SCANDINAVIAN CALEDONIDES

MAGNETIC ANOMALY MAP

1985

0 100 200 km

Scale 1:2,000,000

TECTONOSTRATIGRAPHY

9 PERMIAN AND UPPER CARBONIFEROUS

8 LOWER AND MIDDLE DEVONIAN (possible Upper Silurian locally) intermontane basins (Old Red Sandstone facies)

UPPERMOST ALLOCHTHON

7 Beiarn (7Be), Dyrøy (7Dy), Fauske (7Fa), Helgeland (7He), Lyngen (7Ly), Narvik Gp. (7Na), Niingen Gp. (7Ni), Nordmannvik (7No), Rödingsfjället (7Rd), Salangen Gp. (7Sg), Tromsø (7Tr)

UPPER ALLOCHTHON

6 Atofjället (6At), Björkvattnet (6Bj), Gasak (6Ga), Gelvenåkko (6Ge), Gjersvik (6Gj), Gula (6Gu), Joesjö (6Jo), Kåfjord (6Kd), Leipikvattnet (6Lp), Magerøy (6Ma), Meråker (6Me), Otta (6Ot), Rombak Gp. (6Ro), Senja (6Se), Stikke (6St), Storfjället (6Sr), Støren (6Sn), Sunnhordland (6Sh), Vaddas (6Vd), Vasten and Salo (6VS), KÖLI NAPPES undifferentiated

5 Blåhø (5Bl), Surna (5Su), Skjøtingen (5Sk), SEVE NAPPES undifferentiated

MIDDLE ALLOCHTHON

4 Abisko (4Ab), Akkajaure (4Ak), Bergen anorthosite (4Ba), Gargia (4Gr) Gildetun-Navitdalen (4GN), Hardangervidda-Ryfylke (4HR), Laksefjord (4La), Leksdal (4Le), Jotun (4Jn), Kvitvola (4Kv), Kviby (4Ky), Nalganas (4Nl), Offerdal (4Of), Risberget (4Ri), Rondane (4Rn), Skillefjord (4Sf), Stalon (4Sl), Särv (4Sv), Sætra (4Sa), Sørøy-Seiland (4SS), Tännäs Augen Gneiss (4Ts), Valdres (4Va), Veman (4Ve)

LOWER ALLOCHTHON

3 Sedimentary cover (Upper Proterozoic and/or Lower Palaeozoic)

Blaik (3Bk), Gaissa (3Gs), Gargatis (3Gg), Jämtlandian (3Jm), Lower Bergsdalen (3LB), Osen-Røa (3OR), Rautas (3Ra), Synnfjell (3Sy), Vemdalen (3Vm)

3 Precambrian crystalline rocks (Middle Proterozoic and older)

PARAUTOCHTHON

2 Sedimentary cover (Vendian and/or Lower Palaeozoic)

2 Precambrian crystalline rocks (Middle Proterozoic and older)

AUTOCHTHON

1 Sedimentary cover (Vendian and/or Lower Palaeozoic)

1 Precambrian Basement (Middle Proterozoic and older)

1A Barents Sea Terrane (Upper Proterozoic sedimentary rocks. Cambrian strike-slip displacement)

PERMIAN igneous rocks

DEVONIAN sedimentary rocks

MAJOR CALEDONIAN INTRUSIONS (including basal parts of ophiolites)

CALEDONIAN COVER of Upper Proterozoic and/or Lower Palaeozoic sedimentary and/or volcanic rocks

CALEDONIAN COVER undifferentiated (rocks of unknown age)

MIDDLE PROTEROZOIC AND OLDER ROCKS (mainly crystalline)

THRUSTS (separating major tectonostratigraphic units)

OTHER TECTONIC CONTACTS

PRIMARY CONTACTS (sedimentary and igneous)

AEROMAGNETIC ANOMALIES

TOTAL INTENSITY REFERRED TO IGRF-65

The aeromagnetic measurements were made in 1965* by the Dominion Observatory, Ottawa, Canada, in cooperation with the Danish Meteorological Institute, the Finnish Meteorological Institute, the Geographical Survey of Norway and the Swedish Board of Shipping and Navigation. The flight altitude was 3000 m above sea level and the flight lines had an average spacing of 35 km. The total intensity was measured with a proton magnetometer, recordings being made every 3 seconds.

The map shows the residual total field after removal of the geomagnetic standard field (IGRF-65). The anomalies are given in nanoteslas with a contour interval of 100 nT.

The aeromagnetic data were originally compiled by the Geological Survey of Sweden at a scale of 1:2.5 M. They were published in 1983 (Sveriges geologiska undersökning Cb 22) together with information on the data processing procedures.

The tectonostratigraphic base on which the magnetic anomalies are superposed is taken from the IGCP-CO Tectonostratigraphic Map of the Scandinavian Caledonides (Sveriges geologiska undersökning Ba 35).

A preliminary edition of this map was presented at the Uppsala Caledonide Symposium in 1981 at a scale of 1:1 M.

* F. Eleman, K. Borg, U. Öqvist and C. Sucksdorff, 1969, The Aeromagnetic Survey of Denmark, Finland, Norway, Sweden 1965, Swedish Board of Shipping and Naviagation, Stockholm.

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INTERNATIONAL GEOLOGICAL CORRELATION PROGRAMME PROJECT No. 27
THE CALEDONIDE OROGEN (IGCP-CO)

Copies of this map are included in the book "The Caledonide Orogen – Scandinavia and Related Areas" (edited by D.G. Gee and B.A. Sturt and published by J. Wiley and Sons, Chichester, England). The map is also available from the Geological Survey of Sweden, Box 670, S-751 28 Uppsala, Sweden.

Lambert conformal conic projection
standard parallels 68°N and 54°N

Longitude in °E of Greenwich

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