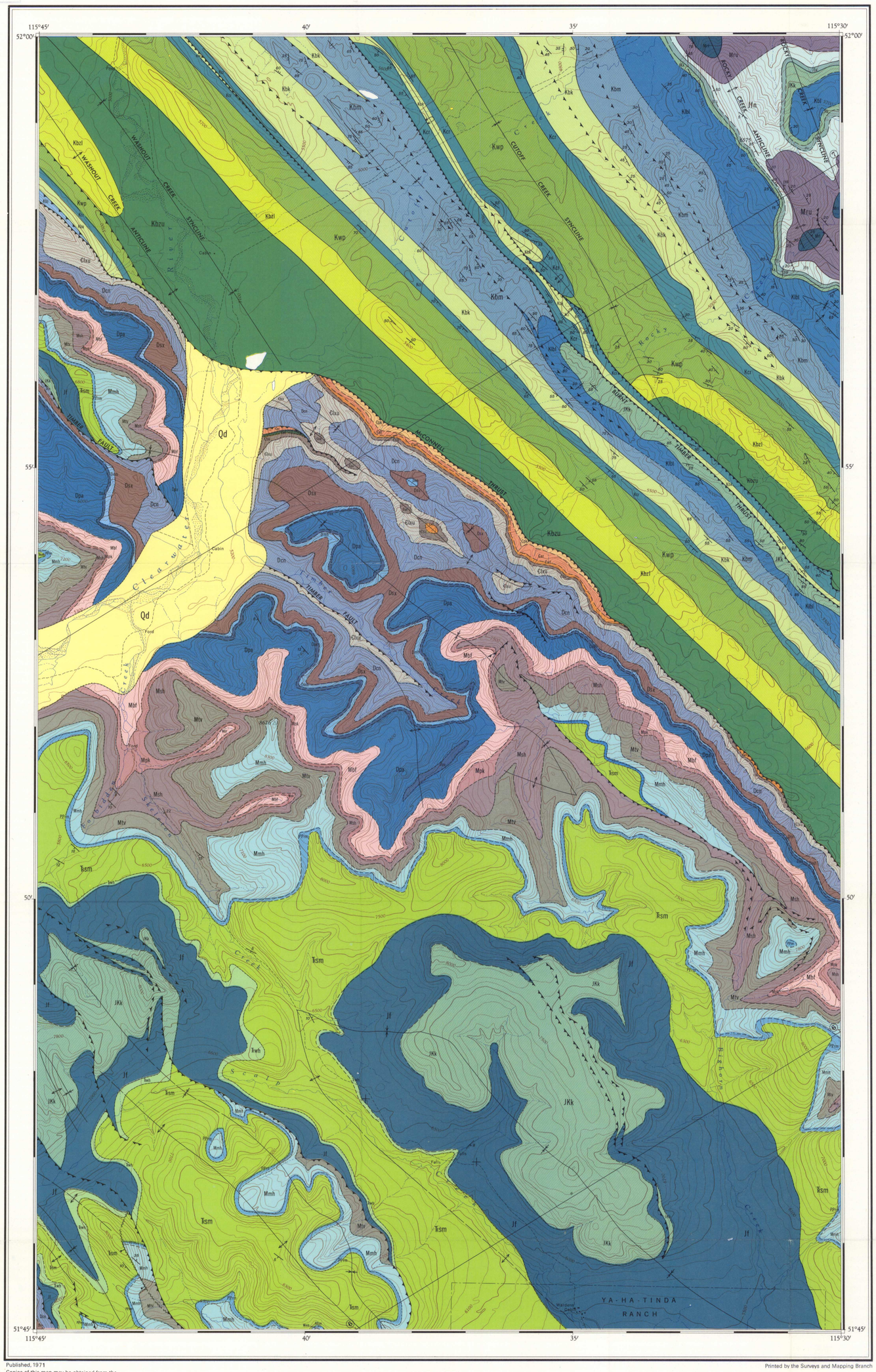
GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES



Published, 1971
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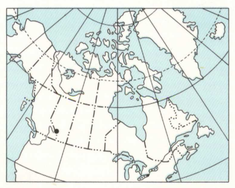


INDEX MAP

MAP 1275A

GEOLOGY

SCALP CREEK

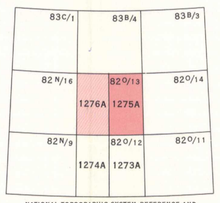
(EAST HALF)

ALBERTA

Scale 1:50,000

Miles 1 0 1 2 Miles

Metres 1000 0 1000 2000 3000 Metres



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

LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

- **Qd** — *Till, alluvium, colluvium*

MESOZOIC

CRETACEOUS
UPPER CRETACEOUS

- **Kbzu** — *BRAZEAU FORMATION (upper part): flaggy to slabby, grey and minor greenish grey, feldspathic sandstone; greenish grey and grey siltstone and rubbly mudstone; minor bentonite and rare coal*
- **Kbzl** — *BRAZEAU FORMATION (lower part): flaggy to slabby, greenish grey and grey, feldspathic sandstone; greenish grey and grey siltstone and rubbly mudstone; local pebbly sandstone and pebble conglomerate*
- **Kbr** — *BELLY RIVER FORMATION: massive, greenish grey, fine to medium-grained sandstone, green siltstone and shale, chert pebble conglomerate*

ALBERTA GROUP (Kbk-Kwp)

- **Kwp** — *WAPIABI FORMATION: silty, dark grey to black, platy to rubbly shale and calcareous shale; commonly with platy laminated siltstone and sandstone layers; concretionary shale and mudstone; minor argillaceous sandstone; pebble layers and bentonite seams*
- **Kcr** — *CARDIUM FORMATION: grey, fine to medium-grained, crossbedded sandstone; grey to dark grey argillaceous siltstone and silty shale (locally concretionary); minor conglomerate*
- **Kbk** — *BLACKSTONE FORMATION: black, dark grey platy and rubbly shale; silty shale, calcareous shale, minor concretionary shale; grey to dark grey siltstone; minor sandstone, bentonite seams and pebble layers*

LOWER CRETACEOUS
BLAIRMORE GROUP

- **Kbl** — *Greenish grey, fine to coarse-grained sandstone; green and red shale; chert-pebble conglomerate*
- **Kbm** — *BEAVER MINES FORMATION: flaggy to slabby, grey and greenish grey, feldspathic sandstone; platy siltstone and rubbly mudstone; minor shale; minor pebbly sandstone and conglomerate*
- **Klbl** — *LOWER BLAIRMORE: grey siltstone and sandstone, commonly calcareous and thin-bedded, locally limonitic; minor grey and black, locally carbonaceous shale; grey limestone; minor coal seams. Includes light yellowish grey sandstone, minor pebbly sandstone and conglomerate of the Cadomin Formation at the base*

JURASSIC AND (?) CRETACEOUS
UPPER JURASSIC AND (?) LOWER CRETACEOUS

- **JKk** — *KOOTENAY FORMATION: grey and black, fine to medium-grained, commonly carbonaceous and limonitic sandstone; grey to black, commonly carbonaceous shale; minor coal*

JURASSIC
FERNIE GROUP

- **Jf** — *Dark grey to black shale; dark grey siltstone and sandstone; brown limonitic quartz sandstone*
- **Jfu** — *Upper member: dark grey to black shale; minor dark grey siltstone and sandstone*
- **Jfn** — *Nordegg member: dark grey, slightly carbonaceous, platy, cherty limestone and oolitic limestone, weathering light grey-brown; dark grey to black chert*

TRIASSIC
SPRAY RIVER GROUP (Tsm - Twh)

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

MISSISSIPPIAN
RUNDLE GROUP (Mpk-Mmh)

- **Mmh** — *MOUNT HEAD FORMATION: dense, dark grey limestone and argillaceous dolomite; grey limestone and calcarenitic limestone; cherty and silty dolomite and limestone. May include beds at the top equivalent to the Etherington Formation*
- **Mtv** — *TURNER VALLEY FORMATION: light grey skeletal calcarenite and calcarenitic limestone; cherty limestone; dolomite*

} **Mru** — *Upper part (undivided)*

- **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*

} **Mrl** — *Lower part (undivided)*

- **Mbf** — *EXSHAW AND BANFF FORMATIONS: platy, dark grey, brown weathering, finely crystalline silty, argillaceous, thin-bedded limestone and calcareous siltstone; 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 (Df: Dcn-Dmh)

- **Dmh** — *MOUNT HAWK FORMATION: dark grey, argillaceous, thin-bedded, finely crystalline limestone; grey calcareous shale*
- **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*

LOWER ORDOVICIAN AND UPPER CAMBRIAN

- **Ꞓ0sp** — *SURVEY PEAK FORMATION: grey to greenish grey, calcareous shale; interbeds of grey intraformational limestone conglomerate; grey dense limestone, calcarenite, calcareous siltstone*

CAMBRIAN
UPPER CAMBRIAN
LYNX GROUP

- **Ꞓlxu** — *UPPER DIVISION: dolomite, mainly grey, locally tinged or speckled with pink, very finely crystalline, grading to dolomitic siltstone, laminated, thickly bedded to massive*
- **Ꞓsu** — *SULLIVAN FORMATION: interbedded, grey, silty dolomitic shale and grey to brown silty dolomite, grading to dolomitic siltstone*

MIDDLE AND UPPER CAMBRIAN

- **Ꞓwf** — *WATERFOWL FORMATION: grey to pink, very fine to microcrystalline silty dolomite, dolomitic siltstone, chert nodules*

} MIDDLE AND UPPER CAMBRIAN — LYNX GROUP (Ꞓwf- Ꞓlxu) — **Ꞓlx** — *(undivided)*

MIDDLE CAMBRIAN

- **Ꞓar** — *ARCTOMYS FORMATION: thinly interbedded, purple-red, green and grey shale; yellow dolomitic siltstone with ripple marks, mud cracks and salt casts; minor yellow weathering dolomite*
- **Ꞓpk** — *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*
- **Ꞓel** — *ELDON FORMATION: dense predominantly grey, dolomite-mottled, massive limestone; dolomitized equivalent*
- **Ꞓst** — *STEPHEN FORMATION: interbedded grey to green shale and limestone, partly dense, partly fragmental minor oolitic; minor siltstone (occurs in structure sections only)*
- **Ꞓca** — *CATHEDRAL FORMATION: limestone, predominantly dense, dolomite-mottled, massive; dolomitized equivalent (occurs in structure sections only)*
- **Ꞓmw** — *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 (occurs in structure sections only)*

MIDDLE (?) AND LOWER CAMBRIAN
GOG GROUP

- **Ꞓgg** — *Quartz sandstone, siltstone, shale (occurs in structure sections only)*

Geological boundary (defined, approximate, assumed)
Bedding, tops known (horizontal, inclined, overturned)
Bedding, tops unknown (inclined, vertical)
Fault, genetic type unknown (defined)
Thrust fault (teeth on upthrust side; defined, approximate, assumed)
Gravity fault (solid circle indicates downthrow side; defined, approximate)
Anticline (upright; trace of axial plane, defined, approximate)
Syncline (upright; trace of axial plane, defined, approximate)
Anticline, syncline (overturned)
Abandoned well
Stratigraphic section, locus of measurement (numbers refer to internal cataloguing system) MQ-44
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, E.W. Mountjoy and R.A. Price (1964-1966)

Geology in Foothills northeast of McConnell thrust by N.C. Ollerenshaw (1969) based on detailed ground observations and studies of vertical air photographs by N.C. Ollerenshaw

Geological compilation by R.A. Price and N.C. Ollerenshaw

Geological cartography by the Geological Survey of Canada

Topographic base-map at the same scale published by the Surveys and Mapping Branch in 1961

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°48′ East decreasing 3.6′ annually

Elevations in feet above mean sea-level

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SCALP CREEK
(East Half)
ALBERTA

1275 A

ALBERTA. SCALP CREEK, E½
1:50,000
MAP 1275A

(Structure section accomp. this map).

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