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GEOLOGICAL REPORT

ON

GRIZZLY LAKE LEAD - ZINC PROSPECTS

Cariboo Mining Division, British Columbia

by

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for

GOLDEN KOOTENAY RESOURCES INC.
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NTS 93A/14E, 15W
Latitude Centre 52° 48'N
Longitude Centre 120° 58'W

December 7, 1992

INDEX

LIST OF ILLUSTRATIONS

INTRODUCTION AND SUMMARY

The Grizzly Lake Project involves an approximate 40 km^2 expanse of largely carbonate rock in south-central British Columbia shown to contain elevated values in zinc throughout much of its 10 kilometre length. Important lead-zinc mines and prospects are known in a similar geological environment elsewhere both to the north and south in British Columbia. Recent road access has allowed some mechanical stripping and trenching of numerous poorly exposed lead-zinc occurrences under shallow but extensive overburden within the main anomalous zinc trend. Some of the occurrences are locally impressive but sufficient work has not been done to establish their relation to the overall system - i.e. no definite model has emerged except that the known occurrences do not seem to fit the "Mississippi Valley Type" which generally involve large bulbous or stratiform masses related to solution cavity filling or similar traps. The writer believes that the overall control is structural and that the target in the largely overburdened area is more likely to be based on the "Irish Model". This involves more relation to certain fault structures and their intersection with locally important sedimentary units such as control the recently discovered Lisheen Deposit in Ireland which took 5 years to locate after soil geochemical results similar to those at Grizzly Lake suggested its possible existence.

Golden Kootenay Resources Inc. has, with its joint venture partner Cariboo Highland Metals Inc., recently optioned the large, now better consolidated holdings which contain a number of untested mineral occurrences plus untested induced polarization and geochemical targets. The latter originated with several earlier investigators whose access problems were more difficult and who conducted no mechanical trenching. Teck Corp., which had a portion of the property under joint venture option agreement and spent several months on it during the relatively short 1989/1990 seasons searching largely for "Mississippi Valley" deposits, conducted a limited VLF geophysical program in the vicinity of two of the better exposed lead-zinc occurrences. This showed that there were certainly proximate fault structures but their two limited shallow drill tests failed to expand on the fault association. Their work appears to have shown an association of lead-zinc mineralization with a dolomitic carbonate-interlayered phyllite contact; this is an

important observation. Golden Kootenay, currently the joint venture manager of the Grizzly Project, has recently carried out a limited VLF orientation survey and strong conductors suggestive of major faulting were indicated.

Golden Kootenay's main initial approach will be to carry out further geochemical surveys over large but slightly swampy areas recommended, but not completed, by Teck, and to cover the whole area with inexpensive VLF surveys in an attempt to assign priorities to fault structures, a number of which appear to be mineral-related. Coincidental VLF-geochemical targets, which may be numerous, will, if less than 4 or 500 feet below surface, be further discriminated via other geophysical methods - i.e. I.P., or gravity, depending on location - prior to drill testing. Some early short hole drilling is recommended to help evaluate to possibility of faults near known deposits displaying evidence of "feeder" activity related to the Irish Model.

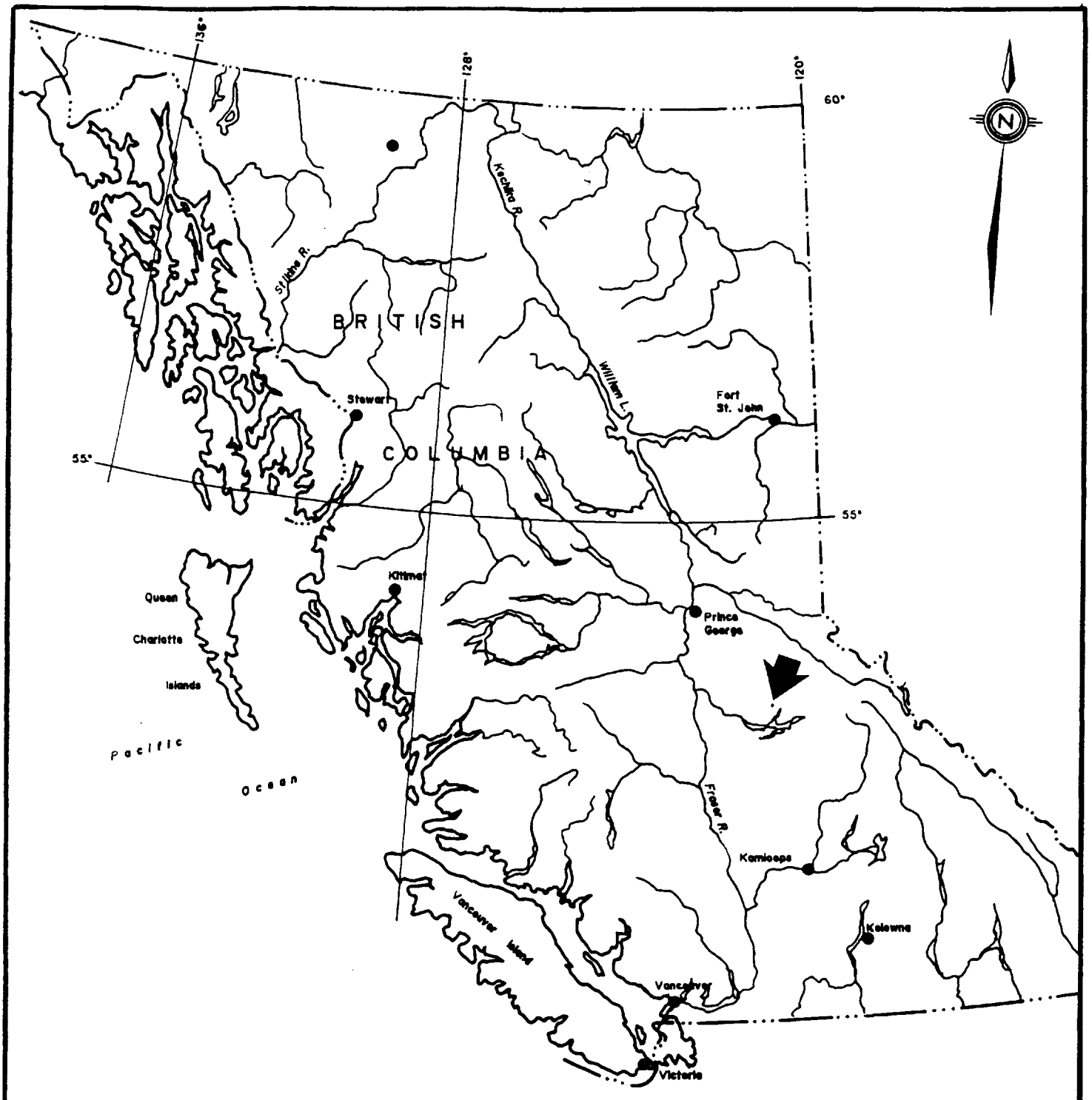
The writer was requested to prepare this summary report for Golden Kootenay Resources Inc. by James McLeod, P.Geol., Director.

LOCATION AND ACCESS

The Grizzly Lake claim group is located north of Quesnel Lake in south-central British Columbia (Figure 1) approximately centered at:

Latitude 52° 48'N; Longitude 120° 58'W (NTS Map 93A/14E, 15W)
U.T.M. Grid Coordinates of mid Grizzly Lake Project Claims
approximate 5853500N, 642000E (elev. 5,050 ft.; 1,540 m)

It lies near the subdued summit of a range between the head of the North Arm of Quesnel Lake and the area immediately north of Maeford Lake, a widening of Little River which flows into Cariboo Lake to the west (Figure 2). The area is generally referred to locally as Cunningham Pass. Claim elevations range from slightly more than 4,000 feet (1,220 m) northeast of Maeford Lake to nearly 6,000 feet (1,830 m) at the western and eastern extremities of the group. Quesnel Lake,



GOLDEN KOOTENAY RESOURCES LTD.

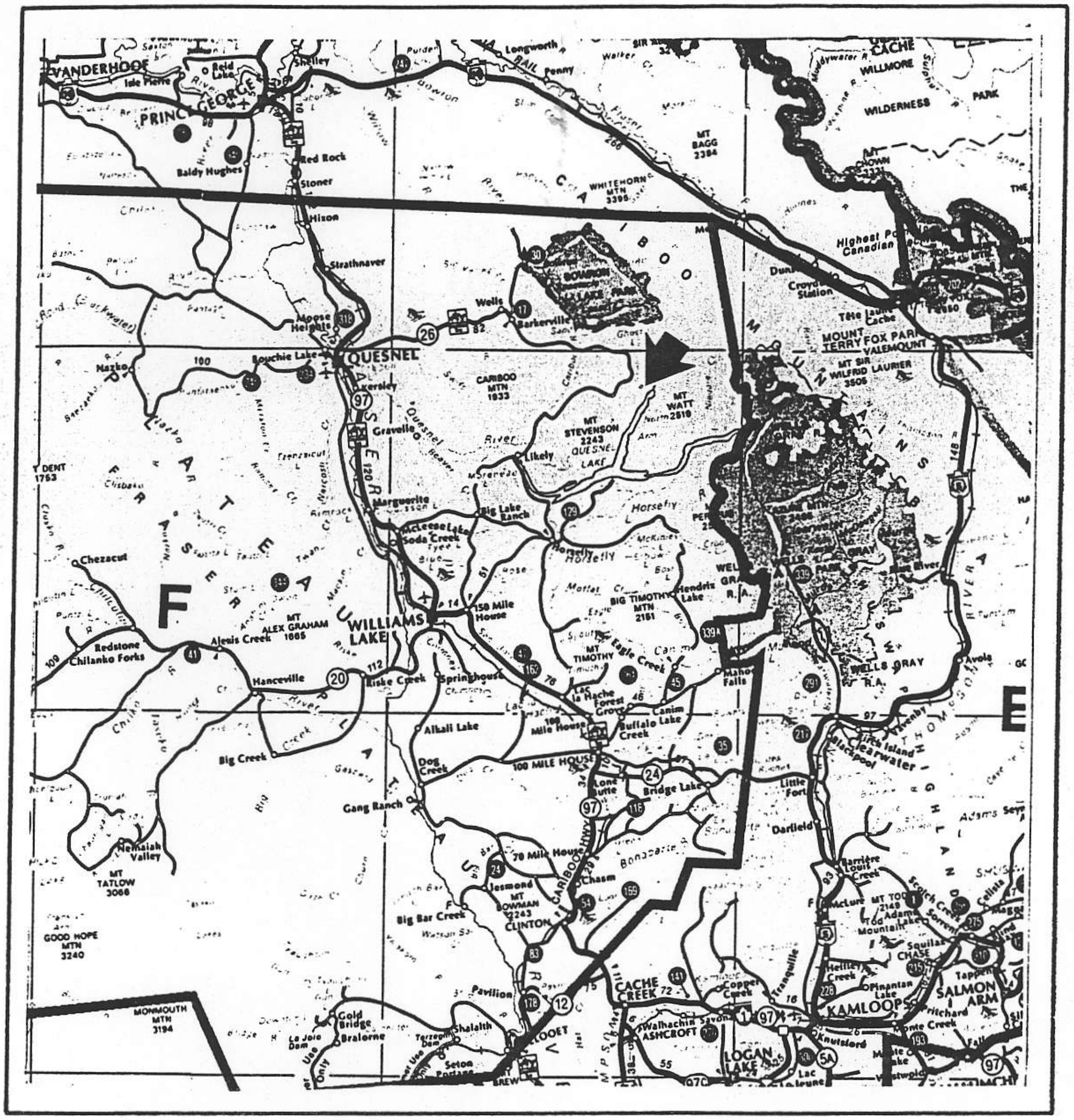
PROPERTY LOCATION MAP

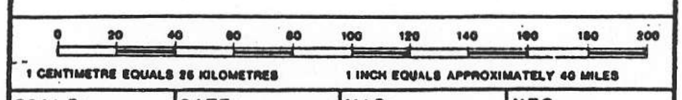
GRIZZLY LAKE LEAD/ZINC OPTION

CARIBOO MINING DIVISION
NTS 093A15W

Scale = AS SHOWN	Date: Dec./92
	FIGURE 1

BRAD'S DRAFTING JRB





GOLDEN KOOTENAY RESOURCES LTD.

SITE LOCATION MAP

GRIZZLY LAKE LEAD/ZINC OPTION

CARIBOO MINING DIVISION

0 20 40 60 80 100 120 140 160 180 200

1 CENTIMETRE EQUALS 25 KILOMETRES — 1 INCH EQUALS APPROXIMATELY 40 MILES

SCALE:	DATE:	MAP:	N.T.S.
1:2,500,000	Dec./92	2	093A15W

approximately 2 km steeply southeast of the eastern boundary, has an elevation of 2,386 ft. (727 m).

The property is 65 air miles (105 km) east of Quesnel and 38 miles (62 km) by road (logging designated as No. 4800) from Likely at the outlet of Quesnel Lake. The main service centre is Williams Lake about 50 miles (80 km) south-southwest of Likely.

The claim group is split and partially encircled by a good logging road which circles back from Cunningham Pass, a few miles north of the claims, southeasterly to the head of the North Arm of Quesnel Lake where active logging is taking place. A branch road from the latter extends westerly to within 1 kilometre of the easterly claim group. The road continues north of the active logging turnoff to Wells, Barkerville and eventually Quesnel. The property owner, R. Mickle, has constructed a 4x4 branch road to some of the better exposed showings east and west of the logging road. There are no inhabitants within 20 miles (33 km) of the property except at a seasonal hunting and fishing lodge at the head of the North Arm of Quesnel Lake and a related outpost cabin at Maeford Lake.

The claim area is sub-alpine in the more open, higher regions which are currently of prime interest and which appear as wide, thinly overburdened covered basins. Bedrock is well exposed in steeper sections, particularly the western extremities. Water is plentiful year-round on the claim group. Several feet of snow is generally on the ground from November to April or May but the logging road is open most of the time. Ghost Lake, about 7 miles (12 km) to the north, is one of the best small but easiest to tap hydro-power sources in central British Columbia with a 250-300 foot 30 degree drop.

Closest existing facilities are in the Likely to Cariboo Lake (Keithley Creek) section along a paved service road.

PROPERTY

The property, approximately 8,460 acres (3,425 ha), is under option to Golden Kootenay-Cariboo Highland J.V. from R. Mickle of Likely, B.C. and consists of 7 continguous MGS claims (Figure 3) containing 137 units and one two-post claim. Outside dimensions are approximately 7 miles (9.5 km) E-W by 3 miles (5 km) N-S. Current standings are as follows:

TABLE 1

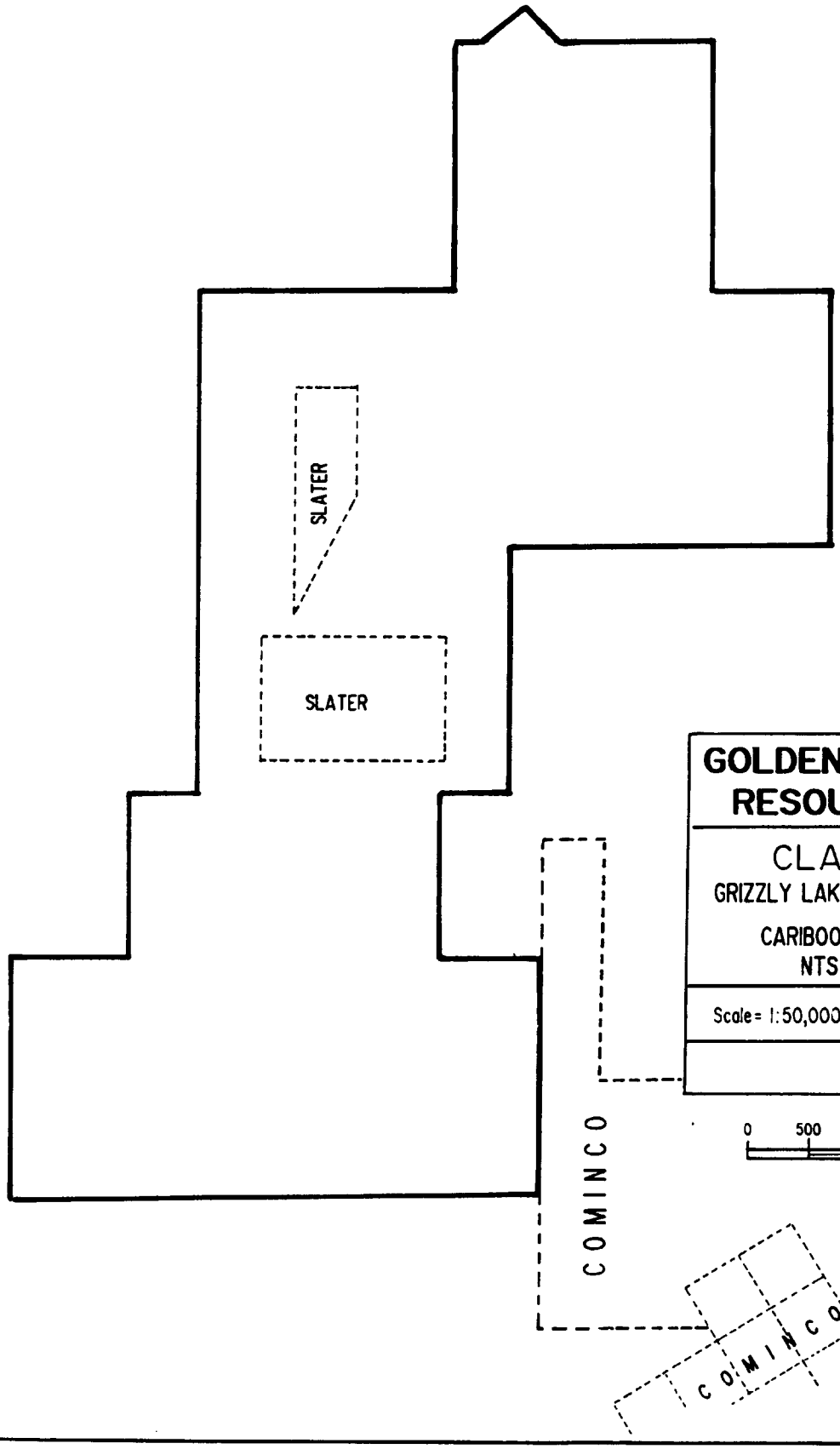
Claim Name	Record Number	Size Units	Registered Owner	Date Located	Current Expiry Date
AT 1	313119	1	R.E. Mickle	27.08.92	27.08.93
FOG 2	206699	20	-do-	12.12.92	12.12.93*
FOG 13	206708	20	-do-	12.12.92	12.12.93*
DICK 1	314843	16	-do-	13.11.92	13.11.93
DICK 2	314844	20	-do-	14.11.92	14.11.93
DICK 3	314845	20	-do-	14.11.92	14.11.93
DICK 4	314846	20	-do-	14.11.92	14.11.93
DICK 5	314847	20	-do-	13.11.92	13.11.93

Some of the earlier Teck claims and all but one of Mickles' two post claims were allowed to lapse or were abandoned and re-staked for more efficient coverage.

Within the Kootenay-optioned property the "Slater 1 & 7" claims were located by an unrelated party to cover "flag rock" and decorative stone (magnesium limestone containing large aragonite crystals). They cover no known lead-zinc occurrences of immediate interest.

Cominco holds a group of lead-zinc claims adjacent and to the immediate southwest which they reportedly intend to examine more thoroughly.

* Assessment credits applied for.



GOLDEN KOOTENAY RESOURCES INC.

CLAIM MAP

GRIZZLY LAKE LEAD/ZINC OPTION

CARIBOO MINING DIVISION
NTS 093A15W

Scale = 1:50,000	Date: Dec/92
	FIG. 3

0 500 1000 1500 2000

Prod's Drafting / IDP

HISTORY AND DEVELOPMENT

Scattered showings of lead-zinc mineralization in the Grizzly Lake area have been known for some time (Minfile BCMM), but access was limited to boat travel up Quesnel Lake and a 3,000 ft. climb up to the area of interest.

The first recorded work on the property took place in 1969 when Canex Aerial Explorations Ltd. (now Placer Dome) investigated a large lead-zinc soil anomaly occurring on the east end of the present project area. It was then believed that any mineralization would be related to intrusive contacts. Four E.M. traverses were run down-slope to the south without outlining any large target and the anomaly was attributed to a minor lead-zinc showing upstream.

In 1972 Canadian Superior Explorations extended the Canex work area to the west and outlined several I.P., E.M. and soil anomalies while noting a few high grade float and less attractive vein-type occurrences. Three drill holes totalling 1,157 feet (352 m) were completed, two of which tested two soil anomalies. One of the holes intersected about 60 feet assaying 0.6% zinc with 400 ppm lead. The remainder of the holes, although anomalous in lead-zinc, failed to intersect any source for the high grade lead float found in the immediate area. The third hole was drilled to test an I.P. target located near the west end of Canex Aerial's high lead-zinc anomaly. The I.P. response was attributed to disseminated pyrite and pyrrhotite occurring in the more shaley (phyllitic?) or argillaceous strata and only minor lead-zinc mineralization was noted.

Some work was also done during the 1969-72 period near the west end of the property as recorded in "Minfile" and assessment records. Cream Silver did some geochemical surveying and minor hand trenching was done which uncovered some lead-zinc mineralization. Further east, a company believed to be Morocco Mines did some 600 metres (4 holes) of drilling in 1971 near the head of the valley now shown as "Flipper Creek". Core remaining appears to be largely argillite or argillaceous carbonates.

Robert Mickle of Likely discussed the possibilities of the area with local "old timers" in 1989 and staked some claims along the trend of numerous spot field tests he obtained using "Zinc-Zap". Richard Lonsdale was first approached but could not conclude an option at that time. The writer visited Mickle (also an ex-Falconbridge employee) on a trip back from the Yukon and was impressed by the well defined, remarkedly continuous, seven to ten kilometre long zinc trend now displayed along the northwesterly trending trace of certain carbonate beds. In addition, limited shallow trenching with a small backhoe of at least two lead zinc occurrences, believed previously to be float, had exposed some impressive mineralization in an area largely devoid of outcrop between the Canadian Superior and the Morocco(?) work areas. The writer interested Winston Management of Vancouver who signed an option with Mickle but then turned it over to T.S.A. Explorations Ltd. which in turn interested Teck Corporation in a Joint Venture Agreement. Teck assumed management and initial funding responsibilities.

Exploration programs consisting largely of ground surveys and trenching were instigated in late 1989 and 1990 and these form the basis of most of the technical descriptions used in this current (1992) report. Mickle's daughter retained the easternmost (formerly Canadian Superior) ground, where numerous shallow trenches completed by her father in 1990 revealed a number of mineralized occurrences whose importance has not been determined. Dealing on this property was complicated by an overstaking dispute, later settled favourably.

The Teck-TSA Joint Venture turned the property back to Mickle in 1990 after limited drilling (4 short Winkie holes). Some of the trenches were filled as per Reclamation requirements and filing of one or two years assessment work on the claims was completed as per agreement.

Mr. R. Lonsdale, through his private company, Cariboo Highland Metals Inc., arranged an option agreement with Mickle in 1992 and the property, including the eastern ground, was included in a Joint Venture Agreement with Golden Kootenay Resources Inc. who are to manage and fund initial work. Mr. Mickle abandoned and restaked some of the claims in the more orderly MGS configuration. At the time of this most recent staking (November 1992), a local VLF survey was undertaken to

supplement a similar but limited survey completed earlier by Teck Corp. Frozen ground allowed an opportune time to cover some swamp areas. Orientation remains with the Teck-assigned grid.

GENERAL GEOLOGY (Figure 4)

The Grizzly Project claims are located in east central British Columbia within a semi-continuous, north to northwesterly trending sequence of largely Paleozoic sediments dominated at intervals by carbonate or clastic units. Several important lead-zinc occurences are known within this carbonate sequence such as Pend Orielle-Salmo on the United States and British Columbia sides of the border, the Kootenay Lake trend in B.C., and north of Grizzly, the Williston Lake prospects of Cominco.

General descriptions are complicated by proposed "accreted terranes" and transform faults with large displacements and much remains to be learned about the details of the underlying stratigraphy of the area.

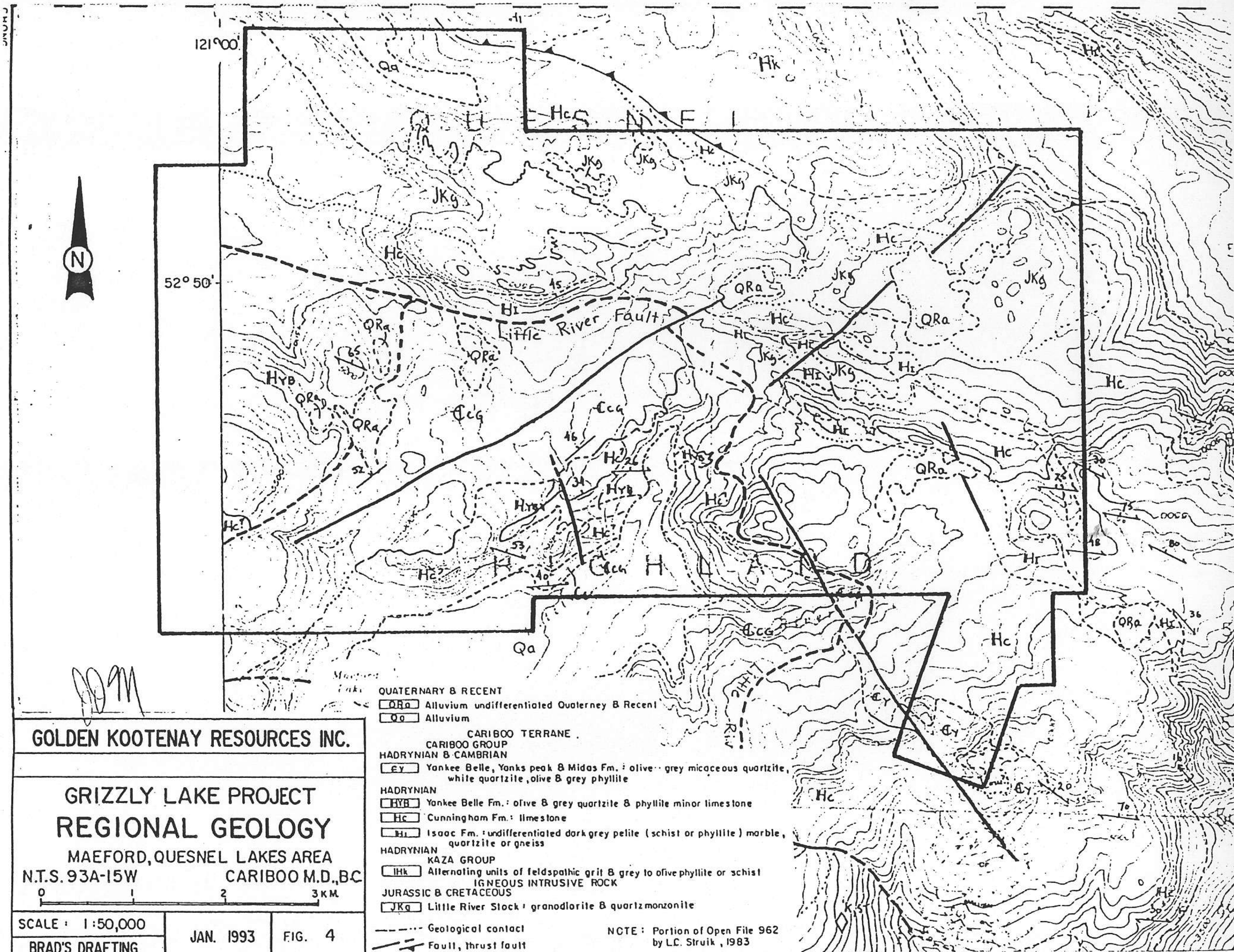
REGIONAL AND LOCAL GEOLOGY (Figure 5)

Stratigraphy in the vicinity of Grizzly Lake is complicated and correlation of units not fully understood, although the phyllite and enclosing dolomites appear most important with respect to mineralization known to this time. Further work may show other units to be important also.

The geology in the area has been described by Teck (Murrell 1991) as follows:

A) General

"The Grizzly Lake property is immediately east of the Quesnel Trough within the "Cariboo Terrane" which is Precambrian to Permian-Triassic (mainly clastic) rocks. The lower succession, which covers the Grizzly Lake area, consists of grit,



GOLDEN KOOTENAY RESOURCES INC.

GRIZZLY LAKE PROJECT

REGIONAL GEOLOGY

MAEFORD, QUESNEL LAKES AREA

N.T.S. 93A-15W CARIBOO M.D., B.C.

0 1 2 3 KM

SCALE : 1:50,000	JAN. 1993	FIG. 4
BRAD'S DRAFTING		

QUATERNARY & RECENT

- QRa — Alluvium undifferentiated Quaterney & Recent
- Qa — Alluvium

CARIBOO TERRANE

CARIBOO GROUP

HADRYNIAN & CAMBRIAN

- €Y — Yankee Belle, Yanks peak & Midas Fm. : olive - grey micaceous quartzite, white quartzite, olive & grey phyllite

HADRYNIAN

- HYB — Yankee Belle Fm. : olive & grey quartzite & phyllite minor limestone
- Hc — Cunningham Fm. : limestone
- HI — Isaac Fm. : undifferentiated dark grey pelite (schist or phyllite) marble, quartzite or gneiss

HADRYNIAN

KAZA GROUP

- Hk — Alternating units of feldspathic grit & grey to olive phyllite or schist

IGNEOUS INTRUSIVE ROCK

JURASSIC & CRETACEOUS

- JKg — Little River Stock : granodiorite & quartzmonzonite

- - - - Geological contact

—— Fault, thrust fault

NOTE : Portion of Open File 962 by L.C. Struik , 1983

limestone, sandstone and shale. Of particular interest is the gradational and interfingering contact between the Isaac Formation (phyllites) and the overlying Cunningham Formation (carbonates).

During 1990, the property was mapped at a scale of 1:10,000 by Carol Lormand and Craig Alford with local contributions by M.R. Murrell. Mapping control was via an enlarged 1:50,000 scale government map, for the more detailed topographic map (on hand) (by Eagle Mapping of Port Coquitlam) was not available until near the end of the mapping program. Much of this geology section is based on the work by Lormand and Alford.

B) Overview

The regional mapping program (1:10,000) defined a package of rocks consisting of interbedded and intercalated carbonate and pelitic sediments which are gently folded regionally, and which have been affected by localized faulting.

A large granodiorite to monzonite pluton is present over the northern part of the claims, and intrusives exit southeast of the property. In addition, small offshoots are found along the 8400 road (Lormand, 1990).

Lead and zinc mineralization was found to be restricted to a carbonate unit, adjacent to an overlying phyllite unit, extending over approximately six km.

The carbonate can be locally broken into two - the lower portion is brecciated limy dolomite and appears to be the main host for significant mineralization. The overlying creamy dolomite contains widespread scattered, but usually insignificant, mineralization mainly as "thumbnail" sized galena often associated with minor smithsonite. Alteration in the carbonates has resulted in thick sequences of dolomite or limy dolomite.

The pelitic sediments that overly the carbonate are shales/siltstones that have been most often altered to a silver grey phyllite. More intense alteration has

resulted in sequences of greenschist to upper greenschist facies of coarse muscovite garnet schist, and elsewhere on the property to micaceous schistose limestone.

C) Lithologies (Figure 5)

Intrusives:	4a	Granodiorite
	4b	Granodiorite with pyrite, porphyritic
Pelites:	5a	Phyllite - usually silver green (Isaac Fm)
	5b	Siltstone - usually greenish (Isaac Fm)
	5c	Garnet Muscovite Schist
Carbonates:	6a	Schistose Micaceous Limestone
	6b	Well banded Grey and White Limestone and undivided carbonates such as 6c (Cunningham Fm)
	6c	Grey Massive Limestone (Cunningham Fm)
	6d	Limy Dolomite - Mottled grey-green usually broken or brecciated (Isaac Fm)
	6e	Cream Dolomite - fine grained, massive (Isaac Fm)

1) **Intrusives**

4a Granodiorite
Coarsely crystalline biotite to locally biotite hornblende granodiorite. Grey to greenish overall. Often jointed. Does not alter adjacent carbonates - no skarn developed. No sulphides observed.

4b Granodiorite to Monzonite
Lighter grey, finer grained with more hornblende and less biotite - distinguished by 1% disseminated specks of pyrite that weather to give the outcrop a spotted orange appearance.
Found as smaller outcrops along the "8400 Road".

2) **Pellites**

A variable thickness of phyllite or higher metamorphosed equivalents are present between underlying creamy dolomites and overlying banded to massive carbonates of the Cunningham Formation. Other pelitic rocks are present in various localities throughout the property and probably represent beds and interbeds in the transitional zone at the top of the Isaac Formation.

5a Phyllite

Pale green to grey, weathering silver grey or silver green to tan brown. Fine grained. Usually very massive weathering appearing in road cuts or creek cuts. Foliation is well developed and appears often parallel to bedding. May locally contain minute garnets if higher metamorphism is present.
May contain minute dissemination pyrite in minor amounts and locally to 2%.
Sheared and fractured; may turn to a grey-green gouge in fault zones.

5b Siltstone

Light green, weathering to tan and lighter green; often mottled due to finer grained mud layers. Not common on the property - probably represents slightly coarser sedimentation. May contain pyrite.

5c Garnet Muscovite Schist

Very light to pale green-white with interbedded garnets up to 0.4 cm wide. Well foliated with undulatory surfaces.

Not common on the property. May be representing very high grade metamorphism or possibly a different stratigraphic unit. Barren quartz veins are common varying 3 to 5 cm wide, parallel to schistosity. May be limonitic.

Carbonates

Several types of carbonates have been delineated on the Grizzly Lake property. Although the dominate limestone, the Cunningham Fm., covers much of the area, it has been found to be barren of sulphides. The more complex carbonates, found at the top of the Isaac Fm., are often mixed or interbedded with phyllitic rock, and show local metamorphic effects. It is probably due to this more complex nature that Pb/Zn mineralization was induced to deposit in the various structural and stratigraphic traps available. Outcrop is not abundant on the Grizzly Lake property, so that the geological map GL90-3b (Figure 5) is probably a simplification of the actual geology.

6a Schistose Micaceous Limestone

Grey to white crystalline limestone with 10-20% thin bands (1-2 mm) of coarse muscovite. Ratio varies locally from almost pure limestone to almost pure schist. Originally deposited as a "dirty" limestone with numerous thin shale interbeds, but has been metamorphosed to its present state. This rock type

has been identified mainly on the western portion of the property, but minor, less metamorphosed, occurrences have been seen elsewhere.

6b Well banded Grey to White Limestone
Most prominent of the limestones, this unit forms most of the ridges present. It is well banded grey and white, often with folding due to soft sediment slumping or to structural complications. The grey banding is very carbonaceous, and varies in thickness from a few to 10 cm. This unit is sometimes broken, healed with white calcite to form small areas of crackle breccia.
On metamorphism, this unit may become the schistose micaceous limestone of unit 6a.
This unit probably contains the grey massive limestone (6c) in covered areas. For map correlation purposes, large areas coloured 6b on Map GL90-3b (Figure 4)(Figure 5?) may probably contain unit 6c and possibly unit 6a.
This unit probably contains the grey massive limestone (6c) in covered areas. For map correlation purposes, large areas coloured 6b on Map GL90-3b (Figure 5) may probably contain unit 6c and possibly unit 6a.

6c Grey Massive Limestone
As the name implies, this unit is distinct for its rather massive uniformity. It may be a phase of unit 6b. Bedding is indistinct,-but jointing is common.

6b Limy Dolomite
A light to medium grey mottled limestone. Often mixed with minor amounts of softer grey phyllitic material in an undulatory fashion so that bedding is indistinct. If the phyllitic material increases, the unit may almost represent a limy mudstone as seen south of the Flipper Creek Showings and near the Gunn Showing. Elsewhere (Main showing) the shaly component is much less evident to locally absent. Although usually completely barren of Pb/Zn mineralization, this unit appears to be the host for the main showing.

6c Cream Dolomite
This thick unit typically lies between the underlying Limy Dolomite (6d) and overlying phyllite (5a). It is very light in colour ranging from almost white, through mainly creamy to almost light tan colour. The matrix is usually very fine grained but can be coarser. It is overall massive looking but close inspection shows it has been shattered and healed usually with

calcite/dolomite of similar colour. When silicified, the cream dolomite may form knobs or hummocks as present in the "Dolomite Flats" area. Galena mineralization is often seen in these areas as small blebs to "thumbnail" sized patches, but only occasionally appears to form significant showings (Flipper Creek). Sphalerite is rare in this unit but does form large clots to pods along a faulted contact at Flipper Creek. Elsewhere, "zinc-zap" solutions detect smithsonite ($ZnCO_3$) commonly in the galena areas".

D) Structure (Figure 5)

Structure is interpreted largely from outcrops occurring at the western and northeastern extremities of the property. Faint traces of lineaments offer clues in the central, more interesting but overburdended portion of the property. Murrell (1991) describes structure as follows:

"Bedding trends about 240° dipping NW on the northwestern portion of the property and 310° dipping NE on the southeastern portion so that it appears a huge warp, with axis trending NE, dominates the structure. Bedding dips 50° or less but locally can be much steeper due to local folding. Gentle open, large scale folding can be seen on the ridge north of DeBasher Lake.

Lormand and Alford, earlier Teck workers, interpret a major fault running SW-NE through several swamps and ponds to be a "scissor fault" resulting in an upward displacement to the northeastern portion of the property. They also interpret the fault associated with the DeBasher showing to be a thrust fault. It is possible this is the "Little River" fault mapped by Struik (Open File 962). The presence of the "Little River" fault extension could not be confirmed by this year's mapping.

The whole claim group appears cut by many faults, some of which are visible as air photo linears. On the western half of the property, these faults trend about 030°, but the orientation gradually changes so that in the extreme eastern portion of the claims (near the Gunn Showing) they trend at 350°. In the east, these faults have played a role in lead/zinc deposition.

As mentioned under "Mineralization", the deposition of the lead and zinc appears to be controlled by an interplay between structural contacts, faulting and folding."

E) **Mineralization** (including showings)

Indications are that most mineralization so far discovered on the Grizzly Property is structurally controlled but limited to certain rock units or contacts. The importance of the phyllite horizon as highlighted by Teck's work is significant. Continuity, however, requires substantial sub-surface geophysics to ascertain. This is the main object of the proposed ongoing program.

Most of the mineral occurrences scattered through the property (about 60 are shown on Geology Map, Figure 5) with the exception of those to the east are described (Murrell, 1991) as follows:

"Structurally controlled lead/zinc mineralization occurs along a 6-1/2 km strike length on the Grizzly Lake Claims. It is confined to a 200 m wide stratabound zone trending roughly NW-SE across the property and occurs in two basic modes:

i) Irregularly Disseminated

Found mainly in the cream dolomite such as Dolomite Flats. No obvious controls for the deposition were observed. The galena is seen as specks, blebs, short wisps, or "thumbnail" size grains. Zinc occurs mainly as powdery smears of smithsonite, and sometimes as minute specks "peppered" in the creamy dolomite. The occurrence is sporadic and unpredictable, and never amounts to a significant showing. Impressive assay values may be obtained from selected grab samples but no continuity has been recognized to date.

ii) Pods and Masses

Irregular shaped pods and masses occur in several structural configurations directly beneath contacts of carbonates and overlying phyllites. Mineralization is enhanced by the proximity of larger scale faulting. It appears mineralizing fluids migrated

up along the contacts or a combination of contacts and faulting. It precipitated out of solution at structural traps usually formed by warping of the phyllite-carbonate contacts, or by open space provided by tectonic separation. The bulk of the mineralization is found near the contact, but lesser amounts occur farther away as if the intensity is dying off with distance. It is interesting that although the lead and zinc are always found near or with each other, the ratio is extremely variable. In most cases, either the lead or the zinc dominate. Masses of galena up to 1 m across have been shown (Main Showing) while sphalerite clots up to 20 cm have been found (Flipper Creek). The colour of the sphalerite ranges from honey-yellow, through greenish, through the more common red-orange. The galena can range from fine grained (cast iron) to very coarsely crystalline. Mylonitic textures are also seen. The finer grained galena yielded higher silver values (to 2 or 3 oz), especially in the western portion of the property.

Quartz veining is not well developed throughout the property, but lead-zinc mineralization may be associated spatially with it. The quartz probably represents open space fillings by quartz "sweats" and not large offshoots from a distant source.

Numerous occurrences of lead and zinc are known across the claim group. Only five warranted extensive development work during 1990:

a) DeBasher Showing

R.E. Mickle had located "irregular disseminated" galena mineralization along the southerly flank of Show Ridge, north of DeBasher Lake. Further prospecting discovered a few old hand trenches probably dug by Cream Silver Mines in 1972. Excellent grade sphalerite with scattered galena in a quartz breccia stockwork appeared to be present. Subsequent excavator trenching showed that most of the mineralization is concentrated along the dolomite-phyllite contact and along a major thrust fault that cuts the area. The host is mainly a locally siliceous limy dolomite overlain by cream dolomite that is, in turn, overlain by faulted phyllites. In the thrust fault area, pods and patches of galena are irregularly distributed throughout a zone three metres wide by 20 metres long directly above the fault.

Extensive prospecting and sampling was carried out, but no significant extensions nor additional "build-ups" of mineralization could be found or inferred. No further work is contemplated on this showing.

b) Flipper Creek

Indicated first by galena showings along the 1989 access road, this showing was found to be quite extensive by the 1990 prospecting and geochemistry. Clots and pods of sphalerite are sporadically distributed along the south bank of Flipper Creek, and blebs, wisps and minor veins of galena are irregularly distributed over about 200 metres to the south of it. The creek is probably a large E-W trending fault with phyllite on the north, creamy dolomite on the south. The impressive patchy green sphalerite is within the cream dolomite, adjacent to the fault and within a small block (2m x 2m) of very white barite which also is along the fault. The area gave a very large and intense geochemical response both in lead and zinc and warranted closer investigation. Several excavator trenches were dug to test the better portion of the anomaly in areas of known mineralization. Nearer to the fault, only irregular disseminated galena (in almost trace amounts) was uncovered - no extensions of the sphalerite were revealed. To the south and west, more weak galena was found sporadically and at one location (Trench 90-17) minute specks of orange-red sphalerite were seen within a dark grey brecciated dolomite. These were in trace amounts only and could not be traced for more than a few metres.

Overburden cover in this area is extensive but not deep. It is felt if significant high grade near surface mineralization exists it would have been indicated and discovered by this year's program. One drill hole, probably by Morocco Mines in 1971, had been drilled near the main part of this showing. Although the results are not known, no core at their old campsite appears to have encouraging mineralization. No additional work is planned for this area.

c) Main Showing

The Main Showing was discovered in 1989 by R.E. Mickle after diligent prospecting to follow-up anomalous stream geochemical "dithazone" results. A small good grade galena occurrence, first thought to be float, was located and subsequent backhoe trenching showed it to be extensive. A larger excavator (Turner's) uncovered an impressive showing under relatively shallow overburden. Other pits and trenches suggested that the mineralization was scattered over a significant area. The backhoe could not remove all the cover and washing would have to wait until summer. However, breccia zones were revealed showing angular blocks of dolomite to be cemented or infilled with coarse galena, suggesting a possible "Mississippi Valley" type genesis.

A fairly exhaustive test of this area, concentrating on the main 30 metre square showing - Trench 5 (Figures 5, 6, 17), was undertaken this year. This included detail soil sampling at 25 x 50 m spacings, additional trenching, enlarging trenches, power washing the exposure, channel "saw" sampling, detail mapping and finally diamond drilling.

The washing revealed the overall structure of the showing. Sulphide mineralization, dominated by galena, is structurally controlled. Numerous quartz veins lace the area, totalling 1-2% of the washed off area. Galena is often, but not always, present as infillings along with the quartz. The veins are usually 2-3 cm wide. When the "side" of a vein is exposed, mineralization "appears" to be extensive, but is actually quite thin. A major(?) E/W fault is present along the south side of the trench. Sporadic breccia zones have been infilled with coarse galena and can locally form up to 50% or more of the rock. Mapping has shown that phyllite is present in the area and, contrary to most outcrops in the property, dips slightly southerly or is flat lying.

Five channels were saw cut across the surface of the showing. Results show the mineralization to be quite sporadic - better Zn grades were found farther away from the fault to the north, and better, more consistent Pb values were present towards the south, nearer the fault. (The overall grade of the better mineralized

section would probably average between 3 and 7% combined lead-zinc although several metre channel samples occasionally returned higher grades.)

Two drill holes, GL90-1 and GL90-2, were drilled (westerly) at dips of -45° directly across the showing to test for possible vertical extensions of the excellent grade surface mineralization. The holes were almost devoid of sulphides. Extensive assaying was done of areas that showed "traces or better" mineralization. Most returned values in the range of 0.3% Pb, 0.2% Zn over 1 metre. The best value was 1.14% Pb, 3.88% Zn over 0.3 metres in hole GL90-2.

An interpretation of all the data for the Main Showing reveals a structurally controlled area of good mineralization. Phyllite, now eroded off, covered the immediate area in a gentle doming arrangement. Mineralization, as elsewhere on the property, was deposited beneath the phyllite within conducive spots in dolomite. Here, those "spots" included small areas of fault breccia. Some of the galena is sheared or mylonitized inferring post sulphide deposition movement. Drilling has shown that the sulphide "build-up" does not extend to depth". (In the writer's view, if no "roots" are present, a case may be made that this showing is related to a low angle "thrust fault" as yet unrecognized, but suspected, in this immediate vicinity.)

"The potential for discovery of major lead/zinc mineralization would lie in the ability to delineate large structural features and "traps" that could contain a sizeable body. Since the area is mainly overburdened, methods less direct than mapping may be necessary to locate such a combination of features. The geochemistry and VLF surveys already completed could be supplemented by gravity and I.P. surveying. If encouraging patterns emerge, the significant anomalies would then have to be drill tested as well as trenched.

Gunn Showing

Several 10-25 cm pods of galena had been discovered by R.E. Mickle in 1989. Trenching with a small excavator had shown several such showings over a fairly broad area and additional prospecting by Lormand and Alford this year located more. Greenish-yellow sphalerite veins are present about 200 m to the north of the main area, near the northerly limit of rolling hills with scattered outcrop. A white weathering silicified knob containing galena veins was located near the original showing. Although other occurrences in the area were also examined and trenched, this knob received the bulk of the testing in the Gunn area.

Excavator trenching was followed by power washing in Trench 90-30. This showed several narrow galena veins trending north to northwest and dipping steeply westerly. These were enclosed by siliceous cream coloured dolomite near to the mottled limy dolomite. Faulting was in evidence.

A drill hole was planned to test below this silicified knob. The intense faulting caused curtailment of both the first (GL90-3) hole and its replacement (GL90-4) before the planned-for total depth. However, sufficient drilling had been completed to test the projected down-dip extension of the surface veins. No significant lead and zinc were encountered.

Sulphide mineralization in the Gunn area is structurally controlled. Unlike most other veins, it is more dependent on fault or open space ground preparation than on phyllite-dolomite contacts. Lead/zinc is often within silicic, rusty weathering sporadic veins trending north to northwest, parallel to the major faults and airphoto lineations in the area. Scattered, random(?) galena pods usually have elongation in the same orientation. Further north, large quartz masses, with or without sulphides, were also located along faults.

Contact-type sulphides are present at grid location 97+00N, 140+40E. Green-yellow sphalerite veins and clots, reminiscent of that of Flipper Creek, are scattered along a small north facing dip-slope. Phyllites are present at the base of the slope. Several pods of galena are nearby.

Excellent grade lead and zinc have been obtained from hand specimens throughout this area, but continuity is lacking. Improvement at depth is, of course, a possibility; however, other means of target selection would be necessary before a drill program is envisioned.

e) Que Claims

The Que 1 and 3 claims were staked in 1981 and have survived through assessment credits to the present. They form part of the option and are located at the extreme SE corner of the property. They are sandwiched between the Gunn showing to the west and the non-Teck showings (Pear Claims) to the east. A small pit put in by Mickle showed a few impressive galena pods to 50 cm width in the extreme SE corner. A "very high" Pb/Zn anomaly trended northwest from this point and scattered surface boulders containing up to 15% Pb with smithsonite were located. Excavator trenching near known boulders or central to the anomaly did not reveal encouraging sulphides.

The main contact between carbonates and phyllites is near the 97+00N baseline. Mineralization here is related to northerly trending, silicified quartz zones that cut both carbonates and phyllites. Mineralized surface boulders can be found scattered over phyllites, even though trenching may reveal only phyllites. Glacial action was a factor in their distribution. The phyllites north of the baseline have thin interbeds of grey limestone.

No further action is contemplated for the Que Claims, but developments on adjacent non-Teck (eastern) property should be monitored."

F) <u>Geotechnical Surveys</u>

Geochemical surveys - soil and silt - were conducted over much of the Teck-optioned property in 1989-1990, guided largely by Mickle's Zinc-Zap results. However, some large central areas of possible importance were ignored due to swampy conditions. The descriptions by Murrell (1991) follow:

Geochemistry

"Since much of the prospective stratigraphic interval is overburden covered, a geochemical survey was determined to help trace extensions of known showings and to detect the presence of undiscovered lead-zinc bodies (Figures 6, 8, 9, 11, 13-16).

A well flagged 7.75 km long base line and 46.9 km long cross line grid was prepared. No cutting nor blazing was carried out. The origin, labelled 100+00N, 100+00E was established adjacent near mile "8430.3" of the "8400" forestry access road. The baseline runs at 113° and extends from 72+00E (near the DeBasher showing) to 140+50E (near the Que showing). It is delineated by orange flagging. Stations every 50 metres are marked with pink and blue flagging, with the station locations marked on aluminum tags stapled to laths. Crosslines are also marked with orange. The orange and blue crossline stations include the station locations written on Tyvek tags. Lines are usually spaced at 200 metres with sample stations every 50 m along the lines. Locally, tighter spacing was done to better delineate targets.

Soil samples were taken at 50 m and sometimes 25 m intervals along the grid line using a mattock. The "B" horizon was sampled whenever possible (very few exceptions) and was usually encountered 15 to 25 cm below surface. Samples were placed in kraft paper geochemical bags marked with the grid location. After air drying, they were shipped to the Rossbacher Laboratory in Burnaby for analysis. At the lab, samples were dried and sifted to minus 80 mesh through stainless steel or nylon screens. They were then digested with a 3-1-2 dilute Aqua Regia and analyzed utilizing an Emission Spectrophotometer for Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Hg, La, Mg, Mo, Mn, Ni, P, Pb, Sb, Si, Sr, Ti, U, V, W and Zn.

Results were tabulated in reference to grid location and returned to the field for further processing and are reported in previous assessment reports.

Histograms, for the first 187 sample results received, were constructed and analyzed to establish anomalous ranges for Pb and Zn:

	ppm Pb	ppm Zn
Background	60	275
Threshold	60 - 110	275 - 450
Anomalous	110 - 220	450 - 1000
Very Anomalous	220	1000

Contour maps displaying these various categories and showing the location and all values for Pb and Zn, were constructed at a scale of 1:5,000 and Pb contours were transferred to the attached 1:1,000 scale maps for the various showings areas.

The eastern part of the grid has much higher background and produced several very encouraging anomalies. The known showings (Gunn, Que, Main, Flipper Creek and DeBasher) were easily detected by geochemistry and extensions seemed to be indicated for some of them. Several other separate anomalies were also defined. In most cases the areas were anomalous both in lead and zinc.

In a carbonate environment, anomalies are usually very close to source as migration is very limited. To further test the original anomalies, parallel sample lines, 50 metres on either side of the anomalies, were sampled at 25 m intervals and the area was prospected in more detail. The more encouraging ones were then trenched by excavator. Although mineralization was found in some of the areas, none have proven to be significant."

Geophysics (Figures 5, 6, 17)

A limited VLF survey ("a") was completed by Teck in the vicinity of the Main Showing. Semi-continuous "crossovers" (conductors") were present in several areas, the most significant probably being an E-W trending one originating near the Main showing. Its trend was more westerly than expected assuming that a small northwest trending valley in the locale marked the trace of a fault.

A second limited VLF survey ("b") conducted by Golden Kootenay (J. McLeod, 1992) appears to have picked up some strong conductors, probably fault structures, and will be enlarged upon as it may represent important mineral association.

Up to 2% disseminated pyrite has been noted in the important phyllite unit which may react to Induced Potential Surveys. If related to lead-zinc mineralization, important targets would be generated. An air-mag survey has recently been completed within the general area by Insular Explorations Ltd. and may be available. Whether or not EM was included is not known.

G) Diamond Drilling

There appear to have been only 11 short (to 300 feet) diamond drill holes completed in four locations along the 7 km belt since 1969. Records on hand are only of those by Teck, as shown below, but summaries of the Canadian Superior holes (3 totalling 352 m) are also available in assessment reports.

"As reported by Teck, four drill holes, totalling 162.5 metres, were drilled using Teck's Winkie drill and Teck personnel. IAX core was produced, which is about the same size as BQ. Two holes (119.8 m) tested beneath the Main Showing. Only a few wisps of mineralization were present even though the -45° holes passed directly beneath excellent surface showings. The other two holes (42.7 m) were drilled from a common set-up at the Gunn Showing. No signficant intersections were obtained. Major faulting problems caused curtailment of the drilling at the Gunn but the projected mineralization interval had been crossed.

Drill core has been stored at the campsite nearer Grizzly Lake west of the 8400 Road."

Hole No.	Northing	Easting	Elevation	Bearing	Dip	Length
GL 90-1	100+36	125+10.5	1535 ±	288°	-44°	61.6 m
GL 90-2	100+17	125+57	1533 ±	307°	-45°	58.2 m
GL 90-3	94+64	143+50	1710 ±	94°	-65°	22.6 m
GL 90-4	94+64	143+50	1710 ±	94°	45°	20.1 m

CONCLUSIONS

The writer's conclusions concur in general with those of Teck's (Murrell, 1991) as outlined below, except possibly for Item 6(b) reference to "feeder systems":

"1. Numerous lead/zinc occurrences and showings are present within carbonates of Hydrynian age on the Grizzly Lake property.

2. The showings are stratabound hydrothermal and in the upper portion of the Isaac Fm. as part of its transitional contact with the overlying Cunningham Fm.

3. The Isaac Fm. in this location consists of series of phyllites of variable thickness and dolomitic carbonates.

4. The intrusives played no apparent role in mineralization.

5. Of the numerous occurrences present, five were deemed signficant and received substantial development work.

6. Lead/zinc mineralization is structurally controlled along favourable stratigraphy. Deposition was controlled by a complex interplay between:

a. Structural traps formed by overlying impervious phyllite and underlying host carbonates.

b. Faulting - to form open space breccia zones and less likely to act as feeder systems.

c. Folding - gentle warps in the contact form conducive areas beneath the impervious phyllite for sulphides to "pool".

Although good to excellent grade Pb/Zn mineralization is present in many occurrences, continuity of the grade is a problem. Mineralization occurs as discontinuous pods or clots, or very minor veins.

If a significant deposit exists on the Grizzly Lake property, it will be along or near a phyllite-carbonate contact and cut by one or several subsidiary faults. This fault will probably, but not necessarily, trend north to northwest. There is every likelihood the deposit would be "blind" - not outcropping nor even subcropping and therefore would be very difficult to detect.

Further work to locate a possible "blind" mineral deposit would consist of careful detail structural mapping and liberal interpretation along the favourable stratigraphic horizon, followed by detail VLF, Gravity and I.P. surveying. Ultimately diamond drilling (possibly deep) would be necessary to confirm the presence of such a deposit."

RECOMMENDATIONS

As suggested by Teck, "the Main Showing and area obviously have the proper conditions for encouraging sulphide deposition. The stratigraphy is interpreted to be mainly fairly flat to undulatory at this location and this may persist to the north. No outcrop is present between the Main Showing and the limestone wall, 700 metres to the north. The area is covered by swamp and lake and could not be soil sampled. It is probable that the area is underlain by the favourable combination of carbonates (as seen at "Dolomite Flats") and phyllite. Major faulting may be present as both a probable easterly extension of the Flipper Creek Fault and as northerly trending cross faults."

It is recommended that this area be subjected to VLF surveys to help follow the favourable phyllite unit as well as faults which might be associated with it locally, followed by I.P. and gravity surveys as required, to help outline the presence of subcropping or "blind" sulphide bodies. It is further recommended that contingent drilling be carried out to test high priority anomalies that may result from any carefully interpreted results of the geophysics, including short holes that might be useful in interpreting the role played by certain fault structures. Subsurface geochemical testing may be required in certain areas. The Eastern area, not part of the Teck (J.V.) agreement, should be treated similarly, as well as mapped and surveyed to the standards used by Teck to the west.

With respect to the initial VLF work, the property should undergo a detailed, grid controlled two station (Seattle and Hawaii) VLF-EM survey with a line spacing of 75 metres. This will enable the structural relationships which are thought to control the Zn-Pb mineralization to be compared to the known mineralized and altered areas, the adjacent covered areas and the soil and rock geochemical anomalies. This phase of exploration can best be completed during February and March 1993 when ground conditions are well suited to the work program. Completion of the VLF-EM survey allows for an early start on any other geophysical and geochemical surveys and on a drilling program.

The VLF-EM survey should be conducted over the Teck-grid area i.e. 8,000 metres x 1,000 metres at a line spacing of 75 metres and a station interval of 20 metres. The response of VLF-EM at the DeBasher mineralized areas as determined from the recent, very limited orientation survey suggests a correlation with somewhat regularly-spaced conductors. A complete survey of the mineralized areas known to date and their adjacent overburden covered areas could accurately outline priority drilling areas. A possible approach to discriminating shallow from deeper mineralization would be to utilize several scout-drill holes and down-the-hole geophysical tests.

Until the overall VLF-EM survey is completed as analyzed the further testing of the anomalies (if necessary) cannot be determined. One thing is certain - from the limited VLF-EM tests conducted to date there appears to be meaningful data expressions evolving which will help in relating at least the observed surface mineralization with structural patterns.

Phase 1 of Joint Venture Agreement calls for exploration expenditures of $120,00 on or before October 31, 1994 and Phase 2 - $200,000 on or before October 31, 1995.

COST ESTIMATES

Phase 1

Geophysical Surveys - VLF-EM and orientation magnetometer:	
Grid installation - two men for 30 days at $300/day	$ 9,000
Operators - two for 35 days at $350/day	12,250
Camp cook and expediter	5,250
Transportation including 4x4, snowcat and skiddoo plus fuel and oil	10,625
Camp and board for 160 mandays at $80/manday	12,800
Equipment rental	1,750
Geophysical interpretation and reports	4,500
Environmental impact bond (refundable)	7,000
Insurance and Workers' Compensation	5,000
Field supplies	2,500
Unemployment insurance and CPP	2,000
Scout diamond core drilling - 300 metres at $130/metre (all inclusive)	39,000
Assays	1,500
Contingency	6,825
Sub-total	$ 120,000

Second Phase contingent on the results of Phase I

Phase II

Supervision	$ 9,000
Detailed geophysical follow-up surveys:	
Operator - 30 days at $200/day	6,000
Assistants - two, 60 mandays at $150/day	9,000
Equipment rental	7,500
Transportation	7,000
Camp and board, 120 mandays at $80/day	9,600
Field supplies	5,000
Drilling - 1,000 metres at $130/metre (all inclusive)	130,000
Assays	5,000
Contingency	11,900
Sub-total	$ 200,000
TOTAL	$ 320,000

REFERENCES

B.C. Ministry of Energy Mines and Petroleum Resources Assessment Reports 2366 - Canex Aerial Exploration; 3417 Vanguard Explorations Ltd.; 3148 - Cream Silver Mines Ltd.; 3783 anzd 3813 - Canadian Superior Explorations Ltd.; and 9667 - M.G. Larsen (see also MinFile).

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CERTIFICATE

I, JAMES J. McDOUGALL, do hereby certify that:

1) That I am a consulting geologist with a business office at 7720 Sunnydene Road, Richmond, B.C., V6Y 1H1 and President of J.J. McDougall & Associates Ltd., Consulting Geologist.

2) That I am a graduate in geology of University of British Columbia (M.Sc., 1954).

3) That I am a Registered Professional Engineer (Geological) in good standing with the Association of Professional Engineers of the Province of British Columbia.

4) That I have practiced my profession as a geologist for the past thirty-eight years.

5) That the information regarding Golden Kootenay Resources Inc.'s Grizzly Lake Joint Ventured property contained herein is based on private and published descriptions, particularly those of Teck Corporation, plus local on ground examinations, the most recent being October, 1992.

6) That I hold no interest in the Securities of Golden Kootenay Resources Inc. or in Joint Venture Partner Cariboo Highland Metals Inc., nor in their present holdings in the Grizzly Lake area, nor do I expect to obtain such securities or holdings.

7) That this report may be used by Golden Kootenay Resources Inc. for any news release or Statement of Material Facts related to the Grizzly Lake Project, provided that no excerpts are used out of context with the whole.

James J. McDougall P.Eng.

James J. McDougall, P.Eng.

Dec 7/92