GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

Qsi — *Snowfield, icefield, glacier*

Qd — *Till, alluvium, colluvium, gravel, sand, silt*

MESOZOIC

LOWER CRETACEOUS
BLAIRMORE GROUP

Kbl — *Grey sandstone; dark grey shale; chert, quartz, and quartzite pebble conglomerate and conglomeratic sandstone at base*

JURASSIC AND (?) CRETACEOUS

JKk — *KOOTENAY FORMATION: grey and black, carbonaceous and limonitic sandstone, grey and black siltstone; black carbonaceous mudstone and shale; coal*

JURASSIC
FERNIE GROUP

Jf — *Dark grey to black shale; dark grey siltstone and sandstone; dark grey, platy, silty, argillaceous limestone; brown, limonitic, quartz sandstone*

TRIASSIC
SPRAY RIVER GROUP (Tsm - Twh)

Twh — *WHITEHORSE FORMATION: light grey, dolomitic siltstone and sandstone; red, green, and brown mudstone and siltstone; limestone and dolomite breccia*

Tsm — *SULPHUR MOUNTAIN FORMATION: dark grey and brown, thin-bedded siltstone, silty mudstone, shale, and dolomitic siltstone*

PALEOZOIC

PERMIAN AND PENNSYLVANIAN
ROCKY MOUNTAIN GROUP

PPrm — *Light grey quartz sandstone, dolomitic sandstone, silty dolomite; chert*

MISSISSIPPIAN
RUNDLE GROUP (Mlv - Met)

Met — *ETHERINGTON FORMATION: light grey limestone, cherty limestone, and calcarenitic limestone; dolomite; cherty dolomite; green and red shale; siltstone; breccia*

Mmh — *MOUNT HEAD FORMATION: dense dark grey limestone and argillaceous dolomite; grey limestone and calcarenitic limestone; cherty and silty dolomite and iimestone. May include strata of Etherington Formation at top, locally*

Mtv — *TURNER VALLEY FORMATION: light grey skeletal calcarenite and calcarenitic limestone: cherty limestone; dolomite*

Msh — *SHUNDA FORMATION: light to dark grey dense limestone, calcarenitic limestone, and cherty limestone*

Mpk — *PEKISKO FORMATION: light grey skeletal calcarenite, calcarenitic limestone, cherty limestone, and dolomite*

Mlv — *LIVINGSTONE FORMATION: light grey skeletal calcarenite and calcarenitic limestone; cherty limestone; dolomite*

Mbfu — *Upper part: dark grey, cherty, argillaceous and dolomitic limestone and calcarenitic limestone, and brownish grey argillaceous dolomite*

Mbfm — *Middle part: light to dark grey skeletal calcarenite, calcarenitic limestone, and argillaceous and dolomitic limestone*

Mbfl — *Lower part: dark grey and brownish grey shale and calcareous shale; brown argillaceous siltstone; argillaceous and cherty limestone*

Mbf — *EXSHAW AND BANFF FORMATIONS: dark grey, finely crystalline, thin-bedded limestone; dark brownish grey shale and calcareous shale; brown argillaceous siltstone, argillaceous and cherty skeletal calcarenitic limestone, and argillaceous dolomite*

DEVONIAN
UPPER DEVONIAN

Dpa — *PALLISER FORMATION: thickly bedded and massive, mottled dolomitic limestone; grey dense limestone; greyish brown dolomite*

Dax — *ALEXO FORMATION: thinly bedded silty dolomite, dolomitic sandstone, light grey dolomite, and breccia*

FAIRHOLME GROUP (Dcn - Dsx)

Dsx — *SOUTHESK FORMATION: massive to thickly bedded, light to medium grey, finely to coarsely crystalline dolomite; greyish brown finely to coarsely crystalline dolomite*

Dcn — *CAIRN FORMATION: massive to thickly bedded, dark brownish grey and grey, medium crystalline dolomite with Amphipora and stromatoporoid beds; dark grey limestone, dolomitic limestone and dolomite in the lower part; minor chert and breccia; includes channel-filling red beds (Yahatinda Formation) locally at base*

ORDOVICIAN

Osk — *SKOKI FORMATION: dolomite, mainly grey, finely and very finely crystalline, partly siliceous, partly fossiliferous; minor chert masses*

Oou — *OUTRAM FORMATION: limestone, mainly dense, nodular,cherty; with argillaceous, dolomitic, and siliceous tracery; dolomitized equivalents; minor brown shale; rhythmically bedded*

CAMBRIAN AND ORDOVICIAN

€Osp — *SURVEY PEAK FORMATION: shale, grey, calcareous; interbedded with limestone, partly dense, partly fragmental, partly algal masses; minor chert; basal shales, calcareous, grey to olive, weathering pale greenish grey, with minor limestone, mainly flat-pebble conglomerate, and siltstone*

CAMBRIAN
UPPER CAMBRIAN

€m — *MISTAYA FORMATION: limestone, partly dense, dolomite-mottled; dolomitized equivalents; minor chert; prominent algal stromatolites*

€bc — *BISON CREEK FORMATION: interbedded shale and mudstone, grey and greenish grey, calcareous; and limestone, partly fragmental, partly dense*

€ll — *LYELL FORMATION: limestone, partly dense, dolomite-mottled, partly dense laminated, locally silty and sandy, mainly massive; dolomitized equivalents*

€lxu — LYNX GROUP *UPPER DIVISION: dolomite, mainly grey, locally tinged or speckled with pink, very finely crystalline, grading to dolomitic siltstone, laminated, thickly bedded to massive*

€su — *SULLIVAN FORMATION: interbedded greenish grey to brown calcareous shale, and limestone, mainly fragmental, partly oolitic; dense algal masses*

MIDDLE AND UPPER CAMBRIAN

€wf — *WATERFOWL FORMATION: limestone, mainly dense with dolomite mottling and laminae, partly silty and sandy; minor fragmental and oolitic lime-stone; dolomitized equivalents*

€lx — LYNX GROUP *Dolomite, mainly grey, very finely to finely crystalline, partly silty; interbeds of siltstone, grey and greenish grey shale, and limestone; minor sandstone and chert masses*

MIDDLE CAMBRIAN

€ar — *ARCTOMYS FORMATION: thinly interbedded; purple-red, green, and grey shale; yellow dolomitic siltstone with ripple marks, mud cracks, and salt casts; and minor yellow-weathering dolomite*

€pk — *PIKA FORMATION: grey, dense, thin-bedded, flaggy limestone with partings and mottling of dense dolomite; limestone pebble conglomerate; oolite; dolomitized equivalents; minor shale intervals near the base*

€el — *ELDON FORMATION: dense, predominantly grey, dolomite-mottled, massive limestone; dolomitized equivalents*

€st — *STEPHEN FORMATION: interbedded grey to green shale and limestone, partly dense, partly fragmental, minor oolitic; minor siltstone*

€ca — *CATHEDRAL FORMATION: limestone, predominantly dense, dolomite-mottled, massive; dolomitized equivalent*

€mw — *MOUNT WHYTE FORMATION: interbedded grey to green shale and grey dense thin-bedded limestone with dolomite partings and mottlings. As mapped, locally includes interbedded shale and glauconitic sandstone (Gog Group) at base*

MIDDLE (?) AND LOWER CAMBRIAN
GOG GROUP

€gg — *Quartz sandstone; siltstone; shale*

Geological boundary (defined, approximate, assumed)
Geological boundary (assumed projection under cover of younger deposits)
Bedding, tops known (horizontal, inclined, overturned)
Thrust fault (teeth on upthrust side; defined, approximate, assumed)
Thrust fault (assumed projection undercover of younger deposits)
Anticline (trace of axial plane, defined, approximate)
Syncline (trace of axial plane, defined, approximate)
Anticline, syncline (overturned)
Abandoned well
Stratigraphic section, locus of measurement (numbers refer to internal cataloguing system) MQ 43
studied by: J.D. Aitken ..... AC *R.W. Macqueen* .... MQ

Geology by R.A. Price and E.W. Mountjoy based on studies of vertical air photographs (1964-1967), ground and air observations by J.D. Aitken, H.U. Bielenstein, D.G. Cook, E.W. Mountjoy and R.A. Price (1964-1966)

Geological compilation by R.A. Price

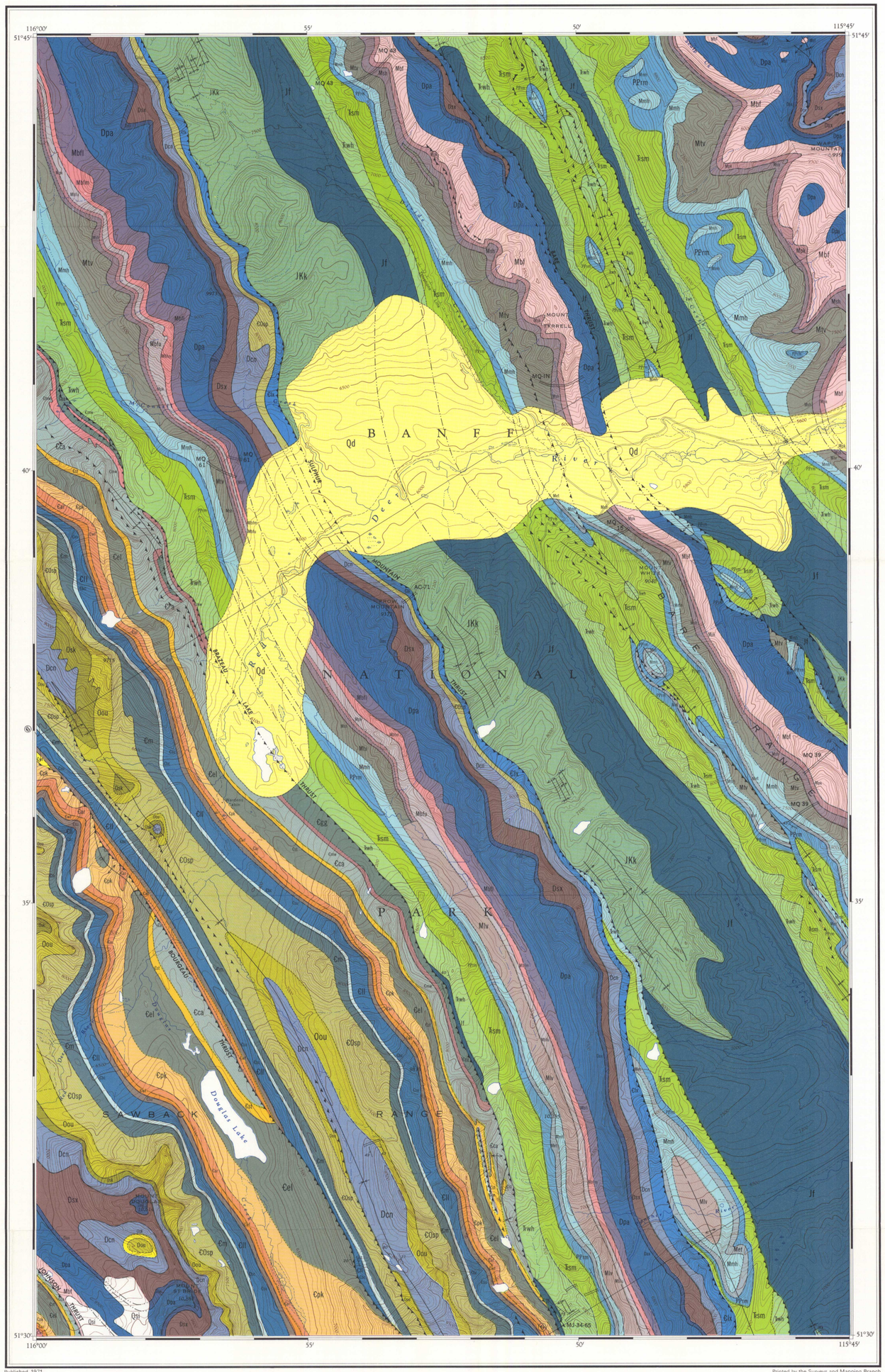
Geological cartography by the Geological Survey of Canada

Topographic base-map at the same scale published by the Surveys and Mapping Branch in 1960

Copies of the topographical edition of this map may be obtained from the Map Distribution Office, Department of Energy, Mines and Resources, Ottawa

Approximate magnetic declination 1970, 22°30′ East decreasing 3.5′ annually

Elevations in feet above mean sea-level



Published, 1971
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INDEX MAP

MAP 1274A

GEOLOGY

BARRIER MOUNTAIN

(WEST HALF)

WEST OF FIFTH MERIDIAN

ALBERTA

Scale 1:50,000

Miles 1 0 1 2 Miles
Metres 1000 0 1000 2000 3000 Metres

82 N/16	1276A	82 O/13 1275A	82 O/14
82 N/9	1274A	82 O/12 1273A	82 O/11
82 N/8		82 O/5 1272A	82 O/6 1271A

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO GEOLOGICAL SURVEY OF CANADA MAPS

BARRIER MOUNTAIN
(West Half)
ALBERTA
1274A

ALTA. BARRIER MOUNTAIN W½
1:50,000
MAP 1274A
1971