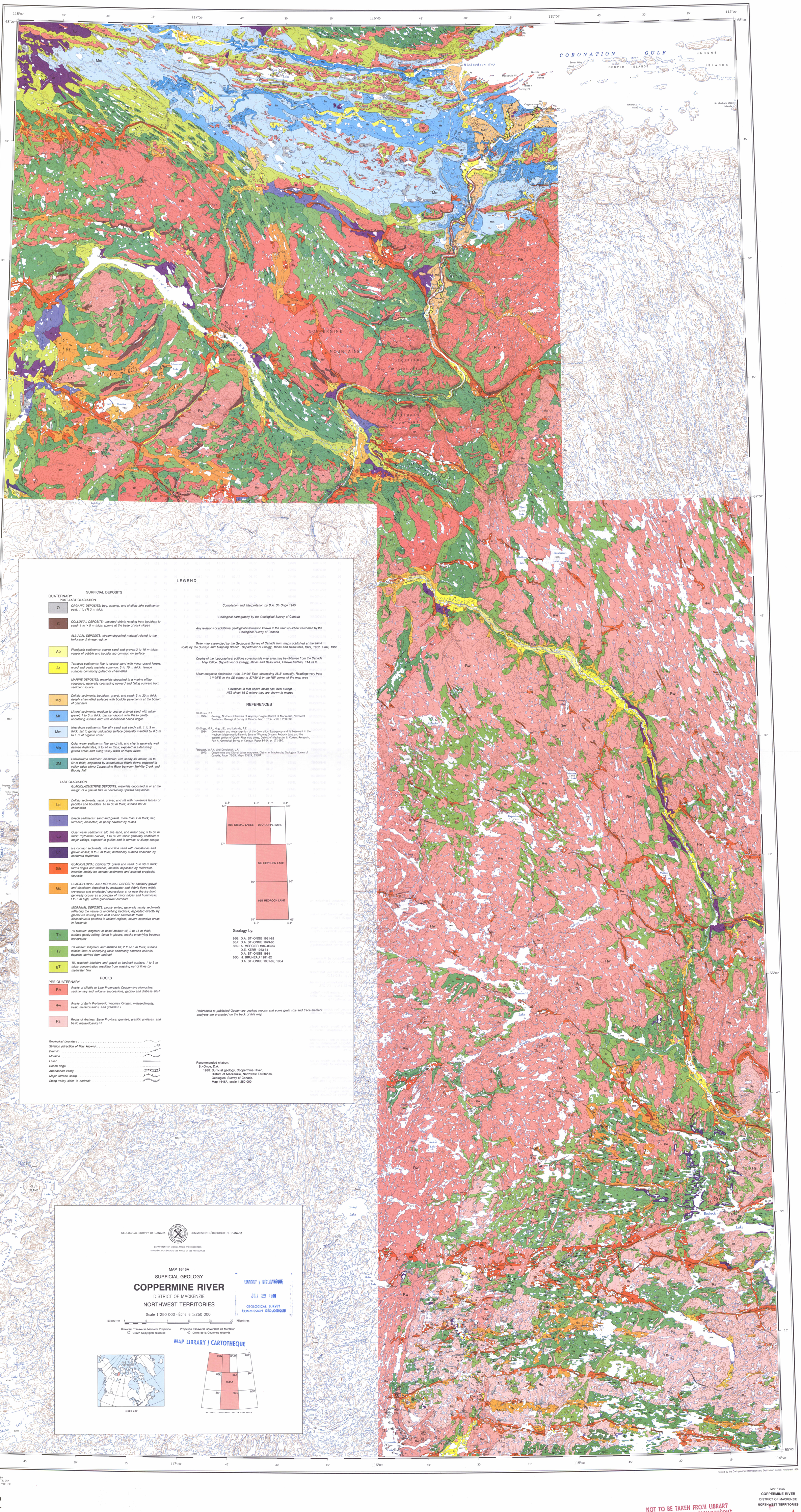

LEGEND

SURFICIAL DEPOSITS

QUATERNARY

POST-LAST GLACIATION

O — *ORGANIC DEPOSITS: bog, swamp, and shallow lake sediments; peat, 1 to (?) 3 m thick*

C — *COLLUVIAL DEPOSITS: unsorted debris ranging from boulders to sand; 1 to > 5 m thick; aprons at the base of rock slopes*

ALLUVIAL DEPOSITS: stream-deposited material related to the Holocene drainage regime

Ap — *Floodplain sediments: coarse sand and gravel; 3 to 10 m thick; veneer of pebble and boulder lag common on surface*

At — *Terraced sediments: fine to coarse sand with minor gravel lenses; wood and peaty material common; 3 to 10 m thick; terrace surfaces commonly gullied or channelled*

MARINE DEPOSITS: materials deposited in a marine offlap sequence, generally coarsening upward and fining outward from sediment source

Md — *Deltaic sediments: boulders, gravel, and sand; 5 to 20 m thick; deeply channelled surfaces with boulder pavements at the bottom of channels*

Mr — *Littoral sediments: medium to coarse grained sand with minor gravel; 1 to 5 m thick; blanket deposit with flat to gently undulating surface and with occasional beach ridges*

Mm — *Nearshore sediments: fine silty sand and sandy silt, 1 to 3 m thick; flat to gently undulating surface generally mantled by 0.5 m to 1 m of organic cover*

Mp — *Quiet water sediments: fine sand, silt, and clay in generally well defined rhythmites, 5 to 40 m thick; exposed in extensively gullied areas and along valley walls of major rivers*

dM — *Olistostrome sediment: diamicton with sandy silt matrix, 30 to 50 m thick, emplaced by subaqueous debris flows; exposed in valley sides along Coppermine River between Melville Creek and Bloody Fall*

LAST GLACIATION

GLACIOLACUSTRINE DEPOSITS: materials deposited in or at the margin of a glacial lake in coarsening upward sequences

Ld — *Deltaic sediments: sand, gravel, and silt with numerous lenses of pebbles and boulders, 10 to 30 m thick; surface flat or channelled*

Lr — *Beach sediments: sand and gravel, more than 2 m thick; flat, terraced, dissected, or partly covered by dunes*

Lp — *Quiet water sediments: silt, fine sand, and minor clay; 5 to 30 m thick; rhythmites (varves) 1 to 30 cm thick; generally confined to major valleys, exposed in gullies and in terrace or slump scarps*

Lh — *Ice contact sediments: silt and fine sand with dropstones and gravel lenses; 3 to 8 m thick; hummocky surface underlain by contorted rhythmites*

Gh — *GLACIOFLUVIAL DEPOSITS: gravel and sand, 5 to 50 m thick; forms ridges and terraces; material deposited by meltwater, includes mainly ice contact sediments and isolated proglacial deposits*

Gx — *GLACIOFLUVIAL AND MORAINAL DEPOSITS: bouldery gravel and diamicton deposited by meltwater and debris flows within crevasses and unoriented depressions at or near the ice front; generally occurs as a complex of minor ridges and hummocks, 1 to 5 m high, within glaciofluvial corridors*

MORAINAL DEPOSITS: poorly sorted, generally sandy sediments reflecting the nature of underlying bedrock; deposited directly by glacier ice flowing from east and/or southeast; forms discontinuous patches in upland regions, covers extensive areas in lowlands

Tb — *Till blanket: lodgment or basal meltout till; 2 to 15 m thick; surface gently rolling, fluted in places; masks underlying bedrock topography*

Tv — *Till veneer: lodgment and ablation till; 2 to >15 m thick; surface mimics form of underlying rock; commonly contains colluvial deposits derived from bedrock*

gT — *Till, washed: boulders and gravel on bedrock surface; 1 to 3 m thick; concentration resulting from washing out of fines by meltwater flow*

ROCKS

PRE-QUATERNARY

Rh — *Rocks of Middle to Late Proterozoic Coppermine Homocline: sedimentary and volcanic successions, gabbro and diabase sills*[3]

Rw — *Rocks of Early Proterozoic Wopmay Orogen: metasediments, basic metavolcanics, and granites*[1,2]

Rs — *Rocks of Archean Slave Province: granites, granitic gneisses, and basic metavolcanics*[1,2]

Geological boundary
Striation (direction of flow known)
Drumlin
Moraine
Esker
Beach ridge
Abandoned valley
Major terrace scarp
Steep valley sides in bedrock

Compilation and interpretation by D.A. St-Onge 1985

Geological cartography by the Geological Survey of Canada

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

Base map assembled by the Geological Survey of Canada from maps published at the same scale by the Surveys and Mapping Branch, Department of Energy, Mines and Resources, 1979, 1962, 1964, 1966

Copies of the topographical editions covering this map area may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa Ontario, K1A 0E9

Mean magnetic declination 1986, 34°39' East, decreasing 36.3' annually. Readings vary from 31°29'E in the SE corner to 37°59' E in the NW corner of the map area

Elevations in feet above mean sea level except NTS sheet 86-O where they are shown in metres

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[2]St-Onge, M.R., King, J.E., and Lalonde, A.E.
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[3]Baragar, W.R.A. and Donaldson, J.A.
1973: Coppermine and Dismal Lakes map-area, District of Mackenzie; Geological Survey of Canada, Paper 71-39, Maps 1337A, 1338A.

Geology by:

86G: D.A. ST-ONGE 1981-82
86J: D.A. ST-ONGE 1979-80
86N: A. MERCIER 1982-83-84
D.E. KERR 1983-84
D.A. ST-ONGE 1984
86O: H. BRUNEAU 1981-82
D.A. ST-ONGE 1981-82, 1984

References to published Quaternary geology reports and some grain size and trace element analyses are presented on the back of this map

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1988: Surficial geology, Coppermine River, District of Mackenzie, Northwest Territories, Geological Survey of Canada, Map 1645A, scale 1:250 000

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MAP 1645A

SURFICIAL GEOLOGY

COPPERMINE RIVER

DISTRICT OF MACKENZIE

NORTHWEST TERRITORIES

Scale 1:250 000 - Échelle 1/250 000

Kilometres 5 0 5 10 15 20 Kilomètres

Universal Transverse Mercator Projection — Projection transverse universelle de Mercator

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MAP 1645A
COPPERMINE RIVER
DISTRICT OF MACKENZIE
NORTHWEST TERRITORIES

1645A

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