

3097

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

REPORT NO. 3097

ON

ELECTROMAGNETIC AND GEOCHEMICAL SURVEYS

OF

SALEM MINES LTD. [M.P.L.]

ROSSLAND PROPERTY

49°02' North Latitude

117°52' West Longitude

82 F / 4W

BY

STRATO GEOLOGICAL LTD.

AND

C.H. DONALDSON, P.ENG.

June 11, 1971

Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. 3097 MAP # 1

KAY 7	KAY 5	KAY 3	KAY 1
KAY 8	KAY 6	KAY 4	KAY 2



		ELI 2	ELI 1	
ELI 11	ELI 9	ELI 7	ELI 5	ELI 3
ELI 12	ELI 10	ELI 8	ELI 6	ELI 4
				ELI 21
		ELI 19	ELI 20	
		ELI 17	ELI 18	ELI 22
		ELI 14	ELI 16	
		ELI 13	ELI 15	

HI-WAY

M 66

L 1225
M 68

L 1496
M 57

SALEM MINES LTD. N.P.L.
CLAIMS MAP
 SCALE - 1" = 3000'
 FEBRUARY 1971

ROSSLAND

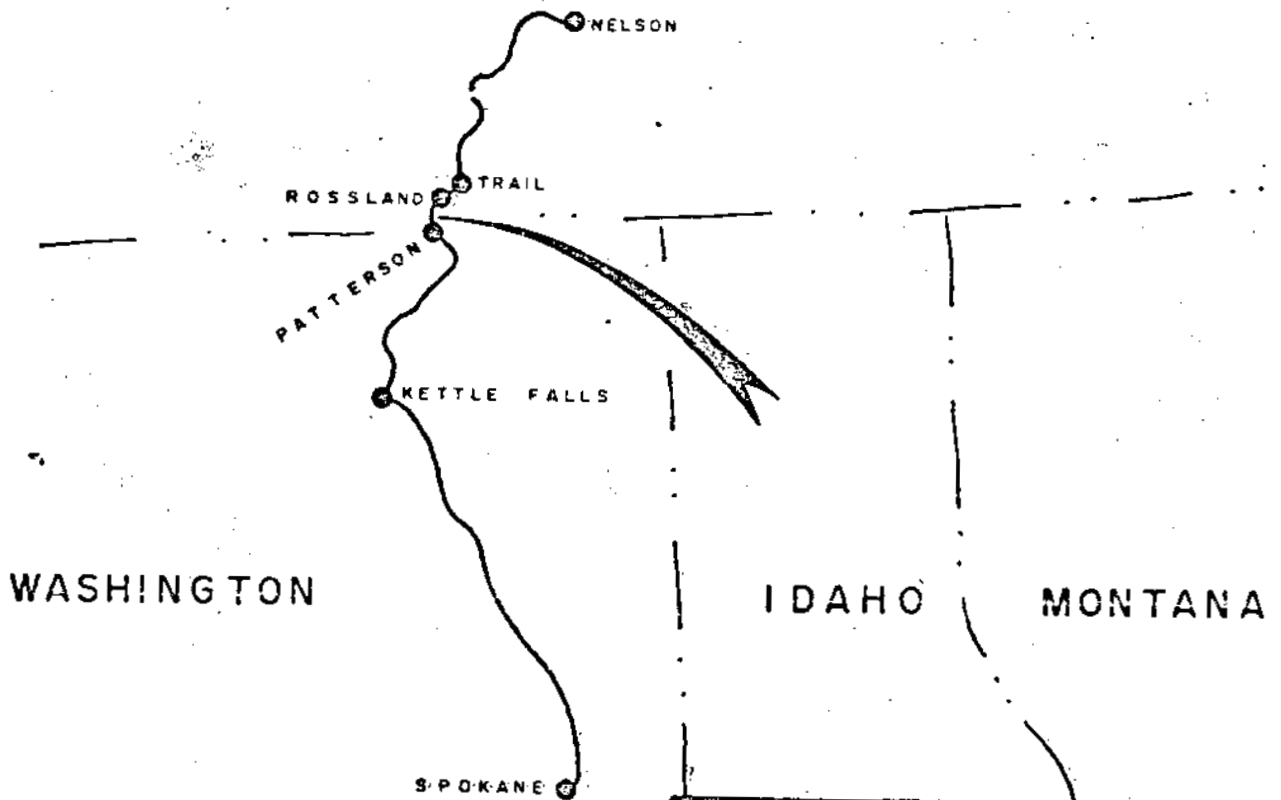
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ASSESSMENT REPORT

NO. 3097 MAP

#2

ALBERTA

BRITISH COLUMBIA



SALEM MINES LTD. N.P.L.

LOCATION MAP

0 30 60

SCALE OF MILES

FEBRUARY 1971

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#1 Location Map * * * * *

#2 Claims Map

#3 Geophy. Survey

INTRODUCTION:

Salem Mines Ltd. [M.P.L.] requested Strato Geological Ltd., mineral exploration contractors, and C. H. Donaldson, Professional Engineer, to carry out an electro-magnetic and geochemical survey on a portion of the Kay Group of claims.

The Kay Group comprises Kay 1 to 8 claims, situated approximately $49^{\circ}02'$ North Latitude and $117^{\circ}52'$ West Longitude, in the Trail Creek Mining Division in South Central British Columbia.

The work was done on Kay 8 claim, southeast of a cliff which is more or less semi-circular in plain view.

PROPERTY:

The Kay Group of claims consists of Kay 1 to 8 claims, Record Nos. 3826 to 3833. The Kay Group is only a portion of the total holdings of Salem Mines Ltd. in the Rossland area.

LOCATION AND ACCESS:

The Kay Group of claims is located about four miles northwest of Rossland, B. C., at approximately $49^{\circ}02'$ North Latitude and $117^{\circ}52'$ West Longitude.

Access is partly by highway and partly by local roads from Rossland to the Kay Group.

GEOLOGY:General:

The rocks in the Rossland area consist of volcanic flows, sills and some sediment intruded by shoots and stocks of the Nelson Batholith. The volcanic rocks are part of the Rossland formation, which has a regional north-south strike with steep westerly dips. The Rossland formation can be divided into four formations that are, from east to west:

- [1] A succession of fragmental and tuffaceous greenstones;
- [2] A thick sill of augite porphyrite;
- [3] Impure quartzite of Mount Roberts formation;
- [4] Massive andesite flows.

The intrusive rocks vary in composition from granite, throughout monzonite to alkaline syenite. The oldest igneous intrusive is an elongated stock of monzonite that lies south and east of Rossland, in which the main ore zones of the gold-copper camp were found. A larger body of granodiorite lies north-east of Rossland and is separated from the monzonite by a narrow belt of sediments. The Coryell syenite lies to the northwest of Red Mountain and the Shepard granite is situated several miles southeast of Rossland. Sills and dykes of the various intrusives are common throughout the area and, in addition, lamprophyre and serpentine dykes cut the monzonite stock in the mine workings.

Kay Group:

The cliff face on Kay No. 8 claim indicates the boundary of an intrusive of the Coryell Syenite.

The E.W. and geochemical survey was carried out on this formation.

SURVEYS:

Between April 26th to 29th [inclusive], Strato Geological Ltd. carried out geophysical and geochemical surveys of the Kay No. 5 claim of the Kay Group of claims.

Geochemical Survey:

Three only, rock chip samples were taken from widely spaced locations. The results are as follows:

<u>Sample</u>	<u>Mo ppm</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
1	1	14	85
2	1	16	75
3	1	20	72

None of the samples show anomalous results as they are all near background values.

The samples were assayed by Acme Analytical Laboratories Ltd., 6455 Laurel Street, Burnaby, B. C. by the following method: The rock chips were crushed and pulverized to -100 mesh. A .50 gram sample is digested with a mixture of concentrated nitric and perchloric acid. The solution is diluted to 10 ml. and is determined by atomic absorption.

Electromagnetic Survey:

The technician on the job took a number of preliminary random readings to establish a background for the area. The average for these was:

Azimuth 54° E, Horizontal Amplitude 14, Tilt Angle $+12^{\circ}$

<u>Location</u>	<u>Azimuth</u>	<u>Horizontal Amplitude</u>	<u>Tilt Angle</u>
1	52° E	2	+ 7.5°
2	42° E	11	+ 4°
3	52° E	1	+ 1°
4	52° E	6	+ 12°
5	56° E	18	+ 10°
6	54° E	14	+ 12°
7	50° E	5	+ 6°
8	54° E	7	+ 10°
9	54° E	18	+ 16°
10	54° E	14	+ 12°
11	52° E	12	+ 10°
12	54° E	14	+ 12°
13	52° E	11	+ 6°
14	52° E	10	+ 10°
15	54° E	14	+ 12°

The above results show a slight fluctuation of values, but none that can be regarded as anomalous.

The instrument used was a Scopes SE80 V.L.F. receiver and transmitter.

The crew employed on the surveys were:

Heino Leis, Technician, President of Strato Geological Ltd. He has conducted geophysical and geochemical surveys throughout B. C., Alberta, Saskatchewan and Yukon Territory.

David MacKenzie, Assistant. He has worked on geophysical and geochemical surveys throughout B. C., Alberta, Saskatchewan and Yukon Territory.

COST:

The cost of the surveys were as follows:

Technician, 4 days @ \$75/day	\$ 300.00
Assistant, 4 days @ \$45/day	180.00
Assaying	7.50
Drafting	50.00
Room and Board	40.24
Transportation	128.39
Field equipment	12.20
Engineering	200.00
	<hr/>
	\$ 918.33
	<hr/> <hr/>

CONCLUSIONS:

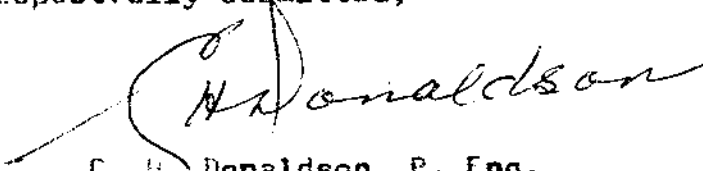
Unfortunately, the assessment work outlined above shows negative results.

The magnetic anomaly centered on Key No. 5 Mineral Claim found in 1969, still remains to be investigated further.

RECOMMENDATION:

I recommend that a systematic geochemical survey be carried out over the magnetic anomaly which is approximately 1,500 ft. wide x 1,800 ft. long in a north-south direction on Key No. 5 claim and adjacent claims.

Respectfully submitted,


C. H. Donaldson, P. Eng.

Declared before me at the *City*
of *Nanaimo*, in the
Province of British Columbia, this *28*
day of *June* *1971*, A.D.

William L. King

L. Phillips

A Commissioner for taking Affidavits within British Columbia of
A Notary Public in and for the Province of British Columbia.

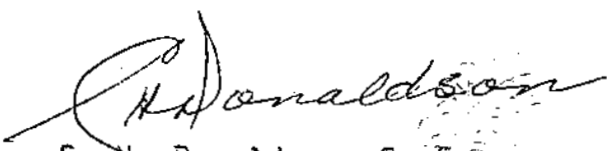
Sub-mining Recorder



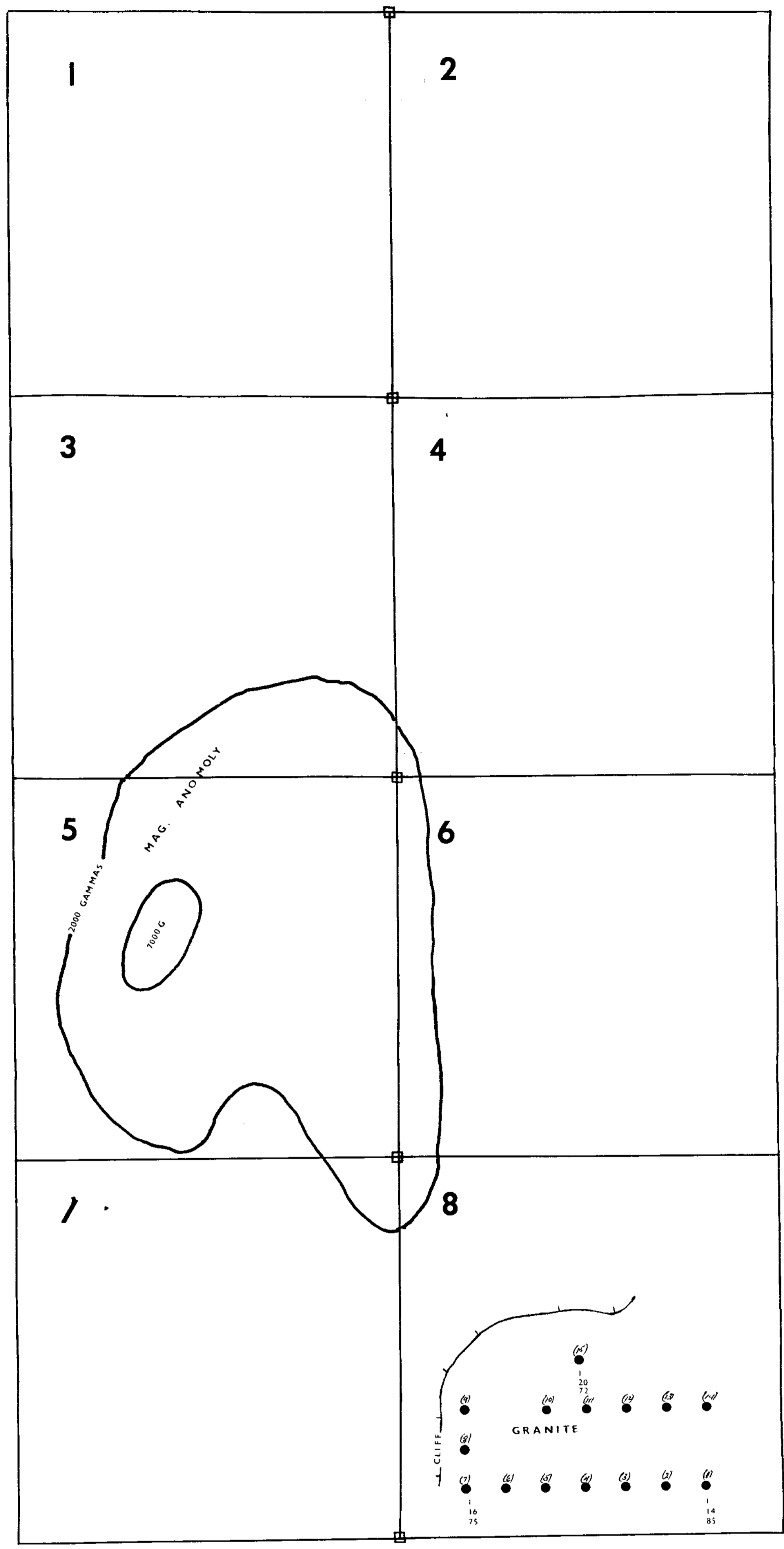
C E R T I F I C A T I O N

I, Clarence H. Donaldson, of the City of Vancouver in the Province of British Columbia, hereby certify as follows:

- 1] That I am a Registered Professional Engineer of the Province of British Columbia and reside at Suite 101, Brentwood Apartments, 2050 Barclay Street, Vancouver 5, British Columbia.
- 2] That my mining experience embraces all phases of the mining industry and have worked throughout Canada, Australia, South Seas and parts of U.S.A. and Mexico.
- 3] That I have no interest either directly or indirectly in the claims or securities of Salem Mines Ltd. [M.P.L.] nor do I expect to receive any.
- 4] That the information contained herein was obtained through examination of the area and a study of the results obtained by Strato Geological Ltd.


C. H. Donaldson, P. Eng.

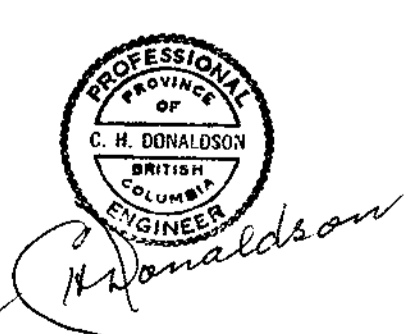
Vancouver, B. C.,
June 11, 1971.



3097 M-3

SALEM MINES LTD

KAY GROUP
TRAIL CREEK M. D.
GEOPHYSICAL SURVEY, GEOLOGICAL
EXAMINATION



TO ACCOMPANY A REPORT BY C. H. DONALDSON P. ENG
1 MO
14 CU IN PPM. CHIP SAMPLES
85 ZN
E M READINGS
BACKGROUND (SEE REPORT)

