

GRØNLANDS GEOLOGISKE UNDERSØGELSE RAPPORT Nr. 58

Preface

The fifth season of the five year mapping programme in the Scoresby Sund region was carried out during July and August. A tent base camp was established at the head of Tonfjord at the entrance to Hjørnedal (fig. 1). The base served as an operation centre for three helicopters and one motor cutter and through the season a regular connection between the base and Mesters Vig airport was maintained with a helicopter. The mapping area was divided into two parts, the eastern part being mapped in the first half of the season and the western part in the second half. The mapping was carried out by one party and another party undertook geological studies of some of the major glaciers in the western part of the region. Approximately 6000 km² were mapped in the Caledonian crystalline complex and about 3500 km² of Tertiary basalts were investigated. After five seasons' mapping the field work between 59° 00' and 55° 00' N was completed and the survey's Scoresby Sund project concluded. GEOLOGISK UNDERSØGELSE AF VESTGRØNLANDS YRSKORBY SUND

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Preface

The fifth season of the five year mapping programme in the Scoresby Sund region was carried out during July and August. A tent base-camp was established at the head of Fønfjord at the entrance to Hjørnedal (fig. 1). The base served as an operation centre for three helicopters and one motor cutter and throughout the season a regular connection between the base and Mesters Vig airport was maintained with a small fixed-wing aircraft. The expedition numbered 44 persons, comprising 14 two-man geological parties and supporting personnel. Ten parties mapped in the crystalline complex around the fjords Vestfjord, Fønfjord and Gåsefjord. One party mapped the western part of the Tertiary basalt area and one party made palaeomagnetic profiles in the basalts. Geochronological investigations in the crystalline areas were carried out by one party and another party undertook glaciological studies of some of the major glaciers in the western part of the region.

Approximately 6000 km² were mapped in the Caledonian crystalline complex and about 3500 km² of Tertiary basalts were investigated. After five seasons' mapping the field work between 70°00' and 72°00' N is completed and the survey's Scoresby Sund project concluded.



GEOLOGICAL MAP OF THE SOUTH-WEST PART OF

WESTERN GNEISS AND SCHIST ZONE
ALLOCHTHONOUS UNITS

- | | | |
|--|---------------------------------|-----------------------------------|
| | Kyanite-garnet-mica schist | } Krummedal supracrustal sequence |
| | Amphibolite and quartzite | |
| | Augen gneiss | |
| | Banded to homogeneous gneiss | |
| | Chloritic and quartzitic schist | |

AUTOCHTHONOUS TO PARAUTOCHTHONOUS UNITS

- | | |
|---|---|
| | Marble and chlorite schist |
| T | Exposure of tillite or psephite |
| | Grey, streaky gneiss with discordant amphibolites |

EASTERN ZONE OF MIGMATITES AND

- | | | |
|--|--|------------------|
| | Quartz syenite | } Post-kinematic |
| | Granite <i>sensu lato</i> | |
| | Granodiorite <i>sensu lato</i> | |
| | Granite <i>sensu lato</i> , sometimes with | |
| | Augen granite | |
| | Migmatite granite | |
| | Undifferentiated migmatite | |
| | Calc silicate and amphibolite horizons | |
| | Banded gneiss | |
| | Migmatite with amphibolitic inclusions | |



THE SCORESBY SUND REGION, EAST GREENLAND

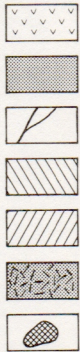
PLUTONIC ROCKS

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schlieren

ons

ions



- Quaternary
- Tertiary basalt
- Dolerite dykes
- Mesozoic sediments
- Upper Palaeozoic sediments
- Gabbro
- Ultramafic bodies

2480 Altitude in metres



Fault



Thrust



Lithological boundary, mapped



Lithological boundary, inferred

29°

28°30'

ANNEXE

BASE TOPOGRAPHIQUE

0 2 4 6 8 10 km

