

3917

82E/2E
GEOLOGICAL SURVEY

VAL 1 & 2 : MINT 5,7,8,9,10,14,15,16,
17,18,19

GREENWOOD M.D.

118-50 SW

4-8-72 : 8-8-72

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3917 MAP

For:

SILCAN RESOURCES LTD.
P.O. Box 816
208 Professional Bldg.
Lethbridge, Alberta.

By:

ALLEN GEOLOGICAL ENGINEERING LTD.
601 - 325 Howe Street
Vancouver 1, B.C.

September 18 1972.

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GEOLOGICAL SURVEY

VAL 1 & 2, MINT 5, 7-10, 14-19

GREENWOOD M.D.

B.C.

INTRODUCTION

The silica deposits south of Greenwood, on the north side of McCarren Creek have been under investigation for some years. The writer first examined the area in September 1969 and in late 1971 supervised a trenching and drilling programme on the silica showings. The geological survey was conducted by the writer August 4-8 inclusive, 1972.

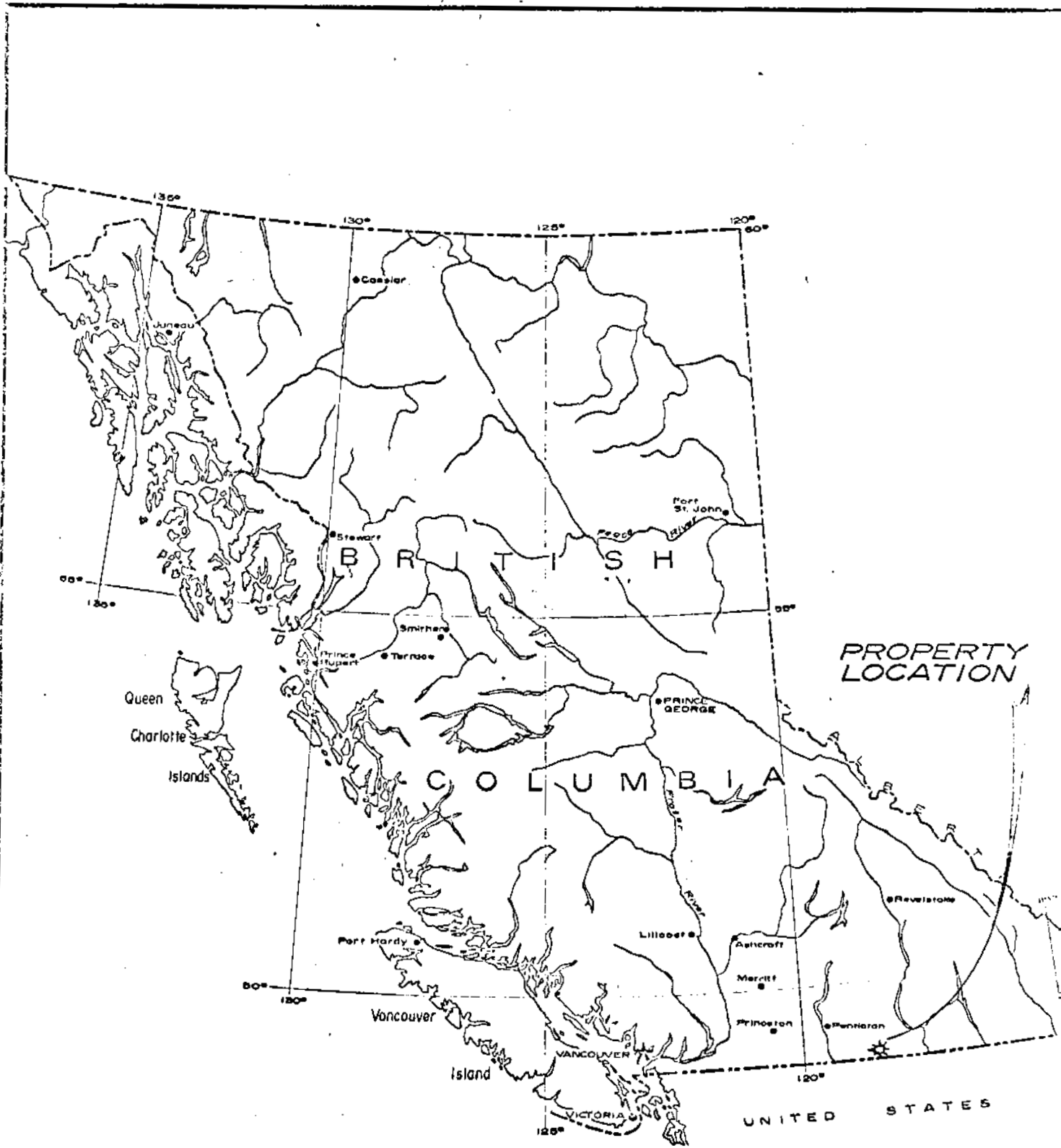
The object of the survey was to acquire as much information as available pertaining to the geology of the area included by the Val 1 and 2 and Mint 5, 7-10 and 14-19 claims.

LOCATION AND ACCESSIBILITY

The property is located in south central British Columbia. It is 3 miles north of the U.S. border and 4 miles south of Greenwood.

Geographic location is $49^{\circ}-02'-15''$ north and $118^{\circ}-39'-20''$ west.

Access is by a good secondary road which branches easterly off Highway #3 at Boundary Creek, 2.3 miles south of Greenwood. It is six miles by this road from the highway to the silica deposits on the property.



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
 No. 3917 MAP # 1

SILCAN RESOURCES LTD.	
LOCATION MAP	
SCALE: 1" = 136 Mls.	
Drawn by	Date 30.05.1972
Checked by	Drg no. S-1
ALLEN GEOLOGICAL ENGINEERING LTD.	

PROPERTY

The property is composed of the following mineral claims:

VAL 1 & 2	Record No's.	30286 and 30287
MINT 5, 7-10, 14-19	" "	30291, 30293-6, 30300-305
SIL 1, SIL 2 Fr., SIL 3-8,	Record numbers not yet available.	

TOPOGRAPHY

The property extends from the high ridge extending west from Mount Attwood, south to the cultivated area on McCarren Creek.

From the high point at elevation 5,200 feet on the northeast portion of the property, two southerly trending ridges extend into McCarren creek valley at an elevation of 3,800 feet. A small southerly flowing tributary creek crosses the eastern part of the property. On the western part of the property steep rocky cliffs alternate with flat terraces down to the 3,500 level.

GEOLOGICAL SURVEY

A geological survey was conducted over the Val 1 & 2, Mint 5, 7-10, 14-19 claims area by the writer. Pace and Brunton compass traverses were made over the property at close intervals.

Topographic and geologic maps and air photos are available for the area, and data from these were compiled onto a base map on a scale of 300 feet per inch.

One main road and numerous logging roads branching from this cross the area. The hydro and gas lines cross the southern part of the property.

Geological data from all outcrop areas was noted and mapped. Numerous rock specimens were acquired and photographs were taken for reference purposes.

GEOLOGY

Regional Geology

The Greenwood-Phoenix area has been mapped by the Geological Survey of Canada. Carboniferous and older volcanic and sedimentary rocks have been folded, faulted, and metamorphosed to phyllites, jasperoids and lime silicates. Greenwood is underlain by a stock of Cretaceous or earlier granodiorite, and numerous smaller dykes and irregular masses of diorite, gabbro, pyroxenite, and serpentine occur throughout the older rocks.

Tertiary volcanic intrusives and minor sediments occur in the Phoenix area. Sulphide deposits, mostly copper-gold-silver, associated with skarn, have been mined in the area. Quartz vein deposits occur throughout the area.

Local Geology

The map area is underlain by metamorphic rocks which have been intruded by dioritic and andesitic dykes. Large tension fractures are occupied by pure white silica.

Stratigraphy

Wide zones of dark phyllite alternate with black impure argillite and minor narrow bands of quartzite, schist and limestone. Although locally contorted, the attitude is uniformly northwest.

The phyllite constitutes more than 80% of rock underlying the map area, and has been divided into the following four categories.

1. Dark green to black phyllite is the most prevalent. It is a compact, fine-grained, massive rock with much biotite and chlorite and thin bands of light coloured siliceous material. It is locally highly contorted and in places weathers a rusty brown.
2. In alternate bands and intergrading with the above is a dark compact argillaceous phyllite. The argillaceous groundmass is very fine grained. Chlorite, biotite and sericite are distinguishable as the main constituents. Limited thin banding is cream to brown feldspar-quartz composition.

3. Light grey-green argillaceous phyllite shows wider banding than the darker types above described. It weathers light grey-green and contains calcaerous bands and vuggy lenses.
4. Light grey to brown phyllite is more micaceous and siliceous with abundant fine siliceous bands cut by vuggy calcite and opaque quartz stringers. This variety is not as abundantly exposed as the other phyllites.

Schist

Bands of talc schist, 5 to 10 feet wide, occur sparingly throughout the phyllites. This siliceous schist is light brown to grey, finely banded and strongly sheared. It is composed of talc, quartz, fine whitish mica and argillaceous material. Cubic pyrite occurs throughout.

Argillite

Fine-grained sooty black siliceous argillite occurs as a 50-foot band near the northeast corner of the property.

Limestone

One band of limestone occurs with phyllite on the ridge a short distance north of the property. This 10-foot section is composed of banded limestone and argillite, mottled finely crystalline light and dark grey limestone and light grey darker-weathering finely crystalline limestone.

Quartzite

On the high ridge at the north boundary of the property, to the east of the limestone strata, there is a 40-foot band of quartzite. It has the same attitude as the phyllite and limestone. It is a light grey cherty rock. Two almost perpendicular sets of fractures produce a surface blocky appearance.

Intrusive Rocks

Several vertical northeasterly trending dykes cut the sedimentary and metamorphic series. The dykes are andesitic, dioritic and gabbroic.

The andesite is dark grey to green, aphanitic except for scattered laths of a dark micaceous mineral. Chlorite appears to be the principal constituent. Most of these dykes are narrow.

The diorite dykes are larger than the andesite and range from medium to fine grained and light to dark grey. Biotite and hornblende are evenly distributed throughout a matrix of cream coloured to black feldspars and accessory minerals.

The gabbro dyke is composed of uniform grains of biotite, hornblende, augite and other ferromagnesian minerals, amounting to over 65% of the rock volume, in a matrix of light to dark crystalline feldspars, pyroxene and olivene.

Structure

The attitude of the sedimentary and metamorphic rocks on the property is uniformly northwesterly with steep northeasterly dips. Locally, such as in the vicinity of the silica deposits, the strike trends more to the west and the dips are in the 30 degree range. The general attitude is, however, demonstrated by the limestone, quartzite and schist horizon markers on the north boundary of the property.

Structure (continued)

One fault zone on the Mint 17 claim strikes northwest and dips 20 degrees northeast.

The dioritic intrusives strike northeast and are close to vertical whereas the minor andesite dykes observed strike northwest and appear to be vertical.

Two of the smaller silica bodies appear to terminate on the northwest side of a diorite dyke on the Mint 17 and 18 claims, whereas a silica lense on the Mint 16 claim strikes northwest through a diorite dyke and dips 30 degrees northeast.

On the Val 1 an andesitic dyke appears to cut the silica zone.

Silica Deposits

Three large and three small deposits of white high-grade silica have been observed and mapped on the property.

The large silica showings on the Val 1 and 2 claims have been partially exposed by trenching. A limited diamond drilling programme indicates that there may be two bodies of quartz or three, but additional exploratory work is necessary to ascertain the extent of these deposits.

The silica zone on the Mint 8 claim appears to be up to 70 feet wide. It has been partially exposed for 450 feet, but additional silica is indicated by sizeable angular quartz in the overburden. The attitude is not well defined.

West of the silica showings on the Val claims there is a 20-foot silica zone cutting a diorite dyke. The footwall of the silica body is clearly exposed and it strikes at 125 degrees and dips 30 degrees northeast. The length of this deposit is unknown.

In the southeast corner of the Mint 17 claim there is a body of silica exposed on the northwest side of a diorite dyke. It is intermittently exposed for 150 feet. The width varies from 20 to 30 feet where exposed.

On the Mint 18 claim there is an outcrop of silica lying on the northwest side of the same diorite dyke as noted in the preceding paragraph. The silica is 10 feet wide, but the exposure is limited and little data is available as to extent or grade.

Sampling of the silica on the Val claims indicates a grade of 99.3% SiO_2 for much of the deposit. The large deposit on the Mint 8 claim has not been sampled, but appears to be of similar grade.

SUMMARY AND CONCLUSIONS

The property is 6 miles by good secondary road up McCarren Creek. The McCarren Creek turn off is 2.3 miles south of Greenwood at the old Boundary Falls townsite.

The map area is underlain by Palaeozoic sedimentary and metamorphic rocks which have been intruded by Jura-cretaceous igneous rocks. Tertiary volcanic and sedimentary rocks occur throughout this region but not on the map area.

The most common rock is a dark massive compact phyllite which strikes northwesterly and dips steeply to the northeast. Lighter coloured phyllites occur in bands, as does minor limestone, schist, argillite and quartzite.

Open folding is indicated near the central part of the property and minor faulting is evident.

Pure white silica occurs in large tabular bodies on the Val 1 and 2 and the Mint 8 claims. This material has an indicated grade of 99.3% SiO_2 . The nature and extent of the deposits has not been ascertained, but a sizeable tonnage of high grade silica is indicated.

RECOMMENDATIONS

It is recommended that the silica deposits on the property be developed as a source of high grade silica.

The following works programme for the ensuing three months is recommended.

	<u>Estimated Costs</u>
1. Bulldoze to bedrock in the area of the silica deposits on the Val 1 and 2 and Mint 8 claims and map the detailed geology and boundaries of the silica,	\$ 4,000.00
2. Cut rock trenches across the silica zones to a depth of 3 to 5 feet for bulk sampling and metallurgical testing,	6,000.00
3. Diamond Drill the silica deposits where required to provide data regarding tonnage and grade,	7,000.00
4. Have metallurgical test made on representative silica samples to provide data for marketing and mill design,	3,000.00
5. Office, overhead and supervision,	3,000.00
6. Contingencies fund,	<u>2,000.00</u>
Total estimated costs,	\$25,000.00

Respectfully submitted,

ALLEN GEOLOGICAL ENGINEERING LTD.

Per Alfred R. Allen P Eng.

Alfred R. Allen

REFERENCES

McNaughton, D.C., G.S.C., Paper 45-20, 1945

Map #10 - 1967, G.S.C. Paper 67-42

A.C.A. Howe, The Greenwood Silica Deposit
November, 1964

M.E. Hertel, G.L., Crippen & Associates,
personal communication 1969

A.R. Allen, A Silica Property near Greenwood, Oct 14, 1969.

* * * * *

ALFRED R. ALLEN, P.Eng.

GEOLOGICAL SURVEY

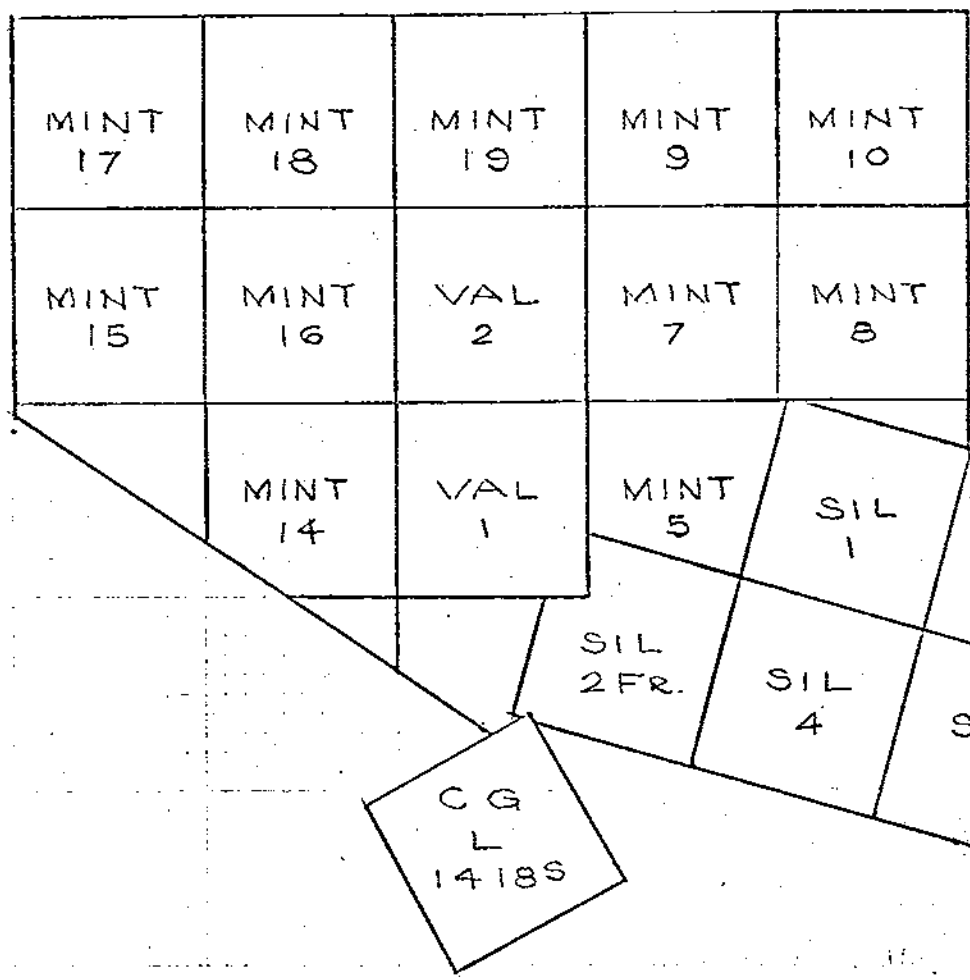
GREENWOOD, M.D.

EXPENDITURES

Alfred R. Allen, P.Eng.	August 3, 4, 5, 6, 7, 8	
	September 10, 11, 12, 16	\$1,500.00
Motel and Meals,		50.40
Transportation,		<u>140.00</u>
	Total.....	\$1,690.40

Declared before me at the *City*
of *Nanaimo*, in the
Province of British Columbia, this *21*
day of *Sept* 19*42*, A.D. *Alfred R. Allen*

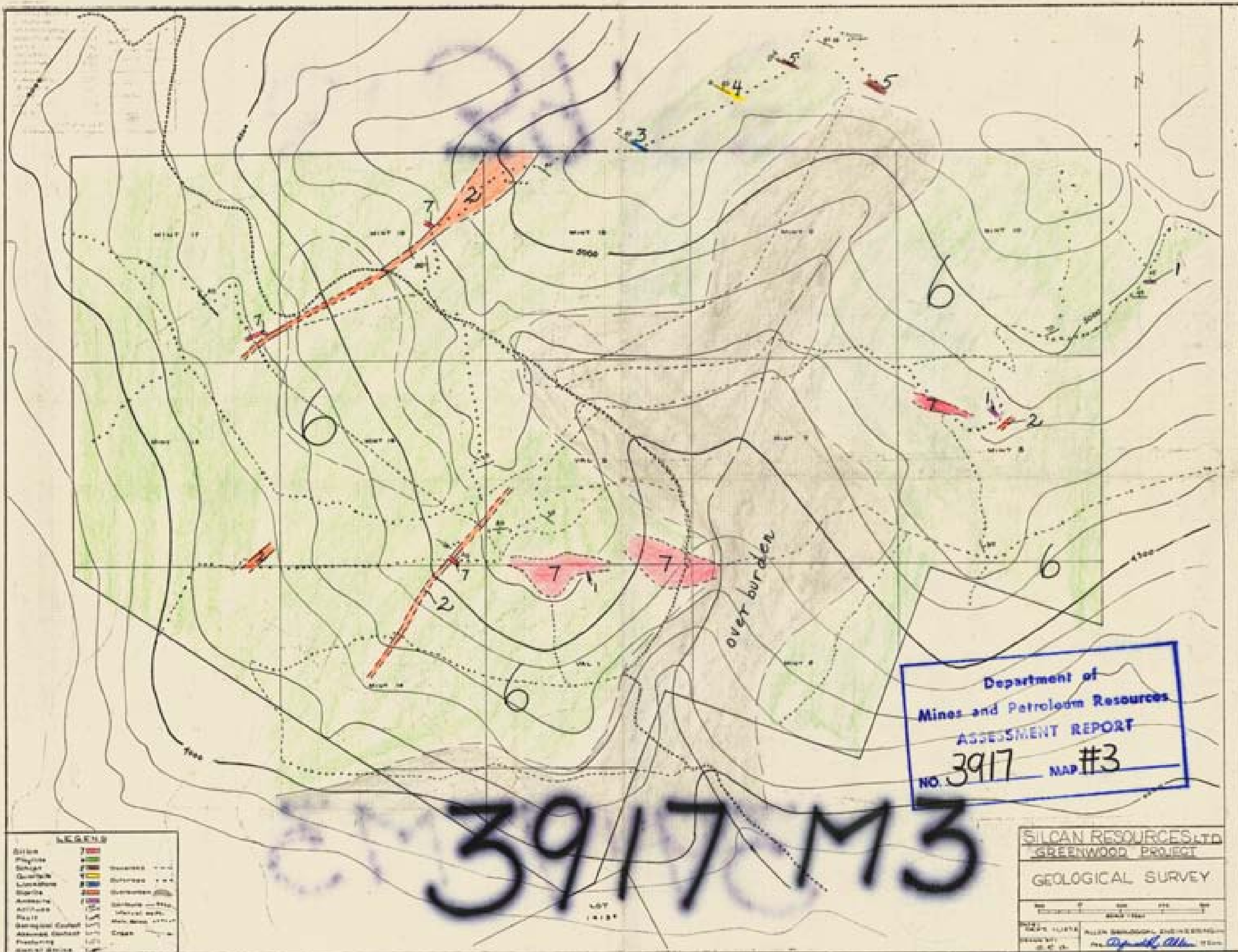
Jill Lussier
Commissioner for taking Affidavits within British Columbia or
Notary Public in and for the Province of British Columbia.
Sub-mining Recorder



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3917 MAP #2

SILCAN RESOURCES LTD.
GREENWOOD B.C.
MINERAL CLAIMS
0 1500 3000
scale - FEET
SEP. 11-72 *Alfred R. Allen* P. Eng.

NOTE: L1418S Not included in Silcan Resources Holdings.



LEGEND

Strata	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Plays	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Structures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Other	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3917 MAP #3

SILCAN RESOURCES LTD
 GREENWOOD PROJECT
 GEOLOGICAL SURVEY

Scale: 1:50,000

Prepared by: ALLEN BRIDGMAN, ENGINEER
 Date: 1988

3917 M3