







**THALWEGS** For bedrock valleys interpreted to be preglacial

SCALE N MLES

## RESEARCH COUNCIL OF ALBERTA Bedrock topography by V. A. Carlson, 1969

Compilation Logs from seismic shot holes provided most of the information used in compiling the bedrock topography map and the side maps. This information was supplemented by logs from water-well drilling contractors and by testhole logs from other sources. These were very important because of the paucity of seismic shothole 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 Also included in the data used in map construction were bedrock outcrop locations obtained from Irish (1967) and from unpublished Research Council of Alberta information. Those bedrock outcrops shown on the drift thickness map were selected to show general outcrop distribution.

An extensive area of glacially contorted bedrock is known to exist in the northeast portion of the map sheet. In general, Tp. 31, Rs. 3 and 4, W.4 and Tps. 32 and 33, Rs. 4 and 5, W.4 are underlain by this material. The upper surface of the contorted material is shown on the bedrock topography map as it was not possible to detect the lower limit from the lithologic logs used.

### Previous Work The general pattern of major preglacial drainage in the southern part of the province has been outlined by Stalker (1961) and Farvolden (1963). A preliminary bedrock topography map of this area

was constructed by Kunkle (1962).

# The shothole logs used in compiling this map were supplied by the companies listed below and it is a pleasure to acknowledge their co-operation: Atlantic Richfield Company, Canada-Cities Service Petroleum Corporation, Canadian Export Gas and Oil Ltd., Chevron Standard Limited, Gulf Oil Canada

Limited, Home Oil Company Limited, Hudson's Bay Oil and Gas Company Limited, Imperial Oil Enterprises Ltd., Mobil Oil Canada Ltd., Shell Canada Limited, Texaco Exploration Company. Also, testhole logs were made available to us by the Water Resources Division, Department of Agriculture. These logs and those submitted by water-well drilling contractors proved most useful in the compilation of this map.

Farvolden, R. N. (1963): Bedrock channels of southern Alberta; in Early contributions to the groundwater hydrology of Alberta; Res. Coun. Alberta, Bull. 12, p. 63-75. Irish, E. J. W. (1967): Geology Oyen; Geol. Surv. Can., Map 21-1966.

Kunkle, G. R. (1962): Reconnaissance groundwater survey of the Oyen map-area, Alberta; Res. Coun.

Alberta, Prelim. Rept. 62-3, 23 pages.

Stalker, A. M. (1961): Buried valleys in central and southern Alberta; Geol. Surv. Can., Paper 60-32, 13 pages.

