File Prince Rupert

PRELIMINARY GEOLOGICAL EXAMINATION
of the
"SIL" Silica Prospect
PRINCE RUPERT, B. C. AREA

February, 1965

REPORT

on

PRELIMINARY GEOLOGICAL EXAMINATION

of the

"SIL" SILICA PROSPECT

CARLYLE-CLAXTON LOCALITY, PRINCE RUPERT, B.C. AREA

SKEENA MINING DIVISION

during

February, 1965

TEL.: BUS. 985-4616
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CONSULTING GEOLOGIST
EXAMINATIONS
EXPLORATION
ENGINEERING

161 PEMBERTON AVENUE,
NORTH VANCOUVER, B.C.

March 2, 1965

C.D. Schultz & Company Limited
Consulting Engineers
325 Howe Street
Vancouver 1, B.C.

Attention: Mr. H.D.C. Hunter

Dear Sirs:

This report summarizes my recent preliminary examination of the "SIL" silica prospect, following your initial instructions.

The scope of the field investigation was severely restricted by the prevailing depth of snow cover, and by stormy weather which limited small boat access to the property. The report, therefore, includes an outline of the general geology and potential of the broader area, together with detailed descriptions of the existing showings within one small part of the property.

The following report, which is condensed in the 'Summary' and 'Recommendations' sections, is hereby presented for your further consideration.

Respectfully submitted,

W. M. Sharp

W.M. Sharp, P.Eng.

WMS/hb
encl.

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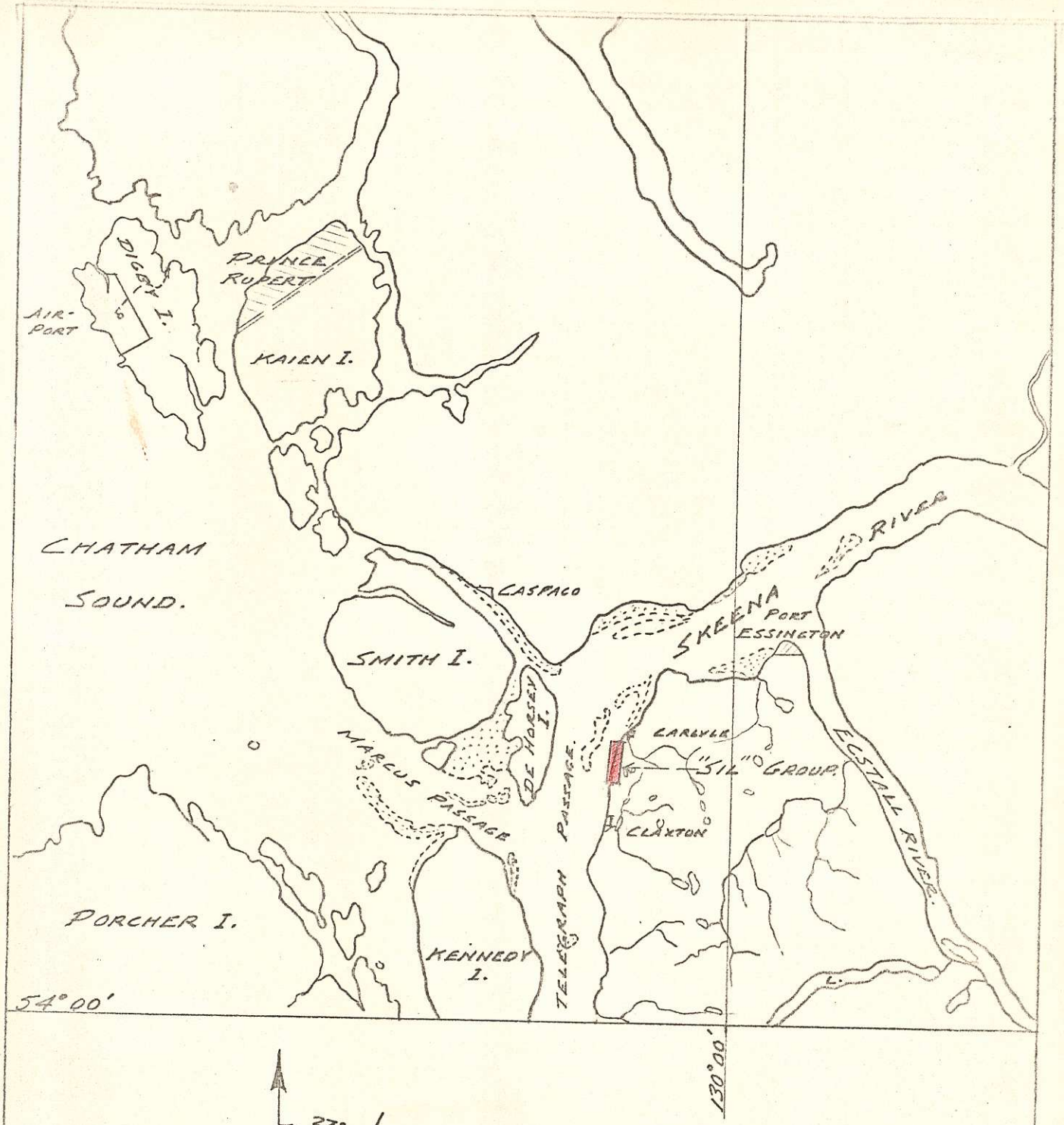

DRAWING No. 1

INDEX MAP, "SIL" GROUP

SKEENA MINING DIVISION,
COAST LAND DISTRICT.

SCALE: 1" = 4 MI. FEB., 1965.

0 1

W.M.S. P. ENG.

SUMMARY

The "SIL" property was originally submitted as a partly-developed silica prospect containing an appreciable quantity of marketable silica. Following the current examination it should be reconsidered as a raw prospect within a geological setting that offers considerable potential for the occurrence of economic quantities and grades of the desired mineral.

The claim block includes a ½ x 1½ mile of favourable, locally silicified metamorphic rocks out of a total 1 x 6 mile belt of these same rocks.

The recent examination, carried out under adverse snow and weather conditions, provides a detailed description of three occurrences previously rather superficially investigated by the owners. The occurrences occupy a small fraction of the total area of the property or of the full potential section. Minor exposures of relatively clean quartz within broader, less completely silicified zones were noted within these preliminary prospect areas, however prospecting efforts within these zones are insufficient for even a preliminary evaluation of them.

The general geology of the area, being located within a highly-silicified major intrusive - metamorphic contact zone, offers fair possibilities for the discovery of sufficient clean silica to sustain a selective mining operation. Operating factors are generally favourable.

RECOMMENDATIONS

1. Reconnaissance prospecting of exposures over the full extent of the property and on 'open' ground beyond it. Some preliminary stripping and rock trenching probably required.

2. Detailed exploration of selected siliceous zones, including the excavation of cross-trenches for detailed examination and conclusive sampling of selected sections of these zones.

3. Further exploration, as required for conclusive evaluation, following upon (1) and (2).

Of the above, (1) is essentially the type of preliminary work that would be done, to some appreciable extent, by the owner; (2) would be started by the owner, and of sufficient extent to allow a preliminary evaluation by an examining engineer; (3) would be at the expense of a well-financed exploration group.

Respectfully submitted,

W.M. Sharp

W.M. Sharp, P.Eng.

March 2, 1965
North Vancouver, B.C.

PRELIMINARY REMARKS

This property examination was authorized by Mr. H.C.D. Hunter and accomplished during February 16 - 18, including the return trip from Vancouver to Prince Rupert via Canadian Pacific Airlines.

A 38-foot gillnetter, chartered by Mr. Bussanich, transported the examination party from the Cassiar Cannery (Caspaco, Dwg. No. 1) to and from the beach near the south end of the property. Stormy weather conditions, which set in during the afternoon of February 17th and ensued for the next few days, precluded further boat service, even if additional field work were considered advantageous at this time.

The principals, Messrs. A.J. Bussanich, T. Grantham, and Mr. Bussonich's son guided the writer to the showings and willingly provided the necessary survey and sampling assistance.

The surface of the property, beyond a narrow strip adjacent to the ocean, was generally covered by one to two feet of soft, wet snow. This condition, in itself, restricted the examination to a localized detailed survey of the more readily-located silica showings closely inland and above the beach. A general reconnaissance investigation of the property, which may have been preferable, was not feasible at this time.

The survey (Dwg. No. 3) was made with a Brunton compass, measuring horizontal and vertical angles, and a 100-foot plastic tape. Temporary survey points were established, and geological details and sample sections located from them.

The accompanying photographs show the beach and general terrain satisfactorily, but no detail of the snow-covered white quartz showings.

PROPERTY

This consists of the "SIL" No.'s 1 - 12 mineral claims located on both sides of a N - S trending location line which, in turn, is the route of the old Claxton-Cassiar boardwalk. The property covers a central section of the silica-bearing meta-sedimentary host rocks (Dwg. No. 2).

An abbreviated record of the group, as contained in Prince Rupert Government office files, is as follows:

Name	Record No.	Tag No.	Locator	Date of Location	Date of Record
SIL #1 - SIL #8	24111-24118	452607 -452614	G.T. Grantham, Pr.Rupert	Sept.1/64	Sept.11/64
SIL #9 - SIL #12	24302-24305	533173 -533176	"	Oct. 8/64	Oct. 20/64

Messrs. A.J. Bussanich and G.T. Grantham are the current joint-owners of the property.

LOCATION AND ACCESS (Dwgs. No.'s 1 and 2)

The property is situated on the mainland coast, closely south of the mouth of the Skeena River, and approximately 25 sea miles southeast of Prince Rupert, B.C. Locally it occupies a ½ mile x 1½ mile coastal area between Claxton and Carlyle. For fuller coverage of the belt of favourable rocks, the group should have been located about a "N - S" line situated some 700 feet to the east of the existing location line.

The terrain may be classified as a generally broad low coastal ridge with a local rolling, ridged, and hummocky surface produced by Pleistocene glaciation. A rather dense forest growth covers shoreline sections of the property. Sparser patchy growths of smaller timber and/or

scrub-brush occur at higher (to 500') elevations. The higher flat area is also locally swampy, with frequent small ponds, sloughs, and a few small lakes. The frequency of rock outcroppings could not be observed because of the current snow cover; however aerial photographs suggest that they may occur quite extensively.

Access, for purposes of examination, is by way of 15 miles of road from Prince Rupert to the wharf of Cassiar Cannery, and approximately 6 miles by water, via Telegraph Passage, to the present beach landing. As the terrain is low and relatively open, fieldwork should not be difficult during periods of more favourable weather.

Quick trips to the property during calm weather would be via float-plane from Prince Rupert.

HISTORY AND PREVIOUS WORK

The only evidence of previous exploration, as noted by the writer and mentioned by the principals, is the short prospect tunnel close to the beach. It is quite possible that the local quartz showings have been prospected for gold and silver during periods of such activity in the district. A search of government publications did not reveal any evidence of former properties or activity in this vicinity. Brief mention is made of occurrences of clean (?) silica on Banks Island, and also of the occurrence of auriferous sulphide-bearing quartz veins on nearby Porcher Island.

Work accomplished by the owners appears to consist of rather localized surface stripping and ineffective surface blasting (bulldozing) of weathered exposures of variably-siliceous outcroppings.

GEOLOGY

(A) Regional (Dwg. No. 2)

The composite assemblage of foliated metamorphic rocks containing the silica deposits forms a coastal belt which is up to one mile in width and over six miles in length. These rocks flank the west contact of the "Ecstall" pluton and were obviously developed by the effect of heat, pressure, and emanations from the major intrusive body upon the adjacent mixed sedimentary and volcanic rocks.

The general strike of foliation within the banded metamorphic rocks is northerly, with local undulations, and dips appear consistently steep.

The age of the Ecstall granodiorite-diorite pluton is given as 'Upper Jurassic or younger', while the older premetamorphic rocks are inferred to be of 'Jurassic or older' age.

The metamorphic assemblage — generally classified as metasedimentary — is composed of interbanded phyllites, mica-chloritoid schists, hornblende - biotite - quartz - feldspar schists and gneisses. In addition, the section contains wide, variably siliceous alteration zones, and distinct injections of clean quartz and granodioritic or other related intrusive types — presumably originating from the contiguous pluton.

Aerial photographs of the terrain — and from which Dwg. No. 2 was constructed — show an en-echelon system of northeasterly - trending lineaments. This pattern is distinctly acute to the lineation trends of the foliated rocks and the principal intrusive contact. Also, it probably reflects the systematic occurrence of dykes, fractures and/or quartz veins. The systematic fracture pattern was possibly developed in response to early differential stresses acting tangentially to the general N - S structural trend.

(B) Local (Dwg. No. 3)

(1) Beach Tunnel Zone

This siliceous zone, as exposed in the beach tunnel, and to the north where it overlies an easterly-dipping hornblende-biotite granodiorite dyke and outcrops below sta. 3, has an apparent minimum width of 20 feet, and a length in excess of 200 feet.

The tunnel section of silica contains a considerable proportion of feldspathic impurities; whereas the sta. 3 exposure is primarily a relatively clean injection variety of vitreous quartz, somewhat contaminated by organic and introduced oxidized, to earthy material.

Evidently, the contact sections of this and similar silica zones are relatively more contaminated by material from the adjacent or enclosing wall rocks. Higher grade silica should occur at increasing distances from these contacts, where the quartz is clearly of the injected or fracture-filling variety.

The zone probably continues northward beyond sta. 3, and could also be prospected in this direction.

(2) 'Station 17' Zone

The general siliceous zone outcropping in this locality includes dykes and irregular bodies of hornblende-granodiorite and highly-silicified inclusions of this rock. As a consequence the average grade of silica is low, except where distinctive sections of fracture-filling or injected quartz occur within the siliceous-altered masses.

The composite zone through station 17 has an apparent minimum width of 150 feet and may be expected to continue NNE or SSW for at least a few hundred feet. The occurrence of high-grade silica, of a quality

approaching that contained in sample #4560, may be expected only in sections not notably contaminated with inclusions of the country rock. Cleaner material may occur outward across the section or along the general strike projection of the siliceous zone.

(3) 'Station 27-29' Zone

This NNE - trending section contains a high proportion of impure silica — obviously originating from the silicification of both intrusive and metamorphic rocks. Only minor occurrence of clean vitreous quartz were observed locally, but it is possible that wider sections of clean silica may parallel this local exposure or occur within strike depressions between the widely-separated outcrops.

The area including the three zones described comprises a relatively small fraction of the potential silica-bearing rocks. The owners note that several exposures of quartz have been observed during preliminary prospecting trips northward along the location line, and that occurrences to the north of the section examined contain higher grade material. The general expanse of the favourable schist-gneiss complex has not been prospected by them.

(C) Mineralogy of the Siliceous Rocks

The proportion of SiO_2 within the silicified igneous and metamorphic rocks depends directly upon the final degree of silicification of the original rock-forming silicates. Low-grade silicification is marked by the frequent occurrence of inclusions of rather fresh country rock and random clots of chlorite, epidote, and/or limonite. Rocks exhibiting intermediate degrees of silicification normally contain some hazy, pale-bleached inclusions with original feldspathic material, accessory silicates, minor to appreciable sericite and only traces of chloritized ferromagnesian minerals. High-grade siliceous material occurs as clear glassy,

or white vitreous quartz and is generally coarse-grained, rather than cherty.

SAMPLING AND ASSAYS

The following samples were taken from natural surface exposures within the few inadequate cross-sections presently exposed for examination and sampling. All of this material is contaminated to some extent by organic matter, surface soil, and the introduced residual products of weathering from the adjacent country rock. Samples more closely representative of fresher sub-surface material should be obtained from newly-excavated pits, trenches, or slashes.

The SiO_2 content of the samples was determined by Coast Eldridge Ltd., using the fusion method of analysis:

Sample No.	Description	SiO_2, %
4553	Outcrop NW of Sta.27; composed of weathered quartz with (highly) silicified granodiorite inclusions	63.20
4554	Outcrop east of sta.29; composed of highly-silic. schist and/or granodiorite, inclusions of less-alt. granodiorite and massive veining quarts	68.84
4555	Similar but less-siliceous material, with less veining - quartz; 30' E of sta.29	58.10
4556	Surface outcrop of Silic.Schist and/or granodiorite with fair patches of massive vitreous quartz; East of sta.17	65.94
4557	As above, but more highly-silic., and contained higher proportion of massive white quartz; south of sta.17.	81.76
4558	Outcrop 30' south of sta.3; relatively clean coarse-grained vitreous quartz.	90.01
4559	Chips across vertical section in beach tunnel; weathered, stained quartz with visible inclusions of feldspathic material	66.56
4560	Selected quartz from few large pieces of freshly-broken material in vic. of sta.17	98.50

At the present stage of development of the various showings, and with only small hand-tools available for the work required, it was impossible to obtain the 350 lb. sample of representative material requested by the client.

The very limited investigation accomplished shows the existence of high-grade silica in association with broader, general zones of lower-grade silicification.

EXPLORATION AND OPERATING FACTORS

1. Location of Showings: These are all within a mile of the coast line and between elevations of 10 to 500 feet. Access road construction would require some rock excavation and placement of free-draining sub-grade fill.

2. Harbour: The present beach, with a minor amount of excavation of projecting rocks, and the addition of some form of breakwater, would provide a satisfactory scow anchorage and material-loading site. The clear width of beach is over 100 feet; it has a mud-pebble bottom and occasional small projections of bedrock. The most unfavourable feature of the site is its vulnerability to storms from the west which funnel through island passages.

3. Camp Site: There is sufficient flat ground within the small stream valley behind the beach for these facilities.

4. Timber and Water: These are readily available for local construction and exploration and/or mining requirements.

5. Labour: This is locally available from the Prince Rupert area; special services would be supplied from Vancouver.

6. Equipment and Supplies: General requirements are available in Prince Rupert; special requirements from Vancouver.

7. Climate: This is typically wet, north-coastal, periodically stormy, but generally mild.

8. Terrain: This is low, rather flat, hummocky, with frequent ponds or swampy areas. Overburden does not appear uniformly heavy, so that preliminary exploration would not be difficult.

W.M. Sharp

W.M. Sharp, P.Eng.

WMS/hb

PHOTOGRAPHS

Refer Dwg. No. 3

No. 1 Beach and lower stream valley at Sta. 0; low slack-tide.

2 Beach area; looking S 50° E.; high-tide.

3 Beach area; looking NW; high-tide.

4 View to seaward from beach.

5 General area of silica exposures; vic. of sta.17, looking S 20° E.

6 Typical terrain and current snow cover vic. of sta. 22, looking N 20° E.

1.

MAR 2 65

MAR 3 65

MAR 4 65

MAR 5 65

MAR 6 65

MAR • 65 •

MAR • 65 •

MAR • 65 •

MAR • 65 •

MAR • 65 •

FEB • 65 •

1000 Hays Cove Avenue
Prince Rupert, B.C.
March 23, 1965

C.D. Schultz & Co.
325 Howe Street
Vancouver 1

Gentlemen:

Three men spent three days drilling and blasting at the showing of silica at Claxton.

Est. 60-70% Potash Feld. dirty - rusty →

Sample #1 was taken from the ravine, which I had mentioned to Bill Sharpe, and which is approximately 2000 Feet North of the station Bill marked on the boardwalk.

Sample #2 is from the top of the hill, ¼ mile east of the boardwalk. *VIC 017 - 30-50% alk. feld w minor phlogopite + ferro-mags*

poss. 30% Potash Feld minor Fe mag →

Sample #3 is from the trail~~s~~, at #4 station.

Please advise us when we can expect your men back on the ~~pp~~ property.

The samples should arrive in Vancouver by Thursday.

The snow is completely gone and weather is improving every day.

- arranged as sugg. orig. by WMS.

Your 120 day free option can now start on April 1,1965.

april - July

Yours truly,

A J Bussanich

A.J. Bussanich

These samples contained excess feldspar, etc.

RECEIVED
MAR 26 1965
Read by.........

3/29/65
WMS advise Mr. Hunter re quality of samples + help from prior letter to A.J. Bussanich emphasizing more recce prospecting needed, and that above samples, except No. 1, are from known exposures already checked by WMS.

(3)

STRAITS TOWING LIMITED

THIS SHIPPING ORDER must be legibly filled in, in Ink, in Indelible Pencil, or in Carbon, and retained by the Agent.

Shipper's No.

Agent's No.

RECEIVED,

at Prince Rupert Mar. 22 1965

from A. J. Bussanich 1000 Hays Cove.

the goods described below, in apparent good order, except as noted (contents and condition of contents of packages unknown, sufficiency of packing or marks not admitted), marked, consigned and destined as indicated below, to be carried upon and subject to the conditions on the face and back hereof, to the usual place of delivery at said destination.

Nature, Weight, Quantity, Measure, Gauge, Quality, Grade, Condition, Brand, Contents and Value declared by the shipper and unknown to the Carrier.

(Mail Address—Not for purposes of delivery)

Consigned to C D Schultz 325 Howe St.

Destination Van. B.C {Province or State of County of

Route Vessel

CHECK COLUMN	No. Packages	DESCRIPTION OF ARTICLES AND SPECIAL MARKS	Weight (Subject to Correction)	Measurement (Subject to Correction)
	2	Cartoons rocks	90	
		actually 65#		
		B7 3/22/65		

If charges are to be prepaid, write or stamp here "To be Prepaid."

Prepaid

Shipper.

Received $

to apply in prepayment of the charges on the property described hereon.

Freight

Wharfage

Wharfage

Cartage

Advances

Total

Rate Clerk.

A. J. Bussanich Shipper

WHARF COPY

Per

Purser or Freight Clerk.

SEE CONDITIONS ON BACK HEREOF

FORM NO. 8

1760-006.

ACCTLC Member Canadian Testing Association

PHONE: 876-4111

CABLE ADDRESS "ELDRICO"

FILE NO A.3-S.1-65 16074

DATE February 24, 1965

To:

W. M. Sharp,

C/O Mr. R. McCleery,

C. D. Schulz Ltd.,

325 Howe Street,

Vancouver, B.C.

Certificate of Assay

COAST ELDRIDGE

ENGINEERS & CHEMISTS LTD.

125 EAST 4TH AVE. VANCOUVER 10, CANADA

We Hereby Certify *that the following are the results of assays made by us upon submitted* Silicious Ore *samples*

MARKED	GOLD		SILVER	Silica (SiO_2)					
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.
		$							
4553 ✓				63.20 ✓					
4554 ✓				68.84 ✓					
4555 ✓				58.10 ✓					
4556 ✓				65.94					
4557 ✓				81.76 ✓					
→ 4558 ✓				90.01 ✓					
4559 ✓				66.56 ✓					
→ 4560 ✓				98.50 ✓					

prob. 2#-3# ea.

Gold calculated at $_____ per ounce

Note. Rejects retained one week.
Pulps retained one month.
Pulps and rejects may be stored for a maximum of one year by special arrangement.

Unless it is specifically stated otherwise, gold and silver values reported on these sheets have not been adjusted to compensate for losses and gains inherent in the fire assay process.

H. Sharples

Provincial Assayer

DE HORSEY I.

CARLYLE.

APPROX. OUTLINE OF "SIL" CLAIM-BLOCK.

SILICIFICATION

QUARTZITE

BEACH

ARTIFICIAL L.

EMERGENCY L.

CLAXTON

ZONE OF

TELEGRAPH PASSAGE

ASTRO.

MAG.

27°

9 10 7 8 5 6 3 4 1 2 11 12

LEGEND

- PROBABLE GEOL. CONTACT (AIR PHOTO.)
- AIR PHOTO LINEAMENTS.
- ATTITUDE OF SCHISTOSITY, FOLIATION, ETC. IN BELT OF META-SEDIMENTARY ROCKS.
- SHOALS. BARS. BEACHES.
- PLUTONICS & META-GNEISSES GRANODIORITE, QUARTZ DIORITE, DIORITE & ASSOC. HYBRIDS.

DRAWING NO. 2

AIR-PHOTO DETAIL

CLAXTON - CARLYLE AREA

SCALE: 1" = 0.57 MI. APPROX. 3000'

FEBRUARY, 1965. W.M.S. P.ENG.