

LEGEND

PRECAMBRIAN*

REGIONAL CATACLASTIC ZONES

- Zones of regional cataclasis and recrystallization have principally affected granite gneisses and metasedimentary rocks to produce: ultramylonite, mylonite, cataclastic, blastomylonite, and faser gneiss; megastructure is typically streaky; may contain rounded or augen rock clasts or feldspar porphyroclasts (°S).
- RECRYSTALLIZED CATACLASTIC ROCK:** dark colored, with white to gray anhedral feldspar porphyroclasts and subhedral feldspar porphyroblasts 10 to 50 mm long; foliated, locally gneissic; aphanitic matrix, locally medium grained; minor apilite and pegmatite. Largely Granodiorite D type parent material.
- RECRYSTALLIZED CATACLASTIC ROCK:** green to black; granulose (siliceous) to schistose, with biotite, chlorite, sericite; feldspar and minor quartz porphyroclasts in a massive to foliated, finely banded, aphanitic matrix. Largely metasedimentary rock parent material.
- RECRYSTALLIZED CATACLASTIC ROCK:** mostly light colored, with white to pink feldspar porphyroclasts 5 to 20 mm long making up 2 to 5 percent of the rock, in a foliated, finely banded, aphanitic matrix. Largely granite gneiss parent material.

GRANITOID ROCK GROUP

- WYLIE LAKE GRANITOIDS**
 - UNDIFFERENTIATED GRANITOID:** lack of field data and local cataclasis do not allow better definition and subdivision of these areas; this broadly defined map-unit includes both Fishing Creek Quartz Diorite and Wylie Lake Granodiorite Phase.
 - WYLIE LAKE PO GRANITE PHASE:** reddish over all; mottled to light spotted, with white to pink to red anhedral feldspar megacrysts 5 to 8 mm in size in a medium-grained, massive to foliated matrix of biotite, feldspar, and quartz; minor sericite.
 - FISHING CREEK QUARTZ DIORITE:** medium gray over all; mottled grayish white on a medium- to dark-gray background in hand specimen; medium grained, typically almost megacrystic but may be locally distinctly megacrystic or equigranular; megacrystic white to gray to pale green feldspars from 5 to 10 mm long in a greenish gray matrix of feldspar, quartz, and biotite; typically poorly foliated, locally massive, or gneissic. Rock-types are predominantly quartz diorite but range to quartz-bearing diorite and granodiorite. Minor, irregularly shaped small bodies of leucocratic, predominantly fine-grained apilite-pegmatite and microgranite, and schlieren of biotite or metasedimentary rocks may be present.
 - WYLIE LAKE GRANODIORITE PHASE:** generally dark greenish or brownish red; may appear finely mottled; medium grained, typically equigranular except for rare 15 mm pink feldspar megacrysts in a feldspar, quartz, biotite matrix; typically poorly foliated to massive. Rock-types are predominantly granodiorite with minor quartz diorite.
- COLIN LAKE GRANITOIDS**
 - COLIN LAKE LEUCOCRATIC GRANITE PHASE:** pink to red anhedral feldspar in an equigranular fine- to coarse-grained matrix; massive to locally foliated; includes minor microgranite and apilite-pegmatite; local sericite. Typically found as small masses intermixed with other Colin Lake Granitoids.
 - GRANODIORITE D:** mottled appearance with gray, white, or pink to red feldspar megacrysts in a gray or pink matrix; subhedral to anhedral feldspar megacrysts 25 to 100 mm long, typically up to 10 to 15 percent abundance, in a medium- to coarse-grained matrix of feldspar, quartz and biotite; matrix is massive to well foliated. Predominant rock-type is granodiorite, but composition ranges to granite and quartz diorite. Includes minor small bodies of apilite, microgranite, and pegmatite.
 - QUARTZ DIORITE C:** spotted appearance with gray white (locally pink) feldspar megacrysts in a dark gray matrix; feldspar megacrysts (locally augen) 5 to 15 mm long, typically up to 20 percent abundance, in a medium-grained, mafic-rich matrix of feldspar, quartz, biotite, and hornblende; matrix is typically fairly well foliated. Predominant rock-type is quartz diorite, but ranges to granodiorite. Includes minor apilite-pegmatite and microgranite.

METASEDIMENTARY ROCK GROUP

- METASEDIMENTARY ROCKS:** the high-grade metasedimentary rock-types included in this map-unit are lithologically and texturally gradational, and in part intermixed on a small outcrop scale. Typically impure quartzite; fresh surface is dark, greenish (bluish) gray; fine grained, layered, with ferruginous and garnetiferous zones, locally scattered pyrite, gossans, and milky or bluish gray quartz pods and veins. Minor, common lithologic gradational variations to: (1) fine- to medium-grained, metamorphic quartzite-feldspathic (granitic) phase ranging from individual feldspar megacrysts to nebulous or distinct aggregations and masses; locally gneissic; (2) fine-grained phyllite and schist (biotite, chlorite, sericite, and uncommonly hornblende) and phyllonite. Minor amphibolite may be present.
- GRANITIC METASEDIMENTARY ROCK:** typically mottled with white feldspar megacrysts in a darker, fine-grained (metasedimentary) matrix; fairly homogeneous in character, commonly foliated to locally gneissic; may contain garnet, white feldspar megacrysts (or augen) 5 to 15 mm long, and medium-grained, quartz-feldspathic (granitic to pegmatitic) segregations as nebulous or distinct irregularly shaped small masses; commonly includes minor small bands of metasedimentary rocks.

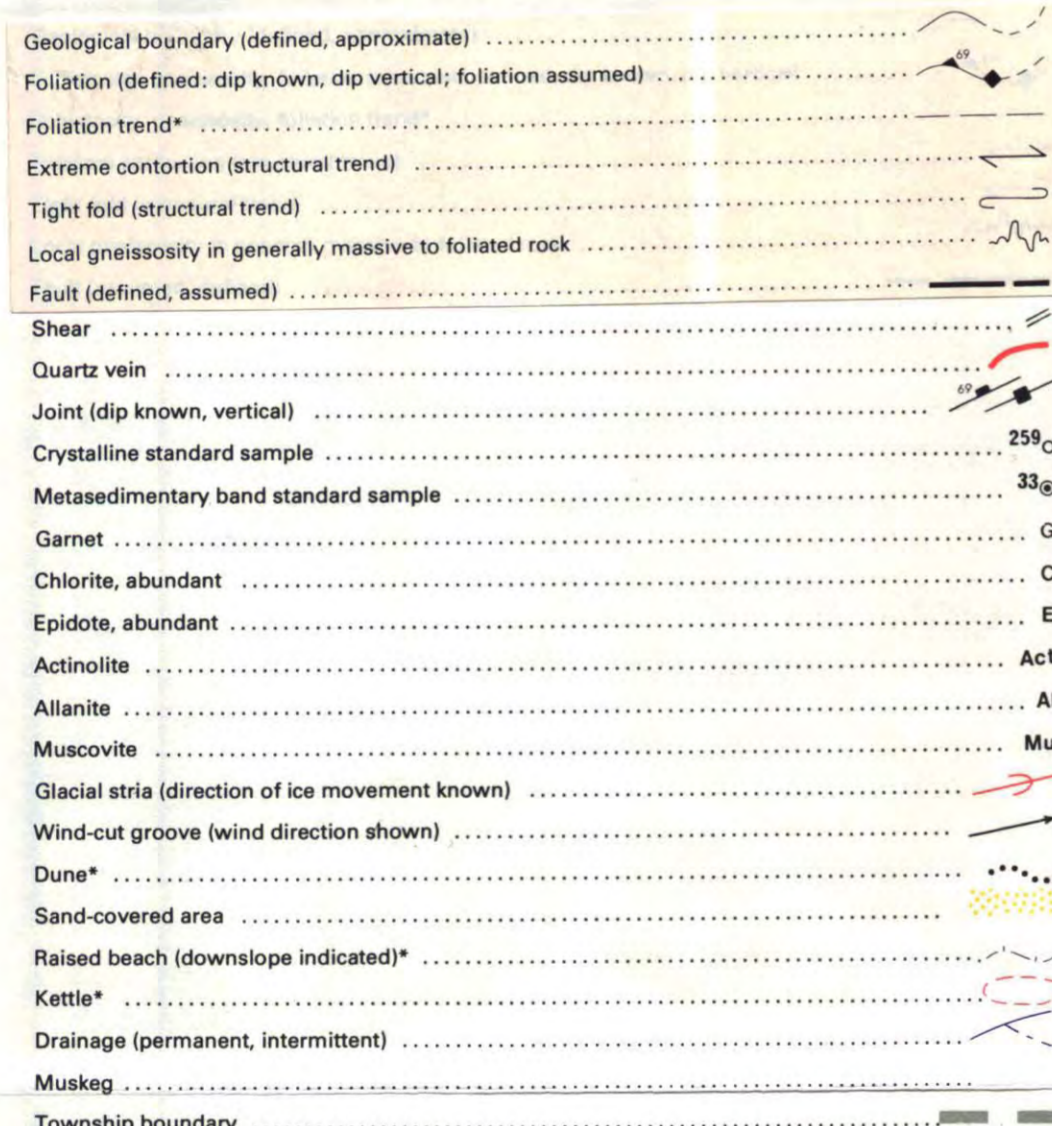
GRANITE GNEISS GROUP

- HORNBLende GRANITE GNEISS:** typically pink to reddish with dark green bands; quartz-feldspar bands interlayered with mafic-rich bands (hornblende, with biotite; generally chloritic) on hand specimen scale; fine- to medium-grained, typically equigranular, uncommonly megacrystic; typically well banded, uncommonly poorly banded, and rarely foliated. Composition includes granite, granodiorite, and quartz diorite. Large areas are migmatitic, particularly where intimately associated with minor lenses, pods, or bands of metasedimentary rocks, pegmatite, or amphibolite.
- BIOTITE GRANITE GNEISS:** typically pink to reddish; quartz-feldspar bands interlayered with mafic-rich bands (locally hornblende); possibly with subordinate hornblende; may be chloritic on hand specimen scale; fine- to medium grained, generally equigranular, rarely megacrystic; commonly well banded but may be locally poorly banded to foliated, and leucocratic phases may be nearly massive. Rock-types include granite, quartz monzonite, granodiorite, quartz diorite, and monodiorite. Large areas are migmatitic, particularly where intimately associated with minor lenses, pods, and bands of metasedimentary rocks, pegmatite, or amphibolite.

AMPHIBOLITE

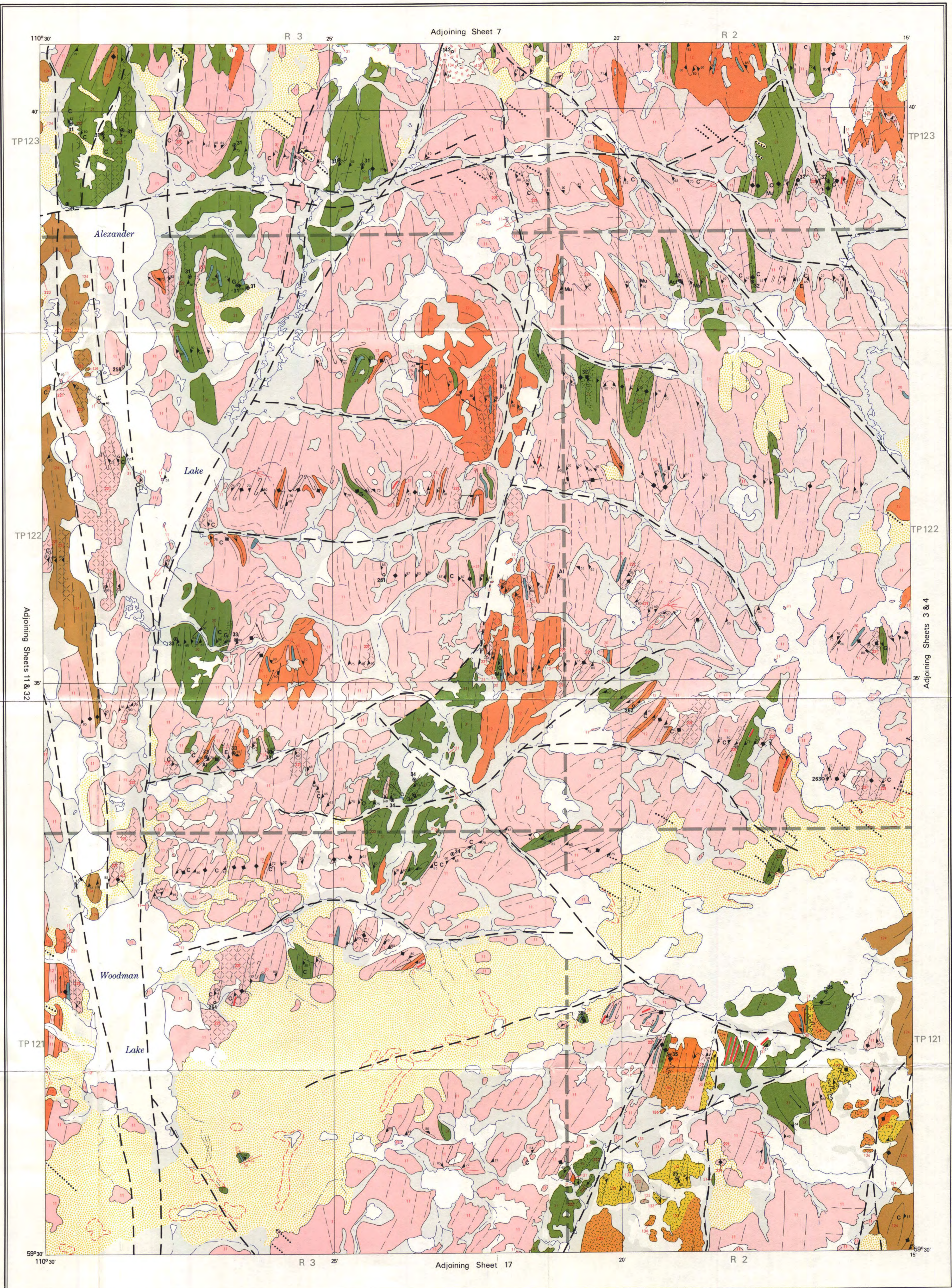
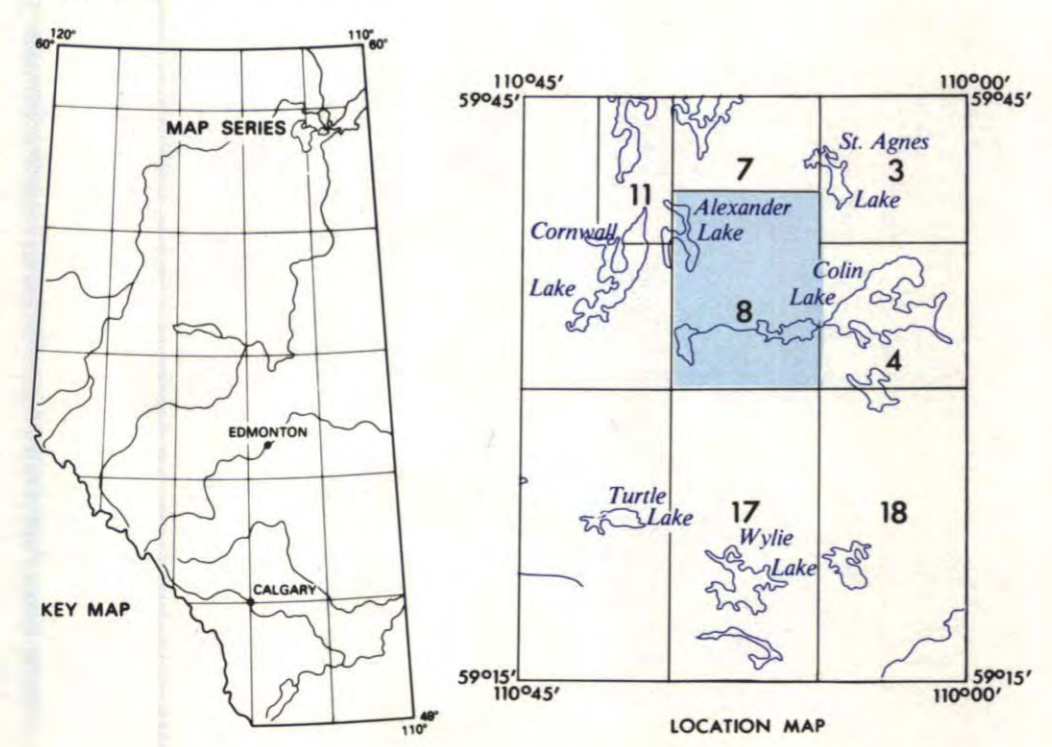
- AMPHIBOLITE:** Dark brownish green (fresh surface) to grayish green; typically medium grained; biotite may be common; essentially amphibole pure, to amphibole rich, to less commonly, feldspathic biotite amphibolite; commonly foliated but may be banded where feldspar rich; minor pyrite common.

*NOTE: Rock groups are arranged in approximate chronological sequence. Nomenclature follows Streckeisen (1967) Classification and Nomenclature of Igneous Rocks; Neues Jahrbuch für Mineralogie, Abhandlungen Band 107, No. 2, p. 144-240.

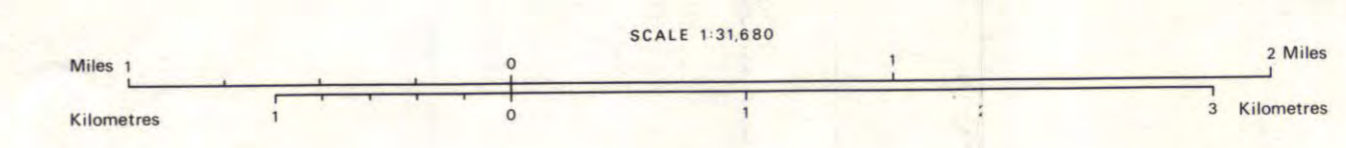


Base maps compiled from planimetric sheets published by Alberta Energy and Natural Resources, Forestry Division, Edmonton.
 Air photographs covering this area obtainable from the Technical Division, Alberta Energy and Natural Resources, Edmonton and the National Air Photographic Library, Ottawa.
 Approximate magnetic declination 24' 34" East in 1976 decreasing 6' annually.

Geology by John D. Godfrey, Maurice B. Dusseault and Peter Klewchuk, 1971.
 Map drawn by D. E. Jacobs
 Cartographic editing by A. Campbell
 SCALE: 1:31,680
 1 inch to 1.2 mile



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 Sheet No. 8



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