

LOG NO: 0130

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GEOLOGICAL SUMMARY REPORT

VALENTINE PROPERTY

Duncan Lake Area  
Slocan Mining Division B.C.

Latitude: 50°25' Longitude: 113° 57'

for

RPW Holdings Ltd.,  
RR#2  
NELSON, B.C.  
V1L 5P5

by

E.A. Lawrence, P.Eng.,  
Consulting Geologist

S13 C17 RR1

WESTBANK, B.C.,  
V0H 2A0

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

January 5, 1999

**18,323**

FILMED

Gold Commissioner  
RECEIVED  
M.R. ...  
KASLO, B.C.

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GEOLOGICAL SUMMARY REPORTVALENTINE PROPERTYDUNCAN LAKE AREAINTRODUCTION

The following report is based on personal observations made on the RPW Holdings Ltd. claims located at Duncan Lake, B.C. The purpose of this work is to prepare plans showing the extent of the talc-bearing zones on the accessible areas of the property; to determine whether sufficient talc of carving quality exists to warrant further work; to make recommendations for further evaluation of the property, if warranted.

The work leading to the preparation of this report was carried out over the summer and fall of 1988.

GEOLOGICAL SUMMARY REPORT  
VALENTINE PROPERTY

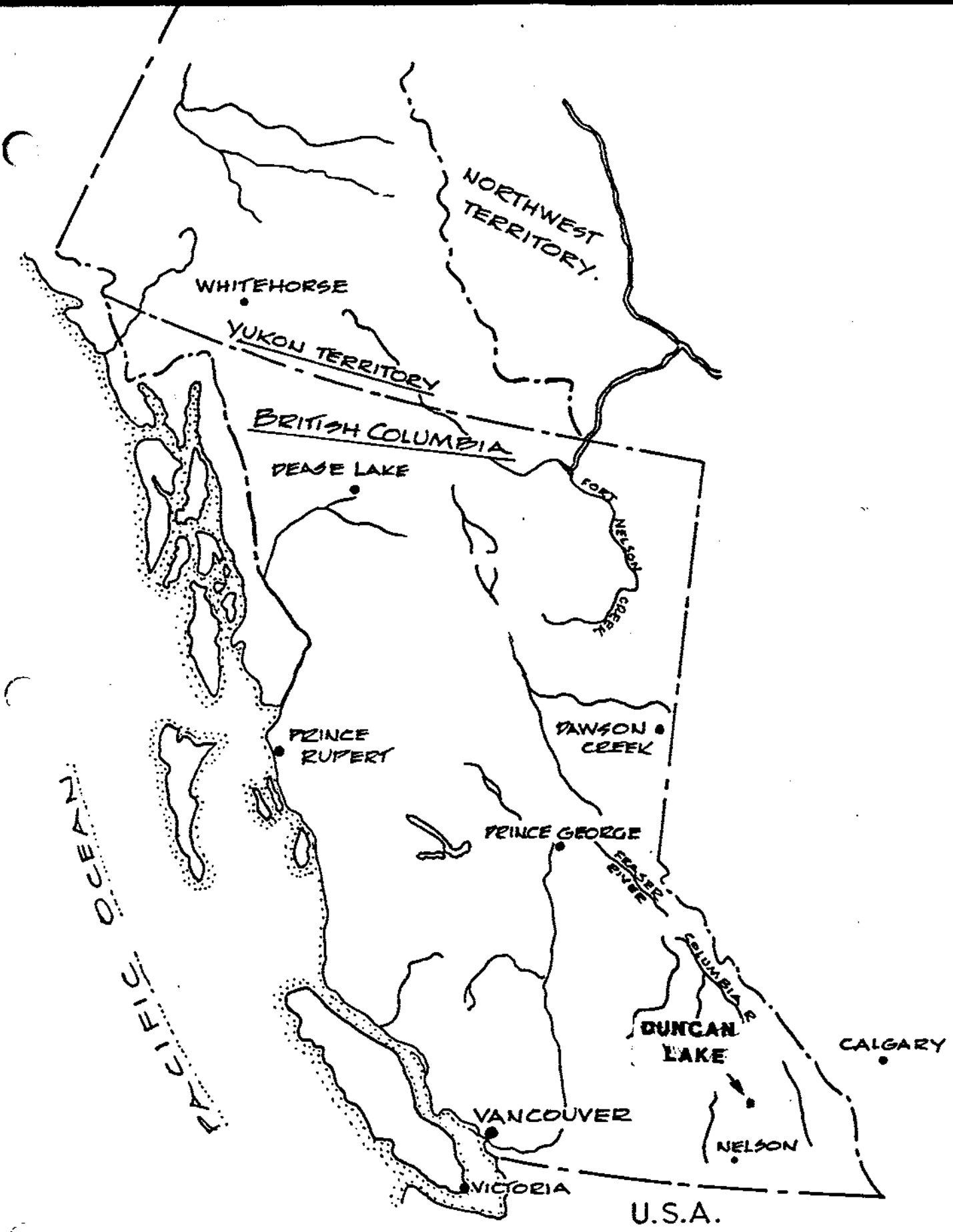
DUNCAN LAKE AREA  
SLOCAN MINING DIVISION, B.C.

RPW HOLDINGS LTD.

SUMMARY

The Valentine property near Duncan Lake B.C. has been examined to evaluate the potential for talc of carving quality. The deposit consists of three zones of talcose rock. Only one zone (the Main zone) was examined in detail. The Main zone is nearly vertical, varies from 18 to 30 meters thick, is seen in outcrops over a strike length of 900 meters, and over a vertical range of 200 meters. This zone is hosted in the Lower Index formation which consists of fine grained grey to green garnet mica schists. The attitudes of the zones is generally parallel to the schists but is also reported to crosscut bedding in some locales. Carving quality talc has been extracted in small quantities for local use for many years. RPW Holdings of Nelson plans to operate a small quarry if quality meets carvers specifications. Preliminary response indicates rock of suitable quality in pieces up to 0.1 meters thick, but fracturing is a problem in larger specimens. Some of this may be due to shearing which is close to the source of the samples examined.

A follow-up program has been recommended to further evaluate this deposit.



**LOCATION MAP**

SCALE: 1" = 140 MILES APPROX.



figure 1.

### PROPERTY OWNERSHIP

The property consists of a 20 unit mineral claim, the Valentine, staked by modified grid system, and one claim staked by the two-post system, the TED#1.

Figure 2 shows the location of the claims.

The status of the claims at time of writing is as follows:

				<u>expiry</u>
Valentine	MGS	20 units	Record #5580	7 Dec 90
TED #1	2-post	1	Record #5694	19 May 97

### PHYSIOGRAPHY

Duncan Lake is located in the north-south trending Purcell trench. The Purcell mountains rise steeply to the east, some peaks reaching elevations of 10,000 feet. The Valentine property is located on the steep slope of the valley, commencing at the shore of Duncan Lake. Approximately 200 meters south of the lake, a bench area of lower slope with some narrow flatsections, extends to about 900 meters from the lake. From this point, the slope steepens somewhat but is still easily traversed on foot.

Vegetation consists mainly of thick young evergreens. Logging has removed most of the mature timber. No creeks flow through the claim area. North Creek is the closest stream, located approximately 5 kilometers to the south-east.

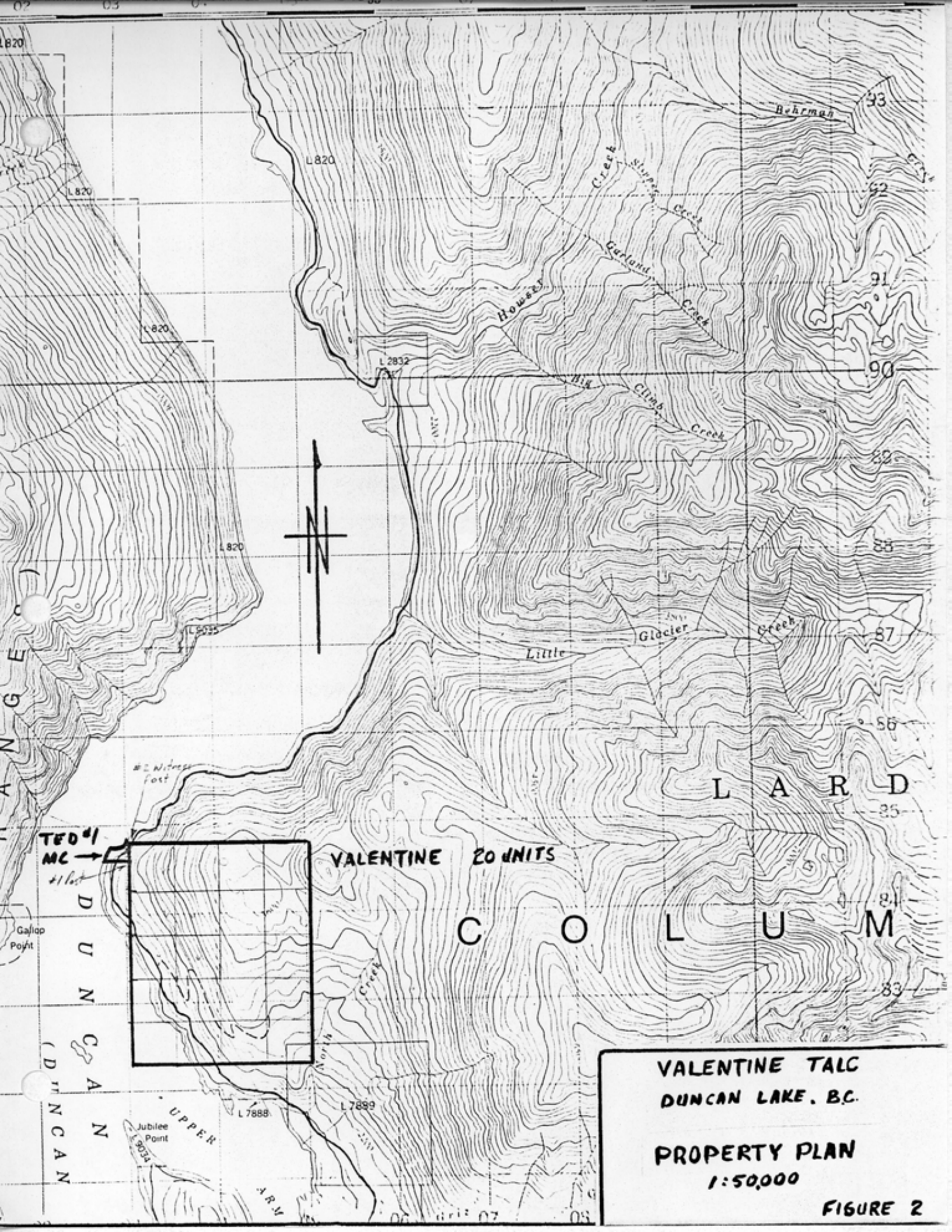
### LOCATION AND ACCESS

The property is accessible by good all weather logging road. This road branches east off Highway 31 immediately south of the Cooper Creek bridge, then carries on along the east shore of Duncan Lake. The property is located near the 35 kilometer post.

### PREVIOUS WORK

It is apparent that some geological work has been done on the property in the past. Collars of two near vertical holes (diamond drill holes?) about two inches in diameter, but of unconfirmed depth, were found on the 'Upper' area. According to M. MacLean (Talc and Pyrophyllite in B.C., 1987) a magnetometer survey was carried out on the showings. However, no file could be located on this property during a check with Mineral Resources Division office in Nelson. Personal communication with the late Ted Savage of Nelson indicated that one hole was cored to a depth of 500 feet (152 meters), in talc to that depth. One small pit (approximately 1m by 1m) where carving quality talc had been cut out with a chain saw was found in the 'Upper' area near station X8. In 1987, RPW Holdings, under the direction of Mr. Savage, removed a small tonnage of talc from the 'Bluff' area on the Duncan Lake logging road. Selected samples were sent to soapstone carvers in the Northwest Territories for their evaluation. The dense black variety was well received. Much of the material however, was weathered and fractured, making it less suitable for carving.





VALENTINE 20 UNITS

VALENTINE TALC  
DUNCAN LAKE, BC.

PROPERTY PLAN  
1:50,000

FIGURE 2

### OBJECT OF THE PRESENT WORK

The object of the present work was to evaluate the known occurrences of talcose material on the Valentine mineral claim as follows:

- i) to delineate the 'Main' talcose zone in the area from the Duncan Lake logging road to a point about 900 meters to the south.
- ii) to differentiate the talc occurrences within the zone by color, and where possible, by carvability.
- iii) recommend further evaluation methods.

### WORK COMPLETED IN 1988

Commencing in April of 1988, a chain and compass reconnaissance line was run to tie together the showings at the 'Bluff' area with those at the 'Upper' area. Vertical angles were measured in order to determine rough elevation differences. Geologic mapping followed at a scale of 1:1200, in the immediate vicinity of the reconnaissance line. (See Figure 4)

11 short test holes were drilled to a maximum depth of 0.30 meters throughout the map area to test for hardness beyond the surface weathering. With the light drill used it was not possible to penetrate unless the rock had a hardness near that of talc, thereby providing a means to differentiate between talc and schist.

Three talcose zones are apparent in the roadcut of the

WORK COMPLETED IN 1988 (CONTINUED)

'Bluff' area. Only the two easterly zones were mapped in the present work, with the greatest effort being expended on the most easterly zone 'Main' zone. During the prospecting and geological work, the Main zone was traversed from the Duncan Lake logging road (Bluff area) south to the Upper area, approximately 900 meters along strike. Differentiation of the talcose material was done by physical characteristics such as hardness, denseness, color, weathering, impurities, foliation and fracturing. As noted earlier, one of the objectives is to determine if there is carvable talc within the zone, and to determine if continuity and location with respect to the zone contacts is reasonably predictable.

Detailed mapping at a scale of 1:120 was done on the Bluff area exposures from station A to station C.

The exposures along the road in the vicinity of stations A and B were cleaned up utilizing a back-hoe/front-end loader and dump truck. Two truckloads of material were taken to Nelson for sorting, cleaning and sampling.

Hand trenching on the Main zone at the Bluff area near station B was carried out to further expose a section of higher grade material. A few hundred pounds of rock was extracted for use as samples, specimens, and test work.

## REGIONAL GEOLOGY

The Duncan Lake area contains complexly folded sedimentary and volcanic rocks in a low to medium grade of regional metamorphism. These rocks belong to the Hamill Group, Badshot Formation, and the Lardeau Group. Rare mafic dykes and amphibolitic sills occur in the area. No plutonic rocks are found in the area near the talcose zones.

## GEOLOGY OF THE VALENTINE TALC DEPOSIT

The talcose zones of interest occur on the eastern limb of the Howser syncline, within schists of the Lower Index formation. Dips of the schistose rocks vary from vertical to steeply west in the map area. Three talcose zones were observed along the roadcut of the Bluff area. With the data presently available, they are all nearly parallel to the regional trend, however crosscutting features are also found. It is possible that the talcose zones are altered mafic sills. Present data is insufficient to clarify this uncertainty.

The following descriptions apply to the Main zone, since this is the only zone where detailed mapping was done. One fact that was apparent was that the talcose material has a variety of characteristics and qualities.

As seen in the Bluff area, where the best exposures are found, the highest quality material tends to be located within several meters of the contacts. This material also

Figure 3  
**GEOLOGICAL MAP  
 OF THE  
 DUNCAN LAKE AREA**

Geology by James T. Fyles 1960-1963



**LEGEND**

- — — — — GEOLOGICAL CONTACT  
defined, approximate, assumed
- ~~~~~ FAULT  
defined, approximate, assumed
- — — — — ATTITUDE OF FOLIATION  
prominent foliation planes undifferentiated  
inclined, vertical
- — — — — ATTITUDE OF BEDDING  
inclined, vertical
- — — — — ATTITUDE OF CLEAVAGE AND SCHISTOSITY  
inclined, vertical
- — — — — Plunge of lineations and axes of minor folds
- Ad.t Prospect
- X Prospect
- XQ Marble quarry
- — — — — Main road
- - - - - Side road
- - - - - Trail
- Building

Scale 0 1 2 Miles

Contour interval 500 feet

**LEGEND**

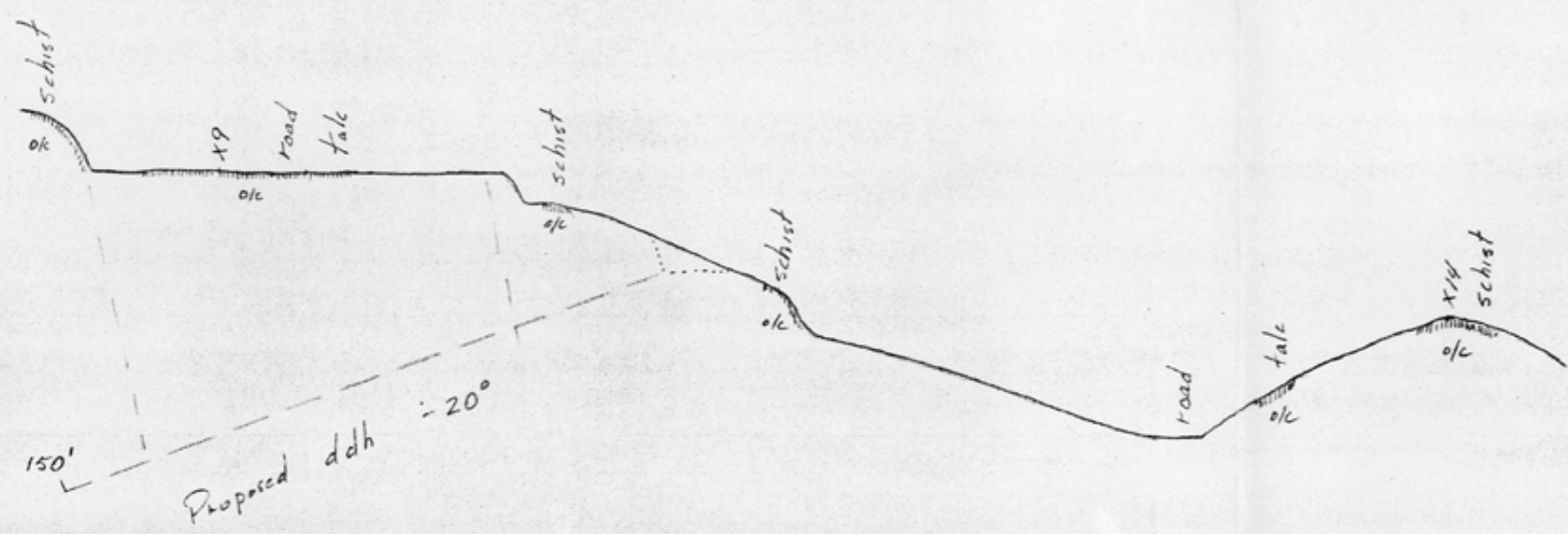
- Areas of little or no outcrop.
- 6 BROADVIEW FORMATION  
Green and grey quartzite, greywacke, grit and fine grained mica schist.
- 5 JOWETT FORMATION  
Fine grained green chlorite schist.
- 4 TRIUNE, AJAX, AND SHARON CREEK FORMATIONS  
4c- dark grey to black argillite. 4b- massive grey quartzite.  
4a- grey and black quartzite.
- 3 INDEX FORMATION  
Interlayered fine grained green and grey schist, minor limestone and quartzite.  
UPPER INDEX: mainly fine grained green schist.  
3d- chlorite schist.  
3c- green mica schist and garnet mica schist.  
LOWER INDEX: mainly fine grained grey schist.  
grey and white limestone, brownish quartzite,  
3b- minor green and grey schist.
- 3a Fine grained grey mica schist and garnet mica schist.
- 2 BADSHOT AND MOHICAN FORMATIONS  
Grey and white crystalline limestone and dolomite  
and interlayered limestone and mica schist.
- 1 MARSH ADAMS FORMATION  
Grey and brown micaceous quartzite, mica schist and white quartzite.
- Amphibolite

GEOLOGY (CONTINUED)

tends to be sheared parallel to the contact. The talc in the contact areas is of good color and density for carving, but shearing has resulted in fine fractures which limit the size of carvable pieces. Colors are variable with grey, green, black, mottled, variegated varieties available. The texture of the contact area material usually is fine-grained and dense, readily amenable to polishing, where it is not sheared. The central area of the Main zone is more massive and blocky than the contact areas, with fracture spacing up to one meter. This material tends to be less competent, possibly due to weathering. Mottling due to oxidation of garnet phenocrysts is common. This rustiness tends to give the rocks a different color than the contact areas, with colors ranging from buff to reddish brown. The weathering also tends to reduce its polishability. Surfaces usually are too 'crumbly' to take a good polish. However, where compact material can be found in this area, it polishes to an attractive mahogany-like color.

Differentiation of the natural outcrops south of the bluffs is difficult due to weathering. It was not possible to get beneath the weathering zone sufficiently to determine true color and carvability. Testing to a depth of about 0.3 meters with a 3/4 inch concrete drill confirmed whether the rock was talcose or schist. Only in one small <sup>r</sup>viously dug hand pit near station X8, which got below the surface by about 0.5 meters, was it possible to examine material that wasn't weathered. This particular occurrence was a fine-grained, grey talc suitable for carving.

VERTICAL SECTION  
 through x9-x14  
 looking sw'ly



VALENTINE TALC		
SCALE: 1" = 40'	APPROVED BY	DRAWN BY EAL
DATE: 22 April 88		
MAIN ZONE - UPPER AREA		
		DRAWING NUMBER Figure 5

GEOLOGY( CONTINUED)

In the vicinity of stations X9 and X13, the log landing site, most of the exposed rock appeared similar to the weathered rock observed in the central area of the Main zone of the Bluff showings. Thus it is likely to be a medium-grained, brownish colored, massive variety. However, until this area can be tested at least 2 to 3 meters below the surface across its full width of about 30 meters, it cannot be stated with confidence what type of talc exists here. One negative feature noted in some outcrops was the occurrence of 10 to 15 centimeter lenses of white quartz within the talcose area. With the limited amount of out crop available, it is <sup>not</sup> known how extensive this situation is.

CONCLUSIONS

Based on the data gathered to date, it can be concluded that at least one talcose zone exists, extending southerly from the shore of Duncan Lake for at least 900 meters. Immediately south of the shore, on the roadcut of the Bluff area, talc of carvable quality exists in relatively narrow (1 to 2 meter) lenses along the contact acts. This material has good color characteristics and is fine-grained and dense. However, due to shearing, there is a tendency to fracture parallel to strike, resulting in few pieces being thicker than about 0.2 meters. In the central area of this zone shearing is less evident, thus larger blocks free from fractures should be available. This material however, is not as fine-grained as the contact areas, and thus is more difficult to polish. Colors are less variable also, being primarily browns.



CONCLUSIONS (CONTINUED)

In summary, there is sufficient talc exposed of carvable quality to justify more extensive sampling to verify quality and quantity.

RECOMMENDATIONS

To learn more about the deposit the following work is recommended:

- i) Bluff area (Main zone)
  - continue to extract the better carving quality contact rock, working to the south, to provide material for test work and sampling.
  - when the contact areas have been opened up another 2-3 meters to the south, the central area should be opened up to obtain adequate samples at a greater depth than presently available.
  - carry out more prospecting of the area immediately to the south of the road to confirm continuity this area to the Upper area.
  
- ii) Bluff area (westerly zones)
  - carry out more detailed geologic mapping and sampling of the roadcut to determine whether commercial quality material is available in these areas.
  - prospect to the south to confirm continuity in that direction.
  
- iii) Upper area (Main zone)
  - expose a section across the zone to a depth

RECOMMENDATIONS (CONTINUED)iii) Upperarea (Main zone)

of about 3 meters to evaluate quality of the un-weathered rock.

--drill two low angle diamond drill holes easterly from locations west of X9 and X13 to evaluate quality at a greater depth.

iv) -- carry out tests to determine the physical and chemical properties of the various talc types. This data will help evaluate the deposit for possible industrial uses.

v) -- trials to develop an efficient extraction method should also be carried out if possible. This will be helpful in future economic evaluations.

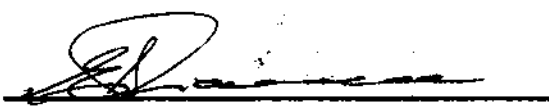
STATEMENT OF COSTSVALENTINE MINERAL CLAIMDUNCAN LAKE, B.C.Field personnel

Geologist	10½ days @ \$250/d	\$2562.50
Assistant	5 days @ \$50/d	250.00

Office Personnel

Geologist	4 days @ \$200/d	800.00
Typist		25.00

Vehicle rental(4x4)	1388 miles @ \$0.25/m	347.00
Food and accomodation		226.76
Gas drill rental	2 days @ \$50/d	100.00
Video rental (recording on-site geology etc.)		25.00
Supplies		130.41
Telephone		121.75
<u>Printing and photocopying</u>		<u>37.00</u>
TOTAL .....		<u><u>\$4631.42</u></u>


  
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 E.A. Lawrence, P.Eng.

4 January 1989

STATEMENT OF QUALIFICATIONS

I, E.A. Lawrence, of RRI S13 C17, WESTBANK, B.C.,

DO HEREBY CERTIFY

- 1) That I am a graduate of the University of British Columbia with a degree of B.A.Sc. in Geological Engineering (1959)
- 2) That all the technical work carried out in 1988 and included in this report, was done by me.
- 3) That I personally supervised all the non-technical work such as test-drilling; hand trenching; backhoe work.
- 4) That I am a registered Professional Engineer in the Province of British Columbia.



---

E.A. Lawrence, B.A.Sc., P.Eng.

Dated at WESTBANK  
in the Province of B.C.,  
this 5th day of January 1989

REFERENCES

- FYLES, J.T. (1964) Geology of the Duncan Lake Area, B.C.  
Department of Mines, Bulletin # 49
- MACLEAN, M. (1987) Talc and pyrophyllite in B.C.  
B.C. Mineral Resources Division, open 1988-19

DUNCAN LAKE  
1892 el.

(Claim Valid only to high water mark)

LCP

TED #1 MC

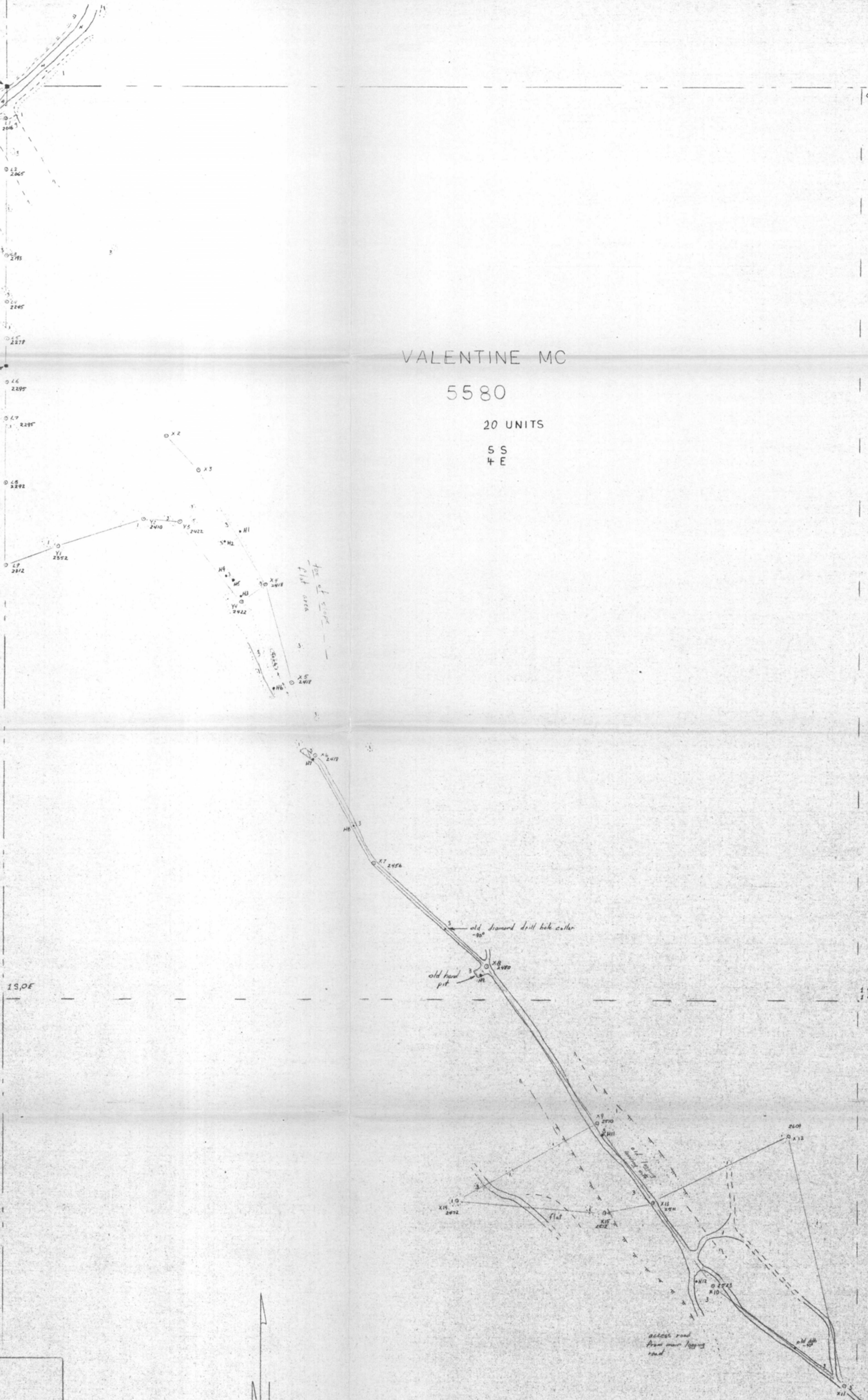
5694

VALENTINE MC

5580

20 UNITS

SS  
4E



15,0E

15,1E

**LOWER INDEX FORMATION**

Schist	1
Green Serpentine	2
Talc	3

——— GEOLOGICAL CONTACT  
 - ? - ? - INFERRED CONTACT

● X6 CHAIN-COMPASS STATION  
 2340 ELEV. (in feet)

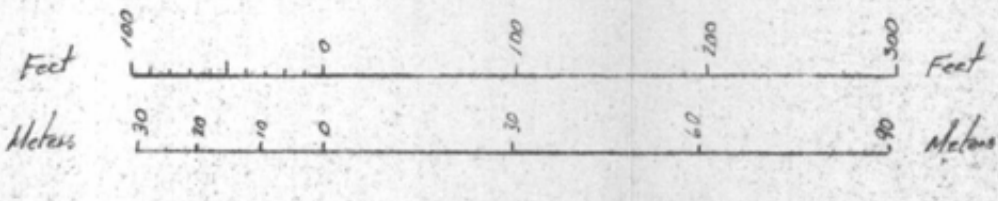
==== ROAD

● 1-15m TEST HOLE



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

18,323



DUNCAN LAKE TALC  
 SCALE = 1:100  
 DATE = 7 NOV 85  
 DRAWN BY EAL  
 GEOLOGY PLAN  
 VALENTINE CLAIM  
 Figure 4