ASSESSMENT REPORT

on the

1990 EXPLORATION RESULTS

(Geology, Geochemistry and Drilling)

of the

GOAT 4 TO GOAT 7 CLAIMS
(Record n° 3868-3871)
and
GOAT 8 TO GOAT 11 CLAIMS
(Record n° 3872-3875)

Located in the Telegraph Creek area
British Columbia
Liard Mining Division
NTS 104 G/12W and 13W

at
57° 46· North Latitude
131° 50· West Longitude

for
Integrated Resources Ltd.
and
Capra Minerals Inc.
700 T.D. Tower
10205 101 Str.
Edmonton Alberta
T5J-2Z1

by
Phil Van Angeren P.Geol.

February 19, 1991

TABLE of CONTENTS

LIST of FIGURES

SUMMARY

The author has been retained by Integrated Resources Ltd. to complete this report, detailing the 1990 exploration activities on their *Goat 4-11 Claims* located 45 km southwest of Telegraph Creek, northwestern British Columbia. The property consists of 8 mineral claims (Goat 4-11) covering a 37.5 km^2 area around Mt.Barrington.

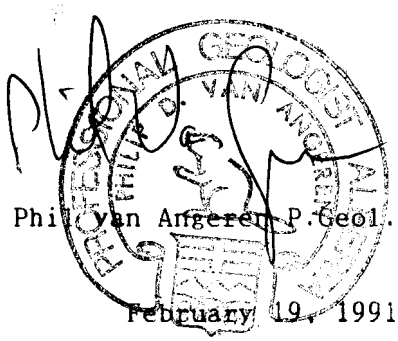
The first truly comprehensive reconnaissance-level exploration program was completed on the claim block in 1990. A total of 104 silt, 100 soil, 330 rock and 48 core samples were collected for analysis. A 110 m diamond-drill hole was also completed. Previously detected high-grade showings (1988-89) were determined to consist of small sulphide pods enclosed within larger, altered features.

The project area is centered on a Triassic-Jurassic pluton of granodiorite to syenite affinities. This was intruded into Triassic andesites and related sediments belonging to the Stuhini Group. Porphyry, shear and replacement type mineralization were the objects of exploration. A total of 15 targets of geological/geochemical significance have thus far been defined.

A high-priority target is the "**Bob structure**" located in Goat 6. This 450 m long structure is characterized by a 5 to 90 m wide alteration belt centered by a 2.0 to 4.0 m wide quartz-stockwork zone containing up to 0.235 oz/t Au and **0.56%** Cu across 1.8 m. A single diamond drill hole was attempted on the "*Bob structure*" late in the season but had to be abandoned 10 m short of the targeted quartz-stockwork zone because of bad drilling conditions. Wall-rocks are mildly anomalous in precious-metals. It is felt that the structure has not been adequately drill-tested.

This author concludes from comparisons with published data, that portions of the Goat 4-11 claims have geological and geochemical analogies with such well-publicized deposits as the **Johnny Mt, Galore Cr, Polaris-Taku** and possibly the **Tulsequah Chief**. The prospects for the occurrence of economically viable, metallic mineralization on the Goat 4-11 claims is considered excellent.

Shear-hosted, stockwork and replacement type deposits are the current focus of exploration on the claims. A program of continued mapping, rock/bulk sampling, IP-resistivity geophysics (to 20 line-km) and large-bore diamond drilling (to 800 m) is recommended for 1991.



Phil Yan Angeren P.Geol.

February 19, 1991

INTRODUCTION

The author has been retained by Integrated Resources Ltd. (Integrated) of Edmonton, Alberta, to complete this report regarding the preliminary geological exploration of their Goat 4 to 11 mineral claims located near Telegraph Creek, northwestern British Columbia (Figure 1).

Reconnaissance-level geological mapping, geochemical sampling (silt, soil and rock) and 110 m of exploratory drilling was completed on the eight contiguous claims between July 28 and October 8 1990. The work was carried out by a four-man crew, supervised by the writer.

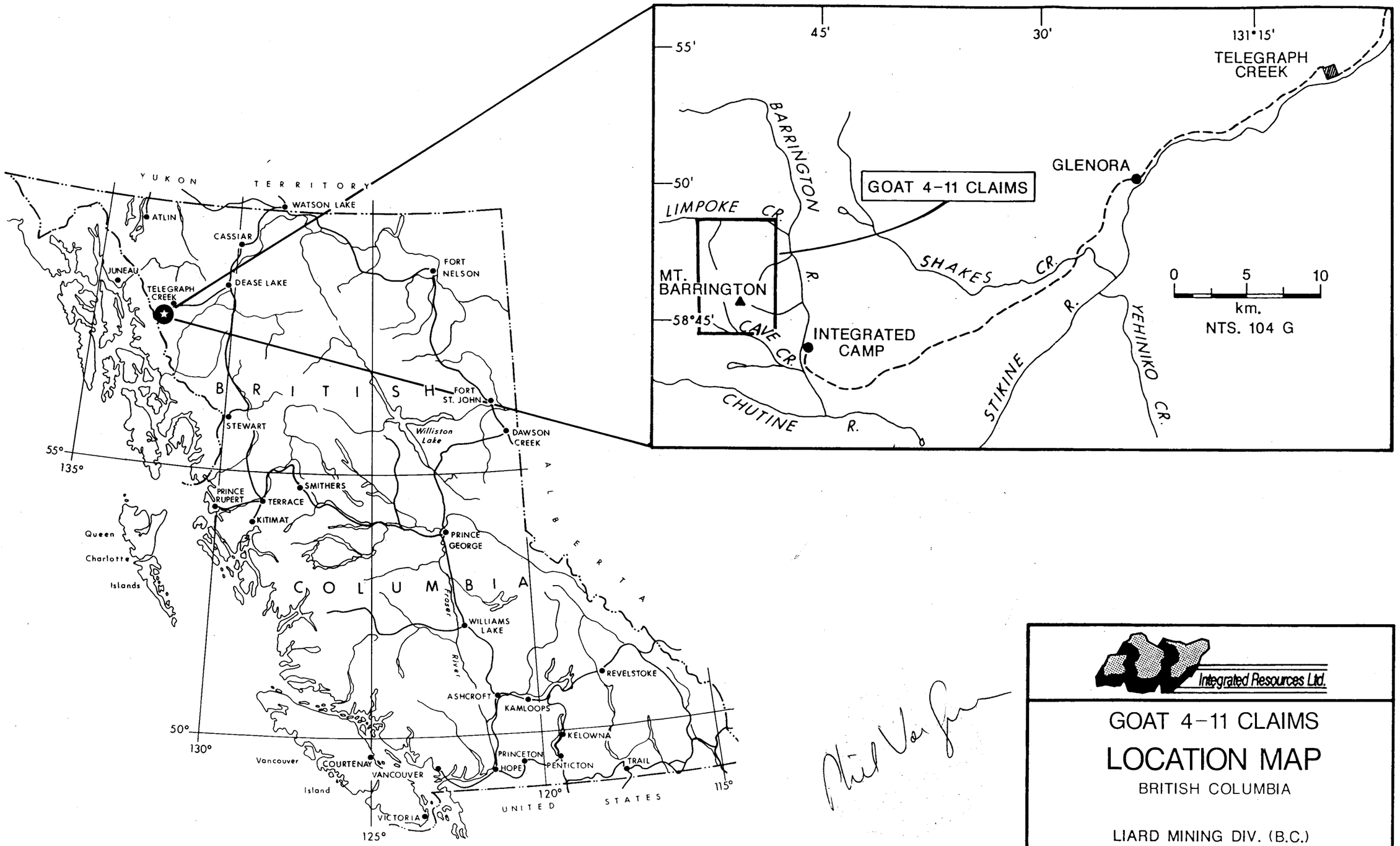
Records at the British Columbia Ministry of Energy, Mines and Petroleum Resources show the following claims to belong to Integrated Resources Ltd. (see Figure 2):

Claim Name	Record N°	Units	Record Date	Expiry Year
Goat 4	3868	15	Dec 5,1986	1990*
Goat 5	3869	15	Dec 5,1986	1990*
Goat 6	3870	20	Dec 5,1986	1990*
Goat 7	3871	20	Dec 5,1986	1990*
Goat 8	3872	20	Dec 5 1986	1990*
Goat 9	3873	20	Dec 5,1986	1990*
Goat 10	3874	20	Dec 5,1986	1990*
Goat 11	3875	20	Dec 5,1986	1990*

* Prior to filing of this report.

The legal aspects of these claims are not known to the author, other than that Capra Minerals Ltd. has the right to earn a 75% working interest in the property through funding of the 1990 exploration program.

The property was staked in 1986 on the basis of encouraging exploration results from previous work completed by DuPont of Canada and on possible geological similarities with the Galore Creek gold-copper exploration camp, located 85 km to the south.



Integrated Resources Ltd.

GOAT 4-11 CLAIMS

LOCATION MAP

BRITISH COLUMBIA

LIARD MINING DIV. (B.C.)

NTS:	DATE:	FIGURE:
104-G/12W,13W	NOV. 1990	1
DRAWN: LEHTINEN '89	SCALE: AS SHOWN	

104G/13W | 104G/13E

131° 45'

BAR 3 BAR 4 BAR 8 BAR 9 BAR 11 BAR 10 CANYON 82 GRAN 11 GRAN 16 IR 9 #6534 4Nx3W

POKER 2 POKER 1 POKER 5 WATERFALL 1 LIMPOKE CREEK LCP

GOAT 4 #3868 3Sx5W GOAT 5 #3869 3Sx5E GOAT 3

POKER 7 POKER 6 IR 1 GOAT 6 #3870 4Sx5W GOAT 7 #3871 4Sx5E CREEK

GOAT 2 STANN CR.

IR 8 IR 2 GOAT 8 #3872 4Nx5W GOAT 9 #3873 4Nx5E

WIMPSON CR. TARGET 1 MT.BARRINGTON

GOAT 10 #3874 4Nx5W CAVE CR. GOAT 11 #3875 4Nx5E JIMMIE CR. GOAT 1

IR 7 IR 6 IR 5 LCP CAVE CR. YON

IR 4 IR 3 INTEGRATED CAMP

TUFFA LAKE BARRINGTON R.

CHUTINE RIVER

LAKE 1 LAKE 2 BAKE 1 BAKE 2 SHAKE 1

LAKE 3 LAKE 4 BAKE 3 BAKE 4 SHAKE 3 CANYON 25

DOLE 1 DOLE 2 SHAKES CR.

DOLE 3 DOLE 4 BRUNN CR.

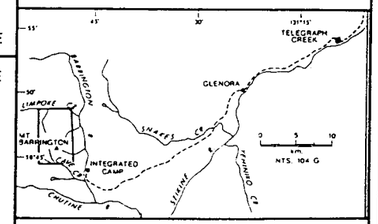
DOLE CR. OGLE CR. WRIGGLE CR.

104G/13W
57° 45'
104G/12W

104G/13E
57° 45'
104G/12E

131° 45'
104G/12W | 104G/12E

N



1.0 0 1.0 2.0
kilometers

Integrated Resources Ltd.

GOAT 4-11 CLAIMS

CLAIMS DISPOSITION

LIARD MINING DIV. (B.C.)

NTS: 104G 12W&13W	DATE: NOV/1990	FIGURE: 2
DRAWN: P.VA	SCALE: 1:50,000	

Reduced from 1:50000'

LOCATION, ACCESS and PHYSIOGRAPHY

The Goat 4-11 claims cover a 37.5 km^2 area surrounding Mt.Barrington, itself located 45 km west of Telegraph Creek and 11 km northwest of the junction of the Barrington and Chutine Rivers in northern British Columbia (Figure 1). This is at latitude 57° 46' North and longitude 131° 50' West on NTS map sheet 104 G/12W, 13W in the Liard Mining Division.

Access to the claim group is by helicopter from Integrateds' placer mining camp established 7 km to the southeast, on the Barrington River. The camp is itself reachable via an all-vehicle gravel road from Telegraph Creek. An airstrip suitable for small fixed-wing aircraft exists on the road near the camp. Supplies are obtained at Dease Lake, on Highway 37, some 90 km northeast of Telegraph Creek.

The claims are situated within the Boundary Ranges of the Coast Mountains where treeline varies from 1000 to 1200 m ASL and where active glaciation is locally prevalent above 1500 m. Vegetation consists of dense growths of stunted conifers, with alpine mosses and shrubs above treeline.

Topography is rugged, ranging from 200 m at the camp to 2025 m at the western edge of the project area. Summers are short, cool and wet. Although snow accumulation in this region is less pronounced than in the main Coast Ranges, shaded creeks may contain packed snow well into late summer.

EXPLORATION HISTORY

Exploration history in the area dates back to the early 1890's when placer gold was discovered on Stikine River gravel bars below Telegraph Creek. The area of interest was last mapped by a government agency (in this case the G.S.C.) in the early 1970's (Souther,1972).

Mineral exploration saw a peak in activities during the 1950's following the discovery of the Galore Creek porphyry copper deposit by Kennco Exploration Ltd. and Hudson Bay Mining & Smelting Co. Ltd.(in 1955). Some of the early exploration included the Mt.Barrington area. For example; geochemical sampling, an "IP" geophysical survey and diamond-drilling were completed in granitic intrusives at the "*Poke*" and "*Limpoke*" occurrences, respectively located in Goat 4 and 8 (Souther, 1972 [p 26]; also Figure 3). It is apparent that insufficient concentrations of copper were found to warrant continued work.

Exploration subsequently lay dormant until the early 1980's when regional silt-sampling surveys were conducted near Telegraph Creek in an effort to locate precious metal mineralization. Teck Corp., DuPont of Canada Exploration and more recently, Integrated Resources Ltd., have all staked and briefly explored the region centered on Mt.Barrington (Folk,1981; Strain,1981; Korenic,1982; Wetherly,1989 and Lehtinen,1989). Emphasis was on auriferous 'vein' and 'copper-porphyry' mineralization.

Strain and Korenic reported that mineralization consisted of sweat-like pods of massive, auriferous pyrrhotite in hornfelsed sediments. These were found to be collectively uneconomic by Korenic. A geochemical report released by the Geological Survey of Canada in July 1988

identifies the Mt.Barrington project-area as containing the highest precious-metal values in silts in the Telegraph Creek district (G.S.C., 1988).

The 1990 exploration program was the first, full-scale, comprehensive, reconnaissance-level operation completed on the Goat 4-11 property. It was conducted in an effort to obtain a decisive appraisal of the potential for economic concentrations of precious and base metal ores in vein, replacement-volcanogenic massive sulphide (VMS) and porphyry environments. Work comprised prospecting, geological mapping, geochemical sampling, and diamond-drilling.

GEOLOGY

Regional Geology:

The Telegraph Creek region was mapped by the Geological Survey of Canada in the early 1970's (Souther,1972). Regional geology in the Mt.Barrington area is shown in Figure 3. The following is derived mostly from Souther.

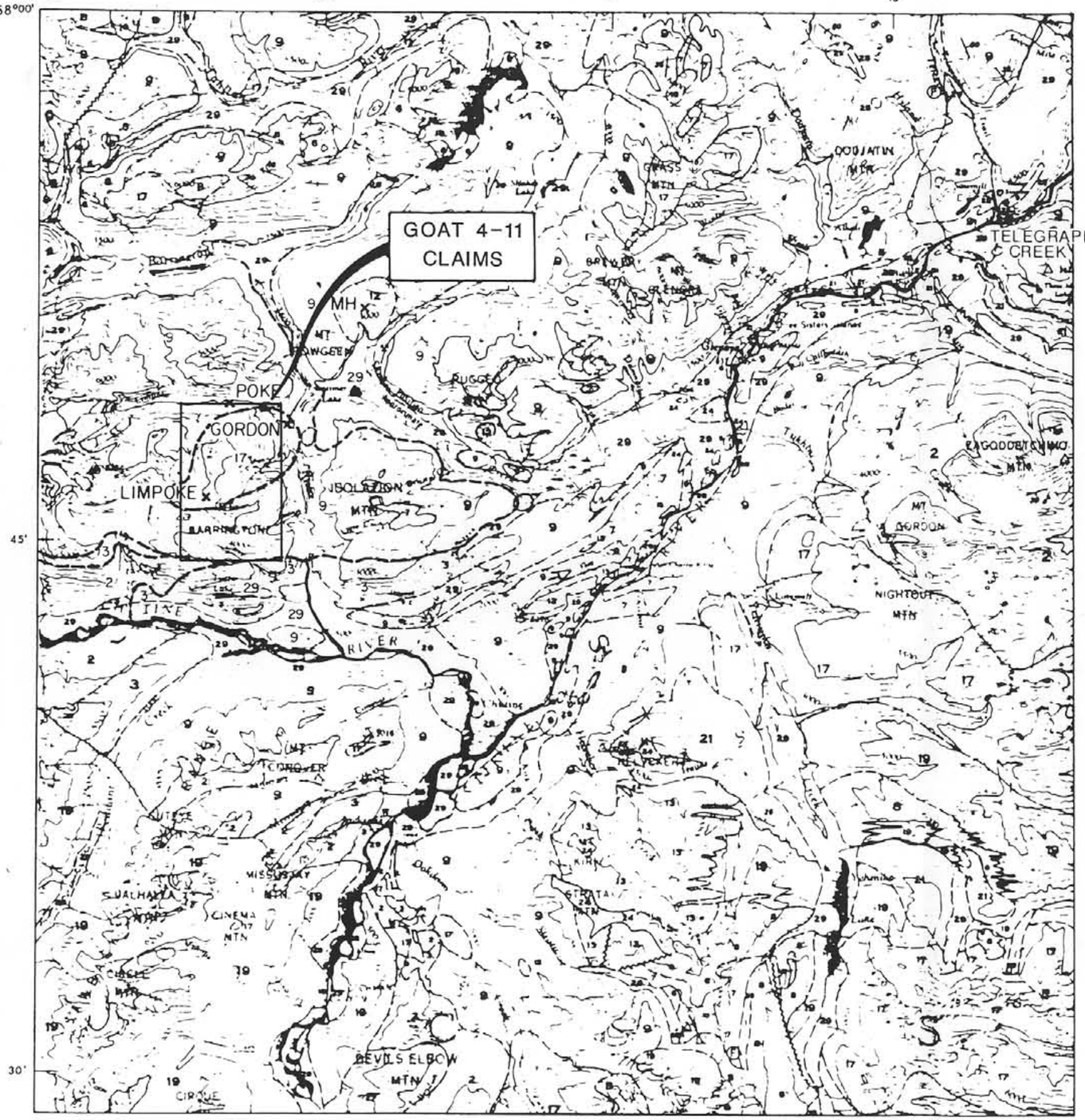
The district lies within the Stikine Arch, at the junction of the Intermontane Belt (accretion terrain) to the east and the Coast Plutonic Belt (island arc root) to the west. The Stikine Arch consists of late-Paleozoic to mid-Jurassic oceanic volcanics and related sediments representing island arc and back-arc deposits (units 1-9, Fig.3). The region is dominated by the late-Triassic Stuhini Group (units 5-9). Stikine Arch formations are locally overlain by a variety of subareal volcanics and sediments of post-late Jurassic age (units 13-16 & 20-22). Most pre-Cretaceous strata are intruded by mid-Triassic to early Cretaceous plutons and dikes of varied affinities (suites 10-12,17,19 & 22-23).

Structural patterns in the region are dominated by west-trending, upright isoclinal folds in Stikine Arch formations. Post-intrusive deformation is characterized by regional-scale, vertical, north-trending, joints, faults and shear zones. Similar structures also strike northwest. Many are typified by orange-weathering, carbonate alteration.

Quartz-biotite hornfelsing has occurred in the Stuhini group, at their contact with coeval and later intrusions. This is particularly evident on Mt.Barrington where prominent gossans define the hornfels.

Mineral deposits associated with the geological environment encountered near Mt.Barrington may be classed into four groups: porphyry copper-silver-gold deposits associated with syenitic and monzonitic intrusives (such as the Galore Creek deposits; Logan & Koyanagi,1989); auriferous, quartz-carbonate stockworks and replacements in shear zones (such as the Polaris-Taku, and Johnny Mt occurrences; E.M.R.C,1984 and Alldrick et.al.,1989); massive, shear-hosted polymetallic sulphide ores in Stuhini andesites (such as the Tulsequah Chief deposit; Souther,1971 & E.M.R.C.,1984); skarn deposits in calcareous horizons (Ray, 1990).

Mineral occurrences related to the Stuhini Group may be found along the entire length of the belt; from Iskut River to the Yukon. This provides for a very large exploration target. It is significant that most of these showings are associated with quartz-carbonate-albite replacements in shear zones within both volcanic rocks and felsic porphyries. It is also noted that many of these are rich in arsenic, bismuth, base metals and antimony. Porphyry copper-gold deposits, on the other hand, are magnetitic, garnetiferous and related to alkaline intrusive suites.



LEGEND
(Adapted from Souther, 1972)

QUATERNARY
PLEISTOCENE and RECENT

29 Fluviatile gravel; glacial outwash; colluvium

CRETACEOUS and TERTIARY

(SLOKO GROUP)
22/23 Biotite leucogranite, dikes and sills
Porphyritic andesite, dikes and sills

(SUSTUT GROUP)
21 Conglomerate; sandstone; shale

20 Quartz-feldspar porphyry; rhyolite; in part equivalent to 22

19 Biotite-hornblende quartz-monzonite

JURASSIC and/or CRETACEOUS

17 Granodiorite; quartz diorite; leucogranite

JURASSIC

13/16 Conglomerate; siltstone; basalt; greywacke

LATE TRIASSIC to MIDDLE JURASSIC

12 Syenite; orthoclase porphyry; monzonite

(HICKMAN BATHOLITH SUITE)
10/11 Hornblende granodiorite; diorite; pyroxenite

TRIASSIC
UPPER TRIASSIC

(STUHINI GROUP)
9 Undifferentiated sedimentary and volcanic rocks

8 Augite andesite tuffs, flows and related clastics

7 Siltstone; ribbon chert; greywacke; limestone

6 Limestone; impure limestone

5 Greywacke; siltstone; tuff; shale

MIDDLE TRIASSIC

4 Black shale; siltstone

PERMIAN

3 Thick bedded limestone

2 Phyllite; schist; greenstone

SCALE 1:250,000

MILES
0 5 10

0 5 10
KILOMETRES

N

SYMBOLS

Geological boundary (defined and approximate, assumed) .....
Bedding (horizontal, inclined, vertical, overturned) .....
Anticline .....
Syncline .....
Fault (defined and approximate, assumed) .....
Thrust fault, teeth on hanging-wall side (defined and approximate, assumed) .....
Fossil locality .....
Mineral property .....
Cluster .....

Integrated Resources Ltd.

MT. BARRINGTON AREA
REGIONAL GEOLOGY
LIARD MINING DIVISION, B.C.

ADAPTED FROM LEHTINEN 1989

DRAWN	NTS	DATE	FIG No
JW	104G/2	NOV 1989	3

The prime goal at Goat 4-11 was therefore to locate such environments.

Property Geology:

The geology of the Goat 4-11 claims is shown on Figure 4. Geological formations have been classed and "dated" on the basis of similarities to formations described by Souther (1972). The project area is underlain almost exclusively by a felsic, multiphase, intrusion of probable Triassic-Jurassic age and by volcanic rocks and related sediments belonging to the late-Triassic Stuhini Group. Groups 1 to 6 in figure 4 are believed to correspond to Southers' n° 7, 8, 10, 12, 12/19 and 22-23 respectively.

Stratigraphy:

The oldest strata on the property are thought to be the marine sediments included in group "1". Green ribbon-chert and black siliceous siltstone (1a and 1b) dominate in the southern halves of Goat 10 and 11. These west-trending formations rest in apparent fault contact against a very thick sequence of Permian limestone to the south. Towards the north, they pass to interlayered and discontinuous beds of impure limestone, siltstone and argillites (1b,d,e). These sediments suggest a gradual shallowing of the seas.

The sedimentary package gradually passes to mixed volcaniclastics and andesitic tuffs and flows (1c,2b,c,d), indicating the development of a volcanic edifice. Rhyolite extrusives and rhyodacite intrusive/extrusives (2a,2e) form a minor constituent of the volcanic assemblage. Presence of small, discontinuous carbonate horizons and cherty argillite beds within the andesites signifies the presence of a back-arc basin environment as well.

All mapped formations are interstratified to some extent suggesting coeval deposition. Furthermore, many contacts are fault-controlled making correlations difficult. In one location on the south ridge of Mt.Barrington it was determined that 'up-stratigraphy' was to the south (limestone cobbles in a flow). Otherwise, stratigraphic relationships are unclear at best.

Intrusives:

Three-quarters of the property is underlain by a small, oval, multi-phase granodiorite pluton measuring up to 8 km along its northeast axis ('Goat' pluton). The pluton has provided the source material for the accumulation of the andesitic volcanic edifice. This is indicated by its close compositional similarity with glomerophyrs contained in Stuhini andesite flows.

The pluton is itself intruded by plugs and dikes of pegmatitic syenomonzonite (4a), porphyritic syenite (4b) and quartz-monzonite (5a). These are all of probable late-Triassic to early-Jurassic age. Some of these phases are closely associated with large-scale alteration. The "dating" of the various intrusive phases, as shown in figure 4, is considered accurate on the basis of studies in contact relationships and wall-rock inclusions. All sedimentary and intrusive formations are cut by post-Cretaceous dikes of granitic and dioritic composition (6a-c).

Structure and Metamorphism:

All Stuhini strata have a westerly trend, are steeply dipping and are affected by complex folding. Of note is the high degree of faulting which has disrupted sediments and volcanics alike. Most faults are

NW-bearing. Intrusives and hornfelsed sediments are heavily jointed in a N- and NE- direction. This structural aspect has important ramifications regarding mineralization since many faults follow these trends (particularly at the "Bob", "Spike" and "Jimmie Cr" areas).

A major, post-intrusive, shear structure, known as the 'Goat' fault, is followed for more than 4.0 km westwards from the "Jimmie Cr" zone. It is accompanied by local brecciation and by strong quartz-carbonate alteration, both of which were exhaustively sampled to no avail.

An important N-trending fault is seemingly offset by the 'Goat' fissure. It is exemplified by the "Barrington" structure, a chloritic shear zone to 5.0 m wide cutting hornfels. It may portray an old, reactivated fault extending northwards for >5.0 km from 'Goat' fault through "Pokey-SE" and possibly towards "Bob" (Bob Structure). Within the northwestern corner of the property is the NW-striking "Spike fault" which is traceable for more than 1.5 km. It too is accompanied by mineralization. All of these faults are excellent, viable exploration targets.

Metamorphic overprinting in the Mt.Barrington region is dominated by biotite-hornfelsing of Stuhini strata at their contact with units 3, 4 and 5. This can extend to 500 m from said contact. Hornfels has little or no bearing on mineralization, aside from providing brittleness for breccia or stockwork development.

Garnet skarn is locally developed in pegmatitic syenomonzonite (4a) and in limy units (1c,d,e). This is magnified at the "Spike" zone where garnet replaces a shear zone. Garnetiferous syenite is an important "ingredient" of the *Galore Cr* deposits.

Alteration Assemblages:

Two types of alteration have affected various strata and structures on the property. These are *A*) quartz-carbonate-albite and *B*) potassium, alteration.

A) Quartz-carbonate-albite: a prevalent feature of the Goat 4-11 claim block is the distinctive, orange-weathering alteration ("q-c") which envelops many post-intrusive stockworks, fault-shears and breccias. These alteration halos are typified by microscopic carbonate (ankerite?), albitic feldspar (adularia?), minor quartz and sericite/kaolinite replacements. Affected rocks are commonly highly fractured (eg: crackle-breccia) particularly where previously rendered brittle by hornfelsing. The microcrystalline "albite" gives a cherty texture to the altered rocks. Despite its nomenclature, "q-c" alteration is mainly a feldspar dominant assemblage. These alteration zones straddle veins and stockworks of calcite and quartz (vuggy to chalcedonitic, ±chlorite). Veins are typically banded or brecciated, with chalcedony representing the final stages of cementation. Sulphides (pyrrhotite, pyrite and traces of arsenopyrite) usually occupy matrix cavities or are smeared along fracture surfaces and stockwork veinlets. Quartz-carbonate-albite alteration has been observed to extend up to 20 m from the core fault structure. The textures and mineral assemblages of "q-c" are classic hydrothermal alteration features.

The best examples of this form of alteration (±mineralization) are found along the 4.0 km length of the 'Goat' fault-shear system and along the exposed portions of the 'Barrington' structure (eg: "Pokey-SE" and "Bob"). In the "Glacier" area, unit 2a is interpreted to be a >50 m wide, albitized, quartz-carbonate alteration zone. Here, and at the "Jimmie Cr" location, the "q-c" assemblage encases a sulphide-rich, hairline-fracture stockwork. Alteration is strongly fracture-controlled; bleaching and "albitization" are progressively more intense and pervasive towards the tiny fractures.

B) Potassium-alteration: this may be subdivided into two categories; potassium-alteration and albitization. Both styles predate jointing and are postulated to be coeval with the intrusion of units 4 & 5. Potassium-alteration ("k" in fig.4) is defined as replacements of the original feldspars in intrusives by pink to orange feldspar. Phenocrysts are the first to be affected, followed by the groundmass. It is best developped within unit 4a and is probably related to intrusion of unit 4b. In extreme cases, the original feldspathic rock is completely

recrystallized to a brownish, "gritty", porous aggregate and all primary fabric (such as porphyry texture) is destroyed. Up to 2% fine-grained, disseminated pyrite replaces magnetite. Alteration of this type is met at the "Bob", "Spike" and "Spann Cr" zones. Albitization ("n" in fig.4) is defined by white, crystalline albite replacing various types of intrusive host-rocks. Remnant textures, pockets of disseminated sulphides and clots of chlorite are much in evidence. Pure albitization is localized in unit 3b, at its contact with potassium-altered 4a (eg: "Bob"). It is felt that unit 4b is the cause of both types of "potassium" alteration. Neither type has yet been observed within Stuhini volcanics, as is the case at the "*Galore Cr*" deposits. The two ("k" & "n") are typically encountered in porphyry-copper environments.

MINERALIZATION

General:

Apart from placer gold recovery from the Barrington River, the area has no mineral production history. Fifteen altered or mineralized zones have thus far been identified on the property. They have not yet been proven to be of economic significance, but it should be remembered that most were uncovered in 1990 and are still at an early stage of exploration. Mineralization on the Goat 4-11 claims falls into three categories; *i*) vein-hosted, auriferous, massive sulphide pods; *ii*) gold-bearing quartz-carbonate stockwork-replacement zones; *iii*) copper-enriched garnet replacements. A fourth group (*iv*), volcanogenic massive sulphides (VMS), has not yet been identified despite favorable geology for such.

The first group, ("*i*"), represents by far the most common mineralized structures encountered on the Goat project. They occur as a sparse network of narrow (< 0.5 m), discontinuous, quartz-carbonate veins and massive sulphide pods ("msp") disposed along joints. The 'msp' are aggregates of massive pyrrhotite with minor pyrite, arsenopyrite, occasional traces of visible gold and unacceptably high levels of arsenic. All are of extremely limited extent. It was the discovery and indiscriminate sampling of these types of occurrences which sparked interest for the property in 1981-89. Such veining is not a feature unique to the Mt.Barrington area and as such, cannot be considered to be an attractive exploration target. Despite spectacular grades (eg: n° 87897; 1.34 oz/t Au, 0.22% Cu), restricted dimensions provide little or no economic potential. Further work on these need not be considered.

Areas which host the other types of mineralization mentionned above are indicated in figure 4. Ten of these targets are presently discussed. The nomenclature in use is as follows: 1000 ppb = 1 gm/T = 0.029 oz/t. All geochemical procedures appear in Appendix A.

Property Occurrences:

These 10 targets have only been examined very briefly, and are forcibly poorly documented. Referenced sample numbers are indicated in brackets and values are tabulated in figure 4.

Terry Cr: {n° 70552-554,759; n° 87824,70901; n° 87818}: This area, located in the center of Goat 5, has a NW-trending pyritic syenomonzonite dike (4b) intrusive into granodiorite (3b). The distinctive feature is the presence of small 'msp's {eg: #553, 0.6 m @ 730 ppb Au and 11.00% Cu} adjacent to high Au-Cu values in the dike {#552, 1.0 m @ 520 ppb Au and #554, 1.0 m @ 4065 ppm Cu}. Mineralization can be traced intermittently for 250 m.

Bob-E: {n° 87815}: Situated east of "Bob" zone, in Goat 7. A 1.5 to 2.0 m wide feldspar porphyry dike (4b) contains a high background concentration of Au and Cu {220 ppb & 2757 ppm resp.}. This structure was not traced beyond the sample site.

Bob-W: {n° 70788}: This area is located west of the "Bob" zone, in Goat 6 and is probably related to it (see below). Altered syenomonzonite (potassium-altered 4b) contains pockets of pyrite which have high gold content {930 ppb}.

Spann Cr: The Spann Cr alteration zone is a 400 m wide 'granitized' area (3a?) crossing the mid-point of Spann Creek in Goat 7. It encloses a dike swarm (4b) centered on the postulated "Spann trend". The zone occurs immediately upstream of several 100 to 1100 ppb Au silt-anomalies (Wetherly, 1989 and this report). Although geology and alteration patterns mimick those of copper-porphyry systems elsewhere in the region, sampling has not yet resulted in mineral discoveries. The mineral potential is nevertheless judged to be excellent.

Pokey-SE: {n° 102207} This site occurs at the head of Pokey Creek, in Goat 8. It is believed underlain by a 50 m wide, high-level, hydrothermal breccia pipe. This consists of broken, kaolinized and calcified monzonite (5a), cemented by banded ankerite and chalcedony. A weak gold anomaly accompanies traces of pyrite in the breccia matrix {sample #207 gave 140 ppb Au upon reassay by coarse-gold methods}. Several silts and soils derived from this zone are anomalous in Au & Cu (see *Geochemistry*). Despite a lack of ore values, this zone is inferred to offer excellent exploration potential on the basis of similarities with other precious-metal deposits in the region (eg: *Polaris-Taku*).

Glacier: At "Glacier", a spectacular gossan dominates a 50 m x >200 m zone of quartz-carbonate-albitized crackle breccia (designated as 2a). The zone contains up to 5% fracture-smeared pyrite and pyrrhotite. All 1990 samples returned negative results even though silt sampling in 1988 had produced up to 2500 ppb gold from that drainage basin (Wetherly, 1989). The "Glacier" zone is conjectured to cover a large, hydrothermally altered, fracture-stockwork structure similar to that at "Jimmie Cr".

Pond: {n° 101960,969}: Pond is located at the head of Cave Creek, in Goat 8. The first sample originates from siltstone (1b) adjacent to a west-trending, altered, barren shear zone. The siltstone at #960 contains 895 ppb Au across 1.0 m. The other sample site is in weakly mineralized siliceous limestone; 2.5 m @ >1.00% Zn. This limy horizon contains diffuse "replacement" stringers of sphalerite (to 5%). It is felt to represent skarnification. This too is in proximity to NW shearing and has not been evaluated in more detail.

Jimmie-E1: {n° 70755,757,758,101972,973}: Jimmie-E1 is on the ridge between Spann and Jimmie creeks, in Goat 9. This zone consists of a 25 m exposure of a N-trending, 2.0 m wide, banded, polymetallic quartz-carbonate vein-system cutting hornfelsed sediments. Sulphides account for up to 10% of individual veins. As in the other areas described above, an auriferous syenite dike (4b) is in close proximity {eg: n° 755, 740 ppb Au}. The presence of anomalous concentrations of Au {to 95 ppb}, Ag {to 24.6 ppm} and Zn {to >1.00%} over widths of up to 2.0 m is an encouraging sign for other sections of the structure.

Jimmie-E2: {n° 102164,165,166,443 ±444,445}: This zone, also in Goat 9, is underlain by a volcanic sequence comprised of units 2a,2b,2c and 4b, attended by pronounced NW faulting. Quartz-sericite-clay-pyrite alteration is well developped within both the fault and unit 4b. The signature of this target is a very high silver background; 10.4 to 26.7 ppm derived mostly from feldspar porphyry and andesite. These observations imply that "Jimmie-E2" has been affected by hydrothermal activity, with inferrance for possible hidden, related, epithermal mineralization. Potential also exists for VMS-type mineralization.

Bob Zone: The "Bob" zone is exposed on a sharp ridge east of Pokey creek (fig.4). A total of 48 rock specimens were taken from core (fig.8). The geology at "Bob" is relatively uncomplicated. The zone lies at the eastern margin of a large plug of syenite (4a,b) intruded into the granodiorite pluton (3a,b,c). Syenites are potassium-altered (eg: 4ak) and carry minor disseminated pyrite

and magnetite. The main focus of exploration at "Bob" is on the quartz-carbonate altered structures. Attention was focused on the "Bob structure", which is a 5.0 to 90 m wide, vertical, altered stockwork zone traced for 450 m. It utilized the previously developed joint pattern as a conduit for mineralization. The "Bob structure" is divisible into two interrelated stockwork types "quartz-" and "proto-". The latter hosts the former.

Quartz-stockwork is a 2.0 to 4.0 m wide network of closely-spaced, discontinuous quartz-carbonate-sulphide veinlets (0.1-0.5 cm thick, >>20 veins/meter). Veinlets permeate through pervasively kaolinized wall-rock ("q-c"). Quartz-stockwork contains vein-hosted manganese, pyrite, chalcopyrite and malachite (to 5% combined). Values up to 0.235 oz/t Au, 18.5 ppm Ag, 0.56% Cu over 1.8 m {n^{o} 102397} have been obtained (van Angeren, 1991).
Proto-stockwork is characterized by sparse (<<20 veins/m), parallel veinlets identical to those above. This zone reaches 90 m in width on the grid base-line. It contains traces of pyrite & chalcopyrite in veins. Proto-stockwork can be described as the "alteration halo" surrounding *quartz-stockwork*. It is the quartz-stockwork zone which Integrated attempted to drill in 1990 (see ***Drill Report***).

Conclusions: Features which enhance the mineral potential of these targets are worthy of note: *A)* There is a strong relationship between mineralization and pyritic feldspar porphyry at the "Terry Cr, Bob-E & W, Spann Cr, Jimmie-E2, and Bob sites. This has similarities to the "*Johnny Mt and Galore Cr*" deposits. *B)* The "Pond, Pokey-SE, Glacier, and Jimmie-E1 targets entertain polymetallic (±Ag-Zn enriched), shear/breccia structures which are affected by quartz-carbonate-albite alteration. This may correspond closely to vein\stockwork deposits such as the "*Polaris-Taku* and *Johnny Mt*"; *C)* VMS possibilities exist at "Jimmie-E2 (eg: "*Tulsequah Chief*"). *D)* All zones contain circumstantial evidence favouring the existence of mineralization of types "*ii, iii & iv*". Emphasis will have to be on discovery of sulphide shoots within the altered zones.

GEOCHEMISTRY

A total of 104 silt, 100 soil ("talus-fines") and 330 rock samples were collected from the Goat 4-11 claims (see figure 4). Analytical procedures and results are tabulated in Appendix A.

Samples were shipped to Loring Laboratories of Calgary, Alberta for preparation and for analyses of Au, Ag, Cu, Zn and As. For most sites, elements occur at background concentrations. Results of the rock analyses are outlined under the heading: "***Mineralization***".

Silt results confirm previous conclusions that the Mt.Barrington area is highly anomalous in Au-Cu (G.S.C., 1988, Wetherly, 1989). Significant results have been noted at the "Terry Cr", "Spann Cr", "Pokey-SE" and "Bob" areas.

SIGNIFICANT SILT-GEOCHEMICAL RESULTS

TARGET	SAMPLE n°	VALUES	SIGNIFICANCE
Spann Cr	70660	Au; 180	In core of $4b_k$, upstream of 1100 ppb Au in silt (1988).
	70661	Au; 480	
	102119	Au; 115 Cu; 917	Headwaters of Spann creek.
Pokey-SE	70665	Au; 105 Cu; 943	Immediately downslope of a breccia pipe, upstream of 450 & 4350 ppb Au in silt (1988)
	70666	Cu; 755	
	87841	Au; 800 Cu; 632	
Terry Cr	70548	Cu; 954	Downstream of "Terry Cr" syenite.
	70896	Au; 385	Moraine in Limpoke Cr
Bob	102019	Au; 100 Cu; 830	200 m south of "Bob-S"

Au in ppb, Cu in ppm.

Five, contour-controlled, "talus-fines", sample lines were established in areas previously known to be anomalous. Mildly anomalous values were encountered in three areas: i) "Bob"; ii) "Pokey-SE" and iii) west of "Pokey-SE". Below "Bob", section 0+001-0+398 of S.L.A. averages 228 ppb Au and 629 ppm Cu over 400 m, very much in keeping with Au-Cu mineralization occurring immediately upslope. In the "Pokey-SE" area, section 8+00-9+00E of S.L.E. coincides with silt samples n° 70665,666 and is represented by high Cu values {to 829 ppm}. These may have been derived from the "Pokey-SE" breccia pipe. Two lines west of "Pokey-SE" exhibit high Au-Cu; S.L.B. 102316-319, averaging 207 ppb Au and 582 ppm Cu over 300 m; S.L.E. 2+00-4+00E, similar mild values over 200 m. Both sites are underlain by extremely coarse talus of units 5a, $4a_t$ and minor $2b_t$. Group "*iii*" mineralization is indicated.

Silt and talus sampling indicates that the 'Goat' pluton is accompanied by a high Au-Cu background and that known mineralized areas respond well to such geochemical methods. Previous and current surveys suggest that the "Bob", "SpannCr", "Glacier" and "Pokey-SE" areas show most promise as mineralized targets.

DIAMOND DRILL REPORT

A short, diamond-drill program was completed on the "Bob" zone. An attempt was made to intercept the "Bob structure" at a depth of 70 m below sample n° 102395 {0.235 oz/t Au}. Van Alphen Diamond Drilling Ltd., of Smithers, British Columbia, provided Integrated with a 'JKS 300' diamond drill capable of boring BDBGM core (BQ equivalent, ~5.4 cm). Hole n° DDH 01-90 was collared very late in the year, at 1660 m ASL at the only safe site on the "Bob" grid (co-ordinates: 0+70W, 0+02S; bearing @ 240°; dip @ -65°; Figures 4 & 8). These circumstances provided for poor "intercept angle" and appalling drilling conditions (eg: no water). The hole did not pierce through frost-broken ground, despite reaching a true vertical depth of 70 m. This resulted in the loss of the hole at 110.9 m, less than 10 m from the targeted stockwork zone. Core recoveries average less than 75%. The drill log is outlined below.

Depth (m)	DESCRIPTION	SAMPLE n°	FROM (m)	TO (m)
0.0-3.0	*Casing*	-		
3.0-5.2	*Syenomonzonite (4ak)*; Strong potassium-alteration. Minor quartz-stockwork (<5/m). Pyrite 2%.	-		
5.2-10.4	*Granodiorite (3bn)*; Albitized and chloritic. Pyrite and magnetite @ 4% combined (diss).	66076 66077	5.9 8.2	8.2 10.4
10.4-15.4	*Syenomonzonite (4ak)*; Same as 3.0-5.2 m. Pyrite 1%.	66078 66079	10.4 12.9	12.9 15.4
15.4-32.9	*Syenomonzonite (4ak,q-c)*; Similar to 3.0-5.2 m but with abundant quartz-carbonate-veinlets (>15/m). Up to 5% combined pyrite & chalcopyrite and trace native-Cu in veinlets.	66080 66081 66082 66083 66084 66085 66086	15.4 17.4 19.5 22.0 24.5 29.8 31.4	17.4 19.5 22.0 24.5 27.0 31.4 32.5
32.9-54.5	*Granodiorite (3bn)*; Same as at 5.2-10.4 m. Pyrite and magnetite @ 2% combined.	66087 to 66095	32.5 - 54.5 Each is 2.5 m in size	
54.5-110.9 (EOH)	*Syenomonzonite (4ak,q-c)*; Same as 15.4-32.9 m. Lower sulphide content (3% combined pyrite and chalcopyrite).	66096 to 66123	54.5 - 110.9 Each is 2.0 m in size	

The hole penetrated *proto-stockwork* ($4a_k$,q-c) and minor albitized granodiorite ($3b_n$). Unit "$4a_k$,q-c" may correspond to the alteration halo surrounding the targeted *quartz-stockwork* zone. Quartz veins rarely exceed 0.5 cm in width and 10/metre in volume. Mineralization comprises minor disseminated and veinlet-hosted pyrite (<2%) with traces of magnetite, chalcopyrite, chalcocite and native copper. The copper minerals occur exclusively in quartz veinlets, particularly from depths of 54.5 to 110.9 m. Host rock alteration corresponds to that described under the section outlining the "Bob" zone (p 7).

A total of 48 core samples were collected; each measuring 1.5 to 2.5 m in length. They were analyzed by the coarse gold method (see Appendix A). Gold values range from trace to 0.011 oz/t, silver does not surpass 3.3 ppm and copper content ranges from 101 to 1500 ppm. Results appear negative at first glance, but it should be emphasized that this drill hole did not intersect the targeted structure. The "Bob structure" has a minimum length of 450 m and represents an enormous untested target. Large-bore drilling is recommended in order to penetrate broken ground and to minimize "nugget effects" on core samples.

CONCLUSIONS and RECOMMENDATIONS

Conclusions:

The Goat 4-11 claim group covers a large, Triassic, granodioritic pluton, intrusive into an andesitic volcanic edifice and its sedimentary apron (collectively known as the Stuhini Group). They have also been invaded by several plugs and dikes of bi-phased syenite. Quartz-carbonate-albite replacement assemblages are identified with stockwork zones. Structural breaks are deemed to be the main factors which controlled mineralization, with host strata being of secondary importance.

Three styles of mineralization have been observed within the project area; i) vein-hosted massive sulphide pods; ii) disseminated sulphides in shear-hosted, quartz-carbonate-albite altered, breccias and stockworks; iii) shear-hosted, garnetiferous replacements with disseminated ores. Volcanogenic massive sulphide (VMS) mineralization was not observed but signature-features occur at various locations.

The first 'ore-type' is illustrated by small, auriferous, quartz-carbonate veinlets and massive sulphide pods. These gold-bearing veinlets and sulphide pods are collectively of no economic significance. The property supports 3 major and 12 minor targets hosting the two other types of mineralization which are further characterized by one or more of the following traits:

A) Hydrothermal brecciation and/or well-developed stockworks.
B) Predominance of pervasive, microscopic, quartz-carbonate-albite replacements in wall-rocks and breccias. These alteration halos are anomalous in precious- and base-metals.
C) Proximity to regional-scale, NW- and NE-trending shear zones and proximity to potassium-altered syenomonzonite dikes and plugs.
D) Abundance of minuscule, highly auriferous, massive sulphide "pods" within the altered structures.
E) Post-intrusive structures are the controlling factors for mineralization. Host rocks seem to be of secondary importance.
F) Mineralization occurs most frequently as sparsely disseminated sulphides smeared along fractures or constrained to veinlets (stockworks).

The minor amount of drilling conducted on the "Bob" showing does not do justice to the occurrence. The structure has by no means been adequately drill-tested.

This author concludes from comparisons with published data, that the 15 targets on the Goat 4-11 claims have geological and geochemical analogies with such well-publicized deposits as the Johnny Mt, Galore Cr, Polaris-Taku and possibly the Tulsequah Chief. In view of the above

observations, of high metal values and of abundant, favourable geological "signatures", it is concluded that the prospects for the occurrence of economically viable, polymetallic mineralization on the Goat 4-11 claims is excellent. Structurally-controlled, hydrothermally altered features such as breccia pipes and stockworks, are the favoured exploration target. High-priorities include the "Bob" (large, strongly altered, mineralized stockwork), "Spike" (multiple, mineralized, epithermal features) and "Jimmie Cr" (large, altered hydrothermal breccia).

Recommendations:

As a result of the above promising conclusions it is recommended that the 15 targets warrant detailed mapping and channel sampling with special emphasis on recognition of hydrothermal brecciation and alteration patterns. Emphasis should be on delineating high-sulphide ore-shoots within the altered structures.

Bulk sampling should be envisaged for any structure carrying widely erratic precious-metal values. Up to 20 line-km of geophysical IP and resistivity surveys should be scheduled for several zones. The narrowness and quartz-carbonate composition of the targeted structures will have to be taken into account. It should be theoretically possible to delineate high-sulphide areas within narrow structures and alteration zones.

A 300 to 800 m, large-bore (eg: NQ) drill program is also proposed. The depth and strike potential of the "Bob" structure would thus be adequately addressed. A moderate-sized, helicopter-supported program, budgeted at approximately $500,000.^{00}$ (maximum) is suggested for 1991.

Respectfully Submitted

Febuary 19, 1991

Phil van Angeren P.Geol.

STATEMENT of COSTS

CAPRA PROJECT
Goat 4-7 and 8-11 Claims
For the period June 28 to October 8, 1990

Particulars	Goat 4-7	Goat 8-11
Wages:	**$**	**$**
P. van Angeren- P.Geol. @ $280.00/d: 15 mandays	-	4,200.00
J. Davies - geologist @ $228.25/d: 21 mandays	-	4,793.25
Rock n' Hammer- prospectors @ $261.00/d[1]:65 mandays	-	16,965.00
	$0.00	**$25,958.25**
Geochemical Costs:		
Geochemical Analyses:		
48 cores @ $21.00/sample-	$1,008.00	-
30 silts @ $20.00/sample-	-	$600.00
73 soils @ $20.00/sample-	-	$1,460.00
233 rocks @ $22.25/sample-	-	$5,184.25
	$1,008.00	**$7,244.25**
Contracts:		
Diamond Drilling: (Van Alphen Drilling)	$29,830.40	-
	$29,830.40	**$0.00**
TOTALS: ..... #4-7:	**$30,838.40**	#8-11: **$33,202.50**

February 19, 1991

Phil van Angeren - P.Geol.

[1]NOTE: Prospector wages include their own supplies and overhead costs.

REFERENCES

Alldrick D.J., Drown T.J., Grove E.W., Kruchkowski E.R. and Nichols R.F., 1989: "*Iskut-Sulphurets Gold.*"
The Northern Miner Magazine; January 1989, pp 46-49.

E.M.R.C., 1984: "*Canadian Mineral Deposits Not Being Mined in 1983.*"
Energy, Mines and Res. Can.; Mineral Bulletin MR 198, 1984.

Geological Survey of Canada, 1988: "*National Geochemical Reconnaissance, Sumdum-Telegraph Creek, British Columbia, NTS 104F-104G.*"
Geol. Surv. Can. Open File n° 1646.

Folk P., 1981: "*Geochemical Report on the LIMP 2 Claim.*"
B.C. Min. Res. Br.; Assessment Report n° 9,092.

Korenic J.A., 1982: "*Assessment Report of Geological, Geochemical and Geophysical Work Performed on the TUFF 1 Claim.*"
B.C. Min. Res. Br.; Assessment Report n° 10,475.

Lehtinen J., 1989: "*1989 Geological and Geochemical Report on the GOAT 1 to GOAT 11 Claims.*"
Private Report prepared for Integrated Resources; dated Nov. 1989.

Logan J.M. and Koyanagi V.M., 1989: "*Geology and Mineral Deposits of the Galore Creek Area, Northwestern B.C.*"
B.C. Min. of Energy, Mines and Pet. Res.; Geol. Field Work 1988, Paper 1989-1, pp 269-284.

Ray G., 1990: "*West Coast Skarns.*"
The Northern Miner Magazine; April 1990, pp 22-27.

Souther J.G., 1971: "*Geology and Mineral Deposits of Tulsequah Map-Area, British Columbia.*"
Geol. Surv. Can.; Memoir 362.

Souther J.G., 1972: "*Telegraph Creek Map-Area, British Columbia.*"
Geol. Surv. of Can.; Paper 71-44.

Strain D.M.,1981: "*Geological and Geochemical Report on the TUFF Claims.*"
B.C. Min. Res. Br.; Assessment Report n° 9200.

van Angeren P., 1991: "*Report on the Geology, Geochemistry, Geophysics and Drill Results of the Capra Project.*"
Private Report prepared for Integrated Resources; dated January 25, 1991.

Wetherly M., 1989: "*Qualifying Report on the GOAT Claims.*"
Private Report prepared for Integrated Resources; dated January 13, 1989.

CERTIFICATE

I, ***Phil van Angeren***, residing at 2123 Deerside Dr. S.E., Calgary, Alberta hereby certify that:

i) I am a geologist having practised my profession for the last 14 years.

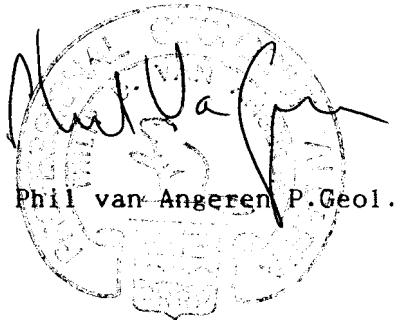
ii) I am a graduate of McGill University, Montreal, having graduated with a B.Sc. in Geology with Honours, in 1977.

iii) I have been a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1985.

iv) I have no interests, direct or indirect, in the securities or properties of both Integrated Resources Ltd. and Capra Minerals Ltd., nor do I expect any.

v) I am the author of this document, which is based on personal examination of the property and on compilation of historical data made available by the companies.

Signed and dated at Calgary, Alberta, on the 19th day of February, 1991.



Phil van Angeren P.Geol.

February 19, 1991

APPENDIX A

ANALYTICAL PROCEDURES

629 Beaverdam Rd. N.E.
Calgary 67, Alberta

LORING LABORATORIES LTD.

Phone 274-2777

FIRE ASSAYING OF GOLD & SILVER

A ½ or 1 assay ton of -100 mesh pulp is weighed into a 30 gram crucible. The sample is fluxed according to the minerology of the sample.

i.e.: For siliceous ores make monosilicate slags.

For basic ores containing any of the following: Fe_2O_3, Fe_3O_4, $CaCO_3$, $MgCO_3$ or MnO_2 make bisilicate slags.

For basic ores containing any of the following: Pb, Zn Fe, As, Sb, Cu and Te make mono or sesquisilicate slags.

FUSING

Crucibles are loaded into a muffle at 1650°F. Temperature is turned up to 1900°F of 2000°F if heavy sulfides are present. About 1 hour is required to complete the fusion. Crucibles are then poured into conical shaped molds, cooled and then the slag is separated from the lead buttons. The buttons are then cubed for easier handling and cleaning.

CUPELLATION

Cupels are charged in the muffle and heated at 1650°F for 10 minutes. Lead buttons are then charged into the muffle which has a temperature of 1650°. The door is lowered and buttons are allowed to open. When all buttons are open the temperature is lowered to 1400° and as soon as the temperature has reached this point the recorder is set at 1350°F. The temperature shall be turned up to 1500° 5 minutes before the finish. Cupels are removed from the muffle and allowed to cool. Beads are then removed from cupels and then placed into coor cups and then weighed. When all beads are weighed, the silver is then parted from the gold by dissolving it with 1:7 nitric acid. The gold bead is then washed, annealed and weighed. The weight of the gold bead is deducted from the total weight and we have both answers for gold and silver.

LORING LABORATORIES LTD.
629 Beaverdam Rd. N.E.
Calgary, Alberta T2K 4W2
Phone 274-2777

COARSE GOLD SAMPLE PREPARATION

1/ Dry total sample @ ≤ 50°C

2/ Double crush sample @ 1/8"

3/ Run total sample through coarse set disc pulverizer until sample totally passes 10 mesh (2 mm) sieve

4/ Homogenize sample and split out ≤ 300 g

5/ Bag reserve, weigh and record weight of split

6/ Pulverize using disc pulverizer

7/ Mechanically or hand sieve sample @ 150 mesh (106 µm)

8/ If +150 mesh material exceeds 20% by weight, gently hand mull and resieve

9/ Weigh and record weight of +150 mesh material, place in coin envelope and submit for fire assay

10/ Homogenize -150 mesh material and place in assay bag. Submit for fire assay at 1 A.T. sample size

LORING LABORATORIES LTD.
629 Beaverdam Rd. N.E.
Calgary, Alberta T2K 4W2
Phone 274-2777

Preparation Procedures for Geochemical Samples

1 - Soil And Silts:

a) The soil sample bags are placed in dryer to dry at 105°C.

b) Each sample is passed through an 80 mesh nylon seive. The +80 mesh material is discarded.

c) The -80 mesh sample is placed into a coin envelope and delivered to the laboratory for analysis.

2 - Lake Sediments:

a) The sediment sample bags are placed into the dryer at 105°c until dry.

b) The dried material is transferred to a ring and puck pulverizer and ground to -200 mesh.

c) The -200 mesh pulp is then rolled for mixing, placed into a coin envelope, and taken to the laboratory for analysis.

3 - Rocks and Cores:

a) The samples are dried in aluminum disposable pans at 105°C.

b) They are then crushed to 1/8" in jaw crusher.

c) the 1/8" material is mixed and split to sample pulp size.

d) The sample is then pulverized to 100 mesh, using a ring and puck pulverizer.

e) The -100 mesh material is rolled on rolling mat and transferred to sample bag. The sample is then sent to the laboratory for analysis.

LORING LABORATORIES LTD.
629 Beaverdam Rd. N.E.
Calgary 67, Alberta
Phone 274-2777

METHODS OF ANALYSIS FOR GEOCHEMS

1. COPPER, LEAD, ZINC, NICKEL, COBALT, SILVER

500 milligrams of -80 mesh material are weighed into coor cups, placed in muffle at 500°C to remove organics. The oxidized samples are then transfered to test tubes, aqua regia added and digested in water bath at 100°C for three hours.

The test tubes are then bulked to the 10 ml. level, mixed and allowed to settle overnite.

The samples are then put through the atomic absorption with appropriate standards and reported in PPM.

2. MOLYBDENUM GEOCHEMS

The same sample weight is used; the organics are also removed; aqua regia is also used, but just prior to bulking up to 10 mls. volume, 3 mls. of aluminum chloride solution is added to enhance the molybdenum atom. After standing overnite the samples are put through the atomic absorption using a nitrous oxide and acetylene flame. Reported in PPM Mo.

LORING LABORATORIES LTD.
629 Beaverdam Rd. N.E.
Calgary, Alberta T2K 4W2
Phone 274-2777

Au Geochems (Soils & Sediments)

1. Weigh 10 g sample to fire assay crucible (carry blank)
2. Place crucibles in fire assay furnace at fusion temperature for 15 minutes.
3. Allow crucibles to cool on steel table.
4. Add 1 tablespoon flux and 1 inquart to each crucible.
5. Fuse for ½ hr. at fusion temperature.
6. Pour pots, remove slag and cupel.
7. Place beads into 50 ml flasks.
8. Pipette stds. and blank into 50 ml flasks.

   1 ml of 10 ppm = 1000 ppb
   1 ml of 5 ppm = 500
   1 ml of 1 ppm = 100
   0 ml = 0

9. Add 5 mls H2O, 3 mls HNO3 and place on 1 switch plate for 5 minutes. Take off plate. Add 5 mls HCl.
10. Digest until total dissolution approximately ½ hr.
11. Bulk flasks to approximately 25 mls with distilled H2O. Cool to room temperature.
12. Add 5 mls MIBK. Stopper and shake each flask for exactly 1 minute.
13. Allow MIBK to settle.
14. Set 1100 AA unit as follows:

    mu - 2428
    slit - .5
    lamp MA - 3
    flame - air-acetylene - extremely lean

Stds. 100 ppb - 10
1000 ppb - 100
500 ppb - reading

As - digestion procedure/

1) WEIGH .5000 gm IN 150 ml BEAKER .

2) ADD .5 gm OF POTASSIUM CHLORATE (KC103).

3) WET DOWN WITH DISTILLED WATER, ADD 15 ml NITRIC ACID (HNO3).

4) TAKE TO DRYNESS OVERNITE ON A 1 SWITCH HOT PLATE.

NEXT MORNING :

5) 1 SHOT (5 - 10 ml) OF HCl, LET DRY ON 1 SWITCH PLATE.
REPEAT THE ABOVE STEP.

6) WET DOWN, ADD 15 ml HCl, COVER AND BOIL ON A 2 SWITCH PLATE, FOR 10 MINUTES.

7) AFTER BOILING, WASH OFF LIDS AND TRANSFER TO 100 ml FLASKS WITH DISTILLED WATER, LET COOL.

8) BULK TO 100 ml WITH DIST. WATER AND SHAKE 20 TIMES.

SEE NEXT PAGE FOR ANALYSIS PROCEDURE.

SOLUTIONS:

- KI : 150 gm TO 1000 ml (DISTILLED WATER).
- SnCl2 : 80 gm INTO 2500 BEAKER, ADD 50 ml HCl AND DISSOLVE, TRANSFER SOLUTION TO A 200 ml FLASK AND BULK TO 200 ml WITH DISTILLED WATER.
- SDDC : DISSOLVE 5 gm SDDC INTO 1000 ml PYRIDINE AND SMELL THE FLOWERS.

As - SDDC analysis procedure:

9) TRANSFER 25 ml OF THE SAMPLE TO A 125 ml ERLENMEYER AND ADD 25 ml OF DISTILLED WATER.

10) STANDARD: PIPET 1 ml OF 10 ppm STD. INTO 125 ml ERLENMEYER, ADD 49 ml OF DISTILLED H2O.
BLANK: 50 ml OF DISTILLED WATER INTO 125 ml ERLENMEYER.

11) ADD 5 ml CONCENTRATED HCl TO SAMPLES.
ADD 8-10 ml CONC. HCl TO THE STANDARD AND BLANK.

12) ADD 3 ml KI solution (150 gm/liter) TO SAMPLES, STD AND BLANK.

13) ADD 1 ml STANNOUS CHLORIDE (40%) TO ALL FLASKS.

14) LET SAMPLE STAND FOR 20 min TO ENSURE COMPLETE REDUCTION OF THE As AFTER THE SnCl2 HAS BEEN ADDED.

15) PUT 5 ml PYRIDINE SOLUTION (SDDC IN PYRIDINE) IN EACH CUVETTE.

16) PLACE 2 DROPS OF LEAD ACETATE SOLUTION INTO THE GLASS WOOL PLUG OF THE ARSENIC GENERATOR APPARATUS.

17) ADD 1 LEVEL SPOON OF ZINC METAL TO THE ERLENMEYER FLASK, AND QUICKLY PLACE STOPPER OF APPARATUS ON THE FLASK AND ENSURE THAT THE TIP OF THE APPARATUS IS IN THE PYRIDINE SOLUTION.

18) ENSURE A TIGHT SEAL HAS BEEN MADE, BY WATCHING FOR VIGOROUS BUBBLES.

19) ALLOW 30 min FOR REACTION (BUBBLING) TO REACH COMPLETION.

20) READ ABSORBANCE ON SPEC-20 @ 535 nm WAVELENGTH.

CALCULATION:

$$\frac{\text{ABSORBANCE OF SAMPLE} \times 10}{\text{ABSORBANCE OF STANDARD}} = \text{ug As}$$

$$\text{ppm As} = \frac{\text{ug As}}{\text{SAMPLE WEIGHT}} \times \frac{100}{\text{SAMPLE ALIQUOT}}$$

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples HEAVY-SED
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
87830	15	0.2	120	78	-
87841	800	1.5	632	70	-
87844	75	0.2	364	142	-

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples SILTS
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
70546	20	0.2	143	60	1
70548	70	0.1	954	190	<1
70629	25	0.5	74	205	3
70631	10	0.2	63	191	7
70654	20	<0.1	82	45	4
70655	100	0.1	310	27	3
70657	50	0.1	325	40	4
70658	45	<0.1	96	35	3
70659	30	<0.1	95	40	<1
70660	180	<0.1	154	49	<1
70661	480	<0.1	64	32	<1
70662	35	0.2	155	59	1
70663	60	<0.1	132	44	<1
70664	45	0.5	326	53	<1
70665	105	1.1	943	89	2
70666	35	1.1	755	90	6
70667	50	0.2	162	56	<1
70668	35	0.3	124	53	<1
70669	15	0.2	124	67	3
70670	40	0.2	82	65	<1
70671	10	0.3	148	96	5
70673	20	0.2	108	55	3
70674	25	0.1	132	94	7
70795	45	0.7	535	99	11
70796	60	0.2	380	89	6
70797	15	0.1	265	92	<1
70807	5	0.2	85	109	17
70808	5	0.2	28	67	<1
70813	65	0.1	59	78	<1
70886	20	<0.1	157	45	6

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples SILTS
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
70894	20	<0.1	240	98	20
70895	10	<0.1	330	142	32
70896	385	<0.1	76	65	14
70897	10	<0.1	231	94	24
70902	<5	0.2	275	77	8
87823	50	0.3	411	96	-
87827	30	0.1	91	51	-
87834	30	0.2	295	139	-
87835	25	0.2	227	81	-
101991	30	0.9	40	183	118
101993	10	0.2	57	97	31
102019	100	0.7	830	124	-
102020	50	0.2	390	133	-
102021	80	0.3	450	129	-
102022	55	0.4	341	103	-
102101	30	0.1	76	43	9
102102	30	0.1	53	28	1
102103	25	0.1	98	33	<1
102104	60	0.7	61	42	24
102105	40	0.1	63	48	<1
102106	25	0.2	60	47	2
102107	30	0.2	55	45	3
102108	15	0.2	80	37	<1
102109	30	0.1	85	46	9
102110	30	0.3	56	33	<1
102111	20	<0.1	48	65	7
102112	20	0.1	108	36	<1
102119	115	1.3	917	60	63
120120	60	0.1	71	57	<1
102121	35	0.2	69	132	15

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples SILTS
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
102122	40	0.1	82	44	<1
102123	30	0.2	59	82	<1
102160	10	0.3	78	139	13
102163	15	<0.1	154	118	23

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Soils
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

Geochemical Analysis

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn
Line A 0+001	495	1.1	1036	141
0+ 93	140	0.3	456	94
0+190	215	0.9	804	103
0+295	115	0.4	589	121
0+398	175	0.6	259	143
0+500	100	0.4	353	138
0+600	75	0.4	315	106
0+700	60	0.3	154	109
0+800	20	0.2	237	113
0+900	50	0.2	228	105
1+000	130	0.2	190	120
1+100	130	0.3	269	113
1+200	45	<0.1	292	111
1+300	20	0.1	121	132
1+400	120	0.3	241	143
1+500	25	<0.1	214	117
1+600	30	<0.1	108	132
1+700	35	<0.1	117	96
1+800	425	<0.1	121	113
1+900	20	0.1	121	104
2+000	25	0.2	176	94
2+100	40	0.4	234	92
2+200	130	0.2	244	101
2+300	60	0.2	282	108
2+400	100	0.3	517	103
2+500	90	0.2	308	100
2+600	320	0.7	524	90
2+700	95	0.3	245	104
2+800	125	1.0	663	93
2+850	190	0.6	371	93

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Soils
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

Geochemical Analysis

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn
102316	315	0.7	689	101
102317	275	0.2	510	103
102318	140	0.4	603	120
102319	100	0.2	525	103
102320	70	0.3	579	137
102321	45	0.4	580	348
102322	40	0.3	397	161
102323	340	0.3	482	127
102324	100	0.3	228	126
102325	100	0.4	369	104
102326	30	0.5	331	134
102327	50	0.2	452	128

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Soils
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
S.L.C. 0+00E	240	<0.1	113	155	59
0+65E	70	0.2	127	125	34
1+00E	110	0.2	120	91	38
1+50E	70	0.1	120	117	22
2+00E	55	0.1	82	126	34
2+50E	80	0.1	86	182	37
3+00E	70	0.1	123	122	81
3+50E	70	0.2	105	138	53
3+80E	45	<0.1	89	125	53
4+50E	90	<0.1	73	140	34
5+00E	45	<0.1	116	148	15
5+50E	20	<0.1	57	166	10
6+00E	25	<0.1	81	163	13
6+50E	15	<0.1	76	144	1
7+00E	15	<0.1	87	183	12
7+50E	10	<0.1	67	134	3
8+00E	125	<0.1	70	142	9
8+50E	15	0.1	63	161	13
9+00E	25	<0.1	100	138	35
9+50E	30	0.1	113	160	23
10+00E	25	0.3	75	175	9
10+50E	20	0.1	71	147	11
11+00E	10	<0.1	79	132	12
11+50E	15	0.2	86	161	25
12+00E	20	<0.1	94	166	21
12+50E	10	0.6	41	227	214
13+00E	15	<0.1	47	163	15
13+50E	15	0.3	74	178	24
14+00E	10	0.2	118	188	7

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Soils
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
Line "D" 0+00S	85	0.3	81	51	<1
0+50S	55	0.2	88	34	7
0+90S	65	0.1	76	28	11
1+70S	115	0.1	154	63	5
2+00S	70	0.1	102	79	1
2+50S	65	0.2	96	88	19
3+00S	50	0.2	72	72	<1
3+50S	60	0.1	58	82	14
4+00S	85	0.1	75	94	40
4+50S	95	0.1	110	78	2
5+00S	70	0.1	87	88	21
5+50S	100	0.2	100	99	76
6+00S	60	0.1	100	90	9
6+40S	110	0.1	100	87	7
7+00S	80	0.1	103	103	70
7+50S	50	0.1	79	76	5
8+00S	30	0.2	116	88	8
SLE- 0+00E	<5	0.3	331	75	2
1+00E	5	0.5	325	54	<1
2+00E	310	1.3	483	68	<1
3+00E	125	4.4	693	62	7
4+00E	130	0.7	491	57	3
5+00E	20	0.4	214	51	<1
6+00E	20	0.2	91	47	<1
7+00E	5	0.1	50	37	6
8+00E	55	0.7	829	62	6
9+00E	35	0.6	575	65	<1
10+00E	10	0.2	177	48	<1
11+00E	20	0.3	242	62	4

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month
unless specific arrangements
are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Rocks
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
70526	55	4.0	175	148	11
70527	25	2.1	189	45	6
70528	100	2.5	975	58	9
70529	130	2.2	287	69	2
70530	1880	30.0	2440	61	14
70543	35	0.9	1055	54	3
70544	35	1.2	702	55	<1
70545	25	0.9	398	42	11
70547	40	1.5	1420	70	8
70549	20	0.8	605	83	<1
70550	265	4.2	3865	193	<1
70551	50	2.7	2460	120	3
70552	520	+30.0	+5000	499	7
70553	730	+30.0	+5000	770	4
70554	170	9.9	4065	221	7
70555	30	1.7	818	166	<1
70556	40	3.7	2090	275	10
70610	40	0.1	184	142	103
70611	25	<0.1	91	40	38
70612	25	<0.1	103	37	132
70672	405	26.3	9480	201	12
70675	55	1.8	955	163	11
70688	190	4.2	2550	47	6
70689	35	0.8	527	37	4
70690	20	0.3	239	94	<1
70691	35	0.8	605	75	6
70692	25	0.2	146	106	<1
70693	40	0.5	430	23	4
70697	115	0.8	238	78	8
70698	65	1.1	486	38	4

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Rocks
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
70706	15	0.3	310	24	<1
70707	10	0.2	179	72	2
70710	15	0.8	49	54	7
70711	15	0.2	67	147	5
70712	10	0.3	256	36	9
70713	15	0.2	412	52	7
70714	20	0.4	360	20	7
70715	60	<0.1	73	36	11
70716	35	0.2	123	205	14
70717	15	0.3	77	57	11
70718	25	0.1	82	84	18
70719	15	0.2	51	24	7
70720	20	0.8	148	49	13
70721	45	4.0	323	49	16
70725	40	1.4	1030	31	15
70731	20	0.2	30	16	7
70732	20	<0.1	39	41	11
70733	20	0.1	44	35	22
70739	20	<0.1	40	29	<1
70740	10	<0.1	54	32	1
70741	5	<0.1	33	24	4
70742	10	0.1	127	20	1
70743	<5	<0.1	13	23	3
70753	10	0.2	210	47	4
70754	15	0.5	610	79	4
70755	740	0.1	261	31	<1
70756	10	1.2	102	350	4
70757	30	5.8	113	1635	6
70758	55	24.6	570	+10000	80
70759	95	37.8	+10000	440	24

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Rocks
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
70760	25	0.7	670	38	259
70788	930	1.1	199	7	10
70801	25	1.6	181	17	23
70802	10	<0.1	49	26	23
70803	25	0.4	164	36	<1
70804	15	0.5	98	20	6
70805	75	4.4	2140	113	75
70885	15	<0.1	61	47	8
70901	380	0.9	706	68	29
87818	20	1.0	1325	109	6
87819	17	0.4	205	147	16
87820	33	0.1	310	60	5
87821	13	0.1	100	97	9
87822	375	3.2	4800	185	6
87824	80	1.1	2350	58	2
87825	60	0.2	215	147	7
87826	10	<0.1	16	10	13
87828	30	<0.1	174	95	9
87829	53	2.0	488	448	16
87831	187	5.2	2975	264	5
87832	50	3.2	2025	120	<1
87833	63	1.0	1775	83	<1
87836	23	0.4	930	35	<1
87837	83	18.5	1600	44	6
87838	485	3.0	5100	74	<1
87839	26	0.5	265	62	<1
87840	47	0.1	122	64	5
87842	23	0.5	855	71	31
87843	325	4.1	3600	79	8
87876	13	0.3	21	23	11

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Rocks
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
87897	45850	15.4	2210	30	677
87899	300	4.4	1550	228	67
87900	270	1.4	335	35	22
101951	133	4.2	326	39	44
101952	43	1.9	3250	758	16
101953	50	0.3	160	50	11
101954	43	1.1	495	44	8
101955	33	0.5	168	41	10
101956	20	0.3	52	140	9
101957	20	0.6	276	55	19
101958	60	1.0	454	28	28
101959	87	0.3	200	19	57
101960	895	1.2	580	53	10
101961	40	0.9	360	31	4
101962	27	0.3	155	18	8
101963	183	1.7	1100	218	7
101964	83	1.1	538	54	11
101965	7	0.3	117	23	24
101966	7	0.2	78	41	23
101967	27	0.3	130	80	11
101968	13	0.3	170	90	17
101969	50	0.8	98	+10000	8
101970	27	0.4	163	65	9
101971	<5	0.3	57	94	-
101972	95	14.4	90	1200	-
101973	85	7.1	226	1130	-
101974	<5	0.2	113	57	-
101975	18	1.5	1354	49	-
101976	15	0.5	413	53	-
101977	13	0.1	110	29	-

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Rocks
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
101978	15	0.3	195	16	-
101979	10	0.2	278	26	-
101980	10	1.4	405	34	-
101981	16	1.2	263	188	-
101982	15	1.2	460	69	-
101983	13	0.6	502	52	-
101984	7	0.3	90	75	-
101985	5	0.3	141	43	-
101986	7	0.5	142	20	-
101987	65	3.0	512	23	-
101988	16	0.7	126	25	-
101989	30	1.3	230	19	-
101990	<5	0.4	18	12	-
101992	10	0.9	460	46	-
101994	20	0.3	89	22	-
101995	22	1.1	621	58	-
101999	+10000	14.6	+5000	248	+10000
102000	410	3.0	405	82	436
102010	127	0.6	225	25	174
102013	90	0.2	70	24	42
102015	475	30.1	+10000	113	71
102031	282	7.5	1895	51	-
102032	5	0.3	37	108	-
102033	7	0.7	131	66	-
102034	<5	0.2	26	8	-
102035	222	3.9	488	16	-
102036	1610	175.0	+10000	185	-
102037	5	0.8	156	28	-
102038	273	16.5	1980	121	-
102098	1750	2.0	1007	85	1698

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Rocks
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
102099	5	1.8	99	116	19
102111	20	<0.1	48	65	7
102113	30	<0.1	405	26	10
102114	60	1.3	132	56	10
102115	1900	+30.0	1785	565	37
102116	2800	+30.0	+5000	193	29
102117	45	0.3	85	16	34
102151	1590	5.1	1165	207	621
102152	830	1.8	515	48	637
102153	5	<0.1	38	243	11
102161	<5	<0.1	26	41	2
102162	5	0.4	41	35	2
102164	10	10.4	149	164	12
102165	15	10.4	181	186	12
102166	35	15.5	255	64	10
102167	60	8.0	320	54	2
102168	15	6.6	238	83	30
102169	25	10.6	211	66	3
102170	15	7.2	258	46	5
102171	30	7.1	740	53	6
102172	15	4.0	49	50	13
102173	25	8.4	13	28	18
102174	85	5.8	172	126	5
102175	35	5.1	134	30	61
102176	20	10.7	152	381	16
102189	45	5.1	210	67	3
102190	530	6.5	110	59	7
102191	45	4.3	1615	33	6
102192	100	4.5	1120	48	3
102193	35	4.2	360	48	9

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Rocks
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
102194	45	2.9	860	25	6
102195	430	8.0	795	54	19
102196	40	3.6	400	26	5
102197	30	3.7	535	39	9
102198	180	3.2	435	24	8
102199	165	7.4	1320	105	9
102200	690	+30.0	+5000	1200	90
102201	45	1.1	745	70	10
102202	40	0.6	495	52	2
102203	15	<0.1	100	56	<1
102204	30	<0.1	167	64	1
102205	10	<0.1	109	66	<1
102206	25	<0.1	151	54	2
102207	20	0.6	260	75	6
102208	195	11.2	4500	51	<1
102209	5	12.9	240	37	<1
102216	20	1.7	201	28	<1
102217	50	3.2	125	33	108
102218	15	<0.1	23	46	12
102219	<5	<0.1	91	92	8
102220	10	<0.1	214	20	<1
102221	20	<0.1	218	32	<1
102222	50	1.0	275	73	10
102223	10	<0.1	252	32	<1
102224	5	0.5	143	85	<1
102225	45	1.2	385	68	2
102226	5	<0.1	155	116	<1
102227	5	0.5	93	60	<1
102228	5	0.1	27	30	<1
102229	5	<0.1	57	630	5

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Rocks
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
102230	25	<0.1	139	44	<1
102231	55	0.2	95	20	9
102232	30	0.1	125	52	6
102233	35	<0.1	78	78	11
102234	50	0.3	167	188	15
102235	400	1.8	802	101	10
102351	23	<0.1	122	22	21
102352	10	<0.1	140	31	15
102353	13	<0.1	155	31	30
102354	67	<0.1	100	36	28
102355	13	0.1	133	39	6
102356	33	0.1	220	33	9
102358	110	0.1	96	18	4
102359	10	<0.1	165	53	18
102360	10	0.5	119	38	8
102361	7	0.3	156	45	5
102362	10	<0.1	100	45	13
102363	20	<0.1	86	41	7
102364	150	0.2	309	32	3
102365	10	0.2	205	27	3
102366	10	<0.1	69	60	8
102400	385	5.6	3050	141	<1
102401	17	0.1	115	20	42
102402	97	<0.1	12	11	4
102403	63	0.1	49	26	3
102404	33	0.1	222	23	<1
102405	30	<0.1	98	59	19
102406	7	<0.1	35	35	2
102407	7	<0.1	154	23	3
102408	37	<0.1	22	49	<1

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
Attn: Robert Lintell
cc: P. Van Angeren

File No. 33556
Date August 2, 1990
Samples Rocks
Project: CAPRA/GOAT 4-5

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
Geochemical Analysis					
102409	10	<0.1	85	34	4
102410	<5	<0.1	10	19	<1
102411	13	0.4	245	20	3
102412	27	0.2	463	44	<1
102413	27	0.2	169	13	<1
102414	23	0.1	100	9	<1
102421	5	<0.1	24	24	-
102426	<5	0.1	142	20	-
102427	15	<0.1	42	32	<1
102429	<5	<0.1	71	23	<1
102433	<5	<0.1	58	79	<1
102434	<5	<0.1	45	92	<1
102435	5	<0.1	101	101	<1
102436	<5	<0.1	99	69	<1
102437	<5	0.9	60	75	<1
102438	<5	0.3	133	88	<1
102439	<5	0.2	174	80	1
102440	5	0.1	65	53	<1
102441	10	0.2	103	22	<1
102442	5	0.1	23	27	2
102443	10	26.7	105	66	<1
102444	10	17.6	216	154	<1
102445	15	14.0	101	43	<1
102446	10	10.5	57	55	<1
102447	5	12.6	48	79	2
102448	10	7.6	74	103	<1
102449	10	10.8	21	20	<1
102450	10	9.6	51	178	<1

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
attn: Robert Lintell
cc: P. Van Angeren

File No. 33806
Date October 31, 1990
Samples Cores

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	ASSAYED OZ./TON GOLD	GEOCHEMICAL ANALYSIS ppm Ag	ppm Cu	ppm Zn	ppm As
CORE SAMPLES					
66076	0.001	0.5	970	45	7
66077	0.001	0.4	787	39	2
66078	0.004	0.9	950	40	11
66079	0.002	0.6	595	36	6
66080	0.003	0.6	480	32	3
66081	0.004	0.8	780	41	11
66082	0.001	0.8	220	12	23
66083	0.003	1.1	798	21	13
66084	0.004	1.2	529	17	12
66085	0.001	1.4	423	30	72
66086	0.001	1.2	681	42	57
66087	0.001	0.7	395	44	5
66088	0.002	0.4	263	34	<1
66089	0.004	0.2	155	28	9
66090	0.002	0.5	275	32	6
66091	0.004	0.8	447	46	11
66092	0.003	1.1	660	44	11
66093	0.002	0.8	375	43	7
66094	0.001	0.9	566	40	<1
66095	0.007	1.1	651	42	5
66096	0.001	1.1	580	26	17
66097	0.007	1.5	807	41	10
66098	0.009	2.2	947	47	2
66099	0.003	1.5	709	34	4
66100	0.005	2.1	804	40	4
66101	0.003	1.5	619	30	5
66102	0.005	3.0	1150	48	7
66103	0.011	3.3	996	43	12
66104	0.003	0.7	460	20	4
66105	0.005	2.7	1050	47	4

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer

To: INTEGRATED RESOURCES
700, 10205 - 101 Street
Edmonton, Alberta T5J 2Z1
tn: Robert Lintell
cc: P. Van Angeren

File No. 33806
Date October 31, 1990
Samples Cores

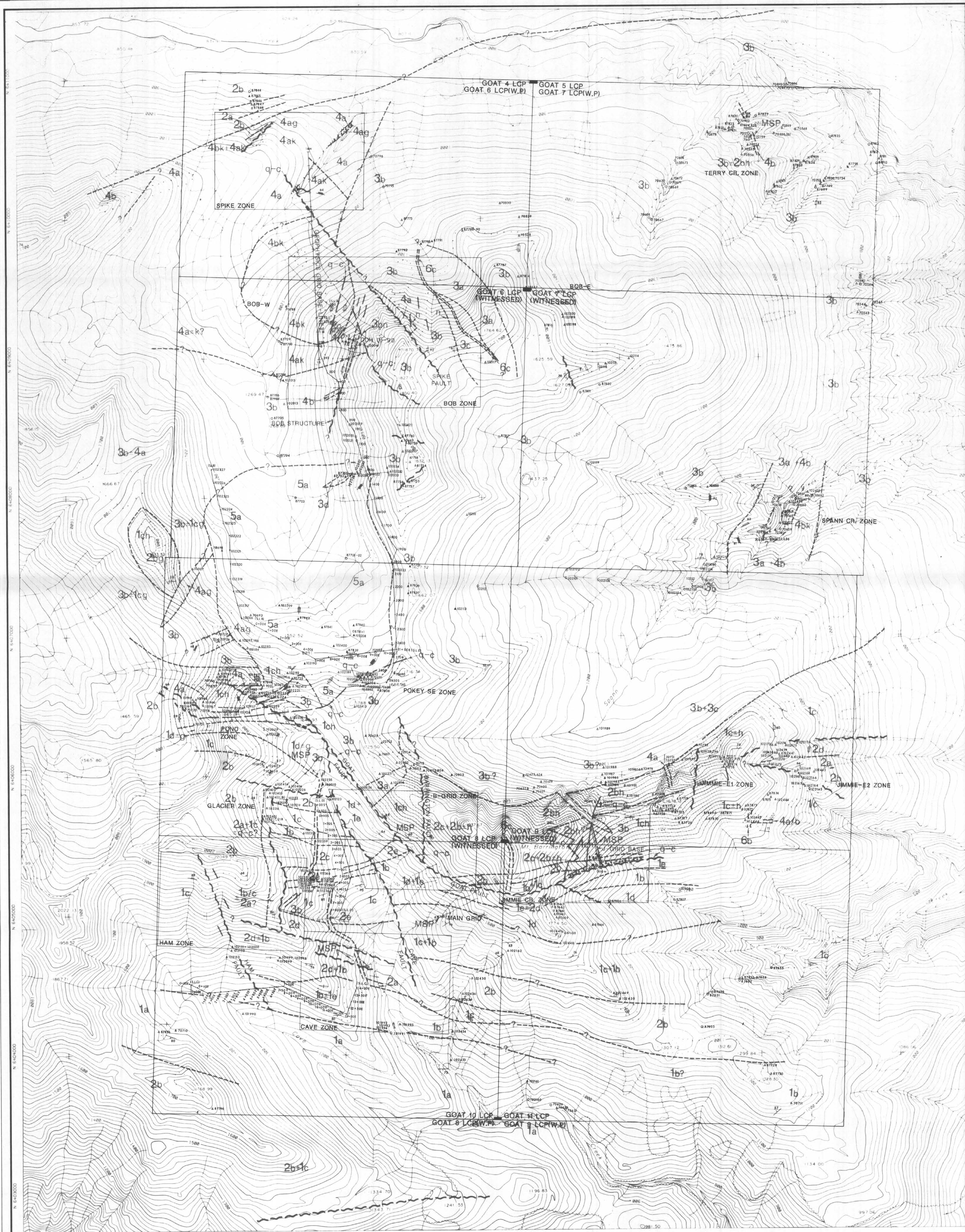
Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	ASSAYED OZ./TON GOLD	GEOCHEMICAL ANALYSIS ppm Ag	ppm Cu	ppm Zn	ppm As
CORE SAMPLES					
66106	0.003	1.5	689	34	9
66107	0.004	0.2	148	16	8
66108	0.007	0.3	158	8	11
66109	0.003	0.3	144	12	8
66110	0.002	1.1	416	24	5
66111	0.005	1.6	750	35	7
66112	0.006	2.7	1500	50	7
66113	0.001	0.4	240	14	4
66114	0.001	1.2	705	31	7
66115	0.004	1.7	917	36	14
66116	0.001	0.5	244	32	3
66117	0.009	1.5	388	25	3
66108	Trace	0.3	101	38	1
66119	0.002	0.7	317	24	7
66120	0.001	0.3	151	10	17
66121	0.005	2.2	1150	47	14
66122	0.007	3.2	1500	58	<1
66123	0.004	1.9	945	39	6

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

Assayer



101984	F -hnfl	7	0.3	90	75	-
101985	F -hnfl	5	0.3	141	43	-
101986	F -hnfl	7	0.5	142	20	-
101987	F -hnfl	65	3.0	512	23	-
101988	F -hnfl	16	0.7	126	25	-
101989	F -hnfl	30	1.3	230	19	-
101990	F -chrt	<5	0.4	18	12	-
101992	F -chrt	10	0.9	460	46	-
101994	F -chrt	20	0.3	89	22	-
101995	0.3-calv	22	1.1	621	58	-
101999	G -qtzv	1.546z	14.6	0.84%	248	>1.0%
102000	1.0-qtzv	410	3.0	405	82	436
102010	1.0-ppp	127	0.6	225	25	174
102013	F -qtzv	90	0.2	70	24	42
102015	0.1-calv	475	30.1	>10000	113	71
102031	0.5-calv	282	7.5	1895	51	-
102032	G -calv	5	0.3	37	108	-
102033	1.0-calv	7	0.7	131	66	-
102034	0.1-calv	<5	0.2	26	8	-
102035	G -qtzv	222	3.9	488	16	-
102036	G -qtzv	1610	175.0	>10000	185	-
102037	G -alb	5	0.8	156	28	-
102038	0.8-bxc	273	16.5	1980	121	-
102098	0.3-qtzv	1750	2.0	1007	85	1698
102099	1.0-chrt	5	1.8	99	116	19
102111	F -gnd	20	<0.1	48	65	7
102113	F -gnd	30	<0.1	405	26	10
102114	F -gnd	60	1.3	132	56	10
102115	0.1-calv	1900	0.86z	1785	565	37
102116	0.1-calv	2800	1.06z	0.89%	193	29
102117	F -calv	45	0.3	85	16	34
102151	G -qtzv	1590	5.1	1165	207	621
102152	0.2-qtzv	830	1.8	515	48	637
102153	5.0-chrt	5	<0.1	38	243	11
102161	0.5-sltn	<5	<0.1	26	41	2
102162	0.5-calv	5	0.4	41	35	2
102164	1.0-hnfl	10	10.4	149	184	12
102165	1.0-hnfl	15	10.4	181	186	12
102166	2.0- FP	35	15.5	255	64	10
102167	2.0- FP	60	8.0	320	54	2
102168	1.0-hnfl	15	6.6	238	83	30
102169	0.5-calv	25	10.6	211	66	3
102170	0.1-hnfl	15	7.2	258	46	5
102171	0.5-hnfl	30	7.1	740	53	6
102172	G -bxc	15	4.0	49	50	13
102173	1.0- FP	25	8.4	13	28	18
102174	0.5-calv	85	5.8	172	126	5
102175	5.0-hnfl	35	5.1	134	30	61
102176	G -ande	20	10.7	152	381	16
102189	3.0-gnd	45	5.1	210	67	3
102190	F -gnd	530	6.5	110	59	7
102191	F -skrn	45	4.3	1615	33	6
102192	F - FP	100	4.5	1120	48	3
102193	F - FP	35	4.2	360	48	9
102194	F -skrn	45	2.9	860	25	6
102195	F -ppp	430	8.0	795	54	19
102196	F -gnd	40	3.6	400	26	5
102197	F -gnd	30	3.7	535	39	9
102198	F -gnd	180	3.2	435	24	8
102199	0.1-qtzv	165	7.4	1320	105	9
102200	0.2-qtzv	890	3.30z	4.00%	1200	90
102201	1.0-gnd	45	1.1	745	70	10
102202	1.0-gnd	40	0.6	495	52	2
102203	0.8-gnd	15	<0.1	100	56	<1
102204	0.8-gnd	30	<0.1	167	64	1
102205	2.0-silg	10	<0.1	109	66	<1
102206	1.0-bxc	25	<0.1	151	54	2
102207	1.8-bxq	20	0.6	260	75	6
102208	F -ppp	195	11.2	4500	51	<1
102209	F -FPp	5	12.9	240	37	<1
102216	0.5-sils	20	1.7	201	28	<1
102217	F -bxc	50	3.2	125	33	108
102218	F -bxq	15	<0.1	23	46	12
102219	F -chrt	<5	<0.1	91	92	8
102220	G -hnfl	10	<0.1	214	20	<1
102221	1.0-sltn	20	<0.1	218	32	<1
102222	0.3-qtzv	50	1.0	275	73	10
102223	F -FPg	10	<0.1	252	32	<1
102224	1.0-skrn	5	0.5	143	85	<1
102225	1.5-skrn	45	1.2	385	68	2
102226	2.0-bxc	5	<0.1	155	116	<1
102227	0.5-skrn	5	0.5	93	60	<1
102228	F -skrn	5	0.1	27	30	<1
102229	F -bxc	5	<0.1	57	630	5
102230	1.0-sltn	25	<0.1	139	44	<1
102231	1.6-sltn	55	0.2	95	20	9
102234	0.4-bxc	50	0.3	167	188	15
102235	0.4-ppp	400	1.8	802	101	10
102351	1.0-sltn	23	<0.1	122	22	21
102352	1.0-sltn	10	<0.1	140	31	15
102353	1.4-sltn	13	<0.1	155	31	30
102354	1.0-sltn	67	<0.1	100	36	28
102355	1.5-chrt	13	0.1	133	39	6
102356	1.0-sltn	33	0.1	220	33	9
102358	F -sils	110	0.1	96	18	4
102359	1.1-chrt	10	<0.1	165	53	18
102360	1.2-chrt	10	0.5	119	38	8
102361	1.2-chrt	7	0.3	156	45	5
102362	1.0-sltn	10	<0.1	100	45	13
102363	1.0-sltn	20	<0.1	86	41	7
102364	1.0-sltn	150	0.2	309	32	3
102365	1.0-sltn	10	0.2	205	27	3
102366	F -calv	10	<0.1	69	60	8
102400	F -gnd	385	5.6	3050	141	<1
102401	G -sils	17	0.1	115	20	42
102402	0.1-calv	97	<0.1	12	11	4
102403	G -gnd	63	0.1	49	26	3
102404	G -sils	33	0.1	222	23	<1
102405	0.5-calv	30	<0.1	98	59	19
102406	0.4-calv	7	<0.1	35	35	2
102407	G -ande	7	<0.1	154	23	3
102408	2.5-gnd	37	<0.1	22	49	<1
102409	G - FP	10	<0.1	85	34	4
102410	G -gnd	<5	<0.1	10	19	<1
102411	G -hnfl	13	0.4	245	20	3
102412	1.0-hnfl	27	0.2	463	44	<1
102413	G -hnfl	27	0.2	169	13	<1
102414	G -hnfl	23	0.1	100	9	<1
102421	G -gnd	5	<0.1	24	24	-
102426	G -gnd	<5	0.1	142	20	-
102427	G - FP	15	<0.1	42	32	<1
102428	5.0- FP	5	0.1	23	41	<1
102429	1.5- FP	<5	<0.1	71	23	<1
102433	G -chrt	<5	<0.1	58	79	<1
102434	G -stwk	<5	<0.1	45	92	<1
102435	G -ande	5	<0.1	101	101	<1
102436	G -ande	<5	<0.1	99	69	<1
102437	G -sltn	<5	0.9	60	75	<1
102438	G -sltn	<5	0.3	133	88	<1
102439	G -ande	<5	0.2	174	80	1
102440	G - FP	5	0.1	65	53	<1
102441	4.0-calv	10	0.2	103	22	<1
102442	G -rhy	5	0.1	23	27	2
102443	G -ande	10	26.7	105	66	<1
102444	G -ande	10	17.6	216	154	<1
102445	G -ande	15	14.0	101	43	<1
102446	1.5- FP	10	10.5	57	55	<1
102447	G -lmst	5	12.6	48	79	2
102448	G -sltn	10	7.6	74	103	<1
102449	G -lmst	10	10.8	21	20	<1
102450	G -ande	10	9.6	51	178	<1

z: in ounces per ton

* 1.0: width in metres
G : grab
F : float
ande: andesite
sltn: siltstone
lmst: limestone
rhy: rhyolite
gnd: granodiorite
FP: feldspar porphyry
FPp: pyritic (1-2%) FP
FPg: garnetiferous FP
FPk: potassium altered FP
hnfl: hornfels
skrn: skarn
silg: q-c alteration in gnd
sils: q-c alteration in sediments
qtzv: quartz vein
calv: carbonate vein
bxc: carbonate breccia
bxq: quartz breccia
ppp: massive sulphide pod
stwk: stockwork

S.L.E.	0+00E	<5	0.3	331	75	2
	1+00E	5	0.5	325	54	<1
	2+00E	310	1.3	483	68	<1
	3+00E	125	4.4	693	62	7
	4+00E	130	0.7	491	57	3
	5+00E	20	0.4	214	51	<1
	6+00E	20	0.2	91	47	<1
	7+00E	5	0.1	50	37	6
	8+00E	55	0.7	829	62	6
	9+00E	35	0.8	575	65	<1
	10+00E	10	0.2	177	48	<1
	11+00E	20	0.3	242	82	4

---GEOCHEMICAL ANALYSES---

ROCKS	TYPE*	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
70526	F -gnd	55	4.0	175	148	11
70527	G -gnd	25	2.1	189	45	6
70528	G -calv	100	2.5	975	58	9
70529	F -gnd	130	2.2	287	69	2
70530	0.2-qtzv	1880	0.67z	2440	61	14
70543	G - FP	35	0.9	1055	54	3
70544	3.0- FP	35	1.2	702	55	<1
70545	G - FP	25	0.9	398	42	11
70547	0.5-calv	40	1.5	1420	70	8
70549	0.5-gnd	20	0.8	605	83	<1
70550	G -ppp	265	4.2	3865	193	<1
70551	G -ppp	50	2.7	2460	120	3
70552	1.0- FP	520	2.36z	5.76%	499	7
70553	0.6-ppp	730	4.08z	11.00%	770	4
70554	1.0-gnd	170	9.9	4065	221	7
70555	1.5-gnd	30	1.7	818	168	<1
70556	1.0-gnd	40	3.7	2090	275	10
70610	2.0-hnfl	40	0.1	184	142	103
70611	2.0-calv	25	<0.1	91	40	38
70612	1.0-calv	25	<0.1	103	37	132
70619	1.0-gnd	20	0.6	197	39	12
70620	F -gnd	15	0.6	280	68	3
70621	0.3-calv	10	0.7	135	157	27
70622	0.3-calv	40	1.9	276	214	26
70623	0.3-qtzv	1710	2.23z	2440	5940	342
70624	0.3-qtzv	485	2.48z	5140	8240	1180
70625	0.2-qtzv	115	4.1	138	70	23
70630	F -sils	35	0.7	253	27	13
70656	1.0-calv	5	0.4	240	26	<1
70672	0.1-calv	405	26.3	9480	201	12
70675	G -ppp	55	1.8	955	163	11
70688	0.5-qtzv	190	4.2	2550	47	6
70689	1.2-gnd	35	0.8	527	37	4
70690	F -calv	20	0.3	239	94	<1
70691	F -bxc	35	0.8	605	75	6
70692	0.5-bxc	25	0.2	146	106	<1
70693	F -FPg	40	0.5	430	23	4
70697	F -bxc	115	0.8	238	78	8
70698	F -hnfl	65	1.1	486	38	4
70706	G - FP	15	0.3	310	24	<1
70707	G -qtzv	10	0.2	179	72	2
70710	G -chrt	15	0.8	49	54	7
70711	G -sltn	15	0.2	67	147	5
70712	G -gnd	10	0.3	256	36	9
70713	G -hnfl	15	0.2	412	52	7
70714	1.0-hnfl	20	0.4	360	20	7
70715	G -gnd	60	<0.1	73	36	11
70716	G -FPp	35	0.2	123	205	14
70717	G - FP	15	0.3	77	57	11
70718	2.0-calv	25	0.1	82	84	18
70719	G -FPg	15	0.2	51	24	7
70720	0.5-calv	20	0.8	148	49	13
70721	G -sltn	45	4.0	323	49	16
70725	G -gnd	40	1.4	1030	31	15
70731	G -ande	20	0.2	30	16	7
70732	G - FP	20	<0.1	39	41	11
70733	2.0-ande	20	0.1	44	35	22
70739	1.0-FPk	20	<0.1	40	29	<1
70740	1.0-FPk	10	<0.1	54	32	1
70741	1.0-FPk	5	<0.1	33	24	4
70742	G - FP	10	0.1	127	20	1
70743	G - FP	<5	<0.1	13	23	3
70753	G -gnd	10	0.2	210	47	4
70754	G -ande	15	0.5	610	79	4
70755	G - FP	740	0.1	261	31	<1
70756	G -calv	10	1.2	102	350	4
70757	G -calv	30	5.8	113	1635	6
70758	G -calv	55	24.6	570	>10000	80
70759	1.0-ppp	95	37.8	>10000	440	24
70760	G - FP	25	0.7	670	38	259
70788	G - FP	930	1.1	199	7	10
70801	G -qtzv	25	1.6	181	17	23
70802	G -qtzv	10	<0.1	49	26	23
70803	F - FP	25	0.4	164	36	<1
70804	F -calv	15	0.5	98	20	6
70805	F -qtzv	75	4.4	2140	113	75
70885	G -gnd	15	<0.1	61	47	8
70901	0.2-qtzv	380	0.9	706	68	29
87658	G -calv	10	0.2	104	75	5
87659	3.0-sltn	5	0.2	35	72	15
87660	1.0-calv	5	0.2	210	243	35
87661	0.2-calv	5	0.2	57	55	15
87662	0.5-calv	5	0.2	58	93	15
87663	0.1-calv	5	0.2	27	122	15
87664	1.0-calv	5	0.2	81	68	25
87719	G -hnfl	5	0.2	63	26	20
87720	G -hnfl	20	0.2	43	32	30
87721	G -hnfl	5	0.2	1	86	150
87722	G -hnfl	5	0.2	183	31	35
87723	G -hnfl	5	0.4	7	43	20
87724	G -hnfl	5	0.4	9	8	15
87725	G -calv	5	0.6	205	26	20
87726	G -calv	10	0.8	102	83	5
87727	G -calv	5	0.6	68	31	5
87728	G -hnfl	5	0.4	363	15	25
87729	G -calv	5	0.2	38	35	5
87730	G -calv	10	0.2	27	48	5
87751	G -gnd	290	0.2	131	15	755
87752	F -ppp	120	0.9	28	8	55
87753	0.1-qtzv	235	7.0	803	18	75
87754	G -qtzv	270	2.8	24	1	10
87755	G -ppp	20	0.4	47	55	30
87756	0.2-qtzv	5	0.2	43	46	20
87757	G -gnd	110	0.8	336	119	5
87758	1.0-gnd	105	0.6	429	81	25
87759	G -calv	340	9.0	2234	77	5
87760	G -gnd	15	0.4	107	23	20
87775	F -gnd	105	1.2	320	25	15
87787	0.1-calv	10	0.6	21	63	5
87788	G -alb	30	0.6	1134	27	10
87789	1.0-qtzv	10	3.1	1682	43	15
87790	G -gnd	5	0.4	1526	49	10
87791	F -gnd	275	5.4	6281	99	15
87792	F -gnd	25	0.2	110	4	<5
87793	F -qtzv	5	0.2	69	94	10
87798	F -gnd	60	0.6	683	116	20
87799	G - FP	5	0.4	730	54	25
87800	G -ande	10	5.8	7215	247	5
87811	F -gnd	80	0.2	80	22	5
87814	F -gnd	5	3.1	2522	57	30
87815	G -FPp	220	3.1	2757	63	35
87816	0.1-qtzv	5	0.8	143	120	20
87818	G -FPp	20	1.0	1325	109	6
87819	G -calv	17	0.4	205	147	16
87820	F -FPp	33	0.1	310	60	5
87821	G - FP	13	0.1	100	97	9
87822	F -ppp	375	3.2	4800	185	6
87824	G -FPp	80	1.1	2350	58	2
87825	G -calv	60	0.2	215	147	7
87826	G -qtzv	10	<0.1	16	10	13
87828	6.0-FPp	30	<0.1	174	95	9
87829	1.0-FPp	53	2.0	488	448	16
87831	0.3-calv	187	5.2	2975	264	5
87832	0.3-calv	50	3.2	2025	120	<1
87833	G -ppp	63	1.0	1775	83	<1
87836	F -skrn	23	0.4	930	35	<1
87837	F -qtzv	83	18.5	1600	44	6
87838	G -calv	485	3.0	5100	74	<1
87839	1.0-bxc	26	0.5	265	62	<1
87840	F -bxc	47	0.1	122	64	5
87842	F -gnd	23	0.5	855	71	31
87843	F -gnd	325	4.1	3600	79	8
87853	0.5- FP	5	0.2	45	85	<5
87854	0.2-sltn	5	0.2	248	193	20
87869	2.0-calv	10	0.2	55	7	20
87870	2.0-calv	70	0.2	71	20	20
87871	F -calv	45	0.2	50	31	5
87872	1.0-calv	55	0.2	91	29	120
87873	G -sltn	50	0.6	607	71	25
87874	2.5-calv	30	0.4	306	37	75
87875	0.5-calv	10	1.2	251	16	5
87876	0.5-chrt	13	0.3	21	23	11
87897	0.1-qtzv	1.337z	15.4	2210	30	677
87899	1.5-ppp	300	4.4	1550	228	67
87900	1.0-hnfl	270	1.4	335	35	22
101951	1.0-sltn	133	4.2	326	39	44
101952	1.0-ppp	43	1.9	3250	758	16
101953	2.0-sltn	50	0.3	160	50	11
101954	1.0-calv	43	1.1	495	44	8
101955	2.0-sltn	33	0.5	168	41	10
101956	1.0- FP	20	0.3	52	140	9
101957	0.5-calv	20	0.6	276	55	19
101958	G -sltn	60	1.0	454	28	28
101959	0.5- FP	87	0.3	200	19	57
101960	1.0-sltn	895	1.2	580	53	10
101961	0.5-calv	40	0.9	360	31	4
101962	5.0-sils	27	0.3	155	18	8
101963	1.0-sltn	183	1.7	1100	218	7
101964	2.0-ppp	83	1.1	538	54	11
101965	G -sils	7	0.3	117	23	24
101966	1.0-lmst	7	0.2	78	41	23
101967	3.0-sltn	27	0.3	130	80	11
101968	5.0-sltn	13	0.3	178	90	17
101969	2.5-lmst	50	0.8	98	>10000	8
101970	0.2-calv	27	0.4	163	65	9
101971	1.0-calv	<5	0.3	57	94	-
101972	2.0-calv	95	14.4	90	1200	-
101973	2.0-calv	85	7.1	226	1130	-
101974	2.0-calv	<5	0.2	113	57	-
101975	0.5-ppp	18	1.5	1354	49	-
101976	0.5-calv	15	0.5	413	53	-
101977	0.1-calv	13	0.1	110	29	-
101978	F -ppp	15	0.3	185	16	-
101979	F -hnfl	10	0.2	278	26	-
101980	F -hnfl	10	1.4	405	34	-
101981	F -hnfl	16	1.2	263	188	-
101982	F -hnfl	15	1.2	460	69	-
101983	F -hnfl	13	0.6	502	52	-

---GEOCHEMICAL ANALYSES---

	PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
HEAVY SEDIMENTS					
87701	205	0.8	101	83	20
87703	5	0.2	127	51	15
87706	15	0.2	268	77	30
87710	55	0.2	108	34	15
87801	20	0.2	105	71	20
87802	95	0.2	159	72	20
87830	15	0.2	120	78	-
87841	800	1.5	632	70	-
87844	75	0.2	384	142	-
SILTS					
70546	20	0.2	143	60	1
70548	70	0.1	954	190	<1
70629	25	0.5	74	205	3
70631	10	0.2	63	191	7
70654	20	<0.1	82	45	4
70655	100	0.1	310	27	3
70657	50	0.1	325	40	4
70658	45	<0.1	96	35	3
70659	30	<0.1	95	40	<1
70660	180	<0.1	154	49	<1
70661	480	<0.1	64	32	<1
70662	35	0.2	155	59	1
70663	60	<0.1	132	44	<1
70664	45	0.5	326	53	<1
70665	105	1.1	943	89	2
70666	35	1.1	755	90	6
70667	50	0.2	162	58	<1
70668	35	0.3	124	53	<1
70669	15	0.2	124	67	3
70670	40	0.2	82	65	<1
70671	10	0.3	148	96	5
70673	20	0.2	108	55	3
70674	25	0.1	132	94	7
70795	45	0.7	535	99	11
70796	60	0.2	380	89	6
70797	15	0.1	265	92	<1
70807	5	0.2	85	109	17
70808	5	0.2	28	67	<1
70813	65	0.1	59	78	<1
70886	20	<0.1	157	45	6
70894	20	<0.1	240	98	20
70895	10	<0.1	330	142	32
70896	385	<0.1	76	65	14
70897	10	<0.1	231	94	24
70902	<5	0.2	275	77	8
87699	10	0.4	97	208	25
87702	20	0.2	108	31	5
87704	25	0.6	395	86	5
87705	15	0.2	202	71	5
87707	35	0.2	210	53	5
87708	25	0.2	293	63	10
87709	95	0.2	268	37	5
87776	50	0.2	352	86	15
87777	155	0.2	371	68	5
87805	10	0.6	51	107	20
87806	15	0.6	147	275	40
87807	5	0.2	71	77	40
87808	5	0.8	163	216	90
87809	10	0.2	303	85	10
87810	75	0.6	143	77	20
87812	10	0.2	125	91	15
87813	5	0.2	178	77	10
87817	60	0.2	203	116	10
87823	50	0.3	411	96	-
87827	30	0.1	91	51	-
87834	30	0.2	295	139	-
87835	25	0.2	227	81	-
87851	10	1.6	176	405	40
87852	15	1.6	170	353	120
87855	10	1.4	154	367	50
101991	30	0.9	40	183	118
101993	10	0.2	57	97	31
102019	100	0.7	830	124	-
102020	50	0.2	390	133	-
102021	80	0.3	450	129	-
102022	55	0.4	341	103	-
102101	30	0.1	76	43	9
102102	30	0.1	53	28	1
102103	25	0.1	98	33	<1
102104	60	0.7	61	42	24
102105	40	0.1	63	48	<1
102106	25	0.2	60	47	2
102107	30	0.2	55	45	3
102108	15	0.2	80	37	<1
102109	30	0.1	85	46	9
102110	30	0.3	56	33	<1
102112	20	0.1	108	36	<1
102119	115	1.3	917	60	63
120120	60	0.1	71	57	<1
102121	35	0.2	69	132	15
102122	40	0.1	82	44	<1
102123	30	0.2	59	82	<1
102160	10	0.3	78	139	13
102163	15	<0.1	154	118	23

SOILS		PPB Au	PPM Ag	PPM Cu	PPM Zn
S.L.A.	0+001	495	1.1	1036	141
	0+ 93	140	0.3	456	94
	0+190	215	0.9	804	103
	0+295	115	0.4	589	121
	0+398	175	0.6	259	143
	0+500	100	0.4	353	138
	0+600	75	0.4	315	106
	0+700	60	0.3	154	109
	0+800	20	0.2	237	113
	0+900	50	0.2	228	105
	1+000	130	0.2	190	120
	1+100	130	0.3	269	113
	1+200	45	<0.1	292	111
	1+300	20	0.1	121	132
	1+400	120	0.3	241	143
	1+500	25	<0.1	214	117
	1+600	30	<0.1	108	132
	1+700	35	<0.1	117	96
	1+800	425	<0.1	121	113
	1+900	20	0.1	121	104
	2+000	25	0.2	176	94
	2+100	40	0.4	234	92
	2+200	130	0.2	244	101
	2+300	60	0.2	282	108
	2+400	100	0.3	517	103
	2+500	90	0.2	308	100
	2+600	320	0.7	524	90
	2+700	95	0.3	245	104
	2+800	125	1.0	683	93
	2+850	190	0.6	371	93
S.L.B.	102316	315	0.7	689	101
	102317	275	0.2	510	103
	102318	140	0.4	603	120
	102319	100	0.2	525	103
	102320	70	0.3	579	137
	102321	45	0.4	580	348
	102322	40	0.3	397	161
	102323	340	0.3	482	127
	102324	100	0.3	228	126
	102325	100	0.4	369	104
	102326	30	0.5	331	134
	102327	50	0.2	452	128

		PPB Au	PPM Ag	PPM Cu	PPM Zn	PPM As
S.L.C.	0+00E	240	<0.1	113	155	59
	0+65E	70	0.2	127	125	34
	1+00E	110	0.2	120	91	38
	1+50E	70	0.1	120	117	22
	2+00E	55	0.1	82	126	34
	2+50E	80	0.1	86	182	37
	3+00E	70	0.1	123	122	81
	3+50E	70	0.2	105	138	53
	3+80E	45	<0.1	89	125	53
	4+50E	90	<0.1	73	140	34
	5+00E	45	<0.1	116	148	15
	5+50E	20	<0.1	57	166	10
	6+00E	25	<0.1	81	163	13
	6+50E	15	<0.1	76	144	1
	7+00E	15	<0.1	87	183	12
	7+50E	10	<0.1	67	134	3
	8+00E	125	<0.1	70	142	9
	8+50E	15	0.1	63	161	13
	9+00E	25	<0.1	100	138	35
	9+50E	30	0.1	113	160	23
	10+00E	25	0.3	75	175	9
	10+50E	20	0.1	71	147	11
	11+00E	10	<0.1	79	132	12
	11+50E	15	0.2	86	161	25
	12+00E	20	<0.1	94	166	21
	12+50E	10	0.6	41	227	214
	13+00E	15	<0.1	47	163	15
	13+50E	15	0.3	74	178	24
	14+00E	10	0.2	118	188	7
S.L.D.	0+00S	85	0.3	81	51	<1
	0+50S	55	0.2	88	34	7
	0+90S	65	0.1	76	28	11
	1+70S	115	0.1	154	63	5
	2+00S	70	0.1	102	79	1
	2+50S	65	0.2	96	88	19
	3+00S	50	0.2	72	72	<1
	3+50S	60	0.1	58	82	14
	4+00S	85	0.1	75	94	40
	4+50S	95	0.1	110	78	2
	5+00S	70	0.1	87	88	21
	5+50S	100	0.2	100	99	76
	6+00S	60	0.1	100	90	9
	6+40S	110	0.1	100	87	7
	7+00S	80	0.1	103	103	70
	7+50S	50	0.1	79	76	5
	8+00S	30	0.2	116	88	8

LEGEND

LATE JURASSIC and/or CRETACEOUS

6 Dikes a;aplite
b;diorite & gabbro
c;porphyritic diorite

5 Quartz monzonite a;leucocratic

LATE TRIASSIC to MIDDLE JURASSIC

4 Syenomonzonite a;feldspar porphyry (crystal-crowded)
b;feldspar porphyry (matrix supported)

3 Granodiorite a;hornblende/biotite granite
b;biotite-hornblende granodiorite
c;diorite
d;pyroxenite

LATE TRIASSIC (Stuhini Group)

2 Volcanic Rocks a;rhyolite tuffs +/- flows
b;andesite tuffs (ash & crystals)
c;andesite tuffs (lapilli/bombs)
d;andesite flows (+/- breccias)
e;rhyodacite intrusion/flows

1 Sediments a;chert (green)
b;argillite and siltstone
c;greywacke-volcaniclastics
d;limestone, massive
e;limestone (tuffaceous+/-argillaceous)

PERMIAN (Stikine Assemblage)

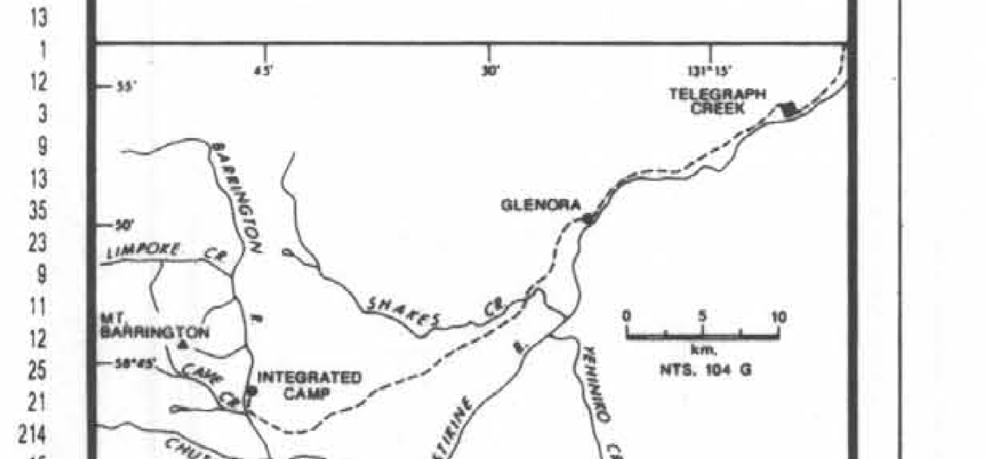
B Limestone

A Sericite schist & greenstone

SYMBOLS

Geological contact (defined,assumed)
Outcrop
Bedding (inclination)
Jointing (inclination)
Foliation (inclination)
Fracturing (inclination)
Fault/Shear zone (+/- breccia)
Hydrothermal Breccia zone
Metamorphism h: biotite hornfels
g: garnet skarn
Alteration k: potassium+/-chlorite
q-c: quartz-carbonate
n: albitization
Vein-Breccia (quartz-carbonate)
Stockwork (quartz +/- carbonate)
MSP Massive Sulphide Pod
Diamond Drill hole location
Trench
Rock Sample (grab)
Rock Sample (float)
Rock Sample (chip/channel)
Silt Sample
Heavy-Sediment Sample
Soil Sample
Bulk Sample

Contour interval in metres.



200 0 200 400
meters

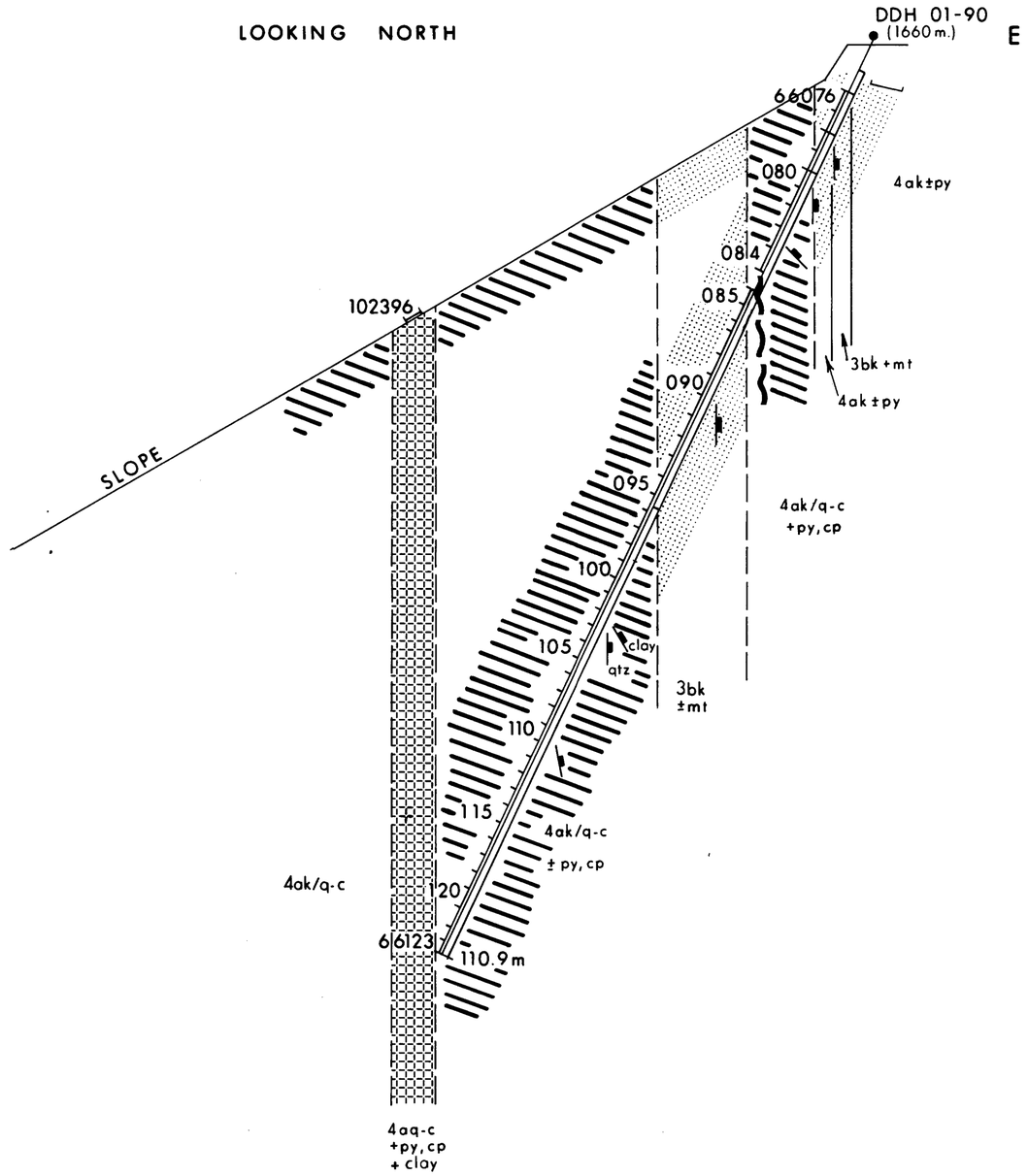
Integrated Resources Ltd.

GOAT 4-11 CLAIMS

GEOLOGY & GEOCHEMISTRY

LIARD MINING DIV. (B.C.)

NTS: 104G 12W&13W	DATE: NOV.1990	FIGURE: 4
DRAWN: P.VA	SCALE: 1:10,000	



SAMPLE	TYPE*	ASSAYED OZ./TON GOLD	ppm Ag	ppm Cu	ppm Zn	ppm As
102396	1.8-stwk	0.235	18.5	(0.56%)	205	16
66076	2.3-gnd	0.001	0.5	970	45	
66077	2.2-gnd	0.001	0.4	787	39	2
66078	2.5-silf	0.004	0.9	950	40	11
66079	2.5-silf	0.002	0.6	595	36	6
66080	2.0-silf	0.003	0.6	480	32	3
66081	2.1-silf	0.004	0.8	780	41	11
66082	2.5-silf	0.001	0.8	220	12	23
66083	2.5-silf	0.003	1.1	798	21	13
66084	2.5-silf	0.004	1.2	529	17	12
66085	1.6-silf	0.001	1.4	423	30	72
66086	1.5-silf	0.001	1.2	681	42	57
66087	2.1-gnd	0.001	0.7	395	44	5
66088	2.5-gnd	0.002	0.4	253	34	<1
66089	2.5-gnd	0.004	0.2	155	28	9
66090	2.5-gnd	0.002	0.5	275	32	6
66091	2.5-gnd	0.004	0.9	447	46	11
66092	2.5-gnd	0.003	1.1	560	44	11
66093	2.5-gnd	0.002	0.8	375	43	7
66094	2.5-gnd	0.001	0.9	566	40	<1
66095	2.0-silf	0.007	1.1	651	42	5
66096	2.0-stwk	0.001	1.1	580	26	17
66097	2.0-stwk	0.007	1.5	807	41	10
66098	2.0-stwk	0.006	2.2	947	47	2
66099	2.0-stwk	0.003	1.5	709	34	4
66100	2.0-stwk	0.005	2.1	804	40	4
66101	2.0-stwk	0.003	1.5	619	30	5
66102	2.0-stwk	0.005	3.0	1150	48	7
66103	2.0-stwk	0.011	3.3	996	43	12
66104	2.0-stwk	0.003	0.7	460	20	4
66105	2.0-stwk	0.005	2.7	1050	47	4
66106	2.0-silf	0.003	1.5	689	34	9
66107	2.0-silf	0.004	0.2	148	16	8
66108	2.0-stwk	0.007	0.3	158	8	<1
66109	2.0-stwk	0.003	0.3	144	12	8
66110	2.0-stwk	0.002	1.1	416	24	5
66111	2.0-stwk	0.005	1.6	750	35	7
66112	2.0-silf	0.006	2.7	1500	50	7
66113	2.0-silf	0.001	0.4	240	14	4
66114	2.0-silf	0.001	1.2	705	31	7
66115	2.0-silf	0.004	1.7	917	36	14
66116	2.0-silf	0.001	0.5	244	32	3
66117	2.0-silf	0.009	1.5	388	25	3
66118	2.0-stwk	Trace	0.3	101	38	1
66119	2.0-stwk	0.002	0.7	317	24	7
66120	2.3-stwk	0.001	0.3	151	10	17
66121	2.0-silf	0.005	2.2	1150	47	14
66122	2.0-silf	0.007	3.2	1500	58	<1
66123	2.1-silf	0.004	1.9	945	39	6

* 2.0: width in metres.
silf: quartz alteration in feldspar porphyry.
stwk: veinlet stockwork.
gnd: granodiorite.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,988

LEGEND
(Adapted from Figure 4)

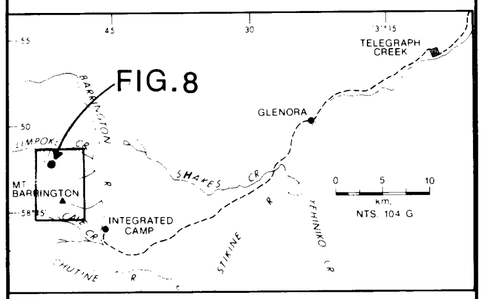
LATE TRIASSIC to MIDDLE JURASSIC

4 Syenomonzonite a;feldspar porphyry (crystal-crowded)
b;feldspar porphyry (matrix supported)

3 Granodiorite b;biotite-hornblende granodiorite

SYMBOLS

- Geological contact (defined,assumed)
- Fracturing (inclination)
- Fault/Shear zone (+/- breccia)
- Alteration k: potassium+/-chlorite; q-c: quartz-carbonate; n: albitization
- Stockwork (veining >> 15%)
- Proto-stockwork (veining << 15%)
- Diamond Drill hole location
- 105 Rock Sample (chip/channel)
- py,cp,mt,po asp,Au Pyrite,Chalcopyrite,Magnetite,Pyrrhotite Arsenopyrite,Gold



Integrated Resources Ltd.

GOAT 4-11 CLAIMS
BOB-ZONE
DRILL-SECTION

LIARD MINING DIV. (B.C.)

NTS:	DATE:	FIGURE:
104 G/13W	NOV.1990	8
DRAWN: P.VA	SCALE: 1:500	