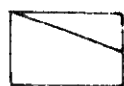


Geological Map Nyvoll District Komagfjord Tectonic Window,
Scale 1:50,000 Finnmark, N. Norway.

Legend



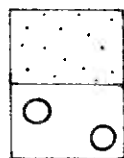
Kalak Nappe Complex



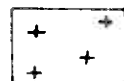
Skillefjord Formation (Eocambrian)



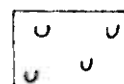
Batdalselva Formation



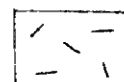
Markfjell Formation



Gabbroic Intrusives



Ultramafic Intrusives



Kvitefjell Quartz Diorite.

CONFIDENTIAL

Report on the geology of the Nyvoll District, in the southwestern part of the Komagfjord Tectonic Window, Finnmark, N. Norway.

Tim Pharaoh, Geology Dept., Dundee University.

Introduction

In this area of about 30 square kms., representatives of all the major lithological groupings identified within the Komagfjord Window are present (see the authors previous reports). A basement sequence of Precambrian age is intruded by synorogenic plutonic rocks of gabbroic, ultrabasic and quartz dioritic composition. Unconformably lying across all these rocks are Eocambrian sediments at very low grade of metamorphism. During the Caledonian orogeny, the Kalak Nappe Complex was thrust across these autochthonous rocks.

1. Basement supracrustal sequence

The basement lithologies have been described in detail in earlier reports, but last season's fieldwork has enabled more detailed resolution of the stratigraphy of the Holmvann Formation of Reitan (1963) since the author's last report. The lowest level of the stratigraphy is occupied by the Markfjell Formation, a polymict conglomerate containing boulders of greenstone, gneiss and granite, the latter, almost certainly, being derived from an underlying gneissose basement. This is the 'greenstone conglomerate' described by Høltedahl (1918) in the Korsfjord region. The Markfjell Formation is overlain by the Batdalselv Formation, a sequence of metasandstones and tuffitic sediments of leptitic aspect.

2. Karelian deformation

The sequence of sediments described above was first deformed during a polyphase Precambrian orogeny which is presumed

to have coincided with the Karelian deformation which has affected other areas of Precambrian terrain in N. Norway. The first phase of deformation produced the regional penetrative S_1^k schistosity which trends WSW - ENE in the Nyvoll district. Considerable deformation of the conglomerates occurred during this episode. Subsequent deformation phases produced crenulation cleavages and kink-bands which are found throughout the area.

3. Synorogenic intrusives

During the Karelian orogeny, a suite of plutonic rocks including ultrabasics, gabbros and quartz diorite was emplaced into the deforming country rocks. Geochemical and petrographical study is being made of these rocks and will be reported on in the completed thesis.

4. Eocambrian sedimentation

Subsequent to the Karelian orogeny, there followed a long period of time during which the Precambrian rocks were eroded, before the return to sedimentation in Eocambrian times. The Skillefjord Formation (equivalent to the Lomvann Formation in the northern part of the Komagfjord Window) is a thin sequence of sandstones and green siltstones, locally underlain by a tillite, which by analogy with other Varangian tillites of Finnmark, is believed to be Eocambrian in age. The relationships of the basement to the autochthonous Eocambrian sequence are very similar to those described from the Altenes area, south of the Komagfjord Window, by Fareth (1974).

5. Caledonian deformation

The autochthonous rocks were first deformed during the Caledonian orogeny, which also produced faulting in the basement, clearly seen at the southern part of the mapped area. Later in the Caledonian orogeny, the Kalak Nappe Complex (Roberts, 1973) was thrust across the region now occupied by the Komagfjord Window.

6. Mineralisation /

6. Mineralisation

None of the lithologies described above contains sulphide ores in comparable quantity to those found in the greenstones and sandstones in the north of the Komagfjord Window. It seems unlikely to the author that a mineral deposit of any economic significance could be found in this area.

Bibliography

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- Reitan, P., 1963. The geology of the Komagfjord tectonic window of the Raipas suite, Finnmark, Norway. N.G.U. Nr 221.
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Tim Pharaoh

August 1978

Heim.

Bring mich
du kommen

Paulsen

Herr Johann Hum
REPPARFJORD

Jeg ber om din udtalelse når det
gælder 2. ansættelse i Budar Boe's
buss.

Jore Gørrensen
25/9-78

Trondheim 22/9-78.

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v/Tore Sørensen

Her ved retårneres krysset sjekk nr. 24986 som skulle dekke regning av 5/8-78. Banken godtok den ikke uten underskrift. Håper snart å motta den i kvittert stand.

Jeg vil samtidig nevne en liten sak. Kjøregodtgjørelsen på kr. 1 pr. km. ville ifølge Johan Heim senere bli justert oppover til å bli identisk med skyssgodtgjørelsen i statens reiseregulativ.

Eftersom lønningskontoret ikke hadde fått beskjed om at jeg skulle ha lønn de ukene jeg arbeidet, har de kanskje heller ikke kjennskap til denne sak.

Vennligst hilsen
Reidar Bpe.