

#### DIAMOND DRILLING & VLF-EM GEOPHYSICS

#### SUREBET PROPERTY

Crawford Bay Area Slocan Mining Division

TRIM 82G.066 5515600N 595500E

NTS 82F/10W Latitude 49° 37' N Longitude 116° 50' W

by

Peter Klewchuk, P.Geo.

October, 2001

### GEOLOGICAL SURVEY BRANCH

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#### 1.00 INTRODUCTION

#### 1.10 Location and Access

The Surebet property is located on the western edge of the Purcell Mountains, on and near Crawford Peninsula on Kootenay Lake about 30 km east of Nelson, B.C. (Fig.1). A network of logging roads cross parts of the property with access from the small community of Crawford Bay.

#### 1.20 Property

The Surebet property consists of 174 claim units in 36 claims which are either wholly owned by Klondike Gold Corp. or under option to them from Bruce Doyle of Nelson, B.C. Claim location is provided in Figure 2 and a list of claims is provided in Table 1.

#### 1.30 Physiography

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Crawford Peninsula is a moderately rugged area with numerous knolls, ridges and gulleys. Vegetation is rather lush and similar to the B.C. coast with forest cover of Douglas Fir, cedar, hemlock and lesser pine, larch, aspen and birch.

#### 1.40 Mineral Exploration History

High grade sulfide boulders have been known in the area for some time and most exploration activity has actively sought a local bedrock source for the boulders.

Cominco Ltd. worked on the property in the 1970's and did some diamond drilling of limestone/dolomite units (B.Doyle, pers, comm.) but no public record of their work is available.

Kokanee Explorations Ltd. held the property in 1992 and completed an extensive soil geochemistry grid, defining widespread strong lead, zinc and copper anomalies. They also completed limited ground geophysics using Horizontal Loop and VLF-EM. They drilled 4 holes in the Mohican gneisses and 4 holes in carbonate-schist units including the Badshot Formation which is host to the Bluebell Mine. Three of their holes tested a single surface occurrence of karst style base metal mineralization with limited success.

In 1995 Cominco Ltd. flew a Dighem V survey over the property and defined a large number of fairly strong EM anomalies (Smith, 1996). In 1997 Cominco completed an extensive soil geochemistry program and a Beep-Mat EM survey (Ransom, 1997). In 1998 they drilled 2 holes from one site west of Crystal Lake, encountering only very minor mineralization in a suite of



Figure	1	Surebet Property
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RECORD#	CLAIM NAME	CLAIM#	# OF UNITS	EXPIRY DATE
257122	SUREBET	1	1	October 31, 2006
257123	SUREBET	2	1	October 31, 2006
257124	SUREBET	3	1	October 31, 2005
257125	SUREBET	4	1	October 31, 2005
257126	SUREBET	5	1	November 1, 2005
257127	SUREBET	6	1	November 1, 2006
257128	SUREBET	7	1	Noveraber 1, 2006
257129	SUREBET	8	1	November 1, 2006
257130	SUREBET	9	1	November 2, 2006
257131	SUREBET	10	1	Noveraber 2, 2006
257132	SUREBET	11	1	November 2, 2006
257133	SUREBET	12	1	November 2, 2006
257248	PUP	1	1	May 2, 2006
257249	PUP	2	1	May 2, 2006
257250	PUP	3	1	May 2, 2006
257251	PUP	4	1	May 2, 2006
334934	CRYSTAL I		20	April 23, 2005
365383	BAY	1	20	April 30, 2005
355871	CRYSTAL	1	1	May 6, 2006
355872	CRYSTAL	2	1	May 12, 2006
355873	CRYSTAL II		6	May 14, 2005
358986	CRYSTAL III		12	August 31, 2005
387303	CRYSTAL V		12	June 20, 2002
387304	CRYSTAL IV		20	June 19, 2002
358150	RAY	1	15	July 28, 2002
358151	RAY	2	12	July 28, 2002
358152	RAY	3	15	July 28, 2002
358153	RAY	4	2	July 26, 2002
369292	FA	1	5	November 14, 2001
369293	FA	2	5	November 14, 2001
369294	FA	3	4	November 14, 2001
369295	FA	4	4	November 14, 2001
370585	SOLA	1	1	July 28, 2002
370586	SOLA	2	1	July 28, 2002
370587	SOLA	3	1	July 25, 2002
370588	SOLA	4	1	July 28, 2002

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Table 1. Surebet Property
List of Claims

carbonates and schists.

1.50 Scope of Present Program

In June of 2001 a program of ground VLF-EM surveying was conducted to establish the precise location of airborne EM anomalies and to provide local detail where diamond drilling was planned. Three NQ diamond drill holes were completed, totaling 303.35 m, to test an inferred structural intersection and an area of indicated airborne EM anomaly complexity.

#### 2.00 GEOLOGY

Crawford Peninsula and the Surebet property are within the Kootenay Arc which

"is a narrow belt of complexly deformed lower Paleozoic rocks that extends several hundred kilometers from northern Washington state to north of Revelstoke, B.C. The stratigraphically lower rocks in the Kootenay arc are present in the Crawford Bay area where metamorphic grade is amphibolite facies (Rice, H.M.A., 1941, Insley, M.W., 1982). In ascending order the formations and inferred protoliths are: Hamill Fm, siliciclastics; Mohican Fm, primarily calcareous siliciclastics and impure limestone: Badshot Fm, a regionally persistent lower Cambrian limestone marker unit; and Index Fm (basal unit of the Lardeau Group) of graphitic, pyritic, biotitic calc-siliciclastics, basic sills or flows, volcaniclastics and limestones. The sequence represents a transition from stable shelf, shallow water conditions to an unstable and progressively deeper environment.

The Badshot Fm hosts large stratabound, probably early replacement, lead-zinc-iron sulphide deposits in the Salmo and Duncan areas (Fyles, J.T., 1959, 1964). At Riondel. 15 km north of Crawford Bay, is Bluebell, an Eocene replacement lead-zinc-copper-silver-iron sulphide deposit in the Badshot marble (Shannon, 1970, Ohmoto, H. and Rye, R.O., 1970, Beaudoin et at, 1992). Associated with Bluebell, and at least one of the Ainsworth deposits, is the rare mineral knebelite, a manganiferous olivine.

The Badshot marble crosses Crawford Peninsula where it is tectonically thickened and repeated in a zone about 1 kilometre wide. Sulphide boulders, known on Crawford Peninsula since the turn of the century, have mineralogy similar to the Bluebell deposit. As well, knebelite is present in some of the boulders. Zn-Pb-Cu sulphide occurrences on Sure Bet property are hosted by the Badshot Fm."

Ransom, 1997

#### 3.00 VLF-EM GEOPHYSICS

A reconnaissance road and local grid VLF-EM survey was undertaken on part of the Surebet property to better delineate anomalies previously detected by an airborne Dighem V mag-EM survey. This work was completed to better establish the ground location of conductors for diamond drilling and to correlate conductors with bedrock geology. Road and grid survey lines were measured with a hip-chain with VLF-EM readings taken at 20 and 25 meter spacings.

A total of 6.75 kilometers of reconnaissance road and 1.7 km of grid line was surveyed, for an over all total of 8.45 km; Figure 3 shows the road survey data and Figure 4 shows the grid survey data.

#### 3.20 VLF-EM Survey

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#### 3.21 Instrumentation and Survey Procedure

The VLF-EM (Very Low Frequency Electromagnetics) method uses powerful radio transmitters set up in different parts of the world for military communication and navigation. In radio communication terminology, VLF means very low frequency, about 15 to 25 kHz. Relative to frequencies generally used in geophysical exploration, the VLF technique actually uses very high frequencies.

A Crone Radem VLF-EM receiver, manufactured by Crone Geophysics Ltd. of Mississauga, Ontario was used for the VLF-EM survey. Two transmitting stations were used for the survey: Seattle, Washington, transmitting at 24.8 kHz and at an approximate azimuth of 247° from the survey area, and Annapolis, Maryland, transmitting at 21.4 kHz and at an approximate azimuth of 123° from the survey area.

In all electromagnetic prospecting, a transmitter produces an alternating magnetic (primary) field by a strong alternating current usually through a coil of wire. If a conductive mass such as a sulfide body is within this magnetic field, a secondary alternating current is induced within it. which in turn induces a secondary magnetic field that distorts the primary magnetic field. The VLF-EM receiver measures the resultant field of the primary and secondary fields, and measures this as the tilt or 'dip angle'. The Crone Radem VLF-EM receiver measures both the total field strength and the dip angle.

The VLF-EM uses a frequency range from about 15 to 28 kHz, whereas most EM instruments use frequencies ranging from a few hundred to a few thousand Hz. Because of its relatively high frequency, the VLF-EM can detect zones of relatively lower conductivity. This results in it being a useful tool for geologic mapping in areas of overburden but it also often results in detection of weak anomalies that are difficult to explain. However the VLF-EM can also detect sulfide



bodies that have too low a conductivity for other EM methods to pick up.

Results were reduced by applying the Fraser Filter; only the Fraser Filter values are shown for the road traverses in Figures 3 while dip angle and Fraser Filter values are provided for the small grid area in Figure 4. Fraser Filter values are plotted between the dip angle readings which are at survey points. The higher Fraser Filter values (10+) are also contoured on the grid survey.

The Fraser Filter is essentially a 4-point difference operator which transforms zero crossings into peaks, and a low pass operator which induces the inherent high frequency noise in the data. Thus the noisy, often non-contourable data are transformed into less noisy, contourable data. Another advantage of this filter is that a conductor which does not show up as a zero crossover in the unfiltered data quite often shows up in the filtered data.

#### 3.22 Discussion of Results

Numerous VLF-EM anomalies were detected by the survey, including both the stronger and the weaker airborne anomalies. Surveying of the small grid areas provides some definition of a few of the anomalies.

Road Traverse Survey (Fig.3)

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The road VLF-EM survey detected all the previously identified airborne EM anomalies as well as a few others. Minimal geologic work was done in association with the VLF but, where present, the bedrock along the road traverses was noted, to provide a rudimentary understanding of the geology at the location of VLF-EM anomalies. Some VLF-EM anomalies occur where no bedrock is exposed along the roads.

Of particular interest are VLF-EM anomalies which occur in association with the Badshot Formation limestone (host stratigraphy for the Bluebell Mine) which crosses the Crawford Bay peninsula in a northeasterly trend. VLF-EM anomalies occur near both the hangingwall and footwall contacts of the limestone. These conductors were only detected on a few of the airborne survey lines (Smith. 1996). VLF-EM surveying on the road covering the northeast projection of the Badshot limestone did not detect any anomalies, suggesting there may be a fault displacement of this geologic unit here. Further geologic and geophysical work are needed to resolve this problem.

A series of VLF-EM anomalies occur in association with the granite - sediment contact on the west side of the peninsula.

Grid Survey (fig.4)

Four short lines were surveyed over an area southeast of McGregor Lake where airborne EM anomalies were fairly strong and where the airborne data suggested a possible discontinuity in

EM anomalies. The lines were run to cross the airborne EM anomalies at a high angle. Three distinct anomalies were detected and DDH SB 01-2 was collared to test these conductors.

#### 4.00 DIAMOND DRILLING

Three NQ diamond drill holes were completed in June, 2001. Drill Hole location is provided on Figures 2 and 3 and simplified cross-sections are given in Figure 5. Complete drill logs are in Appendix 1 and geochemical analyses of drill core is in Appendix 2. All three holes intersected quartzites, carbonates, schists, gneisses and calc-silicates which are interpreted to be part of the Index Formation.

Drill hole SB 01-1 tested an inferred structural intersection near a small pond referred to as 'Duck Pond'. The hole was drilled westerly (azimuth of 260°) at an inclination of -45°. It encountered a narrow 40 cm fault breccia at 68.5 m which was unmineralized. This structure may trend parallel to the regional stratigraphy and it may correlate with a weak VLF-EM anomaly detected on the road traverse just south of the drill hole.

Drill holes SB 01-2 & 3 were drilled in an area southeast of McGregor Lake (Fig.3) to test airborne EM anomalies which were 'ground-proofed' using ground VLF-EM (Fig. 4). The airborne EM and ground VLF-EM conductors are caused by graphite and pyrrhotite -rich bands within the Index Formation. Minor base metal sulfides, including chalcopyrite, sphalerite and galena are associated with both zones.

#### 5.00 CONCLUSIONS

VLF-EM surveying on the Surebet property has successfully detected some of the earlier defined airborne EM anomalies. In some cases the VLF-EM survey has detected EM conductors associated with geologic contacts that may be favourable for base metal mineralization and which are only weakly indicated by the airborne survey. In areas where the airborne EM anomalies are indicated to be discontinuous or displaced by faulting, ground VLF-EM surveying appears to be a useful tool to define these features.

Diamond drilling successfully tested a series of airborne EM / ground VLF-EM anomalies and defined these as carrying strong iron sulfides in association with copper, lead and zinc sulfides. As these conductors are extensively developed on the property, ample opportunity exists for the base metal content to be significantly enriched, perhaps to the level of an economic orebody.

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TOTAL	\$30,117
GST on administration fee (#126616507)	272
Administration Fee (15%)	3.893
Sub total	\$25,952
Food and lodging	565 ¢ac oca
Supplies	100
Vehicle fuel and maintenance	306
Truck rental 9 days @ \$48.15 / day	433
Geochemical Analyses 4 samples @ \$17.70 / sample	71
Diamond Drilling 303 m @ \$68.07 / m	20,625
Field work and report	
Geologist, P. Klewchuk, 12 days @ \$321/day	\$3,852
7.00 STATEMENT OF EXPENDITURES	

#### 8.00 AUTHOR'S QUALIFICATIONS

As author of this report I, Peter Klewchuk, certify that:

- 1. I am an independent consulting geologist with offices at 246 Moyie Street, Kimberley, B.C.
- 2. I am a graduate geologist with a B.Sc. degree (1969) from the University of British Columbia and an M.Sc. degree (1972) from the University of Calgary.
- 3. I am a Fellow of the Geological Association of Canada and a member of the Association of Professional Engineers and Geoscientists of British Columbia.
- 4. I have been actively involved in mining and exploration geology, primarily in the province of British Columbia, for the past 24 years.
- 5. I have been employed by major mining companies and provincial government geological departments.

Dated at Kimberley, British Columbia, this 20th day of October, 2001.

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#### Appendix 1 Diamond Drill Logs

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#### DRILL HOLE RECORD

Property:	Surebet	Hole No.:	SB 01-1
District:	Nelson	Length:	95.12m
Location:	"Duck Pond"	Commenced:	June 23, 2001
Core Size:	NQ	Completed:	June 25, 2001
UTM Coordin	ates: 512,082 E, 5,498,26	0 N, Elev. 868	8m (Hand held GPS)
Azimuth:	260°	Logged by:	P. Klewchuk
Dip:	-43°	Objective:	Test inferred structural intersection
Owner:	Klondike Gold Corp. 711 - 675 West Hastings Stre Vancouver, B.C. V6B 1N2	Drilled By: et	LeClerc Diamond Drilling Cranbrook, B.C.
Operator:	Klondike Gold Corp. 711 - 675 West Hastings Stre Vancouver, B.C. V6B 1N2	et	
<u>Meters</u> 0 - 9.76	Description Casing, no core		
9.76 - 11.3	QUARTZITE Mottled gray, slightly chloritic. Local pinkis graphite.	greenish. Bedd h-brown biotite	ling at 50° to core axis (c/a). Weakly e-rich lenses. Scattered small flecks of
11.3 - 13.0	MAFIC BAND Dark green, mainly ho with poor 'bedding'(? actinolite, scattered pi irregular veins and pa to drill hole (ie Az. ~2	ornblende with ) fabric at 50-6 nk garnets, pate tches of pyrite. 260°) and ~vert	minor feldspar; texture recrystallized 0° to c/a. Chloritic, local fibrous chy reddish-brown biotite. Local Most prominent py veins are parallel ical.

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13.0 - (8.2	Light to med. gray and gray-green, commonly micaceous. Bedded / banded at ~50° to c/a. Rounded porphyroblasts of pink garnet aggregates are quite common with banding foliated around garnet aggregates. Minor scattered pyrite as small bedding-// lenses & in very thin quartz veins.
18.2 - 22.5	CHLORITE - QUARTZ SCHIST Dark green. Foliation varies from 45 - 50° to c/a at upper contact to wavy and locally // to c/a internally. Upper 40 cm is epidote-rich; epidote occurs locally throughout and is common on fractures. White quartz is discontinuously developed along foliation producing a flecked character: est. 30% quartz, 70% chlorite (chloritized biotite?). Lowermost 60 cm is a more massive, mottled, 'healed breccia' texture and probably includes medium green calc-silicates. Few pink garnets and minor pyrite in this lower zone. Contact with underlying limestone is in broken core.
22.5 - 41.5	CALCAREOUS DOLOMITE White to light gray with light brown phlogopite laminae creating a banding at 60-70° to c/a. Also more rare mottled 'healed breccia' texture in scattered zones up to 20-30 cm wide. Only moderately calcareous. Minor pyrite occurs as scattered grains, commonly with phlogopite streaks. At 39.5 m 10 cm of core contains more py, as coarser blebs and narrow veinlets, associated with concentrations of fine, disseminated black graphite.
41.5 - 43.3	BIOTITE - CALC-SILICATE Dark brown with patches of medium green calc-silicate. Dominantly very dark brown biotite in a wavy, lenticular banding at 40 to 60° to c/a. Thin layers of yellow-green epidote are common. Rounded, irregular patches of medium green calc-silicate occur throughout, with a tendency to be elongate // to foliation; these may be mostly diopside. Minor white calcite is scattered throughout, commonly at biotite - calc-silicate contacts. Minor pyrite occurs throughout, mostly as isolated, disseminated coarse patches but also in thin cross-cutting veinlets.
43.3 - 63.2	<ul> <li>SCHIST</li> <li>Chloritic, micaceous and siliceous; ranges from narrow bands of light gray quartzite to very dark green chloritized biotite and muscovite schist.</li> <li>Variably green-gray colored. Yellow-green epiodote is quite common.</li> <li>Foliation typically at ~60° to c/a. Minor pyrite is common throughout, usually disseminated through schists.</li> <li>At 48.3 m a 6 cm zone adjacent to a 1 cm foliation-// crush zone contains est 15% pyrite as foliation-// discontinuous bands.</li> <li>58.6 to 59.1 Darker yellow-brown garnet is coarsely disseminated in</li> </ul>

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	quartzite and quartz-chlorite-mica schist, in association with irregular quartz veins at 58.6 m and 58.9 m and magnetite. Zone contains est 7-10 % garnet.
63.2 - 65.9	QUARTZITE Med gray and gray-green, mottled, banded at ~65-70° to c/a. Minor chlorite is common, along with very minor biotite, graphite and magnetite.
65.9 - 68.3	CHLORITE-QUARTZ SCHIST Dark to medium green, foliated at 50-65° to c/a. Mainly chloritized biotite, minor dark brown biotite, 20-25% quartz, scattered patches of lighter medium green diopside(?), isolated rounded to elongate patches of pink garnet aggregates. Minor pyrite as disseminations and rare thin cross- cutting veins.
68.3 - 68.7	FAULT BRECCIA 50% core loss, rubbly core. Siliceous matrix, blue-gray quartz (vein?). Brecciated, some milky white chalcedony. Numerous thin irregular fractures with graphite. Minor patchy pale pink garnet, very minor disseminated pyrite, graphitic fractures.
68.7 - 73.0	BIOTITIC QUARTZITE Similar in texture to 13.0-18.2 m interval but with more mica. Light, med and dark gray, wavy foliated (schistose). Rounded garnet aggregates, to 12 mm diam. Foliation tends to bend around garnets. Small black elongate flecks, presumed graphite. Minor pyrite. Foliation at 75-80° to c/a.
73.0 - 94.7	ACTINOLITE-CHLORITE-QUARTZ SCHIST Mainly dark green with white streaks and specks. Mixture of actinolite, quartz, chloritized biotite and biotite. Foliated at ~60° to c/a. Locally epidote altered. Rare dissem pyrite, more common with epidote. Scattered thin irregular foliation-// and cross-cutting white quartz and calcite veins. Coarse patchy pyrite at 81.5 m with minor magnetite.
94.7 - 95.12	DOLOMITE Milky white with light brown phlogopite streaks and minor chlorite. Foliation is wavy but tends to be at 60-70° to c/a.
95.12	End of Hole

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#### DRILL HOLE RECORD

Property:	Surebet	Hole No.:	SB 01-2
District:	Nelson	Length:	166.16m
Location:	East of MacGregor Lake	Commenced:	June 25, 2001
Core Size:	NQ	Completed:	June 29, 2001
UTM Coordin	nates: 511,800 E, 5,499,40	3 N, Elev. 850	0m (Hand held GPS)
Azimuth:	135°	Logged by:	P. Klewchuk
Dip:	-45°	Objective:	Test airborne EM anomalies
Owner:	Klondike Gold Corp.Drilled By:LeClerc Diamond Drilling711 - 675 West Hastings StreetCranbrook, B.C.Vancouver, B.C. V6B 1N2		
Operator:	Klondike Gold Corp. 711 - 675 West Hastings Stre Vancouver, B.C. V6B 1N2	eet	
<u>Meters</u>	Description		
0 - 9.76	Casing, no core.		
9.76 - 19.8	QUARTZ-BIOTITE SCHIST (BIOTITIC QUARTZITE) Gray-green-brown colored, foliated / banded at ~80° to c/a. Biotite is pink-brown colored. Greenish fibrous mineral may be tremolite-actinolite or knebelite(?). Fine-grained graphite is common, disseminated throughout. Minor dissem py throughout. Few calcite-enriched bands, few foliation-// QV (up to 3 cm thick).		
	unoughout. Few calence-chirk		follation-a Q f (up to 5 cm unex).

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intense faulting occurs at 19.8-26.2 m. 31.3-33.0 m and 33.9-34.5 m. Lowermost 20 cm at 35.6 m is a mostly healed fault breccia with strong graphite on shear surfaces. Fault zones are a mixture of rubble, brecciated host seds with mostly quartz but few thin calcite veinlets. A locally common, dissem pale pinkbrown mineral may be sphene. Foliation of seds is commonly at 50-65° to c/a.

Sample # SB-1\_10 cm whole core at 25.3 m

#### 35.6 - 45.7 LIMESTONE / DOLOMITE

Milky white to light gray. Massive, banded, mottled and healed breccia texture. Banding locally at ~65° to c/a. Variably calcite / dolomite rich. Commonly stained yellow-orange, probably from surface oxidation. Central zone from 42-43 m is vuggy with local open space crystal development and fragments of graphitic (dissem) schistose quartzite. Dissem py occurs through parts of the carbonate with local rare grains of galena and minor darker honey-brown sphalerite.

#### 45.7 - 50.5 FAULT BRECCIA / GRAPHITIC QUARTZITE

Med-dark gray, locally greenish, broken and healed breccia texture throughout. Foliation in quartzite is at 50-60° to c/a and shear fabric is mostly sub-//. Numerous shear surfaces have graphitic slickensides. Minor dissem pyrite is common throughout. Thin white calcite veinlets are more common than quartz.

#### 50.5 - 56.1 QUARTZITE

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Schistose, graphitic and biotitic quartzite. Med gray, foliated at ~60-65° to c/a. Dissem graphite is common throughout; pink-brown biotite is more restricted to certain lenses. Minor dissem pyrite is present throughout; rare dissem med reddish-brown to darker honey-brown colored ZnS.

#### 56.1 - 60.4 FAULT BRECCIA / GRAPHITIC QUARTZITE

Quite similar to 45.7-50.5 m interval. Med-dark gray. Foliation in quartzite at  $\sim 65^{\circ}$  to c/a. Numerous graphitic shear surfaces. This calcite veinlets. Common dissem py.

#### 60.4 - 66.7 GRAPHITIC QUARTZITE

Med to darker gray, quite uniformly foliated at 60-65° to c/a. Fine-grained, mainly dissem graphite is abundant - local crush zones are present with > graphite; ie narrow zones are more similar to overlying fault breccia zone. Lensey pale green diopside(?) Produces greenish lensey bands. Bedding-// to irregular thin QV are fairly common. Minor py is dissem throughout and is locally concentrated in small patches with quartz veins.

#### 66.7 - 67.9 QUARTZ VEIN

Massive, milky white. Core is broken up with ~35% core loss. Irregular graphitic veinlets and trains of dissem fine crystals are present, concentrated at contacts. Minor fine dissem py.

#### 67.9 - 72.9 GRAPHITIC QUARTZITE

Dark gray, quite uniformly finely foliated at 65-70° to c/a. Narrow sections are small fault zones; at 69.0 m (40 cm broken core); at 69.6 m (20 cm fault gouge): at 70.3-72.9 mostly fault breccia with broken quartz vein material over ~ 40-60 cm at 70.6 m. These fault zones tend to be darker gray-black and more graphitic. Dissem py is common and locally there is very minor darker honey-brown ZnS.

#### 72.9 - 83.8 GRAPHITIC QUARTZITES

More siliceous, less broken than previous interval. Light, med and dark gray. Foliated at 55-70° to c/a, locally with minor folding. Pale green fibrous mineral tremolite-actinolite?- is present throughout in minor quantities. Minor phlogopite -pale pink-brown mica- is also present. Minor py occurs dissem and in thin irregular cross-cutting veinlets. Very minor light reddish-brown to honey-brown ZnS occurs as dissem blebs and local foliation-// small lenses. Thin cross-cutting calcite and quartz veinlets are common. Local more broken core zones are dark gray-black, more graphitic, at: 75.0-75.3 m, 77.7 m (10-15 cm), 80.5-80.8 (broken core, not strongly graphitic) and 83.4-83.8 m with minor milky white quartz veining.

#### 83.8 - 99.0 QUARTZITE

Light to med gray, gray-green to brown. Contains abundant pink-brown biotite / phlogopite, chlorite and green calc-silicate minerals. Graphite is present near the upper contact but is greatly diminished from overlying intervals. Minor dissem py is common, more abundant on some fracture surfaces. Quartzite is weakly magnetic from fine dissem magnetite.

#### 99.0 - 100.6 BIOTITE - CALC-SILICATE / QUARTZITE

Mainly brown-green banded at 65-70° to c/a. Biotite-rich and greenish calcsilicate rich bands and some limey bands. Dissem py is common. Rounded garnet aggregates up to 6 cm diam are more common down hole. Two light gray bands of quartz-biotite-feldspar gneiss occur near the top and bottom of the interval; light gray, mostly quartz with dissem biotite and isolated 'whiter' feldspar.

#### 100.6 - 102.1 QUARTZ-BIOTITE-FELDSPAR GNEISS Mottled light gray-green with dark biotite. Mainly quartz, est 7% biotite. minor scattered whiter feldspar crystals. Dissem py.

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# 102.1-102.65 QUARTZ-SULFIDE-CALCITE ROCK; SEMI-MASSIVE SULFIDES Mixture of contorted, swirly, generally very irregular po with quartz, calcite, possible biotite and magnetite. Dark gray to black. Foliated at 65-85° to c/a; both contacts conformable to foliation (bedding?). Minor cpy and ZnS observed with po. Dissem and vein py also present.

Sample # SB-2 102.1 - 102.65 m

#### 102.65-115.1 QUARTZ-MICA SCHIST

Variably gray-brown, foliated at 65-70° to c/a. Mainly mica (phlogopite and biotite) and quartz with minor greenish calc-silicate and scattered calcite. Weakly magnetic, presumably from dissem magnetite. Py and po are common; po as ragged patches and lenses, py more dissem. 105.5-106.4 has more concentrated sulfides; 2 narrow bands (1.5 to 3 cm wide) of semi-massive sulfides, po-rich, similar to overlying unit, and more patchy dissem, irregular po and minor py, cpy and ZnS. Another po concentration near 106.8 m. and a 3 to 6 cm wide po-rich band with minor cpy, ZnS at 111.6 m.

#### 115.1 - 126.8 BIOTITE-QUARTZ SCHIST / GNEISS

Texture changes to coarser grained with dark brown / black biotite. More gneissic in texture with wavy foliation around quartz lenses and pink garnet porphyroblasts. Whitish carbonate-rich zones are present with green calc-silicate mineral(s). Med-dark gray with foliation / schistosity at ~70° to c/a. 117.7-118.6 is mainly white quartzite with scattered flecks of biotite. Near 122.2 m coarse black biotite is dissem in and near foliation-// quartz bands up to 3 cm wide.

#### 126.8 - 128.3 QUARTZITE Med grav-green with slightly darker grav patches where 1

Med gray-green with slightly darker gray patches where biotite is more abundant. Foliated at  $\sim 70^{\circ}$  to c/a.

#### 128.3 - 133.5 QUARTZ-BIOTITE SCHIST

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Light gray to dark gray-brown, foliated at 70° to c/a. Few garnet porphyroblasts with foliation developed around them. Locally calcareous, minor pale green calc-silicate mineral(s).

## 133.5 - 135.2 LIMESTONE / DOLOMITE Finely laminated and light gray at 133.5 m for 30 cm, then biotitic and foliated at 60° to c/a with some swirly texture and lowermost 1.1 m is quite massive, faintly foliated.

#### 135.2 - 148.9 BIOTITE-QUARTZ-GARNET SCHIST

Fairly dark gray-brown, foliated at 75-80° to c/a with foliation commonly draped around rounded reddish-pink garnet porphyroblasts. Small scale crenulation is common. Very fine black magnetite occurs in garnets.

From 144.8 to 146.8, within a relatively coarse phase of the schist there are more abundant garnets and an abundantly disseminated yellowish mineral which looks like ZnS. Minor dissem py.

Sample # SB-4 Whole core, grab, ~ 12 cm at 146.0 m

148.9 - 156.8 QUARTZITE, BIOTITIC QUARTZITE, SCHIST, minor CALC-SILICATE Med gray, gray-green and green. Foliated at ~65° to c/a. Biotite and calc-silicate content varies but generally increases down-hole. Garnet porphyroblasts and green calc-silicate lenses occur in bands near the lower contact. At 151.0 m a 35 cm wide QV occurs in broken core. Fractures in QV at 15° to c/a. Broken core 151.9-152.6 m with pyritic fractures. Minor fault at 154.5 m; 15 cm of dark gray-black chloritic fractured zone. At 155.2 m clots of brown garnets occur in med green calc-silicate mass.

#### 156.8 - 159.6 AMPHIBOLITIC CALC-SILICATE

Pale, med and dark green with brown biotitic bands. Foliated at 70-80° to c/a. Mineralogy includes biotite, quartz, white feldspar and light, med and dark green minerals which may be diopside, chlorite and amphibole. A few rounded to elongate pink garnet porphyroblasts are present. Minor dissem py.

159.6-166.16 BIOTITIC QUARTZITE / BIOTITE-QUARTZ SCHIST minor CALC-SILICATE Med to dark gray, top 2 m has more greenish calc-silicate. Foliated at 65-70° to c/a. Local pink garnet porphs.

163.5-164.5 is a fault zone with broken core. At 163.7 m a 10 cm wide zone at 35-40° to c/a has clay gouge and abundant pyrite. Scattered fracture veinlets of quartz and calcite diminish downward to 165.6 m.

166.16 m End of Hole

#### DRILL HOLE RECORD

Property:	Surebet	Hole No.:	SB 01-3
District:	Nelson	Length:	42.07m
Location:	East of MacGregor Lake	Commenced:	June 30, 2001
Core Size:	NQ	Completed:	June 30, 2001
UTM Coordin	nates: 511,920 E, 5,499,93	3 N, Elev. 87	9m (Hand held GPS)
Azimuth:	132°	Logged by:	P. Klewchuk
Dip:	-45°	Objective:	Test airborne EM /ground VLF-EM conductors
Owner:	Klondike Gold Corp. 711 - 675 West Hastings Stre Vancouver, B.C. V6B 1N2	Drilled By: eet	LeClerc Diamond Drilling Cranbrook, B.C.
Operator:	Klondike Gold Corp. 711 - 675 West Hastings Street Vancouver, B.C. V6B 1N2		
Meters	Description		
0 - 1.8	Casing, no core		
1.8 - 17.8	MICACEOUS QUARTZITE / SCHIST Med to dark gray green to brown, wavy foliated at 80° to c/a. Few pink porphyroblasts up to ~ 5 mm diam. Greenish bands are calc-silicate; actinolite and/or diopside. Minor magnetite, pyrite and graphite. Few foliation-// quartz veins typically with garnet, calc-silicate and white calcite.		
17.8 - 28.9	QUARTZ-MICA SCHIST Med to dark gray to brown. Thin greenish bands of calc-silicate, typically with abundant pink garnets. Foliated at $\sim 80^{\circ}$ to c/a. Minor calcite occurs in thin, scattered bands. Garnets are scattered through all of the core below $\sim 21$ m. Small specks of graphite &/or magnetite are present, also rare dissem py and po.		

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#### 28.9 - 29.6 QUARTZITE

White, quite massive, no strong fabric. Flecked with short wisps of dark brown to black phlogopite - biotite and chlorite. Few small pink garnets, minor dissem small ragged patches of po.

#### 29.6 - 30.6 QUARTZ-MICA SCHIST

Similar to 17.8-28.9 unit. Wavy foliated at 70-85° to c/a. At 30.4 m minor isoclinal folding is present with po, quartz, minor py and cpy developed with the folds.

#### 30.6 - 32.5 FAULT ZONE

Broken core, fault breccia. Minor quartz-calcite veining. Mostly micaceous quartzite with some greenish calc-silicate. Veining / shearing is inconsistent; some preference for 35-40° to c/a. Minor coarse dissem and vein py is present.

32.5 - 34.4 QUARTZ-MICA SCHIST

Light, med and dark gray with greenish calc-silicate bands and brown phlogopite biotite bands. Wavy foliated at 70-80° to c/a. Scattered pink garnets common, usually with quartz and in calc-silicate bands. Dissem py and po. Narrow bands (<1 cm wide) of 'semi-massive' po with minor cpy, py occur from 33.4 to 33.7 m. A weaker thin band of more discontinuous po is at 34.25 m. Magnetite &/or graphite and very minor ZnS occur with the po.

#### 34.4 - 34.8 PYRRHOTITE-RICH BAND

Dark gray quartz-mica schist, foliated at 85° to c/a with 10-15% po, minor cpy and very minor ZnS. Po appears discontinuous with ragged elongate foliation-// patches but may be continuous through the core.

Sample # SB-3 34.4 - 34.8 m

#### 34.8 - 41.8 QUARTZ-MICA SCHIST

Light, med and dark gray and gray-brown with few gray-green calc-silicate rich bands. Foliated at 80-90° to c/a. Lighter gray, more quartzitic zones have a darker brown, almost black biotite. Few reddish garnet porphs, minor dissem po.

#### 41.8 - 42.07 QUARTZITE

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Light gray, quite massive with minor very small biotite flocks and very small garnets.

42.07 End of Hole

SAMPLE#
8-1 8-2 8-3 8-4 E SB-4
TANDARD C3

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

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