

SURFICIAL AND GLACIAL MAPPING, SOUTHWEST NEWFOUNDLAND

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The results of a reconnaissance mapping program in the southwest section of Newfoundland (map sheets 11 0/10, 11 0/11, 11 0/14, 12 B/2, 12 B/3, 12 B/7, 12 B/8 and parts of 11 0/15, 12 B/1, 12 B/9) to describe the surficial deposits, glacial flow indicators, and aggregate potential of the area, are now being compiled and the final report will be completed in 1975. The work was conducted to assess the aggregate resources of the area and in support of Canada/Newfoundland Mineral Exploration and Evaluation Program Project 6-5, Geochemical Reconnaissance Survey of the Codroy-Bay St. George Carboniferous Basin (see McArthur and Davenport, this volume).

An airphoto interpretation (scale 1:50,000) of the surficial deposits and glacial flow indicators was completed in May. The data were transferred to base maps (scale 1:50,000) and approximately six weeks were spent field mapping, obtaining ground truth for the airphoto interpretation and information on the aggregate resources.

The glacial pattern of the study area was coastward ice flow from the Long Range Mountains during the Wisconsin glacial maximum followed by valley glaciation during retreat (Grant, 1974 a and b, Prest et al. 1968). The pattern of flow during retreat (Fig. I) was as follows:

- (a) southwest in the Fishell's Brook to George's River area;

GLACIAL MAP SOUTHWEST NEWFOUNDLAND

LEGEND

- ← Roche moutonnée
- ⊥ Crag and tail
- Striae — directional
- Striae — non-directional
- ▬ Till Fabric
- ▬ Glacial lineations

Miles 5 0 5 Miles
SCALE

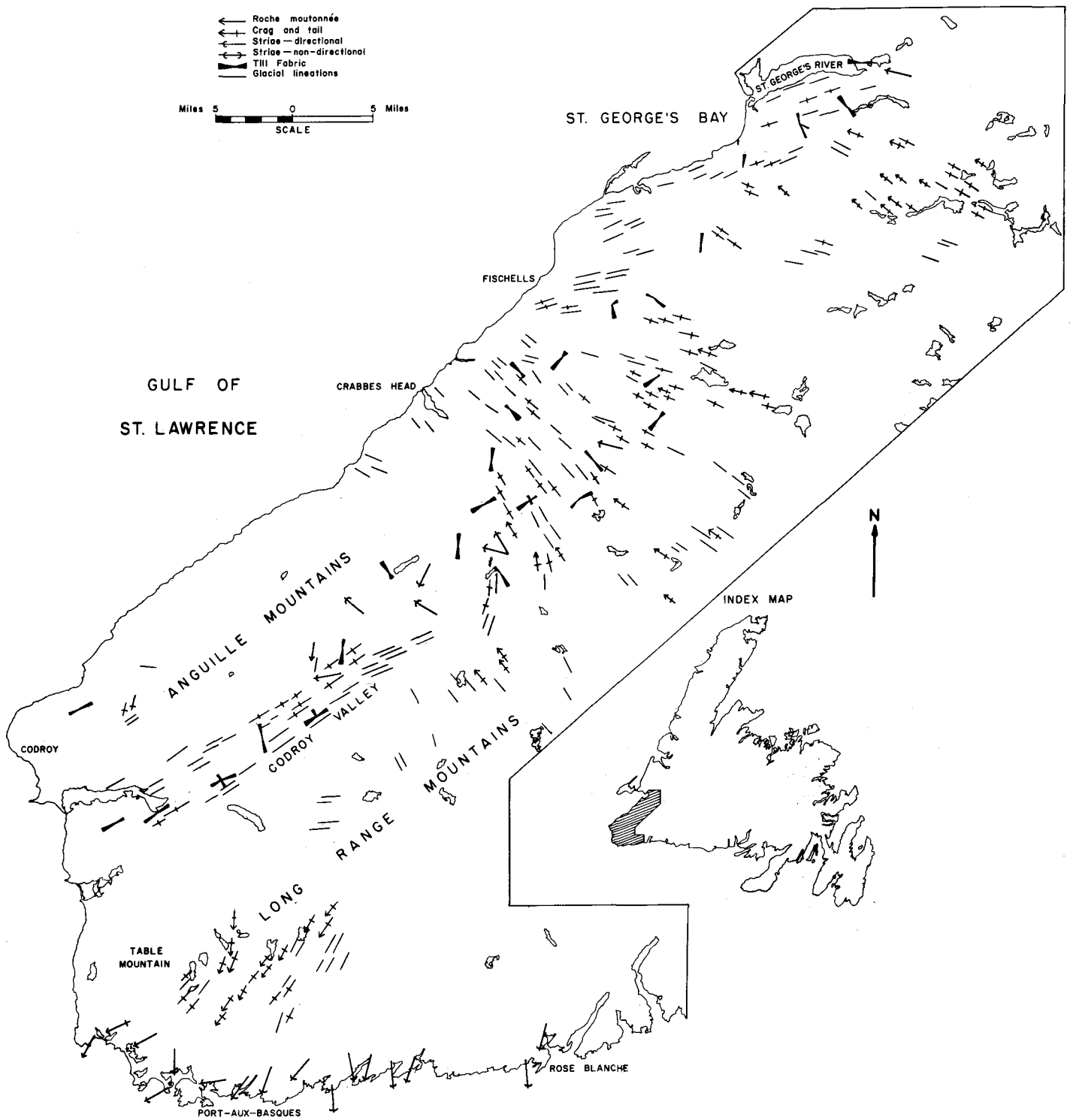


Fig. 1

- (b) northwest between Crabbes River and Fishell's Brook;
- (c) southwest around the northwest side of the Anguille Mountains;
- (d) southwest between the Anguille and Long Range Mountains, fed by valley glaciers; and
- (e) generally coastward from the Long Range Mountains between Table Mountain and Rose Blanche.

It was found during field mapping that till fabrics in general were a good indicator of flow when other flow indicators were scarce. Erratic till fabrics (Fig. I) can normally be explained in terms of (a) the quality of the locale chosen for a fabric (i.e., shallow vs. deep pits), and (b) evidence of solifluction.

Follow-up exploration to the geochemical reconnaissance of the area will have to take the deglacial pattern into account to be successful in explaining any geochemical anomalies in the area.

Surficial deposits are generally thick through the Codroy Valley and over the plateau area north of the Anguille Mountains. Outcrops are normally limited to stream valleys. Drift is generally thin along the flanks of the Anguille and Long Range Mountains.

Aggregate resources over plateau and Codroy Valley areas are generally abundant and could support substantially more development provided it is conducted in conjunction with a regional aggregate resource management policy. The larger deposits are located parallel

to most major drainage systems and in some coastal regions. Aggregate is less abundant in the Port aux Basques area and scarce in the vicinity of Route 84 to Rose Blanche. Glaciofluvial deposits occur along a few of the major rivers within a few miles of the road (Route 84) and are therefore considered moderately accessible. Care must be exercised during exploitation of these deposits due to their sensitive environmental positions.

References

Grant, D.R.

1974a: Granular Resources Inventory, Nfld; Geol. Surv. Can., Open File 194, Scale 1:500,000.

1974b: Prospecting in Newfoundland and the Theory of Multiple Shrinking Ice Caps; in Geol. Surv. Can., Paper 74-1, Part B.

Prest, V.K., Grant, D.R. and Rampton, V.N.

1968: Glacial map of Canada; Geol. Surv. Can., Map 1253A, Scale 1:5,000,000.