299

GEOLOGY

of

CACHE CREEK SILICA COMPANY PROPERTY

ASHCROFT, B. C.

September 1959

D. D. Campbell

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

DOUGLAS D. CAMPBELL
CONSULTING GEOLOGIST
1119 MARINE BUILDING
VANCOUVER 1, B.C.

INTRODUCTION

Twenty-nine located mineral claims have been staked along the Trans-Canada highway eight miles south of Ashcroft, B. C., by Mr. Walter Barber and associates. Most of these claims cover outcrops of silica schist. Much of the schist is of sufficiently high silica content as to be suitable as a source of raw material for the glass and kindred industries.

Be-H

The property lies on the west side of the Thompson River across from Basque Station.

The writer spent about four days on the property, the first days of which were in the company of Mr. Barber. The general geology of the area was mapped to provide a basis for establishing the continuity of the silica. The claims were examined, mapped and sampled in more detail to allow a firm estimate of the grade and tonnage of available ore material.

Accompanying the writer at the time was Mr. Harry Howey, a mining engineer associated with the consulting firm of Dolmage, Mason and Stewart Ltd. Mr. Howey is a competent and widely experienced engineer who assisted greatly in estimating probable costs of establishing a plant at the property.

SUMMARY AND CONCLUSIONS

The 29 mineral claims that comprise the Cache Creek Silica Company property are underlain by rocks belonging to the Cache Creek Group of Permian Age. All the rocks are more or less schistose and some have been extensively replaced by quartz to form silica schists. The different bands of rock types trend north-northwest across the property and range in width from 500 to 3000 feet in width. The rock types underlying the property are separable into four general categories by composition, each in its own distinct band or bands. These categories are:

1. White Silica Schist - One band about 500 feet in width extending down the centre of the property for the full length. Largely covered by the Trans-Canada Highway right-of-way.

2. Green Silica Schist - Two bands flanking each side of the white silica schist, the west band about 3000 feet in width and the east band about 700 feet. The west band underlies most of the claims west of the highway and has negligible overburden cover.

3. Feldspar-silica Schist - One band about 1500 feet in width trending from the Basque Ranch northward through the saddle in Red Mountain. Largely covered by overburden.

4. Greenstone (volcanics) - One band on either side of the feldspar-silica schist band and another near the south end of the property. Comprised of bodies of andesite, schistose andesite, chlorite schist and gabbro.

Analyses and microscopic examination of samples of each of the schists listed above, (1, 2, 3), indicate that their compositions are almost identical and roughly average over 70 percent silica, about 10 percent alumina, 3 percent iron oxide, 1 - 5 percent calcium oxide, about 2 percent magnesia, 2 percent soda and 1 percent potash. This composition is generally better than that of the original analysis obtained by Mr. Barber which was indicated to be acceptable to the glass industries. Therefore, most of the schist bands can be considered to be "ore".

The best immediately available silica ore on the property occurs north of Oregon Jack Creek and west of the highway. It is a hill of green silica schist that is sparsely veneered with patches of soil. It underlies the mineral claims Cache Creek, 1, 2, 3, 4 and 8 and Lucky Four 1 and 2.

Calculating a depth of only 10 feet of ore on six claims the property has an indicated tonnage of about 9 million readily available tons. The nature of the geology and abundance of exposures eliminate the necessity of development drilling.

It is estimated that equipment for mining, handling, transporting and loading the ore would cost about $60,000 and have a life of at least three years at a production rate of 200 tons per day.

GENERAL GEOLOGY

REGIONAL GEOLOGY

The claims of the Cache Creek Silica Company are underlain by metamorphosed sedimentary and volcanic rocks belonging to the Cache Creek Group of Permian age. East of the Thompson River these rocks have been intruded by the Guichon Creek granitic bodies and along the Fraser River, north and south from Lytton, by the Mount Lytton granodioritic bodies. These multiple intrusions have greatly dislocated the sedimentary and volcanic formations of the Cache Creek Group and in addition have caused these rocks to locally change to greenstones, marbles, quartzites and schists by various metamorphic processes. In the Ashcroft district the Cache Creek formations strike about N20°W and dip vertically to steeply west. From the Thompson River six miles upstream of Spences Bridge to at least 20 miles north of Cache Creek, in a N20°W direction, the Cache Creek Group rocks occur in a band from four to twelve miles in width with the eastern edge lying approximately along the Caribou Highway. The eastern half of this band is comprised of greenstones and schists and otherwise altered thin-bedded sedimentary and volcanic rocks and the western half is comprised of limestone designated as the Marble Canyon Formation. The Cache Creek Silica Company property lies within the belt of schists about three miles east of the limestone contact (Figure 1).

GEOLOGY OF CACHE CREEK SILICA COMPANY CLAIMS

Between the Thompson River and the Venables Valley at Oregon Jack Creek the band of the Cache Creek Group rocks east of the limestone contact is comprised of five interfingering bands of different rock types (Figure 1). From the limestone contact eastward to the Thompson River these bands

Reference: Duffell, S. and McTaggart, K.C., Ashcroft Map Area, Mem. 262, Geological Survey of Canada, 1952.

GENERAL GEOLOGY (cont'd):

consist of the following general rock types:

Principal Rock	Width of Band
1. Andesite - locally schistose	±6300 ft.
2. Quartzite and red quartz feldspar schist	±3200 ft.
3. Andesite and green schist	3000 - 4200 ft.
4. Quartz-sericite schist	1300 - 2000 ft.
5. Andesite-gabbro	±4200 ft.
6. Red quartz-feldspar schist	±4500 ft.

North of Oregon Jack Creek the andesite-gabbro band, #5 in the above list, is split into two narrow bands which encompass a lense of red quartz-feldspar schist.

The schist bands have been developed by metamorphism from bands of quartzite and andesite and can be seen to grade into these rock types at several locations. Several of the schist bands in addition have been silicified to the extent that they are now composed of over 60 percent chalcedonic quartz. In addition, at least two of the silica schist bands have been incipiently granitized and thus transformed into a quartz-feldspar schist.

The original discovery outcrop is located on the highway on a quartz-sericite schist band, #4 in the above list. To the west this schist changes within a few tens of feet from a white, papery, quartz-sericite rock to a greenish, more massive, cherty, quartz rock.

The bands of different rock types are continuous in general but in detail they split or end abruptly or grade into one another. The discovery band of white quartz-sericite schist extends in a N20°W direction from the Thompson River at Spatsum to Oregon Jack Creek, a distance of 3.6 miles, where it shifts abruptly to the east and thence extends N20°W for at least five miles (Figure 1). Most of the Cache Creek Silica Company claims lie along this band in the vicinity of Oregon Jack Creek.

ROCK TYPES

VOLCANICS - Most of the greenstones in the area are massive

ROCK TYPES (cont'd):

volcanic rocks of andesitic composition and, locally, derived green chlorite schists.

South of Oregon Jack Creek the andesitic rock appears to be intruded by an irregular body of medium crystalline dark green gabbro. Exact relationships of the two rock types are difficult to determine because of poor exposures.

QUARTZITE - Northeast of Venables Lake a band of quartzite crops out but it grades to the southeast into a quartz-feldspar schist. The quartzite is a banded, gray and white, hard cryptocrystalline rock that is actually more nearly a chert.

WHITE SILICA SCHIST - A band of distinctive, white or rusty papery schists runs through the middle of the Cache Creek Silica claims and continues southward across the Oregon Jack Creek Indian Reservation to Spatsum. It also extends northward for at least three miles.

Microscopic examination of this rock type reveals that it is comprised of quartz "eyes" (porphyroblasts) (20% of rock), occurring in a groundmass composed of extremely fine grained cherty quartz, (45% of rock), and platey sericite (25% of rock). Most of the remainder of the rock is made up of dolomite and minor accessory minerals.

The sample chosen for thin section examination was identical in appearance with the sample that was assayed originally. The above mineral identification corresponds roughly with the analysis as follows:

Analysis		Mineral
Silica (SiO_2)	64.46%	Quartz
Alumina (Al_2O_3)	10.51	Sericite (K, Al, OH, SiO_2)
Iron (Fe_2O_3)	3.07	Limonite ($2Fe_2O_3 \cdot 3H_2O$) rusty mottling
Calcium Oxide (CaO)	5.32	Dolomite ($CaCO_3 \cdot MgCO_3$)
Magnesia (MgO)	3.68	

ROCK TYPES (cont'd):

Analysis		Mineral
Sodium (Na_2O)	2.65	Feldspar ($NaAlSi_3O_8$)
Potash (K_2O)	1.01	Sericite
Ignition Loss	9.20	CO_2 and Hydrous minerals (talc, sericite, limonite)

Three subsequent analyses of typical white schist returned an even higher purity of silica and less calcium and other impurities. (Table 1).

GREEN-SILICA SCHIST - Immediately to the west the white schist grades into a dense, cherty, pale green coloured phyllitic schist. This rock is comprised essentially of cherty silica but has a higher proportion of green minerals and tends to be less schistose than the white paper schists.

The green silica schist occurs in a wide band beside the white schist band throughout the length of the property.

Analysis of this rock indicates that it is essentially identical to the white schist in composition, if not a little purer. Comparative analysis is as follows:

	White Silica Schist	Green Silica Schist
Silica	64.4%	74.02
Alumina	10.51	10.70
Iron	3.07	2.69
Calcium Oxide	5.32	3.45
Magnesia	3.68	1.76
Soda	2.65	2.85
Potash	1.01	1.10
Ignition Loss	9.20	3.32

It is apparent that the principal mineralogical difference between the green schist and the white schist is that the green schist has less magnesia, calcium, iron, and carbonate (ignition

ROCK TYPES (cont'd):

loss, CO_2) and proportionately more silica. This composition is readily satisfied by subtracting dolomite ($CaCO_3 \cdot MgCO_3$) and limonite ($2Fe_2O_3 \cdot 3H_2O$) from the white schist and substituting quartz. In general, however, the two rock types are essentially the same in composition but a little different in form, (ie), the white schist has been subjected to more tectonic pressures and consequently is more schistose.

FELDSPAR-SILICA SCHIST - Two major bands of a mottled red and white, only slightly schistose, hard rock occur on both sides of the white schist band but are separated from it by bands of andesite and chlorite schist (Figure 1). This red and white rock is finely crystalline and has the appearance in many places of an aplitic rock. In one place it was seen to grade into a granitic rock. It also grades into green schist and into quartzite at different places.

Microscopic examination of this rock reveals that it is essentially the same as the white silica schist except for the addition of large feldspar crystals, (albite), in the fine quartz groundmass. In addition, the dolomite and sericite of the white schist are absent and some muscovite and biotite have appeared. The rock is cut by microscopic veinlets of hematite (Fe_2O_3). It would appear that this rock is a granitized phase of the silica schists.

Analysis of this rock indicates confirmation of the above mineralogical differences. The feldspar-silica schist has less calcium, magnesia, potash and ignition loss than the white schist and this deficiency is made up by an increase in silica and sodium. This indicates that there has been a decrease in dolomite and sericite with a corresponding increase in albite and quartz.

ROCK TYPES (cont'd):

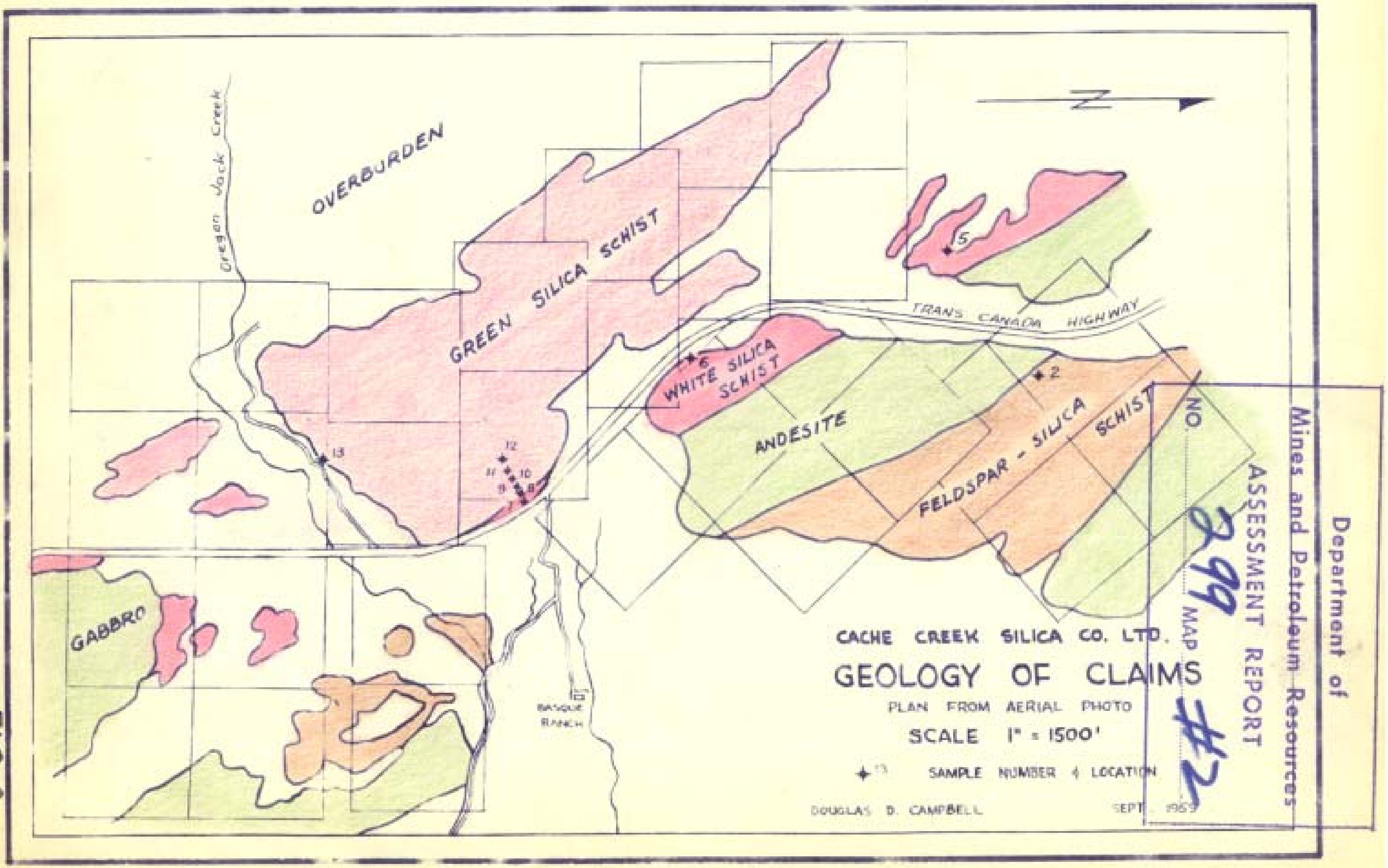
It is evident from microscopic examination and from chemical analyses that all the above-described schists and variations of them in the area are essentially the same rock type in composition but somewhat different in texture and colour. The principal mineralogical variation is apparently that of minor increases or decreases from one rock type to the other of dolomite, sericite and quartz. From the analyses made of all the schist types it is also apparent that most, if not all, of them are potential silica ore (Table 1).

It is apparent from the analyses that the amount of red and brown iron oxide staining the surface of the schists is a feature of the oxidation of the inherent iron in the rock and does not indicate an addition of iron. Thus the very rusty schists do not generally contain any more iron than the white schists.

TABLE I

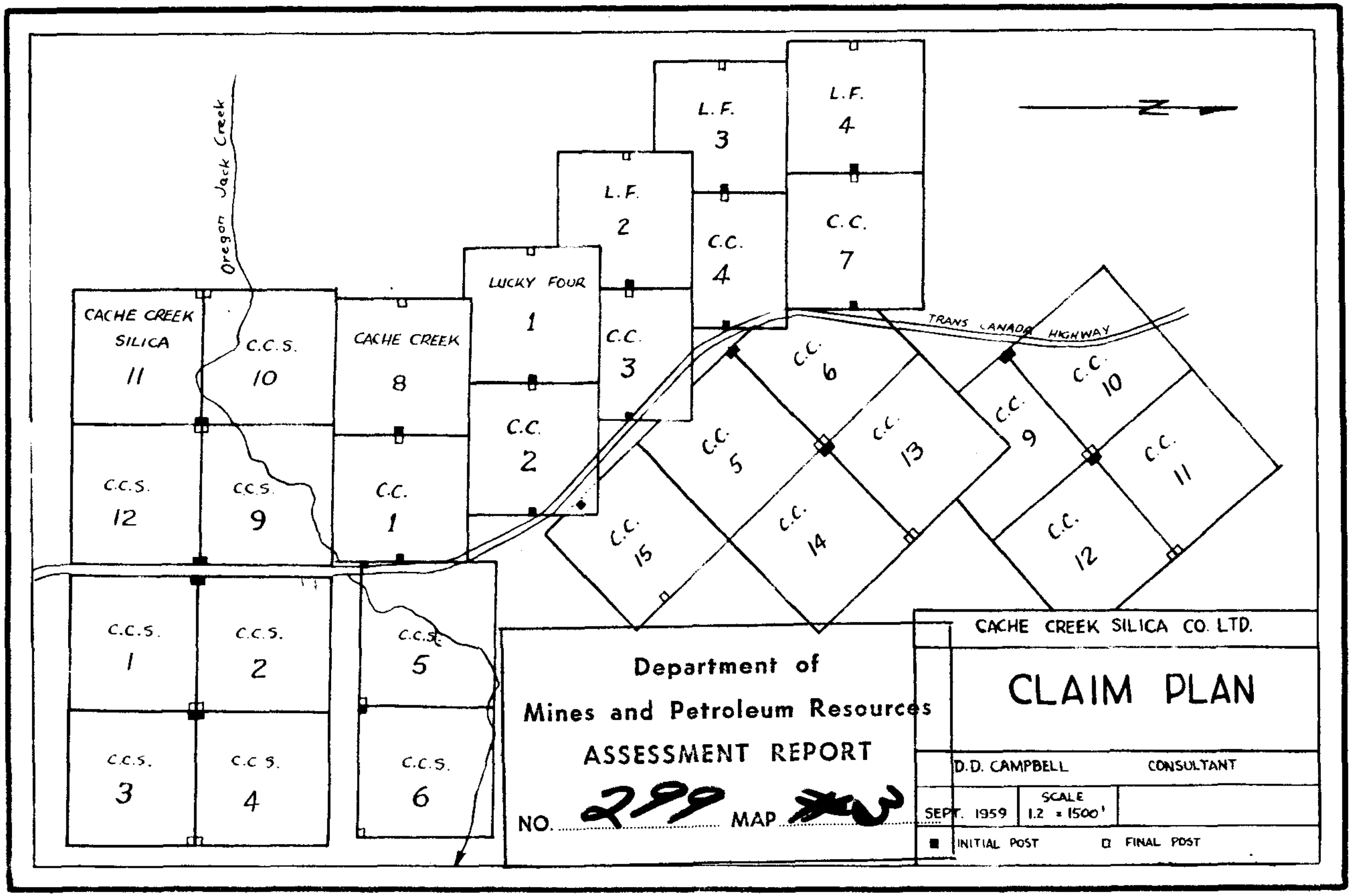
	WHITE SILICA SCHIST					GREEN SILICA SCHIST			FELDSPAR-SILICA SCHIST	AVERAGE (-#13)
Sample No.	July 6	#5	#6	#7	#9	#8	#10	#12	#13	
Loss on Ignition	9.20	3.95	2.50	8.53	4.70	3.32	0.94	0.81	1.13	4.24
Silica (SiO_2)	64.46	71.05	77.90	67.54	72.52	74.02	76.02	82.22	79.92	73.21
Alumina (Al_2O_3)	10.51	12.02	11.42	8.51	11.90	10.70	12.22	8.26	9.41	10.70
Iron (Fe_2O_3)	3.07	4.43	2.05	2.40	3.20	2.69	2.55	3.06	3.13	2.93
Calcium oxide (CaO)	5.32	0.70	1.05	8.65	1.90	3.45	1.05	1.01	1.30	2.89
Magnesia (MgO)	3.68	6.08	2.26	2.07	2.06	1.76	1.42	1.29	1.32	2.74
Soda (Na_2O)	2.65	0.29	0.42	1.08	2.85	2.85	5.65	2.99	3.58	2.33
Potash (K_2O)	1.01	1.38	2.25	1.15	0.83	1.10	0.13	0.26	0.17	1.01
Undetermined	0.10	0.10	0.15	0.07	0.04	0.11	0.12	0.10	0.04	0.098

Analyses by G. S. Eldridge & Co. Ltd., Vancouver, B. C.



OVERBURDEN
Oregon Jack Creek
GREEN SILICA SCHIST
WHITE SILICA SCHIST
TRANS CANADA HIGHWAY
ANDESITE
FELDSPAR - SILICA SCHIST
GABBRO
BASQUE RANCH
N
CACHE CREEK SILICA CO. LTD.
GEOLOGY OF CLAIMS
PLAN FROM AERIAL PHOTO
SCALE 1" = 1500'
SAMPLE NUMBER & LOCATION
DOUGLAS D. CAMPBELL
SEPT. 1959
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 399 MAP #2

FIG. 2



Oregon Jack Creek
CACHE CREEK SILICA 11
C.C.S. 10
C.C.S. 12
C.C.S. 9
CACHE CREEK 8
C.C. 1
LUCKY FOUR 1
C.C. 2
L.F. 2
C.C. 3
L.F. 3
C.C. 4
L.F. 4
C.C. 7
N
TRANS CANADA HIGHWAY
C.C. 6
C.C. 5
C.C. 13
C.C. 15
C.C. 14
C.C. 9
C.C. 10
C.C. 11
C.C. 12
C.C.S. 1
C.C.S. 2
C.C.S. 3
C.C.S. 4
C.C.S. 5
C.C.S. 6
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 299 MAP 3
CACHE CREEK SILICA CO. LTD.
CLAIM PLAN
D.D. CAMPBELL
CONSULTANT
SEPT. 1959
SCALE 1.2 = 1500'
INITIAL POST
FINAL POST

FIG. 3

ECONOMIC GEOLOGY

DEFINITION OF ORE

The original analysis of the white silica schist obtained by Mr. Barber assayed 64.46% silica, 10.51% alumina and, according to potential users, reasonable limits of impurities. The impurities that have a critical effect on the uses of the ore are reported to be iron, magnesia and calcium. It has been reported by Mr. Barber that enough of these impurities can be removed by simple treatment of the ore so that the shipping product is within tolerable limits for the users. With the acceptance of the original analysis as being ore material, considering the foregoing limitations, then it is evident from the eight subsequent analyses that essentially all of the types of schist on the property are also ore material.

A complete list of all the analyses made to date is given in Table #1. The locations of the samples taken for these analyses are shown in Figures 1 and 2 accompanying this report. Descriptions of the samples are given in the Appendix.

LOCATION OF ORE

With the white silica schist and the green silica schist accepted as ore material then the central schist band shown on Figure 1 is all potential minable reserve. In addition, if the feldspar-silica schist is also acceptable as ore then the western schist band is also potential reserve.

Considering the central schist band as the best ore as far as proximity to railroad is concerned then the western sixteen claims of the Cache Creek Silica Company are all underlain by ore (Figure 2).

The continuation of the central schist band toward the north is heavily covered by overburden.

ECONOMIC GEOLOGY (cont'd):

The continuation of the central schist band toward the south narrows considerably and lies almost wholly within the Oregon Jack Creek Indian Reservation (Figure 1).

Considering the availability of existing roads the most advantageously located ore is that lying near the intersection of Oregon Jack Creek with the Trans Canada Highway, (ie) on the Cache Creek Silica claims #2, 4, 5, 6, 9, 10, 11 and 12 and the Cache Creek claims #1, 2, 3, 4, and 8. (Figures 1 and 2).

ORE RESERVES

The schist bands on the property are continuous for miles and dip vertically. They are traceable over a vertical range of at least 500 feet, from south to north. With these indications, it is obvious that the ore material will continue to depth for at least several hundreds of feet.

In view of the fact that the ore material completely underlies entire claims it is straightforward to calculate that each claim contains about 173,000 tons of ore per vertical foot.

Calculation: $\frac{1500 \text{ ft.} \times 1500 \text{ ft.}}{13 \text{ ~~tons~~ cu.ft./ton}}$ = 173,077 tons per vertical foot.

If it is assumed that the ore will extend to depth at least 10 feet, then each claim is underlain by over 1 1/2 million tons. If this is multiplied by six claims, (closest to highway and covered by little or no overburden), then the property has a ready potential reserve of about 9 million tons.

It is, of course, entirely possible that some bands of the schist will not be as acceptable as others as ore, in this case selective mining can be easily instituted according to detailed assays made on the property. This will be entirely governed by the requirements of the users.

RECOMMENDATIONS

CONFIRMATION OF RESERVES

Because of the nature of the ore rock and its ease of identification, as well as the abundance of outcrops on the claims along the western side of the highway, there is little need for further work to confirm ore reserves.

It is suggested, however, that when the quarry area is chosen it should be examined in detail and sampled at a fairly close interval.

It is also suggested that the geology of the property be mapped in more detail than done for this report. If this is done on a scale of about 500 feet per inch it will provide sufficient control for all future operations. This would necessitate the preparation of a control map that could be done by Aero Surveys from existing B. C. Government air photos or by a ground crew. Such a topographic map would be of great assistance in planning and conducting the operation.

If subsurface samples are desired of the most likely rock for mining, then one diamond drill hole could be collared near the highway on the discovery outcrop and drilled to the westward at an inclination of 20 degrees below the horizontal for a distance of 500-1000 feet. Such a hole would crosscut the ore rock at the most likely place for a quarry. It is emphasized that because of the abundant exposures available on the surface such a hole would be more of a luxury than a necessity.

Judging by the great continuity of the silica rock and its consistent composition, attested by hand lens examination and confirmed by assays, it is practically a surety that very little selective mining and control sampling will be necessary in the quarry. The only exception will be the separation of rock from the occasional dike, one of which crosses Cache Creek #2 MC.

QUARRY PREPARATION

It is suggested that a quarry be excavated on mineral claims Cache Creek 1, 2, 3 or 8 because of their easy access and the negligible amount of

RECOMMENDATIONS (cont'd):

overburden covering them. Stripping would be the removal of a few feet or less of soil.

It is felt that the excavation of the ore material will necessitate drilling and blasting but because of the schistose nature of the rock large tonnages will be broken with relatively light charges.

If a quarry is excavated on the above suggested claims they can be started from the flat against a rising face. There need be no excavation of a pit in the foreseeable future. The hill on the claims west of the highway contains abundant reserves and need only be benched out.

CLAIMS

It is clearly evident from the geological mapping that the claims underlain by greenstone will provide no ore reserves and may as well be discarded in preference to more favourable ground. Such claims are Cache Creek Silica #1, 3, and 4, and Cache Creek #13 and 14.

It is recommended that after the claims are surveyed any fractions and the ground north of Cache Creek #4 and 7 M.C.'s be staked.

It is also suggested that the band of schist extending to the south through the Indian Reservation be claimed if possible.

PLANT INSTALLATION

The separation plant should be located near the highway, near the quarry and near Oregon Jack Creek. A location on Cache Creek #1 M.C. would suit these requirements provided surface rights are obtained. The haul from quarry to mill would be by conveyor or truck, depending on the tonnages involved, and the concentrate from the mill would then be trucked a distance of about four miles to the CNR siding on the Thompson River. The existing road to the siding will have to be dozed out and graded over much of its length and one bridge be replaced over the lower part of Oregon Jack Creek.

At the CNR siding a bin or stockpile area with a loading chute will have to be constructed. The topography lends itself to the installation of

RECOMMENDATIONS (cont'd):

a stockpile area on the hill above the siding with a chute to the cars. Loading could be done by a small bulldozer or front end loader. The alternative would be the construction of a bin at the siding and manual loading through a chute.

COST ESTIMATES OF OPERATION

(Major Capital expenditures required for breaking,loading and transporting 200 tons of silica rock per shift)

The following table will give a general idea of the major items of equipment and their cost. A more detailed study with further enquiry into competitive prices for equipment should be made before actual purchases are made.

No provision has been made for roads from the pit to the railroad. Mr. Barber could get a better estimate of requirements and costs in the area. If a ten-ton truck is used considerable work would be required on the existing road and bridge.

Storage bins have not been included at the railroad terminal since they may not be required. If they are required, the frequency of car loadings and number of cars loaded each time would have to be known before determining size. For purposes of approximation a figure of $20.00 per ton of capacity can be used.

COST ESTIMATES OF OPERATION (cont'd):

Operation	Equipment	Dealer	Amount
Drilling	Thor Air Track Drill) used 500 C.F. Compressor)	Purves Ritchie	$ 13,500.00
	Steel 1 1/4" Round 10' 20' lengths - 10 sets	Purves Ritchie	420.00
	Timken T. C. Bits D thread 2 1/4" 20	Purves Ritchie	540.00
	Bit Sharpener	Purves Ritchie	463.00
	Aluminum Air Line - 100'	Purves Ritchie	125.00
	Couplings	Purves Ritchie	25.00
	2" Hose - 50'	Purves Ritchie	120.00
Blasting	Powder (Max. use 1 lb. to yd.) 1 month's supply Caps (1 mon. supply)	C.I.L.	650.00 50.00
	Powder Magazine		200.00
	Blasting Machine	C.I.L.	80.00
Loading	Model 123 Eimco Front End Loader (Could purchase used 1/2 yard shovel for $10,000.00)	Mine Equipment Co. Ltd.	24,000.00
Trucking	Model 1-U-D) used 10 ton Euclid)	Dietrich Collins	14,000.00
			$ 54,173.00

Say $60,000.00 including taxes and freight.

Respectfully submitted,

[signature]

Dr. Douglas D. Campbell.

DESCRIPTION OF SAMPLES

Number	
1	Cherty, white, rusty mottled, papery sericitic schist.
2	Crystalline, white, rusty, feldspar - silica, massive rock.
3	Cherty, green, sericitic schist.
4	Cherty, pale green, chloritic, pyritic, lineated, massive rock.
5	As #1 but extremely rusty.
6	As #1.
7	As #1 but not as mottled. Powdery.
8	As #3.
9	As #1 only red-brown with oxidation.
10	Cherty, pale green, slightly oxidized, mottled, massive "quartz-eye" rock.
11	Gray green, cherty chlorite phyllite.
12	As #10 only more schistose.
13	As #2.

Thin sections made of #13 and #5.

Analyses made of #5, 6, 7, 8, 9, 10, 12, 13.

A P P E N D I X

FILE NO. 29588

(E)

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PHONE MUtual 4-1267
CABLE ADDRESS "ELDRICO"

October 1, 1959

Dr. Victor Dolmage,
1119 Marine Drive,
Vancouver, B.C.

Attention: Dr. Douglas D. Campbell

Dear Sirs:

We have made analyses on eight samples of ore submitted and report as follows:

	#5	#6	#7	#8	#9	#10	#12	#13
Loss on Ignition	3.95	2.50	8.53	3.32	4.70	0.94	0.81	1.13
Silica (SiO_2)	71.05	77.90	67.54	74.02	72.52	76.02	82.22	79.92
Alumina (Al_2O_3)	12.02	11.42	8.51	10.70	11.90	12.22	8.26	9.41
Iron (Fe_2O_3)	4.43	2.05	2.40	2.69	3.20	2.55	3.06	3.13
Calcium Oxide (CaO)	0.70	1.05	8.65	3.45	1.90	1.05	1.01	1.30
Magnesia (MgO)	6.08	2.26	2.07	1.76	2.06	1.42	1.29	1.32
Sodium (Na_2O)	0.29	0.42	1.08	2.85	2.85	5.55	2.99	3.58
Potassium (K_2O)	1.38	2.25	1.15	1.10	0.83	0.13	0.26	0.17
Undetermined	0.10	0.15	0.07	0.11	0.04	0.12	0.10	0.04
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Respectfully submitted,
G.S. ELDRIDGE & CO.LTD.

H. Sharples

H. Sharples
Chief Assayer

HS*jl

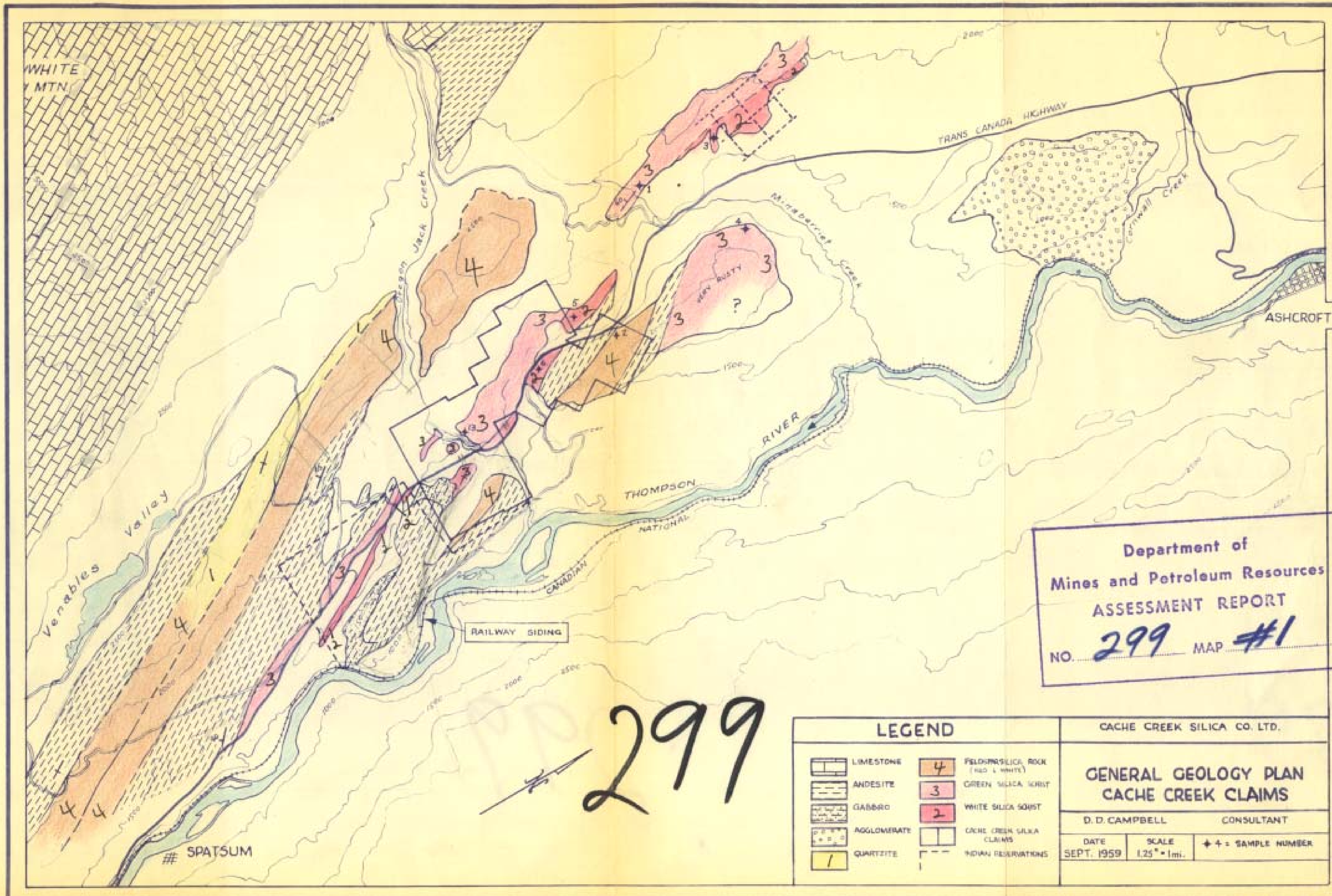
WHITE MTN
TRANS CANADA HIGHWAY
Oregon Jack Creek
Minaberriet Creek
Cornwall Creek
ASHCROFT
VERY RUSTY
THOMPSON
RIVER
CANADIAN NATIONAL
RAILWAY SIDING
Venables Valley
SPATSUM
Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 299 MAP #1
299
LEGEND
LIMESTONE
ANDESITE
GABBRO
AGGLOMERATE
QUARTZITE 1
FELDSPAR-SILICA ROCK (RED & WHITE) 4
GREEN SILICA SCHIST 3
WHITE SILICA SCHIST 2
CACHE CREEK SILICA CLAIMS
INDIAN RESERVATIONS
CACHE CREEK SILICA CO. LTD.
GENERAL GEOLOGY PLAN
CACHE CREEK CLAIMS
D. D. CAMPBELL CONSULTANT
DATE SEPT. 1959
SCALE 1.25" = 1 mi.
✦ 4 = SAMPLE NUMBER

FIG. 1