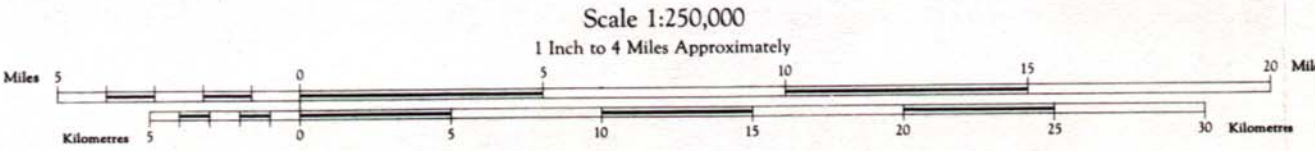


Base maps provided by the Surveys and Mapping Branch, Department of Energy, Mines and Resources, Ottawa.



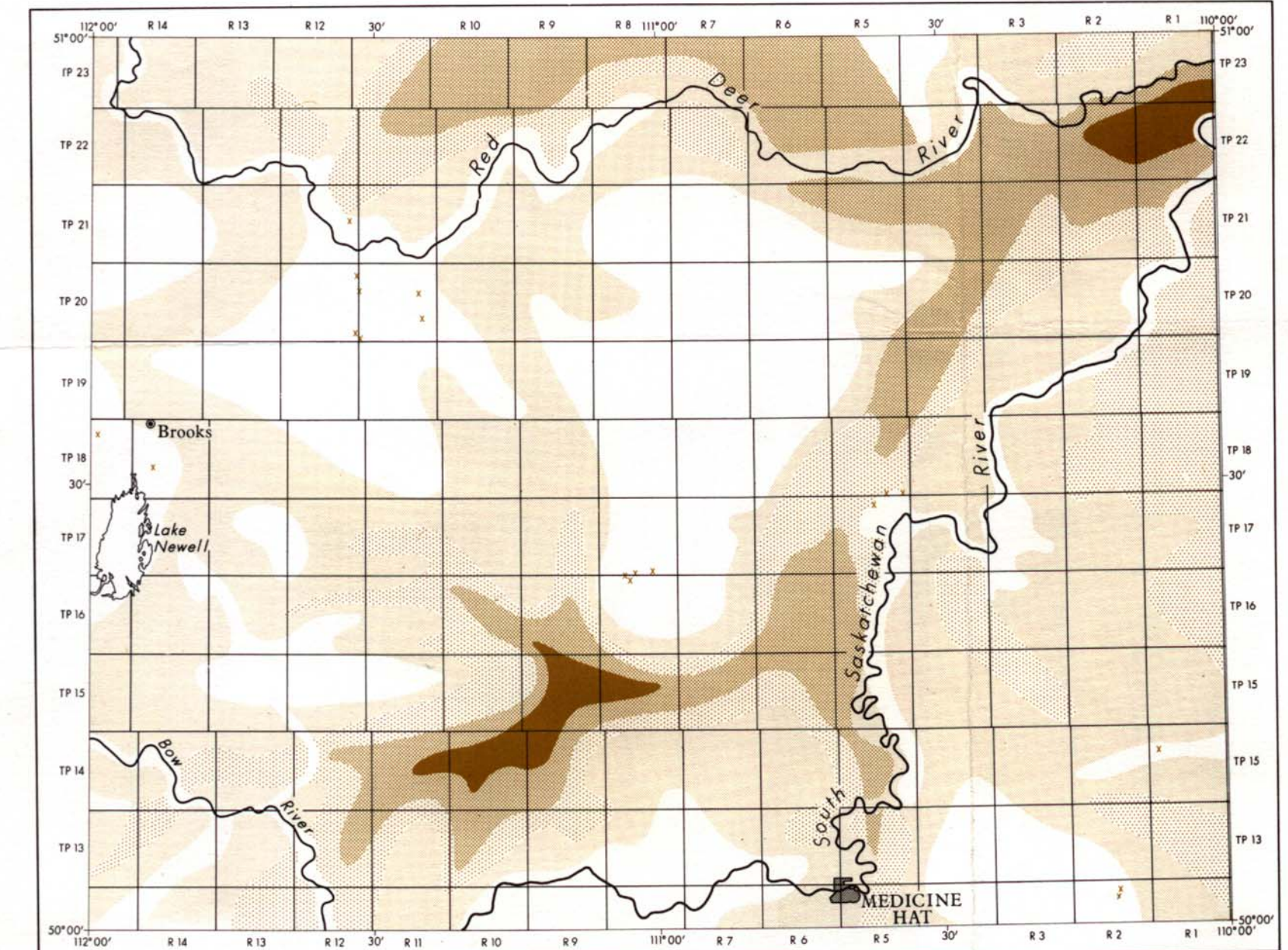
**BEDROCK TOPOGRAPHY
OF THE MEDICINE HAT MAP-AREA,
NTS 72L, ALBERTA**
WEST OF FOURTH MERIDIAN

LEGEND

- Highway
- Road
- Trail
- Railway
- Section line
- Township line

LEGEND

- Sample locations
- Bedrock contours:
 - definite
 - approximate
- Surface contours:
 - elevation
 - depression
- All elevations above mean sea level
- Contour interval 100 feet



LEGEND

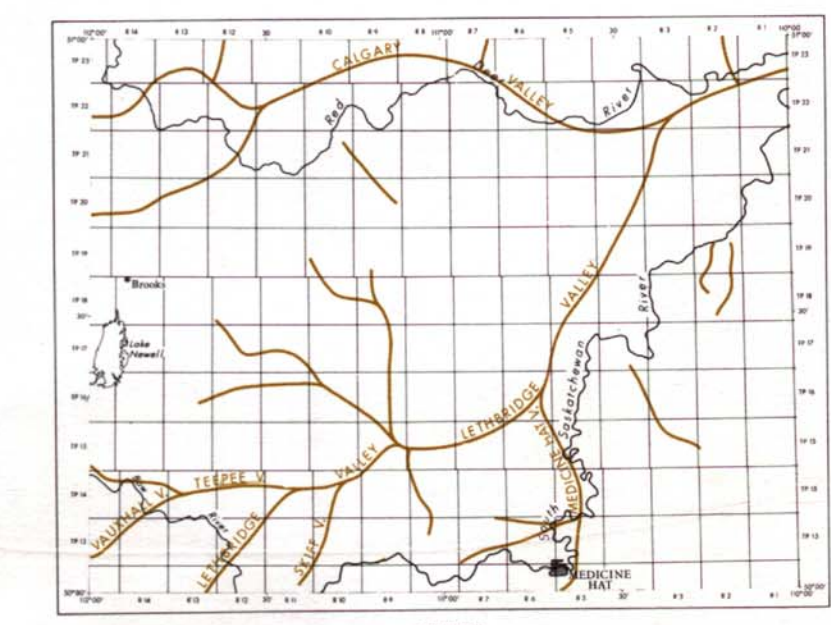
Thickness of drift in feet:

- 0 to 50
- 51 to 150
- 151 to 250
- 251 to 350
- 351 to 450

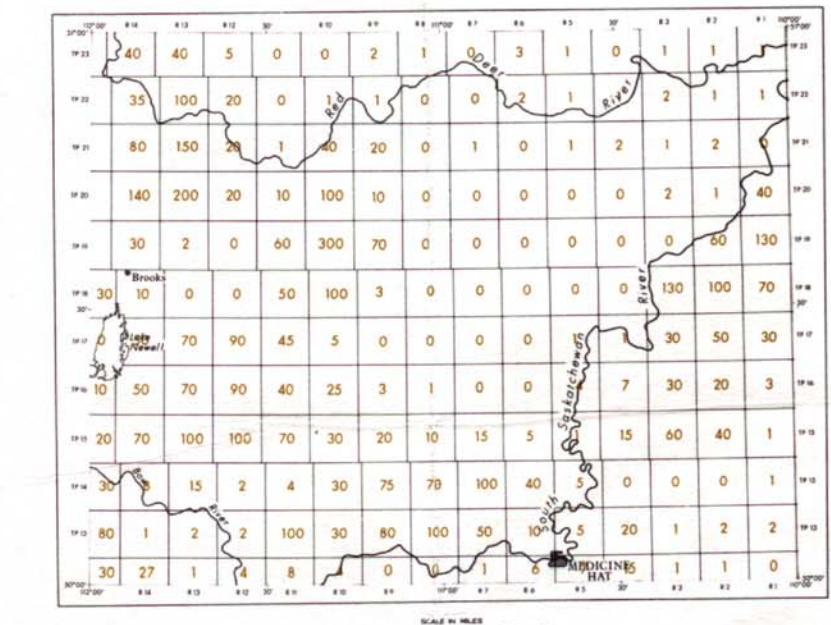
bedrock outcrop

DRIFT THICKNESS

SCALE IN MILES



THALWEGS
For bedrock valleys interpreted to be preglacial



DATA DENSITY
Number of logs used in each township or range



RESEARCH COUNCIL OF ALBERTA

Bedrock topography by V. A. Carlson, 1970
Cartographic editing by J. E. Mearns
Bedrock topography map drawn by E. J. Clouston, 1970

NOTES

Logs from seismic shot holes provided most of the information used in compiling the bedrock topography map and side maps. This information was supplemented by logs from water-well drilling companies and by test-hole logs from other sources. These were very important because of the quantity of seismic shot-hole data in a number of areas, as can be seen from the data density map. Also included in the data used in map construction were bedrock outcrop locations obtained from Irish (1968). These bedrock outcrops shown on the drift thickness map were selected to show general outcrop distribution. Bedrock outcrops along the Bow, Red Deer, and parts of the South Saskatchewan River valleys are common and have been omitted from the drift thickness map.

Previous Work

The general pattern of major preglacial drainage in the southern part of the province has been outlined by Saller (1961) and Farrow (1962). The buried bedrock valley leading north from Medicine Hat was discussed in more detail by Mayboom (1962).

Acknowledgments

The shot-hole logs used in compiling this map were supplied by the companies listed below and it is a pleasure to acknowledge their cooperation: Alberta Exploration Company, Adams Balfour Ltd., Canadian Pacific Oil and Gas Limited, Chevron Standard Limited, Gulf Oil Canada Limited, Home Oil Company Limited, Hudson Bay Oil and Gas Company Limited, Imperial Oil Enterprises Ltd., Mobil Oil Canada Ltd., Pan American Petroleum Corporation, Shell Canada Limited, Texaco Exploration Company.

Also, test-hole logs were made available to us by the Water Resources Division, Department of Agriculture and Livestock. These logs and those submitted by water-well drilling contractors proved most useful in the compilation of this map.

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Farrow, R. N. (1962). Bedrock channels in southern Alberta: In Early contributions to the ground-water hydrology of Alberta. Res. Coun. Alberta Bull. 12, p. 62-75.

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Mayboom, P. (1962). Induced infiltration, Medicine Hat, Alberta: In Early contributions to the ground-water hydrology of Alberta. Res. Coun. Alberta Bull. 12, p. 88-97.

Saller, A. M. (1961). Buried valleys in central and southern Alberta. Geol. Surv. Can. Paper 60-25, 13 pages.



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