

The Foxe and Committee Fold Belts extend in an east-northeast direction from southern Melville Peninsula to central Baffin Island. They are composed of granitic and gabbroic rocks...

The Archean rocks form a basement complex predominantly of granitoid gneiss (Aggdn) and layered quartz-feldspar schists (Aa) and foliated gabbroic rocks (Aa2, Aa3, Aa4) with minor amphibolite and metabasite units...

REFERENCES

Campbell, F.H.A., 1975. Sedimentary Rocks of the Prince Albert Group, District of Keenatin. Geological Survey of Canada, Paper 75-1A, pp. 131-132.
1974. Paragneisses of the Prince Albert Group. Geological Survey of Canada, Paper 74-1A, pp. 159-160.

DESCRIPTIVE NOTES

Map-area 46/9 contains the basement complex in its northwest quarter and the Pennin Group. Gneissic units (Aggdn) of the complex have not been differentiated in this area except in the vicinity of some outcrops of metasedimentary rocks (Aa2, Aa3, Aa4) correlated with the Prince Albert Group.

PLANAR STRUCTURES

Bedding and compositional layering (horizontal, inclined, vertical). Foliation, schistosity, gneissic layering and cleavage (horizontal, inclined, vertical). Axial planes (inclined, vertical) associated with folds.

FAULTS

High angle fault (defined, approximate); Arrows indicate apparent relative movement. Low angle fault (defined, approximate); Teeth in direction of dip.

NOTE ON DATA PRESENTATION

Lithologic and structural data shown is that obtained in the field augmented by only limited interpretation. No attempt has been made to extend lithologic units to construct an integrated stratigraphic and structural model.

Amongst the gneissic rocks of the complex are presumed to be some that form the basement to the Prince Albert Group but unconformable relations, if present are masked by deformation and plutonic activity.

The Pennin Group consists of paragneiss (An, An2, An3) and marble (Apc) with some quartzitic psammite (Apc2, Apc3) and calc-silicate (Apc4) units. Minor orthoquartzite (Aq), amphibolite (Aam), pelite (Ap) and very minor iron formation (Aaif) are also present.

At the highest observed structural and stratigraphic levels is a unit of quartz-biotite and hornblende schist and metagabbro. This unit is variable in gross lithology and variously interbedded and compositionally gradational with paragneiss (Aa2, Aa3) calc-silicate gneiss and minor marble.

The Pennin Group appears to lie unconformably on the basement complex. Tectonism has obliterated any angular discordance and unconformable relationships are inferred because of the clear lithologic contrast and the common presence of the thin orthoquartzite unit with rare felsitic and hornblende-clark conglomerate beds lying upon a variety of rock types in the complex.

Polypase structures indicating numerous episodes of deformation of the basement complex, the Prince Albert Group and the Pennin Group exist throughout the two fold belts but inconspicuous sequential relationships among them have not been observed.

Later episodes of folding produced prominent meso- and megascopic folds that impose an east-northeast structural grain on the Foxe Fold Belt. Tight to nearly isoclinal recumbent structures are folded by later nearly coaxial, more open, upright to overturned folds.

In numerous places gneissic bodies of the basement complex can be seen to lie on and possibly within the Pennin Group. Such relationships suggest either the presence of large allochthonous nappes or smaller scale, locally overturned folds and thrust faults.

North to northeasterly trending broad transverse flexures alter the plunges of pre-existing folds. Few mesoscopic structures associated with this phase were observed. It may be related to syn- and post-tectonic plutonic intrusion, steeply dipping fractures and faults, many with northerly and northeasterly trends.

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Metamorphism is believed to have accompanied all phases of deformation up to the late northeasterly trending open folding. It possibly reached its peak during the preceding northeasterly trending isoclinal phase, but mineral recrystallization outlasted much of the penetrative deformation.

Massive and foliated plutonic rocks (A1, A2, A3, A4), chiefly of hornblende and biotite granodiorite, quartz monzonite and granite intrude the basement complex and the Pennin Group. Foliated plutonic rocks, except where observed to have intruded the Pennin Group are assigned to the complex.

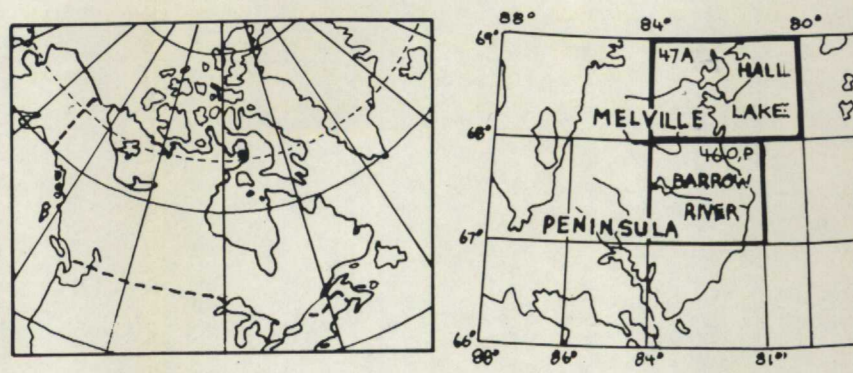


Table with 2 columns: Unit, Description. Includes units like A4, A3, A2, A1 and their corresponding lithological descriptions.

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LEGEND - LEGENDE ROADS AND RELATED FEATURES ROUTES ET OUVRAGES CONNEXES. Includes symbols for roads, railways, and other infrastructure. Also includes a scale bar and coordinate information.

CONVERSION SCALE FOR ELEVATIONS. Includes scales for meters and feet, and a note about the magnetic compass. Also includes a note about the geodetic datum used for the map.