

7 Sand and silt; lake; Pleistocene and Recent

6 Gravel and sand; alluvial and deltaic; Pleistocene

5 Till; modern

4 Gravel and sand; inter-till

3 Till; old; Labura or Maunsell

2 Gravel and sand; pre-glacial

1 Bedrock

Section along line A-B  
Horizontal scale: 1 inch to 1 mile  
Vertical scale: 1 inch to 200 feet

**QUATERNARY RECENT**

15 Alluvium or eroded area: 15a, alluvium, fine sand, silt, and clay; 15b, alluvium, coarse gravel and sand; 15c, eroded area, till, gravel, sand, silt, clay, slump; does not include exposed bedrock

14 Wind deposits: sand; includes areas of blow-outs

**PLEISTOCENE AND RECENT**

13 Lake deposits, fine silt and clay, locally varved

12 Lake deposits, coarse: 12a, sand and silt; 12b, gravel and sand

**PLEISTOCENE**

11 Alluvium, coarse gravel and sand; 11a, delta deposits; 11b, channel deposits

10 Alluvium, fine sand, silt, clay; includes some slump, small amounts of gravel and minor bedrock exposures

9 Outwash: gravel, sand, silt, clay, till; may include some lake deposits; 9a, pitted plain, with correspondence of summit levels; 9b, pitted plain, no correspondence of summit levels; 9c, chiefly gravel; 9d, hummocky; may include some kames

8 Stagnant ice deposits: till, clay, silt, sand, and gravel; 8a, moraine plateau, with local rim ridges of till; 8b, ice-block depressions, with rim ridges of gravel, sand, silt, till; 8c, kames

7 Hummocky moraine: till, knob and kettle topography strongly developed; includes dead-ice and recessional moraines; 7a, locally modified by lakewater

6 Hummocky moraine: till, knob and kettle topography moderately developed; includes dead-ice and recessional moraines; 6a, locally modified by lakewater

5 Drumlin: mostly till

4 Ground moraine: till, strongly-rolling plain; 4a, locally modified by lakewater

3 Ground moraine: till, undulating to gently-rolling plain; 3a, locally modified by lakewater; 3b, locally modified by stream erosion or deposition

**TERTIARY AND EARLY QUATERNARY**

2 Alluvium: gravel and sand, pre-glacial river deposits, includes "Saskatchewan gravel and sand"

**CRETACEOUS AND TERTIARY**

1 Bedrock: sandstone, shale, coal; locally covered by thin slump, alluvium or drift; 1a, exposed by post-glacial erosion; 1b, area of little or no Pleistocene and Recent deposition

**MEZOZOIC AND CENOZOIC**

Drumlin or allied ridge: till, clay, sand, silt, gravel; (actual length represented on map)

Ice-flow markings; individual or group of parallel flutings, furrows, gouges, and low drumlinoid forms; (actual length represented on map)

Esker ridge: till, gravel, sand, silt and clay; (direction of flow defined, not defined)

Ridge, mostly morainal, but including rim ridges of ice-block depressions and moraine plateaus, also ridges of undetermined origin; may include some eskers: till, minor gravel, sand, and silt

Crest lines of large sand dunes; (in areas of wind deposits only)

Wind gap; valley cut through ridge, commonly a bedrock ridge; by glacial stream that elsewhere flowed on ice

Buried valley; (edge defined, approximate, assumed)

Geology by A. Mac S. Stalker, 1927, 1928 and 1951

To accompany G. S. C. Memoir 306 by A. Mac S. Stalker

Cartography by the Geological Survey of Canada, 1959

Main road with route no. ....

Other roads .....

Trail .....

Cart track .....

Power transmission line .....

Church .....

School .....

Post Office .....

Township boundary surveyed .....

Indian Reserve boundary .....

Intermittent lake or stream .....

Marsh .....

Sand or gravel .....

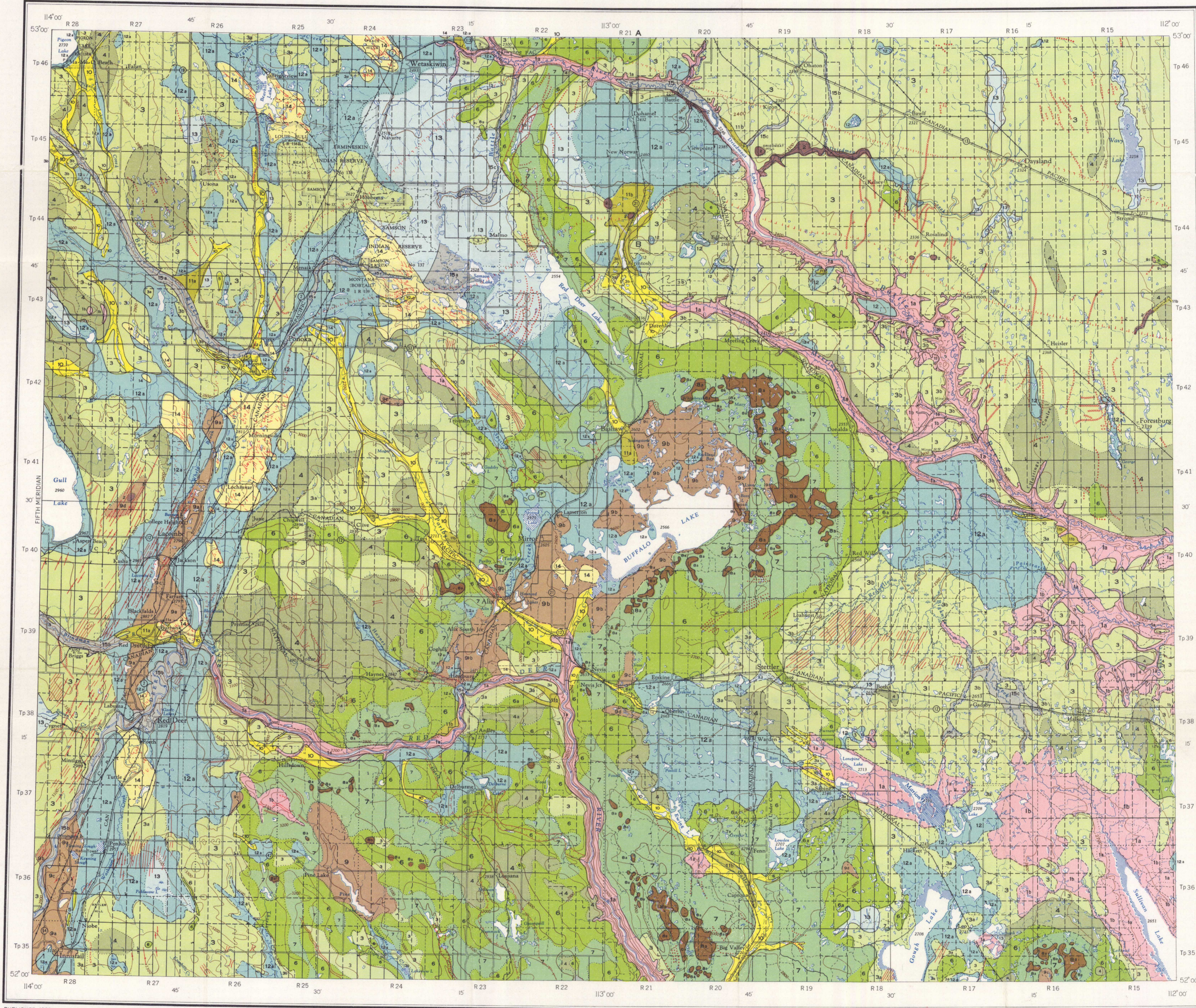
Contours (interval 100 feet) .....

Height in feet above mean sea-level .....

Base-map compiled and drawn by the Surveys and Mapping Branch

Air photographs covering this map-area may be obtained through the National Air Photographic Library, Topographical Survey, Ottawa, Ontario.

Approximate magnetic declination, 22°34' East



PUBLISHED, 1960  
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DIRECTOR, GEOLOGICAL SURVEY OF CANADA, OTTAWA

MAP 1031A  
SURFICIAL GEOLOGY  
**RED DEER-STETTLE**  
WEST OF FOURTH MERIDIAN  
ALBERTA

Scale: One Inch to Four Miles =  $\frac{1}{253,440}$   
Miles

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