LEGEND

CRETACEOUS LOWER CRETACEOUS **BULLHEAD GROUP**

GETHING FORMATION - Rusty weathering quartz arenite in thick units, interbedded with thick units of dark grey to black

shale and siltstone; trace fossils and bioturbaton common; minor coal. CADOMIN FORMATION - Resistant chert pebble conglomerate and quartz arenite; minor siltstone, mudstone and coal.

JURASSIC AND CRETACEOUS MINNES GROUP MONTEITH FORMATION - Resistant, white or grey quartz arenite; fine- to coarse-grained; minor dark grey or black shale

and argillaceous quartz arenite; rare chert pebble conglomerate. Includes the overlying Gething Formation and/or Cadomin Formation. FERNIE FORMATION - Medium to dark grey siltstone and shale; interbedded with light to dark grey or black sandstone, siltstone, and limestone; calcareous in lower part; concretions locally present. JFt- Transitional upper part of the Fernie Formation containing beds of rusty weathering sand, more abundant and thicker upwards.

SCHOOLER CREEK GROUP

PARDONET FORMATION - Recessive, dark grey to brownish-grey weathering, thin-bedded, fossiliferous limestone; locally argillaceous or silty; abundant Monotid bivalves are characteristic in eastern exposures; ichthyosaur bones locally preserved. BALDONNEL FORMATION - Resistant, grey, massive, fossiliferous limestone and dolostone; minor shale, siltstone, and fine-grained quartz arenite.

TBu - upper part consisting of light grey weathering, bluff forming limestone.

CHARLIE LAKE FORMATION - Recessive, orange-brown to yellow weathering, calcareous or dolomitic siltstone, dolostone, and silty dolostone or limestone; minor shale, quartz arenite, and intraformational breccia. LIARD FORMATION - White, buff, and light brown weathering, thick-bedded, fine- to very fine-grained quartz arenite, interbedded with calcareous quartz arenite, siltstone and limestone; sandstone massive to cross-bedded

TBI - lower part consisting of thin-bedded, platy, dark grey limestone.

TLsh - locally mappable black, fossiliferous shale reflecting westward facies transition to Toad-Grayling lithologies.

TOAD - GRAYLING FORMATION (Doig and Montney Fms. subsurface) - Grey to brownish grey weathering, calcareous shale interbedded with brown weathering, silty, fine-grained limestone; shale is more calcareous in upper part and more

PERMIAN

STODDART GROUP

PF FANTASQUE FORMATION - Dark grey to white weathering, dark grey, well bedded, spiculitic chert; rhythmically interbedded with minor shale and siliceous siltstone; basal phosphatic breccia or sandstone; 5-20m thick. **CARBONIFEROUS**

STODDART GROUP: (Golata, Kiskatenaw, and Tiaylor Flat Formations) - Includes Golata Formation, Kiskatenaw Formation, and Taylor Flat Formation; locally Golata, Taylor Flat or entire Group is absent.

GOLATA FORMATION - Dark grey to black shale and silty mudstone; subordinate rusty weathering, fossiliferous dolostone and limestone that decrease upsection; locally truncated below Kiskatinaw Formation. **RUNDLE GROUP**

PROPHET MEMBERS B AND C - Undivided members B and C.

PROPHET MEMBER C (FLETT FORMATION) - Grey, cherty, skeletal limestone, rhythmically interbedded with maristone and shale; locally abundant chert as bands, nodules, and selective silicification; proportion of chert increases up section and towards the northwest; medium-bedded, beds massive. Becomes difficult to differentiate from underlying member in the

PROPHET MEMBER B - Resistant, white to dark girey, bedded and nodular calcareous chert; subordinate to minor skeletal limestone, spiculite, and dark grey shale; proportiion of limestone increases up section; medium- to thick-bedded; bed contacts irregular to ighly undulatory.

PROPHET MEMBER A - Dark grey to black, spiculitic chert interbedded with subordinate dark grey shale, mudstone, and cherty skeletal limestone; proportion of shale decreases; up section; thin-bedded and planar laminated; bedding commonly rhythmic. CARBONIFEROUS AND UPPER DEVONIAN

BESA RIVER FORMATION - Medium grey to black shale and mudstone; variably calcareous, buff weathering where calcareous; rhythmically interbedded with minor buff weathering argillaceous dolostone, limestone, spiculite, and black bedded chert that increase up section; scattered siderite nodules and pyrite lenses. In western exposures, basal 50 m of black siliceous shale is overlain by 10-20 m of black, bedded chert resembling Member A of the Prophet Formation.

DUNEDIN FORMATION - Medium grey to bluish-grey weathering, dark grey, fossiliferous lime mudstones and skeletal grainstones.

STONE FORMATION - Very light grey weathering, thick-bedded, finely crystalline dolostone; floating quartz sand grains common; fenestrae, broken mud laminae, and stratiform breccias locally present. SILURIAN AND DEVONIAN

MUNCHO-McCONNELL FORMATION - Light brown to yellowish-brown weathering, sandy to argillaceous dolostone overlain by medium and dark grey weathering, very thick-bedded dolostone; local thin beds of quartz arenite in upper part; rare thin brown

NONDA FORMATION - Very dark grey to black, very thick-bedded, siliceous dolostone with chert nodules and subordinate quartz arenite; high diversity and abundance of corals, stromatoporoid bioherms locally present. **UPPER ORDOVICIAN**

BEAVERFOOT FORMATION - Grey dolostone and limestone; dolomitization discordant to bedding; chert nodules and silicified fossil debris locally present; sandstone layers locally abundant, particularly near top of unit, trough crossbedded.

BEAVERFOOT FORMATION BASAL QUARTZITE - White quartz arenite, medium grained, 40 m thick; trough crossbedding prominent in upper part; bioturbated. Most prominent in northern part of map area. MIDDLE ORDOVICIAN

SKOKI FORMATION - Light to medium brown and grey, thick-bedded dolostone with variable quartz sand content; oncolites, planispiral gastropods and solitary corals are characteristic, locally bioturbated; calcareous sandstone, commonly crossbedded. CAMBRIAN AND LOWER ORDOVICIAN

KECHIKA GROUP - Orange to brown weathering, thin-bedded silty limestone with mud laminae, and shale or slate; abundant bioturbation; chert nodules locally present.

MAP SYMBOLS

Outcrop stations Geological boundary (defined, approximate, assumed) Bedding form lines LOCAL STRUCTURES PLANAR STRUCTURES Bedding, tops known (inclined, overturned, vertical, horizontal) Bedding, observed from the air Cleavage Normal fault Thrust surface Fracture Joint (inclined) Mylonitic foliation

REGIONAL STRUCTURES

Thrust fault (teeth indicate dip direction; defined, appiroximate, assumed) Normal fault (symbol indicates dip direction; defined, assumed)

Anticline (defined, approximate, assumed) Syncline (defined, approximate, assumed) Overturned anticline (defined, approximate, assumed) Overturned syncline (defined, approximate, assumed) Box anticline (approximate)

OTHERS Fossil loc (NOTE: M

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GSC OF 3767

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX

TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

cality Map symbols may be slightly displaced for clarity)		E,			
		Easting,	Northing		
	🕒 - C-304049,	Mid Triassic (Late Ladinian)	464410	6350486	
	© ₂ - C-304051,	Mid to Late Triassic (Late Ladinian or Early Carnian)	464380	6352000	
	© ₃ - C-304053,	Late Triassic (Carnian)	464570	6352216	
	①4 - C-304054,	Late Triassic (Late Carnian)	469130	6371296	
	⑤ ₅ - C-304055,	Late Triassic (Late Carnian)	468640	6371376	
	© ₆ - C-304062,	Late Triassic (Late Carnian)	466790	6371686	
	©7- C-417549,	Silurian (probably Early)	445941	6367475	
	© ₈ - C-417558,	not diagnostic	445530	6351345	

Geology by L.S. Lane, based on fieldwork conducted during 1998,1999, 2000, with contributions from:

T. Brekko, G. Carrelli, M. Cecile, A. Khudoley, J. McDonald, K. McDonald, P. Mortensen, and M. Pelletier; and able assistance from: R. Aquilini, C. Bass, S. Carter, C. Cecile, C. Kruchkowski, S. Sharpe, J. Tremblay, D. Utting

THIS MAP IS A PRODUCT OF THE CENTRAL FORELAND NATMAP PROJECT

Geological cartography by S.J. Hinds

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

Base map at the same scale published by Surveys and Mapping Branch in 1971

Copies of the topographical edition of this map area may be obtained from the Canada Map Office, Department of Natural Resources, Ottawa, Ontario

> Recommended citation: Lane L.S. 2001. Geology of the Redfern Lake map area (94G/5), Geological Survey of Canada Open File 4172, scale 1:50 000, 1 sheet.

Geological Survey of Canada standards.

Although every effort has been made to ensure accuracy, this Open File Report has not been edited for conformity with