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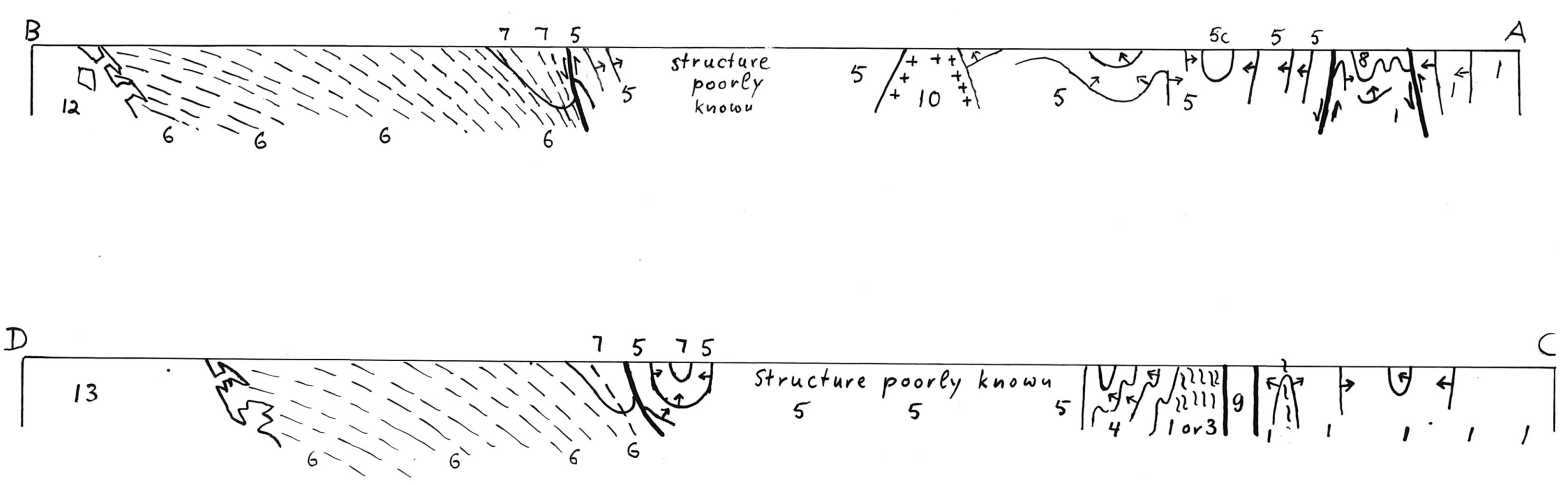
FIGURE 1: Tentative structural sections

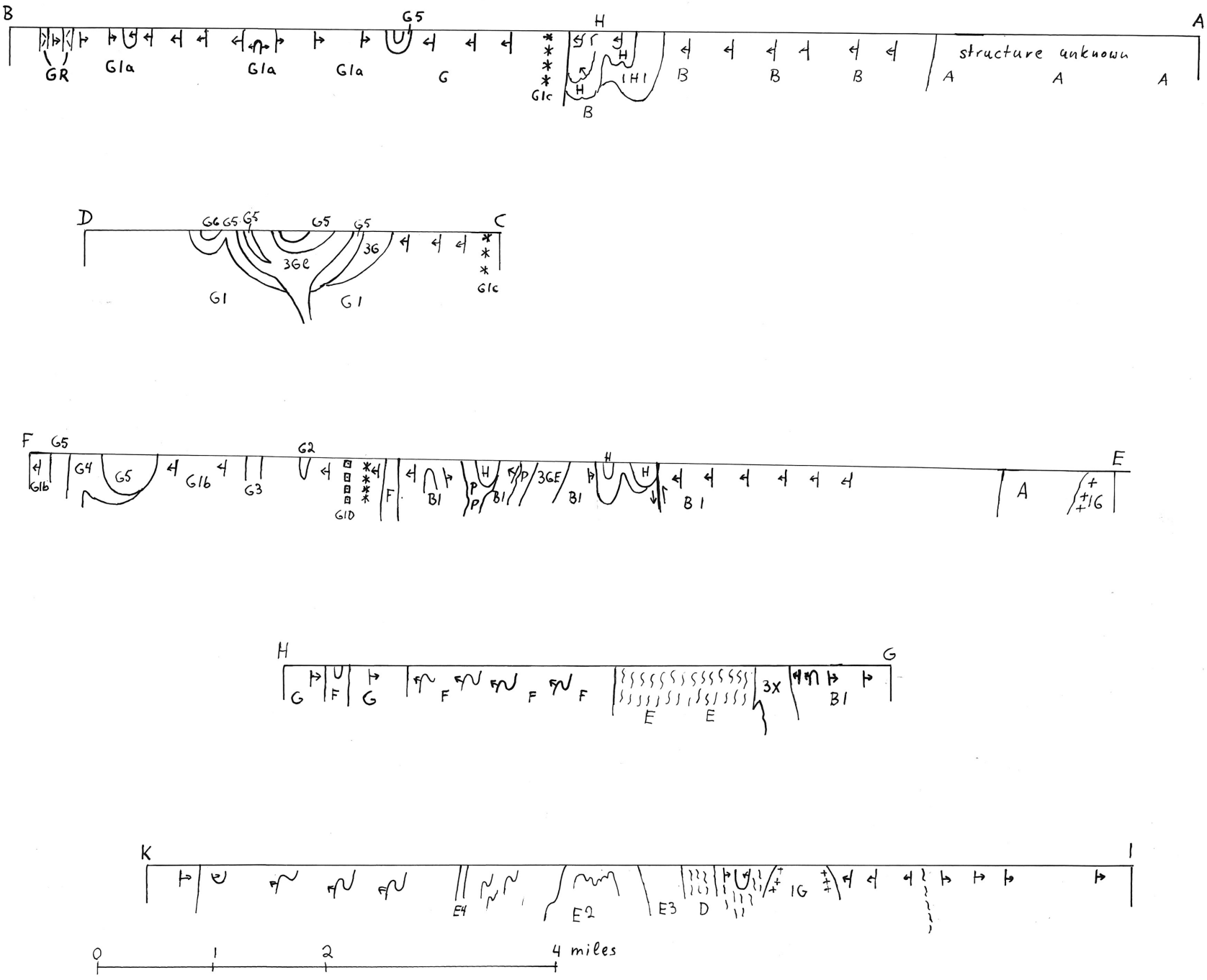


Tentative structural sections across the Rouyn-Noranda area

0 2 4 8 miles

Legend: see map 1

Tentative structural sections across the Duparquet-Destor-Manneville break



Legend: see map 2

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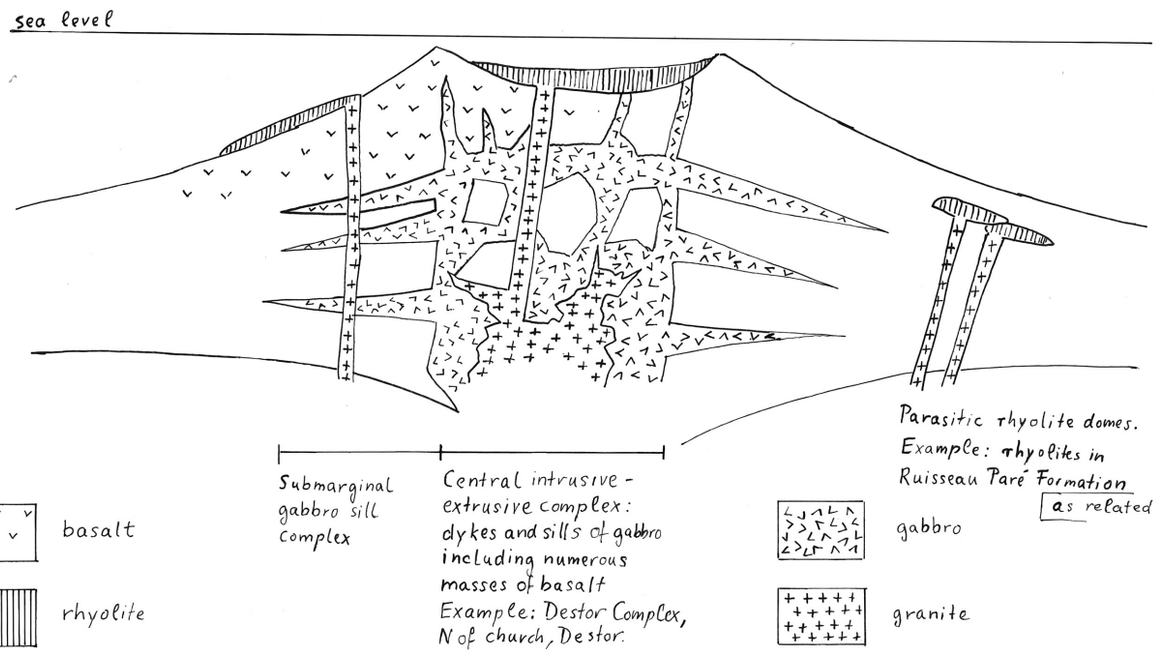
Figure 2

Models of the interpretation of volcanogenic facies as related to eruptive centers in the Duparquet - Destor - Cléricy area

E. Dimroth, 1973

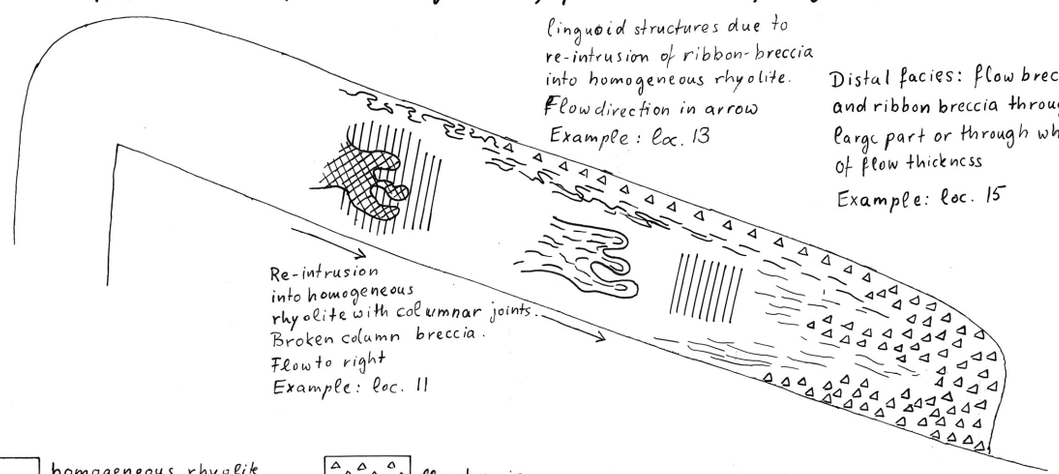
Model of a basalt volcano (adapted from Walker, 1963)



Note: Basalt eruptions tend to be violently explosive if taking place at shallow depth (Tazieff, 1972; Bennett, 1972). Their explosivity decreases with increasing depth; eruptions taking place below 2000 m water are completely quiet effusions. Therefore we relate the proportion of hyaloclastic breccia and aquagene tuff present to water depth, and indirectly, to distance from the eruptive center. This proportion is thought to increase drastically toward the volcanic center, particularly of water depth at the center is not large. This interpretation of basalt facies to water depth and indirectly - to distance from the volcanic center is tentative.

Model of the facies distribution in rhyolite flows (after Spence, in Goodwin and Ridler, 1972)

Note: not all facies are generally present in any single flow.



Note: Facies relations correspond to those described by A. Spence, in Goodwin and Ridler, 1972, except for tentative re-interpretation of linguoid structures as due to re-intrusion, ● in part more proximal than some homogeneous rocks.

Model of the facies interpretation of pyroclastic tuff breccias and ash flow tuffs

Adapted from Fiske (1964), Bouma (1962), Walker (1970), Blatt, Middleton and Murray (1972)

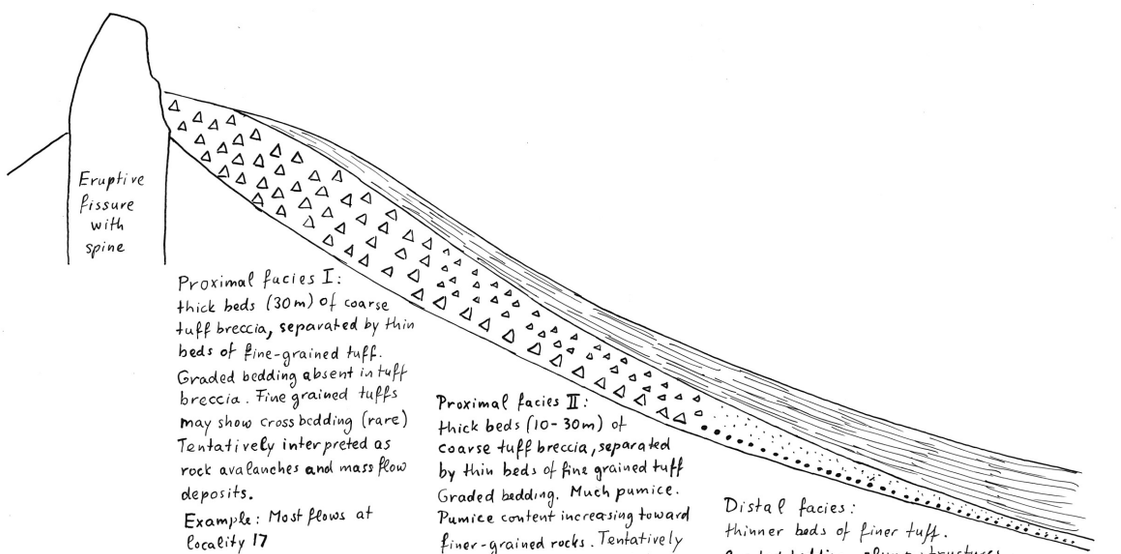


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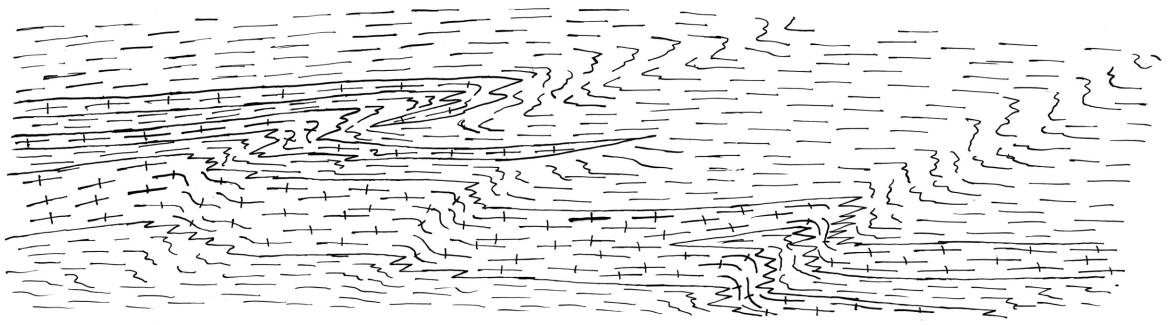
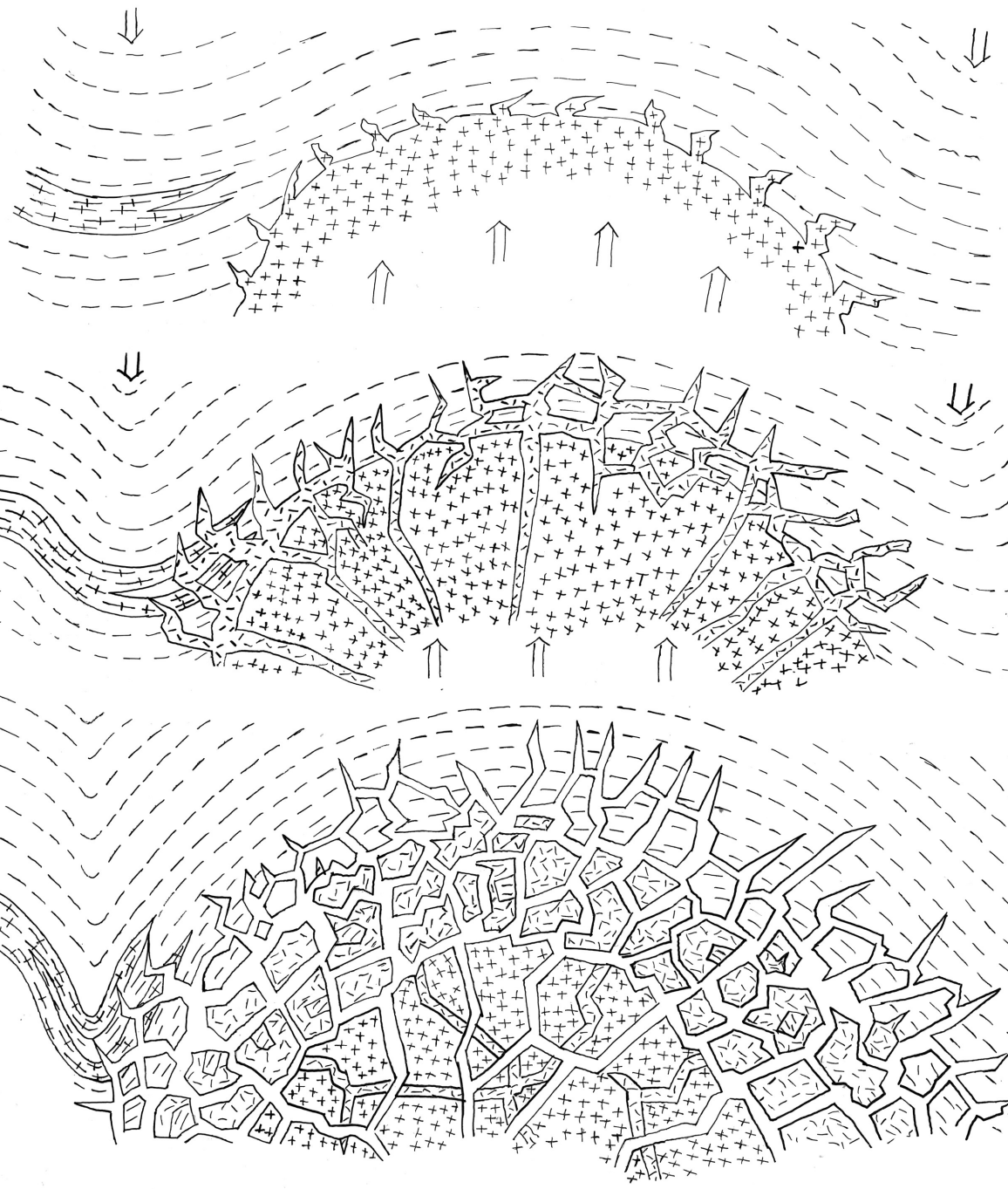
FIGURE 3



I

Intrusion of grey tonalite gneiss into Pontiac schist; recumbent folding and development of sub-horizontal schistosity.



II

Intrusion of hornblende granodiorite dome. Updoming of granite batholith, beginning subsidence of marginal synclines.

III

Continuing updoming of batholith and subsidence of marginal syncline. Brittle fracturing at cold contact of batholith. Remaining magma drains into a dyke and sill system at margin of batholith, where it forms the heterogeneous granodiorite

IV

Continuing updoming and fracturing in the envelope of the batholith. Continuing intrusion of dykes of heterogeneous granodiorite

Figure 3: Development of the batholitic system of Remigny

L E G E N D

- Pontiac schist
- Grey tonalite gneiss
- Hornblende granodiorite and tonalite
- Heterogeneous granodiorite, older dyke generations
- Heterogeneous granodiorite, younger dyke generations

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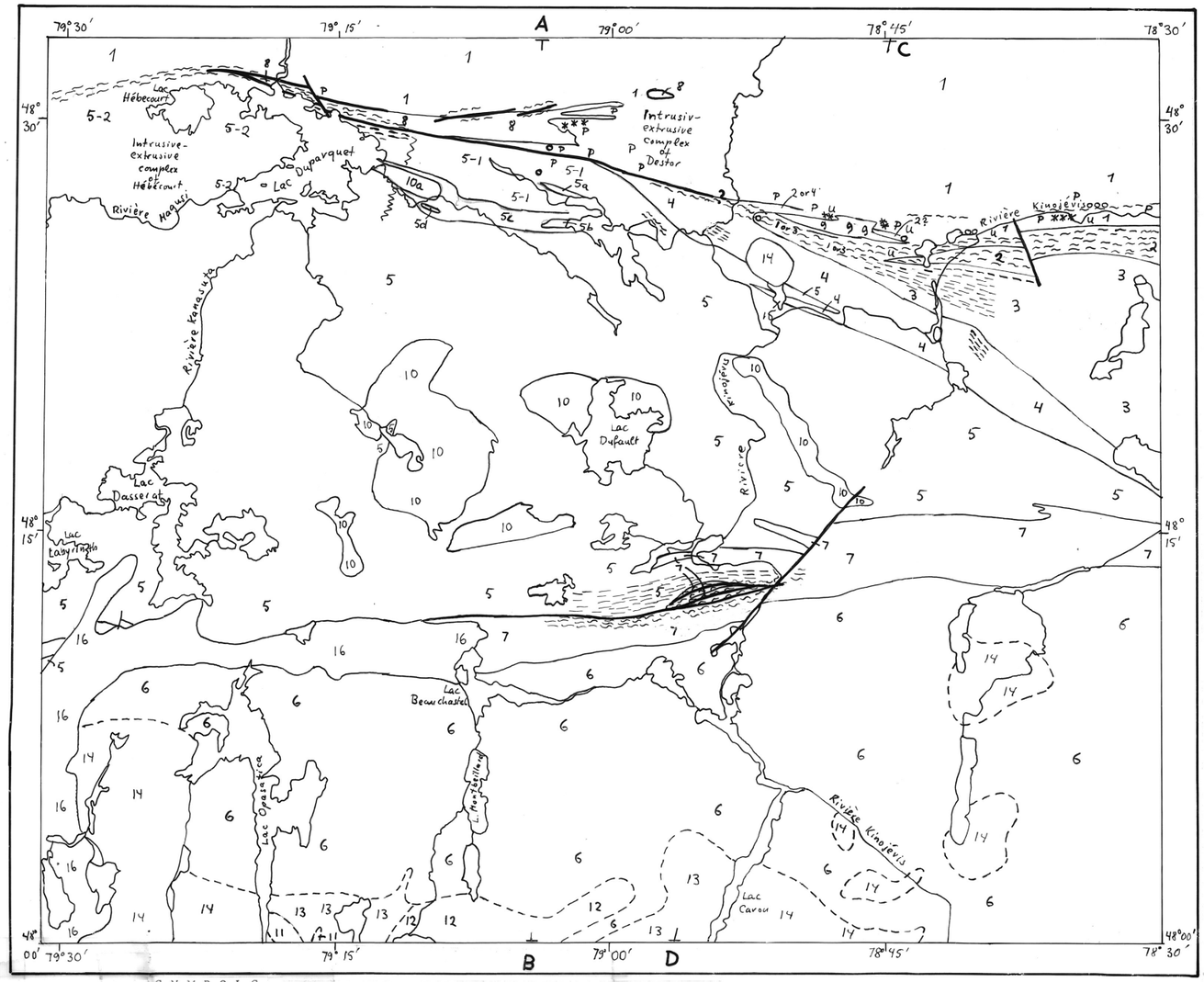
Géologie par: E. Dimroth.

MAP 1: GENERAL GEOLOGY OF THE ROUYN-NORANDA AREA
(modified from Wilson, 1962)



0 2 4 8 miles

SYMBOLS

Fault zone, narrow, well defined

Zone of extremely strong schistosity. Probably intense folding and faulting; carbonatization widespread. Faults, if present, poorly defined.

Zone of strong schistosity. Intense folding known or suspected.

Tops

Section line

Compilation: E. Dimroth 1973

L E G E N D

PROTEROZOIC

16 Cobalt Group

ARCHEAN

Intrusive rocks

15 Pyroxenite[1)]
14 Uncorrelated "granitic" rocks[1)]
13 Heterogeneous granodiorite
12 Pyroxene monzodiorite
11 Grey tonalite gneiss
10a Layered gabbro complex of Duparquet lake[1)]
10 "Granitic" intrusions related to volcanic rocks

Intrusive and extrusive rocks of the Duparquet-Destor-Manneville zone

9 Intrusive breccia
P Porphyry dykes, stocks and sills
U Ultramafic dykes, stokks and sills (mostly pyroxenite)
o Rhyolite domes
* Ultramafic flows (komatiites and peridotites)

Volcanic and sedimentary rocks

8 Duparquet Group[2)]
7 Cadillac Group
6 Pontiac Group
5 Blake River Group
5-1 Aphanitic basalts predominating
5-2 Porphyritic and glomeroporphyritic basalts predominating (probably derived from Hébécourt intrusive-extrusive complex)
5d Rhyolite of Dalembert river
5c Dacitic or andesitic ash flow tuff
5b Rhyolite of Dufresnoy lake
5a Lower rhyolite
4 Kewagama Group
3 Malartic Group
2 Lake Caste Group[3)]
1 Kinojévis Group[4)]

Notes:
1) age relative to other units unknown
2) age relative to units 2-7 unknown
3) may be equivalent to unit 4
4) may be equivalent to unit 5

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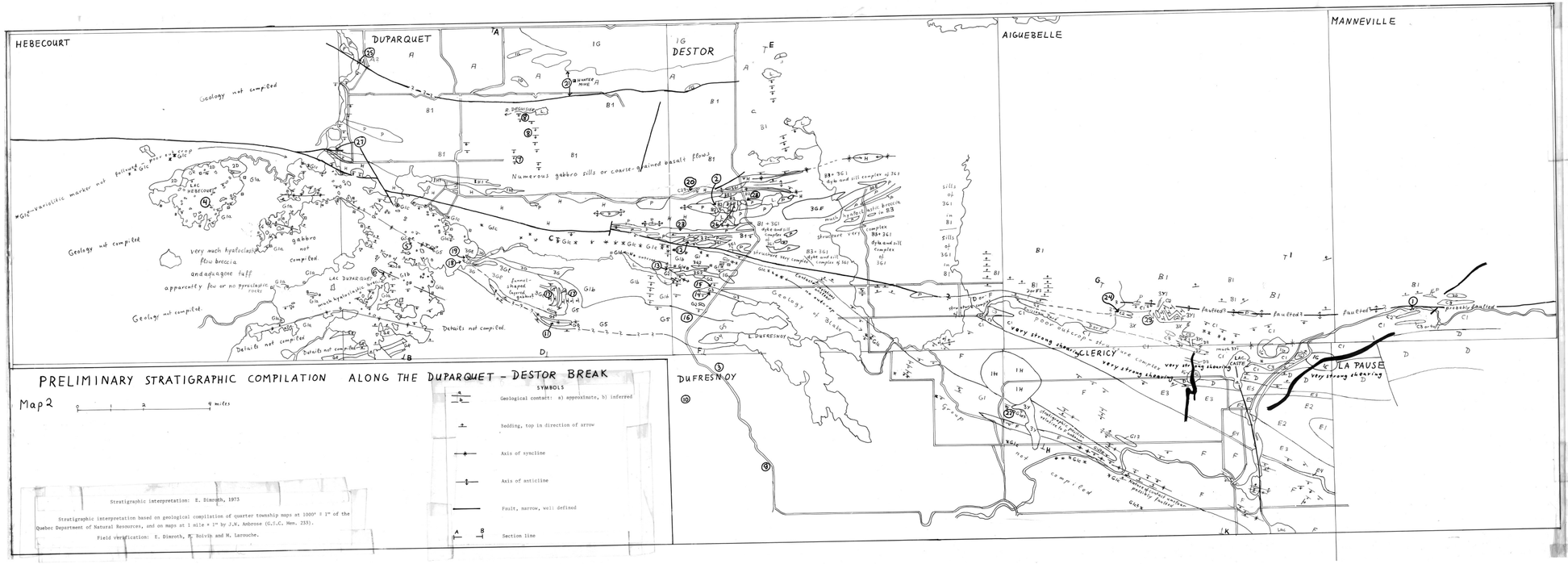

MAP 2: PRELIMINARY STRATIGRAPHIC COMPILATION OF THE DUPARQUET-DESTOR ZONE

LEGEND

4 Diabase

INTRUSIVE ROCKS

Acidic intrusive rocks

1G Granitic rocks, unsubdivided

1G1 Syenite of Duparquet; probably equivalent of P

P Porphyries and micro-granites of the Duparquet-Destor zone: quartz porphyry, quartz-feldspar porphyry; micro-granite. Probably in part feeder dykes and subvolcanic stocks and sills equivalent to rhyolites C5 and G2. Younger than gabbro 3G1, older than Duparquet Group. Older than intrusive breccia 3X.

Mafic intrusive rocks

3G Gabbro, not correlated

3G1 Layered gabbro complex of Duparquet lake (exact shape and age unknown)

3GE Composite sill: gabbro, pyroxenite, peridotite, locally cornnitic. May be part of Destor Complex

3G2 Gabbro, younger than rhyolite G2

3G1 Gabbro of Destor Complex (sills and dykes, probably feeder dykes and subvolcanic equivalents of basalt B1). Older than porphyries P and rhyolites C1

3Y Pyroxenite, not correlated

3Y1 Pyroxenite of Destor-Manneville fault zone. Older than intrusive breccia 3X and porphyries P.

Intrusive breccia

3X Polymictic intrusive breccia of Ruisseau Paré. Brecciated rocks of ruisseau Paré Formation and adjoining sediments. Older than folding

SEDIMENTARY AND VOLCANIC ROCKS

H Duparquet Group: conglomerate, arkose, greywacke, shale. Overlies porphyries and Kinojévis Group. Relations to Blake River Group unknown.

G Blake River Group

G6 Uncorrelated rhyolite

G6 Rhyolite of Dalembert river

G5 Dacitic or andesitic ash flow tuff

G4 Rhyolite of Dufresnoy lake

G3 Lower Rhyolite: rhyolite flow overlain by rhyodacite flow, aphanitic

G2 Local rhyolite domes in lower part of Blake River Group

G1 Mafic flows and flow breccias

G1o Porphyritic and glomeroporphyritic facies of Hébécourt and Duparquet lakes. Much flow breccia and aquagene tuff.

G1b Aphanitic flows, little flow breccia.

G1c Variolitic marker

G1d Coarsely porphyritic marker (flow breccia or pyroclastic rocks, minor pillow basalt)

F Kewagama Group: greywacke, shale, minor conglomerate. Relations F/G poorly exposed, may be faulted in places. Appears to overlie E concordantly

E Kelaartic Group
E4 Upper felsic unit
E3 Upper mafic unit
E2 Lower felsic unit
E1 Lower mafic unit
Contacts B/F not exposed

D Lac Caste Group (may be equivalent to Kewagama Group): greywacke, shale, some conglomerate, little chert; strongly schistose and metamorphosed
Contacts C/D not exposed

A - C Kinojévis Group

C Ruisseau Paré Formation
C5 Rhyolite domes and tuffs
C2 Ultramafic flows (komatiite, peridotite)
C1 Basalt, minor flow breccia
Relations B/C unclear, probably faulted

B Ruisseau Degussier Formation
B2 Ultramafic flows (komatiite?)
B1 Basalt flows, minor flow breccia and aquagene tuff
Contact A/B not exposed, strongly schistose and possibly faulted

A Hunter Mine Formation (rhyolite, felsic pyroclastic rocks, minor mafic flows and dykes, subordinate greywacke, conglomerate, iron formation)

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