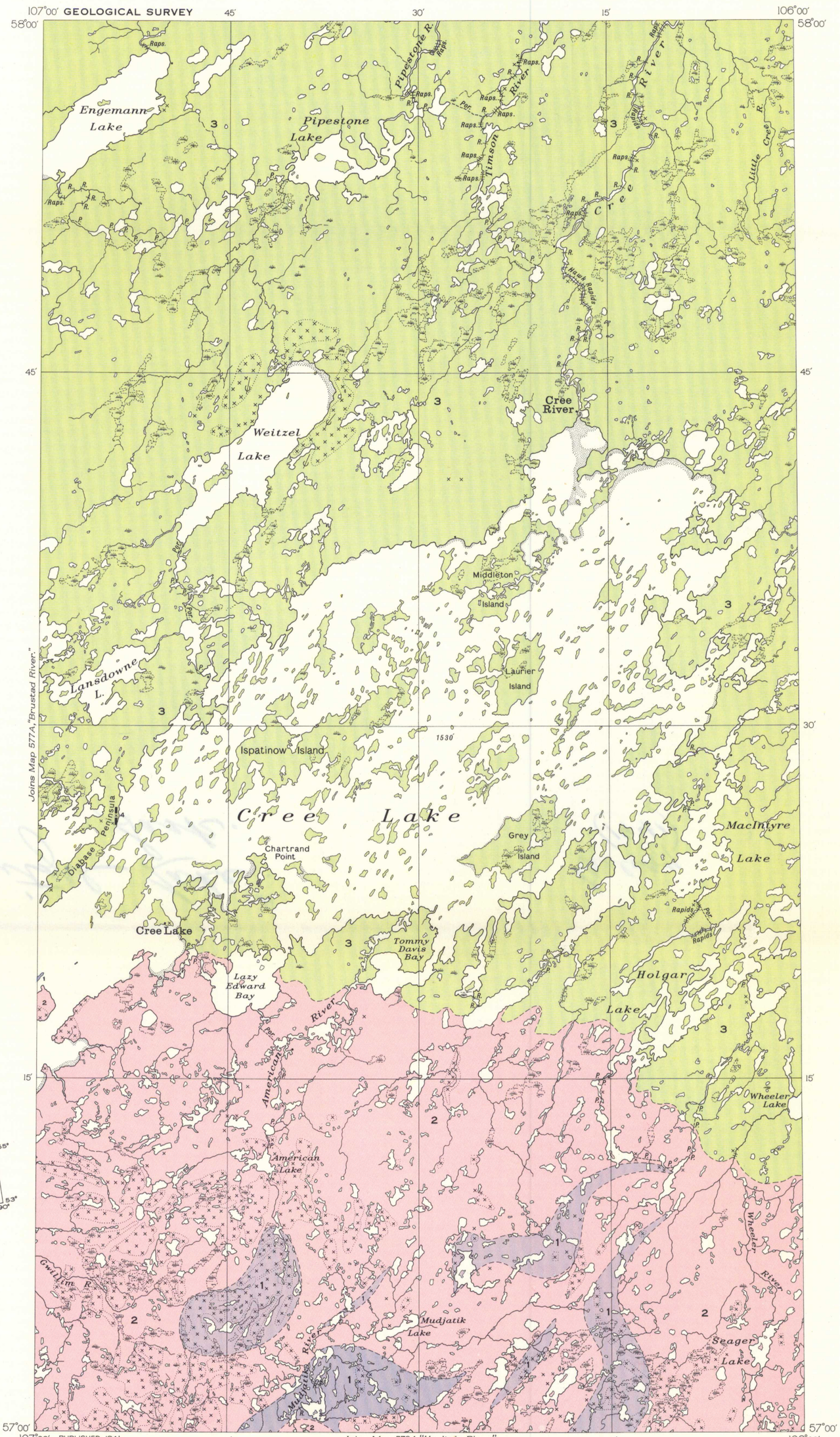
CANADA

DEPARTMENT OF MINES AND RESOURCES

MINES AND GEOLOGY BRANCH

BUREAU OF GEOLOGY AND TOPOGRAPHY

GEOLOGICAL SURVEY



LEGEND

PROTEROZOIC (LATE PRECAMBRIAN)

- 4 — *Diabase*
- 3 — *ATHABASKA FORMATION: sandstone*

ARCHEAN (EARLY PRECAMBRIAN)

- 2 — *Mainly granite and granite-gneiss*
- 1 — *Biotite and biotite-garnet gneiss and schist; interbedded hornblende and chlorite schist; minor intrusions of pegmatite, granite, diorite, and gabbro*

Area of outcrop and small outcrop, in part examined, and in part sketched from aerial photographs

Geological boundary

Glacial striæ

Building

Portage

Stream (position approximate)

Rapid

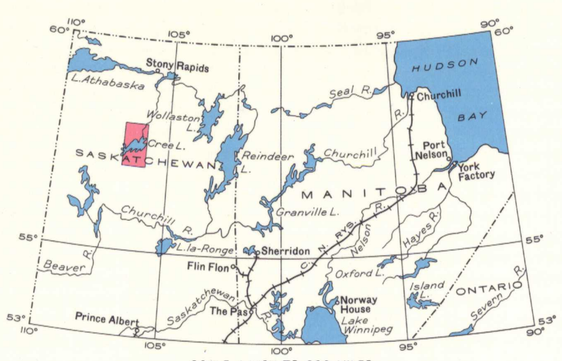
Marsh

Sand bar

Height in feet above Mean sea-level ..... 1530′

Geology by J.C. Sproule, 1937.

Base-map prepared by the Topographical Survey, 1938, from Federal Government map since published in 1939. Cartography by the Drafting and Reproducing Division, 1940.



SCALE, 1 INCH TO 200 MILES

DESCRIPTIVE NOTES

The area may be entered by aeroplane or by a canoe route from the railway termini at Big River and Meadow Lake. This route leads down Beaver river to Ile a la Crosse lake and Churchill river and from there follows up Mudjatik and Gwillim rivers and over the height of land to Cree lake.

The northern part of the area, underlain by flat-lying, Athabaska sandstone, has a gently undulating surface broken only by groups of drumlins and by esker ridges. All drumlins have a southwesterly elongation parallel to the direction of ice movement. Individually they may be as much as 250 feet high and 1.5 miles long. The eskers also trend southwest and are up to 150 feet high. Between the eskers and drumlins the drift mantle is thin. Glacial material is in all cases chiefly of sand and sandstone. South of the Athabaska sandstone the area is marked by many low rocky hills, depressions between which are partly filled by sandy glacial debris. The maximum relief for the entire area is about 350 feet.

The vegetation reflects the predominantly sandy character of the soil in that much of the area is sandy parkland covered with Banksian pine. Spruce occurs mainly on low, wet ground, or on rocky ridges in the southern part of the area.

The oldest rocks exposed (1) are mainly biotite and biotite-garnet gneisses and schists, and quartzites but include some interbedded volcanic rocks, which, in part, are altered to hornblende and chlorite schist. These rocks are, for the most part, steeply inclined, much altered, and have been extensively granitized by acid intrusives (2). Included with the latter are minor amounts of diorite and pegmatite, and small remnants of older rocks.

The Athabaska sandstones (3), consisting of massive, cross-bedded, and thinly-banded rocks, lie unconformably and nearly horizontally on all the above-mentioned formations. They may be of Palaeozoic age.

Dykes of coarse-grained, uralite diabase (4) intersect the sandstones of the Athabaska formation.

Little prospecting has been done in the area and no ore deposits have yet been discovered.

PUBLISHED, 1941.

MAP 576A

WEITZEL LAKE

NORTHERN SASKATCHEWAN

Scale, 1/253,440 or 1 Inch to 4 Miles

Miles 4 0 4 8 12

Approximate magnetic declination, 23° to 26° East.