BIG BULL MINE, NORTHWESTERN B.C.

TULSEQUAH CHIEF PROJECT

1992 GEOLOGICAL PROGRAM

NTS 104K/12E

Latitude: 58°40' North, Longitude: 133°35' West

Big Bull Extension (203965), Bull 4 (203968), Big Bull (L6303), Bull No. 1 (L6304), Bull No. 5 (L6306), Bull No. 6 (L6305)

ATLIN Mining Division

Owner and Operator:

REDFERN RESOURCES LTD.
205 - 10711 Cambie Road
Richmond, B.C.
V6X 3G5

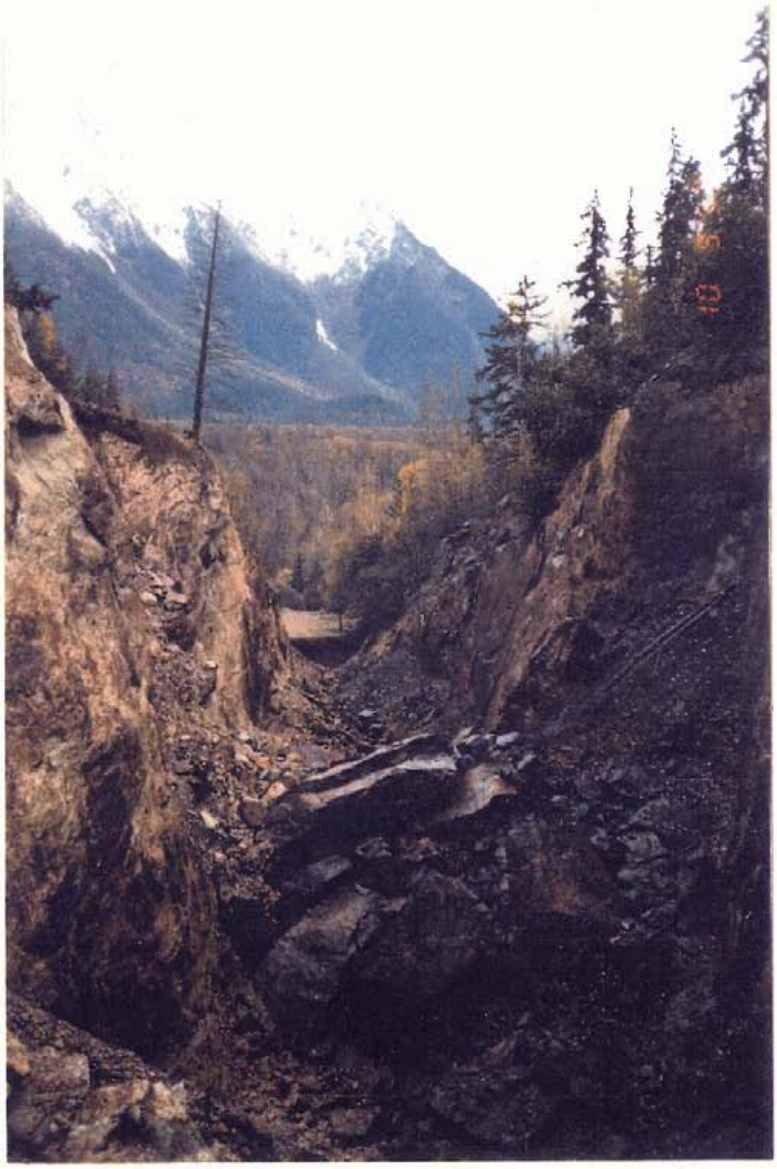
Consultants:

CAMBRIA GEOLOGICAL LTD.
1531 West Pender Street
Vancouver, B.C.
V6G 2T1

By

G.L. Dawson
D. J. Harrison
P.J. McGuigan

June 2, 1993



Frontispiece: Looking southeast across the Taku River Valley from the north end of the glory hole, Big Bull Mine, Tulsequah Chief Property (Oct. 1992).

SUMMARY

The Tulsequah Chief Property, situated in northwestern British Columbia, is located 100 km south of Atlin, B.C. and 64 km northeast of Juneau, Alaska. The property includes the Tulsequah Chief deposit, which was discovered in 1923, and the Big Bull deposit, which was discovered in 1929.

Cominco Ltd. acquired the property in 1948. Mining began at both deposits in 1951 and continued until 1957, at which time low metal prices forced their closure. Unpublished production figures during that period were 311, 383 tonnes grading 1.2% copper, 1.9% lead, 7.3% zinc, 154 grams/tonne silver and 5.1 grams/tonne gold for the Big Bull Mine and 622,136 tonnes of similar grade for the Tulsequah Chief Mine.

The Tulsequah Chief Property lay dormant from 1957 to 1971. In 1971, the Tulsequah Chief and Big Bull deposits were interpreted as volcanogenic massive sulphide (VMS) deposits similar to Kuroko deposits in the Green Tuff district of Japan. In that area, syngenetic massive sulphide deposits are associated with back-arc rifting and felsic volcanism. Cominco Ltd. completed small scale exploration programs from 1981 to 1988 on the Big Bull deposit concurrent with extensive exploration programs on the Tulsequah Chief deposit. In June, 1992, Redfern Resources Ltd. purchased Cominco Ltd.'s interest (60%) in the Tulsequah Chief Property.

The Tulsequah Chief and Big Bull deposits are precious metal-rich syngenetic volcanogenic massive sulphide deposit hosted within the pre-Mississippian to Early Permian Mount Eaton Group. The Mount Eaton Group is a bimodal volcanic suite that is mainly subalkalic and calc-alkaline in composition typical of an island-arc setting. Mapping in 1992 and re-interpretation of data from Payne (1987) has identified two felsic volcanic-sedimentary sequences within the dominantly mafic Mount Eaton Group. The lower felsic volcanic-sedimentary sequence hosts the Tulsequah Chief and Big Bull deposits, plus extensive areas of altered volcanic rocks. Stratigraphically higher is the upper felsic volcanic-sedimentary sequence which contains felsic

volcanics, volcanic sediments and limestone. Both the upper and lower sequences are prospective for additional volcanogenic massive sulphide discoveries.

The 1992 Exploration Program on the Big Bull deposit was completed between October 1 and October 12 as part of the on-going exploration on the Tulsequah Chief Property. The program consisted of establishing 14 km of cut grid centered on the Big Bull Mine Glory hole over which geological mapping was completed.

Mapping has subdivided the Mount Eaton Group into five volcanic sequences in the Big Bull Mine area--Lower Mafic Volcanic Sequence (unit 1), Lower Felsic Volcanic Sequence (unit 2), Altered Volcanic/Exhalite Sequence (unit 3), Upper Mafic Volcanic Sequence (unit 4) and Upper Felsic Volcanic Sequence (unit 5). The Lower Felsic Volcanic Sequence (unit 2), Altered Volcanic/Exhalite Sequence (unit 3) and the Upper Felsic Volcanic Sequence (unit 5) are stratigraphically equivalent to the lower felsic volcanic-sedimentary sequence on the Property Map. In this area, the Mount Eaton Group forms an northwest striking, steeply dipping, upright sequence on the western limb of the regional Mount Eaton Anticline. Easterly verging parasitic folds related to this deformation plunge shallowly ($<35°$) to the northwest. A second phase of deformation produced overturned small scale open folds in the northeast area of the grid. Their axial plane strikes northeast and dips moderately northwest.

Massive sulphide horizons which were the focus of mining at the Big Bull Mine from 1951 to 1957 occur near the upper contact of the sericite + pyrite altered exhalitic tuff sequence (unit 3). Drilling and mining indicate one massive sulphide horizon is 400 metres in strike length, extends from surface (+50 to +150 metre elevation) to -50 metres elevation and varies from 2 to 8 metres in thickness. The sulphide horizon strikes AZ310° and dips steeply to 75° southwest. The thickest massive sulphide intervals occur along minor folds axes which plunge shallowly ($<35°$) to the northeast.

Drilling (C-24 to C-28) on the east side of Snye Channel on the Taku River flood plain (Bull Slough) intersected altered exhalitic tuffs and sulphide horizons on strike and up to 400 metres southeast of the mine workings.

A Three Phase Exploration Program is recommended for 1993. The Phase One Program would consist of compiling historic drill and underground data to produce a set of mine sections and plans. The Phase Two Program would consist of surveying, linecutting, geophysics (magnetic, VLF, and Pulse-EM), geochemistry, and geological mapping. The Phase Three Program would consist of drill testing targets identified by the Phase One and Two Programs.

TABLE of CONTENTS

LIST of APPENDICES

LIST of FIGURES

LIST of PLATES

LIST of PLATES continued

LIST of MAPS

A. INTRODUCTION

A.1 Scope of Work

Cambria Geological Ltd. was retained by Redfern Resources Ltd. to complete geological mapping in the Big Bull Mine area, northwestern B.C. The objectives of this program were to resolve stratigraphic and structural relationships in order to define new exploration targets. This report summarizes the results of mapping completed by G.L. Dawson and D.J. Harrison between October 1 and October 12, 1992. In addition, the geology of historic surface and underground working were compiled at 1: 1000 Scale.

A cut and picketed grid (compass and slope corrected) centred on the Big Bull glory hole was established by Courier de Bois Contracting Ltd. to provide mapping control. Lines are spaced 50 metres apart and extend 300 metres on either side of the baseline. The baseline is 1,000 metres long and is oriented at AZ310°. Geologic mapping (1:2000 scale) was restricted to the grid area.

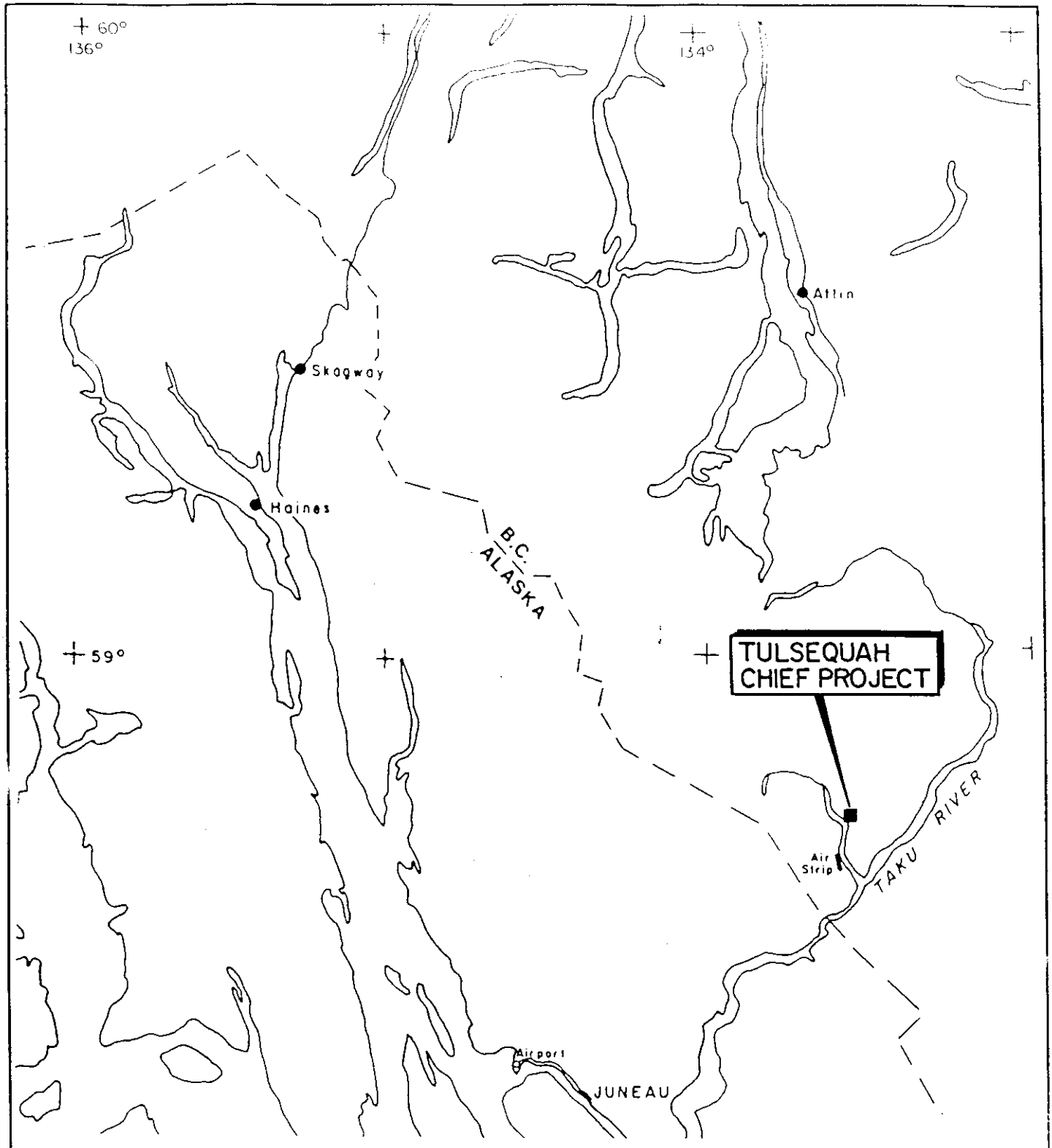
A.2 Location and Access

The Big Bull Mine is located approximately 110 kilometres south of Atlin, B.C. and 64 kilometres northeast of Juneau, Alaska (Fig. 1). The mine is situated on the north side of the Taku River, four kilometres east of the Tulsequah River confluence. Latitude and longitude co-ordinates are approximately 58° 40' N and 133° 33' W (NTS map sheet 104 K/12).

Access to the mine area is by helicopter from Atlin or Juneau. Two gravel airstrips are located six km to the northwest, on the west side of the Tulsequah River. The largest airstrip is suitable for aircraft up to a Bristol Freighter in size. Jet-boats can navigate the Tulsequah River and Snye Channel (a channel of the Taku River) to the Big Bull Mine area.

A.3 History

The Big Bull deposit was discovered in 1929 by V. Manville. The Alaska Juneau Gold Mining Company optioned the property from I. Goldstein and Associates of Juneau, Alaska between August 1929 and July 1930. They completed an adit (610 metres), ten cross-cuts and drilled



REDFERN RESOURCES LTD.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
P. J. McGUIGAN
GEOSCIENTIST

Report by: GLD, DJH
Date: March, 1993

NTS: 104K

Mining Division: Atlin

Ref: B49-11X17TB

TULSEQUAH CHIEF PROJECT

LOCATION MAP

Cambria Data Services Ltd.

Fig. 1

eight surface holes (AJ-1 to 7, 12) and one underground drill hole (AJ-16). In 1944, Leta Exploration Ltd. optioned the property and completed six underground drill holes (L-1 to L-6). Consolidated Mining and Smelting Company of Canada Ltd. (Cominco Ltd.) acquired the Big Bull deposit in 1946 and drilled 1667m in twelve surface holes (C-1 to C-12) in 1947. From 1948 to 1950, Cominco Ltd. completed underground development work and drilled 790m in thirty-one underground holes (No. 101-131). From 1951 to 1956, Cominco drilled 2,293 metres in 16 surface holes (C-13 to C-28).

The Big Bull deposit was put into production in 1951 along with the Tulsequah Chief deposit. Ore was trucked to, and processed at the Polaris-Taku mill, six kilometres to the northwest on the west side of the Tulsequah River. Concentrates were barged from the mill down the Tulsequah and Taku Rivers to Juneau. The Big Bull Mine shut down in 1957 because of depressed metal prices, after producing 311,383 tonnes of ore grading 1.2% copper, 1.9% lead, 7.3% zinc, 154 grams/tonne silver, and 5.1 grams/tonne gold. Insitu reserves at the Big Bull Mine at closing were 45,360 tonnes grading 0.5% copper, 1.3% lead, 5.6% zinc, 61.7 grams/tonne silver, and 2.4 grams/tonne gold (Casselman, 1987).

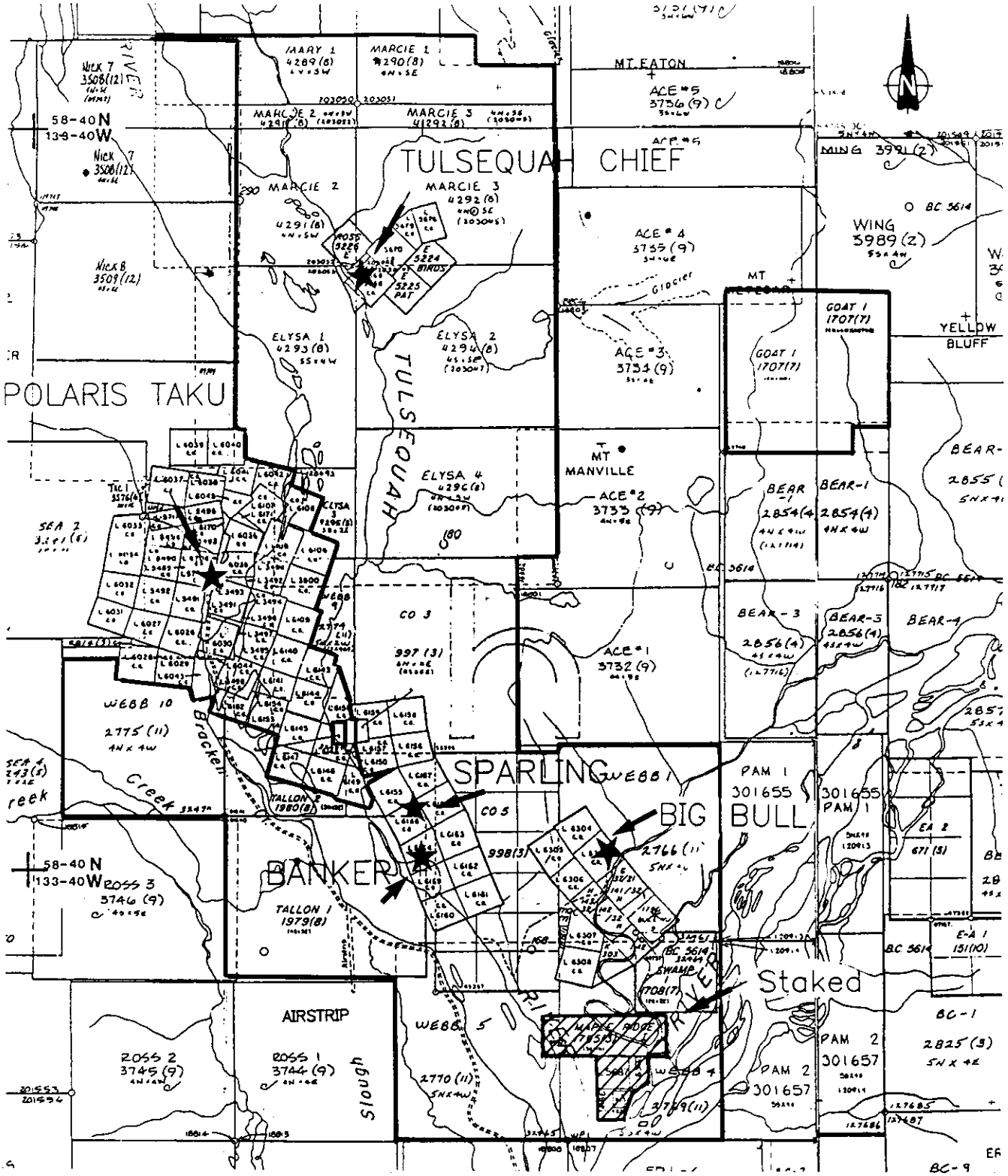
The property lay dormant from 1957 to 1971. In 1971, the deposit was interpreted as volcanogenic massive sulphide deposit, rather than a fault controlled hydrothermal replacement deposit as originally described. In 1981, Cominco Ltd. (Sorbara, 1981) completed geological mapping and geochemical soil sampling over parts of the Big Bull Mine. In 1982, an airborne magnetic and EM survey over the Tulsequah Chief Property, which includes the Big Bull and Big Bull Extension, failed to identify significant bedrock anomalies. Cominco Ltd. completed ground geophysical surveys over the Taku River channel during February 1983 to outline southerly extensions of the Big Bull deposit. The program included 10 line-kilometres of HLEM, VLF-EM, and total field magnetics (Lajoie, 1983).

A joint venture between Cominco Ltd. and Redfern Resources Ltd. from 1987 to 1991 on the Tulsequah Chief Property (includes the Tulsequah Chief and Big Bull deposits) focused primarily on exploration in and around the Tulsequah Chief Mine. Limited geological mapping was

completed on the Big Bull deposit in 1987 (Muraro, 1988) and in 1988 (Muraro, 1989). Redfern Resources Ltd. bought Cominco Ltd's interest in the Tulsequah Chief Property in June, 1992 and is now 100% owner.

A.4 Land Status

Redfern Resources Ltd. holds title to 56 mineral claims which make up the Tulsequah Chief Property and encompasses the Big Bull and Tulsequah Chief Mines (Fig. 2). The entire property consists of 19 four-post mineral claims (319 units), 10 Reverted Crown Granted claims and 25 Crown Granted claims. The claims cover an area approximately 14 kilometres long by 8 kilometres wide, comprising 5896 hectares. The Big Bull Mine area is covered by 10 Crown Granted claims within the larger WEBB 1 mineral claim. A list of claim name, tenure number and expiry date is attached as Appendix 1.



Redfern Resources
Property Boundary

1 0
Km

REDFERN RESOURCES LTD.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA P. J. McGUIGAN June 1st GEOSCIENTIST

Report By:	GLD, DJH
Date:	March, 1993
NTS:	104K
Mining Division Attn	
Ref. #	80106

TULSEQUAH CHIEF PROJECT

CLAIM LOCATION MAP

Cambria Geological Ltd.

Figure: **2**

B. PROPERTY GEOLOGY

The Tulsequah region is located within the Stikine Terrane and lies near the contact with gneissic and plutonic bodies of the Coast Belt. In this area, the Stikine Terrane contains the Middle to Upper Paleozoic Mount Eaton and Tulsequah Groups. Cretaceous to Tertiary age intrusions locally intrude these rocks. Volcanogenic massive sulphide deposits are associated with felsic volcanic sequences within the dominantly intermediate to mafic Mount Eaton Group.

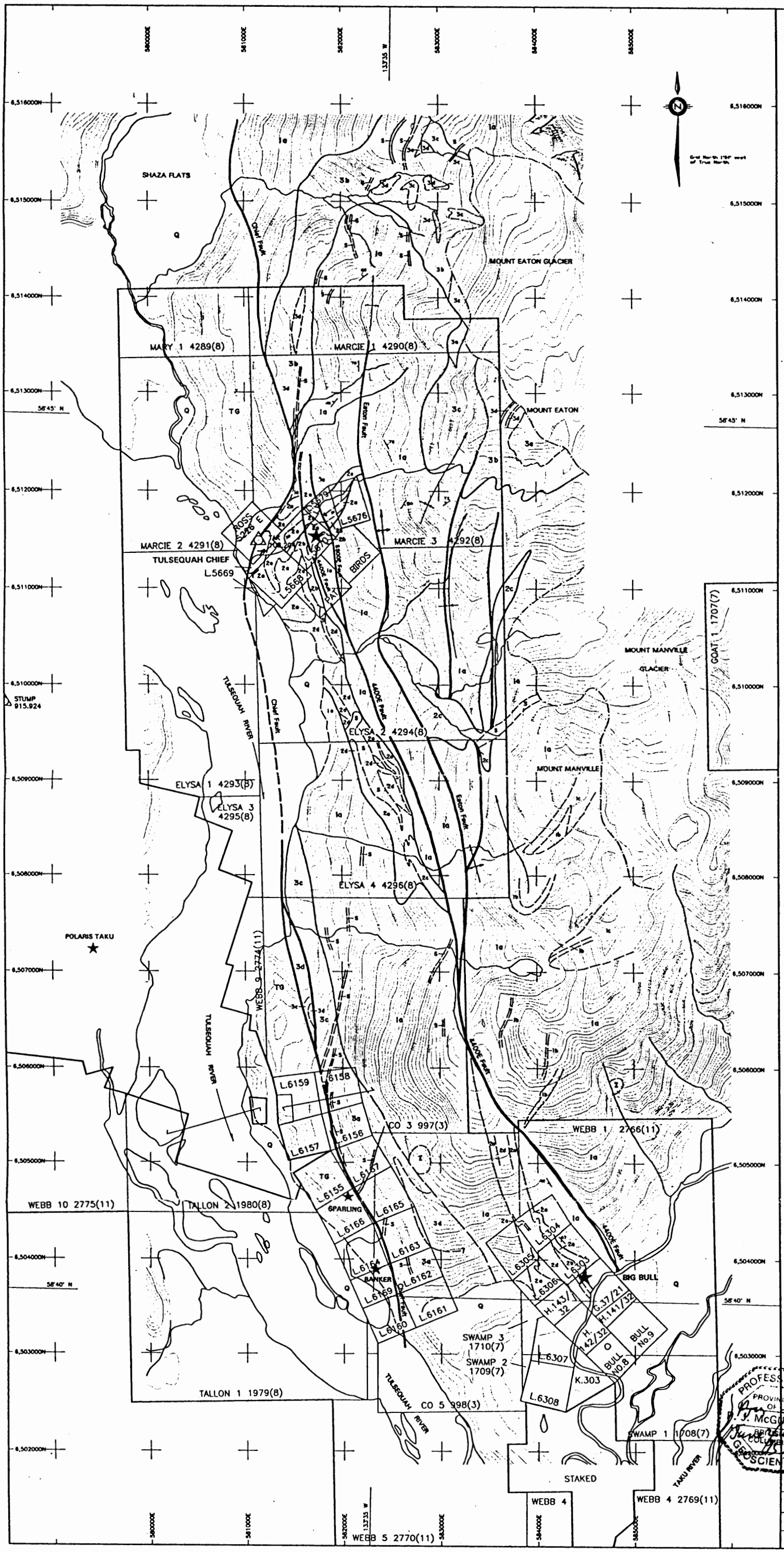
B.1 Stratigraphy

B.1.a Mount Eaton Group

The pre-Mississippian to Permian Mount Eaton Group forms a northerly trending sequence which is bounded on the east by Cretaceous quartz monzonite intrusions and on the west by the Chief Fault. Mount Eaton Group stratigraphy was mapped at 1:10,000 scale by Payne (1987). Mapping over the Tulsequah Chief and Big Bull Mines in the 1992 Exploration Program was incorporated into work by Payne (1987). Re-interpretation of the stratigraphy indicates two discrete felsic volcanic-sedimentary sequences within a dominantly mafic volcanic succession (Fig. 3, Map 1). On the property-scale map, mafic volcanics of several stratigraphic levels are termed unit 1. They consist mostly of massive and pillowed basalt and basaltic andesite flows, flow breccias and hyaloclastic tuffs. Minor volcanic sediments are present.

The lower felsic volcanic-sedimentary sequence (unit 2) is spatially and genetically related to volcanogenic massive sulphide at the Tulsequah Chief and Big Bull Mines. It consists primarily of dacite flows, flow breccias and lapilli tuff in the vicinity of the Tulsequah Chief Mine. Eastward the unit grades into mainly clastic sediment and chert. Southward, the unit consists of bedded dacite ash and lapilli tuff at the Big Bull Mine.

The upper felsic volcanic - sedimentary sequence (unit 3) consists mainly of dacite flows and tuffs in the southern area of the map. In the central and northern area of the map, unit 3 is dominated by limestone with minor interbeds of chert, clastic sediment and dacite tuff.



LEGEND

QUATERNARY

Q – Alluvium

INTRUSIVE ROCKS

S SLOKO SUITE – Tertiary

Flow–banded rhyolite dykes, mafic quartz–feldspar porphyry dykes, fine–grained andesite – diorite dykes and/or sills.

I COAST PLUTONIC COMPLEX (?) – Mesozoic (?)

Diorite to granodiorite

PALEOZOIC ROCKS

MOUNT EATON GROUP– Mississipian (or older) to Permian

(Lower Greenschist to Amphibolite Metamorphic Facies)

3 Upper Felsic volcanic – Sedimentary Belt

- 3a dacite flows, breccia, tuff
- 3b chert, mudstone, siltstone, wacke
- 3c limestone with interbedded chert, siltstone
- 3d basalt to andesite tuff, flows

2 Lower Felsic Volcanic – Sedimentary Belt

- 2a dacite flows, breccia, tuff
- 2b massive sulphide horizons, sulphate exhalite horizons, sericite–quartz–pyrite alteration
- 2c chert, mudstone, siltstone, wacke
- 2d basalt to andesite tuff, flows.
- 2e undifferentiated basaltic flows and/or sub–volcanic intrusions

1 Dominantly Mafic Volcanics – present at several stratigraphic levels.

- 1a basalt, andesite, dacitic andesite; flows, flow breccia, ash – lapilli – breccia tuff
- 1b dacitic tuffs, flows
- 1c chert, clastic sediments

TULSEQUAH GROUP– Upper Paleozoic (or older) Metamorphic Rocks

(Upper Greenschist Metamorphic Facies)

TG –felsic schist, sub–gneiss: coleolastically deformed quartz diorite, granodiorite.

–andesite flow, tuff: massive to schistose augite and/or plagioclase porphyritic.

–tuffaceous sediments, mudstone, greywacke, limestone

SYMBOLS

- geological contact (defined, inferred)
- limit of stratigraphic belt (defined, inferred)
- bedding
- fault (defined, inferred)
- axis of syncline (indicating direction of plunge)
- axis of anticline (indicating direction of plunge)
- Mineral Claim boundaries
- Perimeter of REDFERN RESOURCES LTD Mineral Claim holdings
- Massive Sulphide deposits
- Mineral occurrences

UTM Grid based on North American Datum 1927 (NAD 27)

Mine Survey Grid Origin is BC Survey Monument "TAK" (F7953)

Origin established as: N 15,000 – E 10,000 .

NAD 27 Latitude 58°44'15.79080" N
Longitude 133°35'53.87550" E

UTM 6,511,486.871 N
Zone 8 581,145.128 E

Elevation: 108.204 m

Horizontal Control derived from BC Survey Monument "STUMP" (F7952)

NAD 27 Latitude 58°43'23.32960" N
Longitude 133°38'40.31090" E

UTM 6,509,809.346 N
Zone 8 578,498.670 E

Elevation: 915.924 m

Claim Boundary locations based on B.C.M.E.M.P.R. Mineral Title maps for map–sheets 104 K/11,12,13 as of November, 1992.

Geology after Payne and Sisson, (1987). B.C.M.E.M.P.R. Assessment Report 17054.

Geology in the vicinity of Tulsequah Chief and Big Bull deposits based on mapping by Cambria Geological Ltd. during 1992.

Topography base scanned from 1:10000 base maps Produced by: Triathalon Mapping Corporation (File: COM106), 1987

Contour Interval : 20 metres

400 0 400 800 1200 1600
METRES

REDFERN RESOURCES LTD.

Report by: B. J. McGUIGAN, P.Geo.

Date: March, 1993

TULSEQUAH CHIEF PROJECT

PROPERTY GEOLOGY

NTS: 104K

Mining Division: Atlin

Ref.: B110–M1

Cambria Geological Ltd.

Fig: 3

Regional metamorphism has altered these rocks to Lower Greenschist and locally to Lower Amphibolite facies mineral assemblages.

B.1.b Tulsequah Group

Tulsequah Group (unit 6) crops out north of the Chief Fault in the northwest area of the map (Fig. 3, Map 1). It consists of strongly deformed, metamorphosed intermediate to mafic volcanics, tuffaceous sediment and limestone that are now schists, phyllites and marble. Chlorite-carbonate schists consist of altered feldspar phyric intermediate to mafic volcanic and carbonate. Some schists have well developed kink bands. Less deformed rocks consist of moderately foliated, dark green to black, chloritic, fine grained mafic flows and tuffs. Limestone is laminated to bedded, grey to white, fine to medium grained, and mostly recrystallized to marble.

B.1.c Intrusive Rocks

The Coast Belt is a belt of plutonic and metamorphic rocks which form the Boundary Ranges west of the Tulsequah River area. In the Tulsequah River area, scattered, small Mesozoic or younger intrusions are granodiorite to pyroxenite in composition. Tertiary quartz monzonite underlies a large area east of Mount Eaton. Narrow rhyolite and quartz and feldspar porphyritic dacite dykes of the Tertiary Sloko Suite are emplaced along fault structures.

B.2 Structure

The Chief Fault is a major north-south striking, strike-slip fault which separates the Mount Eaton and Tulsequah Groups. West of the fault, Tulsequah Group rocks exhibit up to four phases of deformation (Payne, 1987). East of the fault, Mount Eaton Group rocks are folded into open to tight, mostly north-plunging fold sets. Payne (1987) reports the major fold structure to be the Mount Eaton Anticline and positioned its axial plane trace east of Mount Eaton peak. Re-interpretation of the structure and stratigraphy in 1992 suggests the trace of the Mount Eaton Anticline is near and parallel to the Eaton Fault which lies on the western slope of Mount Eaton. Its axial plane is upright to steeply east dipping and strikes north-northwest. The fold axis plunges moderately to the north-northwest (plunge of 56° in the direction of AZ329° at the Tulsequah Chief Mine and 35° in the direction of AZ310° at the Big Bull Mine).

Rocks of the economically important lower felsic volcanic-sedimentary sequence (unit 2) lie on both limbs of the Mount Eaton Anticline. However, felsic rocks hosting the Tulsequah Chief and Big Bull Mines lie on the western limb. In both areas, massive sulphide horizons are deformed into subsidiary folds which verge eastward to the axis of the Mount Eaton Anticline.

Payne (1987) mapped a younger phase of folds with north-northeasterly plunges on the upper western slopes of Mount Eaton. A similar style of folding is observed in unit 2 rocks on the northeastern side of the Big Bull grid. These folds are discussed in Section C.3.

Major bedrock lineaments on the Tulsequah Chief Property include the 4400E, 5300E and Eaton Faults; all are sub-parallel and north trending. The Eaton Fault is sub-parallel to the axial plane of the Mount Eaton Anticline; displacement of the lower felsic volcanic-sedimentary belt (unit 2) indicates right-lateral movement. A major fault system described by Kerr (1948) strikes northeasterly parallel to the Taku River Valley. A splay of this fault is found on the south side of the valley at the Erickson-Ashby mineral property where it is called the Bracken Fault (Payne, 1979). Regional geological mapping suggest there is significant displacement (1-2 km) of map units across the fault.

B.3 Mineralization and Alteration

Syngenetic massive sulphide mineralization at the Tulsequah Chief and Big Bull Mines is economically the most significant mineralization in the camp. The similarity of massive sulphide mineralization, alteration and associated felsic volcanics to a general 'Kuroko' deposit model was first recognized in 1971. Sulphide consists of heavily disseminated to massive pyrite, sphalerite, chalcopyrite, galena and tetrahedrite. Significant amounts of native gold occur as visible grains. Massive sulphides occur in bands associated with exhalitive chert, barite and gypsum and felsic tuffs. Locally, massive sulphides interfinger with a debris flow facies containing fragments of altered volcanic rocks, chert, barite and massive sulphides. The debris flow facies is similar to the 'ore-clast breccia' unit of the HW/Myra Formation in the Buttle Lake Camp.

At both the Tulsequah Chief and Big Bull Mines, footwall alteration is characterized by an assemblage of silica, sericite, chlorite and pyrite. In strongly altered footwall zones, regional metamorphism of Lower Amphibolite grade has overprinted these assemblages with cordierite and biotite. Hanging wall alteration is a weak propylitic assemblage consisting of fracture controlled albite, epidote, chlorite, silica and magnetite ($\pm$ hematite).

Compilation work and limited field traverses during the 1992 Exploration Program identified a number of prospective areas on the Tulsequah Chief Property. In the lower felsic volcanic sequence (unit 2), Casselman (1987) mapped a sequence of felsic flows and intercalated tuffs and sediments 2 km south of the Tulsequah Chief Mine. Associated with these rocks are zones of intense sericite + pyrite alteration similar to the footwall alteration at the Tulsequah Chief Mine. Both the upper and lower felsic volcanic sequences are prospective for the discovery of additional massive sulphide deposits.

West of the Chief Fault, the Banker and Sparling deposits lie within Tulsequah Group rocks. Both occurrences were acquired in 1992 by Redfern Resources Ltd. and are targets for mineralization similar to the nearby Polaris-Taku Mine. In 1992, Canarc Resources Ltd. diamond drilled the Polaris-Taku gold-arsenopyrite-quartz veins and stockworks.

C. BIG BULL MINE GEOLOGY

C.1 Introduction

The Big Bull deposit is a precious metal-rich syngenetic massive sulphide deposit hosted by the pre-Mississippian to Permian Mount Eaton Group (Figs. 4 and 5, Map 2). Mapping during the 1992 Exploration Program has subdivided the Mount Eaton Group into five volcanic sequences in the Big Bull Mine area--Lower Mafic Volcanic Sequence (unit 1), Lower Felsic Volcanic Sequence (unit 2), Altered Volcanic/Exhalite Sequence (unit 3), Upper Mafic Volcanic Sequence (unit 4) and Upper Felsic Volcanic Sequence (unit 5). Volcanic rock compositions were estimated by colour; whole rock chemistry has not been completed on these rocks. In this area, the Mount Eaton Group forms an upright sequence that mainly strikes northwest and dips steeply southwest. Minor fold axes plunge shallow to moderately northwest. Exhalitive massive sulphide mineralization occurs within the sericite + silica + pyrite altered exhalitic tuff sequence (unit 3).

C.2 Stratigraphy

C.2.a Lower Mafic Volcanic Sequence (unit 1)

Lower Mafic Volcanic Sequence (unit 1) is the lowest unit identified in the Big Bull Mine area (Figs. 4 and 5, Map 2). The unit crops out along the eastern edge of the grid where it consists of mixed dacite to basalt ash and lapilli tuffs. Ash tuffs are dark green to dark grey (fresh surface) and andesite to basalt in composition. Lapilli tuffs have a medium green andesite to basalt ash matrix which supports mainly light green dacite clasts (Plate 1). Lapilli are subrounded to subangular, $<$4cm in diameter and aligned subparallel.

C.2.b Lower Felsic Volcanic Sequence (unit 2)

Lower Felsic Volcanic Sequence (unit 2) forms a thin unit ($<$50 metres) that crops out east of the Big Bull glory hole where it stratigraphically overlies Unit 1 (Figs. 4 and 5, Map 2). It can be traced from Line 1+00N 0+20E to Line 7+50N 2+00E. The unit consists mainly of pale green to maroon, thinly laminated (1-10mm) dacite dust to ash tuff, minor lapilli tuff and rare grey to maroon chert and black argillite laminae (Plate 2). The chert laminae are often magnetic from finely disseminated magnetite. Heterolithic dacite lapilli tuff form thick beds within the

LEGEND

MOUNT EATON GROUP – Mississippian or older to Early Permian (units 1–5)

5 **Upper Felsic Volcanic Sequence (unit 5)**
Thinly laminated, greyish green dacite ash to lapilli tuff and rare flows.

4 **Upper Mafic Volcanic Sequence (unit 4)**
Massive to weakly foliated, dark green to black, chloritic basalt tuff and flows; rare dacite tuff and argillite.

3 **Altered Volcanic/Exhalite Sequence (unit 3)**
Strongly foliated (schistose), sericite + pyrite altered tuff with thin beds of exhalitic chert, barite and sulphides. Sulphides are mainly pyrite with lesser sphalerite, galena and chalcopyrite.

2 ***Lower Felsic Volcanic Sequence* (unit 2)**
Thinly laminated, pale green dacite dust to ash tuff; minor argillite and chert.

1 **Lower Mafic Volcanic Sequence (unit 1)**
Dark green dacite to basalt ash and lapilli tuff.

ABBREVIATIONS

LITHOLOGY

BTF	Basalt tuff
BAT	Basalt ash tuff
BLT	Basalt lapilli tuff
BFL	Basalt flow
BFX	Basalt flow breccia
DTF	Dacite tuff
DDT	Dacite dust tuff
DAT	Dacite ash tuff
DLT	Dacite lapilli tuff
DFL	Dacite flow
DFX	Dacite flow breccia
VSD	Volcanic sediments
CHT	Chert
SCH	Chlorite +/– carbonate schist
EXT	Exhalitic tuff
PYF	Pyrite Facies
CUF	Copper Facies
ZNF	Zinc Facies
BDY	Basalt dyke

ALTERATION

HEM	Hematitic
PRO	Propylitic
CHL	Chloritic
CAL	Carbonate
SER	Sericitic
SIL	*Silicified*
BIO	Biotitic
COR	Cordierite

SULPHIDES

DPY	Disseminated pyrite
BPY	Banded pyrite
MPY	Massive pyrite
SPY	Stringer pyrite
DSL	Disseminated sphalerite
BSL	Banded sphalerite
MSL	Massive sphalerite
DGN	Disseminated galena
MGN	Massive galena
DCP	Disseminated chalcopyrite
BCP	Banded chalcopyrite
MCP	Massive chalcopyrite
SCP	Stringer chalcopyrite

PROFESSIONAL ENGINEERS PROVINCE OF BRITISH COLUMBIA P. J. McGUIRE GEOSCIENTIST

REDFERN RESOURCES LTD.

Report by: GLD, DJH
Date: March, 1993

TULSEQUAH CHIEF PROJECT
BIG BULL MINE
1992 Legend and Abbreviations

NTS: 104K
Mining Division: Atlin
Ref. # 8110–K8

Cambria Geological Ltd.

Fig.: 4

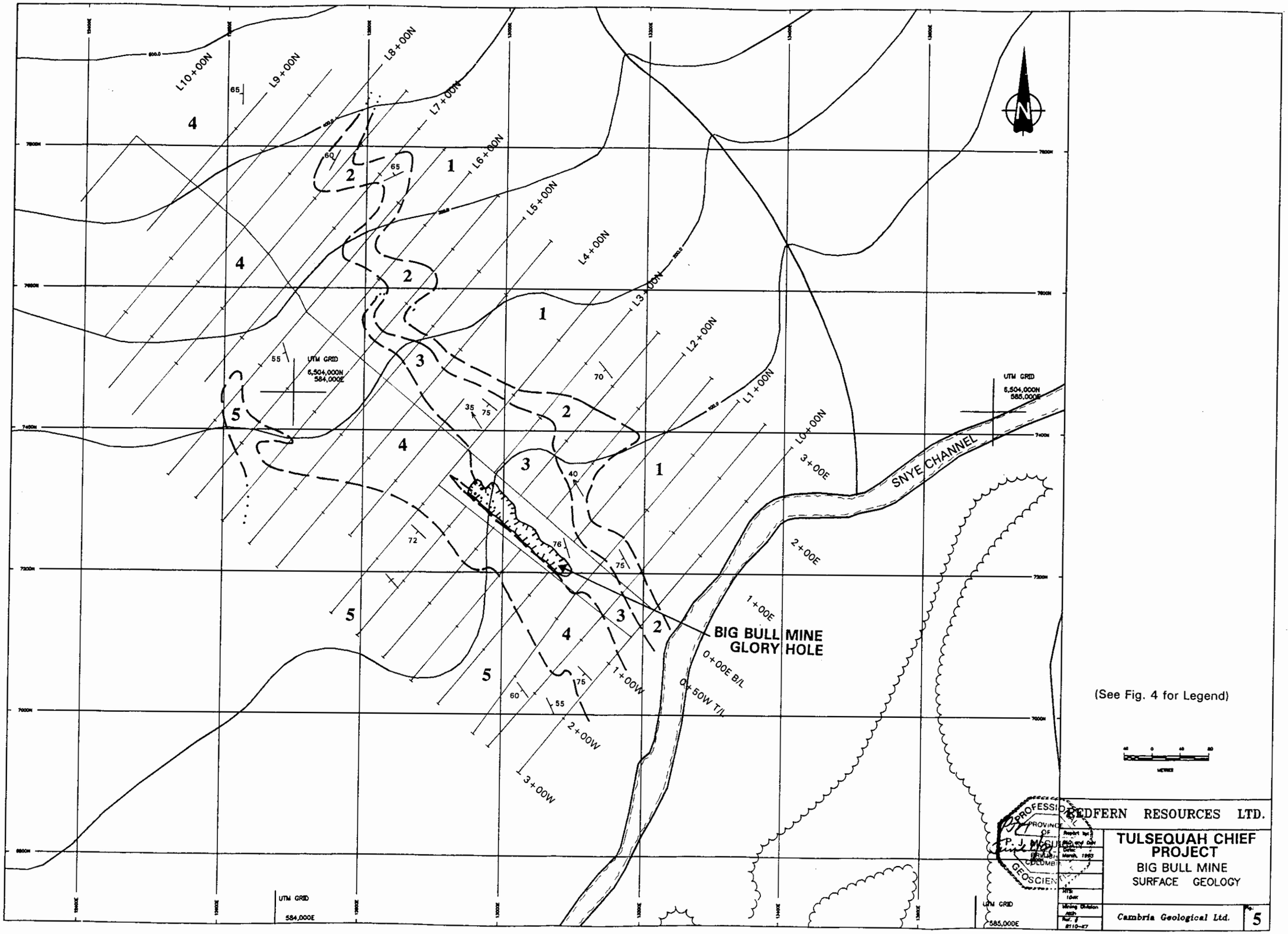

L10+00N
L9+00N
L8+00N
L7+00N
L6+00N
L5+00N
L4+00N
L3+00N
L2+00N
L1+00N
L0+00N
3+00E
2+00E
1+00E
0+00E B/L
0+50W T/L
1+00W
2+00W
3+00W
BIG BULL MINE
GLORY HOLE
SNYE CHANNEL
UTM GRID
6,504,000N
584,000E
UTM GRID
6,504,000N
585,000E
UTM GRID
584,000E
UTM GRID
585,000E
(See Fig. 4 for Legend)
REDFERN RESOURCES LTD.
TULSEQUAH CHIEF PROJECT
BIG BULL MINE
SURFACE GEOLOGY
Cambria Geological Ltd.
5

Plate 1 Mixed dacite to basalt lapilli tuff (unit 1). Medium green andesite to basalt ash tuff matrix with mainly pale green to cream dacite lapilli.

Plate 2 Pale green to white thinly laminated dacite dust to ash tuff (unit 2). Moderate to strong foliation (S_1) associated with phase one folding (F_1) locally produces "kink bands" in this unit.

thinly laminated tuffs. Lapilli consist of white, wispy (<3 cm), flattened pumaceous clasts (fiamme), black glass shards and lithic fragments.

C.2.c Altered Volcanic/Exhalite Sequence (unit 3)

Altered Volcanic/Exhalite Sequence (unit 3) crops out along the centre of the southern half of the grid (Figs. 4 and 5, Map 2). The unit (50 metres) is in sharp contact with the underlying Lower Felsic Volcanic Sequence (unit 2); it can be traced in outcrop for 500 metres from L+00N 0+45W to L5+00N 0+65E. The 200 metre long glory hole formed by the collapse of the historic underground workings is in this unit. The unit consists primarily of sericite + silica + pyrite altered ash and lapilli tuff with discrete lenses and beds of exhalitive sulphides, chert, barite and minor gypsum. Alteration of this unit is intense and the original protolith is uncertain, however, it is likely dacite similar to the underlying unit 2. Sulphides include sphalerite, chalcopyrite, galena, tetrahedrite and pyrite. Deformation has imparted a schistose fabric to the sericite altered volcanic rocks (Plate 3). Sub-parallel to the foliation are lenticular layers and laminations (<1 cm) of white to grey translucent chert. Fine grained pyrite (1-10%) occurs as fine disseminations or thin beds (<10cm) throughout the unit. Previous workers (Castle, 1929; M°Kechnie, 1930; Muraro, 1988) referred to this unit as either a shear zone, dacite and/or rhyolite.

A folded ("Z") massive sulphide bed hosted within strongly foliated sericite altered exhalitic tuff crops out (L3+00N 0+12W) at the northeastern end of the glory hole (Plate 4). Sulphides are remobilized and thickened along the fold axis (100 cm) and attenuated along the fold limbs (<15 cm). Sulphides include sphalerite, galena and pyrite in a gangue of chert and barite. Additional exposures of massive sulphides were not observed, however, massive sulphide boulders were found in the waste dumps and glory hole. Sulphide types observed in the boulders include:(i) thinly laminated to bedded chalcopyrite and dark brown sphalerite and (ii) mixed sulphide (sphalerite, galena, pyrite and chalcopyrite), barite and chert matrix supporting beige to green sericite altered volcanic fragments (Plate 5). This second type of mineralization suggests volcanic fragments (5-25%) were deposited into sulphide rich horizons prior to lithification.

Plate 3 Thinly laminated sericite + pyrite altered exhalitic ash tuff. Unit is strongly foliated (S_1) by phase one deformation (D_1); minor "S" fold (F_1) displayed by chert and pyrite laminae.

Plate 4 Folded (F_1) massive sulphide bed (unit 3) displaying thickening of sulphides along the fold hinge and attenuation on the limbs. Sulphides consist of pyrite, sphalerite and galena in a gangue of barite and chert.

Plate 5 Massive sulphide (unit 3) supporting beige, sericite altered volcanic fragments. Sulphides include pyrite, sphalerite, galena and chalcopyrite in a gangue of barite and chert. Altered volcanic fragments are interpreted to be deposited in the sulphide-rich horizons prior to lithification.

Compiled historic work (M°Kechnie, 1930 and others) indicate the main sulphide horizon was 2 to 8 metres thick and over 500 metres in strike length. The zone strikes AZ310° and dips steeply to 75° southwest. Cominco Ltd's. mine plans and sections (1947) show the zone(s) were mined on three levels to a depth of approximately 100 metres below surface.

C.2.d Upper Mafic Volcanic Sequence (unit 4)

The Upper Mafic Volcanic Sequence (unit 4) form a wedge shaped unit that thickens from 80 metres (Line 0+00N 1+40E) to greater than 200 metres where it underlies the northern and western portions of the grid (Figs. 4 and 5, Map 2). It consists primarily of massive to weakly foliated, chloritic, feldspar phyric basalt ash to lapilli tuff and flows. Dacite tuff and phyllitic, maroon basalt tuff occur as minor sub-units within unit 4. The unit is in sharp contact with altered exhalitic tuffs of unit 3.

C.2.e Upper Felsic Volcanic Sequence (unit 5)

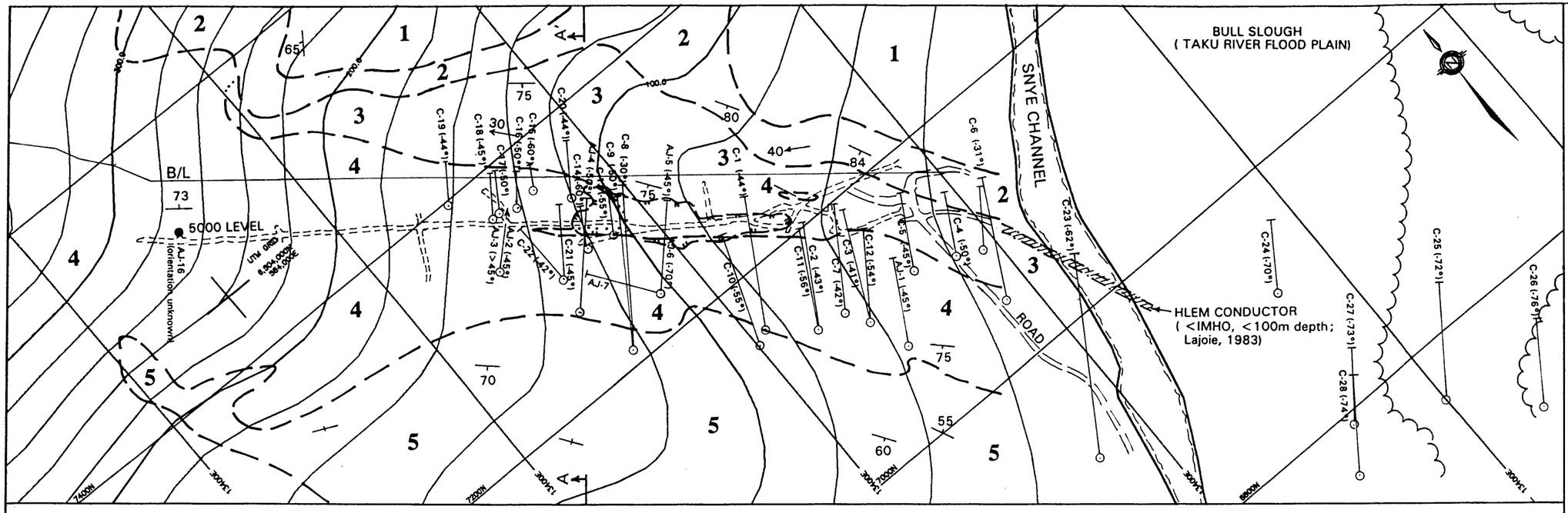
Upper Felsic Volcanic Sequence (unit 5) crops out on the southwest side of the grid where it stratigraphically overlies unit 4 (Figs. 4 and 5, Map 2). The unit consists mainly of massive, greyish green, heterolithic dacite lapilli tuff and thinly laminated, pale green to white dacite dust to ash tuff (Plate 6).

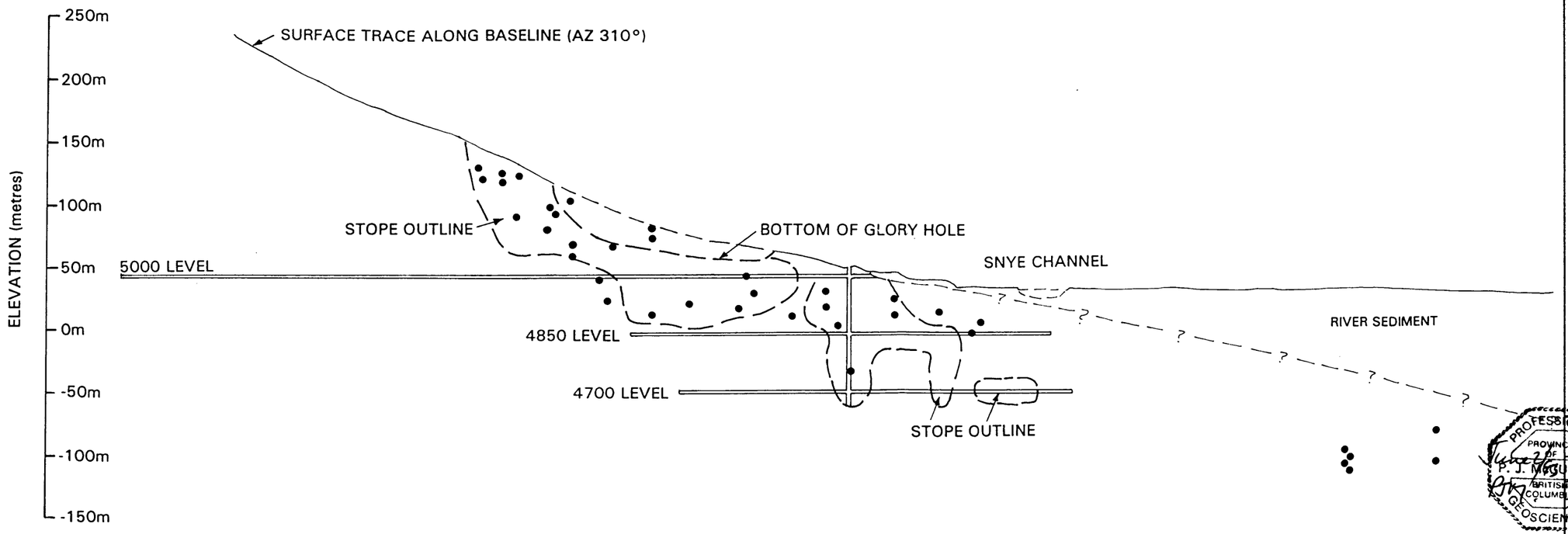
C.3 Structure

Mount Eaton Group rocks record two phases of deformation in the Big Bull Mine area. The first phase of deformation (D_1) produced easterly verging, parasitic folds on the western limb of the regional Mount Eaton Anticline. The Mount Eaton Anticline axial plane lies east of the map area along the western slope of Mount Eaton and Mount Manville (Fig. 3, Map 1).

In detail, the parasitic folds (F_1) are upright to overturned and have tight to moderate interlimb angles. Axial planes strike northwest and dip steeply; fold axes plunge shallowly to moderately ($<40°$) to the northwest. Foliation (S_1) related to the fold event is best developed in the sericite + pyrite altered tuffs (unit 3); it strikes northwest and dips steeply. Intersection of this foliation

Plate 6 Thinly laminated, pale green to white dacite dust to ash tuff (unit 5) displaying small scale folds (F_1).





● Sulphide Drill Intercept

(See Fig. 4 for Legend)

20 0 20 40 60 80
METRES

PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
P. J. McGUIGAN

REDFERN RESOURCES LTD.

BIG BULL MINE

Plan and Longitudinal Section Showing Surface Drilling and Underground Workings

NTS: 104K

Mining Division: Atlin

Ref. # 8110-KBF

Cambria Geological Ltd.

Fig. 6

(S_1) and bedding (S_0) produces a well developed lineation (L_1) that is similar in orientation to the plunge of the parasitic folds (F_1). Poles to A-C joint planes associated with this fold event plunge shallow to moderately northwest.

The second phase of deformation (D_2) is poorly understood. Overturned, small scale open folds (F_2) with amplitudes of 100 metres and a frequency of 125 metres are recognized only in the northeast area of the grid. Their axial plane strikes northeast and dips moderately northwest.

Major faults are not identified in the Big Bull Mine area. A reported fault zone drifted along in the underground workings (M^{c}Kechnie, 1930) appears to follow the contact between the Altered Volcanic/Exhalitic Sequence (unit 3) and the overlying Upper Mafic Volcanic Sequence (unit 4). This fault probably represents a bedding plane slip formed by folding units with a large competency contrast, and is probably not a major structural break; there appears to be no displacement across this structure (Plate 7).

C.4 Metamorphism and Alteration

Regional metamorphism has altered rocks of the Mount Eaton Group to Lower Greenschist facies mineral assemblages. The assemblage is characterized by pervasive chlorite, epidote, carbonate, minor quartz and trace pyrite and magnetite. Sericite + silica + pyrite alteration related to hydrothermal ore forming processes is restricted to the Altered Volcanic/Exhalite Horizon (unit 3).

C.5 Big Bull Mine Compilation

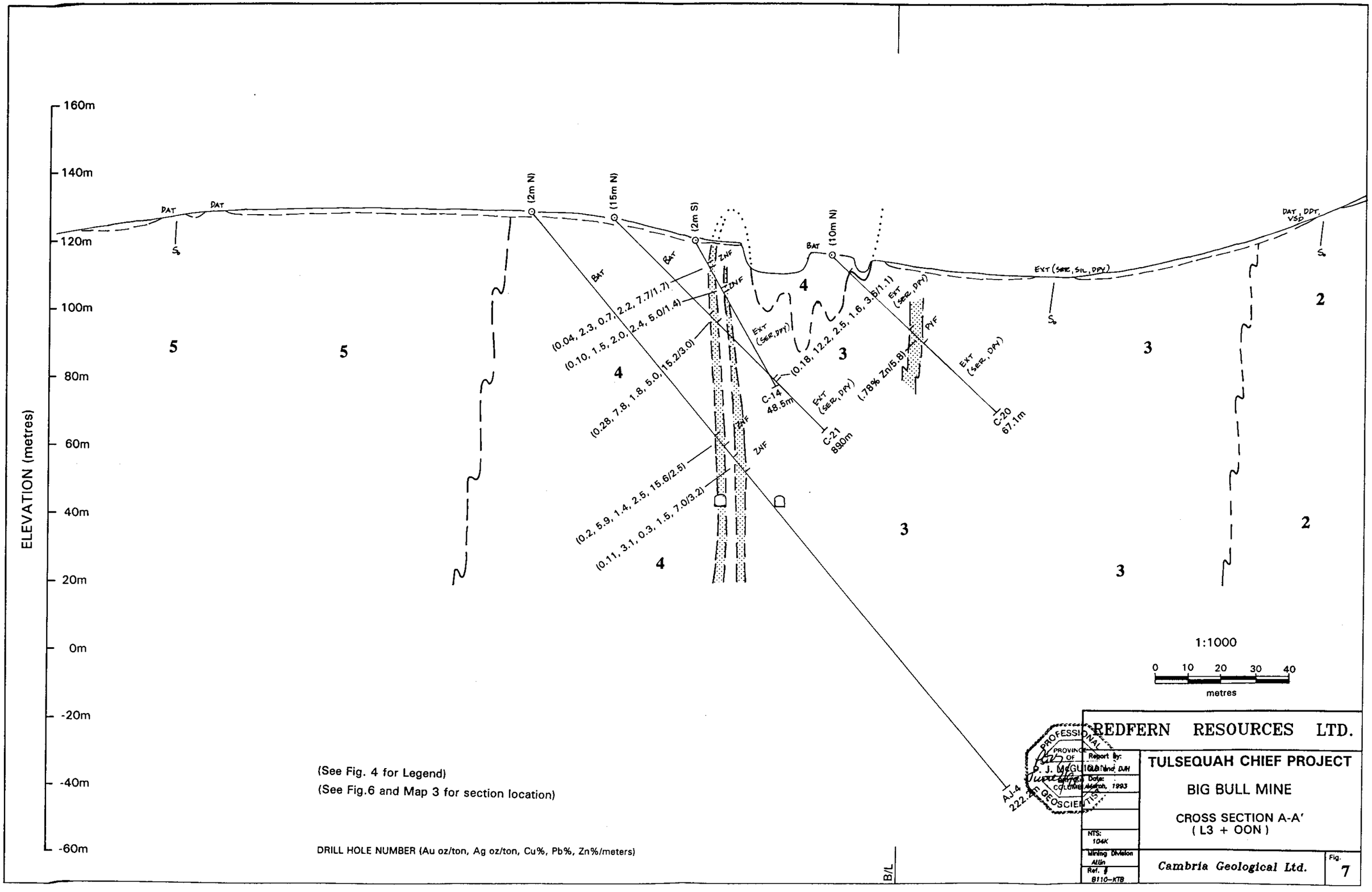
Exhalitive massive sulphide (unit 3) surface exposures have largely been removed by mining and underground workings are not accessible. Surface drilling (C-1 to 28, AJ-1 to 7, 12), limited underground drilling (L-1 to L-6, AJ-16) and underground workings completed from 1929 to 1957 were compiled to determine the tenor and extent of massive sulphide mineralization (Fig. 6, Map 3). Underground drill holes (71) completed by Cominco Ltd. from 1951 to 1957 are not included in this compilation.

Plate 7 Bedding plane slip between sericite+pyrite altered exhalitic tuffs (unit 3) and overlying massive andesite ash tuff (unit 4). This break formed as a result of competency contrasts between the two units during phase one folding (F_1).

Drilling and mining indicate at least one massive sulphide horizon that is 500 metres in strike length, extends from surface (+50 to +150 metres elevation) to -50 metres elevation, and varies from 2 to 8 metres in thickness. The sulphide horizon strikes AZ310° and dips steeply 75° southwest. Drilling (C-24 to C-28) on the east side of Snye Channel on the Taku River flood plain (Bull Slough) intersected sericite + pyrite altered exhalitic tuffs and sulphides 400 metres southeast of the mine workings. The most easterly drill hole (C-25) intersected 3.5 metres of sub-economic mineralization. A Horizontal Loop EM Survey (Lajoie, 1983) identified the horizon 100 metres southeast of the mine workings, however, no anomalies were identified in the area of drill holes C-24 to C-28.

Near the north end of the glory hole, two massive sulphide horizons were intersected near the upper contact of unit 3 (Fig. 7). The upper sulphide horizon (<3 metres) is separated from the lower horizon (<4 metres) by altered exhalitic tuff (<3 metres). Sericite + pyrite altered exhalitic tuff was intersected to the end of the 5000 Level drift; this is approximately 150 to 200 metres north of surface exposures.

In detail, sulphide horizons are structurally thickened along fold noses and attenuated along fold limbs, resulting in shallow (<35°), northeast plunging orebodies. Castle (1929) describes the sulphide orebodies as being kidney shaped in plan and rod-like in section (fold axis).



(See Fig. 4 for Legend)

(See Fig.6 and Map 3 for section location)

DRILL HOLE NUMBER (Au oz/ton, Ag oz/ton, Cu%, Pb%, Zn%/meters)

B/L

PROFESSIONAL ENGINEERS PROVINCE OF BRITISH COLUMBIA D. J. McGUIGAN GEOSCIENTIST

REDFERN RESOURCES LTD.

TULSEQUAH CHIEF PROJECT

BIG BULL MINE

CROSS SECTION A-A'
(L3 + OON)

Report By:	GLA and DJH
Date:	March, 1993
NTS:	104K
Mining Division	Atlin
Ref.	8110-KTB

Cambria Geological Ltd.

Fig. 7

D. CONCLUSIONS

The Big Bull volcanogenic massive sulphide deposit is hosted by the pre-Mississippian to Permian Mount Eaton Group. Mapping in 1992 and re-interpretation of data from Payne (1987) has identified two felsic volcanic-sedimentary sequences within the dominantly mafic Mount Eaton Group. The lower felsic volcanic-sedimentary sequence hosts the Tulsequah Chief and Big Bull deposits, plus extensive areas of altered volcanic rocks. Stratigraphically higher is the upper felsic volcanic-sedimentary sequence which contains felsic volcanics, volcanic sediments and limestone. Massive sulphides have not been found in the upper sequence. Both the upper and lower sequence are prospective for additional volcanogenic massive sulphide discoveries.

In the Big Bull Mine area, the 1992 mapping has subdivided the Mount Eaton Group into five volcanic sequences--Lower Mafic Volcanic Sequence (unit 1), Lower Felsic Volcanic Sequence (unit 2), Altered Volcanic/Exhalite Sequence (unit 3), Upper Mafic Volcanic Sequence (unit 4) and Upper Felsic Volcanic Sequence (unit 5). The Lower Felsic Volcanic Sequence (unit 2), Altered Tuff/Exhalite Sequence (unit 3) and the Upper Felsic Volcanic Sequence (unit 5) are equivalent to the Lower Felsic Volcanic-Sedimentary Sequence on the Property Map.

In the Big Bull Mine area, the Mount Eaton Group forms an northwest striking, steeply dipping, upright sequence on the western limb of the regional Mount Eaton Anticline. Easterly verging parasitic folds (F_1) related to this deformation (D_1) plunge shallowly ($<35°$) to the northwest. A second phase of deformation (D_2) produced overturned small scale open folds (F_2) in the northeast area of the grid. Their axial plane strikes northeast and dips moderately northwest.

Massive sulphide horizons which were the focus of mining from 1951 to 1957 occur near the upper contact of the sericite + pyrite altered exhalitic tuff sequence (unit 3). Drilling and mining indicate one massive sulphide horizon is 500 metres in strike length, extends from surface (+50 to +150 metres elevation) to -50 metres elevation, and varies from 2 to 8 metres in thickness. The sulphide horizon strikes AZ310° and dips steeply 75° southwest. The thickest massive sulphide intervals occur along minor fold (F_1) axes which plunge shallowly ($<35°$) to the northeast.

Drilling (C-24 to C-28) on the east side of Snye Channel on the Take River flood plain (Bull Slough) intersected altered exhalitic tuffs and sulphide horizons up to 400 metres southeast of the mine workings.

Exploration targets identified during the 1992 program are:

* Southeast extension of sulphide horizons from the mine workings across the Snye Channel to drill hole C-27 to C-28. This represents approximately 200 metres of untested strike length; drill hole C-24 was likely collared in the footwall of the Altered Volcanic/Exhalite Sequence (unit 3).

* Southeast extension of sulphides intersected in drill holes C-25, -26 and -27.

* Downplunge (35°) extension of sulphide horizons from the northwest end of the glory hole below the 5000 Level (42 metre elevation) drift.

* Downdip and downplunge potential of the Altered Tuff/Exhalite Sequence (unit 3). Drilling and mining to date has focussed mainly on outlining sulphide horizons exposed on surface near the upper contact of this unit; only minor drilling has tested the complete stratigraphic interval of unit 3.

* Massive sulphide horizons associated with the Upper Felsic Volcanic Sequence (unit 5).

E. RECOMMENDATIONS

The 1992 Exploration Program has identified a number of exploration targets in the Big Bull Mine area. In 1993, a three phase program is recommended to evaluate these targets.

Phase One Program - Big Bull Mine Compilation

* Compile all surface (approximately 40) and underground (approximately 71) drill holes into a drill hole management program (LogII).

* Digitize Cominco Ltd.'s underground workings and stope outlines in AutoCAD.

* Produce a set of level plans at 50 metre intervals from surface (+150 metre elevation) to -100 metre elevation.

* Produce a set of cross sections orientated at AZ040° at 20 metre intervals across the deposit.

* Interpret level plans and sections; this would allow a better understanding of the thickness and grade of the deposit before it was mined, identify areas that were drill tested but not mined, and define trends of high grade/thickness mineralization which could be projected to untested areas.

Phase Two Program - Surface Surveys

* Surveying: merge historic mine surveys with 1992 Tulsequah Chief Mine Survey. Tie in Cominco Ltd. (<1947) Survey, Cominco Ltd. (1950-1957) Survey, Muraro (1988) Survey, portal, shaft, drill hole collars etc.

* Linecutting: extend grid to the west to cover the Upper Felsic Volcanic Sequence (unit 5), to the northeast to cover the Lower Felsic Volcanic Sequence (unit 2), and to the southeast to cover the extension of the Altered Volcanic Exhalite Sequence (unit 3) across the Snye Channel in the Bull Slough area.

* Geophysics: complete magnetometer, VLF and EM Surveys over the entire grid. More detailed surveys should be completed over the Altered Volcanic/Exhalite Sequence (unit 3) and across felsic volcanic contacts.

* Geochemistry: soil sampling over the entire grid at 24 metre spaced stations.

* Geological Mapping: walk out lithologic contacts and refine structural interpretation of the 1992 program. Extend mapping over areas of the new grid.

Phase Three Program - Surface Drilling

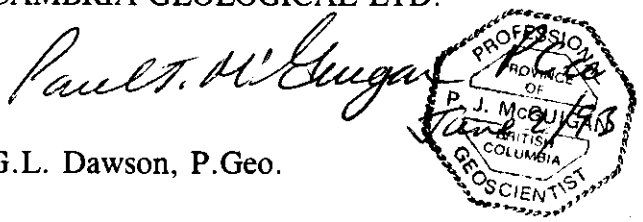
* Drilling: drill test targets identified during the Phase One and Phase Two Programs.

* Downhole Geophysical Surveys: complete downhole EM surveys to map the continuity of sulphide horizons and identify nearby sulphide targets.

The proposed 1993 Budget for the Phase One and Phase Two Program is outlined in Appendix 2. Budgeting for the Phase Three program would be determined on completion of the Phase One and Phase Two Programs.

Respectfully submitted,

CAMBRIA GEOLOGICAL LTD.



G.L. Dawson, P.Geo.

F. REFERENCES

Casselman, M.J. (1987): Cominco Work Proposal No. WP 87-34A, In-house report.

Castle, W.F. (1929): Report on the Big Bull Group. Unpublished report.

Cominco, (1980): Big Bull Composite Plan: Longitudinal Section & Cross Sections; compilation map and section at 1"=100' (coloured). Unpublished Map.

Cominco, (1947): Big Bull Property; 5000 Level Plan and Longitudinal Section showing Ore Reserve Blocks (two maps dated Oct. 10/47 and Nov. 25/47). Unpublished Maps.

Irvine, W.T. (1957): Tulsequah Chief and Big Bull Mines, in Structural Geology of Canadian Ore Deposits, Vol. 2.

Lajoie, J.J. (1983): Horizontal Loop EM, VLF-EM, and Magnetics Surveys on the Big Bull, Big Bull Extension, Big Bull 2, 3, 4, 8, and 9 Claims. B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 11,361.

Kerr, F.A. (1948): Taku River map-area, British Columbia. Geological Survey of Canada, Memoir 248.

M^{c}Kechnie, D.C. (1930): Big Bull Group, Taku River, B.C., Cominco Report.

Muraro, T.W. (1988): Geological Mapping of the Big Bull Property. B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 16,983.

Muraro, T.W. (1989): Big Bull Property B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 18,428.

Nelson, J. and Payne, J.G. (1984): Paleozoic Volcanic Assemblages and Volcanogenic Massive Sulphide Deposits near Tulsequah, B.C. Canadian Journal of Earth Sciences, 21: 379-381.

Payne, J.G.,(1979): Geology Report for Semco Mining Corporation on the Erickson-Ashby Claims. B.C. Ministry of Energy Mines, and Petroleum Resources, Assessment Report 7707.

Payne, J.G. and Sisson, W. (1987): Geological Report on the Tulsequah-Taku Property (Webb, CO, Bull, Big Bull, Swamp Claim Groups). B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 17,054.

Sorbara, J.P. (1981): Geological - Geochemical Report on the Big Bull Area. B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 9825.

Souther, J.G. (1971). Geology and Mineral Deposits of the Tulsequah Map Area, British Columbia: Geological Survey of Canada, Memoir 362.

APPENDIX 1

MINERAL CLAIM HOLDINGS

APPENDIX 1

MINERAL CLAIM HOLDINGS

Claim Name	No. of Units	Tenure No.	Expiry Date
CO #3	20	201802	Mar. 04, 2000
CO #5	18	201803	Mar. 04, 2000
GOAT 1	16	201925	July 23, 1994
SWAMP #1	4	201926	July 23, 2000
SWAMP #2	1	201927	July 23, 2000
SWAMP #3	1	201928	July 23, 2000
TALLON #1	20	202030	Aug. 02, 1993
TALLON #2	9	202031	Aug. 02, 1993
WEBB 1	20	202279	Nov. 27, 2000
WEBB 4	20	202282	Nov. 27, 2000
WEBB 5	20	202283	Nov. 27, 2000
WEBB 9	10	202284	Nov. 27, 2000
WEBB 10	16	202285	Nov. 27, 2000
MARY 1	20	203385	Aug. 05, 2001
MARCIE 1	20	203386	Aug. 05, 2001
MARCIE 2	20	203387	Aug. 05, 2001
MARCIE 3	20	203388	Aug. 05, 2001
ELYSA 1	20	203389	Aug. 05, 2001
ELYSA 2	20	203390	Aug. 05, 2001
ELYSA 3	6	203391	Aug. 03, 2001
ELYSA 4	20	203392	Aug. 05, 2001
BULL NO. 8	1	203779	July 16, 2000
BULL NO. 9	1	203780	Apr. 25, 2000
BRUCE FR.	1	203781	Aug. 17, 2000
BIRDS	1	203794	May 30, 2001
PAT	1	203795	May 30, 2001
ROSS	1	203796	May 30, 2001
BIG BULL EXTENS	1	203965	July 18, 2000
BULL #2	1	203966	July 19, 2000
BULL NO. 3	1	203967	July 19, 2000
BULL #4	1	203968	July 19, 2000

APPENDIX 1 (continued)

CROWN GRANTED CLAIMS

Name	Lot No.	Area (Ha)
RIVER FR.	5669	7.99
TULSEQUAH BONANZA	5668	20.90
TULSEQUAH BALD EAGLE	5676	14.16
TULSEQUAH CHIEF	5670	20.90
TULSEQUAH ELVA FR.	5679	9.70
BIG BULL	6303	20.65
BULL NO. 1	6304	16.95
BULL NO. 5	6306	14.57
BULL NO. 6	6305	17.22
HUGH	6308	20.71
JEAN	6307	17.02
VEGA NO. 1	6155	20.90
VEGA NO. 2	6156	17.62
VEGA NO. 3	6157	18.97
VEGA NO. 4	6158	19.85
VEGA NO. 5	6159	14.94
JANET W. NO. 1	6160	18.95
JANET W. NO. 2	6161	18.75
JANET W. NO. 3	6162	16.60
JANET W. NO. 4	6163	20.76
JANET W. NO. 5	6164	18.20
JANET W. NO. 6	6165	19.02
JANET W. NO. 7	6166	18.78
JANET W. NO. 8	6167	17.99
JOKER	6169	16.60

APPENDIX 2

PROPOSED 1993 BUDGET

PROPOSED 1993 EXPLORATION BUDGET

PHASE ONE PROGRAM - BIG BULL COMPILATION

1. Input and plot historic drilling and underground workings	$2,500.00	
2. Interpretation of level plans and sections	5,000.00	
Total Phase One	7,500.00	$7,500.00

PHASE TWO PROGRAM - SURFACE SURVEYS

1. Surveying	2,000.00	
2. Linecutting (15 km)	15,000.00	
3. Geophysics (30 km)		
Magnetic-VLF Survey	12,000.00	
EM Survey	30,000.00	
4. Geochemistry (1200 samples)	48,000.00	
5. Geological Mapping (60 days)	30,000.00	
6. Camp Mobilization, etc.	20,000.00	
Total Phase Two	157,000.00	157,000.00
Total Phase One and Phase Two Programs		**$164,500.00**

PHASE THREE PROGRAM - SURFACE DRILLING

1. Drill testing targets from Phase One and Phase Two Programs (say 1000 m)	150,000.00	150,000.00
Total Phase One, Two and Three Programs		**$314,500.00**

APPENDIX 3

1992 COST STATEMENT

EXPENDITURE ALLOCATION LEGEND

A	U/G WORK AND DRILLING
B	SURFACE MAPPING - TULSEQUAH CHIEF
C	SURFACE MAPPING - BIG BULL
D	U/G MAPPING - TULSEQUAH CHIEF

REDFERN RESOURCES LTD.
TULSEQUAH PROJECT
1992 PROGRAM EXPENSE SUMMARY - July to December, 1992

Category	Description	Expenditures	A	B	C	D	TOTAL
Air charter	Fixed wing/helicopter -supply and support	$134,777.79	$127,977.79	$2,000.00	$4,000.00	$800.00	$134,777.79
Assay/Analysis	Assay/ICP/freight	$6,079.78	$5,479.78	$300.00	$300.00	$0.00	$6,079.78
Camp supplies	Groceries, hardware, materials etc.	$45,263.99	$42,863.99	$1,000.00	$1,000.00	$400.00	$45,263.99
Communications	Radios/Satellite-Tel/BC Tel	$23,180.66	$22,280.66	$400.00	$400.00	$100.00	$23,180.66
Drilling/UG	Drilling, materials, parts, machinery repair, U/G labour, mine and drillhole surveys	$727,696.88	$727,696.88	$0.00	$0.00	$0.00	$727,696.88
Expediting	Expediting/equip. rentals/labour	$64,905.82	$59,405.82	$2,500.00	$2,500.00	$500.00	$64,905.82
Freight/shipping	Air/truck freight, courier	$9,341.64	$8,741.64	$200.00	$300.00	$100.00	$9,341.64
Fuel supply	Bulk diesel,JP4, propane	$49,658.93	$48,108.93	$300.00	$1,000.00	$250.00	$49,658.93
Geological/Supervision	On-site geological control and reporting	$284,506.78	$252,006.78	$17,000.00	$13,000.00	$2,500.00	$284,506.78
Labour/wages	Additional crew/labour costs	$37,643.32	$36,643.32	$500.00	$200.00	$300.00	$37,643.32
Misc.	Reproduction, Travel/accomod., misc.	$6,606.53	$5,606.53	$400.00	$500.00	$100.00	$6,606.53
Surface work	Line-cutting, topo-scanning.	$34,536.75	$0.00	$20,536.75	$14,000.00	$0.00	$34,536.75
TOTAL		$1,424,198.87	$1,336,812.12	$45,136.75	$37,200.00	$5,050.00	$1,424,198.87
			$291.79 per meter	$2,702.31 per line-km	$2,227.14 per line-km	$4,105.69 per km	

EXPENDITURE SUMMARY BY CLAIM AND GROUP		A	B	C	D	TOTAL	TC-CENTRAL GROUP	BB GROUP	TC-NORTH GROUP	TC-WEST GROUP
	CLAIM									
	BIRDS	$38,433.98	$4,750.67			$43,184.65	$43,184.65			
	TULSEQUAH ELVA FR.	$695,575.66	$3,848.10		$1,724.39	$701,148.15				$701,148.15
	MARCIE 3	$338,269.79	$5,280.32		$369.51	$343,919.62			$343,919.62	
	TULSEQUAH BALD EAGLE	$170,242.22	$1,178.21			$171,420.43	$171,420.43			
	TULSEQUAH CHIEF	$94,290.47	$11,263.24		$2,956.10	$108,509.81				$108,509.81
	PAT		$4,691.22			$4,691.22	$4,691.22			
	RIVER FR.		$2,126.72			$2,126.72				$2,126.72
	ROSS		$3,675.15			$3,675.15			$3,675.15	
	TULSEQUAH BONANZA		$8,323.13			$8,323.13				$8,323.13
	BIG BULL EXTENSION			$6,200.00		$6,200.00		$6,200.00		
	BULL 4			$6,200.00		$6,200.00		$6,200.00		
	BIG BULL			$6,200.00		$6,200.00		$6,200.00		
	BULL NO.1			$6,200.00		$6,200.00		$6,200.00		
	BULL NO. 5			$6,200.00		$6,200.00		$6,200.00		
	BULL NO. 6			$6,200.00		$6,200.00		$6,200.00		
		$1,336,812.12	$45,136.75	$37,200.00	$5,050.00	$1,424,198.87	$219,296.29	$37,200.00	$347,594.77	$820,107.81

REDFERN RESOURCES LTD.
TULSEQUAH PROJECT Expenditure Listing by Category
1992 PROGRAM July to December 1992

Month	Category	Vendor	Description	Cheque Amt.	Category Subtotal
Aug.	Air charter	Action Aviation	Charter, White-Tuls 310mi	$620.00	
Aug	Air charter	Capital Helicopters	206B slinging fuel & supp	$4,002.17	
Aug.	Air charter	Capital Helicopters	206B 16.2 hr. camp & drill	$8,501.84	
Sept.	Air charter	Capital Helicopters	206B Slinging/supplies	$10,864.66	
Aug.	Air charter	Discovery Helicopters	206B 6.1 hr camp & drill	$3,420.70	
Sept.	Air charter	Discovery Helicopters	206B Supplies/Slinging	$7,660.91	
Oct.	Air charter	Discovery Helicopters	206B Slinging Fuel & Supp	$11,488.20	
Oct.	Air charter	Discovery Helicopters	206B slinging fuel & supp	$5,501.44	
Nov.	Air charter	Discovery Helicopters	206B slinging fuel & supp	$11,856.14	
Dec.	Air charter	Discovery Helicopters	206B slinging fuel & supp	$6,089.04	
Sept.	Air charter	Frontier Helicopters	206B 4.0 hrs. Supply move/mine surve	$2,529.30	
Sept.	Air charter	Frontier Helicopters	206B slinging fuel & supp	$3,116.10	
Oct.	Air charter	Summit Air	Air charter/Equip transport	$11,101.20	
Aug	Air charter	Summit Air Charters	Beech/207 air transport	$4,149.20	
Aug.	Air charter	Summit Air Charters	Beech - Freight & Fuel hauls	$9,285.00	
Sept.	Air charter	Summit Air Charters	Beech/207 - Freight & Fuel hauls	$27,101.56	
Oct.	Air charter	Summit Air Charters	Air charter/Equip transport	$3,508.00	
Nov.	Air charter	Summit Air Charters	Air charter/Equip transport	$1,763.80	
Nov.	Air charter	Summit Air Charters	Beech 132 mi Genset, equip	$528.00	
Dec.	Air charter	Summit Air Charters Ltd.	207 Air charter transport	$1,172.54	
Sept.	Air charter	Temsco Helicopters (US $)	Hughes 500D 3PAX Juneau	$517.99	$134,777.79
Oct.	Assay/Analysis	ACME Analytical	Assay 28 spls.	$778.27	
Oct.	Assay/Analysis	ACME Analytical	Assay/ICP/freight	$3,020.94	
Nov.	Assay/Analysis	ACME Analytical	Assay/ICP/freight	$1,673.60	
Dec.	Assay/Analysis	ACME Analytical	Assay/ICP/freight	$606.97	$6,079.78
Aug.	Camp supplies	Abso Blue Prints	Bond Paper Xerox 2080	$275.47	
Aug	Camp supplies	Acme Analytical	Feldspar kit/soil bags	$196.10	
Aug.	Camp supplies	Atlin General Store	Supplies	$87.33	
Aug	Camp supplies	Atlin General Store	Paint supplies	$190.47	
Sept.	Camp supplies	Atlin General Store	Camp Supplies	$172.93	
Oct.	Camp supplies	Atlin General Store	Hardware	$138.86	
Nov.	Camp supplies	Atlin General Store	Hardware	$7.67	
Dec.	Camp supplies	Atlin General Store Ltd.	Hardware, misc.	$77.92	
Nov.	Camp supplies	Centre Line Workshop	Labour, carpentry 16.5 days	$2,725.00	
Aug.	Camp supplies	Deakin Equipment	Stamp Dies 3/16"	$96.99	
Sept.	Camp supplies	Deakin Equipment	Camp supplies, matt&cloth	$626.55	
Sept.	Camp supplies	Dominion Blueprint	Blackline-Sepias	$279.31	
Sept.	Camp supplies	ENS Baldry	Spine Board	$55.00	
Aug.	Camp supplies	Falcon Research Ltd.	Supplies	$53.47	
Oct.	Camp supplies	Food Fair	Groceries	$1,399.62	
Dec.	Camp supplies	Food Fair	Groceries	$697.88	
Oct.	Camp supplies	Kilrich Industries	Supplies	$1,342.86	
Aug.	Camp supplies	Klondike Copier	Aug. rent - photocopier	$213.00	
Sept.	Camp supplies	Klondike Copier	Toner Cartridge for PC20	$138.00	
Nov.	Camp supplies	Klondike Copier	Copier rental Oct.	$75.00	
Dec.	Camp supplies	Klondike Copier	Copier rent Oct-Nov 3	$82.50	
Aug	Camp supplies	Nelville Crosby	Field, sampling supplies	$917.01	
Oct.	Camp supplies	Nelville Crosby Industries	Camp Supplies	$631.46	
Aug.	Camp supplies	Neville Crosby	Supplies, field work	$1,396.83	
Sept.	Camp supplies	Northern Building	Lumber, plywood	$1,955.90	
Aug	Camp supplies	Northern Building	Lumber & plywood	$1,947.40	
Sept.	Camp supplies	Northern Hospital	First Aid Supplies	$588.90	
Nov.	Camp supplies	Northern Hospital Rehab.	Resusitator kit (1st Aid)	$307.10	
Aug	Camp supplies	Northern Metalic Sales	Tools, parts, supplies	$1,460.81	
Oct.	Camp supplies	Northern Metallic	Hardware supplies	$1,904.01	
Aug.	Camp supplies	Northern Metallic Sales	Fire Safety Equipment/Paint	$1,881.48	
Oct.	Camp supplies	Northern Metallic Sales	Supplies	$37.66	
Oct.	Camp supplies	Northern Metallic Sales	Hardware	$235.82	
Oct.	Camp supplies	Northern Metallic Sales	Supplies	$27.94	
Nov.	Camp supplies	Northern Metallic Sales	Credit, G101 filters	($36.90)	
Dec.	Camp supplies	Northern Metallic Sales	Fire axes	$120.20	
Aug.	Camp supplies	Profile Business Supplies	2bx continuous feed paper	$81.75	

Aug.	Camp supplies	Universal Manufacturing	Long Backboard	$106.00	
Aug	Camp supplies	Vi & Cor's Food	Groceries	$3,265.99	
Aug.	Camp supplies	Vi & Cor's Food Basket	Groceries	$3,046.46	
Sept.	Camp supplies	Vi & Cor's Food Basket	Groceries	$9,177.73	
Oct.	Camp supplies	Vi & Cor's Food Basket	Groceries	$3,699.06	
Dec.	Camp supplies	Vi & Cor's Food Basket	Groceries	$2,637.93	
Sept.	Camp supplies	Western Diazo	Drafting film, supplies	$681.63	
Sept.	Camp supplies	Western Diazo	Drafting film	$259.89	$45,263.99
Nov.	Communications	Falcon	Radio Rental Nov 1-4	$141.67	
Oct.	Communications	Falcon Research	VHF radios Rental Sept.	$604.20	
Dec.	Communications	Falcon Research	Rental, VHF radio, Oct.	$604.20	
Sept.	Communications	Falcon Research Ltd.	Aug. rent - VHF radios	$630.70	
Nov.	Communications	Infosat	Long dist. tel/freight	$104.78	
Nov.	Communications	Infosat	BC Tel for camp long distance	$871.68	
Dec.	Communications	Infosat	Telephone L.D.	$7.40	
Aug.	Communications	Infosat Tele	Sat. Phone Aug. & Last Month	$9,600.00	
Sept.	Communications	Infosat Tele	Sat-phone install/rental	$10,616.03	$23,180.66
Dec.	Drilling/UG	ADW Engineering	Survey equipment rental Oct.	$1,375.00	
Oct.	Drilling/UG	ADW Surveyors	Survey - mine workings	$8,385.41	
Nov.	Drilling/UG	ADW Surveyors	Equip Supply & rental Sept	$1,375.00	
Sept.	Drilling/UG	Boisvenu	Drilling, labour, parts	$46,439.10	
Oct.	Drilling/UG	Boisvenu Drilling	Drilling, labour, parts	$87,969.35	
Oct.	Drilling/UG	Boisvenu Drilling	Drilling, labour, parts	$60,415.78	
Nov.	Drilling/UG	Boisvenu Drilling	Drilling, labour, parts	$82,434.49	
Nov.	Drilling/UG	Boisvenu Drilling	Drilling, labour, parts	$145,238.12	
Dec	Drilling/UG	Boisvenu Drilling	Drilling, labour, parts	$104,397.23	
Oct.	Drilling/UG	Canamet	Supplies U/G	$1,192.65	
Nov.	Drilling/UG	Canamet	Rental B2135 Pump to Oct. 21	$726.50	
Sept.	Drilling/UG	Canamet Sales	Materials, Hose, Jackleg rent Etc.	$1,991.75	
Sept.	Drilling/UG	Canamet Sales Yukon	Rental-Flygt Pumps	$2,147.20	
Dec.	Drilling/UG	Canamet Sales Yukon Ltd.	Rent, Flygt Pump	$486.00	
Aug	Drilling/UG	Don Wright	Expense account Jul 21/92	$638.62	
Sept.	Drilling/UG	Don Wright	Tel. locate equipment	$58.53	
Oct.	Drilling/UG	Don Wright	Mine equip./expenses	$2,641.85	
Dec.	Drilling/UG	Don Wright	Freight exp. D. Wright	$481.35	
Sept.	Drilling/UG	Dr. Matti Raudsuip	Petrographic Study	$336.00	
July	Drilling/UG	F. Boisvenu	Drill labour/repair/parts/mob	$112,467.31	
Aug.	Drilling/UG	Finning	Finning	$670.26	
Oct.	Drilling/UG	Fry & Associates	Rent 2 drum slusher	$742.00	
Nov.	Drilling/UG	Jacobs	Oxygen	$70.25	
Sept.	Drilling/UG	Jacobs Industries	Bottle Oxygen/Acetylene	$207.00	
Oct.	Drilling/UG	Jacobs Industries	Oxygen/Acetylene bottles	$222.50	
Dec.	Drilling/UG	Jacobs Industries Limited	Oxygen Cyl Rent Sep-Oct 15	$8.00	
Sept.	Drilling/UG	Northern Metallic Sales	Drilling/Misc. Supplies	$1,758.28	
Oct.	Drilling/UG	Pothier Enterprises	Rental Sperry Sun Sept/92	$1,706.07	
Oct.	Drilling/UG	Pothier Enterprises	Film and developer	$120.84	
Nov.	Drilling/UG	Pothier Enterprises	Sperry rent, Oct-Nov. 6	$1,706.07	
Aug.	Drilling/UG	Pothier Enterprises Ltd.	Aug. rent-Sperry Sun	$1,706.07	
Dec.	Drilling/UG	Pothier Enterprises Ltd.	Sperry repairs, misc.	$205.87	
Aug.	Drilling/UG	R.F. Fry & Associates	Aug 15-Sept 15 Rent, Slusher	$371.00	
Sept.	Drilling/UG	R.F. Fry & Associates	Secan-J Leg & One spare	$847.25	
Oct.	Drilling/UG	Silver Fox Mining	20 ft. lengths of 20 lb rail	$1,450.00	
Sept.	Drilling/UG	Tamrock EJC Canada	12B Loader Repair & Parts	$336.59	
Nov.	Drilling/UG	Techdel	Light-log Rent/Interp. Sept.	$6,825.70	
Dec.	Drilling/UG	Techdel	Lightlog - shipping/interp.	$1,182.00	
Aug.	Drilling/UG	Techdel International	Aug. rent - light log	$4,029.95	
Dec.	Drilling/UG	Techdel International Inc.	Light log interpretation	$7,168.20	
Sept.	Drilling/UG	Terraplus Inc.	Aug. rent - KT-5 meter	$322.82	
Sept.	Drilling/UG	Transwest Dynequip	Underground pipe and rail	$11,568.26	
Aug.	Drilling/UG	Tri-Valley Equipment	Tri-Valley Equipment	$118.80	
Sept.	Drilling/UG	Vancouver Petrograhics	2 Precision Diamond Blade	$392.20	
Sept.	Drilling/UG	West Coast	WDS120/LH pails	$2,100.00	
Nov.	Drilling/UG	West Coast Drilling	Drill Polymer/Grease	$2,562.00	
Dec.	Drilling/UG	West Coast Drilling	Used jackleg/lubricator - Purchase	$3,070.17	
Aug	Drilling/UG	Westcoast Drilling	Rubber seals	$167.18	
Sept.	Drilling/UG	Westcoast Drilling	Drill cement/sealant	$3,240.00	

July	Drilling/UG	Westcoast Drilling	Drill additives/supplies	$2,226.00	
Aug.	Drilling/UG	Wiseworth Canada	Generator supplies	$2,691.50	
Sept.	Drilling/UG	Wiseworth Canada	2 pails ultra coolant	$667.80	
Sept.	Drilling/UG	Wiseworth Canada	Repairs IR150 Compressor	$2,558.76	
Oct.	Drilling/UG	Yukon Explosives	Explosives	$9,292.61	
Oct.	Drilling/UG	Yukon Explosives	Credit memo Cigel 4 cases	($573.88)	
Nov.	Drilling/UG	Yukon Explosives	Explosives, credit	($323.26)	
Nov.	Drilling/UG	Yukon Explosives	Explosive returned, credit	($4,915.22)	$727,696.88
Aug	Expediting	Kawdy Ventures	Air filter, elec. genset	$45.68	
Sept.	Expediting	Kawdy Ventures	Skidder rental, labour, supplies	$2,981.71	
Oct.	Expediting	Kawdy Ventures	Whitehorse delivery/Material	$1,909.30	
Oct.	Expediting	Kawdy Ventures	Rentals/Expediting/labour	$19,780.59	
Nov	Expediting	Kawdy Ventures	Expediting services/disbursements	$12,850.45	
Nov.	Expediting	Kawdy Ventures	Expediting/labour/rentals	$14,857.60	
Nov.	Expediting	Kawdy Ventures	Expediting/rentals	$1,824.35	
Dec.	Expediting	Kawdy Ventures	Expediting/labour/rentals	$10,837.64	
Dec.	Expediting	Kawdy Ventures	Credit for fuel	($181.50)	$64,905.82
Sept.	Freight/shipping	Arrow Transport	T/L Locomotive	$450.00	
Sept.	Freight/shipping	Atlin Express	Pick-up and Deliveries	$28.03	
Oct.	Freight/shipping	Atlin Express	Delivery Services	$235.51	
Oct.	Freight/shipping	Atlin Express	Freight Aug.3-Aug. 26/92	$174.00	
Nov.	Freight/shipping	Atlin Express	Freight, spls to Whitehorse	$386.20	
Nov.	Freight/shipping	Atlin Express	Express freight, misc.	$116.36	
Dec.	Freight/shipping	Atlin Express	Freight, express	$113.55	
Aug.	Freight/shipping	Atlin Trucking	Shipping Freight-Whitehorse	$142.09	
Aug	Freight/shipping	Atlin Trucking	Trucking-general freight	$301.47	
Oct.	Freight/shipping	Atlin Trucking	Freight Serv. Atlin-Whitehorse	$1,328.15	
Nov.	Freight/shipping	Atlin Trucking	Atlin trucking to Sept. 25	$847.64	
Nov.	Freight/shipping	Atlin Trucking	Trucking	$15.25	
Dec.	Freight/shipping	Atlin Trucking	Freight, fire axes	$11.65	
Dec.	Freight/shipping	Atlin Trucking	Freight	$477.70	
Oct.	Freight/shipping	Canadian Air	Freight	$793.48	
Nov.	Freight/shipping	Canadian Air	Airfreight	$118.57	
Oct.	Freight/shipping	Canadian Air	Freight	$963.71	
Sept.	Freight/shipping	Canadian Airlines	Freight	$362.78	
Dec.	Freight/shipping	Canadian Airlines	Airfreight	$1,703.70	
Oct.	Freight/shipping	Westarm Truck Lines	10,000 lbs. Rail & Equip.	$771.80	$9,341.64
Aug.	Fuel supply	Pine Tree	Lubricants-Oil	$99.35	
Oct.	Fuel supply	Pine Tree	Fuel, general	$6,769.23	
Sept.	Fuel supply	Pine Tree Service	Bulk fuel supplies	$33,712.27	
Aug	Fuel supply	Pine Tree Services	Fuel, rentals	$7,221.31	
Nov.	Fuel supply	Pine Tree Services	Propane/drum credit	($223.20)	
Dec.	Fuel supply	Pine Tree Services	Propane, grease, misc.	$2,079.97	$49,658.93
July	Geological	Cambria Geological	Consulting	$21,730.00	
July	Geological	Cambria Geological	Mob/Jul 29-31 Cons. Geo.	$9,740.00	
Aug.	Geological	Cambria Geological	Aug. 1-15 Cons. Geo.	$32,250.00	
Sept.	Geological	Cambria Geological	Consulting Sept. 1-15	$26,850.00	
Sept.	Geological	Cambria Geological	Travel/Consulting/disbursements	$35,503.90	
Nov.	Geological	Cambria Geological	Travel/Consulting/disbursements	$55,051.57	
Nov.	Geological	Cambria Geological	Travel/Consulting/disbursements	$82,821.07	
Dec.	Geological	Cambria Geological	Disbursements/reporting	$20,560.24	$284,506.78
Aug.	Labour/wages	Graham Ennis	16 days Aug. 16 to 31	$1,703.59	
Sept.	Labour/wages	Graham Ennis	September salary	$3,346.32	
Oct.	Labour/wages	Graham Ennis	Salary, Oct. 1-10 plus Oct 15, 11days	$2,894.79	
Nov.	Labour/wages	Graham Ennis	Salary, Nov. 1 to 6	$1,162.80	
Sept.	Labour/wages	Graham Ennis-expenses	Graham Ennis-expenses	$642.11	
July	Labour/wages	John Ridley	5 days July 23 - July 27	$633.23	
July	Labour/wages	John Ridley	John Ridley 4d July 28-31	$506.00	
Aug.	Labour/wages	John Ridley	15 days Aug. 1 to 15	$1,560.66	
Aug.	Labour/wages	John Ridley	16 days Aug. 16 to 31	$1,560.66	
Sept.	Labour/wages	John Ridley	September salary	$1,878.90	
July	Labour/wages	Receiver General	July Payroll Taxes	$163.45	
Aug.	Labour/wages	Receiver General	Receiver General - July	$130.42	
Sept.	Labour/wages	Receiver General	August Payroll Taxes	$3,348.16	
Oct.	Labour/wages	Receiver General	September Payroll Taxes	$4,279.67	
Nov.	Labour/wages	Receiver General	October payroll taxes	$2,976.78	

Nov.	Labour/wages	Receiver General	November payroll taxes	$1,242.61	
Oct.	Labour/wages	Suntac Invoice	Reimbursement of G. Ennis Salary	($425.00)	
Aug.	Labour/wages	Terry Zanger	16 days Aug. 16 to 31	$1,373.42	
Aug.	Labour/wages	Terry Zanger	13 days Aug. 3 to 15	$1,373.42	
Sept.	Labour/wages	Terry Zanger	September salary	$2,893.16	
Oct.	Labour/wages	Terry Zanger	Salary, Oct. 1-15	$2,425.31	
Nov.	Labour/wages	Terry Zanger	Salary, Nov. 1 to 15 - 15 days	$1,409.99	
Dec.	Labour/wages	Terry Zanger	4% Holiday Pay	$562.87	$37,643.32
Nov.	Misc.	Bank of Montreal - M/C	Airline Tickets - Alaska	$2,370.00	
Nov.	Misc.	Bank of Montreal - M/C		$54.81	
Dec.	Misc.	Bank of Montreal - M/C		$475.00	
Aug.	Misc.	Beakem Printing	Printing PO and Artwork	$490.14	
Oct.	Misc.	Dominion Blue Prints	Blueprints	$579.97	
Dec.	Misc.	Dominion Blue Prints	Map copying	$63.28	
Oct.	Misc.	Dominion Blueprint	Blueprints	$742.51	
Dec.	Misc.	Dominion Blueprints	Reproductions	$257.24	
Dec.	Misc.	Finning Tractor	Credit, D3 downtime	($3,013.20)	
Nov.	Misc.	Graham Ennis	Ennis exp. acct. Nov. 16	$756.70	
Oct.	Misc.	Jim O'Rourke	Technical Services	$860.00	
Oct.	Misc.	Norman Wade	Airphotos Tulsequah	$337.54	
Aug	Misc.	Reed Stenhouse	Insurance to December 19	$248.00	
Sept.	Misc.	Reed Stenhouse	Insurance	$65.00	
Oct.	Misc.	Reed Stenhouse	insurance	$138.00	
Dec.	Misc.	Suntac Minerals	Grader work/labour	$1,740.00	
Aug.	Misc.	The Atlin Inn	The Atlin Inn	$292.65	
Oct.	Misc.	The Atlin Inn	Accomodation - Aug. 4	$48.60	
Aug	Misc.	Vancal Reproductions	Reproduction	$100.29	$6,606.53
Sept.	Surface work	Coureur Des Bois Ltd.	Line Cutting (83days@250)	$20,750.00	
Oct.	Surface work	Courier de Bois	Linecutting and supplies	$12,711.75	
Sept.	Surface work	Scan Conversion Services	Scanning of 3 topo maps	$1,075.00	$34,536.75
		TOTALS		$1,424,198.87	$1,424,198.87

APPENDIX 4

STATEMENT of QUALIFICATIONS

STATEMENT of QUALIFICATIONS

I, Paul J. McGuigan of 2980 Mt. Seymour Parkway, North Vancouver, B.C. do hereby certify that:

1. I am a consulting geologist and president of Cambria Data Services Ltd. and Cambria Geological Ltd. of 1531 West Pender Street, Vancouver, BC, V6G 2T1.

2. I am a graduate of the University of British Columbia with a B.Sc. (Honours) in Geological Sciences, 1974, and have practised my profession continuously since graduation. My experience ranges through all phases of exploration, mining geology and geochemistry.

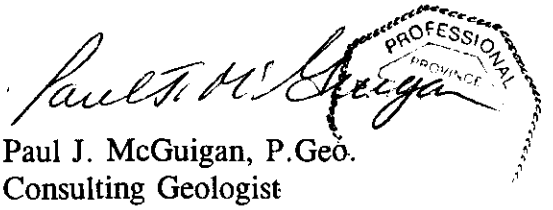
3. I am a member of the Association of Professional Engineers and Geoscientists of B.C. and a voting member of the Association of Exploration Geochemists.

4. I have no interest, nor do I expect to receive any interest, direct or indirect, in Redfern Resources Ltd. or any of the properties involved.

5. This report dated June 2, 1993 is based on a review of all available technical documents and my personal examination of the property in September of 1992.

6. I hereby grant permission for Redfern Resources Ltd. to use this report in any company documents, including but not limited to, statements of material facts and prospectus filings.

Dated at Vancouver, B.C. this 2nd day of June, 1993.



Paul J. McGuigan, P.Geo.
Consulting Geologist

STATEMENT of QUALIFICATIONS

I, Garnet L. Dawson, of 205 - 5343 Yew Street, Vancouver, B.C., do hereby certify that:

- I graduated from the University of Manitoba, Winnipeg, with at degree of B.Sc. (Geology) in 1981.
- I am currently enrolled in a Masters Program in geology at the University of British Columbia.
- I have worked with major exploration companies and government geological surveys since graduation.
- I was an employee of Cambria Geological Ltd. at the time of this work.
- I have not received, nor do I expect to receive any interest directly or indirectly in Redfern Resources Ltd.
- This report is based on geological mapping carried out during the period July to October, 1992.

Dated at Vancouver, B.C. this 2nd day of June, 1993.

Garnet L. Dawson
Vancouver, B.C.

STATEMENT of QUALIFICATIONS

I, Don J. Harrison, of P.O. Box 37, Pender Island, B.C., do hereby certify that:

- I graduated from the University of British Columbia, with at degree of B.Sc. (Geology) in 1984.
- I have been practicing my profession since graduation.
- I was an employee of Cambria Geological Ltd. at the time of this work.
- I have not received, nor do I expect to receive any interest directly or indirectly in Redfern Resources Ltd.
- This report is based on geological mapping carried out during the period July to October, 1992.

Dated at Vancouver, B.C. this 2nd day of June, 1993.

Don J. Harrison
Vancouver, B.C.