Geological / Geochemical.

RECONNAISSANCE PROJECT

of the

"SADDLE CLAIM GROUP"

Skeena Mining Division

NTS 103 P/12

Latitude 55 37'
Longitude 129 50'

Owner and Operator:

Nor Con Exploration Ltd.

Author of Report:

Regis Cavanagh,
Geologist

February 24, 1983

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INTRODUCTION

i- The Saddle Claim Group is located 30 kilometres south-southeast of Stewart in the Skeena Mining Division, B.C. (figure 1) and on the westerly side of the head of Hastings Arm (figure 2). The showings of Saddle Group are situated at an elevation of 1400 metres.

The property is accessible by helicopter, by combined sea-plane or boat, and a foot-trip to the crest of the mountain.

ii- Seven and a fractional reverted Crown Granted 2 Post Claims constitute the Saddle Group which is embraced by Norcon Nos. 5 and 6 claims. The current owner and operator of these claims is Nor Con Exploration Ltd. of Prince Rupert, British Columbia.

Saddle Claim Group has been explored and developed between 1926 and 1930. Silver Crest Mines Ltd. developed the property until 1930 when further financing became impossible; the mine closed. Three shafts totalling 28 metres were sunk and short drifts were run from the bottom of two of them. A drift-adit was driven 142 metres. In 1929, 2.72 metric tons of ore from the surface outcrop were shipped from this property. From this ore 84 ounces of silver, 44 kilograms of copper and 1436 kilograms of lead were recovered. It is obvious that zinc statistics are incomplete because they handsorted ore and discarded the "worthless" sphalerite.

An exploration program including diamond drilling would define the mineralized zone and would assess the economic potential of the property.

iii- In 1982, Nor Con Exploration Ltd. acquired the Saddle Group and did a reconnaissance project of the property in July of the same year. The reconnaissance project consisted in a geological survey covering a total area of 0.5 square kilometres with geochemical and petrographic analysis of rock samples. Two geological maps at the scale of 1:5000 and 1:500 (figure 3 and 4) resulted from this survey.

A grid (60 x 260 metres) was established with the use of a compass and a "HIP-CHAIN" over the mineralized zone (figure 3) totalling 1.34 kilometres of line established.

iv- The geological survey was performed on Saddle, Saddle Nos. 1,2,5, and 6 claims. The grid was established on the Saddle claim. The boundaries of the claim were located by the topographic map 103p/12 and photo-interpretation. "In the field, no post claim has been located."

DETAILED TECHNICAL DATA AND INTERPRETATION

Purpose-

The purpose of the reconnaissance project was to assess the Saddle Group as to the potential for the containment of economic deposits and to establish the basic geology of the area.

Results-

The showings of Saddle Group consist of a main and several branch quartz veins mineralized with lenses or shoots and streaks of massive sulphides carrying silver and a small amount of gold. The lenses contain: galena, sphalerite, pyrite and chalcopyrite in a gangue of quartz.

General Geology

The showings of Saddle Group occur in a series of sedimentary rocks of the Stewart Complex intruded by plutonic rocks of the Coast Cristalline Belt.

The sedimentary rocks are divided in two formations. The oldest formation consists of folded sedimentary rocks and is overlaid by a formation of unfolded sedimentary rocks. These formations are Triassic and/or Jurassic and, form a pendant within the Coast Cristalline Belt (Grove E.W. 1971 and Map No. 86).

These two formations are intruded by Tertiary or older plutonic rocks which range in the composition of diorite along the northern intrusive contact striking east-west.

A few felsic and mafic dykes intruded these two formations and the plutonic rocks. The mineralized quartz veins striking northwest deplaced a granitic dyke striking northeast.

The unfolded sedimentary formations indicate a low to medium grade of regional metamorphism by the presence of quartz and epidote veinlets cutting the unfolded rocks and by the presence of muscovite and phlogopite in a siltstone (see petrographic description).

Lithology

The formation of folded sedimentary rocks is from a marine origin and consist of slates with minor limestones concentrated in the hinge area of the folds. The thickness of the beds varies from a few centimetres to a metre. The structure of the folds is very complicated and includes closed, disharmonic and tight folds.

The formation of unfolded sedimentary rocks consists of breccias, conglomerates and siltstones. All these rocks are fine grains (to cryptocrystalline) and their identification is based on macroscopic and structural features. The stratification of these beds strikes west-northwest with a south-westerly dip varying from 25 to 64 degrees.

The breccias are intraformational consisting of stratified angular fragments of siltstone in a fine matrix. The color of the breccia is greyish with green aggregates of phenocrysts.

The conglomerate are grey to greyish with greenish elongated rounded fragments smaller than 15 centimetres.

The siltstones are grey to greyish with a gradual variation of color which indicates the stratification. The beds (variation of color) vary from a few millimetres to a few decimetres.

A few beds of homogeneous dark grey siltstones (argilaceous?) are intercalated within the grey to greyish beds. The thickness of the darkest beds is 10 centimetres. A petrographic description of sample No. 2 from a dark siltstone bed (figure 3) indicates a quartz muscovite siltstone with phlogopite, anatase and opaque minerals as secondary minerals and minor apatite. The sample is fine grained equigranualar rock with a weak foliation and may be classified as quartz-muscovite-phlogopite schist.

Plutonic Rocks:

The plutonic rocks which intruded these formations, range in the composition of a diorite with variable amounts

(5 to 15%) of hornblende and (10 to 30%) of biotite along the northern intrusive contact. Later stage differentitates include quartz porphyry, aplite, and lamprophyre.

Mineralization

The mineralization of Saddle Group consists of ore shoots of massive sulphides within a main and several branch quartz veins. The sulphides are galena, sphalerite, chalcopyrite and pyrite, and carry silver and a small amount of gold.

The quartz veins are found in the formation of unfolded sedimentary rocks within a hundred metres of the intrusive plutonic contact.

The main vein strikes north-west with a southwesterly dip of about 70 degrees and the branch veins strike at acute angles to the main vein. These veins occur along fault-planes which have displaced a granitic dyke from a few centimetres to a few metres. The main vein has been traced for about sixty metres and its width varies up to 1.5 metres. The branch veins have been traced for about a hundred metres and their widths vary up to 1.3 metres.

At the surface of the showings, the writer localized several lenses (lenticular shoots) and intermittent streaks of massive sulphides within the veins. The size of the three largest lenses at the surface vary from 15 to 30 centimetres in width and from 2 to 3.1 metres in length. These three lenses are located within the main quartz veins though two of them occur on the hanging wall side and the third occurs in the middle of the vein (figure 4).

A channel sample (No. QV3 on figure 4) taken across 1 metre of the mineralized main vein and analyzed by Acme Analytical Laboratories Ltd. of Vancouver, assays as follows:

Gold	Silver	Copper	Lead	Zinc
.018 oz.	4.45 oz.	0.35%	4.85%	6.38%

A channel sample, QV4, taken across 0.15 metres of a branch vein at about 30 metres south of QV3 assayed as follows:

Gold	Silver	Copper	Lead	Zinc
.004 oz.	2.20 oz.	.22%	4.91%	7.96%

The other samples analyzed by Acme Analytical Laboratories Ltd. were grab samples and three rock samples (No: 1,2,1R). Their locations are shown on figures No. 3 and 4 (see appendix #1 for results of assays).

The petrographic analysis of mineralized rock samples done by Vancouver Petrographics Ltd. of Fort Langley, B.C., indicates that galena, sphalerite, pyrite and chalcopyrite are the only sulphides present in the veins (see appendix #2 for petrographic descriptions of these rocks).

Conclusions

The mineralization present on the Saddle Group consists of lenses and streaks of massive sulphides (galena, sphalerite, pyrite, chalcopyrite) carrying silver and a small amount of gold within a main and several branch quartz veins.

The lengths of the largest observed lenses seem to be related to the strike slip of the main fault or main quartz vein.

The presence of two lenses on the hanging wall side and one lens in the middle of the main vein suggests more than one migration of ore-bearing fluids.

Further detailed works are necessary to describe the mineralization in depth though secondary or superimposed structures on the sedimentary rocks are the greatest significant factor to the path of circulation followed by the ore-bearing fluids.

In conclusion, the lead-zinc-silver-copper-gold deposit of Saddle Group is of hydrothermal origin and has a depositional texture of open-space filling.

Regis Lavanaz
Geologist

Itemized Cost Statement

During the period July 20th to July 28th, 1982, a reconnaissance project was conducted by Nor Con Exploration Ltd. on the Saddle Claims which are owned by Nor Con Exploration Ltd.

The crew in the field consisted of a field-manager-prospector, a geologist and an assistant. The office-coordinator organized and supervised the exploration program. The crew was mobilized from Prince Rupert to Kitsault by plane, from Kitsault to Saddle Property by helicopter. Demobilization was carried out from Saddle Property to Stewart by helicopter. Mobilization from Stewart to Prince Rupert will be subject of a separate submission for assesment work on another Nor Con Property.

The total cost of the reconnaissance project in 1982 is $7 029.31 as presented in statements of Appendix 3 included in this report.

Author's Qualifications

Education: I am a graduate of the Quebec University of Chicoutimi, Quebec and hold a B.Sc. degree in geological engineering.

Membership: I am a registered Professional Engineer of the Engineer's Order of Quebec. I am a member of the "Canadian Institute of Mining and Metallurgy" and the "British Columbia & Yukon Chamber of Mines."

Summer Employment:

1976: Ministry of Natural Resources, P.Q. - geological survey and mapping.

1977: Development Society of James Bay - photo-interpretation, geochemical sampling and mapping, aerial spectrometric and geological surveys.

Following Graduation:

1978: SERU Nuclear Canada Ltd.
Uranium exploration in New-Brunswick; photo-interpretation; spectrometric, geo-chemical and geological surveys.

1979: A. & V. Harris Exploration Service Ltd. - geophysical exploration in Saskatchewan; foreman of cutters, chainers and geophysical technicians in magnetic, electro-magnetic, scintillometric and spectrometric surveys; and prospection.

1980-81: Desjardins, Sauriol & Associates - Construction of transport line (electrical) on steel towers at the James Bay Territories; technical-inspector, control-register, team leader of civil technicians, and engineer supervisor.

1982-83: Nor Con Exploration Ltd.
Geologist in exploration and development in British Columbia; reconnaissance projects (base metals), geological reports, consulting, prospection and documentary research.

FIGURE 1

NOR CON EXPLORATION LTD.
NOR CON PROPERTY
Skeena M.D., B.C.
LOCATION MAP

October 1982

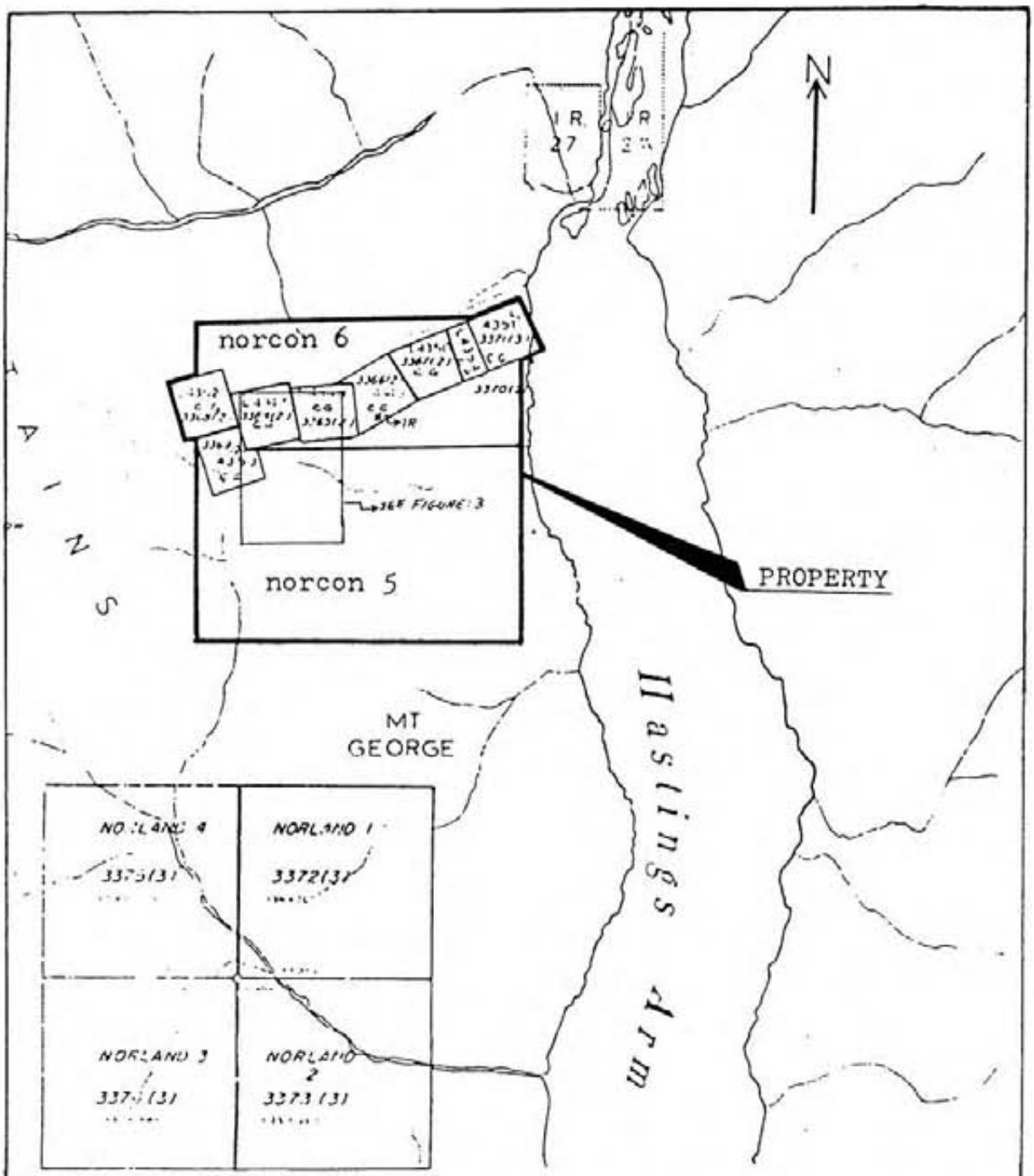
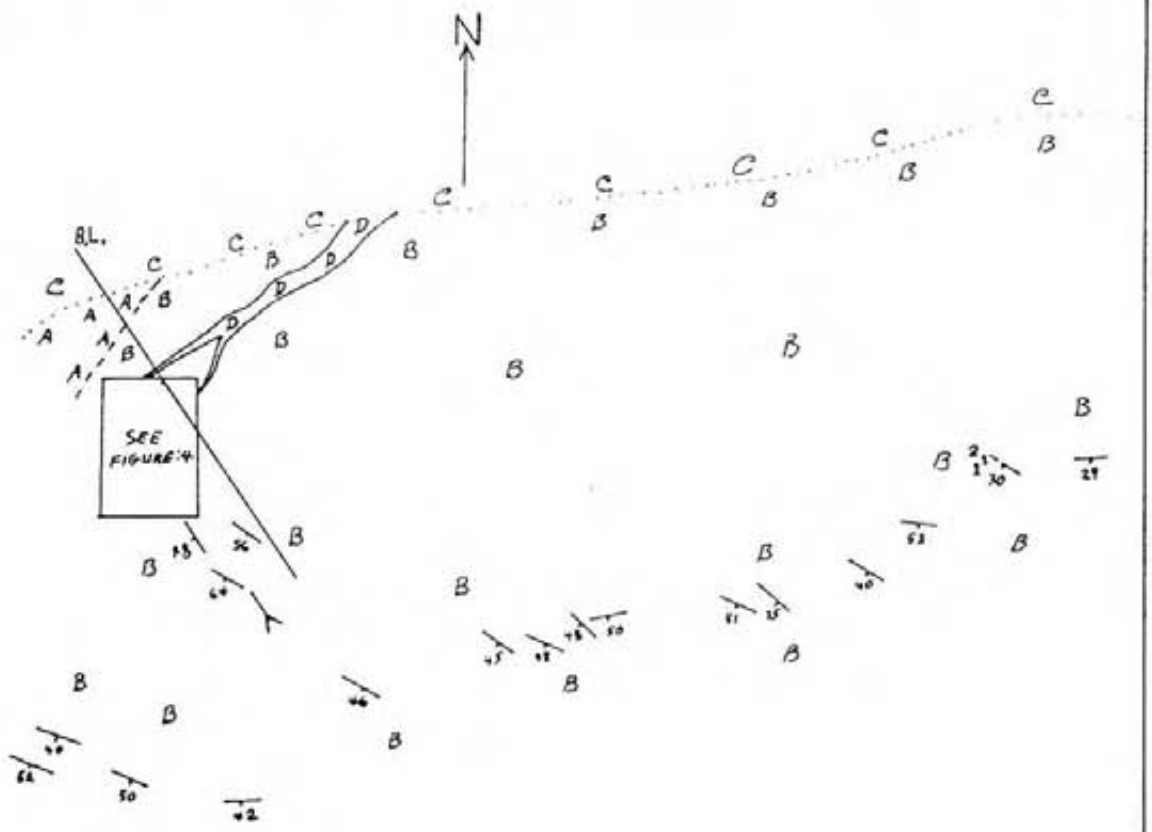


FIGURE 2

NOR CON EXPLORATION LTD.	
Nor Con Property	
Skeena M.D., B.C.	
CLAIM MAP	
Scale: 1:50,000	Oct. 1982

Note: Figure 3 was localised by topographic map 103/P12 and by photo-interpretation. In the field, no post claim has been located.



LEGEND

Folded sedimentary rocks....A
Unfolded sedimentary rocks..B
Dioritic intrusive.....C
Granitic dyke.....D
Geological contact.....
Bedding (inclined).....
Drift-adit.....
Base Line.....B.L.
Sample number..... 2.

100 metres

FIGURE 3

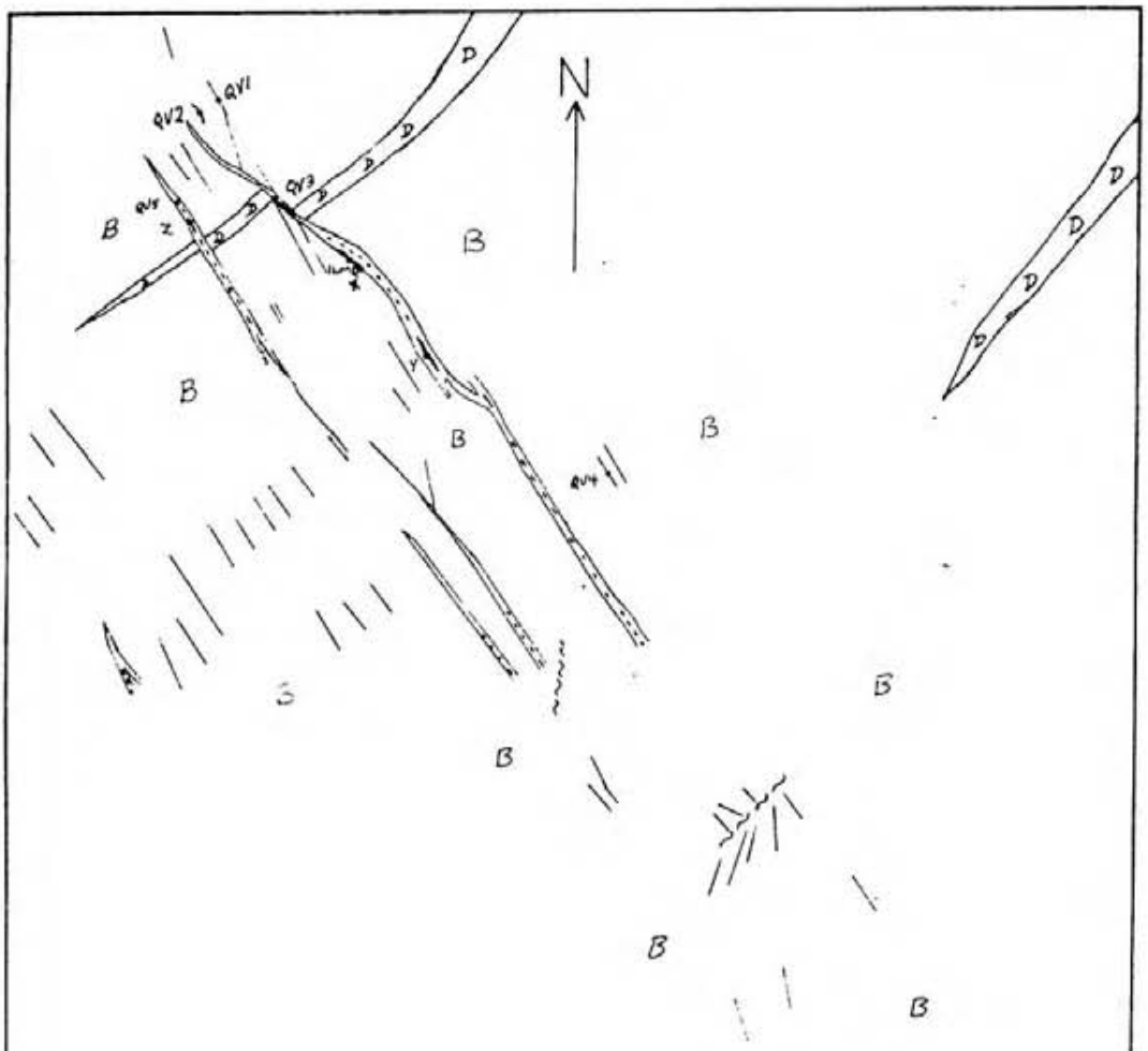
NOR CON EXPLORATION LTD

Saddle Group Property

Skeena m.d. B.C.

GEOLOGY MAP

Scale: 1:5000 | Feb.1983



LEGEND

Quartz vein (width more than 0.3m., less than 0.3m.).....
Massive sulphides.....
Streak of sulphides.....
Shear zone.....
Unfolded sedimentary rocks.. B
Granitic dyke..... D
Sample Number..... QV2.

FIGURE 4

NOR CON EXPLORATION LTD.
Saddle Group Property
Skeena M.D., B.C.

QUARTZ VEIN SHOWINGS

Scale: 1:500	October 1982

APPENDIX #1

RESULT(S) OF GEOCHEMICAL ASSAYS

Type of Samples: Rocks

No.	Description	Cu. %	Pb %	Zn %	Ag oz/ton	Au oz/ton	Ni %
1	Siltstone	.01			.16	.002	.01
2	Siltstone	.01			.07	.001	.01
1R	Diorite				.03	.001	
QV3	Channel	.35	4.85	6.38	4.45	.018	
QV4	Channel	.22	4.91	7.96	2.20	.004	
1LMQ	Grab	10.46	7.80	21.78	24.40	.202	
QV5	Grab	.85	6.96	10.80	4.93	.030	
X	Grab	2.48	11.35	15.40	12.90	.060	
A	Grab	.33	.09	11.40	2.98	.006	
QV1	Grab	.05	1.02	.49	.61	.001	.01
AV2	Grab	.04	1.31	.71	.83	.001	.01

See figure No. 3 and 4 for the location of samples.

The geochemical method used for the assays was by Atomic Absorption done by Acme Analytical Laboratories Ltd. of Vancouver, B.C.

Appendix #2

PETROGRAPHIC ANALYSIS

The following petrographic descriptions of rock samples were done by A. L. Littlejohn, M. Sc. geologist of the firm: Vancouver Petrographics Ltd. of Fort Langley, B.C.

See figures No.2, 3 and 4 for the location of the rock samples.

X: Massive Sulphides.

This is a coarse grained sample of massive sulphides. Gangue is minor. Minerals are:

pyrite	53%
galena	25
sphalerite	20
quartz	2
sericite	trace
chalcopyrite	inclusions in sphalerite

Pyrite forms subidiomorphic grains up to 2mm in size. Smaller rounded to subidiomorphic grains cluster around the edges within the gangue. The larger grains are fracured and broken around their edges.

Galena forms massive grains which enclose the broken pyrite and extend into the fractures.

Sphalerite forms shapeless,rather ragged grains up to 3.5mm in size which occur around the pyrite and galena. Where in contact with galena, small shapeless inclusions of galena no more than 0.05mm in size occur in the sphalerite. The sphalerite is full of rounded to cubic inclusions of chalcopyrite 0.001 to 0.005mm in size. These tend to be aligned along the cleavages. The inclusions are denser towards the centre of the grains. A few pyrite inclusions are also present.

Quartz forms subhedral interlocking grains up to 0.2mm in size. They occur between the sulphide masses.

Sericite forms small flakes interstitial to some of the quartz grains.

Y: Massive Sulphides.

This is a very coarse grained sample of massive sulphided. There is no quartz gangue. Minerals are:

chalcopyrite	55%
galena	39
sphalerite	5
clinozoisite	1
goethite	minor
clay	minor

Chalcopyrite and galena form very coarse grains which are intergrown. A few inclusions of chalcopyrite occur in galena and a few inclusions of galena occur in chalcopyrite near the contact of these minerals.

Rounded or ragged patches of sphalerite up to 4mm in size occur in the chalcopyrite. It is full of angular to rounded inclusions of chalcopyrite from 0.001 to 0.1mm in size.

A thin film and patches of goethite,sometimes associated with cuprite occur in fractures in the sphalerite.

One patch of sphalerite which occurs partly in galena and partly in chalcopyrite,is surrounded by clinozoisite mixed with goethite and a clay (illite?).

Z: Massive Sulphides with quartz gangue.

This is a coarse grained sample of massive sulphided in a quartzitic gangue. Minerals are:

galena	28%
sphalerite	18
chalcopyrite	18
pyrite	2
quartz	34
clinozoisite	minor
goethite	trace
sericite	trace
clay	trace
cuprite	trace

Galena forms aggregates of subidiomorphic to rounded grains up to 6 mm in size.

Sphalerite forms ragged aggregates of fractures grains up to 0.5 mm in size. They may form around galena. They are full of rounded to shapeless chalcopyrite inclusions ranging in size from 0.001 to 0.1 mm. Rare inclusions of galena are also present.

Chalcopyrite forms irregularly shaped grains which surround the sphalerite or within fractures in it. Cuprite, derived from oxidation of the chalcopyrite, forms thin films along fractures in the sphalerite and between quartz grains around the sphalerite.

Pyrite forms cubic grains up to 0.2 mm in size within the gangue around the other sulphides.

Quartz forms rounded to shapeless interlocking grains 0.05 to 0.5 mm in size. Small inclusions of sphalerite, galena, and pyrite are sometimes present. The sphalerite is reddish in colour as opposed to the larger grains which are brownish, occasionally with a reddish core. They are free of chalcopyrite inclusions.

Goethite forms along thin fractures in the sulphides and between the quartz grains. It also occurs around some of the smaller sulphides which are included in the quartz. It is sometimes associated with clay (illite?) and sericite.

Clinozoisite forms aggregates of small grains less than 0.01 mm in size which occur as a thin rim around the massive sulphides and in fractures in the sphalerite.

1LMQ: Massive Sulphides in quartzitic gangue.

This is a coarse grained sample of massive sulphided in a quartzitic gangue. Minerals are:

galena	12%
sphalerite	35
chalcopyrite	10
quartz	38
chlorite	5
sericite	trace
goethite	trace
clinozoisite	trace

Galena forms massive grains up to 5mm in size.

Sphalerite forms aggregates of large grains which may partly enclose the galena. It is crowded with chalcopyrite inclusions which occur along the cleavages. They may be rounded or cubic and along some cleavages thin stringers occur. Size ranges from less than 0.001 to 0.05mm.

Chalcopyrite forms ragged,irregularly shaped grains up to 1cm in size. They generally occur within the quartz gangue. Smaller patches occur around the edges of the sphalerite or in a discontinuous zone between the sphalerite and galena. A few veinlets of chalcopyrite occur in fractures in the sphalerite. A few rounded inclusions of sphalerite are present in the larger chalcopyrite.

The gangue is mainly quartz which forms interlocking subhedral grains up to 1mm in size,averaging about 0.5mm.

Patches of chlorite occur within the quatrz,particularly around the sulphides. It forms spherulitic aggregates with grain size 0.05mm. Traces of sericite are intergrown with the chlorite. Irregularly shaped grains of chalcopyrite are sometimes intergrown with the chlorite.

Clinozoisite forms aggregates of small grains in narrow veinlets 0.01mm wide which cut the chlorite.

Goethite occurs in narrow stringers within the chlorite masses.

QV5: Quartz vein with sulphides.

This sample consists of fine to coarse grained quartzitic rock with a 5 mm thick band of massive sulphides at one end. In the quartz vein the minerals are:

quartz	65%
muscovite	35
chlorite	minor
clays	minor
apatite	minor
sphalerite	minor
galena	minor
chalcopyrite	minor
rutile	trace
hematite	trace
zircon	trace

Quartz forms subhedral to shapeless interlocking grains from 0.2 to 2.5 mm in size. Between aggregates of these grains are finer grained patches of more rounded grains. These are intergrown with muscovite with grain size about 0.05 mm. Some patches 1 to 3 mm in size consist almost entirely of muscovite.

Small patches of illite intergrown with kaolinite replace some of the quartz in the muscovite rich patches.

Chlorite forms flakes up to 0.02 mm in size interstitial to or included in the larger quartz grains.

Apatite and zircon form idiomorphic crystals up to 0.02 mm in size, but usually less, which are included in the quartz.

Angular to irregularly shaped grains of sphalerite, galena and chalcopyrite occur intergrown with the muscovite or interstitial to the quartz.

The sulphides at the end of the sample consist of galena, sphalerite, and chalcopyrite. Galena makes up the bulk of this. Sphalerite forms a ragged 1 mm wide zone between the galena and the quartz. A few small grains of chalcopyrite occur around the sphalerite which is full of rounded chalcopyrite inclusions ranging from 0.001 to 0.02 mm in size.

Between the galena and sphalerite there is a zone 0.01 mm wide of clinozoisite. It also forms in the cleavages of the galena.

2: Muscovitic quartzite (mineralized) .

This sample is a fine grained equigranualar rock with a weak foliation. Minerals are:

quartz	40%
muscovite	36
phlogopite	8
anatase	4
opaques	12
apatite	minor

Quartz forms a mosaic of rounded grains 0.03 mm in size. Occasional patches of slightly coarser grains are present.

Muscovite forms interstitial flakes 0.01 to 0.06 mm in size. There is a vague alignment of the coarser grains.

Phlogopite forms ragged flakes intergrown with and surrounding the muscovite. It often occurs in aggregates and is concentrated in diffuse bands.

Apatite forms subidiomorphic grained about 0.03 mm in size which are intergrown with the larger muscovites.

Opaque minerals (pyrite? Fe-oxide?) form ragged to subcubic grains interstitial to the quartz. Grain size varies from 0.001 to 0.3 mm.

Note from the author:

In the geological report, the sample #2 is described as a quartz muscovite siltstone.

APPENDIX 3

Itemized Cost Statement

a) Wages

NAME, TITLE	# OF DAYS	RATES PER DAY	DATES (JULY)	# OF EMPLOYEES	TOTALS
Regis Cavanagh, geologist	9	56.45	20 to 28		508.05
Paul B. Wadsworth prospector, and field manager	9	64.52	20 to 28		580.68
David Bury, assistant	9	70.00	20 to 28		630.00
William G. Mandley Office co-ordinator	6	64.52	19-20-21 24-27-28		387.12
		TOTAL (WAGES)			2 105.85

b) Food and Accomodation

	9	(22.50+ 10.00) 32.50	20 to 28	3	877.50
TOTAL: (food and accomodation)					877.50

c) Transportation

Freight (foods and supplies) Prince Rupert to Kitsault airplane, July 19	259.20
(3 employees) Prince Rupert to Kitsault (airplane) July 20	432.00
(3 employees) Kitsault to Saddle Property helicopter, July 20	621.75
Freight (foods and supplies) Prince Rupert to Stewart (airplane) July 27	78.00
(3 employees) Saddle Property to Stewart helicopter July 28	655.25
TOTAL: transportation	2 046.20

d) Analysis

NUMBER	ASSAYS	$/EACH	TOTAL
11	Ag and Au	10.00	110.00
10	Cu	3.50	35.00
8	Pb	3.50	28.00
8	Zn	3.50	28.00
4	Ni	3.50	14.00
11	Rock sample preparation	2.50	27.50
Interest at Jan. 31, 1983, at 1 1/2 %/months			11.07
Shipping			12.10
Sub-total			265.67

- Petrographic Analysis

NUMBER, ITEMS:	
1 thin section	6.00
5 polished-thin section at $16.00 each	80.00
6 ground & labelled thin section reject slices at 0.75 each	4.50
5 sample impregnation at $1.00 each	5.00
Petrographic Report	277.00
Shipping	17.10
Sub-total	389.60
TOTAL: analysis	655.27

e) Reasonable cost of preparation of the report pertaining to the investigation 600.00

f) Other documented and itemized cost as have been incurred in carrying out the investigation.

Items:

Compass, canvas bags	97.90
2 thread rolls for Hip Chain	4.50
Foam mattress, cooler, heater	95.73
Propane cylinder and refills	50.90
Gloves, boots, socks, cruise vests, and sets of rain gear	290.01
Stationary supplies (pens, paper, etcetra...)	205.45
TOTAL: other	744.49
TOTAL: of exploration program	7 029.31

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- Corporation Files: "Silver Crest Mines Limited." Mineral Resource Division, EMR.

- Grove E.W. (1971), Geology and Mineral Deposits of the Stewart Area, B.C., Department of Mines & Pet. Res., Bull No. 58, figure #1.