800613

1990 EXPLORATION PROGRAM

SUMMARY REPORT

PELICAN PROPERTY

GOSSAN 1, 4, 5, 6, 7, 22 CLAIMS

CATHEDRAL GOLD CORPORATION
ECSTALL MINING CORPORATION

LIARD MINING DIVISION

104B/10W

56^{0}33'N 130^{0} 51'W

for
CATHEDRAL GOLD CORPORATION
by
DENNIS GORC

JANUARY 1991

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1.0 INTRODUCTION

This report describes the 1990 Exploration Program on the Pelican Property, Iskut River Area of northwestern British Columbia. The field portion of the program was completed during the period August 14-September 14, 1990. Aim of the program was to locate gold-bearing mineralized structures through geophysical and geochemical surveys as well as geological mapping and prospecting. Previous work by Lonestar (1983), Western Canadian (1987), Cathedral Gold Corporation (1988) and Aerodat (1989) had outlined several target areas to focus exploration on. To prepare for the 1990 program a camp was constructed in the central portion of the property. Grids were laid out on several of the target areas. These grids consisted of lines spaced every 100m and marked by wooden pickets every 25m. The geophysical section of this report was written by Mr. Roger Caven, Consulting Geophysicist. Mr. Caven conducted or supervised all of the geophysical surveys.

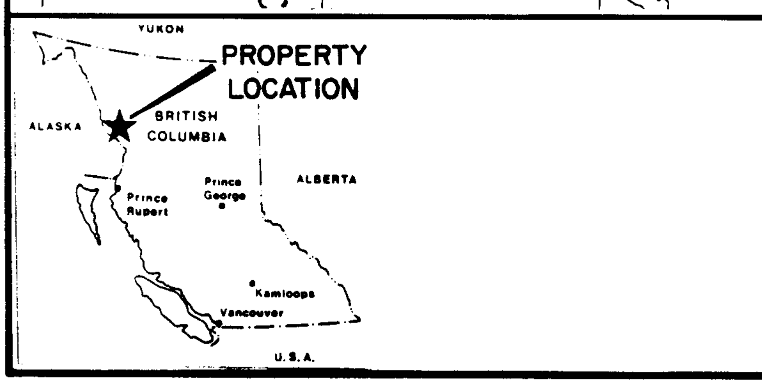
2.0 LOCATION, ACCESS, TOPOGRAPHY

The Pelican Property is located in the Iskut River Area of northwestern British Columbia on NTS map sheet 104B/10W.

The property is located along branches of Snippaker Creek approximately 16 km southeast of the Bronson Airstrip currently servicing the Cominco/Prime Snip Project.

Access to the property is by aircraft from either Smithers (320 km), Terrace (280 km) or Wrangell, Alaska (80 km) to one of three airstrips: Bronson, Johnny Mountain or Snippaker airstrip. The Snippaker airstrip is located along Snippaker Creek 1 km east of the Pelican Property. This strip is still in use but has not been maintained and can be used only by small aircraft. The Bronson airstrip has now been upgraded to enable large aircraft to land. Access to the property is by helicopter from either of the three airstrips. An alternative access route is by helicopter from the Bobquin airstrip - Highway Maintenance camp located along the Stewart-Casslar Highway, 50 km to the east.

The property occurs within the Coast Range Mountains which are characterized by rugged, steep, glaciated terrain. Elevations on the property range from 600m to 2300m above sea level. The upper elevations are marked by ice caps and valley glaciers. The southwestern



CATHEDRAL GOLD CORPORATION

PELICAN

LIARD M.D.

FIGURE 1 | N.T.S. 104 B/10 W

LOCATION MAP

km 0 — 50 — 100 — 150 — 200 km

SCALE:	1:3,750,000	GEOLOGIST:	D. GORC
DATE:	JUNE, 1989	DRAWN BY:	J. C[illegible]

portion of the property is marked by extremely rugged relief with many areas only accessible with mountain climbing gear. Movement about other portions of the property although time consuming is not overly difficult.

Vegetation ranges from thick alder growth along the valley bottoms to alpine grasses along the ridge tops. Stunted (1m-3m) spruce trees cover the slopes to most ridges.

3.0 CLAIM INFORMATION

The Pelican Property is comprised of 11 claim blocks totalling 188 units. The claims are located on NTS map sheet 104B/10W in the Liard Mining Division. The property has been divided into the following groups for assessment purposes:

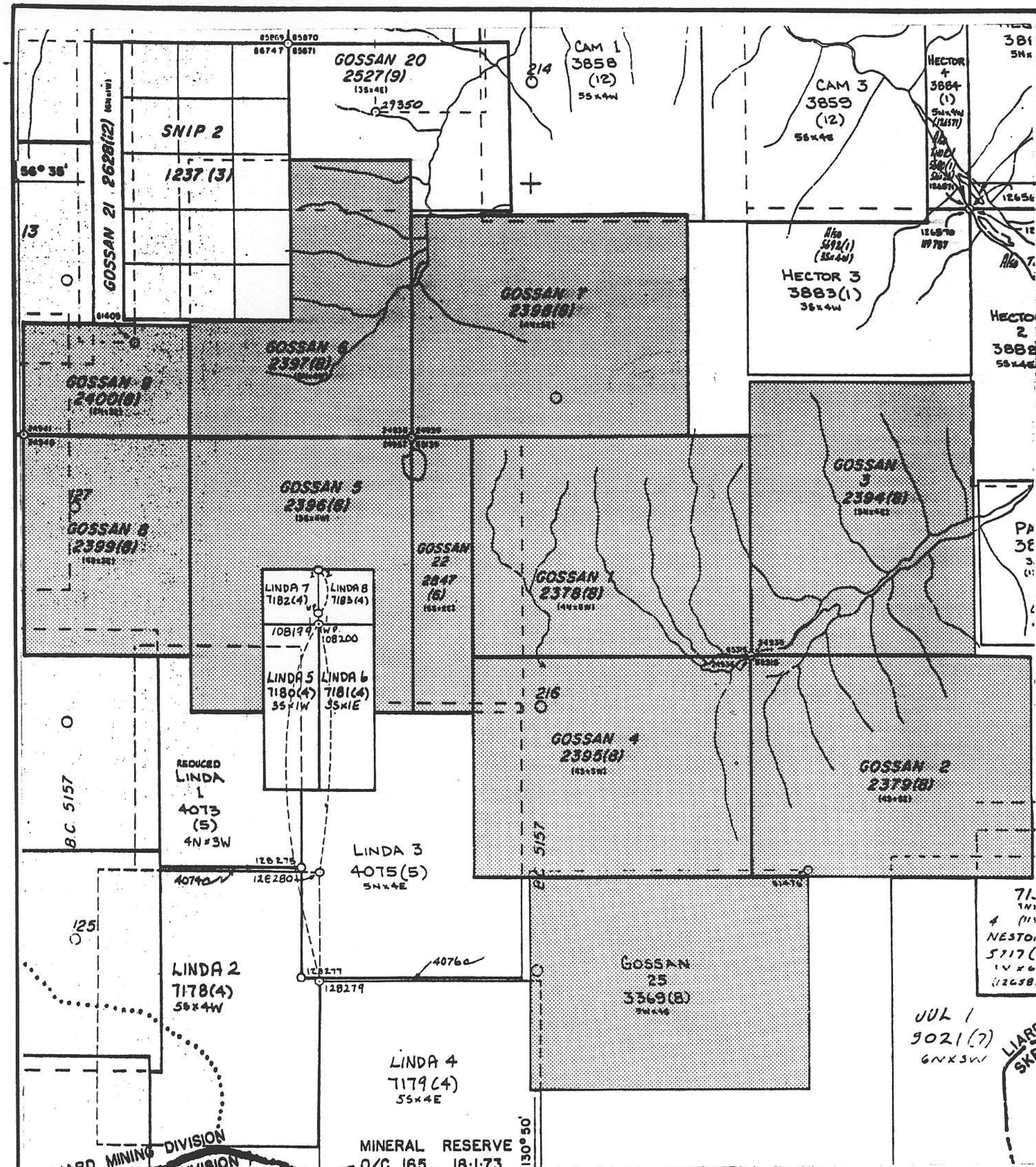
TABLE 1
Claim Information - Pelican Property

GROUP 1

Claim Name	Units	Record No.	Recording Date	Year of Expiry
Gossan 1	20	2378	August 12/82	1994
Gossan 2	20	2379	August 12/82	1993
Gossan 3	20	2394	August 12/82	1993
Gossan 6	20	2397	August 24/82	1999
Gossan 7	20	2398	August 24/82	1993
	100 units			

GROUP 2

Claim Name	Units	Record No.	Recording Date	Year of Expiry
Gossan 4	20	2395	August 24/82	1993
Gossan 5	20	2396	August 24/82	1993
Gossan 8	12	2399	August 24/82	1994
Gossan 9	6	2400	August 24/82	1999
Gossan 22	10	2487	June 30/82	1993
Gossan 25	20	3369	August 13/85	1994
	88 units			



CATHEDRAL GOLD CORPORATION

PELICAN
LIARD M.D.

FIGURE 2 N.T.S. 104 B /10 W

CLAIM MAP

m 0 1000 2000 3000 m

SCALE:	1:50 000	GEOLOGIST:	D. BORC
DATE:	NOVEMBER, 1990	DRAWN BY:	J. CORKUM

The Pelican Property was staked by Mr. Chris Graf in 1982-83 as part of his Gossan Claim Group. In 1985, Western Canadian Mining Corporation signed an option agreement with Mr. Graf whereby Western Canadian could earn a 60% interest in the Gossan Property. In August 1988, Cathedral Gold Corporation signed an option agreement whereby Cathedral Gold Corporation could earn Western Canadian's 60% interest in two separate portions of the Gossan Property. One of these portions is now called the Pelican Property. In 1990 an agreement was signed with Cross Lake Minerals whereby Cross Lake Minerals could earn an interest in the Pelican Property.

4.0 EXPLORATION HISTORY

Mineral exploration in the area dates back to 1907 with the discovery of mineralization near Johnny Mountain. Since then the area has undergone sporadic episodes of mineral exploration for both precious metals and base metals. One such period was in the 1960-1970s when several of the prominent large gossans were examined as possible copper porphyry targets. One such gossan examined occurs on the ridge abounding the property to the north and east (Sericite Ridge Gossan). This large gossan was first explored by Great Plains Development in 1972. Subsequent work was done by Teck Corporation and Lonestar Resources Ltd. This work included geological mapping, soil geochemical surveys and silt geochemical surveys. Exploration in the area of the Pins Showing located in the southern portion of property was first recorded in 1972 by Cobre Explorations. This work consisted of prospecting, geological mapping, soil geochemical surveys, magnetometer surveys and ground electromagnetic surveys.

The present Pelican Property was staked in 1982-83 by Mr. Chris Graf as part of the larger Gossan Property which extended a further 10 km to the northwest. In 1983, Lonestar Resources Ltd. completed an extensive regional mapping, silt sampling and soil sampling program over the entire Gossan Property.

In 1987, Western Canadian completed a geological mapping, soil sampling and silt sampling program over portions of the Pelican Property.

In 1988, Cathedral Gold completed a rock chip sampling-prospecting program during which 237 rock chip and 383 soil samples were taken. The results returned from this program include: 0.5m wide quartz vein the area within the present Southeast Grid which returned a gold value of 6,205 ppb, a float sample from the Snow Grid area which returned 11,025 ppb Au and mineralized float near the Pelican Grid samples of which returned gold values of up to 2,895 ppb Au.

In 1989, Aerodat Ltd. was contracted to complete an airborne electromagnetic and magnetometer survey over the entire property. This survey outlined several electromagnetic and magnetic anomalies worthy of follow-up.

5.0 REGIONAL GEOLOGY

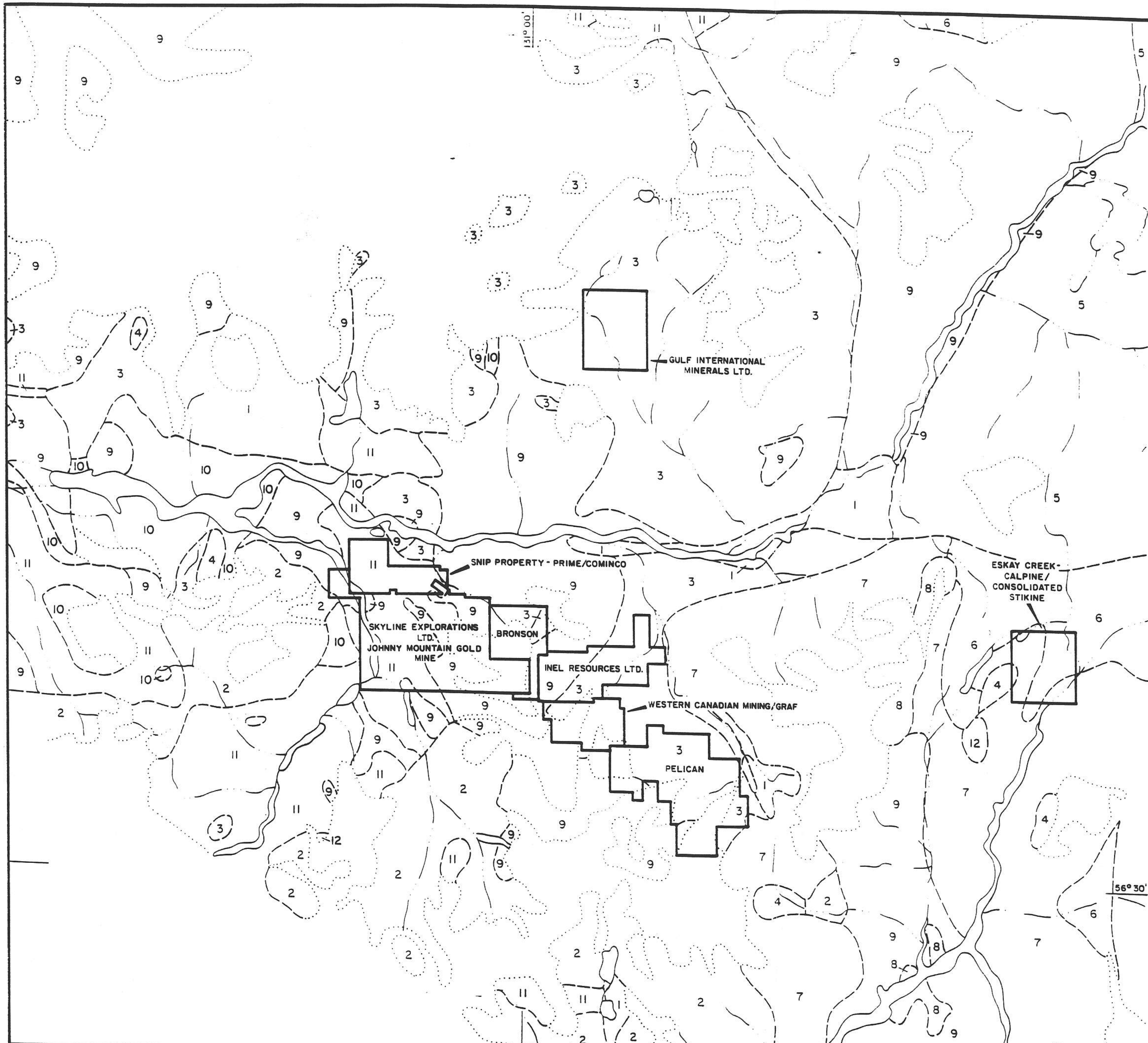
5.1 Introduction

Past geological mapping in the area by Kerr (1948) and Grove (1971, 1986) is currently being revised and updated by both the Federal and Provincial governments (Anderson, 1989); (Britton et.al, 1990). Although this work is not yet finished there is now a clearer understanding of the geology of the area.

The Iskut map area is located near the boundary of the Intermontane Belt and the Coast Plutonic Complex. Anderson (1989) has proposed four tectonostratigraphic assemblages to define the geology of the area:

1. Tertiary Coast Plutonic Complex
2. Middle-Upper Jurassic Bowser Assemblage
3. Triassic-Jurassic volcanic-plutonic arc assemblage
4. Paleozoic Stikine Assemblage

The Pelican Property is underlain by rocks belonging to Triassic-Jurassic volcanic-plutonic arc assemblage within 5-10 km of the Coast Plutonic Complex.



LEGEND

CENOZOIC

1	Recent basalt flows, ash
2	Early Tertiary felsic intrusives

MESOZOIC

3	Cretaceous and Tertiary intrusive rocks, mainly felsic
4	Jurassic intrusives, syenite to granodiorite
5	Jurassic to Cretaceous clastic sediments, Upper Hazelton Group in part
6	Middle to Upper Jurassic Hazelton Group sediments
7	Upper Triassic to Middle Jurassic Hazelton Group volcanics and related sedimentary rocks
8	Triassic and Early Jurassic granodiorite
9	Upper Triassic to Lower Jurassic andesitic volcanics and clastic sediments

PALEOZOIC

10	Carboniferous and Permian greenstone, clastic sediments and limestone
11	Carboniferous and Permian schist and gneiss
12	Metamorphic rocks, age unknown

Ice Field Cover

CATHEDRAL GOLD CORPORATION

BRONSON-PELICAN
LIARD M.D.

FIGURE 3 N.T.S. 104B/10W,11E

REGIONAL GEOLOGY

km 0 5 10 15 km

SCALE:	1:250,000	GEOLOGIST:	D. GORC
DATE:	JUNE, 1989	DRAWN BY:	J. CORKUM

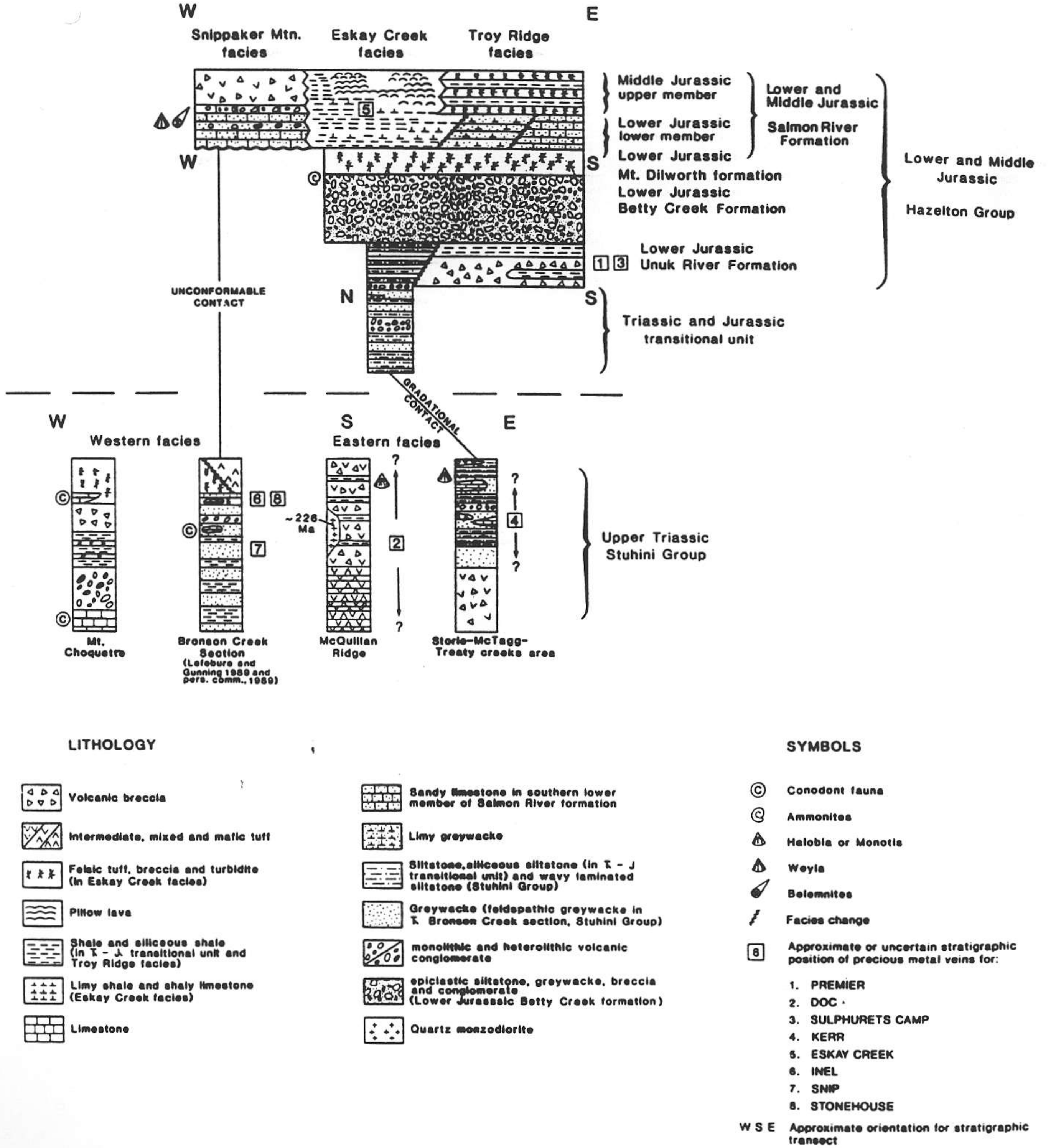
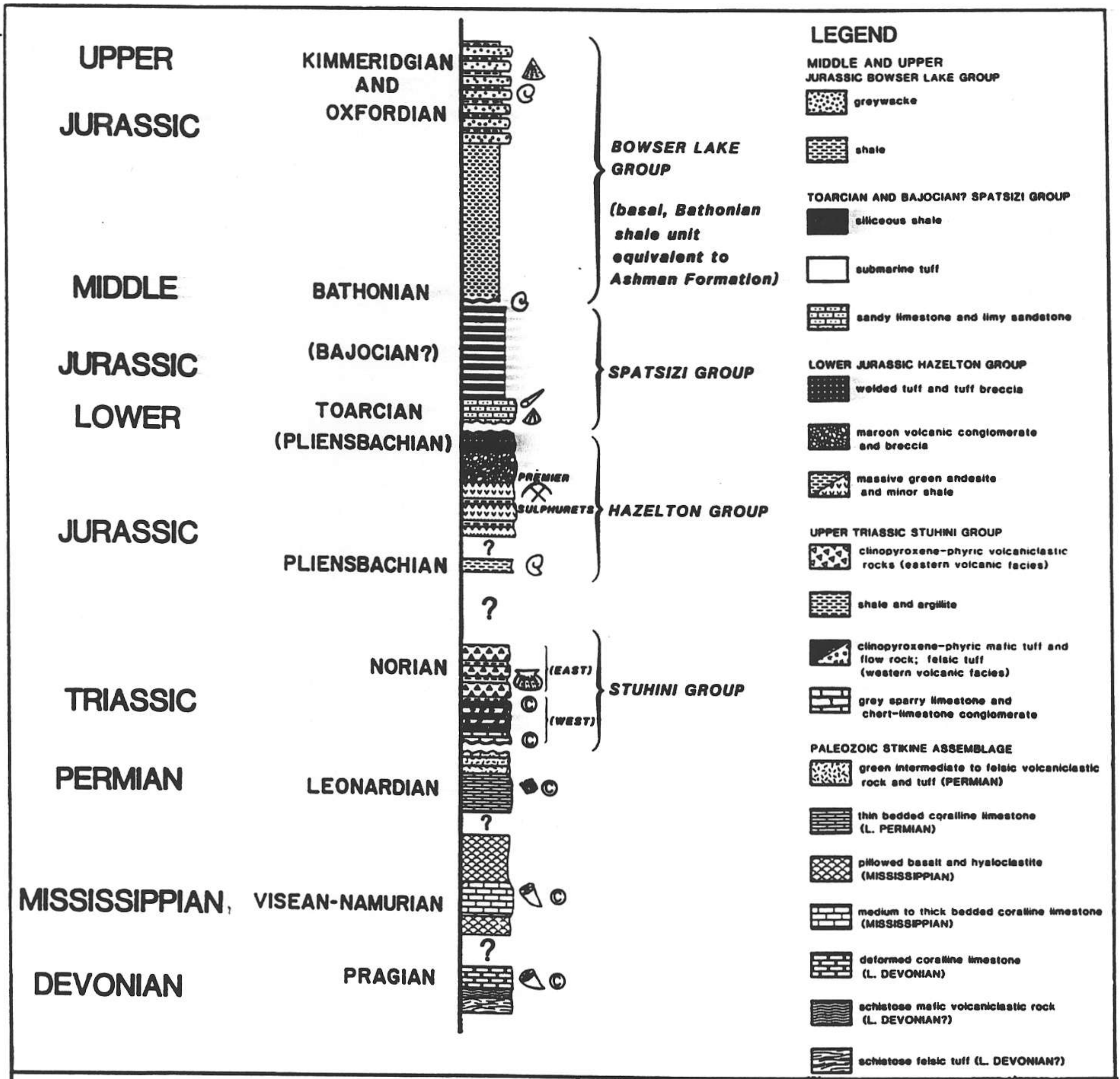


Figure x. Schematic facies changes in Triassic and Lower and Middle Jurassic strata. Facies changes occur toward the east and northeast for Upper Triassic Stuhini Group and both south to north and east to west for Upper and Middle Jurassic Salmon River Formation in Iskut River map area.



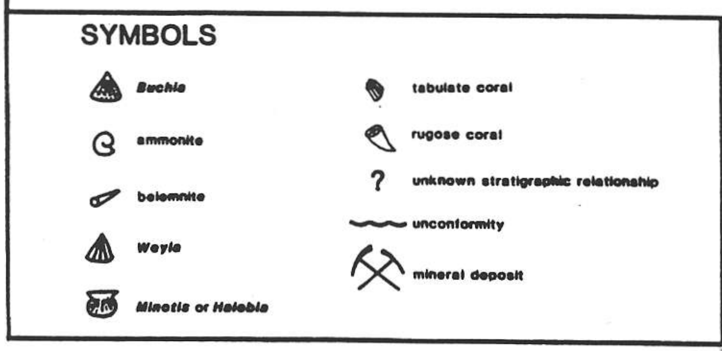


Figure . Schematic stratigraphic column and plutonic framework for Iskut River map area (time scale not to scale).

5.2 Triassic-Jurassic Volcanic-Plutonic Arc Assemblage

The Triassic-Jurassic Volcanic-Plutonic Arc Assemblage has been divided into the following stratigraphic units:

a) Upper Triassic Stuhini Group
   i) Eastern Facies
   ii) Western Facies

b) Lower Jurassic Hazelton Group
   i) Unuk River Formation
   ii) Betty Creek Formation
   iii) Mount Dilworth Formation

c) Lower and Middle Jurassic Salmon River Formation

A brief description of the above stratigraphic units follow:

a) Stuhini Group

   i) Eastern Facies:
   This facies grades to the northeast from a largely intermediate to mafic tuff sequence to a sequence containing abundant greywackes and siltstone. This facies lacks the thick limestone and felsic tuff units of the western facies.

   ii) Western Facies:
   This facies consists of a lower unit of limestone and conglomerate which changes towards the east to a largely feldspathic greywacke-siltstone unit at Bronson Creek. This sedimentary unit is overlain by a bimodal volcanic suite consisting of volcanic breccia, limestone and felsic tuff. Overall the character of the sequence becomes more sedimentary towards the east.

b) <u>Hazelton Group</u>

i) Unuk River Formation:
This formation consists of andesitic breccias and lavas which grade into siltstones, conglomerates and greywackes west of the Bowser River.

ii) Betty Creek Formation:
This formation contains volcanic-siltstone, greywacke, conglomerate and breccia. A maroon colour characterizes this formation.

iii) Mount Dilworth Formation:
Consisting of felsic tuff, tuff breccia and dust tuff. This unit represents the final episode of Hazelton volcanism.

c) <u>Salmon River Formation</u>

The formation contains a basal calcareous sandstone unit overlain by one of three north trending facies:

i) East - Troy Ridge Facies:
Siltstone shale, tuff turbidite

ii) Central - Eskay Creek Facies:
Pillowed lava, limy to siliceous shale and siltstone

iii) West - Snippaker Mountain Facies:
Andesitic volcaniclastics

5.3 Intrusives

The northwestern area of British Columbia is characterized by four episodes of intrusive activity:

Hyder Suite	(Tertiary)	44-46 My
Three Sisters Suite	(Middle Jurassic)	175-180 My
Texas Creek Suite	(Early Jurassic)	189-196 My
Stikine Suite	(Late Jurassic)	213-226 My

These episodes appear to be coeval with volcanic rocks of the Stuhini Group, Hazelton Group and Salmon River Formation. The composition of plutons, associated with the various intrusive episodes are as follows:

Hyder Suite (Tertiary) - monzogranite, quartz monzonite and granodiorite with minor monzodiorite and microdiorite dykes.

Three Sisters Suite (Middle Jurassic) - Plutons of this age have not yet been recognized in the Iskut River area.

Texas Creek Suite (Early Juraasic) - a) calc-alkaline quartz monzodiorite and granodiorite characterized by widespread chlorite-epidote alteration, b) alkaline syenite often associated with gold and porphyry copper-gold deposits.

Stikine Suite (Late Jurassic) - gabbro, diorite, and quartz monzonite.

5.4 Structure

Detailed structural studies within the Iskut area have not yet been done. Extensive deformation is essentially limited to the Paleozoic strata whereas Mesozoic units are, for the most part, flatlying. Faults fall into northwesterly, northeasterly and north-south sets. These faults are the most part steep-angled. Recent mapping in the area has also suggested that flatlying faults often occur between rock units of differing competency.

6.0 ECONOMIC GEOLOGY - REGIONAL

6.1 "Golden Triangle" - NW British Columbia

The mineral deposits of the area can be divided into four main classes: vein, porphyry/disseminated, stratabound massive sulphide and skarn. High-grade gold-quartz-base metals veins are by far most abundant type of deposit and have constituted the main exploration target until recently. Recent exploration programs on porphyry targets such as the Kerr property and several properties in the Galore Creek area as well as exploration programs for massive sulphide targets such as Eskay Creek have significantly widened the scope of exploration.

The vein deposits occur at a variety of stratigraphic levels from the Permian/Mississippian (e.g. McLymont Creek) to the lower Middle Jurassic (e.g. Eskay Creek). With the exception of the Eskay Creek, which is now believed to be at least in part a massive sulphide deposit, the deposits do not appear related to specific stratigraphic horizons but several do appear to be related to Early Jurassic intrusions (Texas Creek Suite) (Premier, Kerr, Inel, Snip). In Table 2 some characteristics of several vein deposits are listed.

6.2 Bronson Trend

In the Iskut Gold Camp gold mineralization has been discovered within a NW-SE trending corridor approximately 2 km in width extending from Cominco/Prime's Snip deposit to Cathedral Gold's Pelican Property. Mineralized zones discovered to date include:

- a) Snip (Twin Zone) - Cominco/Prime
- b) Bronson Creek and Bonanza West - Placer Dome/Skyline
- c) S and T Zones - Cathedral Gold Corporation/Ecstall Mining
- d) AK Zone - Gulf International
- e) Khyber - Vector Industries International/Graf
- f) SJ - Cathedral Gold Corporation/Ecstall Mining

The above mineralized zones all trend NW-SE and appear to have similar mineralogy: gold, pyrite, pyrrhotite, sphalerite, chalcopyrite, galena, calcite and quartz.

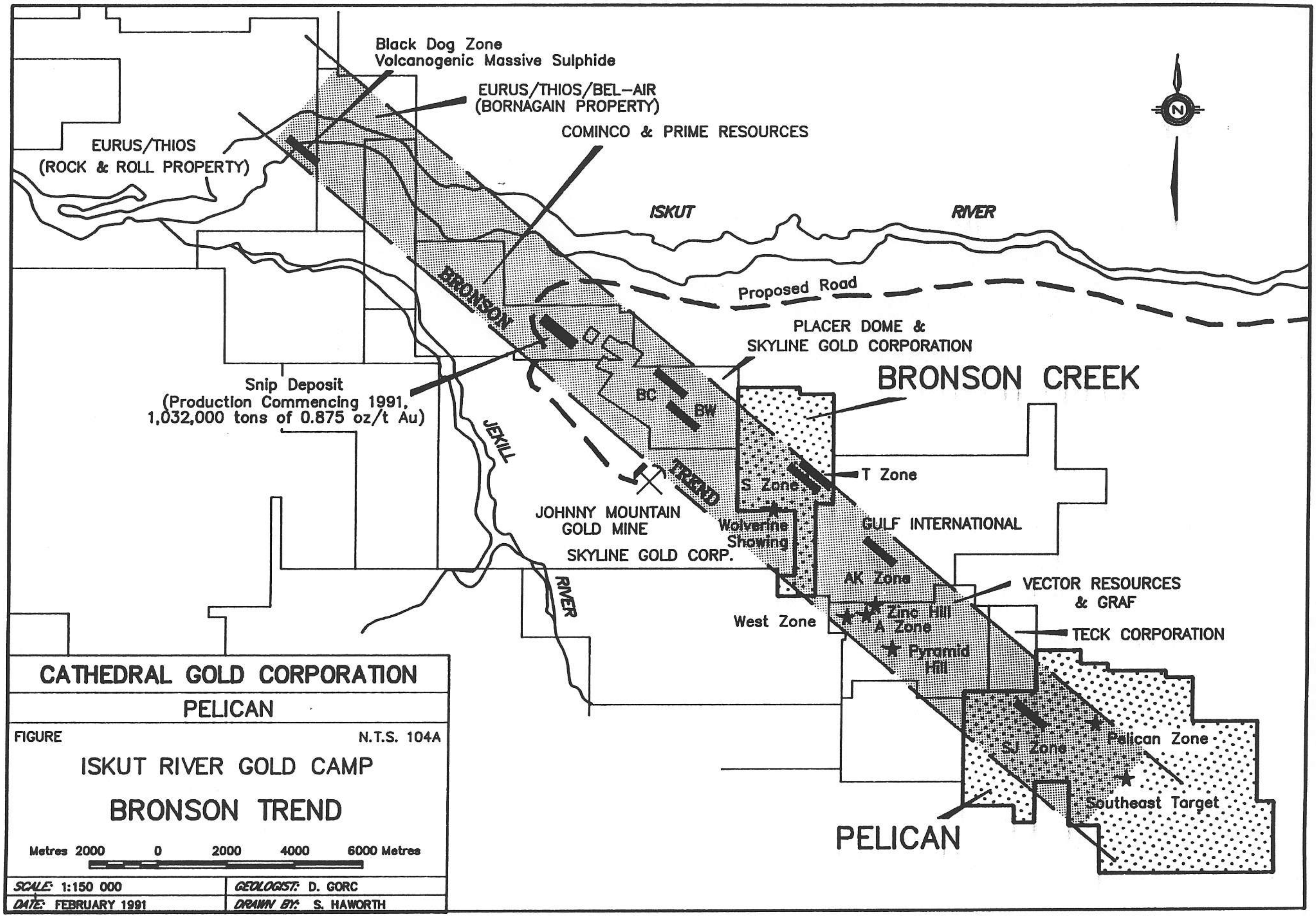

Black Dog Zone
Volcanogenic Massive Sulphide
EURUS/THIOS/BEL-AIR
(BORNAGAIN PROPERTY)
COMINCO & PRIME RESOURCES
EURUS/THIOS
(ROCK & ROLL PROPERTY)
ISKUT
RIVER
BRONSON
TREND
Proposed Road
PLACER DOME &
SKYLINE GOLD CORPORATION
BRONSON CREEK
Snip Deposit
(Production Commencing 1991,
1,032,000 tons of 0.875 oz/t Au)
BC
BW
JEKILL
T Zone
S Zone
JOHNNY MOUNTAIN
GOLD MINE
SKYLINE GOLD CORP.
Wolverine
Showing
GULF INTERNATIONAL
RIVER
AK Zone
VECTOR RESOURCES
& GRAF
West Zone
Zinc Hill
A Zone
TECK CORPORATION
Pyramid
Hill
Pelican Zone
SJ Zone
Southeast Target
PELICAN
CATHEDRAL GOLD CORPORATION
PELICAN
FIGURE
N.T.S. 104A
ISKUT RIVER GOLD CAMP
BRONSON TREND
Metres 2000 0 2000 4000 6000 Metres
SCALE: 1:150 000
GEOLOGIST: D. GORC
DATE: FEBRUARY 1991
DRAWN BY: S. HAWORTH

TABLE 2

CHARACTERISTICS OF SELECTED DEPOSITS IN THE 'GOLDEN TRIANGLE'

DEPOSIT	DEPOSIT TYPE	HOST FORMATION	NEARBY INTRUSIVE	MINERALOGY	TRACE ELEMENTS
SNIP	VEIN	STUHINI GP.	MONZODIORITE	PYRITE	AU
	(SHEAR)	UPPER	-MONZONITE	PYRRHOTITE	AG
	120/60SW	TRIASSIC		SPHALERITE	ZN
		SILTSTONE-	TEXAS CK.	ARSENOPY.	CU
		WACKE	SUITE	GALENA	PB
				MOLYBDENITE	BI
				CHALCOPY.	CD
					AS
					SB
					HG
INEL	VEIN-	STUHINI GP?	FELSITE	PYRITE	AU
	INTRUSIVE	UPPER	STOCK AND	CHALCOPY.	AG
	BRECCIA	TRIASSIC	DYKES	GALENA	ZN
				SPHALERITE	CU
		UNUK RIVER?		PYRRHOTITE	PB
		LOWER JURASSIC			AS
					SB
		ANDESITIC			BI
		TO BASALTIC			
		TUFFS AND			
		SEDIMENTS			
STONEHOUSE	VEIN	SIMILIAR	SIMILIAR	PYRITE	AU
-JOHNNY	065	TO INEL	TO INEL	CHALCOPY.	AG
MTN.				SPHALERITE	CU
				GALENA	PB
					ZN
SILBACK-	VEINS	UNUK RIVER	PORPH.	PYRITE	AU
PREMIER	STOCKWORK		DACITE	SPHALERITE	AG
	BRECCIA		GRANODIORITE	CHALCOPY.	CU
		ANDESITE		TETRAHED.	PB
	MAIN-050	DACITE		GALENA	ZN
	WEST-290	FLOWS,TUFFS,		ARSENOPY.	AS
		BRECCIAS		PYRRHOTITE	

DEPOSIT	DEPOSIT TYPE	HOST FORMATION	NEARBY INTRUSIVE	MINERALOGY	TRACE ELEMENTS
MCLYMONT	VEIN AND	MISS. OR	QUARTZ	PYRITE	AU
NORTHWEST	MANTOS	PERMIAN	SYENITE	SPHALERITE	AG
	REPLACEMENT	SANDSTONE	AT DEPTH	GALENA	CU
	?	CHERT		CHALCOPY.	PB
	SKARN ?	MARBLE		BARITE	ZN
					AS
					BA
				GYPSUM	SB
				MAGNETITE	SB
				TETRAHED.	BI
ESKAY	STRATABOUND	MOUNT	FELDSPAR	PYRITE	AU
CREEK	MASSIVE	DILWORTH	PORPH.	SPHALERITE	AG
	SULPHIDES	SALMON		GALENA	PB
		RIVER		ARSENOPY.	ZN
	VEINS	LOWER TO		STIBNITE	CU
	STOCKWORK	MIDDLE		CINNABAR	AS
		JURASSIC		TERAHED.	SB
				ORPIMENT	HG

The information and data on this corridor obtained to date is insufficient as to why this corridor should be the focus of these mineralized zones. However it seems quite likely that additional exploration will uncover additional gold mineralization within the corridor.

A few kilometres southwest of the "Bronson Trend" workers in the area have mapped a major fault, the Sky Fault, which parallels the "Bronson Trend". The Sky Fault may have some economic sigriificance in that no substantial mineralization has been found west of the Sky Fault. One also notes that no large gossans occur west of the fault.

7.0 PROPERTY GEOLOGY

Both Lonestar (1984) and Western Canadian (1987) have completed property scale geological mapping programs. Bending (1984) divided the stratigraphy into five mappable units. These mappable units from oldest to youngest are: Black Argillite, Banded Siltstone, Green Volcanic, Upper Tuffaceous Sedimentary Unit and a Grey Volcanic unit. Intrusive rocks were divided by Bending into: granodiorite and diorite stocks, orthoclase porphyry, quartz-eye felsite dykes, Coast Range intrusives, and alkali basalt dykes.

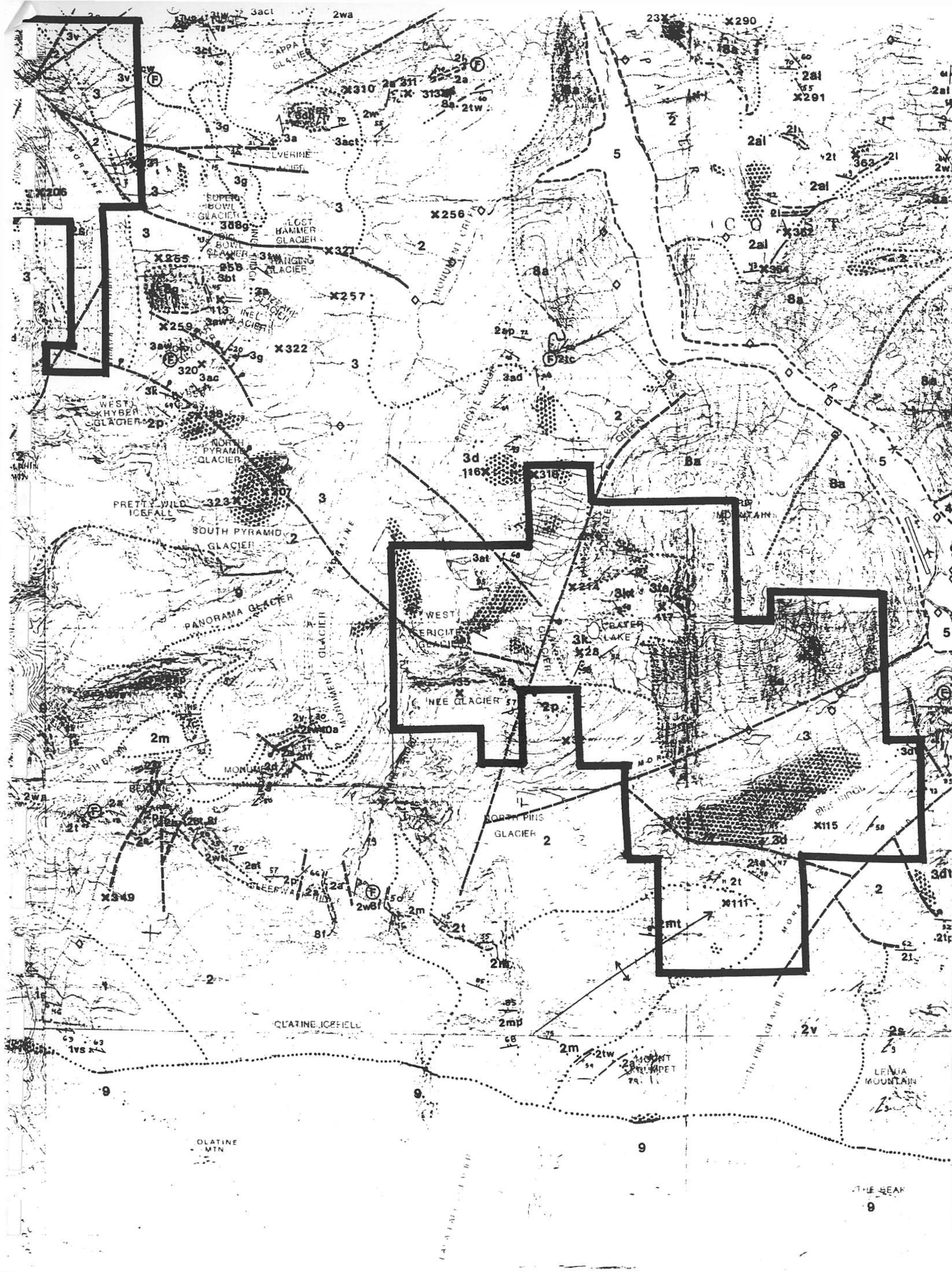
A subset of the units outlined by Bending was used in the current mapping on the Pelican property.

7.1 Black Argillite Unit

The Black Argillite is dark grey to black, well bedded and contains narrow irregular quartz-carbonate veins. Black Argillite was only noted on the west Pins Ridge where there is little outcrop. Most of the southwest part of the Ridge is covered by angular Black Argillite talus.

7.2 Banded Siltstone Unit

The contact between Banded Siltstone and Black Argillite was not observed, however, Bending, 1984, reports that the Siltstone overlies the Argillite and that the Siltstone has variable thickness of approximately 400 meters.



GEOLOGY AND MINERAL DEPOSITS OF THE SNIPPAKER AREA

NTS 104B/6E, 104B/7W, 104B/10W, 104B/11E

GEOLOGY BY
D.J. ALLDRICK, J.M. BRITTON, M.E. MACLEAN, K.D. HANCOCK, B.A. FLETCHER AND S.N. HIEBERT

SCALE 1:50 000

CONTOUR INTERVAL 100 FEET

MAGNETIC DECLINATION (1982) 27° EAST

LEGEND

GOSSANOUS ALTERATION ZONES

Pyrite ± quartz ± sericite ± carbonate ± clay; locally foliated to schistose

INTRUSIVE ROCKS

TERTIARY

10 *POST-TECTONIC DYKES (Narrow, not shown)*

- 10a *Lamprophyre, andesite, diabase*
- 10b *Leucogranite: holofelsic, quartz-rich, fine to coarse-grained*
- 10c *Hoodoo dykes: basaltic dykes related to Quaternary extrusives*

9 *COAST PLUTONIC COMPLEX: Medium to coarse-grained biotite granite; biotite ± hornblende granodiorite; minor quartz diorite; locally foliated along margins*

JURASSIC

8 *TEXAS CREEK PLUTONIC SUITE: Fine to coarse-grained, quartz diorite, monzodiorite, quartz monzonite; syn to post-volcanic intrusions. Porphyritic to phaneritic textured; possibly hypabyssal equivalents of extrusive rocks*

- 8a *Lehto Batholith: coarse K-feldspar ± hornblende porphyritic monzodiorite; equigranular monzonite and quartz diorite*
- 8b *Bronson Stock: coarse K-feldspar porphyry hornblende monzodiorite to monzonite*
- 8c *Red Bluff Stock: coarse K-feldspar porphyry hornblende monzodiorite to monzonite*
- 8d *Iskut Stock: coarse K-feldspar porphyry hornblende monzodiorite to monzonite*
- 8e *Gregor Stock: coarse K-feldspar porphyry hornblende monzodiorite to monzonite*
- 8f *Isolated K-feldspar-porphyry dykes and sills (Narrow, not shown)*
- 8g *Felsite: (Age unknown) hypabyssal sills, stocks and related dyke swarms; leucocratic to holofelsic; fine-grained feldspar ± quartz phenocrysts set in an aphanitic groundmass*

TRIASSIC

7 *STIKINE PLUTONIC SUITE: Foliated to massive, fine to medium-grained hornblende-biotite quartz diorite*

- 7a *Mount Verrett Stock: medium to dark grey-green, fine-grained, plagioclase phyric diorite; extensively recrystallized*
- 7b *Jekill River Stocks: fine to medium-grained hornblende diorite; variably recrystallized*
- 7c *Synvolcanic sills and dykes; melanocratic, fine-grained; recrystallized*

VOLCANIC AND SEDIMENTARY ROCKS

(Note: No stratigraphic order is implied within sequences.)

QUATERNARY

RECENT

6 *UNCONSOLIDATED SEDIMENTS: Alluvium, glaciofluvial deposits, landslide debris, moraine*

PLEISTOCENE TO RECENT

5 *BASALT FLOWS AND TEPHRA: Dark grey to black, olivine and plagioclase phyric basalt flows and tephra*

VOLCANIC AND SEDIMENTARY ROCKS (continued)

JURASSIC

HAZELTON GROUP

MIDDLE JURASSIC

4 *SILTSTONE SEQUENCE (Salmon River Formation): Dark grey, well-bedded siltstone; minor sandstone*

LOWER JURASSIC

3 *UPPER VOLCANOSEDIMENTARY SEQUENCE: Heterogeneous, grey, green, rarely purple or maroon, massive to bedded pyroclastic and sedimentary rocks. Green and grey, intermediate to mafic volcaniclastics and flows intercalated with fine-grained immature sedimentary rocks. Locally thick conglomerates. Limestone rare or absent.*

Includes equivalents of Unuk River, Betty Creek and Mount Dilworth formations. In the Snippaker-Johnny Mountain area an upper package of felsic volcanics (consisting of units 3d, 3b, 3g and 3dh) is probably correlative with the combined Betty Creek and Mount Dilworth formations of the Sulphurets map area (see Hancock, 1990, and MacLean, 1990).

- 3v *Undifferentiated, mainly volcanic rocks*
- 3a *Green and grey, massive to poorly bedded andesite; ash tuff to tuff breccia; feldspar ± hornblende phyric*
- 3b *Dark green, basaltic-andesite tuffs and flows*
- 3d *Grey, green and purple dacitic tuff, lapilli tuff, crystal and lithic tuff; massive to well bedded. feldspar phyric; locally welded*
- 3g *Light grey and green dacite crystal and lapilli tuffs with minor hematitic stringers (Snippaker-Inel Ridge)*
- 3k *K-feldspar-plagioclase ± hornblende porphyritic andesitic to dacitic tuffs and flows ("Premier Porphyry")*
- 3s *Undifferentiated, mainly sedimentary rocks*
- 3t *Black, thinly bedded siltstone (turbidite), shale ,argillite, mudstone*
- 3h *Maroon, hematitic mudstone with calcareous concretions*
- 3w *Grey, brown and green tuffaceous wacke; variably bedded*
- 3c *Conglomerate and volcanic conglomerate; polymictic, locally orange-weathering*

TRIASSIC

STUHINI GROUP

UPPER TRIASSIC

2 *LOWER VOLCANOSEDIMENTARY SEQUENCE: Medium to dark green, mafic to intermediate volcanic and volcaniclastic rocks and thick sequences of brown, black and grey, immature sedimentary rocks; minor limestone as beds, lenses and clasts*

- 2v *Undifferentiated, mainly volcanic rocks*
- 2a *Grey and green, plagioclase ± hornblende ± pyroxene phyric andesite*
- 2p *Grey and green, pyroxene ± feldspar porphyritic andesite; rare pillow breccia*
- 2m *Melanocratic, pyroxene-rich basalt and andesite; tuff, tuff-breccia, debris flows; with intercalated pyroxene-bearing wacke and conglomerate*
- 2y *Light grey-green, waxy, dacitic pyroxene-plagioclase crystal and lapilli tuffs (Winslow Ridge)*
- 2i *Aphyric andesitic tuffs and lapilli tuffs (Winslow Ridge)*
- 2f *Light weathering, felsic tuffs and breccias*
- 2s *Undifferentiated, mainly sedimentary rocks*
- 2t *Black, thinly bedded siltstone and fine sandstone (turbidite); shale; argillite*
- 2w *Grey, brown and green tuffaceous wacke; variably bedded; locally calcareous*
- 2c *Conglomerate and volcanic conglomerate; polymictic*
- 2l *Grey, variably bedded limestone (mostly recrystallized); locally silty or sandy*

PALEOZOIC

STIKINE ASSEMBLAGE

1 *DEFORMED METAMORPHIC ROCKS (May include some Triassic strata): Phyllite; fine-grained schist and gneiss. Metamorphosed tuffaceous siltstone and sandstone with interbeds of marble and quartzite. Metamorphosed volcanic rocks are distinguished by relict volcaniclastic textures.*

- 1s *Mica-rich schist and phyllite; probable sedimentary protolith*
- 1l *Marble (recrystallized limestone); massive to thinly layered*
- 1q *White, fine-grained quartzite*
- 1g *Grey, fine-grained, biotite-rich quartzofeldspathic gneiss*
- 1m *Fine-grained, migmatitic amphibolite and quartzofeldspathic gneiss (xenolith in Coast Plutonic Complex)*

The Banded Siltstone consists of 1-5 cm light grey, coarser grained and medium green, darker coloured, finer grained bands. The weathering colour varies from light buff green to bright red gossanous with the introduction of only 1-2% disseminated pyrite. The Banded Siltstone is hard, competent and relatively unfoliated.

7.3 Green Volcanic Unit

The Green Volcanic unit is in general a massive medium green chloritic basalt, however, one outcrop of volcaniclastic agglomerate was observed east of the lake. The agglomerate consists of coarse grained dioritic textured rounded to subangular, 3-30 cm, clasts in fine light green chloritic matrix. The massive basalt has a distinctive green colour, however, frequently 1-2% disseminated pyrite causes a rusty brown weathered colour. Several bright red gossanous areas are caused by relatively unaltered Green Volcanic with minor disseminated pyrite.

Rhyolite tuffs, flows and breccias as well as diverse breccias are reported by Bending to occur elsewhere within the Green Volcanic unit, however, these lithologies were not observed during the 1988 program.

7.4 Granodiorite and Diorite Intrusives

Large areas of the Pelican property is underlain by medium grained, light green granodiorite or diorite. These intrusive are commonly massive, unfoliated and weakly silicified. At the north end of the Lake ridge brittle fractures in a siliceous diorite are filled by irregular narrow quartz veinlets.

7.5 Orthoclase Porphyry Intrusive

The name orthoclase porphyry is applied to a distinctive white feldspar porphyritic rock probably granodiorite or quartz monzonite in composition. Although the name orthoclase porphyry is used it has not been determined that the feldspar phenocrysts are K-spars. Feldspar phenocrysts 1-3 cm make up 5-10% of the rock in a grey-green groundmass. The unaltered rock commonly weathers white. Strong epidote alteration is common and these rocks contain epidote pseudomorphs after feldspar phenocrysts. Commonly the orthoclase porphyry outcrops as plugs less than 50 metres. Such plugs are fractured and pyritized where they occur near shearing. In the Lake zone area, orthoclase porphyry is strongly fractured and predates the shearing. The intrusion of the orthoclase porphyry plug on the east edge of the Lake zone ridge, at the NG-1 showing, may have resulted in abundant flat shearing n the adjacent Banded Siltstone.

7.6 Structure

Mapping by Lonestar (Bending, 1984) fonnd that the sequence of volcanic and sedimentary rocks is gently to intensely folded and cut by significant faults. The most prominent shear directions were north-northwest (150°) and east-northeast (070°). Bending notes that most granodiorite and orthoclase porphyry dykes are oriented parallel to one of these regional fracture patterns.

Dominant fracture patterns on the Pelican property, mapped in the 1988 program, are in order of abundance 150° to 120°, 000° to 020° and 060°. Two strong north-south faults cut the stratigraphy, one on the eastern edge of the area mapped and a second zone adjacent to the Lake glacier.

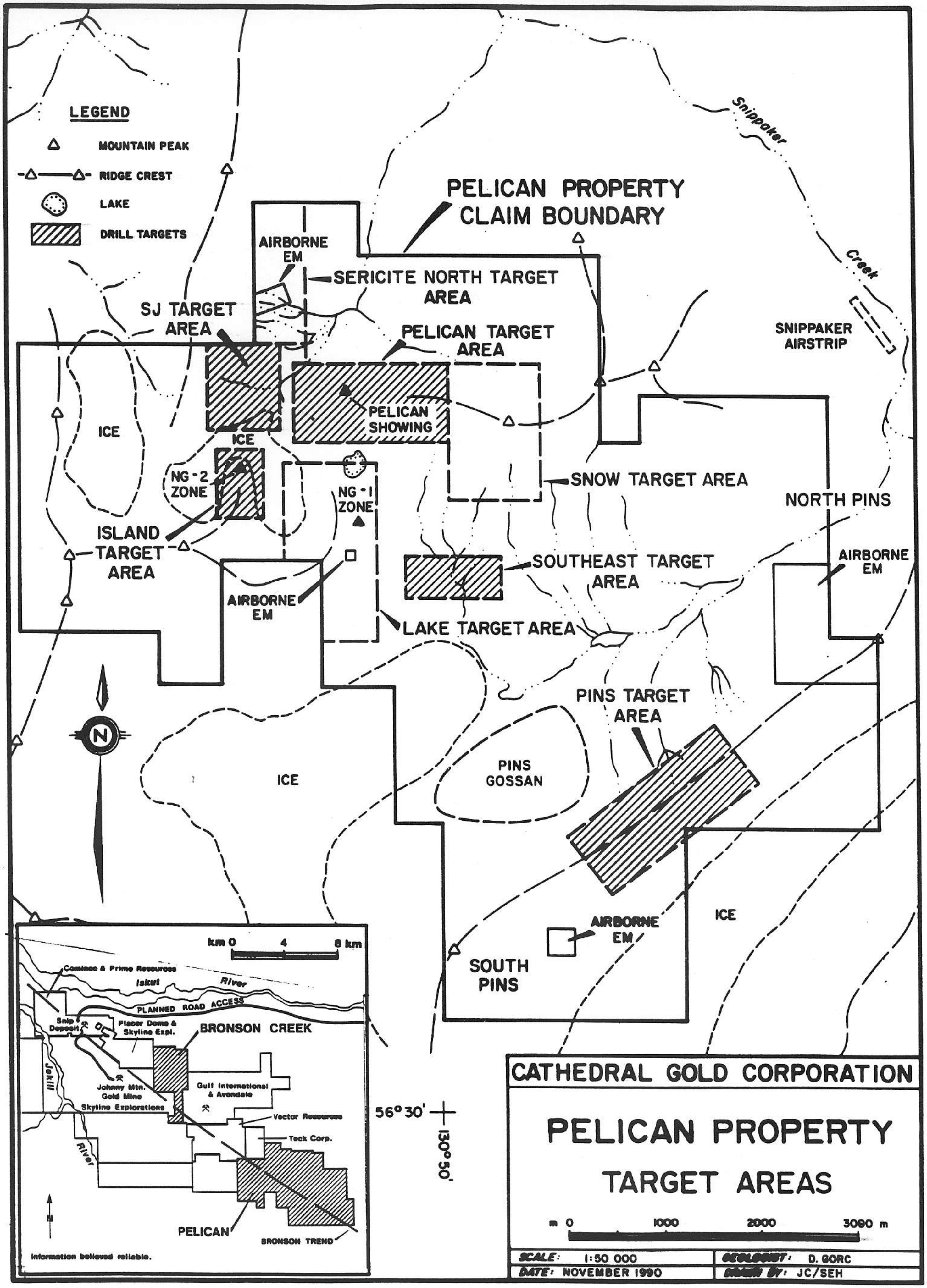
8.0 EXPLORATION TARGETS

8.1 SJ Zone

Previous soil sampling by Western Canadian (1987) outlined a 400m x 400m area which returned greater than 50 ppb Au including a high of 650 ppb Au. Results for Cu, Ag and Zn also included anomalous values although more sporadic than that of gold.

Additional detailed sampling was completed by Cathedral Gold Corporation in 1990 within the above 1987 anomaly to more accurately delineate the source of anomalous gold.

Gold analyses returned in dictate a sharp upper cutoff to the anomaly striking NW-SE. This cutoff is located near a strong NW-SE shear mapped in 1990 suggesting that the source of anomalous gold is located along the shear. Soil samples below the shear returned greater than 250 ppb Au with some values as high as 2,270 ppb Au. Immediately adjacent to the shear gold values were greater than 500 ppb Au. Lead, arsenic and silver values indicate coincident although less prononnced anomalies. It is interesting to note that the above


LEGEND
MOUNTAIN PEAK
RIDGE CREST
LAKE
DRILL TARGETS
PELICAN PROPERTY
CLAIM BOUNDARY
Snippaker
Creek
SNIPPAKER
AIRSTRIP
AIRBORNE
EM
SERICITE NORTH TARGET
AREA
SJ TARGET
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PELICAN TARGET
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SNOW TARGET AREA
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PLANNED ROAD ACCESS
Snip Deposit
Placer Dome & Skyline Expl.
BRONSON CREEK
Jekill
Johnny Mtn. Gold Mine
Skyline Explorations
Gulf International & Avondale
Vector Resources
Teck Corp.
River
PELICAN
BRONSON TREND
Information believed reliable.
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130° 50'
CATHEDRAL GOLD CORPORATION
PELICAN PROPERTY
TARGET AREAS
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SCALE: 1:50 000
DATE: NOVEMBER 1990
GEOLOGIST: D. GORC
DRAWN BY: JC/SEH

NW-SE trend also marks the edge of a copper anomaly but instead of higher values occurring below the trend (towards the east) as with gold, copper values increase above the trend to the west.

Two lines of a max-min electromagnetic indicated a weak conductor coincident with the shear and soil anomaly. Some galena-pyrite mineralization was discovered along the shear a sample of which returned 6,910 ppb Au.

In 1991 the grid area will be expanded and additional soil, VLF and max-min electromagnetic surveys completed to extend the SJ Zone. Trenching and diamond drilling are planned to test the zone.

8.2 Southeast

Soil sampling by Lonestar (1983) and Western Canadian (1987) sporadic anomalous gold values in the Southeast area. In 1988 Cathedral Gold sampled a quartz-pyrite vein which returned 6 gr/tonne gold. In 1990 a grid was emplaced and soil, VLF electromagnetic and magnetometer surveys completed.

The VLF survey traced several conductors one of which is near the 6 gr/tonne Au quartz-pyrite vein sampled in 1988. In 1990 further prospecting in this area located quartz-pyrite float samples of which returned up to 46,660 ppb Au. Elsewhere on the grid additional thin quartz pyrite veins were sampled which returned up to 3,360 ppb Au.

In 1991 more detailed VLF and max-min electromagnetic surveys are planned to more accurately locate the conductive structures. An IP survey may also be done depending on the results of the electromagnetic surveys. This work should define drill targets.

8.3 Pelican

Numerous small shears containing variable sphalerite, galena and pyrite occur in the Pelican area near a prominent cliff. Sampling of this mineralization has returned up to 9.0% Zn, 5% Pb, 39.3 ppm Ag and 1,796 ppb Au. There is minor outcrop and abundant talus below the cliff. Sampling of fine talus below the cliff has returned up to 1,225 ppb Au with numerous samples, returning greater than 250 ppb Au. In this talus area copper bearing float was discovered samples of which returned up to 6.4% Cu and 2,895 ppb Au. In 1990 VLF and max-min electromagnetic, magnetometer, IP and soil surveys were completed on the relatively flat portion of the Pelican area above the talus slope adjacent to the cliff.

The VLF-EM survey appears to show structures, or mineralized structures, and the correspondence with the IP is encouraging. The weak anomalies indicate both depth and poor conductivity as seen also with the horizontal loop survey. The magnetic responses associated with the IP tend to indicate the presence of pyrrhotite, as magnetite would be expected to produce stronger peaks than in the case. The IP responses were very high, although this can be at least in part explained by the background disseminated pyrite mineralization seen in the rocks.

Soil sampling returned several marginally anomalous gold values (>20 ppb Au) including a high of 172 ppb Au.

8.4 Additional Exploration Targets

A brief description of other exploration targets follow:

Snow

Numerous small gossans contain thin quartz-pyrite veins and pyrite-filled fractures. To date grab samples of these veins have returned up to 980 ppb Au. An IP survey was completed in 1990 which outlined anomalies but survey was very limited.

Sericite North

Soil sampling has returned several anomalous gold values (up to 650 ppb Au), a subsequent airborne electromagnetic survey outlined anomalies in this area.

Lake Target

Narrow quartz-pyrite veins have been discovered in this area. Soil sampling has returned sporadic anomalous gold values. In 1988 the NG-1 Showing, a pyritic shear, was discovered. Grab samples of the showing returned low values. On the nearby Nee (Linda) property samples of narrow arsenopyrite veins have returned up to 0.797 oz/t Au.

The 1989 airborne geophysical survey indicated a strong (>30 moh) conductor in this area. Follow-up in 1990 led to the discovery of a pyritic basaltic dyke samples of which returned up to 2,240 ppb Au.

Pins

Several targets occur on the Pins Ridge which is located in the eastern portion of the property. In one area there are 0.3 to 2.0 metre wide sphalerite-galena vein samples of which have returned 1-2% Pb, 2-3% Zn, 5-10 ppm Ag and less than 100 ppm Au.

On the North Pins Glacier there is a 300m long float train of mineralized sphalerite-galena mineralized boulders up to 2 metres across. Samples of this float have returned up to 5.87% Zn, 1.92% Pb, 16.5 oz/ton Ag, 0.028 oz/t Au.

The 1989 airborne geophysical outlined two separate anomalous areas on the Pins Ridge. Reconnaissance VLF electromagnetic surveys completed in 1990 on one of the anomalous areas outlined conductors.

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