

GEOLOGY OF THE NORTHWESTERN PART OF THE FLORENCE LAKE GREENSTONE BELT AND THE BAIKIE SHOWING, HOPEDALE BLOCK (NAIN PROVINCE), EASTERN LABRADOR (WESTERN PART OF NTS MAP AREA 13K/15)

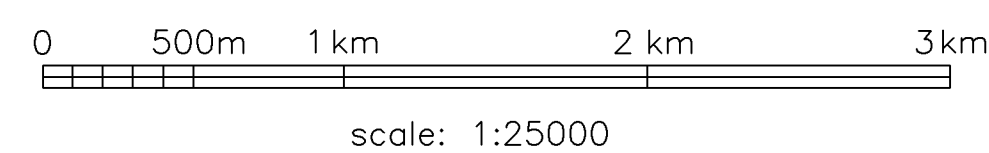
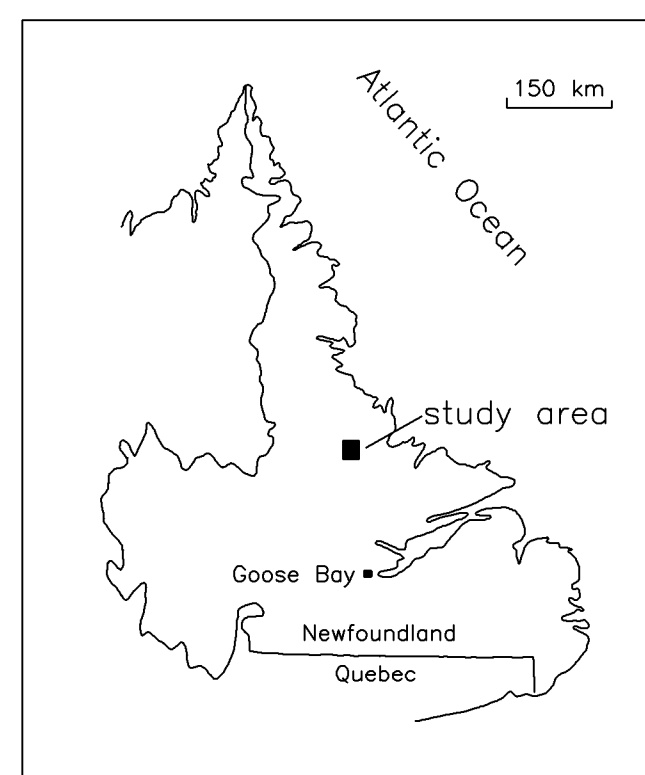
OPEN FILE: 013K/15/0229
OPEN FILE MAP: 97-02

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This map is one in a series of 1:25000-scale Open File maps of the geology of the Florence Lake greenstone belt. The other maps in this series cover the southwestern part of the belt (Open File Map 96-23), central part of the belt (Open File Map 96-24), and northeastern part of the belt (Open File Map 96-25).

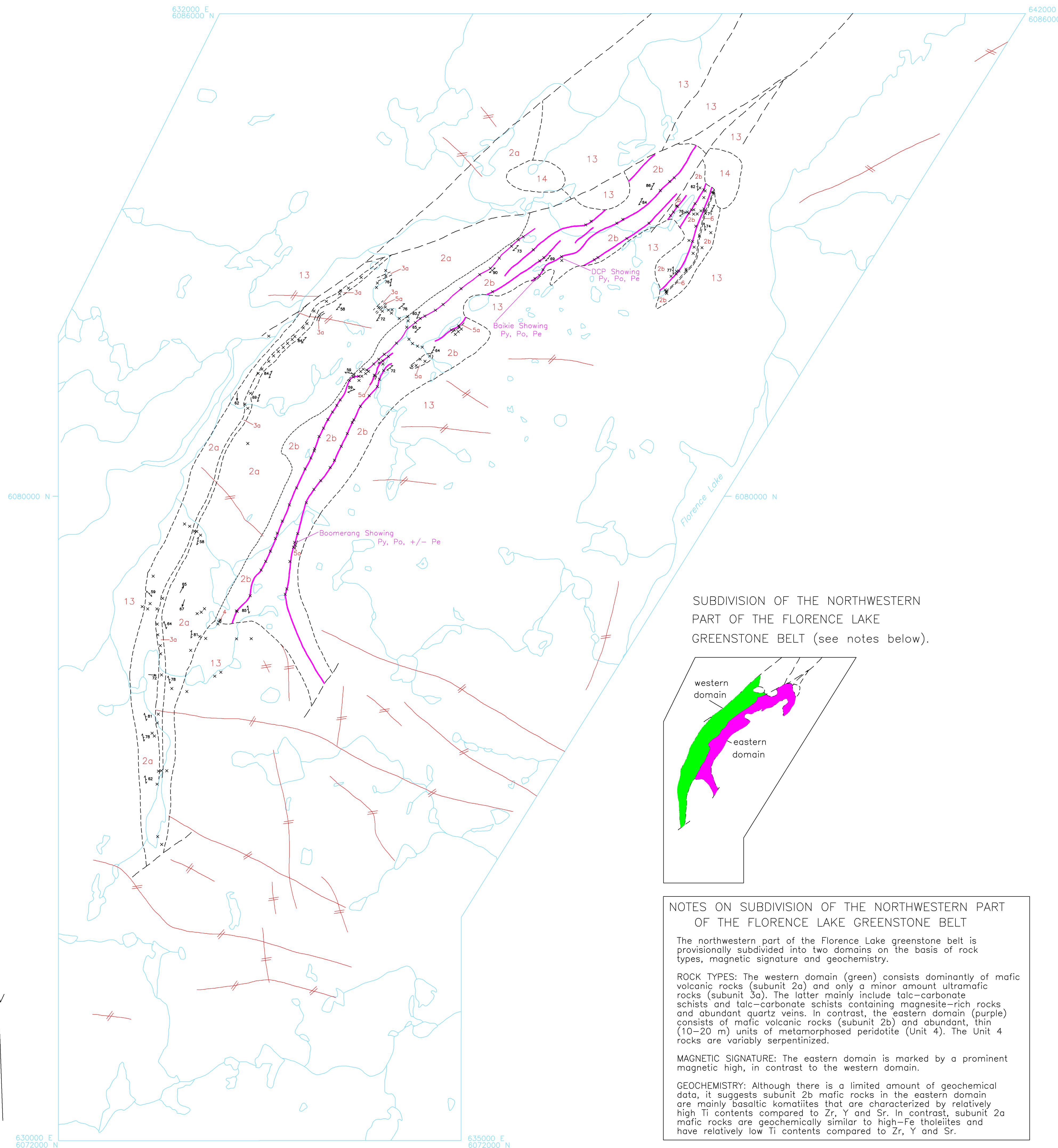
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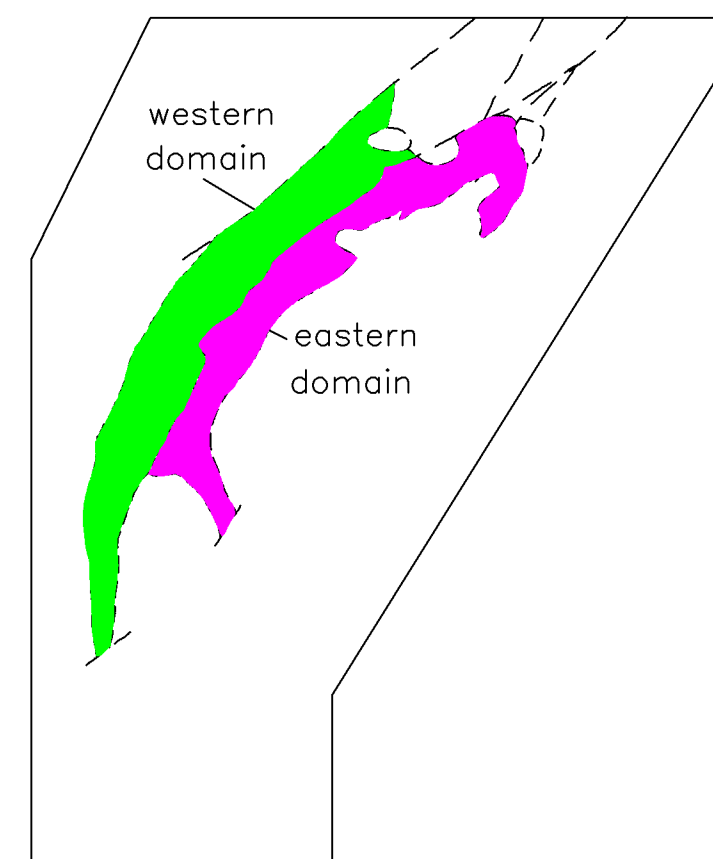


Map coordinates are UTM coordinates for Grid Zone 20.

The topographic base was digitized from 1:50000-scale NTS map 13K/15 and from air photographs.



SUBDIVISION OF THE NORTHWESTERN PART OF THE FLORENCE LAKE GREENSTONE BELT (see notes below).



NOTES ON SUBDIVISION OF THE NORTHWESTERN PART OF THE FLORENCE LAKE GREENSTONE BELT

The northwestern part of the Florence Lake greenstone belt is provisionally subdivided into two domains on the basis of rock types, magnetic signature and geochemistry.

ROCK TYPES: The western domain (green) consists dominantly of mafic volcanic rocks (subunit 2a) and only a minor amount ultramafic rocks (subunit 3a). The latter mainly include talc-carbonate schists and talc-carbonate schists containing magnesite-rich rocks and abundant quartz veins. In contrast, the eastern domain (purple) consists of mafic volcanic rocks (subunit 2b) and abundant, thin (10-20 m) units of metamorphosed peridotite (Unit 4). The Unit 4 rocks are variably serpentinized.

MAGNETIC SIGNATURE: The eastern domain is marked by a prominent magnetic high, in contrast to the western domain.

GEOCHEMISTRY: Although there is a limited amount of geochemical data, it suggests subunit 2b mafic rocks in the eastern domain are mainly basaltic komatiites that are characterized by relatively high Ti contents compared to Zr, Y and Sr. In contrast, subunit 2a mafic rocks are geochemically similar to high-Fe tholeiites and have relatively low Ti contents compared to Zr, Y and Sr.

LEGEND

PALEOPROTEROZOIC (?)

15 plagioclase-porphyrific gabbro

ARCHEAN

Intrusive rocks (post-volcanic intrusions)

14 gabbro

13 Kanairiktok Plutonic Suite: variably deformed granitoid intrusions of several ages (unsubdivided)

12 Adlatok gneiss: granitoid orthogneiss

Florence Lake greenstone belt

Subvolcanic intrusions

11 hornblende syenite

10 Knee Lake pluton: porphyritic granite, granodiorite, quartz syenite

Sedimentary Rocks

9 quartz wacke, conglomerate, pelitic and semi-pelitic schist

8a pelite and wacke

8b pelite and wacke equivalent to Unit 8a and abundant layers of ultramafic schist equivalent to Unit 3

Volcanic Rocks

7 mafic to intermediate volcanic rocks, and lesser amounts of felsic rocks, ultramafic schists, and sedimentary schists

6 intermediate to felsic volcanic rocks

5a felsic volcanic rocks, quartz +/- feldspar porphyry, quartzofeldspathic schist

5b felsic volcanic rocks equivalent to Unit 5a containing abundant layers of ultramafic schist equivalent to Unit 3

Ultramafic Rocks

4 peridotite: variably serpentinized, isotropic to weakly foliated ultramafic rocks inferred to be derived from peridotite and minor amounts of Unit 3 ultramafic rocks

3 heterogeneous ultramafic schists and volcanic rocks

3a composite unit of ultramafic schists including talc schist, tremolite schist, magnesite-rich rocks, felsic volcanic rocks, plagioclase-phyric flows and mafic volcanic rocks, may also include minor amounts of peridotite equivalent to Unit 4 and sedimentary schists

3b ultramafic schist (mainly talc schist)

3c magnesite-rich rocks

3d plagioclase-phyric flows

Mafic Volcanic and Subvolcanic Mafic Rocks

2 mafic volcanic rocks including massive, layered and pillowed flows, amphibolite of uncertain protolith, gabbro

2a mafic volcanic rocks (western domain)

2b mafic volcanic rocks (eastern domain)

Gneissic rocks (pre-volcanic gneisses)

1 Maggo Gneiss: granitoid orthogneiss

NOTES ON THE LEGEND

This is a common legend developed for 1:25000-scale Open File maps covering the geology of the Florence Lake greenstone belt (Newfoundland Geological Survey Open File Maps 96-23, 96-24 and 96-25). Not all of the units which appear in the legend appear on this map.

Stratigraphic markers and detailed geochronological data from the greenstone belt are absent. Thus, stratigraphy is undefined and the numbers assigned to rock units shown in the legend are not meant to imply stratigraphic order or relative age relations.

Symbols

- x outcrop
- - - contact (approximate)
- - - - contact (assumed)
- - - - fault (approximate)
- thin (10-20m) ultramafic unit (Unit 4; approximate)
- ~ foliation
- ∩ axis of minor fold
- axis of prominent linear magnetic anomaly (magnetic high; possible mafic dyke)
- Py, Po, Pe mineral showing: Py - pyrite, Po - pyrrhotite, Pe - pentlandite