

02/86

Geology and Geochemistry
of the Anna and SC Claim Groups

Bar Project
NTS 82M/5W, 92P/8E

Lat. 51°20'N Long. 120°00'W

FILMED

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,243

February 28th, 1985

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Table of Contents

	Page
INTRODUCTION	1
General	1
Location and Access	1
Physiography	1
Property and Ownership	3
History	3
Summary of Work Done	5
RESULTS	5
Geology	5
Litho geochemistry	6
CONCLUSIONS AND RECOMMENDATIONS	9
ITEMIZED COST STATEMENT	11
STATEMENT OF QUALIFICATIONS	13
APPENDIX I (Litho geochemical Data)	14
APPENDIX II (Soil Geochem Data)	18

List of Figures

- Figure 1 Property Location
Figure 2 Claim Configuration

List of Tables

- Table 1 Claim Status
Table 2 Lithogeochem Summary Statistics

List of Maps (in pocket)

- Map 1 Geology 1:10,000
Map 2 Sample Locations 1:10,000
Map 3 SiO₂, TiO₂, CaO, MgO 1:10,000
Map 4 Na₂O, Cu, Zn, Ba 1:10,000

INTRODUCTION

General

Corporation Falconbridge Copper is the owner of 463 claim units totalling 11,500 hectares in the Barriere area of the Kamloops Mining Division, British Columbia. For the purpose of administration this large property is divided into 6 claim groups. This report presents the results of geological mapping and lithogeochemical sampling carried out during 1984 on the Anna and SC groups.

Location and Access (Figure 1)

The claims are located on the Adams Plateau between Adams Lake and the North Thompson River and are bounded by latitude $51^{\circ}00'N$ and $51^{\circ}25'N$ and longitude $119^{\circ}45'W$ and $120^{\circ}10'W$ (Figure 1).

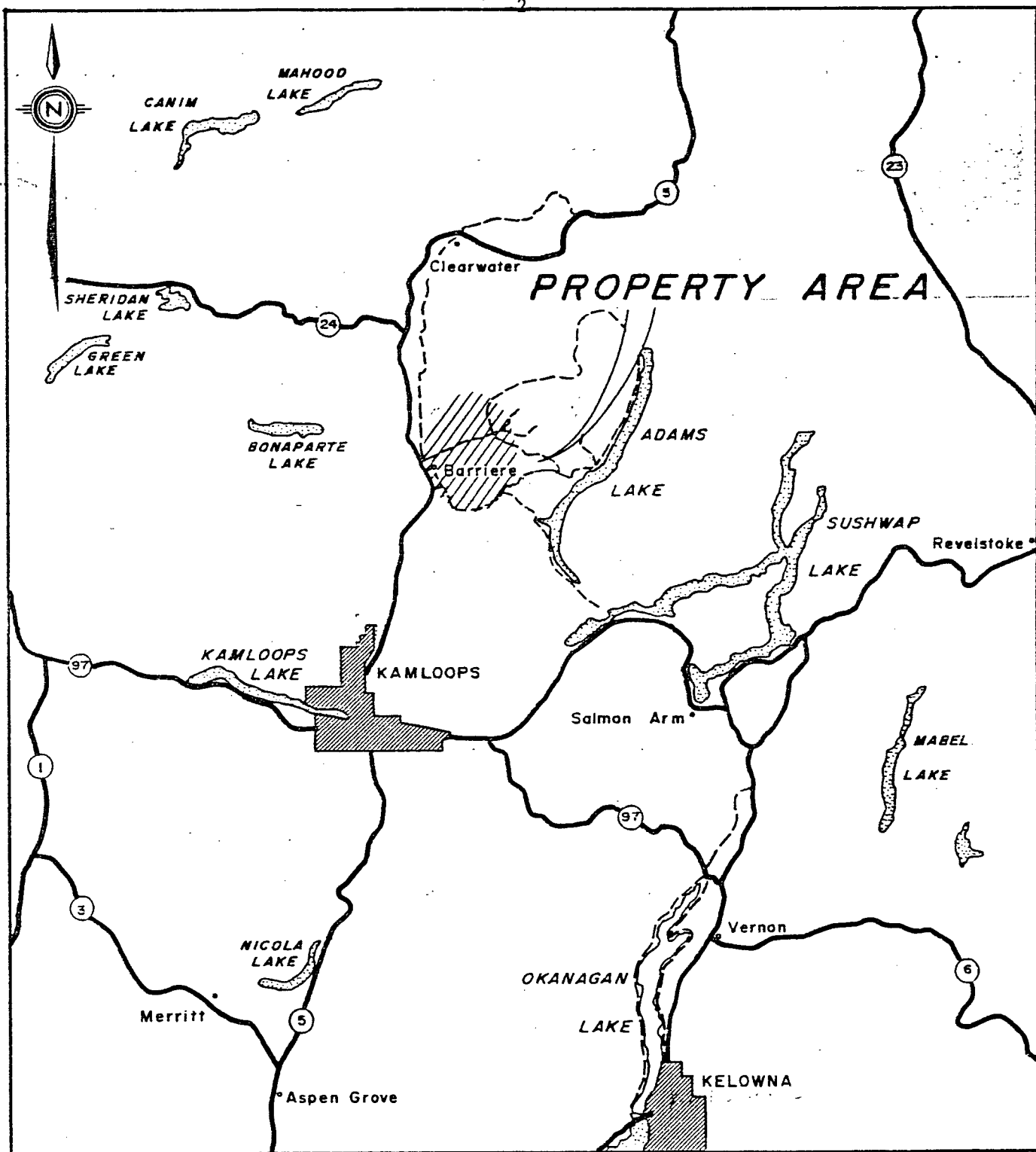
Access is readily available from Highway 5 in the Barriere area via the Barriere Lakes Road.

Physiography

The western edge of the Adams Plateau consists of high rolling plateau country incised by locally steep, drift filled valleys. Elevations range from less than 500m. in the Sinmax Valley at the south end of the property to over 1900m. on the SC claims. However, the majority of the property lies between 1000m. and 1500m. elevation.

Fairly dense forest cover occurs across most of the area, although the Sinmax Valley is partially cultivated. Active logging operations are present on the property.

The climate is moderate with temperatures ranging from $-25^{\circ}C$ in the winter to $30^{\circ}C+$ in the summer. Precipitation is extremely variable ranging from semi-arid in the south to moderately wet in the north. The snow free period runs from May to November in the south, but lasts only from July to October in the north.



BAR PROJECT

LOCATION MAP

FIGURE 1

Property and Ownership

Figure 2 shows the configuration of the Bar, Alex, SC and Anna claims with the Anna and SC Groups highlighted. Table 1 summarizes the pertinent claim data. All are 100% owned and operated by CFC.

Table 1

<u>Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Month</u>
Anna 1	5332	20	December
Anna 2	5333	20	December
Anna 7	5339	20	December
Anna 8	5340	20	December
SC2	5561	20	March
SC3	5562	20	March
SC4	5640	20	May
SC5	5641	20	May
*SC6	5906	3	October
*SC7	5907	6	October

* staked following work reported herein

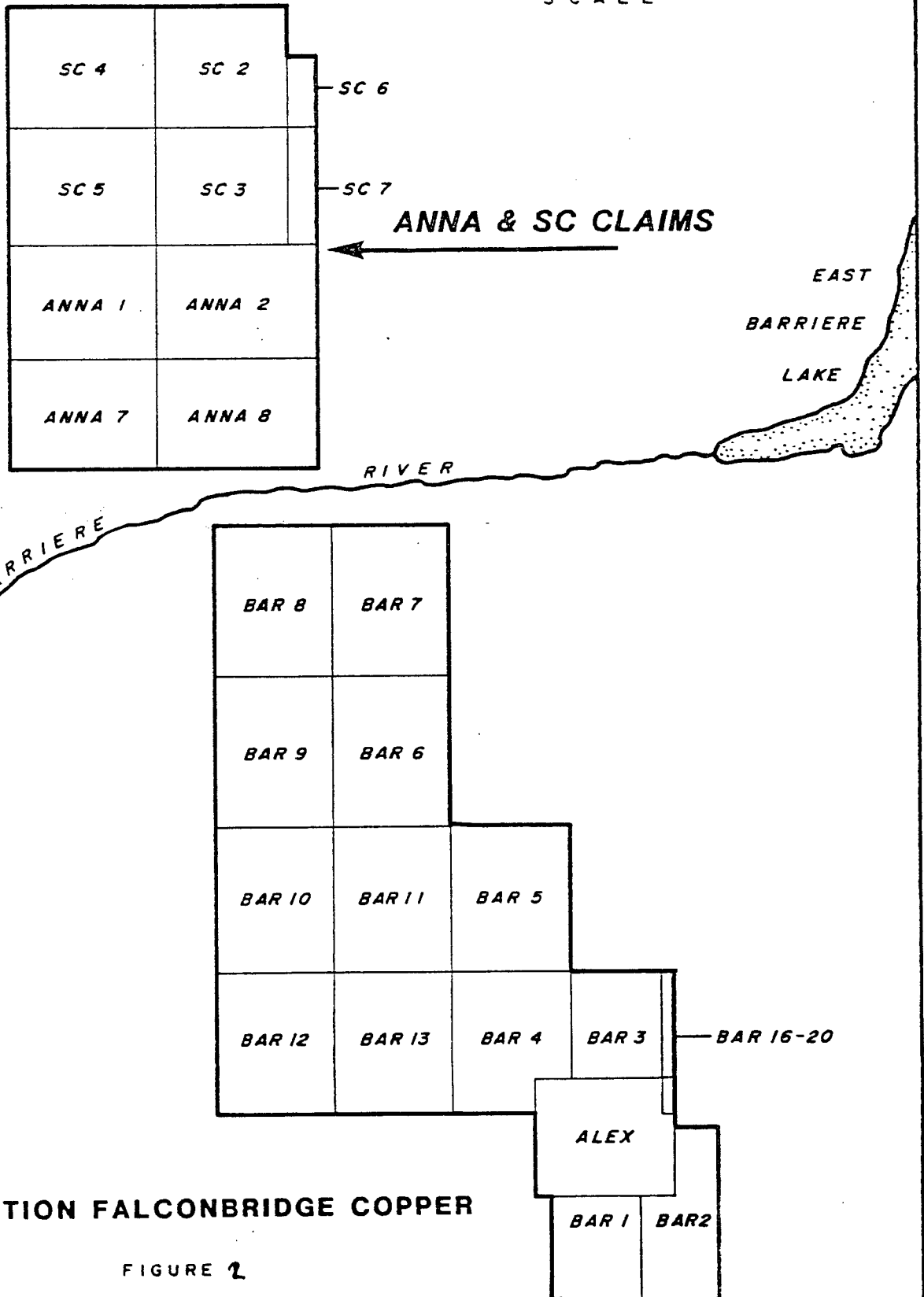
History

The Anna and SC claims were acquired in late 1983 to cover favourable stratigraphy in an area highlighted by reconnaissance mapping and sampling. They, in part, contain stratigraphy correlative with that at the Chu Chua massive sulphide deposit 6km to the north. Previous exploration appears to be confined to an airborne (Dighem) survey flown by Craigmont in 1978.



SC 1

BAR PROJECT CLAIM CONFIGURATION



CORPORATION FALCONBRIDGE COPPER

FIGURE 1

Summary of Work Done

Geology	31 man-days mapping	1:10,000 scale pace and compass mapping tied to road locations obtained from existing forestry and topographic maps.
Geochemical	33 man-days sampling 166 rock samples 14 soil samples	located as above. Rocks analyzed for Cu, Zn, SiO ₂ , TiO ₂ , CaO, MgO, Na ₂ O, Ba. Soils tied to small flagged grid and analyzed for Au, Ag, Cu, Pb, Zn and As.
Other	4 man-days	clearing trees from roads to gain access.

RESULTS

Geology (Map 1)

Exposure on the Anna and SC claims is patchy, especially towards the east. Overburden is glacial in origin, but is not considered to be particularly deep.

The area is underlain by a northerly trending sequence of volcanics, intrusions and sediments. Dips are highly variable and can be either east or west. Tops are uncertain. Previous mapping, most recently by Preto et al (BCDEMPR Preliminary map #56) has placed these rocks in the Upper Paleozoic Fennell Formation close to its contact with the Eagle Bay formation. The Fennell formation is host to the Chu Chua massive sulphide deposit 6km to the north.

Underlying the western part of the claims, over their entire north-south length, is a sequence of mafic flows and pillowed flows interbedded with thin cherty argillite units and intruded by diorite. The volcanics are quite massive and apparently undeformed. Minor silicification was noted locally, principally in an area west of Bottrel Creek.

The cherty argillites are always thin (<20m) and, at this scale of mapping, have not been traced laterally for any distance. Where bedded they indicate steep westerly dips. Pyrite is occasionally present.

The diorites are medium to coarse grained and occur as both ovoid, plug-like bodies and thinner, NE trending dykes.

Immediately to the east there is a much thicker section of chert and cherty argillite. Dips vary from steeply east and west in the north part of the map area to shallow (20-30°) west in the south-central part. The chert is often brecciated.

Once again, dioritic intrusions are in evidence. Other rock types found associated with the cherts include thin felsic tuff units and fine grained wackes.

Adjacent to the cherts to the east, and principally exposed on claim SC2, is a felsic volcanic sequence of rhyolitic flows and pyroclastics, quartz-feldspar porphyry (QFP) intrusions and minor sediments. The felsics pinch out to the south but are open to the north. The QFP occupies a plug like body with a thin northerly offshoot. Within the plug 5-10% pyrite occurs as a stockwork. The rhyolites are extremely siliceous. The sediments are predominantly argillitic with lesser wacke and chert.

In the south east corner of the claims a sequence of intermediate to felsic tuffaceous rocks is recognized. These are accompanied by minor quartz-feldspar porphyry (QFP) intrusion and coarse quartzose wackes. Quite detailed mapping in this area suggests that it is strongly folded. Only minor (pyrite) mineralization was recognized along with local sericite. However, a zone of gossan was noted just within the claim group in the extreme south east corner. This was covered by two 120m long lines, 50m apart and soil samples taken at 20m intervals. The location of these lines is shown on Map 2. The results of the soil samples are in Appendix 2. No significant values were obtained.

Litho geochemistry

A total of 166 rock samples were taken from or immediately adjacent to the SC and Anna claims during the program. They were chosen to be representative of the different lithologies in the mapped area. Samples were of fresh rock, weighed 1 1/2-2 lbs and were analyzed at TerraMin Research

Labs in Calgary for Cu, Zn, Ba, SiO₂, TiO₂, CaO, MgO, and Na₂O. Cu and Zn were determined by aqua regia digestion with AA finish, while the rest were determined by Lithium Borate fusion, dilute HCl leach and AA finish.

In this particular area, because of the abundance of sediments, approximately 20% of the samples were from sedimentary rocks. Sample locations are plotted on Map 2 with the elemental data on Maps 3 and 4. Appendix 1 consists of a listing of the data.

Table 2 summarizes the data for this area. The mafic volcanic rocks are low to moderate TiO₂ basalts or basaltic andesites. They show a relatively small range of alkalis. A single high MgO values (12.9%) is believed to be due to misclassification of a diorite as a mafic volcanic. Trace metals provide only a single anomalous value - 138 ppm Cu in a sample from the silicified zone west of Bxtrel Creek. Ba gives 2 anomalous values, both from thin mafic tuffs within the sediment/felsic package on SC.

Intermediate to felsic volcanic rocks are considered together because of the very few samples classified as intermediates and the fairly continuous range of SiO₂. The range is, in fact, remarkably large (37%) but makes a good normal population. TiO₂ is consistently low (<0.5%).

Alkali numbers are consistently low and have a fairly even distribution within the total range. A single high CaO value of 8.81% is from a sample located adjacent to a diorite and appears to have carbonate contamination related to that intrusion. Almost half of the samples have less than 2% Na₂O. Nine out of ten samples containing less than 1% Na₂O come from the area of the felsic centre of SC2.

Trace element values are not particularly high. However, three Cu values greater than 50 ppm come from the area east of Sprague Creek. The single potentially anomalous Zn value (125 ppm) comes from the south east corner of the Anna claims.

Ba values are consistently very high. Because anomalous values are scattered throughout the felsic rocks a specific locus of interest is hard to determine, but the area of the SC2 felsic centre is again worthy of note.

Mafic intrusive rocks, almost exclusively classified as diorite, are represented by 18 samples. TiO₂ distribution suggests two populations, one less than 1.1% and one greater than 1.3%. The lower population occurs in a narrow E-W belt across the SC claims, which is rather hard to explain given the N-S strikes. It may simply represent a higher erosion level in that area.

TABLE 2
SUMMARY STATISTICS

	Mafic Volc. (38)	Int-Felsic Volc. (55)	Mafic Intrus. (18)	Felsic Intrus. (21)	Sediments-Chert (19)
SiO ₂ (%)	range 45.5-55.0 \bar{x} = 50.8	range 56.3-93.7 \bar{x} = 73.4 good normal pop.	range 42.1-53.1 \bar{x} = 49.2	range 58.2-81.5 \bar{x} = 73.9 (58.2 is anom.)	range 70.6-94.5 \bar{x} = 83.0
TiO ₂ (%)	range 0.9-2.1 \bar{x} = 1.49	range 0.07-0.70 \bar{x} = 0.25 95% < 0.5	range 0.63-2.50 \bar{x} = 1.40 2 pop. < 1.1; > 1.3	range 0.07-0.37 \bar{x} = 0.17	range 0.07-0.40 \bar{x} = 0.20
CaO (%)	range 3.19-14.7 \bar{x} = 9.23	range 0.03-8.81 \bar{x} = 1.25 8.81 is anomalous	range 4.49-16.4 \bar{x} = 9.80	range 0.01-2.07 \bar{x} = 0.43	range 0.02-3.01 \bar{x} = 0.66 > 1.5 is a 2nd pop?
MgO (%)	range 4.0-12.9 \bar{x} = 6.48 > 8 may be anomalous	range 0.12-2.74 \bar{x} = 1.05 2 pop ^{ns} Modes=0.75, 2.25	range 3.18-14.7 \bar{x} = 7.27 > 10 is anom.	range 0.00-2.88 \bar{x} = 0.47 > 1.2 is high	range 0.18-3.23 \bar{x} = 1.26
Na ₂ O (%)	range 1.17-5.88 \bar{x} = 3.51	range 0.02-6.54 \bar{x} = 2.10 6.54 is anomalous	range 1.42-4.80 \bar{x} = 3.09	range 0.37-7.95 \bar{x} = 3.97 high group > 6%	range 0.03-3.52 \bar{x} = 1.04 2 pop. < 1.00%; > 1.50%
Cu (ppm)	range 12-138 \bar{x} = 51.9	range 1-120 \bar{x} = 19 92% < 50 ppm > 50 is anomalous	range 3-125 \bar{x} = 32.7	range 1-48 \bar{x} = 7 > 15 is anom.	range 1-280 \bar{x} = 17.4 280 is anomalous
Zn (ppm)	range 20-82 \bar{x} = 56	range 3-125 \bar{x} = 38 > 100 is anomalous	range 12-740 \bar{x} = 47.3 (corrected) 740 is anomalous	range 1-72 \bar{x} = 23 > 50 is high	range 5-188 \bar{x} = 43.2 188 is anomalous
Ba (ppm)	range 40-6200 \bar{x} = 262 1000+ is anomalous	range 60-9100 \bar{x} = 2119 > 2500 is anomalous	range 60-2700 \bar{x} = 252 > 1500 is anomalous	range 30-8200 \bar{x} = 1310 > 2250 is anomalous	range 80-9900 \bar{x} = 3425 > 5000 is high

MgO values greater than 10% stand out as being anomalous, but, since both samples in this range are from the same intrusion, it is likely that it indicates simply a more mafic phase.

Of the trace and minor elements, Cu is remarkable only for its relatively low values for this rock type, a single high Zn value (740 ppm) is obtained from a small intrusion within the Bottrel Creek silicified zone and the only anomalous Ba value (2460 ppm) is obtained from a rather strange outcrop of indeterminate origins on the extreme eastern margin of the SC claims.

Overall, the statistics for mafic intrusions are very similar to those of the mafic volcanics.

Felsic intrusions (21 samples) are exclusively quartz-feldspar porphyries in this area. One of these, a small QFP in the south-central Anna claims, is distinctly anomalous, containing higher MgO, Zn, and Ba than normal for the area. The only other area that stands out is the area of the stockwork mineralization in the east-central SC's.

Of the sedimentary rocks for which geochemical data was obtained, only the cherts (6.1, 6.2) are considered to have a wide enough distribution and large enough population to merit statistical analysis. However, although both CaO and Na₂O show more than one population, no obvious distribution pattern has emerged. The area of chert in the centre of the Anna claims, immediately south east of the Bottrel Creek silicified zone, stands out as being higher in Cu, Zn and Ba than other cherts in the area.

CONCLUSIONS AND RECOMMENDATIONS

Although mapped only at the semi-detailed reconnaissance scale of 1:10,000, stratigraphy in the property has been tied down quite well in all but the extreme eastern and southwestern margins. Regional strike is clearly N-S and tops may be to the west. This latter possibility is inferred from government mapping immediately to the west which indicates pillows facing west and from the presence of mafic intrusions, which appear to have been feeders for the mafic volcanics, within the (underlying) sediments.

Whichever way tops are, the area contains a felsic-mafic transition with accompanying marine sediments, an environment ideal for massive sulphide deposition. Within this large area, two target areas immediately

stand out both geologically and geochemically. These are the felsic centre in the north-eastern SC claims and the Bottrel Creek area in the centre of the Anna claims.

Both these area should be covered by grids and mapped and sampled in more detail. They should be related to available airborne geophysics to determine the need for ground truthing.

It should also be noted that the distance between traverses, especially within the mafic volcanics, leaves lots of room for significant areas of alteration. Additional traverses, carried out after grid work defines stratigraphy more precisely, are definitely warranted.

ITEMIZED COST STATEMENT - ANNA CLAIM GROUP

Field Costs

M. J. Burson	4 days mapping (July 15,16,17,31) @ \$175	700.00
K. Heather	4 days mapping (July 15,16,17,18) @ \$175	700.00
W. Shanks	5 days mapping (July 11,12,15,16,17) @ \$175	875.00
M. Corrigan	2 days road clearing (June 24,25) @ \$100	200.00
M. Corrigan	5 days sampling (July 15,16,17,18,28) @ \$100	500.00
T. McRae	2 days road clearing (June 24,25) @ \$100	200.00
T. McRae	5 days sampling (July 15,16,17,18,28) @ \$100	500.00
K. Meagher	5 days sampling (July 11,12,15,16,17) @ \$100	500.00
Accommodation (house)	10 days @ \$20/day	200.00
Food	32 man/days @ \$15/day	480.00
Truck Rental	13 truck/days @ \$50/day	650.00
Misc. (flagging, sample bags, topofil, etc.)		250.00

Analytical Costs

14 soil samples @ \$9.20	128.80
76 analyses @ \$15.35/sample	1,166.60
shipping costs 90 samples @ \$0.40/sample	36.00

Office Costs

Drafting 3 days @ \$125/day	375.00
Interp. & report (L. D. Pirie) 3 days @ \$300/day	900.00
Misc. (materials, copying, typing etc)	150.00

TOTAL \$8,511.40

ITEMIZED COST STATEMENT - SC CLAIM GROUP

Field Costs

M. J. Burson	3 days mapping (July 8,9,14) @ \$175	525.00
K. Heather	10 days mapping (July 9,11,12,14,23,24,25,29, 30,31) @ \$175	1,750.00
W. Shanks	5 days mapping (July 14,18,19,29,30) @ \$175	875.00
M. Corrigan	3 days sampling (July 8,9,14) @ \$100	300.00
T. McRae	10 days sampling (July 9,11,12,14,23,24,25,29, 30,31) @ \$100	1,000.00
K. Meagher	5 days sampling (July 14,18,19,29,30) @ \$100	500.00
Accommodation (house)	13 days @ \$20/day	260.00
Food	36 man/days @ \$15/day	540.00
Truck Rental	14 truck/days @ \$50/day	700.00
Misc. (flagging, sample bags, topefil, etc.)		250.00

Analytical Costs

90 analyses @ \$15.35/sample	1,381.50
shipping (\$0.40/sample)	36.00

Office Costs

Drafting 3 days @ \$125/day	375.00
Interp. & report (L.D. Pirie) 3 days @ \$300/day)	900.00
Misc. (materials, copying, typing, etc.)	150.00

TOTAL \$9,542.50

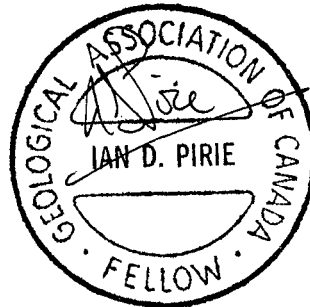
CERTIFICATE OF QUALIFICATIONS

I, Ian D. Pirie certify that:

1. I am an Exploration Geologist residing at 307 - 2145 York Avenue, Vancouver, B. C.
2. I have a BSc (Hons) in Applied Geology from the University of Strathclyde, Glasgow, Scotland (1977) and a MSc (Geology/Geochemistry) from Queen's University at Kingston, Ontario (1980).
3. I have practised my profession since 1977.
4. I personally carried out or supervised the work reported herein.

Date March 19th, 1985

Ian D. Pirie



APPENDIX 1

Lithochemical Data Listing

SAMPLE NO.	LAT	DEP	ROCK	SI02	CAO	MGO	NA2O	TIO2	BA	CU	ZN
ECS2006	896.6	924.6	3.3	65.7	1.26	0.91	2.05	0.4	3800.		
BCS2007	889.2	917.4	3.3	76.4	2.18	1.92	0.408	0.15	5300.		
BCS2008	867.7	916.8	6.3	61.8	0.101	2.17	0.189	0.183	19300.		
BCS2009	872.8	908.9	3.1	75.3	0.039	2.69	0.64	0.067	1280.		
BCS2010	877.8	911.4	3.3	78.7	0.073	0.133	4.49	0.083	550.		
BCS2011	883.2	909.2	5.1	78.3	1.01	0.418	2.21	0.067	1270.		
ECS2013	818.7	924.4	6.3	68.5	1.18	0.287	3.32	0.267	1710.	27.	11.
BCS2014	818.7	924.4	6.3	68.5	0.125	0.232	4.31	0.367	1580.	6.	3.
BCS2015	815.2	928.	2.3	65.	1.3	0.491	1.16	0.701	3710.	66.	74.
BCS2016	813.	927.6	5.1	71.7	0.846	0.574	2.91	0.217	2320.	3.	8.
BCS2017	811.4	926.4	3.3	64.8	3.55	1.05	1.25	0.284	1720.	9.	23.
BCS2018	811.1	915.2	3.3	67.2	0.47	0.63	3.24	0.384	1740.	16.	19.
BCS2020	811.9	911.	5.1	69.1	2.07	0.574	1.81	0.25	1510.	33.	7.
BCS2021	809.4	921.9	3.3	65.	1.86	0.861	2.88	0.367	1580.	43.	16.
BCS2022	818.9	923.8	4.3	42.1	9.32	9.09	3.45	1.47	2700.	390.	81.
BCS2023	817.2	925.6	3.3	66.1	1.06	1.	2.7	0.3	1230.	6.	62.
BCS2024	815.5	927.8	3.3	80.9	0.095	0.207	2.4	0.183	3700.	23.	5.
BCS2025	815.5	927.8	6.5	78.7	0.034	0.128	2.53	0.234	2000.	5.	6.
BCS2092	874.8	90.8	3.1	84.3	0.246	0.219	2.43	0.067	900.	2.	7.
BCS2093	873.	81.6	6.1	89.	0.043	0.93	0.049	0.067	3000.	2.	10.
BCS2094	871.2	85.4	4.1	51.3	11.8	12.2	1.59	0.684	170.		
BCS2095	869.4	87.1	6.1	80.6	0.579	1.38	3.52	0.25	1110.		
BCS2096	869.7	87.4	3.1	77.2	0.145	0.239	1.05	0.217	700.		
BCS2099	815.9	80.7	5.1	65.2	1.62	2.88	7.95	0.367	1640.		
BCS2119	867.5	925.5	3.1	77.2	3.53	1.39	1.34	0.183	310.	109.	74.
BCS2121	830.2	77.7	1.2	49.	14.7	12.9	1.87	1.05	320.	12.	27.
BCS2122	827.8	82.4	6.1	78.5	0.876	1.77	0.17	0.4	8200.	23.	61.
BCS2123	832.1	77.7	6.1	81.1	0.621	1.74	2.56	0.284	4000.		
BCS2124	835.8	75.2	1.2	50.3	10.3	5.31	3.72	1.48	170.	54.	60.
BCS2125	836.3	67.2	1.1	48.6	9.65	6.81	4.1	1.58	120.	49.	55.
BCS2126	854.4	69.2	4.1	50.7	8.76	5.41	4.72	1.62	80.	41.	69.
BCS2127	857.1	70.7	1.1	49.6	9.16	6.88	3.33	1.6	190.	38.	51.
BCS2128	852.	71.5	1.1	50.3	9.81	6.58	4.17	1.53	70.	54.	58.
BCS2129	850.8	71.9	3.1	73.2	8.81	1.02	0.384	0.15	250.	36.	35.
BCS2130	849.8	71.7	1.3	49.6	9.54	6.57	3.61	1.58	130.	46.	69.
BCS2131	848.2	72.3	1.3	50.5	10.8	6.47	3.45	1.53	100.	48.	54.
BCS2132	819.4	85.2	1.3	47.1	10.5	10.5	2.52	1.2	250.	150.	51.
BCS2133	819.7	84.8	4.1	47.9	12.4	4.31	3.25	0.951	370.	12.	30.
BCS2134	821.1	82.8	5.1	76.4	0.617	0.521	4.34	0.133	720.	48.	8.
BCS2135	867.5	925.5	1.1	52.4	8.07	5.94	4.77	1.4	520.	14.	39.
BCS2136	867.5	925.5	4.1	53.1	4.49	3.18	2.37	1.08	2460.	36.	55.
BCS2137	867.5	925.5	1.1	49.8	11.8	6.86	3.6	1.48	470.	64.	47.
BCS2138	867.5	925.5	1.1	50.7	9.	5.99	4.37	1.5	540.	67.	50.
BCS2139	864.6	923.	1.1	53.9	6.74	7.18	3.6	1.35	620.	53.	58.
BCS2140	864.6	923.	3.1	78.1	3.37	2.47	1.26	0.317	120.	120.	61.
BCS2141	864.6	923.	1.1	49.8	8.73	6.73	4.08	1.98	520.	29.	58.
BCS2142	862.6	924.	3.1	77.9	1.72	1.53	0.464	0.417	5800.	22.	50.
BCS2148	865.9	914.7	3.4	74.7	0.173	2.14	1.81	0.167	2510.	3.	50.
BCS2151	828.6	77.7	4.1	48.3	8.44	7.97	3.03	1.67	500.		
BCS2152	843.5	913.	6.5	87.5	0.478	1.07	0.131	0.217	7000.	1.	35.
BCS2153	867.5	912.5	5.1	72.7	0.158	0.099	3.09	0.15	760.	3.	26.
BCS2154	867.8	912.4	5.1	65.7	0.063	0.768	1.31	0.217	3550.	7.	51.
BCS2155	865.4	911.3	5.1	78.1	0.024	0.022	7.39	0.133	30.	2.	7.
BCS2156	899.2	915.3	3.4	81.5	0.48	2.11	2.16	0.334	5900.	16.	24.
BCS2157	889.4	911.7	4.1	50.7	5.61	6.8	3.19	1.48	3800.	43.	28.
BCS2158	889.5	911.7	1.1	46.6	7.26	4.29	4.26	1.93	620.	15.	56.
BCS2159	888.5	88.9	5.1	75.1	0.269	0.099	3.73	0.15	530.	4.	21.
BCS2176	815.5	927.8		62.9	3.16	0.338	2.28	0.467	4200.	11.	56.
BCS2192	815.5	927.8	3.3	81.1	0.059	0.118	2.41	0.133	3410.	2.	14.
BCS2193	815.5	927.8	6.3	41.5	9.85	9.07	2.66	1.3	5800.	98.	92.

SAMPLE NO.	LAT	DEP	ROCK	SI02	CAO	MGO	NA2O	TIO2	BA	CU	ZN
BCS2194	815.5	927.8	3.3	65.5	2.29	0.277	2.13	0.367	5000.	11.	80.
BCS2195	815.5	927.8	3.3	66.7	2.62	0.307	3.14	0.35	3000.	31.	54.
BCS2196	815.5	927.8	3.3	71.9	0.112	0.222	3.33	0.267	2210.	25.	35.
BCS2199	862.7	916.3	6.1	76.4	0.136	1.97	0.156	0.334	8600.	39.	97.
BCS2213	832.8	78.9	4.1	48.8	5.64	5.27	4.8	1.9	230.	105.	740.
SC5083	875.3	89.6	3.1	84.7	0.192	0.555	0.702	0.117	990.	6.	91.
SC5084	875.	87.8	3.1	74.2	0.358	0.907	0.727	0.133	1780.	1.	58.
SC5085	879.	90.8	3.1	78.3	0.05	0.978	0.813	0.117	940.	1.	29.
SC5086	879.	88.7	3.1	79.6	0.309	0.948	1.82	0.133	630.	1.	34.
SC5087	881.1	81.6	6.1	94.5	0.101	0.25	0.235	0.117	3900.	12.	8.
SC5088	881.8	81.6	3.	93.7	0.049	0.522	0.03	0.133	2310.	11.	18.
SC5089	881.8	82.5	6.1	78.9	3.01	3.23	0.1	0.25	3620.	10.	72.
SC5090	867.	74.2	4.1	48.1	16.4	9.95	2.13	0.634	150.	4.	12.
SC5091	866.5	73.8	4.1	49.6	12.3	8.97	2.16	0.784	80.	76.	34.
SC5092	829.4	74.2	4.1	51.6	13.8	6.58	3.34	1.58	250.	11.	30.
SC5093	828.2	75.3	1.1	50.3	13.	7.21	3.67	1.62	170.	27.	36.
SC5094	826.8	81.	6.1	81.1	0.523	2.67	0.345	0.317	4500.	280.	103.
SC5095	825.2	80.2	5.1	77.4	0.032	1.71	0.375	0.2	8200.	4.	68.
SC5096	821.6	79.3	6.	79.4	0.346	1.19	0.442	0.384	6300.	20.	55.
SC5097	820.1	78.6	3.1	78.5	0.031	0.29	2.63	0.133	3510.	4.	28.
SC5098	818.8	77.5	6.	74.2	0.935	1.94	6.11	0.25	540.	12.	23.
SC5099	815.2	81.2	4.1	48.1	8.65	4.86	4.12	2.5	330.	8.	41.
SC5101	816.8	79.2	6.	72.3	0.89	2.09	3.72	0.25	1750.	3.	5.
SC5102	817.5	78.7	4.1	49.6	9.68	4.99	4.33	2.22	200.	3.	44.
SC5103	818.9	83.7	6.1	70.6	1.11	1.27	2.51	0.25	80.	2.	13.
SC5105	837.8	909.8	4.1	44.3	6.81	8.22	2.32	1.33	730.	26.	62.
SC5106	837.4	910.6	6.9	68.9	2.94	0.849	0.355	0.167	1970.	3.	23.
SC5108	843.3	912.8	6.	74.	1.2	2.09	0.291	0.517	4300.	138.	80.
SC5116	866.4	909.	6.7	64.6	0.239	0.625	0.572	0.167	1400.	3.	16.
SC5117	866.2	909.2	3.1	71.2	0.112	0.279	3.18	0.117	1540.	4.	7.
SC5118	866.5	909.7	3.1	75.3	1.76	0.759	1.9	0.15	1630.	2.	10.
SC5119	865.5	909.2	3.1	81.5	0.236	0.214	4.6	0.167	1380.	5.	8.
SC5120	864.3	910.5	5.1	76.2	0.196	0.197	2.45	0.15	840.	2.	39.
SC5121	864.4	911.4	5.1	74.	0.048	0.01	7.37	0.133	120.	1.	9.
SC5122	864.6	911.2	5.1	80.2	0.031	0.007	7.28	0.133	50.	1.	1.
SC5123	863.3	910.9	5.1	81.5	0.064	0.095	2.51	0.133	820.	1.	16.
SC5124	863.3	89.6	4.1	48.1	11.8	14.7	1.42	1.03	60.	3.	37.
SC5126	813.9	924.9	3.3	62.	2.78	1.42	1.69	0.334	710.	25.	83.
SC5127	813.1	924.2	6.9	70.2	0.316	0.559	3.36	0.3	980.	17.	5.
SC5128	817.5	924.1	6.9	62.	2.36	0.589	2.67	0.317	1190.	9.	50.
SC5129	815.7	922.6	6.9	61.6	3.36	0.885	2.06	0.35	970.	15.	52.
SC5130	812.3	923.2	6.9	66.7	0.837	0.807	3.33	0.317	1230.	25.	20.
SC6059	898.4	924.5	6.	79.6	0.043	0.403	0.174	0.25	1580.	60.	146.
SC6060	879.3	915.9	6.	88.6	0.221	1.27	2.56	0.167	930.	5.	15.
SC6061	882.8	912.2	1.	50.9	7.05	7.13	3.59	1.43	5900.	62.	65.
SC6062	882.6	910.2	3.5	89.1	0.05	1.17	0.837	0.1	1000.	1.	27.
SC6063	886.3	911.	3.3	83.4	0.12	0.13	6.36	0.117	240.	2.	7.
SC6064	888.4	910.6	4.	51.8	4.45	4.91	2.	1.77	1450.	61.	68.
SC6065	888.4	910.6	3.	88.1	2.03	1.47	1.02	0.133	60.	2.	16.
SC6066	833.4	77.3	1.2	50.3	10.6	5.97	3.6	1.47	60.	45.	73.
SC6067	835.1	77.5	1.2	49.4	9.77	6.5	4.02	1.45	60.	41.	62.
SC6068	835.4	73.4	1.2	53.1	9.71	4.89	3.61	1.42	90.	52.	70.
SC6069	836.5	68.4	6.2	93.9	0.06	0.181	0.03	0.117	2210.	13.	5.
SC6070	873.5	62.4	4.1	51.8	10.7	5.54	2.47	1.35	110.	33.	56.
SC6071	871.9	69.8	1.1	52.4	11.1	7.16	3.6	1.47	100.	52.	58.
SC6072	869.5	69.4	1.1	52.2	10.4	6.7	3.52	1.48	60.	46.	62.
SC6073	883.	72.3	1.1	51.1	11.	7.73	3.32	1.48	260.	23.	20.
SC6074	875.5	60.9	1.1	52.4	10.9	8.14	2.72	1.3	70.	74.	61.
SC6075	818.1	925.2	3.3	69.3	3.69	0.337	4.39	0.234	1010.	15.	24.
SC6076	817.3	926.7	6.5	76.4	0.034	0.366	0.396	0.484	2540.	3.	4.

SAMPLE NO.	LAT	DEP	ROCK	SI02	CAO	MGO	NA2O	TIO2	BA	CU	ZN
SC6077	810.5	925.	2.3	72.9	0.336	1.34	0.361	0.234	2290.	6.	125.
SC6078	816.1	919.5	2.3	66.1	1.17	0.678	3.77	0.317	1960.	20.	10.
SC6079	817.	918.3	3.3	68.2	1.06	0.449	6.54	0.3	1230.	14.	21.
SC6080	810.3	922.	2.3	64.2	3.74	0.945	2.75	0.25	1560.	10.	28.
SC6081	810.9	920.5	1.3	57.3	3.19	1.19	2.47	0.35	1540.	47.	31.
SC6082	812.5	914.2	2.3	61.	3.36	2.74	2.12	0.45	2220.	12.	32.
SC6083	810.7	915.8	3.3	65.7	0.87	0.924	1.93	0.567	1770.	2.	3.
SC6084	811.5	915.7	3.3	66.5	0.235	2.01	2.57	0.35	1550.	22.	92.
SC6085	811.2	913.4	3.3	68.2	0.578	0.711	2.22	0.217	1030.	18.	27.
SC6086	812.5	910.8	3.3	71.	0.297	0.821	3.55	0.334	1220.	5.	12.
SC6087	810.5	907.6	3.3	71.7	1.82	0.643	0.871	0.167	1390.	3.	6.
SC6088	811.1	907.4	3.3	56.3	4.03	2.45	3.19	0.617	850.	20.	46.
SC6089	818.7	915.8	3.3	61.6	2.24	0.731	4.84	0.384	1520.	45.	6.
SC6090	808.7	926.2	3.3	61.4	2.73	0.627	3.13	0.35	1060.	14.	28.
SC6091	864.4	922.8	3.3	74.7	1.62	2.06	1.33	0.234	680.	87.	78.
SC6099	888.5	919.4	6.1	77.9	1.09	0.574	0.825	0.1	1890.	1.	19.
SC6101	888.	919.5	6.1	80.2	0.754	0.408	2.14	0.067	1510.	1.	188.
SC6102	887.7	99.7	3.1	70.4	2.49	0.884	2.72	0.183	950.	5.	40.
SC6103	887.5	89.1	5.1	75.3	0.255	0.071	3.19	0.1	730.	4.	22.
SC7059	867.5	925.5	1.3	51.8	8.21	6.83	3.28	1.32	3560.	52.	54.
SC7060	860.4	916.2	6.1	85.6	1.04	0.514	1.63	0.067	430.	3.	23.
SC7061	860.3	915.8	6.3	42.6	6.83	3.35	2.56	1.92	1140.	28.	83.
SC7064	827.5	81.9	6.1	87.9	0.052	0.928	0.148	0.183	3860.	19.	48.
SC7065	834.	82.7	6.2	82.1	0.021	1.67	0.991	0.267	9900.	27.	81.
SC7066	835.2	74.7	6.1	92.4	0.032	0.633	0.039	0.167	2600.	32.	21.
SC7067	835.7	73.2	1.2	54.1	9.01	5.74	4.64	1.42	100.	138.	67.
SC7068	838.	62.3	1.1	52.8	10.	5.49	5.1	1.55	40.	51.	60.
SC7069	855.	68.2	1.1	51.6	10.1	6.67	4.08	1.5	80.	38.	52.
SC7070	856.8	70.5	4.1	52.	7.69	7.28	2.74	1.62.	60.	42.	75.
SC7071	857.8	71.2	1.1	54.1	11.3	5.77	2.44	1.45	150.	42.	53.
SC7072	892.3	71.9	6.1	72.3	2.13	3.68	0.687	0.317	5700.	26.	110.
SC7073	884.9	74.7	4.1	51.1	10.9	5.11	4.26	0.951	420.	55.	14.
SC7074	868.2	910.7	3.4	75.9	0.305	0.865	3.61	0.15	1750.	3.	50.
SC7076	866.6	911.8	5.1	58.2	0.113	0.662	1.93	0.2	1370.	3.	72.
SC7077	866.6	911.8	5.1	80.2	0.028	0.022	7.63	0.133	90.	1.	3.
SC7078	865.6	911.2	5.1	81.3	0.011	0.	6.74	0.1	70.	2.	5.
SC7079	899.3	916.5	3.4	82.6	0.492	1.12	1.25	0.25	8700.	3.	14.
SC7080	899.4	923.1	6.5	89.4	0.	0.187	0.051	0.167	2150.	7.	43.
SC7081	857.3	910.	6.3	70.8	0.713	0.018	8.34	0.117	140.	1.	55.
SC7082	857.1	910.	6.1	76.2	0.337	0.284	3.29	0.083	670.	2.	7.
SC7083	855.5	910.5	6.3	43.4	8.35	3.98	1.18	1.85	1600.	24.	75.
SC7084	855.	913.2	6.9	51.8	7.44	3.76	3.53	2.02	640.	24.	84.
SC7085	889.8	911.6	6.1	92.6	0.102	0.718	0.121	0.15	3430.	18.	40.
SC7086	890.9	911.3	4.1	49.2	6.76	7.2	3.1	1.75	290.	35.	70.
SC7087	890.6	88.6	5.1	68.2	0.08	0.136	3.38	0.15	1000.	5.	25.
SC7088	890.4	88.7	5.1	76.4	0.148	0.138	3.38	0.167	940.	12.	17.

BLANK SPACES REPRESENT NUMBERS THAT ARE MISSING OR HAVE OTHERWISE BEEN CODED AS "SPECIAL VALUES". ALL O'GAS PROGRAMS RECOGNIZE THESE VALUES AS MISSING AND TREAT THEM ACCORDINGLY.

APPENDIX 2

Soil Geochemistry



TERRAMIN RESEARCH LABS LTD.

ANALYTICAL REPORT

Job # 84-166-B

Corp. Falconbridge Copper

Date Aug.26, 1984

Client Project "BAR" 215

Page 1/1

Sample No. <u>Soil</u>	Au ppb	Ag ppb	As ppm	Cu ppm	Pb ppm	Zn ppm
525	-2	100	25	25	28	185
527	4	140	18	16	37	250
528	16	240	26	30	37	198
529	14	140	35	23	93	540
530	2	80	33	35	19	172
531	6	270	52	29	16	162
532	2	400	33	29	16	126
533	20	280	27	42	14	130
534	12	140	13	18	8	220
535	16	200	16	28	13	208
536	-2	150	18	37	34	390
537	2	180	16	26	78	310
538	24	250	13	28	26	220
539	-2	190	18	23	29	580

* 2,400

* 10,280

* 6,270

* 12,140

* 2,80

* 16,200

* 14,140

* <2,150

* 16,240

* 2,180

* 4,140

* 24,250

* <2,100

* <2,190

scale [10m

* Au, Ag (ppb)

BAR PROJECT
ANNA CLAIMS
SOIL GRID
Au, Ag

x 33,29

x 27,42

x 52,29

x 13,18

x 33,35

x 16,28

x 35,23

x 18,37

x 26,30

x 16,26

x 18,16

x 13,28

Scale [10m

x 25,25

x 18,23

x As, Cu. (ppm)

BAR PROJECT
AWA CANALS
SOIL GRS
As, Cu.

x 16,126

x 14,130

x 16,162

x 8,220

x 19,172

x 13,208

x 93,540

x 34,390

x 37,198

x 78,310

x 37,250

x 26,220

Scale [10m

x 28,185

x 29,580

x Pb, Zn (PPM)

BAR PROJECT
ANWA CLAIMS
SOIL G.E.D
Pb, Zn.

x 532

x 533

x 531

x 534

x 530

x 535

x 529

x 536

x 528

x 537

x 527

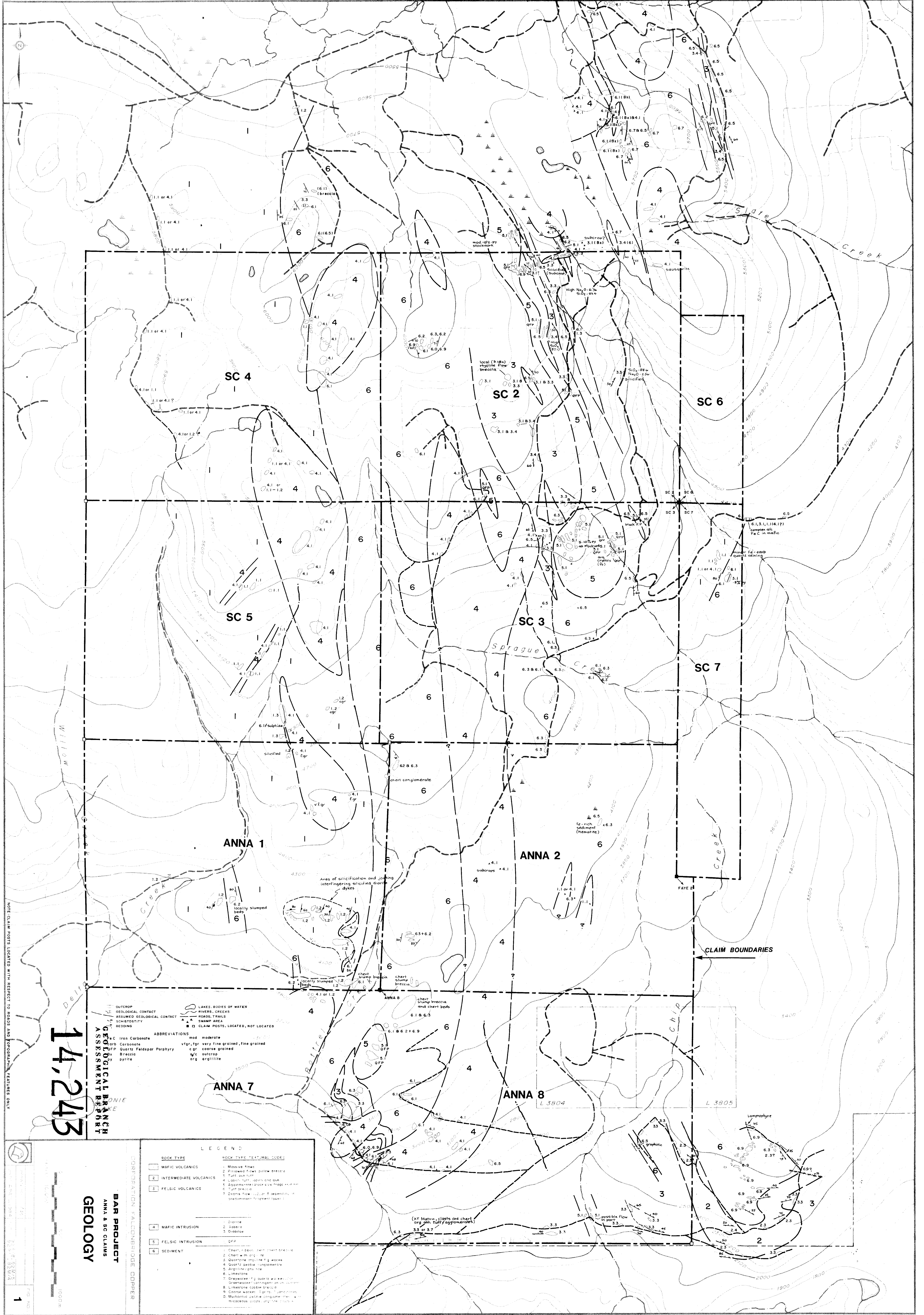
x 538

Scale [10m

x 525

x 539

BAR PROJECT
ANNA CLAIMS
SOIL GRID
SAMPLE LOCATIONS



14,243

BAR PROJECT
ANNA & SC CLAIMS
GEOLOGY

NOTE: CLAIM POSTS LOCATED WITH RESPECT TO ROADS AND FOREMAN'S FEATURES ONLY

SYMBOL	DESCRIPTION
○	OUTCROP
—	GEOLOGICAL CONTACT
—	ASSUMED GEOLOGICAL CONTACT
—	SCHISTOSITY
—	BEDDING
—	ABBREVIATIONS
—	LAKE, BODIES OF WATER
—	RIVERS, CREEKS
—	ROADS, TRAILS
—	SWAMP AREA
—	CLAIM POSTS, LOCATED, NOT LOCATED

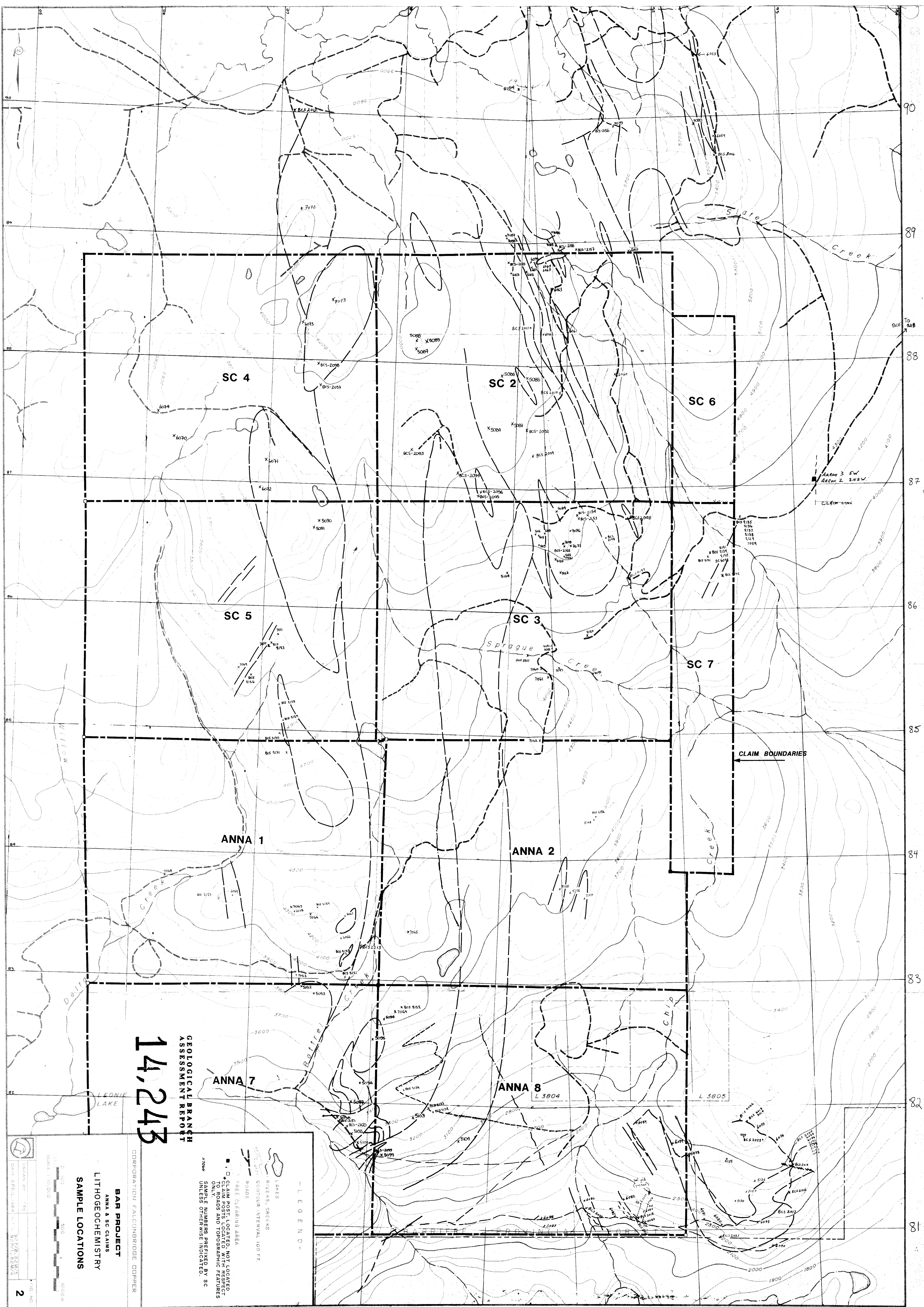
ABBREVIATIONS: mod. moderate; vfg, vfg; very fine grained, fine grained; egr, coarse grained; outcrop; arg, argillite

LEGEND

ROCK TYPE	ROCK TYPE "EXTRAL CODES"
1 MAFIC VOLCANICS	1 Massive flow
2 INTERMEDIATE VOLCANICS	2 Pillowed flow, pillow breccia
3 FELSIC VOLCANICS	3 Tuff, ash fall
4 MAFIC INTRUSION	4 Igneous rock, dyke and sill
5 FELSIC INTRUSION	5 Agglomerate, breccia, tuff, etc.
6 SEDIMENT	6 Limestone
	7 Gneiss, schist, etc.
	8 Metasediment, etc.
	9 Metavolcanic, etc.
	10 Metasediment, etc.
	11 Metavolcanic, etc.
	12 Metasediment, etc.
	13 Metavolcanic, etc.
	14 Metasediment, etc.
	15 Metavolcanic, etc.
	16 Metasediment, etc.
	17 Metavolcanic, etc.
	18 Metasediment, etc.
	19 Metavolcanic, etc.
	20 Metasediment, etc.

1000 ft

1



14,243
GEOLOGICAL BRANCH
ASSESSMENT REPORT

BAR PROJECT
 ANNA & SC CLAIMS
 LITHOGEOCHEMISTRY
 SAMPLE LOCATIONS

CORPORATION FALCONBRIDGE COPPER

LEGEND

- CLAIM BOUNDARIES
- CLAIM POSTS LOCATED, NOT LOCATED TO ROADS AND TOPOGRAPHIC FEATURES ONLY.
- SAMPLE NUMBERS PREFIXED BY SC UNLESS OTHERWISE INDICATED.
- TREE CLEARING AREA
- ROADS
- RIVERS, CREEKS
- CONTOUR INTERVAL 100 FT.
- LAKES

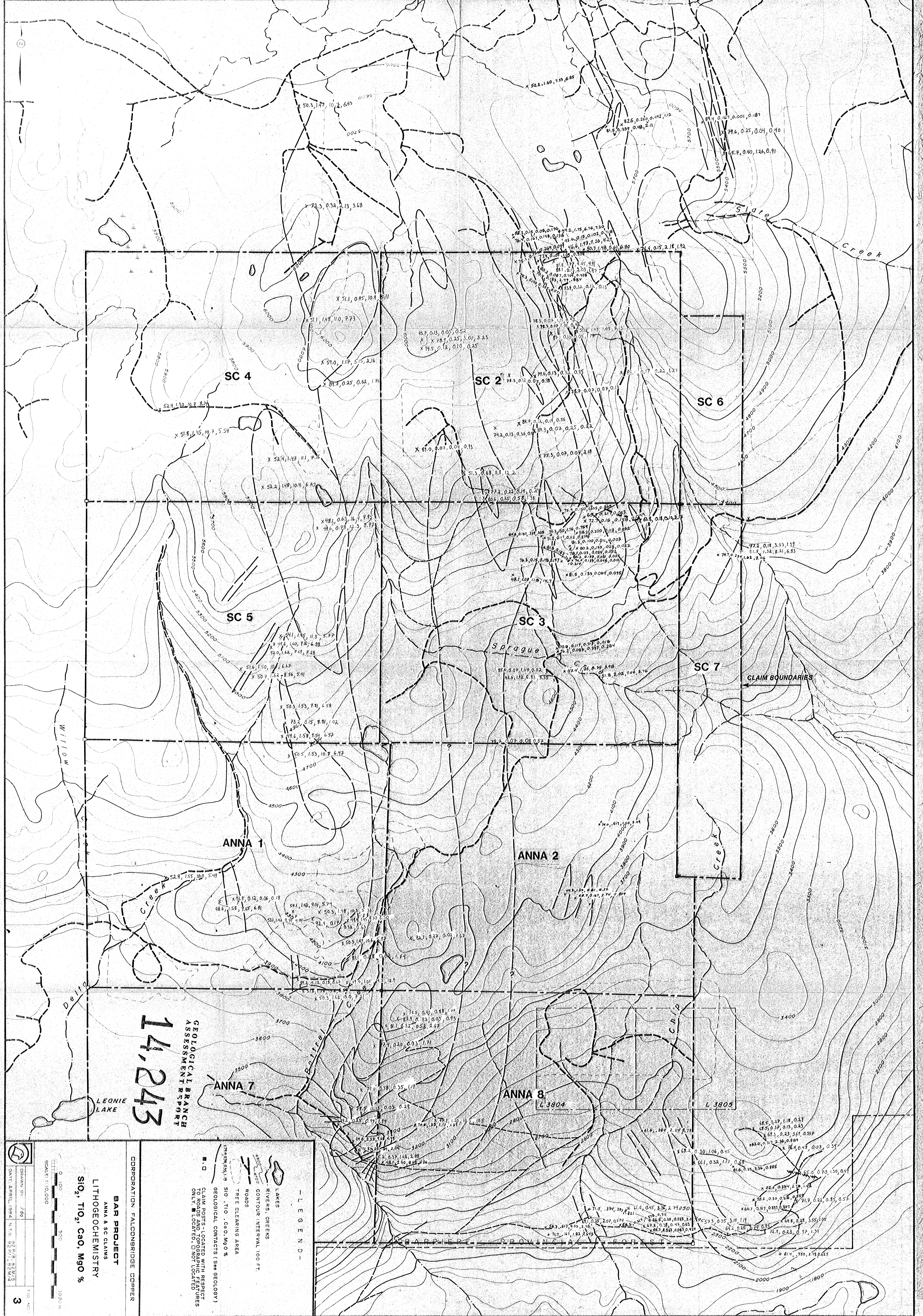
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DATE: APRIL 1984

BY: D. J. BROWN

2

90
89
88
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83
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81

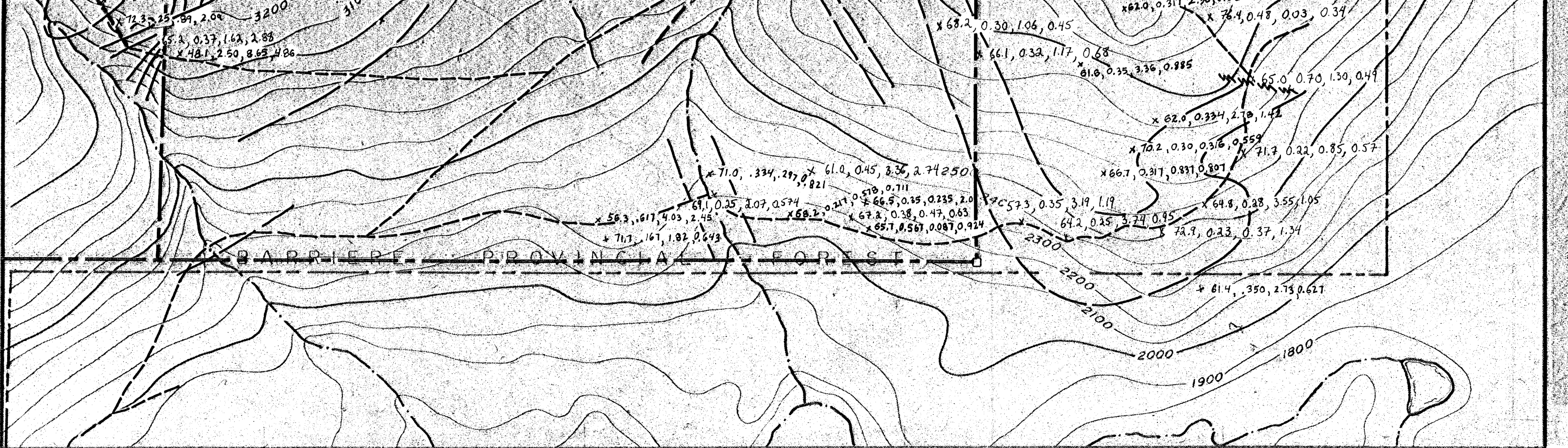


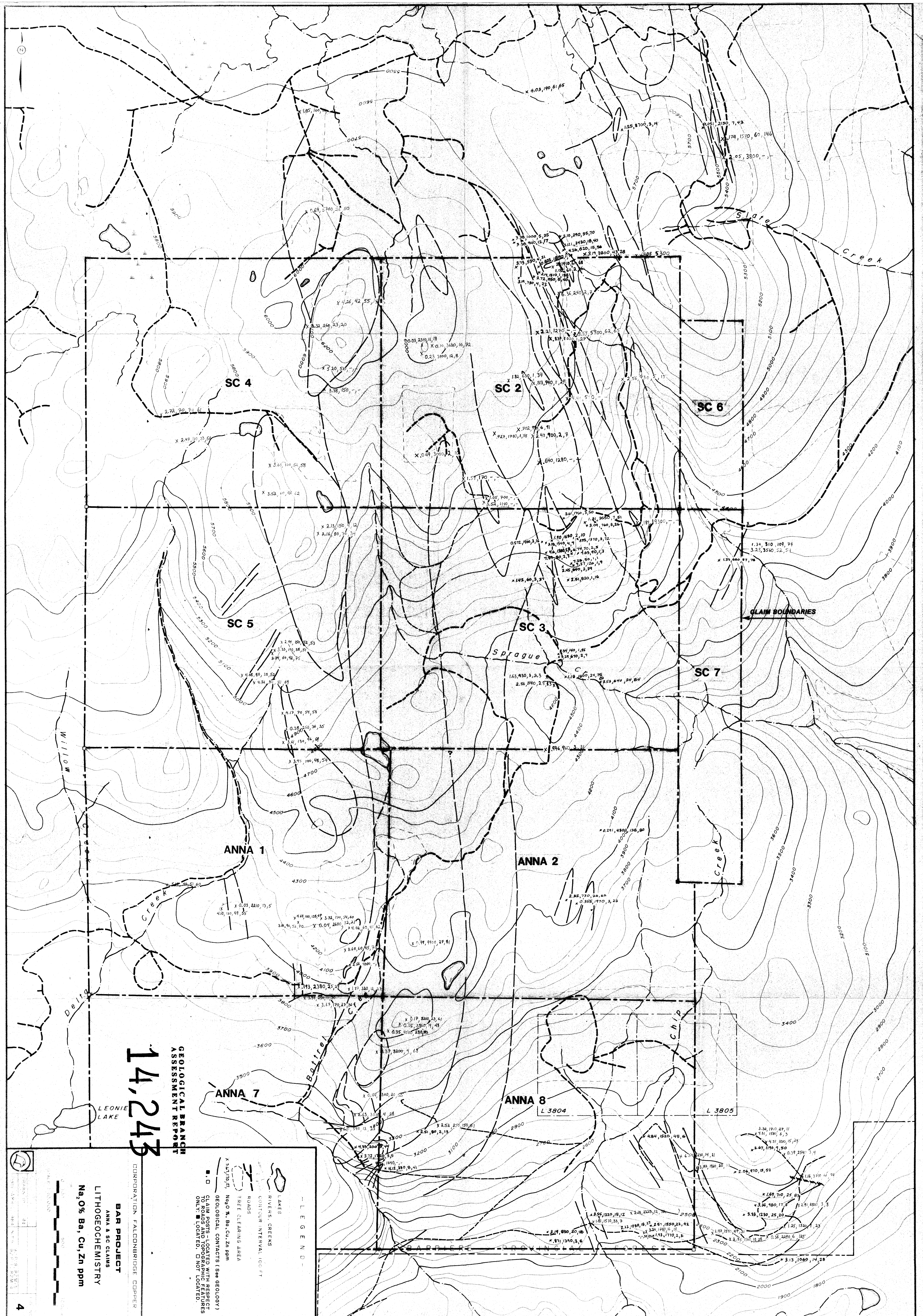
14,243
 GEOLOGICAL BRANCH
 ASSESSMENT REPORT

DRAWN BY: J49
 DATE: APRIL 1964
 SHEET NO. 3

BAR PROJECT
 ANNA & SC CLAIMS
 LITHOGEOCHEMISTRY
 SiO₂, TiO₂, CaO, MgO %

LEGEND
 LAKES
 RIVERS, CREEKS
 100 FT. CONTOUR INTERVAL
 ROADS
 TREE CLEARING AREA
 SIO, TIO, CAO, MGO %
 GEOLOGICAL CONTACTS (SEE GEOLOGY)
 CLAIM POSTS - LOCATED WITH RESPECT TO ROADS AND TOPOGRAPHIC FEATURES ONLY
 CLAIMS LOCATED, D NOT LOCATED





14,243
 GEOLOGICAL BRANCH
 ASSESSMENT REPORT

CORPORATION FALCONBRIDGE COPPER
BAR PROJECT
 ANNA & SC CLAIMS
 LITHOGEOCHEMISTRY
 Na, O% Ba, Cu, Zn ppm

LEGEND

- LAKES
- RIVERS, CREEKS
- 100 FT. CONTOUR INTERVAL
- ROADS
- TREE CLEARING AREA
- GEOLOGICAL CONTACTS (see GEOLOGY)
- CLAIM POSTS - LOCATED WITH RESPECT ONLY
- CLAIM LOCATED - NOT LOCATED