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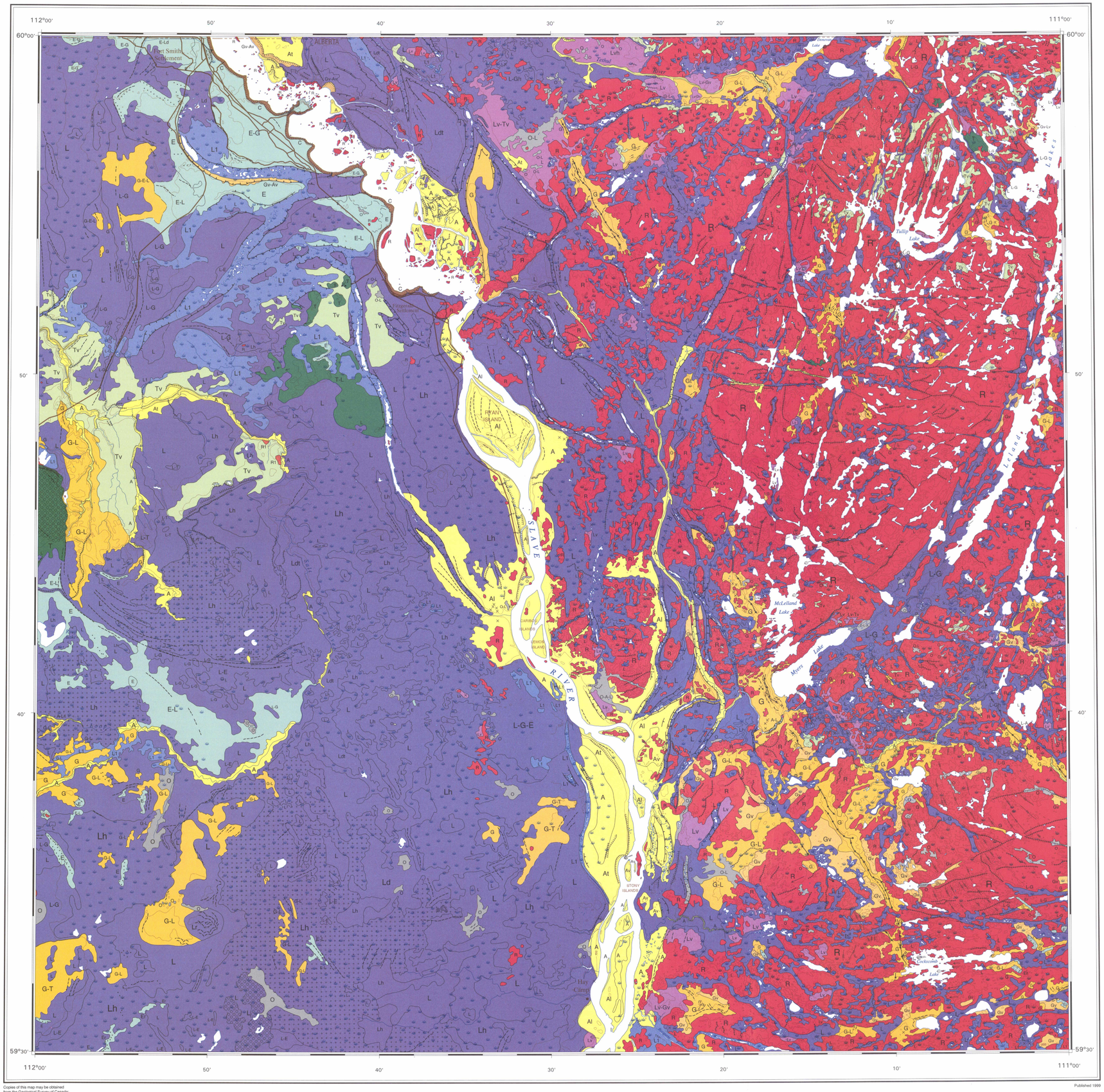
GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA



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Copies of this map may be obtained from the Geological Survey of Canada:
601 Booth Street, Ottawa, Ontario K1A 0E8
3303-33rd Street, N.W., Calgary, Alberta T2L 2A7
101-605 Robson Street, Vancouver, B.C. V6B-5J3

Canada

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LEGEND

This legend is common to maps 1937A, 1938A, 1939A, 1940A, and 1941A. Coloured legend blocks indicate map units that appear on this map. Not all map symbols shown in the legend necessarily appear on this map.

SURFICIAL DEPOSITS
QUATERNARY
POSTGLACIAL

NONGLACIAL ENVIRONMENT

O — ***ORGANIC DEPOSITS:*** *organic matter; 1 to 2 m thick; formed by the accumulation of vegetation in poorly drained depressions (swamps and bogs); usually forms flat terrain; may contain shallow permafrost; in places forms mounds and plateaus; Oh, hummocky topography*

C — ***COLLUVIAL DEPOSITS:*** *massive diamicton, usually at the foot of a slope or cliff and brought there chiefly by gravity*

A — ***FLUVIAL DEPOSITS:*** *alluvium; gravel and sand >1 m thick; A, floodplains and mantling valley floors; Al, meander scars and point bars; At, terraces along valley sides; Af, alluvial fans; Av, thin discontinuous veneer*

L1 — ***LACUSTRINE DEPOSITS:*** *sand, silt, and minor clay deposited in a former lake; >1 m thick; generally overlain by organic deposits in lowlands; level topography; L1r, sandy strandlines; L1d, deltaic sediments, sequences of stratified sand, silt, clay, and gravel; L1h, hummocky topography*

NONGLACIAL AND PROGLACIAL ENVIRONMENTS

E — ***EOLIAN DEPOSITS:*** *medium to fine sand; >2 m thick; in sheet or dune form; derived from deltaic or glaciolacustrine deposits; in some areas, eolian sediments are thin or absent between dunes; Er, ridged topography; Eh, hummocky topography*

Ev — *Eolian deposits forming a thin discontinuous veneer; <1 m thick*

POSTGLACIAL OR LATE WISCONSINAN
PROGLACIAL AND GLACIAL ENVIRONMENTS

GLACIOLACUSTRINE DEPOSITS: *sand, silt, minor clay or gravel, deposited in lakes formed by ice-dammed valleys or along the margin of the retreating Laurentide Ice Sheet*

L — *Sediment >1 m thick; may contain rhythmic bedding; usually forms flat topography; Lh, hummocky topography in the west; Ld, deltaic sediments; Ldt, sequences of stratified sand, silt, clay, and gravel that form terraces; Lr, strandlines*

Lv — *Sediment forming a thin discontinuous veneer; <1 m thick; Lvh, hummocky topography*

GLACIOFLUVIAL DEPOSITS: *gravel, sand, minor sand diamicton; 1 to 40 m thick; deposited behind, at, or in front of the ice margin*

G — *G, braided outwash deposited in front of the ice margin; Gt, level outwash terraces; Gd, braided outwash deltas; Gdt, delta terraces; Gh, hummocky topography*

Gv — *Outwash forming a thin, discontinuous veneer; <1 m thick*

Gi — *Ice-contact stratified drift; deposited behind or at the ice margin; topography is undulating, irregular, or ridged*

TILL: *diamicton deposited directly by glacial ice; matrix is sandy to silty and contains striated clasts*

T — *Till blanket; >1 m thick; forming undulating topography that may be fluted or drumlinized in places*

Tv — *Till veneer; <1 m thick and discontinuous; underlying bedrock topography is discernable*

BEDROCK
PRE-QUATERNARY

R1 — *Devonian limestone, dolomite, gypsum*

R — *Precambrian granite, gneiss, and metasedimentary rocks; forming bare, hilly outcrops*

NOTE: *In areas where the surficial cover forms a complex mosaic, the area is coloured according to the predominant unit and labelled with hyphenated letters in descending order of cover*

Geological boundary (defined, approximate)
Organic deposits (swamp or bog)
Sand dune
Salt flat; saline groundwater discharge
Strandline
Abandoned or underfit channel (large, small and direction of flow inferred, small and direction of flow unknown)
Escarpment
Karst area
Kettle
Esker (direction of flow inferred, unknown)
DeGeer moraines
End moraine
Drumlin or fluting parallel to ice flow (undifferentiated)
Crag and tail (till tail)
Ice molded bedrock form (roche moutonnée, rock drumlin)
Striae
Depressional lineament in bedrock
Small bedrock outcrop
Gravel pit
Quarry

Geology by J.M. Bednarski (1992-1994)

Digital cartography by D. Nunez, General Dynamic Consulting; T. West and J. Pratt, Geoscience Information Division

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

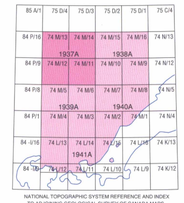
Digital base map from data compiled by Geomatics Canada, modified by the Geoscience Information Division

Magnetic declination 1999, 20°49'E, decreasing 13.4' annually. Readings vary from 20°28'E in the SE corner to 21°31'E in the NW corner of the map

Elevations in feet above mean sea level

Contour interval of 50 feet except, west and south of 111°30' and 59°45' respectively, where contour interval is 100 feet

LOCATION MAP



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

MAP 1937A

SURFICIAL GEOLOGY

DOG RIVER

ALBERTA

Scale 1:100 000 - Échelle 1/100 000

Kilometres 2 0 2 4 6 8 Kilometres

Universal Transverse Mercator Projection
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Projection transverse universelle de Mercator
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Contribution to Canada-Alberta Agreement on Mineral Development (1992-1995), a subsidiary agreement under the Canada-Alberta Economic Regional Development Agreement.

Contribution à l'Entente Canada-Alberta sur l'exploitation minérale (1992-1995), entente auxiliaire négociée en vertu de l'Entente Canada/Alberta de développement économique et régional.

CANADA ALBERTA Partnership on Minerals

Alberta Canada

Recommended citation:
Bednarski, J.M.
1999: Surficial geology, Dog River, Alberta; Geological Survey of Canada, Map 1937A, scale 1:100 000.