672548

EXPLORATION & UPDATE REPORT

ON THE

COLORADO MINERAL CLAIMS

HEDLEY GOLD CAMP

SOUTHERN BRITISH COLUMBIA

NTS 82 E 5

by

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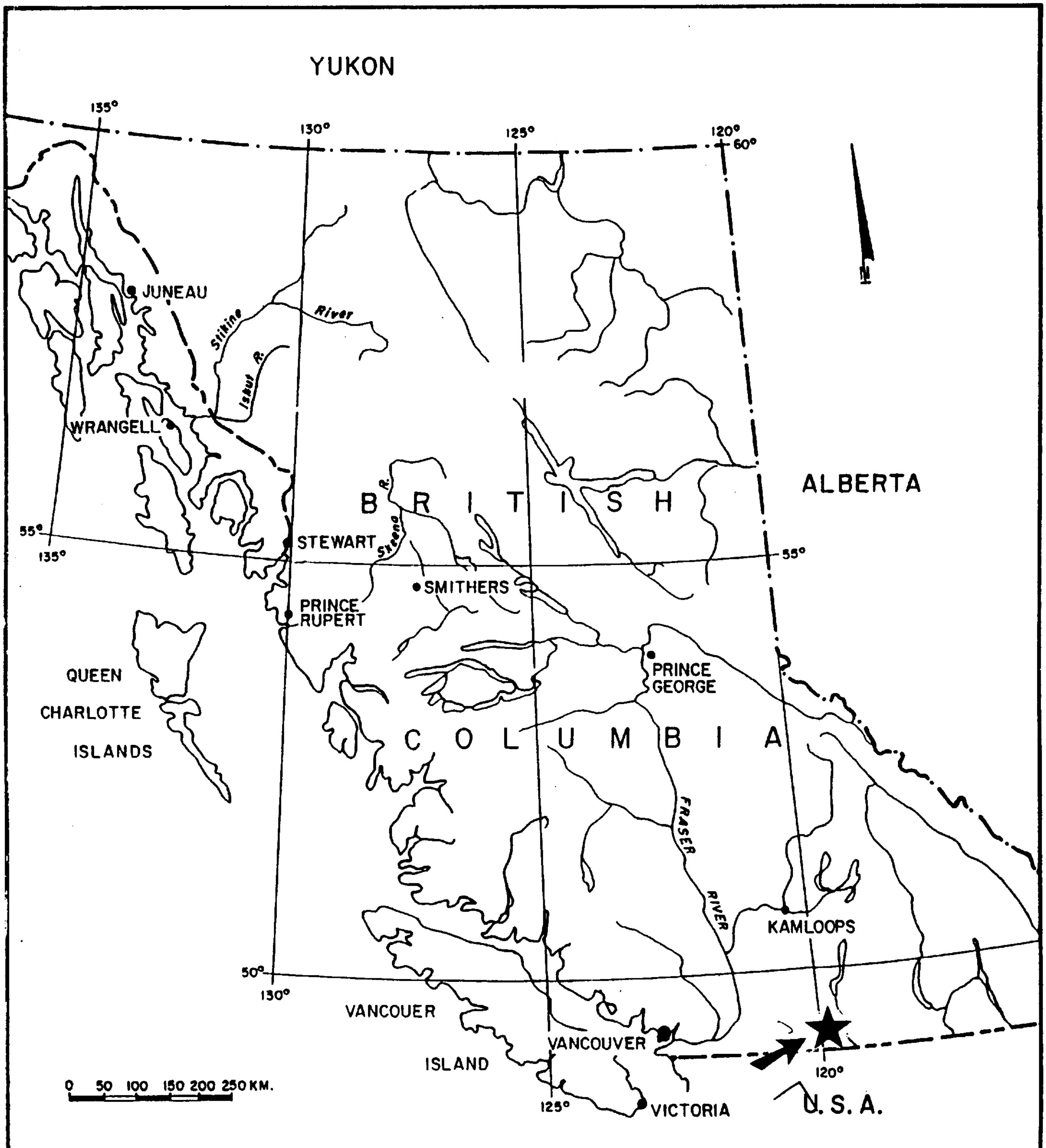
INTRODUCTION

The objective of the Hedley Gold Camp staking project was to define and acquire areas in Southwestern British Columbia which display excellent potential for hosting precious metal deposits. This search was geared to the discovery of deposits similar to Hedley Phoenix, Greyhound, Mother Lode, Oro-Denoro, Marshall. Such deposits consist of P.M.E. - Precious Metal Enriched, skarn deposit.

The 1990 winter research program led to the selection of the prospective Hedley - Nickel Plate Mountain area and subsequent staking of a total of 88 units in 5 claim blocks by early spring of 1990.

The Hedley Project is continuing and it is likely that additional attractive areas will be defined and acquired.

The following information will help to determine the exploration targets on Colorado claims, and, as well, may help to determine the exact number of dollars (Canadian funds) required to carry out mineral exploration projects around Hedley Gold Camp area - Okanagan County, Southern British Columbia, in the summer of 1990.



PROPERTY LOCATION MAP

Figure 1

Locations & Access, Physiography & Climate Description

The Colorado mineral claims are located approximately 32 km West of the town of Penticton, British Columbia, in the Osoyoos mining divisions. The reference mineral claim maps of the B.C. Department of Mines are 82 E/8W and 92H/8E. The geological reference is 49° 27' North and 120° 10' West. Altitude ranges from 1,560 metres to 1800 metres. The terrain is gently rolling and is heavily treed with second growth timber. Good road access to and through the claims is from the Mascot Gold Mines and Apex Ski Resort area. Central part of Colorado - 1, 2, 3 claims is about eight miles distance from Apex Ski Resort. Climatic conditions are typical for southern interior, with hot summers and cold winters. Precipitation is light, being 10 - 15 inches per year. Exploration could be carried out during most of the year, except in fire-peril and extreme snowfall periods, provided, of course, that suitable transportation equipment is used. The claims area is covered mainly bench land, wooded, with jackpine and related coniferous trees. Elevations range from 5600 to 6000 feet (1,550 to 1900 metres). The reference land maps are Princeton 92HSE and Penticton 82ESW.

Property Status

The Coloradd Group Claims are registered to the author of this report, Gregory W. Batycki, of Richmond, British Columbia.

The properties are shown on Figure #2, and the relevant tenure data is presented below:

Claim Name	Record #	# of Units	Record Date	Expiry Date
Colorado - 1	3359	18	March 26, 1990	March 20, 1991
Colorado - 2	3360	18	March 26, 1990	March 21, 1991
Colorado - 3	3361	18	March 26, 1990	March 21, 1991
Colorado - 4	3362	16	March 26, 1990	March 21, 1991
Colorado - 5	3363	18	March 26, 1990	March 20, 1991
	Total:	88 Units		

In order to keep all the properties in good standing, annual assessment requirements in the amount of $100.00 per unit are required for the first three years. After three years, the annual assessment requirements are $200.00 per unit.

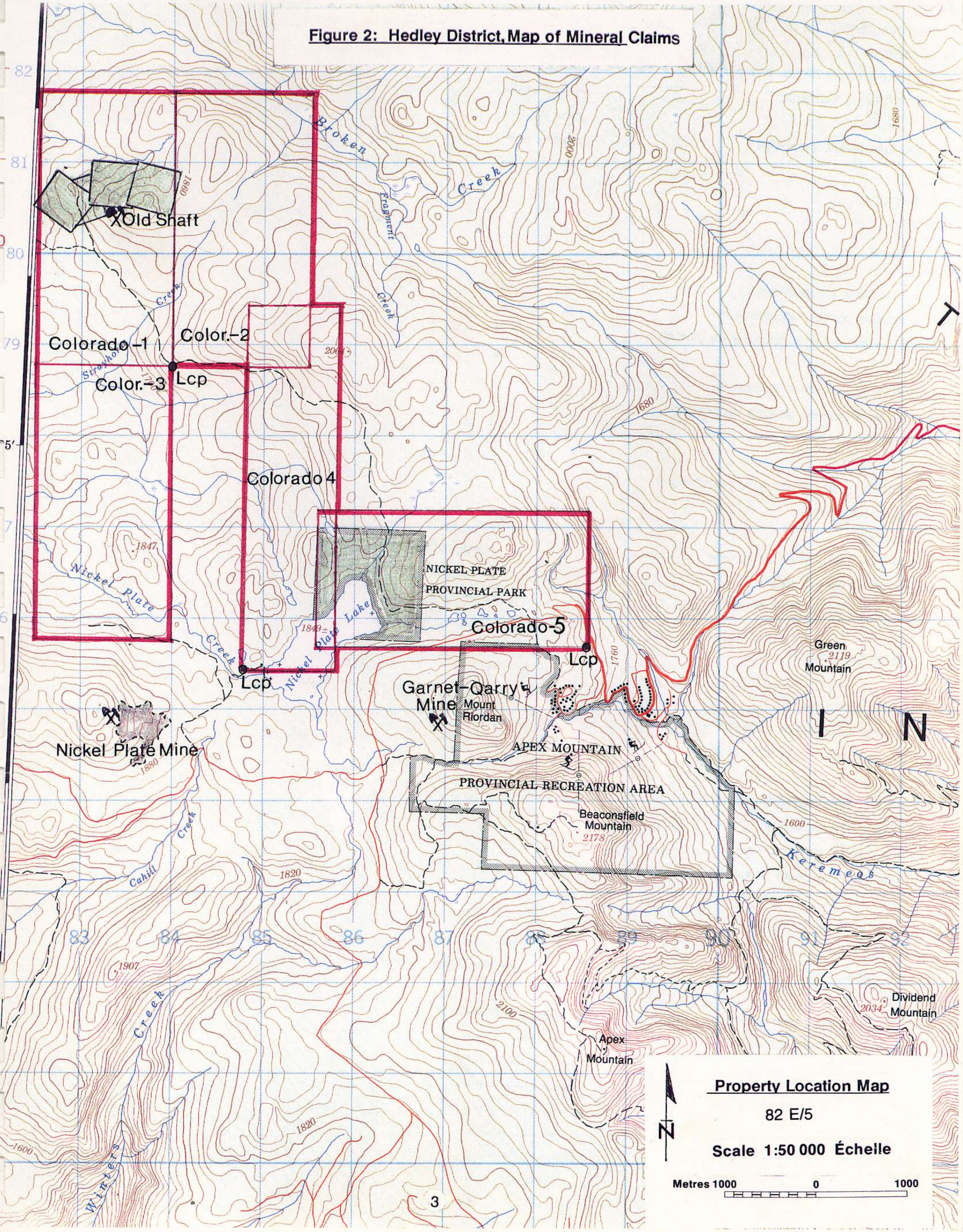


Figure 2: Hedley District, Map of Mineral Claims

GEOLOGY

The following geology capsule was based on 1989 Geology map, Penticton, B.C., by the Geological Survey of Canada, Map # 1736A Scale 1:250,000, as well as on various assessment report data related to the Hedley Gold Camp area (BCDM Min-File 82 E/8W). The property is underlain mostly by Trassic-Nicola group, consisting of metasedimentary and metavolcanic rocks, greenstones, tuffs, quartzite, limestone, argillite, schists and skarn derivatives. Intrusives are cretaceous Nelson plutonic rock complexes, i.e. granite, granodiorite, quartz, diorite, quartz monzonite and dyenite. Generally, much of the Colorado 1, 2, 3 claims (central part) is underlain by intrusives of the Nelson plutonics, which, in the northern part of the property, envelope a 1.5 km wide band of rocks of the Nicola group that is striking easterly. Both groups are host to the Hedley Mining Camp with the Nicola being regarded as the more favourable. According to previous exploration data (Assessment Rep. # 13,879 - BCDM Min-File 82E5W) the probably area of gold mineralization occurs on the adjacent four Crown Grant claims and the nearby Nickel Plate Mountain. The Golden Zone (now the Central Part of Colorado - 1 claim) occurs along the southern contact of Nicola volcanic and sediments. This area consists of approx. 365 m long quart vein striking easterly and occurring in both Nicola sediments and Nelson fine-grained granite. The mineralization within the quartz veining consists of pyrite, arsenopyrite, sphalerite and chalcopyrite. Some values in gold and silver are noted. Bands of metamorphosed limestone, calcareous and argillites associated with basic intrusives are mineralized with gold-bearing arsenopyrite in Hedley Mascot Gold Mine and Nickel Plate Mine. Further discussion and details about precious metal-enriched skarn deposit of Nickel Plate & Hedley Mascot Mines will be described in the next chapter of this report as an exploration history. The similarity of geological features between Hedley Camp and Colorado properties may reflect in future aggressive exploration work on Colorado 1 - 5 mineral claims.

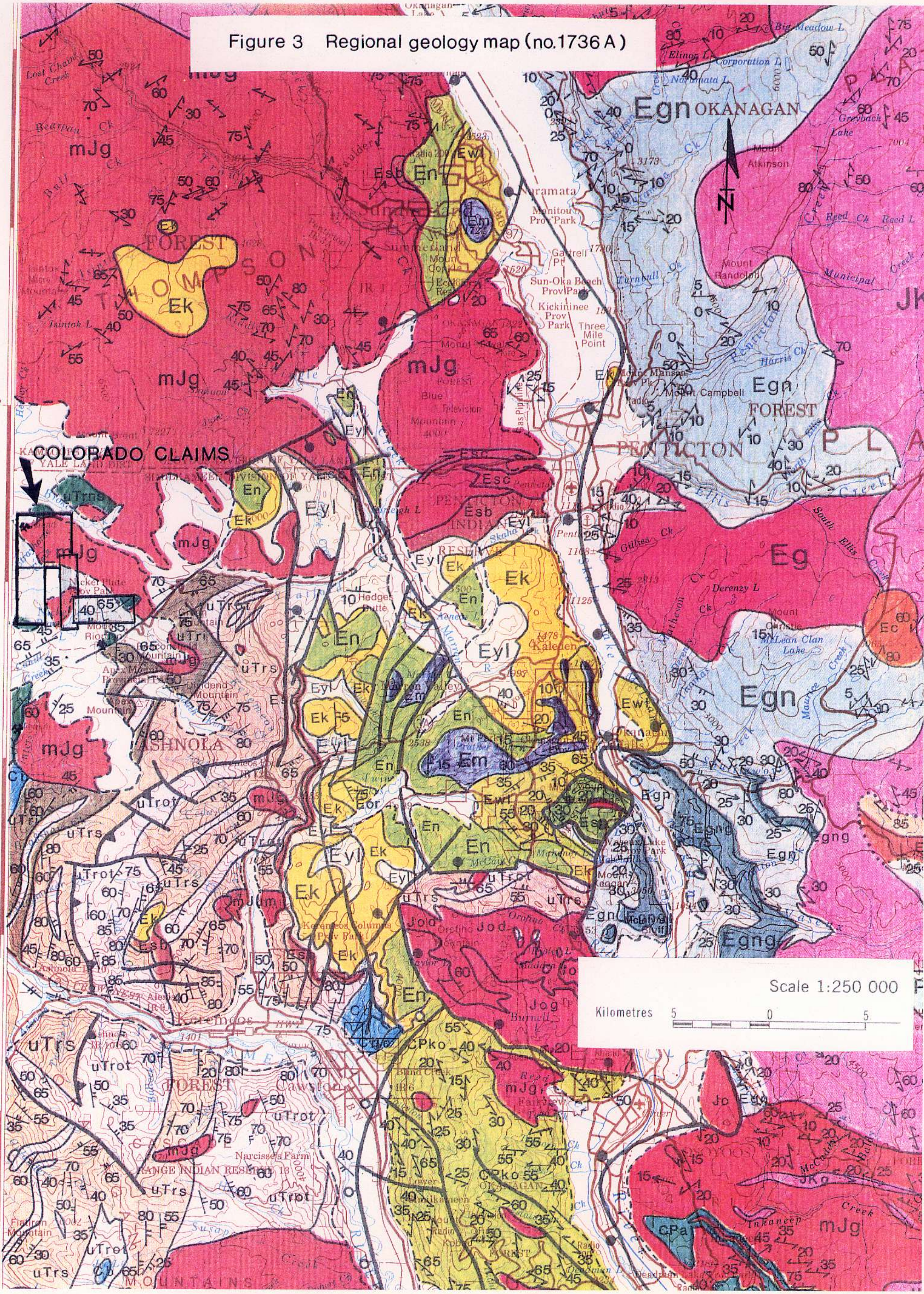


Figure 3 Regional geology map (no.1736 A)

Figure 3: Regional Geology, Map and Legend

CENOZOIC

QUATERNARY

PLEISTOCENE

Symbol	Description
QPl	*LAMBLY CREEK BASALT: rusty weathering black basalt, with hornblende, biotite and pyroxene phenocrysts to 5 mm in an aphanitic black matrix: occurs as columnar jointed flows, a few metres thick above Mesozoic strata, K-Ar age of 0.762 Ma determined by Church, 1981*

TERTIARY

MIOCENE

Symbol	Description
mTv	*PLATEAU BASALT: andesite and basalt with augite and hornblende phenocrysts to 5 mm in a black aphanitic matrix: forms massive flows to 20 m thick: locally underlain by poorly sorted boulder conglomerate and pebbly sandstone: K-Ar cooling ages of 2.9 and 14.9 Ma: includes Daves Creek Basalt (14.9 Ma) and Carrot Mountain alkali basalt (11.8 Ma)*

EOCENE

Symbol	Description
Eor	*OLALLA RHYOLITE: rhyolite breccia, massive obsidian and related dykes*
Ema	MARRON GROUP *Undifferentiated andesite, dacite and trachyte of the Marron Group: may include minor epiclastic rocks equivalent to* Ewl *and* Esb.
Es	*SKAHA FORMATION: brecciated greenstone (Old Tom Formation), brecciated chert (Shoemaker Formation,* Es1*), and brecciated granite (Oliver Granite,* Es2*) resting as fault slices hundreds of metres across, above the White Lake Formation on gently dipping faults: includes undifferentiated polymictic fanglomerate and arkose resting unconformably on these brecciated rocks: near Rock Creek includes heterogeneous epiclastic breccia (Klondike Mountain Formation)*
Ewl	*WHITE LAKE FORMATION: massive to thick bedded volcanic breccia and pyroclastic rocks with clasts of Trepanier Rhyolite and Kitley Lake and Yellow Lake formations: includes interbedded medium and thin beds of brown sandstone and clayey siltstone, minor carbonaceous seams: includes minor trachyte and andesite. Palynomorphs from Powers Creek indicate a Middle Eocene or older age*
Em	*MARAMA FORMATION: medium brownish grey, flow banded dacite with subhedral plagioclase, hornblende and biotite phenocrysts to 5 mm in an aphanitic ground: forms the top of Black Knight Mountain, Mount Boucherie, Aeneas Butte, Mount Law*
En	*MARAMA FORMATION-NIMPIT LAKE MEMBER: recessive, reddish weathering, amygdaloidal, trachyandesite with minor intercalated pyroclastic deposits: includes undifferentiated intrusive equivalents*
Ek	*KITLEY LAKE FORMATION: massive, yellowish to buff, trachyte to trachyandesite; plagioclase and biotite glomerophenocrysts to 3 cm (10 % of the rock) in a finely crystalline groundmass: includes ash flow tuff and minor mudstone: includes undifferentiated intrusive equivalents. Church determined K-Ar ages between 52.9 (biotite) and 44.2 Ma (whole-rocks)*
Eyl	*YELLOW LAKE FORMATION: massive to thick, tabular flows of buff to light tan pyroxene-rich, mafic phonolite locally with rhomb anorthoclase phenocrysts and primary analcite, abundant zeolite fills cracks and amygdules: includes undifferentiated intrusive equivalents*
Etr	*TREPANIER RHYOLITE: white and locally pink, greenish or light grey, flow banded rhyolite with subhedral quartz, hornblende and biotite phenocrysts to 3 mm in an aphanitic matrix. K-Ar ages of 47.7 and 46 ± 2 Ma were determined by Church (1981) west of Trepanier*
Esb	*SPRINGBROOK FORMATION: poorly sorted, massive to thick bedded, immature, coarse boulder and pebble conglomerate. Clasts to 50 cm are rounded, but of low sphericity and are locally derived (chert, greenstone, granite, and other pre-Eocene rocks with fewer Marron Group clasts, mainly Yellow Lake and Kitley formations). Near Rock Creek this unit consists of white to light grey, medium bedded, feldspathic sandstone, siltstone and shale with coaly partings, named the Kettle River Formation*

Ec	*CORYELL SYENITE: alkalic to calc-alkalic, high level, pink and buff syenite and quartz monzonite and trachytic pink feldspar porphyry dykes: plutonic equivalent of the Marron Group especially the Kitley Lake Formation: gradational to pulaskite and to Shingle Creek Porphyry: probably includes* JKg *undifferentiated in East half of map area: poorly dated*
Esc	*SHINGLE CREEK PORPHYRY: massive, buff and pink, fine grained porphyritic granite and felsite with euhedral phenocrysts of K-feldspar to 10 cm across: occurs as dykes under, and feeders to, the volcanic rocks of the Marron Group, especially the Kitley Lake Formation: a shallow level equivalent of the Coryell Syenite: includes rhomb porphyries and related rocks*
Egn	*"OKANAGAN GNEISS": massive, medium grey weathering, resistant hornblende-biotite granodiorite orthogneiss: strongly foliated: grades to mylonitic gneiss, mylonite and blastomylonite: minor amphibolite and paragneiss- minor schist: minor pegmatite and aplite: strongly chloritized along Okanagan Fault: grades eastward (and up the structural succession) to* JKg, mJg *and* Pm *units of which it is presumed as to the sheared equivalent: probably also includes sheared equivalents of the Anarchist Group: presumed sheared and thermally overprinted during the Eocene:* Egn1 *- quartz chlorite microbreccia and related altered rocks close to the Okanagan Fault*
Egng	*Massive, light grey weathering, biotite granite gneiss and granodiorite gneiss with pegmatite veins and sills*
Eg	*Hornblende granodiorite: massive, resistant, grey weathering, coarse grained, equigranular mesocratic with euhedral fresh black hornblende crystals; locally weakly foliated: age poorly constrained*

MESOZOIC

CRETACEOUS AND/OR JURASSIC

JKg	*OKANAGAN BATHOLITH: massive, light grey weathering, medium- to coarse-grained, equigranular to porphyritic, unfoliated to weakly foliated, fresh biotite granodiorite and granite: includes undifferentiated granodiorite of the Nelson suite: age poorly constrained*
Jo	*OLIVER PLUTON: massive, unfoliated, medium grained porphyritic biotite granite with weakly foliated, equigranular hornblende granodiorite along the southern border: includes* Jod, *biotite-hornblende diorite agmatite and* Jog, *massive garnet-muscovite granite; age poorly constrained*
Jos	*OSOYOOS GRANODIORITE: recessive, pasty greenish, hornblende granodiorite: pervasively saussuritized, chloritized, sheared and fractured; age unknown*

MIDDLE JURASSIC

mJg	*NELSON PLUTONIC ROCKS: massive, generally moderately foliated, medium grey weathering, medium- to coarse-grained, equigranular, hornblende-biotite granodiorite, quartz diorite and granite: includes undifferentiated biotite granite of the Valhalla suite: age poorly constrained*
mJum	*OLALLA PYROXENITE: black, fresh, massive, medium- to coarse-grained pyroxenite, hornblendite, serpentinite and peridotite*
Jgd	*KRUGER SYENITE: massive, medium grained, biotite hornblende granodiorite with a marginal zone of megacrystic, mesocratic coarse grained hornblende syenite*

MESOZOIC

UPPER TRIASSIC AND/OR LOWER JURASSIC

ROSSLAND AND NICOLA GROUPS

uTrv *Massive greenstone, andesite, latite, agglomerate and volcanic breccia of greenstone fragments locally with limestone clasts, minor greywacke: minor interbedded limestone: includes lenses of silicified equivalents: may include undifferentiated Lower Jurassic volcanics of similar lithology*

uTrns *Rusty weathering, black pyritic slate, phyllite and argillite, locally silicified or "cherty": minor quartzite:minor interbedded argillaceous limestone: includes undifferentiated greenstone lenses*

PALEOZOIC TO MESOZOIC

ORDOVICIAN TO UPPER TRIASSIC

uTrot *OLD TOM FORMATION: massive andesitic greenstone and greenstone breccia: locally includes large, extensive, strongly silicified equivalents in irregular bodies and lenses with gradational boundaries, which are undifferentiated: includes a few small lenses of undifferentiated limestone: minor diorite: unit is poorly understood: known to contain Ordovician, Carboniferous and Triassic fossils- undifferentiated; relations to Shoemaker Formation are gradational*

uTrs *SHOEMAKER FORMATION: massive, greyish green silicified volcanic rocks, including "cherty" tuff and breccia: includes undifferentiated massive greenstone: may include chert: generally fractured and broken by irregular spaced cleavage: may be largely the silicified equivalent of the Old Tom Formation*

uTri *INDEPENDENCE FORMATION: massive greenstone- volcanic breccia with greenstone fragments- includes large undifferentiated silicified lenses: includes lenses of undifferentiated limestone: resembles the Old Tom and Shoemaker formations*

MESOZOIC

MIDDLE AND LOWER TRIASSIC (?)

Trbs *BROOKLYN LIMESTONE AND "SHARPSTONE CONGLOMERATE": white weathering, thick bedded, light grey limestone commonly with rounded to angular detrital "chert" grains: minor greenish siltstone and massive, resistant, breccia with angular, roughly equant, clasts to 10 cm across, of "chert" and greenstone and locally limestone in a matrix of coarse sand and grit of the same material: grades to "chert" sandstone and "chert" grit by decrease in grain size: minor green and black argillite, partly a fine grained tuff: grains and matrix strongly silicified: "chert" and andesitic greenstone fragments derived mainly from the Knob Hill Group; limestone mostly from the Brooklyn Formation, and locally from the Attwood Group: limestone contains Middle Triassic fossils*

PALEOZOIC

CARBONIFEROUS OR PERMIAN

CPk KNOB HILL GROUP: *massive "chert" (largely silicified greenstone), greenstone and amphibolite: minor limestone or marble: minor "sharpstone": age unknown*

CPat ATTWOOD GROUP: *light grey limestone with minor interbedded chert: contains Carboniferous fossils*

CARBONIFEROUS

Cbc *BLIND CREEK FORMATION: medium bedded grey limestone and calcareous argillite; lacks penetrative fabrics, low greenschist facies metamorphism*

Cb *BARSLOW FORMATION: thin bedded, brown, silty slate and argillaceous siltstone: lacks penetrative fabrics, low greenschist facies metamorphism*

CARBONIFEROUS OR OLDER

CPa ANARCHIST GROUP: *dark grey weathering, recessive, amphibolite, greenstone, quartz-chlorite schist, quartz-biotite schist, minor serpentinized peridotite: "chert" breccia that resembles* Trbc *is locally included:* CPap- *peridotite and serpentinized equivalents:* CPaa- *amphibolite: age unknown*

CPko — KOBAU GROUP: *undivided amphibolite, greenschist, quartzite, mica schist, greenstone- minor marble: strongly foliated with penetrative flaser fabrics: age unknown*

ORDOVICIAN (?) TO DEVONIAN (?)

ODs — *Schist, thin bedded argillaceous limestone, slate and limestone includes metamorphosed equivalents mostly biotite-diopside-quartz skarn and marble: age unknown*

PROTEROZOIC AND PALEOZOIC

PROTEROZOIC (?) AND PALEOZOIC (?)

GRAND FORKS GNEISS

Pgfm — *Mylonitic biotite leucogranodiorite: Preto unit X*

Pgfo — *Medium crystalline, well foliated biotite hornblende granodiorite orthogneiss: Preto unit IX*

Pgfa — *Amphibolite, amphibolitic gneiss, minor marble: Preto unit IV*

Pgfs — *Coarsely crystalline garnet-biotite schist, interfoliated quartzite, minor marble, abundant pegmatite and leucogneiss: Preto unit III*

Pgfq — *Coarsely crystalline, thick layered quartzite, minor marble and pegmatite: Preto unit II*

Pgfg — *Sillimanite-biotite-quartz paragneiss, amphibolite and amphibolitic gneiss, marble, biotite schist and gneiss, garnet-biotite-quartz schist, micaceous quartzite: includes minor leuco-orthogneiss:Preto unit I*

Pm — *MONASHEE GNEISS: grey, massive, biotite granodiorite gneiss: gradational westward with* Egn*, but not overprinted by the Eocene event that affected the rocks nearer the Okanagan Fault: may be equivalent or related to* Pgf*: may include equivalents of* ODs*: age unknown*

Outcrop boundary. . . . .

Probable stratigraphic contact, location approximate. . . . .

Geological contact, relations unknown, possibly faulted. . . . .

Strike and dip of bedding. . . . .

Strike and dip of foliation. . . . .

Trend and plunge of lineation and minor folds. . . . .

Inferred fault, age and displacement unknown. . . . .

Inferred normal fault, age unknown, circle on downthrown side. . . . .

Inferred Eocene normal fault, circle on downthrown side. . . . .

Slide- inferred fault in metamorphosed rocks, roughly parallel to foliation. . . . .

EXPLORATION HISTORY

Mineral deposit in the Hedley Camp area

The Hedley Camp is situated approximately 40 km. south-east from Princeton, in southern British Columbia. Hedley Gold Camp is the largest and economically most important precious metal enriched skarn deposit in the Province of British Columbia. Hedley has had a long history of intermittent gold mining and between 1902 and 1955 approximately 51 million grams (1.8 million ounces) of gold) were won from at least four gold-bearing skarn deposits. However, contributions of more than 90% of the gold production in the area came from one very large deposit which was worked at the Hedley Mascot Mine and Nickel Plate Mines. In the Eastern part of the Hedley District, at Mount Riordan there is also a large Tungsten-Copper bearing skarn which contains some silver, but very low gold values. Recent work done on this area led to opening a Garnet-Quarry Open Pit Mine. However, most exploration interest in the Hedley Gold Camp has been revitalized by the recent re-opening of the Nickel Plate Mine by Mascot Gold Mines Ltd. (now Corona Corporation). As a near 2500 tonne per day open pit operation, the Nickel Plate and Hedley Mascot Mines were largely developed on a single, very large westerly dipping skarn-related gold deposit. Discovered in 1889, and mined in several underground operations until 1955, produced approx. 48 million (1.7 million ounces) of gold from 3.6 million tonnes of ore. Mining resumed in April 1987 and spurred exploration throughout the area. On November 18, 1987, Mascot Gold Mines Ltd. reported mineable reserves of 8.9 million tonnes grading 4.56 grams gold per tonne. In December 1988 Corona Corporation reported 8.25 million tonnes grading 3.02 grams per tonne at Nickel Plate Mine.

Colorado Properties – History of Previous Work

Colorado claims, particularly #1, 2 and 3, are staked in places of Nickel 1, Nickel 2, Gold zones group and Oro group, just immediately north of Hedley's biggest gold producer - Nickel Plate Open Pit Mine. Colorado - 1 surrounds four Crown Grants claims - so-called Golden Zone. The Golden Zone Crown Grants were first staked in 1900, during the ensuing ten years, considerable work was done, including sinking two shafts, drifting, trenching and the establishment of a 5-stamp mill. The properties were dormant until 1930, when additional development work was done from 1930 to 1937. The work included extending one of the shafts and further drifting. According to the 1930 Annual Report of B.C. Minister of Mines, shows following descriptions and very respective date of analysis of the samples, which were assayed at that time:

"1930: A sample from a vein 4 feet wide near the tunnel assayed gold 0.02 oz. to the ton, silver 10.8 oz. to the ton, zinc 3.9 per cent. A sample of dump ore taken from the 47 foot shaft assayed gold 0.12 oz. ta the ton, silver 0.80 oz. to the ton. An ore-dump sample from the main shaft assayed 0.76 oz. to the ton, silver 4.30 oz. to the ton. The last two samples carried pyrite, arsenopyrite and sphalerite. A sample of solid sulphides from a pile of selected material near the widest quartz carrying heavy pyrite and arsenopyrite returned gold 1.94 oz. per ton."

"1937 - A selected sample from the dump of the adit containing more sphalerite than pyrite - returned gold 0.02 oz. per ton, silver 8 oz. per ton. A grab sample from the dump containing pyrite and little chalcopyrite, returned gold trace, silver 1.2 oz. per ton."

It will be worth mentioning that various reports from this area have described the deposit which has in previous years assayed gold as high as 1.9 oz/ton. Accessory mineralization consists of arsenopyrite, pyrite sphalerite and chalcopyrite. According to the 1985 assessment report #15072, one of the two shafts (former gold mine) is located outside the boundary of the Golden Zone Crown Grant lot #904S. This assumption was made after the initial survey during the 1985 summer exploration work. Preliminary excavation of the shaft indicated a support structure was necessary to prevent slumping of the walls. Approximately ten feet of the shaft was stabilized with at least eight feet of loose fill remaining to be excavated. The old shaft (former gold mine) remains now within the boundary of Colorado - 1 mineral claim. In addition, Colorado -1 and Colorado - 2 claims totally surround the Golden Zone Crown Grant area. Mentioned above one of the old mine's shaft is now on the grounds of Colorado - 1 mineral claim.

Based on previous data work (Assessment Reports No. 13,878, 11,687 and 15,072) very intensive field work was done within the district. However, most of it, geophysical surveys was the main part of the exploration program. The quality of reporting indicates a very professional manner and field procedures. All results from the geophysical survey show excellent potential of the properties. Recommendation of 3-phase program was made in one of the assessment reports - totalling $441,800 with first phase estimated at $96,800. That included diamond drilling, geochemical and geophysical extension work.

Targets were located on the properties, sufficient data work completed. Unfortunately, no further work past 1986 concerning those projects was found by the writer of this report. Quality reporting and positive results were one of a few reasons why this ground once came open, was re-staked, and put under future consideration by the author. In the chapter

"Recommendations", discussion of previous exploration results will be mentioned with more detailed objectives. In addition to this section of the report, it will be important to mention that all four Crown Grants claims are held by Midland Energy Corporation. In 1982 the property was optioned to Midland Energy Corporation which carried out geological, soil geochemistry, ULF-EM and I.P. surveys, followed by diamond drilling. Preliminary surface sampling obtained values to 0.568 oz. per tonne of gold, and 6.56 oz. per tonne of silver. Drill intersections as high as .414 oz. per ton of gold and 5.37 oz. per ton of silver - across 5 feet, were encountered at 60 - 65 feet.

All the above information was obtained from B.C.D.M. Min-File Data, as well as from assessment reports concerning the present areas of Colorado Group locations. The initial survey and research done by the author of this report revealed that the Colorado property is underlain by promising host rocks with gold, silver and base metal sulphide mineralization.

Also, only 5 km. to the south from the centre of Colorado - 1 Gold Prospect, occurs the gold ore bodies of Nickel Plate mine. Further investigation and reviewing of previous data work will provide an accurate evaluation of potential for mineralization as has been found in the rest of the Hedley Gold Camp.

Figure 4: Photographs of Nickel Plate Mine

Nickel Plate Mine, Open Pit, Hedley, B.C.
March, 1990

1990 FIELD PROGRAM

Recommendations

The geological formations surrounding Colorado claims provide a favourable complex for gold, silver, copper and other metallic minerals of commercial significance. Based on past data work, anomalous concentrations of gold, silver and arsenic occur in the central part of Colorado - 1 claim (previous Golden zone Fr. and Gold #1 claim). That is supported by very intensive geophysical survey, has located a northwest/southwest trending structure. Studying the airborn geophysics results shows some target areas throughout the property, most notably the VLF-EM highs. It is recommended to check these out, by VLF-EM surveying with magnetic surveying as well. Limited 50 km (proposed) geophysical grid should cover most of anomalous areas on Colorado - 1 and Colorado - 2 claims. That will correspond to recommendations made by previous explorers of the property; however, first stage of work done around the Colorado group will include re-locations of the mineral showings (Au - Ag) and re-locations of VLF - EM highs areas. It is not expected to find in place the old geophysical grid, therefore, a new one must be spread with detailed cutted - line surveying, to avoid making any mistakes on mapping work. Such procedure, i.e. line cutting, re-chaining line and slope-correcting, will help to determine the exact location of the anomalous areas. Trenching (hand-made or blasting) should take place next after in spots where any of the anomalous areas are noted. Magnetic surveying should be carried out to assist the geological mapping. The whole property (Colorado group) should be prospected and geologically mapped on a scale of 1:5,000 or minimum 1:10,000 scale. Geochemical testing is recommended as follows: silt samples should be taken up creeks and gullies every 50 m, even if it is small, the gully should be sampled up to 25 m. above the main creek. Soil samples may not be effective field procedure during the project time. The writer of this report has done the preliminary research concerning soil horizons in the district. However, if the decision is made to proceed with a soil sampling grid, a professional geochemist should be called to the project area for initial consultations. Unfortunately, so many exploration programs failed because of unquestioned acceptance that so-called "standard procedures" must always work.

Results from this and previous work should be used in the construction of a preliminary geological model to predict potential mineralization as well as in choosing drill targets on the properties. To make any decision requires some knowledge or sensible assumptions about what is happening in the survey area. This means reference to relevant information on:

a) Dispersion and mobility characteristics of elements in the mineralization and host rocks;

b) Local environmental influences on dispersion processes;

c) Target size - both the size of mineralization and the expected size of any dispersion halo around it;

d) Availability of sample material;

e) Analytical capability;

f) Logistical conditions.

To ignore these suggestions ensures that some, and perhaps the majority of, explorations' decisions could be misguided. Geochemical techniques played a major role in exploration projects. Recognizing potential sources of error and avoiding them is the main purpose of this chapter.

Conclusions

Skarn deposits in British Columbia have produced 95.4 tonnes of gold and 342 tonnes of silver. The Hedley and Greenwood camp together were responsible for over 90 percent of the Province's skarn-derived gold production. Furthermore, the importance of these two camps is due to their containing two world-class deposits. If these two deposits had not been found, skarns in British Columbia would probably not be regarded as significant targets for gold exploration. However, it is the size and grade of the Nickel Plate Mine and Hedley's Mascot Mine deposits which makes the search for precious metal-enriched skarn deposits in this area soı potentially rewarding.

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Geology Map of Penticton - Map # 1736A.

Map of Hedley Area. Geological Survey of Canada, Map # 568A.

PROPOSED BUDGET

Pre-Field Preparation Fee:

	Project logistics, permit applications, map preparation, crew and material assembly, air photo interpretation:	$ 3,000

Field Program:

Personnel:	Project Geologist - 35 days x $350	$ 12,250
	Senior Prospector - 35 days x $175	$ 6,125
	Senior Prospector - 35 days x $175	$ 6,125
	Junior Prospector - 35 days x $125	$ 4,375
Camp Support:		
	Food and Accommodations	$ 6,000
	Communications (Fax rental, telephone)	$ 2,000
	Laboratory freight	$ 1,000
Transportation:		
	4 x 4 truck rental (km included)	$ 3,000
	ATV (All terrain vehicle) rental	$ 1,000
	Fuel	$ 2,000
Geophysical Survey:		
	50 km @ $150/km	$ 7,500
	Sintrex ULF-EM equipment, 14 days x $250	$ 3,500
	Software Data support, 14 days x $35	$ 490
Geochemical Analysis:		
	Rock/silt samples (Total) 1,000 samples x $15	$ 15,000
Trenching:		
	Blasting crew and powder	$ 5,000
Contingency Allowance:		
	Included: hiring an independent geochemist or geophysicist on project site for professional project data interpretation.	$ 10,000
Post-Field Preparation Charges:		
	Data compilation, report writing, secretarial, Accounting and drafting services	$ 10,000
Total:		$ 98,365

COMMENTS ON BUDGET

Much confusion exists between the absolute cost of a survey and cost of effectiveness. Project managers are ever cost-conscious, and are frequently tempted to pick the cheapest possible methods. This may be false economy, since techniques applied, while inexpensive, may not be effective. Frequently, a small increase in cost optimizes sampling, sample preparation or analysis, and can dramatically improve the effectiveness of a survey.

The converse is also true. Sophisticated and expensive techniques may promise advantages, but should be critically evaluated, since they may not be appropriate for the targets, the local secondary environment, scale of operation or fit the overall exploration program.

In practical terms, the challenge is to design an effective program by making decisions from all available parameters.