THE FOXE AND COMMITTEE FOLD BELTS EXTEND IN AN EAST-NORTHEAST DIRECTION FROM SOUTHERN MELVILLE PENINSULA TO CENTRAL BAFFIN ISLAND. THEY ARE COMPOSED OF GRANITOID GNEISSIC ROCKS ENGULFING METAMORPHOSED SEDIMENTS AND VOLCANIC ROCKS ALL OF ARCHAEAN AGE, OVERLAIN BY METASEDIMENTARY ROCKS OF EARLY PROTEROZOIC AGE OF THE PENRHYN AND PILING GROUPS. THESE FOLD BELTS SUFFERED POLYPHASE DEFORMATION AND METAMORPHISM MOSTLY DURING THE HUDSONIAN OROGENY. GENERATION AND EMPLACEMENT OF PLUTONIC ROCKS PRECEDED, ACCOMPANIED AND FOLLOWED DEFORMATION. DIABASE DYKES OF PRESUMED LATE PROTER-OZOIC AGE CUT OLDER ROCKS.

THE ARCHAEAN ROCKS FORM A BASEMENT COMPLEX PREDOMINANTLY OF GRAN-ITOID GNEISS (Aggdn), LAYERED QUARTZO-FELDSPATHIC GNEISS (Agn) AND FOLIATED GRANTIC ROCKS (Ag, Ag, AND Ag,), WITHIN WHICH ARE RELATIVELY MINOR AMOUNTS OF AMPHIBOLITE (Am) AND METASEDIMENTARY AND METAVOLCANIC ROCKS OF THE PRINCE ALBERT GROUP. THE GNEI-SSIC AND PLUTONIC ROCKS ARE LARGELY QUARTZ MONZONITIC TO GRANODIORITIC IN COMPOSITION; LEUCOCRATIC AND MAFIC (Ag.) VARIETIES ARE COMMON BUT DO NOT CONSTITUTE A LARGE VOLUME OF THE COMPLEX. GNEISSIC LAYERING AND MINERAL FOLIATION FORMED OF BIOTITE AND HORNBLENDE ARE UBIQUITOUS BUT NOT ALWAYS CLEARLY VISIBLE. METAVOLCANIC (AAM),

Aab, Aava, Aaub) AND METASEDIMENTARY (AAn, Aanm Aaif, Aag) ROCKS OCCURING AS DISCONTINUOUS ZONES AND LENSES WITHIN THE BASEMENT COMPLEX OF THE FOXE FOLD BELT ARE CORRELATED WITH THE PRINCE ALBERT GROUP OF THE NORTHWESTERLY ADJACENT COMMITTEE FOLD BELT ON THE BASIS OF CONSIDERABLE LITHOLOGIC SIMILARITY. THE STRATIGRAPHY OF THAT PART OF THE GROUP WITHIN THE FOXE FOLD BELT IS UNKNOWN BUT IT HAS BEEN DESCRIBED BY CAMPBELL (1974) AND SCHAU (1975A) WITHIN THE COMMITTEE FOLD BELT. A LENSOID SILL OF ANORTHOSITIC GABBRO (AAb) AND LAYERED AMPHIBOLITE (AAM,), AS WELL AS POSSIBLY RELATED AMPH-IBOLITIC DYKES (AAM2) MAY INTRUDE OR BE GENETICALLY RELATED TO THE GROUP.

AMONGST THE GNEISSIC ROCKS OF THE COMPLEX ARE PRESUMED TO BE SOME THAT FORM THE BASEMENT TO THE PRINCE ALBERT GROUP BUT UNCONFORM-ABLE RELATIONS, IF PRESENT ARE MASKED BY DEFORMATION AND PLUTONIC ACTIVITY. SOME GNEISSIC UNITS, PARTICULARLY PARTS OF UNIT Agn, MAY BE DERIVED FROM THE PRINCE ALBERT GROUP OR SOME STILL OLDER METASEDIMENTARY SUCCESSION BY MIGMATITIC PROCESSES. GRANITOID GNEISS UNITS OF PROBABLE PLUTONIC ORIGIN (Ag, Ag, Ag, MAY BE OLDER AND YOUNGER THAN THE PRINCE ALBERT GROUP. IN THE COMMITTEE FOLD BELT, PORPHYRITIC GRANITE RESEMBLING THAT OF UNIT Ag HAS INTRUDED THE GROUP (SCHAU, 1975A). ELSEWHERE, AGE RELATIONS ARE COMMONLY EQUIVOCAL. MORE DETAILED STUDIES OF THE BASEMENT COMPLEX HAVE BEEN MADE BY FRISCH (1974, 1975) AND SCHAU (1975A, 1975B).

THE PENRHYN GROUP CONSISTS OF PARAGNEISS (Alpn, Alpnc) AND MARBLE (APC) WITH SOME QUARTZ-MICA PSAMMITE (Alpgb, Alpgm) AND CALCIUM-SILICATE GNEISS (ALPCS). MINOR ORTHOQUARTZITE (ALPQ), AMPHIBOLITE (A)PM), PELITE (A)PD) AND VERY MINOR IRON FORMATION (A)PIT) ARE ALSO PRESENT. COMPLETE UNDERSTANDING OF THE STRATIGRAPHIC SUCCES-SION IS LACKING AS MOST UNITS ARE DISCONTINUOUS AND LENSOID AND THE POSSIBILITY OF THE EXISTENCE OF FACIES CHANGES, UNCONFORMITIES AND CRYPTIC EARLY STRUCTURES RENDERS ITS DELINEATION DIFFICULT. A GENERAL ORDER TO THE UNITS CAN BE INDICATED NONETHELESS. A THIN (50-100 M) BASAL SEQUENCE INCLUDES ORTHOQUARTZITE, RUSTY SILLIMANITE SCHIST, A SUSPECTED METAREGOLITH AND MINOR AMPHIBOLITE, DOLOMITIC MARBLE QUARTZO-FELDSPATHIC GRIT, RUSTY PYRITE-MAGNETITE IRON FORM-ATION AND CONGLOMERATE WITH QUARTZ AND HEMATITE CLASTS. THIS SEQ-UENCE IS OVERLAIN BY A PREDOMINANTLY CALCAREOUS UNIT OF MARBLE, CALCIUM-SILICATE GNEISS AND SOME PARAGNEISSIC INTERBEDS. THE CALC-AREOUS UNIT IS FOLLOWED BY A THICK UNIT OF PARAGNEISSIC ROCKS AND A UNIT OF MARBLE, CALCIUM-SILICATE GNEISS AND BIOTITE QUARTZITE. AT THE HIGHEST OBSERVED STRUCTURAL AND STRATIGRAPHIC LEVELS IS A UNIT OF QUARTZ-BIOTITE AND/OR MUSCOVITE PSAMMITE AND METAGREYWACKE. THIS UNIT IS VARIABLE IN GROSS LITHOLOGY AND VARIOUSLY INTERBEDDED AND COMPOSITIONALLY GRADATIONAL WITH PARAGNEISS (Aprigh), CALCIUM-SILICATE GNEISS AND MINOR MARBLE. THE TOP OF THE PENRHYN GROUP HAS NOT BEEN OBSERVED. THE RELATIONSHIP BETWEEN PRESENT AND ORIGINAL THICKNESS OF THE GROUP IS WELL DISGUISED BY THE RIVAL PROCESSES OF THINNING DURING DEFORMATION, REPETITION BY FOLDING AND DILATION BY SYNTECTONIC PLUTONISM.

THE PENRHYN 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 ORTHO-QUARTZITE UNIT WITH RARE FELDSPATHIC GRIT AND HEMATITE-CLAST CON-GLOMERATE BEDS LYING UPON A VARIETY OF ROCK TYPES IN THE COMPLEX. METAMORPHISM IN THE FOXE FOLD BELT PRODUCED THE ASSEMBLAGES GARNET-BIOTITE-SILLIMANITE AND CORDIERITE-SILLIMANITE-GARNET IN PARAGNEISS AND, IN MARBLE, DIOPSIDE-FORSTERITE-CALCITE AS WELL AS SCAPOLITE AND A HUMITE GROUP MINERAL. IN PELITIC AND SEMI-PELITIC ROCKS, THE REACTIONS: . MUSCOVITE + QUARTZ -> SILLIMANITE + K FELDSPAR

ANDALUCITE -> SILLIMANITE CAN BE DELINEATED IN RESTRICTED AREAS. RETROGRADE, OR LATER LOW GRADE METAMORPHISM IS PROBABLE BECAUSE OF EXTENSIVE ALTERATION OF HIGH GRADE MINERALS.

POLYPHASE STRUCTURES INDICATING NUMEROUS EPISODES OF DEFORMATION OF THE BASEMENT COMPLEX, THE PRINCE ALBERT GROUP AND THE PENRHYN GROUP EXIST THROUGHOUT THE TWO FOLD BELTS BUT UNEQUIVOCAL SEQUEN-TIAL RELATIONSHIPS AMONG THEM ARE RARE. THE EARLIEST DEFORMATIONAL PHASE IS INFERRED TO HAVE AFFECTED THE BASEMENT COMPLEX PRIOR TO DEPOSITION OF THE PENRHYN GROUP, TECTONIC TRENDS IN THE BASEMENT COMPLEX AND THE PRINCE ALBERT GROUP WITHIN THE FOXE FOLD BELT ARE FOR THE MOST PART CONFORMABLE WITH THOSE OF THE OVERLYING PENRHYN GROUP AND PRE-PENRHYN STRUCTURES ARE NOT READILY DISTINGUISHABLE. STRUCTURES IN THE COMMITTEE FOLD BELT HAVE BEEN DESCRIBED BY CAMPBELL (1973, 1974), FRISCH (1974), REESOR, ET AL. (1975) AND SCHAU (1973, 1974, 1975A, 1975B). SOME DEFORMATION OF THE PRINCE ALBERT GROUP MAY HAVE ALSO PRECEDED DEPOSITION OF THE PENRHYN GROUP. A SECOND PHASE OF FOLDING, THE EARLIEST OBSERVED IN THE PENRHYN GROUP, IS BELIEVED TO HAVE FORMED ATTENUATED ISOCLINAL FOLDS AND UBIQUITOUS FOLIATION. IN ALL BUT A FEW OUTCROPS THIS FOLIATION IS PARALLEL TO BEDDING. MEAGRE EVIDENCE SUGGESTS THAT THE TREND OF EARLY PENRHYN STRUCTURES MAY HAVE BEEN NORTHERLY. THE EFFECTS OF THIS FOLDING EPISODE ON THE PENRHYN GROUP REMAIN PROBLEMATICAL, BUT MAY HAVE RESULTED IN SOME OF THE OBSERVED DISCONTINUITY OF

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. THESE LATER FOLDS CAN OFTEN BE OBSERVED TO HAVE DEFORMED EARLIER STRUCTURES.

UNITS DESCRIBED ABOVE.

IN NUMEROUS PLACES GNEISSIC BODIES OF THE BASEMENT COMPLEX CAN BE SEEN TO LIE ON AND POSSIBLY WITHIN THE PENRHYN GROUP. SUCH REL-ATIONSHIPS SUGGEST EITHER THE PRESENCE OF LARGE ALLOCHTHONOUS NAPPES OR SMALLER SCALE, LOCALLY OVERTURNED FOLDS AND THRUST FAULTS. THE TIME OF MOVEMENT OF THE BASEMENT MASSES IS UNCERTAIN BUT AS THEY ARE FOLDED ABOUT NORTHEASTERLY TRENDING AXES, THEY ARE PRE-SUMED TO HAVE BEEN EMPLACED DURING THE EARLY DEFORMATION OF THE PENRHYN GROUP.

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 FRAC-TURES AND FAULTS, MANY WITH NORTHERLY AND NORTHWESTERLY TRENDS ARE EVIDENCE OF THE LAST MAJOR PHASE OF DEFORMATION. MOST FAULT DISPLACEMENTS APPEAR TO BE LEFT LATERAL AND EAST-SIDE-UP. MINOR EVIDENCE OF EAST-WEST FAULTING THAT MAY HAVE AFFECTED LATE PROT-EROZOIC DIABASE DYKES (HId) HAS BEEN OBSERVED.

METAMORPHISM IS BELIEVED TO HAVE ACCOMPANIED ALL PHASES OF DEFORM-ATION UP TO THE LATE NORTHEASTERLY TRENDING OPEN FOLDING. IT POSSIBLY REACHED ITS ZENITH DURING THE PRECEDING NORTHEASTERLY-TRENDING ISOCLINAL PHASE, BUT MINERAL RECRYSTALLIZATION OUTLASTED MUCH OF THE PENETRATIVE DEFORMATION. RETROGRESSIVE METAMORPHISM MAY HAVE ACCOMPANIED LATEST FOLDING EPISODES OR BEEN POST-TECTONIC. CONTACT METAMORPHIC AUREOLES ARE LIKELY PRESENT AROUND POST-

TECTONIC GRANITIC PLUTONS (A) Massive and Foliated Plutonic Rocks (Ag, Ag, Ag, Ag), Chiefly OF HORNBLENDE AND BIOTITE GRANODIORITE, QUARTZ MONZONITE AND GRANITE INTRUDE THE BASEMENT COMPLEX AND THE PENRHYN GROUP. FOLIATED PLUTONIC ROCKS, EXCEPT WHERE OBSERVED TO HAVE INTRUDED THE PENRHYN GROUP ARE ASSIGNED TO THE COMPLEX. WHERE INTRUSIVE INTO THE GROUP (A) THEY ARE CONSIDERED TO BE PRE- OR SYN-TECTONIC TO THE MAIN PHASES OF DEFORMATION. COMMON LOCAL GENERATION OF PEGMATITE AND LEUCOCRATIC GRANITIC ROCK (A) IS BELIEVED TO BE COEVAL WITH DEF-ORMATION ALSO. MASSIVE, OFTEN CROSS-CUTTING PLUTONS (A) IN-

VADED THE PENRHYN GROUP AFTER CESSATION OF DEFORMATION. AVAILABLE RESULTS OF RADIOMETRIC ANALYSES INDICATE FORMATION OF THE BASEMENT COMPLEX PRIOR TO 2500 MA AGO, WITH SOME EVENTS OCCUR-RING POSSIBLY AS LONG AS 2900 MA AGO (R.K. WANLESS, PERSONAL COM-MUNICATION, 1976). ACID VOLCANIC ROCKS OF THE PRINCE ALBERT GROUP ON THE WEST SIDE OF MELVILLE PENINSULA HAVE YIELDED A PRELIMINARY

DATE OF ABOUT 2700 Ma (R.K. WANLESS, PERSONAL COMMUNICATION, 1977). DEFORMATION OF THE BASEMENT COMPLEX AND THE PENRHYN GROUP MAY HAVE TAKEN PLACE 2134 MA AGO (JACKSON AND TAYLOR, 1972) AND AGAIN DURING THE HUDSONIAN OROGENY (CIRCA 1700 MA AGO). POST-TECTONIC PLUTONS (1600 Ma OLD, HEYWOOD, 1967) WERE EMPLACED INTO THE FOLD BELT LATE IN THE OROGENIC HISTORY. FOLLOWING EXTENSIVE UPLIFT AND EROSION, DIABASE DYKES (HId) PRESUMED TO BE PART OF THE MACKENZIE DYKE SWARM OF ABOUT 1000 Ma AGE (FAHRIG, 1970), CUT ROCKS OF THE FOLD BELT. THESE ARE SPACIALLY ASSOCIATED WITH FAULTS AND FRACTURES TRENDING NORTHWEST. SUBSEQUENT UPLIFT AND EROSION WAS FOLLOWED BY DEPOSITION OF SILURIAN AND ORDOVICIAN CARBONATE ROCKS (OSC), REMNANTS OF WHICH LIE NORTH AND SOUTH OF THE COMMITTEE AND FOXE FOLD BELTS AND BORDERING FOXE BASIN.

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DESCRIPTIVE NOTES

MAP-AREA 46 0/11 CONTAINS A LARGE CENTRAL REGION WHERE GNEISS OF THE BASEMENT COMPLEX AND METAMORPHOSED VOLCANIC AND SEDIMENT-ARY ROCKS OF THE PRINCE ALBERT GROUP ARE EXPOSED IN A FEW OUTCROPS. METASEDIMENTS OF THE PENRHYN GROUP FLANK THE BASEMENT COMPLEX ALONG THE NORTH AND SOUTH BORDERS OF THE AREA. THE COMPLEX CON-TAINS LAYERED GNEISS (Agn) IN A BELT ADJACENT TO THE PRINCE AL-BERT GROUP IN THE SOUTH AND FOLIATED GRANODIORITE AND GRANITOID GNEISS (Ag1) IN MUCH OF ITS WESTERN AND NORTHERN PARTS. FOLI-ATED K FELDSPAR AUGEN GRANITE IS FOUND BORDERING THE PRINCE ALBERT GROUP IN THE NORTHEAST AND SOUTHEAST QUARTERS. THE PRINCE ALBERT GROUP IS FOUND IN SCATTERED OUTCROPS THROUGHOUT THE EAST-CENTRAL PART OF THE AREA. PARAGNEISS (AAn) FORMS MOST OUTCROPS BUT LAY-ERED AMPHIBOLITE (AAM), POSSIBLY MAFIC METATUFF, IS ALSO COM-MON. ASSOCIATED WITH THE AMPHIBOLITE ARE MUSCOVITE SCHIST AND PARAGNEISS (Anm), IRON FORMATION (A aif), ULTRAMAFIC ROCKS (AAUD) AND SMALL BEDS OF FELSIC ROCKS, POSSIBLY METARHYOLITE,

AND ORTHOQUARTZITE AND SCHIST. THE BASAL SEQUENCE OF THE PENRHYN GROUP IS NOT EXPOSED IN THIS AREA. MARBLE (APC) AND CALCIUM SILICATE GNEISS (APCS) LIE AG-AINST BASEMENT GNEISS IN OVERTURNED SECTIONS ALONG BOTH NORTH AND SOUTH CONTACTS. PARAGNEISS (A)Pn) FOLLOWS THE CARBONATE UNITS AND IS IN TURN FOLLOWED BY MORE MARBLE AND CALCIUM SILICATE GNEISS. MASSIVE LEUCOCRATIC GRANITIC ROCKS INTRUDE PENRHYN STRATA IN THE

NORTHWEST AND SOUTHWEST CORNERS OF THE AREA (Ag). POLYPHASE STRUCTURES HAVE BEEN OBSERVED IN THE BASEMENT COMPLEX AND THE PRINCE ALBERT GROUP BUT CANNOT BE DELINEATED ON THE LARGE SCALE. FOLIATION AND GNEISSIC LAYERING DEFINE A BROAD, ASSYMET-RICAL SYNFORMAL BASIN THAT PLUNGES GENTLY TO THE EAST. ITS AXIS LIES WITHIN 4 KM OF THE NORTHERN PENRHYN CONTACT AND IT IS LIKELY A CONTINUATION OF THE SYNFORMAL FEATURE IN MAP-AREAS 46 0/15 AND

STRUCTURES IN THE PENRHYN GROUP ARE PREDOMINATLY PERVASIVE FOLI-ATION AND ISOCLINAL TO OPEN, RECUMBERT AND UPRIGHT FOLDS. IN THE NORTHWEST CORNER, FOLDS PLUNGE WEST-SOUTHWEST AND LIE ON THE SOUTHEAST LIMB OF A MAJOR ANTIFORMAL STRUCTURE EXTENDING FROM MAP-AREA 46 0/12 to 47 A/3. Some recumbent folds plunge moderate-LY TO THE SOUTH AND MAY BE EARLIER THAN THOSE WHICH FORM THE COM-MON WESTERLY AND WEST-SOUTHWESTERLY TECTONIC GRAIN OF THE PENRHYN

THE BASEMENT COMPLEX STRUCTURALLY OVERLIES THE PENRHYN GROUP IN THIS AREA AND ALONG EXTENSIONS OF THESE CONTACTS TO THE EAST-NORTHEAST FOR NEARLY 60 KM. ALTHOUGH EVEN A STRUCTURE OF SMALL AMPLITUDE COULD HAVE GREAT LATERAL EXTENT, SUCH CONSISTENCY ALSO SUGGESTS THAT THE COMPLEX MAY FORM A VERY LARGE CONTINUOUS SHEET OR NAPPE THAT CONTAINS AN OVERTURNED SEQUENCE OF BASEMENT GNEISS AND PENRHYN GROUP IN ITS LOWER LIMB. THE NORTHEAST TERMINATION OF THIS HYPOTHETICAL NAPPE IS NOT EXPOSED. ITS WESTERN END MAY LIE SOMEWHERE WITHIN AREAS OF LITTLE OUTCROP IN MAP-AREA 46 0/12 (REESOR, ET AL. 1976) OR EXTEND INTO REGIONS UNDERLAIN BY THE COMPLEX TO THE NORTHWEST. ITS TIME OF EMPLACEMENT, ON THE BASIS OF EVIDENCE DESCRIBED IN MAP-AREA 46 0/9, IS PRIOR TO EAST-NORTHEASTERLY TRENDING ISOCLINAL FOLDING OF THE PENRHYN GROUP.

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ORDOVICIAN AND SILURIAN OSc | BUFF AND LIGHT GREY DOLOMITE

LATE(?) PROTEROZOIC

HId Brown WEATHERING, DARK GREEN TO BLACK, FINE TO MEDIUM GRAINED

INTRUSIVE CONTACT

UNGONFORMITY

LEGEND

EARLY PROTEROZOIC

APHEBIAN AND YOUNGER (?) ORANGE AND BUFF WEATHERING, WHITE, TAN AND GREY, MASSIVE AND GRANDIORITE, QUARTZ MONZONITE, GRANITE AND LEUCOCRATIC EQUIVALENTS, SOME PORPHYRITIC VARIETIES. PEGMATITE COMMONLY PRE-AND POST-TECTONIC PLUTONS ARE NOT DIFFERENTIATED. INCLUDES ZENOLITHS OF OLDER UNITS.

INTRUSIVE CONTACT

PENRHYN GROUP

GREY, FINE TO MEDIUM GRAINED, THIN TO THICK BEDDED, QUARTZ-MUSCOVITE-FELDSPAR PSAMMITE, SOME WITH ANDALUCITE PORPHYROBLASTS; MUSCOVITE SCHIST, META-GREYWACKE.

APP BLACK, FISSILE, VERY FINE GRAINED, "SOOTY" PELITE. REY, FINE TO MEDIUM GRAINED, THIN TO THICK BEDDED, QUARTZ-IOTITE-FELDSPAR PSAMMITE AND META-GREYWACKE, SOME WITH GARNE

AND RARELY CORDIERITE. GRADATIONAL CONTACTS WITH UNIT APR IN APN BROWN, RUSTY AND TAN WEATHERING, BUFF AND GREY, FINE TO MEDIUM GRAINED, QUARTZ-BIOTITE-FELDSPAR, QUARTZ-FELDSPAR-BIOTITE GARNET-SILLIMANITE AND QUARTZ-FELDSPAR-BIOTITE-GRAPHITE PARAGNEISS AND MINOR SCHIST. MINOR CORDIERITE-BEARING

Appab Units Apab and Apn; interbedded, gradational and undifferentiated GREY AND GREY-GREEN, MEDIUM TO COARSE GRAINED THIN BEDDED, CALCIUM-SILICATE GNEISS AND MARBLE-QUARTZITE WITH QUARTZ-CALCITE-PLAGIOCLASE-DIOPSIDE AND ACCESSORY SCAPOLITE, ACTINOLITE, GRAPHITE, EPIDOTE AND BIOTITE. COMMONLY INTERBEDDED WITH AND

PARAGNEISS. INCLUDES SOME INTERBEDS OF UNITS APRIC , APC

WHITE, GREY AND GREY-BLUE, MEDIUM TO COARSE GRAINED, MASSIVE AND BEDDED MARBLE WITH CALCITE-DIÓPSIDE-MICROCLINE-QUARTZ AND MINOR DOLOMITE, SCAPOLITE, PHLOGOPITE, GRAPHITE, A HUMITE GROUP MINERAL AND TREMOLITE. INTERBEDDED WITH AND PASSING LATERALLY INTO UNIT APCS. INCLUDES SMALL BEDS OF UNIT APP. PEGMATITE OF UNIT AG

PASSING LATERALLY INTO UNIT APC.

APnc RUSTY, FINE TO MEDIUM GRAINED, GRAPHITIC PARAGNEISS WITH PYRITE AND PYRRHOTITE.

APM A DARK GREEN, FINE TO MEDIUM GRAINED, MASSIVE AND FOLIATED AMPHIBOLITE; SOME BIOTITE-GARNET AMPHIBOLITE. WHITE TO GREY-BLUE, MEDIUM TO COARSE GRAINED, MASSIVE AND APQ FAINTLY BEDDED, ORTHOQUARTZITE WITH MINOR FELDSPAR, WHITE MICA AND PHLOGOPITE. MINOR QUARTZO-FELDSPATHIC GRIT, CONGLOMERATE

EGOLITH?). BIOTITE-GARNET-SILLIMANITE SCHIST AND AMPHIBOLITE. Apif Rusty, Massive Pyrite, Magnetite Iron Formation. UNCONFORMITY

FOLIATED, MASSIVE AND PORPHYRITIC GRANITE AND GRANITOID GNEISS. FOLIATED FELDSPAR AUGEN GRANITE; MINOR GRANITOID GNEISS. OLIATED HORNBLENDE GRANODIORITE AND AMPHIBOLITIC GRANITOID

Agn LAYERED GRANODIORITIC GNEISS; MINOR AMPHIBOLITE. MIGMATITE OF UNITS Ag, Ag AND/OR Agn.

DRANGE, GREY AND TAN, MEDIUM TO COARSE GRAINED, LAYERED AND FOLIATED, BIOTITE AND HORNBLENDE GRANDDIORITIC, QUARTZ MONZONITIC AND LEUCOCRATIC GNEISS. INCLUDES ROCK OF UNITS Ag, Ag, Ag, Agn Ang AND SMALL BODIES OF Am. Am DARK GREEN FOLIATED AMPHIBOLITE, META-GABBRO AND HORNBLENDE-

PRINCE ALBERT GROUP

AAM FOLIATED AMPHIBOLITE DYKES. AYERED AMPHIBOLITE.

DLIATED AND MASSIVE, DARK GREY, COARSE GRAINED ANORTHOSITIC GABBRO; MINOR AMPHIBOLITE

Aaub FOLIATED, SERPENTINIZED ULTRAMAFIC ROCK. AAn QUARTZ-BIOTITE-FELDSPAR PARAGNEISS, SOME HORNBLENDE-BEARING.

AANM MUSCOVITE-QUARTZ-FELDSPAR PARAGNEISS.

AAIF DARK BLUE-GREY LAYERED OXIDE FACIES IRON FORMATION. AAq WHITE, MEDIUM TO COARSE GRAINED, MASSIVE ORTHOQUARTZITE;

AAVa LIGHT GREY, FINE GRAINED LAYERED ACID VOLCANIC ROCKS.

---- GEOLOGICAL BOUNDARY (DEFINED, APPROXIMATE). BOUNDARY OF AREAS EXTENSIVELY DRIFT-COVERED.

----- GEOLOGICAL BOUNDARY GRADATIONAL, POORLY-EXPOSED, IMPRECISELY LOCATED OR NOT OBSERVED. PLANAR STRUCTURES

BEDDING AND COMPOSITIONAL LAYERING (HORIZONTAL, INCLINED, VERTICAL) FOLIATION, SCHISTOSITY, GNEISSIC LAYERING AND CLEAVAGE (HORIZONTAL, INCLINED, VERTICAL, DIP UNKNOWN); EARLIEST OR ONLY OBSERVED.

AXIAL PLANES (INCLINED, VERTICAL) ASSOCIATED WITH FOLDS DEFORMING BEDDING AND COMPOSITIONAL LAYERING. EARLIEST OR

AXIAL PLANES (INCLINED, VERTICAL); ASSOCIATED WITH FOLDS OF LATER PHASES OBSERVED TO HAVE DEFORMED BEDDING OR EARLY FOLIATION.

LINEATION (PLUNGING, HORIZONTAL); FORMED BY FOLD AXES, BEDDING FOLIATION, INTERSECTION (X), MINERAL GROWTH OR RODDING (R), MULLION (M), AND BOUDIN AXES (B); EARLIEST OR ONLY OBSERVED. LINEATION (PLUNGING, HORIZONTAL); FORMED BY BEDDING-FOLIATION AND FOLIATION -FOLIATION INTERSECTION (X), MINERAL GROWTH OR RODDING (R) AND MULLION (M) AND FOLD AXES ASSOCIATED WITH FOLDS

OBSERVED TO HAVE DEFORMED BEDDING OR EARLY FOLIATION. HIGH ANGLE FAULT (DEFINED, APPROXIMATE); ARROWS INDICATE APPARENT RELATIVE MOVEMENT.

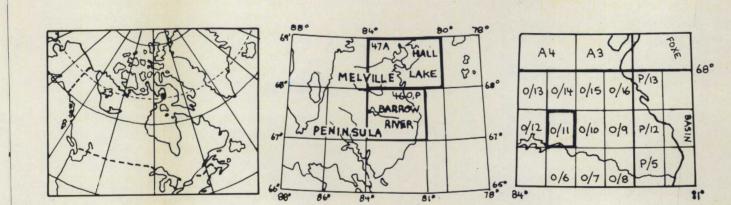
NOTE ON DATA PRESENTATION

__ _ LOW ANGLE FAULT (DEFINED, APPROXIMATE); TEETH IN DIRECTION OF

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. LITHOLOGIC UNITS IN THE LEGEND ARE NOT ARRANGED IN TEMPORAL ORDER, AS THIS IS LARGELY UNCERTAIN, EXCEPT THAT BASAL UNITS OF THE PENRHYN GROUP ARE LISTED BELOW OTHER PARTS OF THE GROUP. DESCRIPTION OF MESOSCOPIC STRUCTURES IS LIMITED TO MORPHOLOGY OF COMMON TYPES. MESOSCOPIC STRUCTURES ARE ASSIGNED A POSITION (EARLY OR LATE) IN THE TECTONIC HIERARCHY BASED UPON INTERPRETATION OF LOCAL FIELD RELATIONSHIPS ONLY. THIS POSITION CANNOT BE DIRECTLY RELATED TO DEFORMATIONAL PHASES WHICH FORMED LARGE FOLDS OR TO MESOSCOPIC STRUCTURES IN NEARBY AREAS. NO ATTEMPT HAS BEEN MADE TO INTEGRATE MESOSCOPIC FEATURES INTO A MEGASCOPIC STRUCTURAL SYNTHESIS. AXIAL TRACES OF MEGASCOPIC FEATURES ARE NOT PORTRAYED AS THOSE OF EARLY FOLDS ARE LARGELY INTERPRETATIVE AND THOSE OF LATE FOLDS CAN BE DEDUCED FROM ATTITUDES OF PLANAR STRUCTURES ON THE MAP.

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NOTICE OF ANY REVISIONS OR ADDITIONAL GEOLOGICAL INFORMATION KNOWN TO USERS OF THESE MAPS WOULD BE GRATEFULLY RECEIVED BY THE AUTHORS.



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