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GRANITE GEOCHEMISTRY PROJECT - BAY D'ESPOIR AREA

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INTRODUCTION

The project was started during the 1978 field season and will be completed in 1979. It is intended to sample all the major igneous intrusions in the following map areas: Gaultois (1M/12), north of the Hermitage Bay Fault, St. Alban's (1M/13), Twillick Brook (2D/4), and Burnt Hill (2D/5). The work is being done in conjunction with the Department of Geology, Memorial University of Newfoundland.

SAMPLING PATTERN

In the Gaultois map area and the St. Alban's map area south of the Salmon River Dam, exposure is excellent and a grid sampling method devised by Dr. R. Garrett of the Geological Survey of Canada was used. The method has an inverted-nested design and provides for the selection of sample sites, outcrop duplicates and analytical splits. North of the Salmon River Dam in the St. Alban's map area and in the Twillick Brook area, exposure is poor and samples have been taken on an opportunity basis; outcrop duplicates have been taken for 10 to 15 percent of locations and analytical splits will be made of 5 percent of the samples. The Burnt Hill area has not yet been mapped and the sampling pattern to be used there will be determined when exposure availability and rock types are better known.

Sample size depends on grain size, but is at least 2 kg.

ANALYSES

Samples will be examined petrographically and analysed for all major elements as well as the following trace elements:

U, Zr, Sr, Rb, Zn, Cu, Ba, Sn, Mo, Nb, Ga, Pb, La, Cr, Ni, V, Y, Ce, S, F, Li, Be.

PROGRESS IN 1978

The intrusions sampled during 1978 are listed in Table 1 and shown on the map (Figure 1). Descriptions of these intrusions and their contact relationships have been given by Colman-Sadd (1976, 1978a, 1978b, 1979).

It is expected that the Partridgeberry Hills Granite (unit 13) and the Through Hill granite (Burnt Hill map area) will be sampled in 1979.

REFERENCES

Colman-Sadd, S.P.

1976: Geology of the St. Alban's map area (1M/13), Newfoundland. Newfoundland Department of Mines and Energy, Mineral Development Division, Report 76-4, 19 pages.

1978a: Gaultois map area (1M/12), Newfoundland. *In* Report of Activities for 1977. *Edited by* R.V. Gibbons. Newfoundland Department of Mines and Energy, Mineral Development Division, Report 78-1, pages 90-96.

1978b: Twillick Brook, (2D/4) Newfoundland. Newfoundland Department of Mines and Energy, Mineral Development Division, Map 7871.

1979: Geology of Twillick Brook (2D/4) and part of Burnt Hill (2D/5) map areas, Newfoundland. This volume.

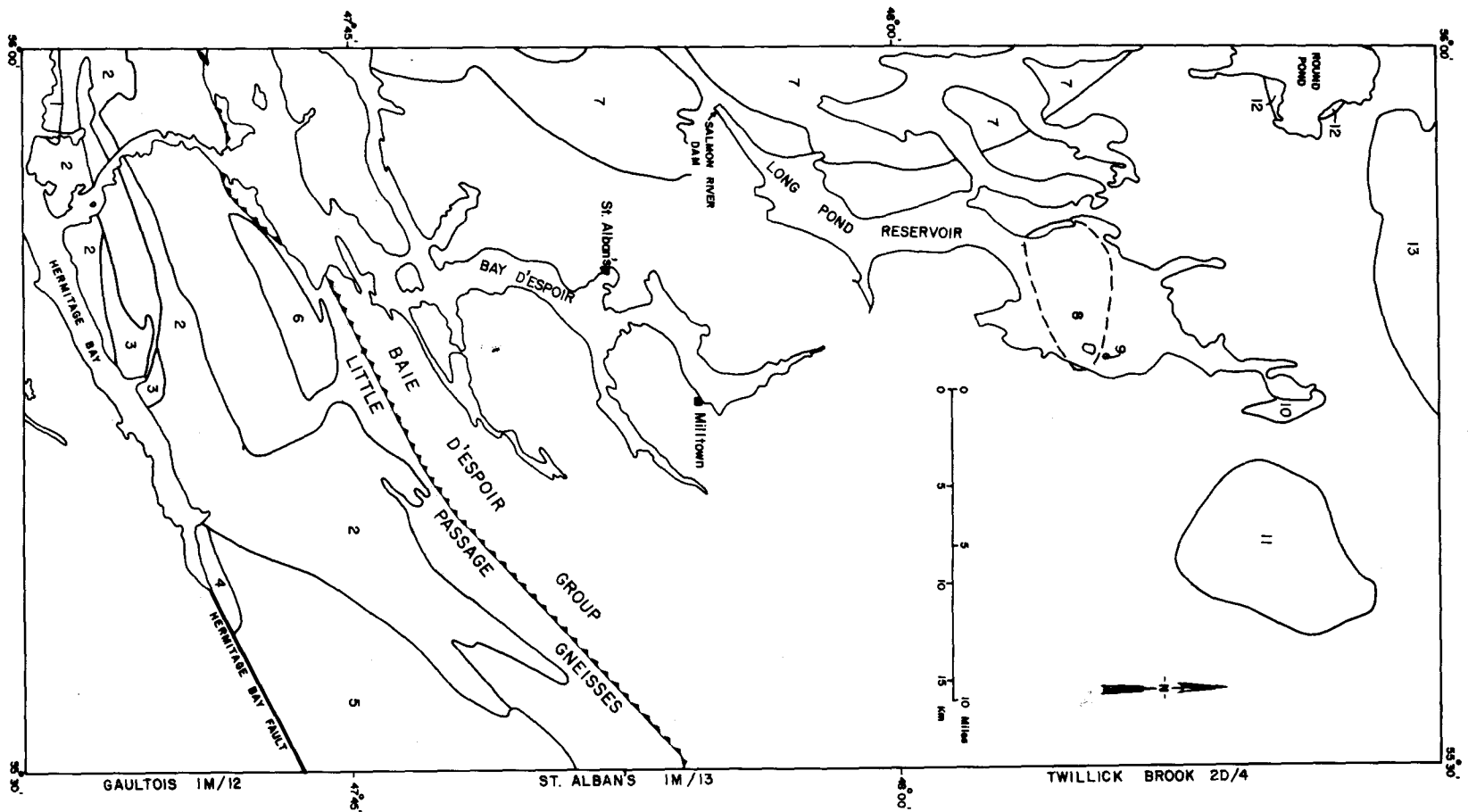


Table 1. Samples collected in 1978.

Map No.	Name	No. of regular samples	No. of pegmatite or aplite samples
1	Piccaire Granite	16	
2	Gaultois Granite	77	8
3	Northwest Cove Granite	18	
4	Straddling Granite	21	
5	Southeast equigranular granite	43	3
6	Dolland Bight granite	28	
7	North Bay Granite	55	4
8	Long Pond granite	5	
9	Long Pond gabbro	2	1
10	Rocky Bottom tonalite	15	
11	Matthews Pond granite	17	
12	Round Pond gabbro / granodiorite	4	
13	Partridgeberry Hills Granite		