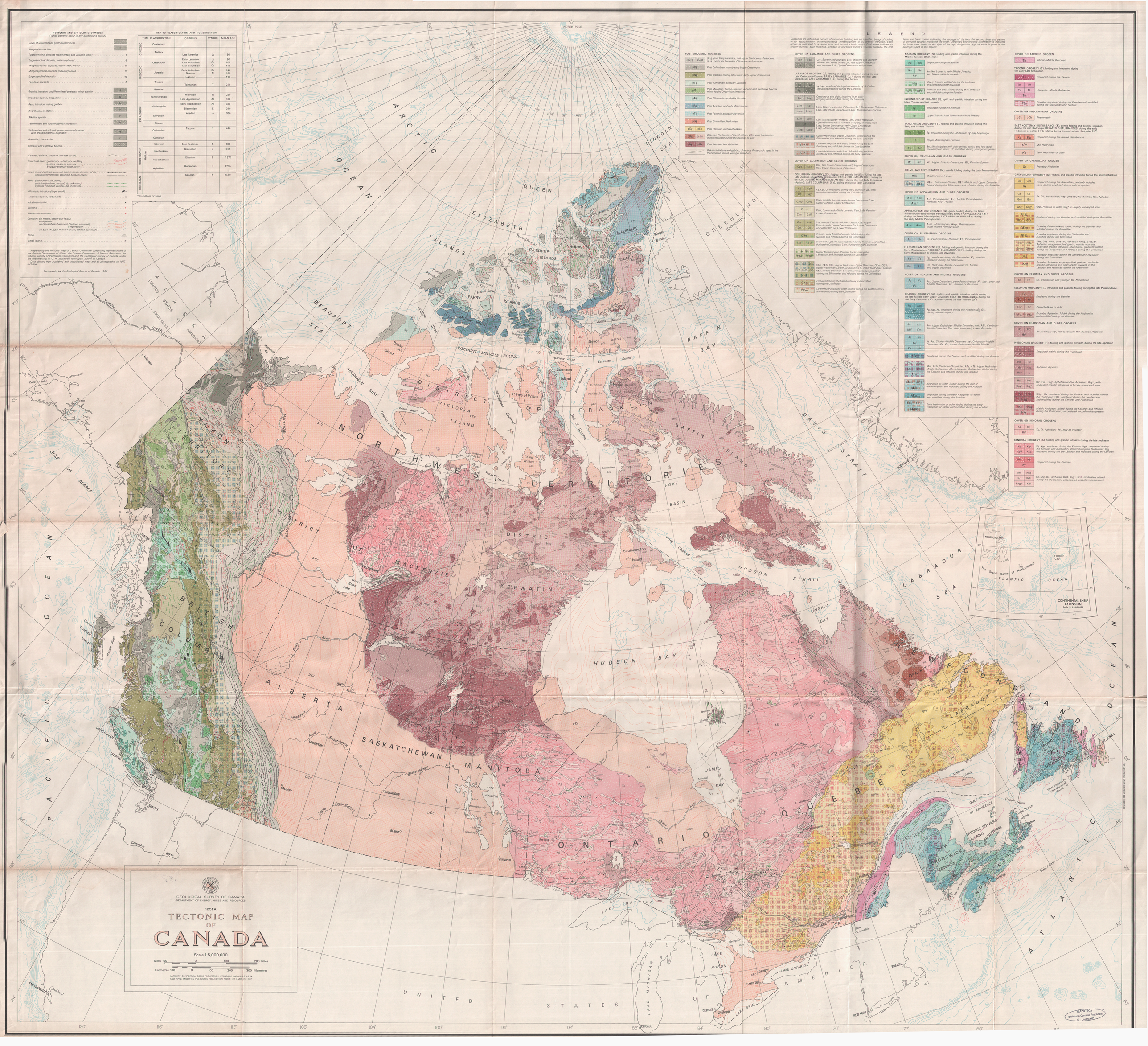
TECTONIC AND LITHOLOGIC SYMBOLS
(White patterns occur in any background colour)
Cover of unfolded and gently folded rocks
Marginal homocline
Eugeosynclinal deposits (sedimentary and volcanic rocks)
Eugeosynclinal deposits, metamophosed
Miogeosynclinal deposits (sedimentary rocks)
Miogeosynclinal deposits, metamophosed
Epigeosynclinal deposits
Foredeep deposits
Granitic intrusion, undifferentiated gneisses, minor syenite
Granitic intrusion, discordant
Basic intrusion, mainly gabbro
Anorthosite, troctolite
Alkaline syenite
Sedimentary and volcanic gneiss and schist
Sedimentary and volcanic gneiss commonly mixed with granitic material, migmatite
Granulite, charnockite
Volcanic and explosive breccia
Contact (defined, assumed, beneath cover)
Structural trend: gneissosity, schistosity, bedding
positive magnetic anomaly
Bouguer anomaly (high, low)
Fault, thrust (defined, assumed, twin indicate direction of dip)
unclassified (defined, assumed, beneath cover)
Fold (attitude of axial plane)
anticline (inclined, vertical, dip unknown)
syncline (inclined, vertical, dip unknown)
Ultrabasic intrusion (large, small)
Alkaline intrusion, carbonatite
Alkaline intrusion
Volcano
Piercement structure
Contours (in meters; datum sea-level)
on surface
on Precambrian basement (defined, assumed) (depression)
on base of Upper Pennsylvanian (defined, assumed)
Shoal
Small island
Prepared by the Tectonic Map of Canada Committee comprising representatives of the Ontario Department of Mines, the Quebec Department of Natural Resources, the Alberta Society of Petroleum Geologists and the Geological Survey of Canada, under the chairmanship of C. H. Stockwell, Geological Survey of Canada.
Data derived from published and unpublished maps and air photographs, to 1967 inclusive.
Cartography by the Geological Survey of Canada, 1968
KEY TO CLASSIFICATION AND NOMENCLATURE
TIME CLASSIFICATION | OROGENY | SYMBOL | MEAN AGE*
CENOZOIC: Quaternary; Tertiary — Late Laramide L2 50
MESOZOIC: Cretaceous — Early Laramide L1 80; Late Columbian C2 100; Mid Columbian C1 110
Jurassic — Early Columbian Ci 140; Nassian N 165
Triassic — Inklinian I 190; Tahltanian T 210
PALAEOZOIC: Permian; Pennsylvanian — Melvillian M 290; Late Appalachian A2 310
Mississippian — Early Appalachian A1 320; Ellesmerian E 340
Devonian — Acadian A 360
Silurian
Ordovician — Taconic T 440
Cambrian
PROTEROZOIC: Hadrynian — East Kootenay K 730
Helikian: Neohelikian — Grenvillian G 955; Elsonian E 1370
Palaeohelikian — Hudsonian H 1735
Aphebian
ARCHAEAN — Kenoran K 2480
* in millions of years
NORTH POLE
ARCTIC OCEAN
QUEEN ELIZABETH ISLANDS
GREENLAND (DENMARK)
LINCOLN SEA
ALASKA (UNITED STATES OF AMERICA)
BEAUFORT SEA
BAFFIN BAY
DAVIS STRAIT
HUDSON STRAIT
HUDSON BAY
JAMES BAY
FOXE BASIN
LABRADOR SEA
NORTHWEST TERRITORIES
YUKON TERRITORY
DISTRICT OF MACKENZIE
DISTRICT OF KEEWATIN
DISTRICT OF FRANKLIN
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
NEWFOUNDLAND
LABRADOR
PRINCE EDWARD ISLAND
NEW BRUNSWICK
NOVA SCOTIA
PACIFIC OCEAN
ATLANTIC OCEAN
GULF OF ALASKA
UNITED STATES OF AMERICA
LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
LAKE ONTARIO
LAKE ERIE
GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES
1251 A
TECTONIC MAP OF CANADA
Scale 1:5,000,000
Miles 100 0 100 200 Miles
Kilometres 100 0 100 200 300 Kilometres
LAMBERT CONFORMAL CONIC PROJECTION, STANDARD PARALLELS 49°N AND 77°N; MODIFIED POLYCONIC PROJECTION NORTH OF LATITUDE 80°
POST OROGENIC FEATURES
pLig, pLig: post Early Laramide, mid Upper Cretaceous-Paleocene; pLig, post Late Laramide, Oligocene and younger
pCg: Post Columbian, mainly early Upper Cretaceous
pNg: Post Nassian, mainly late Lower-early Upper Cretaceous
pTg: Post Tahltanian, probably Jurassic
pMN: Post Melvillian, Permo-Triassic; volcanic and explosive breccia, minor folded Ordovician limestone
pEg: Post Ellesmerian, probably Permian
pAg: Post Acadian, probably Mississippian
pTg: Post Taconic, probably Devonian
pCg: Post Grenvillian, Hadrynian
pEy, pEb: Post Elsonian, mid Neohelikian
pHg, pHm: post Hudsonian, Palaeohelikian; phm, post Hudsonian, dolomite folded during the Helikian or later
pKg, pKy: Post Kenoran, late Aphebian
Dykes of diabase and gabbro, of various Proterozoic ages in the Precambrian Shield, younger elsewhere
LEGEND
Orogenies are defined as periods of mountain building and are identified by age of folding or by approximately contemporaneous metamorphism or by plutonic intrusion. Each orogen is indicated by a capital letter and note of a basic colour. Dual letters indicate an orogen that has been modified, refolded, or reworked during a younger orogeny, the first letter and basic colour indicating the younger of the two, the second letter and pattern of coloured squares indicating the older. Lithologic and tectonic information is indicated by lower case letters to the right of the age designation. Age of rocks is given in the descriptive part of the legend.
COVER ON LARAMIDE AND OLDER OROGENS
Lac, Eocene and younger; Lac', Miocene and younger plateau and valley basalt; Lic, late Upper Cretaceous and younger; Lih, Upper Cretaceous mid volcanic
LARAMIDE OROGENY (L), folding and granitic intrusion during the mid Late Cretaceous-Eocene; EARLY LARAMIDE (L1), during the mid Late Cretaceous; LATE LARAMIDE (L2), during the Eocene
Lg, Lgd, emplaced during the Laramide; Lg', Lh' older intrusions modified during the Laramide
Ln, Lng, Cretaceous and older, involved in an older orogeny and modified during the Laramide
Lzm, Lzf; Lrep, Lrep; Lzm, Lzm; Lr, Lrep, Lrep, Upper Hadrynian-Paleocene; Lzf, Cretaceous-Paleocene; Lrep, late Upper Cretaceous; Lrep', Mississippian-Eocene
Lzm, Lzm, Lzm, Lzm, Lzm, Mississippian-Triassic; Lzm', Upper Hadrynian-Upper Devonian; Lzf, Jurassic-early Upper Cretaceous; Lrep, Lower Cretaceous-early Upper Cretaceous; Lrep', Mississippian-early Upper Cretaceous
Upper Hadrynian-Upper Devonian, folded during the Ellesmerian and refolded during the Early Laramide
Lower Hadrynian and older, folded during the East Kootenay and refolded during the Late Laramide
Lower Hadrynian and older, folded during the East Kootenay and refolded during the Early Laramide
COVER ON COLUMBIAN AND OLDER OROGENS
Ccc, late Lower Cretaceous-early Upper Cretaceous; Ccc, Upper Cretaceous-Paleocene
COLUMBIAN OROGENY (C), folding and granitic intrusion during the late Late Jurassic-lower Late Cretaceous; EARLY COLUMBIAN (C1), during the late Late Jurassic; MID COLUMBIAN (C2), during the mid Early Cretaceous (Aptian); LATE COLUMBIAN (C3), during the latest Early Cretaceous
Cg, Cgd, Cb, emplaced during the Columbian; Cg', older intrusions modified during the Columbian
Cnep, Cnep, Cnep', Jurassic-early Lower Cretaceous; Cnep, Upper Jurassic-Lower Cretaceous
Czm, Czm, Lower and Middle Jurassic; Czm, Czm, Czm', Permian-Lower Cretaceous
Cse, Cse, Cse, Cse, Cs, Upper Triassic-early Lower Cretaceous; Cs, Lower Cretaceous and older; Cs', pre Lower Cretaceous
CNe, Triassic-early Middle Jurassic, folded during the Nassian and refolded during the Columbian
Cse, Cse, Cse, Cse, Cse, mainly Upper Triassic; uplifted during Inklinian and folded during the Columbian; Cse, during the mid Columbian
Upper Mississippian-Permian folded during the Tahltanian and refolded during the Columbian
CEm, CEm, CEm, CEm, Upper Hadrynian-Upper Devonian; CEm, CEm, Upper Hadrynian-Lower Devonian; CEn, Upper Hadrynian-Triassic; CEe, Middle Devonian-Lowermost Mississippian; folded during the Ellesmerian and refolded during the Columbian
Emplaced during the East Kootenay and modified during the Columbian
Lower Hadrynian and older, folded during the East Kootenay and refolded during the Columbian
NASSIAN OROGENY (N), folding and granitic intrusion during the Middle Jurassic (Bathonian)
Nig, Ngd, Emplaced during the Nassian
Nm, Ne; Ne', Nm, Ne, Lower to early Middle Jurassic; Ne', Triassic-Middle Jurassic
Nne, Upper Triassic, uplifted during the Inklinian and folded during the Nassian
Nm, Nm, Nm, Nm, Permian and older, folded during the Tahltanian and refolded during the Nassian
INKLINIAN DISTURBANCE (I), uplift and granitic intrusion during the latest Triassic-earliest Jurassic
Ig, Emplaced during the Inklinian
Ie, Upper Triassic, local Lower and Middle Triassic
TAHLTANIAN OROGENY (T), folding and granitic intrusion during the Early and Middle Triassic
Tg, Tgd, Tg, emplaced during the Tahltanian; Tg', may be younger
Te, Upper Mississippian-Permian
Tn, Tn, Tn', Mississippian and older gneiss, schist, and low grade metamorphic rocks; Tn', modified during younger orogenies
COVER ON MELVILLIAN AND OLDER OROGENS
Mc, Mh, Mc, Upper Jurassic-Cretaceous; Mh, Permian-Eocene
MELVILLIAN DISTURBANCE (M), gentle folding during the Late Pennsylvanian
Mm, Middle Pennsylvanian
MEc, MEf, MEm, Ordovician-Silurian; MEf, Middle and Upper Devonian; folded during the Ellesmerian and refolded during the Melvillian
COVER ON APPALACHIAN AND OLDER OROGENS
Aic, Aic, Aic, Pennsylvanian; Aic, Middle Pennsylvanian-Permian; Aic', Triassic
APPALACHIAN DISTURBANCE (A), gentle folding during the latest Mississippian-early Middle Pennsylvanian; EARLY APPALACHIAN (A1), during the latest Mississippian; LATE APPALACHIAN (A2), during the early Middle Pennsylvanian
Aiep, Aiep, Aiep, Mississippian; Aiep, Mississippian-lower Middle Pennsylvanian
COVER ON ELLESMERIAN OROGENS
Ec, Eh, Ec, Pennsylvanian-Permian; Eh, Pennsylvanian
ELLESMERIAN OROGENY (E), folding and granitic intrusion during the Early Mississippian; POSSIBLY ELLESMERIAN (E'), folding during the Early Mississippian or middle-late Devonian
Eg, Ey, Eg, emplaced during the Ellesmerian; Ey, possibly emplaced during the Ellesmerian
Em, Ei, Em, Hadrynian-Middle Devonian; Ei, Middle and Upper Devonian
COVER ON ACADIAN AND RELATED OROGENS
Ac, Ac; Ac', Upper Devonian-Lower Pennsylvanian; Ac', late Lower and Middle Devonian; Ac', Silurian or Devonian
ACADIAN OROGENY (A), folding and granitic intrusion mainly during the late Middle-early Upper Devonian; RELATED OROGENIES, during the mid Early Devonian (A'); possibly during the late Silurian (A")
Ag, Agd, Ab, emplaced during the Acadian; Ag', Ab, during related orogeny
Am, Amf, Am, Upper Ordovician-Middle Devonian; Amf, Adf, Cambrian-Middle Devonian; Am, Hadrynian-early Lower Devonian
Ae, An, Ae, Silurian-Middle Devonian; Ae', Ordovician-Middle Devonian; Ae', Ae, Lower Ordovician-Middle Silurian
Emplaced during the Taconic and modified during the Acadian
ATm, ATm, ATm, Cambrian-Ordovician; ATe, ATd, Upper Hadrynian-Middle Ordovician; ATn, Hadrynian-Ordovician; folded during the Taconic and refolded during the Acadian
Hadrynian or older, folded during the mid or late Hadrynian and modified during the Acadian
Emplaced during the early Hadrynian or earlier and modified during the Acadian
Early Hadrynian or older, folded during the early Hadrynian or earlier and modified during the Acadian
COVER ON TACONIC OROGEN
Tn, Silurian-Middle Devonian
TACONIC OROGENY (T), folding and intrusions during the early Late Ordovician
Emplaced during the Taconic
Tm, Tm, Te, Td, Tn, Hadrynian-Middle Ordovician
Probably emplaced during the Elsonian and modified during the Grenvillian and Taconic
COVER ON PRECAMBRIAN OROGENS
pCc, pCh, Phanerozoic
EAST KOOTENAY DISTURBANCE (K), gentle folding and granitic intrusion during the mid Hadrynian; RELATED DISTURBANCES, during the early Hadrynian or earlier (K'); folding during the mid or late Hadrynian (K")
Kig, Kig, Emplaced during the related disturbances
K"m, Mid Hadrynian
K'e, Early Hadrynian or older
COVER ON GRENVILLIAN OROGEN
Gc, Probably Hadrynian
GRENVILLIAN OROGENY (G); folding and granitic intrusion during the late Neohelikian
Gg, Ggd, Emplaced during the Grenvillian; probably includes some bodies emplaced during older orogenies
Gy
Ge, Gd, Ge, Gd, Neohelikian; Gep, probably Neohelikian; Gm, Aphebian
Gep, Gm
Gng', Gng*, Gng', Helikian or older; Gng*, in largely unmapped areas
Emplaced during the Elsonian and modified during the Grenvillian
Probably Palaeohelikian; folded during the Elsonian and refolded during the Grenvillian
Probably emplaced during the Hudsonian and modified during the Grenvillian
Ghg, Ghg, Ghm, probably Aphebian; Ghg, probably Aphebian miogeosynclinal gneiss, marble, quartzite; undivided granitic intrusion, charnockite, granulite; folded during the Hudsonian and refolded during the Grenvillian
Probably emplaced during the Kenoran and reworked during the Grenvillian
Gkng, Probably Archaean eugeosynclinal gneisses, undivided granitic intrusion and charnockite; involved in the Kenoran and reworked during the Grenvillian
COVER ON ELSONIAN AND OLDER OROGENS
Ec, Eh, Ec, Neohelikian and younger; Eh, Neohelikian
ELSONIAN OROGENY (E), intrusions and possible folding during the late Palaeohelikian
Eg, Emplaced during the Elsonian
Eng', Er', Palaeohelikian or older
Ehm, Probably Aphebian, folded during the Hudsonian and modified during the Elsonian
COVER ON HUDSONIAN AND OLDER OROGENS
Hc, Hc', Hc, Helikian; Hc', Palaeohelikian; Hc*, Helikian-Hadrynian
HUDSONIAN OROGENY (H), folding and granitic intrusion during the late Aphebian
Hig, Hig, Hig, Emplaced mainly during the Hudsonian
Hm, He, Hc, Hng, Hep, Hm, He, Hc, Hng, Hep, Aphebian deposits
He', Hc', Hng', Aphebian and/or Archaean; Hng*, with undivided granitic intrusions in largely unmapped areas
HKg, HKs, HKg, emplaced during the Kenoran and modified during the Hudsonian; HKs, emplaced during the pre-Kenoran and modified during the Kenoran and Hudsonian
HKe, HKng, HKr, Mainly Archaean, folded during the Kenoran and refolded during the Hudsonian; uncorrelated unconformities present
COVER ON KENORAN OROGENS
Kc, Kh, Kc, Aphebian; Kc', may be younger
KENORAN OROGENY (K), folding and granitic intrusion during the late Archaean
Kg, Kgd, Kg, Kgd, emplaced during the Kenoran; Kgd, emplaced during the Kenoran and moderately altered during the Hudsonian; KKg, KKgH, emplaced during the pre-Kenoran and modified during the Kenoran
Kc, Kh, Kc, Kh, Ky, Emplaced during the Kenoran
Ke, Kng, Kr, Kr, Kr, Kr, Archaean; KeH, KngH, KrH, moderately altered during the Hudsonian; uncorrelated unconformities present
NEWFOUNDLAND
The Grand Banks of Newfoundland
ATLANTIC OCEAN
Flemish Cap
CONTINENTAL SHELF EXTENSION
Scale 1: 10,000,000
MAPOTECA
Biblioteca Conrado Paschoale
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