

Legend for the geological map of South, South-West and southern West Greenland

Scale 1 : 100 000

QUATERNARY

ALV		Alluvium
Qundif		Undifferentiated deposits, including moraine older than 4000 BC
Q1		Neoglacial moraine younger than AD 1600
Q5		Talus and alluvial cones
Q6		Alluvial fans and deltas
Q7		Fluvio-glacial deposits and terrace
Q8		Marine deposits and terrace
Q10		Prehistoric moraine
Q11		Moraine younger than AD 1600 on Inland Ice
Q12		Wind-blown sand
Q16		Beach sand
Q20		Ice-dammed lake with periodic drainage
Q21		Maximum extent of ice-dammed lake
RIVER		River
ICE		Ice and perennial snow
ICELAK		Lake on Inland ice

MESOZOIC

C		Carbonatite
ai_fen		Fenitisation associated with carbonatite, gabbro and leucogabbro
an_fen		Fenitisation associated with carbonatite, leucogabbro and anorthosite
gi_fen		Fenitisation associated with carbonatite, granite
gn_fen		Fenitisation associated with carbonatite, orthogneiss
P_fen		Fenitisation associated with carbonatite, pegmatite
deltaM		Dolerite dyke

MESOPROTEROZOIC: Gardar, intrusive rocks

g_G		Granite
eps_G		Alkali granite
sig_G		Syenite
lam_G		Augite syenite and pulaskite
psi_G		Nepheline syenite
mzsg_G		Monzo- to syenogabbro
ome_G		Ultramafic rocks
alf_G		Anorthosite
deG_G		Gabbroic dykes and sills
sigP_G		Paatusoq syenite

MESOPROTEROZOIC: Gardar, intrusive rocks: Ilímaussaq Intrusion

chK_G		Agpaite, kakortokite
chL_G		Agpaite, lujavrite
chN_G		Agpaite, naujaite
chS_G		Agpaite, sodalite foyaite

MESOPROTEROZOIC: Gardar, intrusive rocks: Klokken intrusion

KI_G		Klokken intrusion
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MESOPROTEROZOIC: Gardar, intrusive rocks: South Qôroq Centre

sqi_G		South Qôroq Centre
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MESOPROTEROZOIC: Gardar, intrusive rocks: Igaliko Nepheline Syenite Complex

la1_G		Syenite (M1, I1)
la2_G		Syenite (SQ4, I4, EM, N)

ps1_G		Nepheline syenite (NQ1, SQ1, NM1)
ps2_G		Nepheline syenite (M2, NQ2, SQ2, I2, NM2)
ps3_G		Nepheline syenite (M3, NQ3, SQ3, I3, Ø)
ps4_G		Nepheline syenite (M4, NQ4, T)
ps5_G		Nepheline syenite (M5, NQ5, SQ5, I5)
ps6_G		Nepheline syenite (I6, I7)

MESOPROTEROZOIC: Gardar, intrusive rocks: Grønnedal - Ika Complex

mu_G		Carbonatite
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MESOPROTEROZOIC: Gardar, intrusive rocks: Brown Dykes of Gardar age

BD_G		Brown dykes
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MESOPROTEROZOIC: Gardar, intrusive rocks: Giant Dykes of Gardar age

GD_G		Tugtutôq Giant Dykes (OGD and YGD)
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MESOPROTEROZOIC: Gardar, extrusive rocks: Eriksfjord Formation

bet_G		Basalt
tau_G		Trachyte

MESOPROTEROZOIC: Gardar, sedimentary rocks: Eriksfjord Formation

q_G		Sandstone, quartzite
Cgl_G		Conglomerate

PALAEOPROTEROZOIC: Ketilidian Orogen, syn- and late-tectonic intrusive igneous rocks





gb		Granite, biotite-bearing, commonly porphyritic
gx		Granite, granodiorite and tonalite
gs_K		Granite, sensu stricto
gj		Orthogneiss (Igutsaat fjord area)
gar_K		Gabbro, orthopyroxene-bearing
api_K		Appinitic rocks
aik		Mafic metaintrusive rocks
hbd_K		Hornblendite
per_K		Ultramafic intrusives

PALAEOPROTEROZOIC: Ketilidian Orogen, syn- and late-tectonic intrusive igneous rocks: Rapakivi Suite

r_R		Rapakivi granite
rb_R		Biotite granite

PALAEOPROTEROZOIC: Ketilidian Orogen, syn- and late-tectonic intrusive igneous rocks: Julianehåb Batholith



g_K		Granite, sensu lato, early Ketilidian
hg1_K		Granite, sensu lato, commonly porphyritic
bg_K		Biotite granite
hg2_K		Hornblende granite
lg_K		Leucogranite
gapl_K		Aplite granite
ag_K		Granite, albitised rocks
mgsG_K		Monzogranite and syenogranite
mz_K		Monzonite
gd_K		Granodiorite, sensu lato
di_K		Diorite, sensu lato
diga_K		Diorite and gabbro
dii_K		Diorite, with inclusions
dt_K		Diorite and tonalite

<i>gGG_K</i>		Granodiorite, gneissose
<i>gn_K</i>		Mainly granodioritic, gneissic domains
<i>qgn_K</i>		Siliceous gneiss, often aplittic
<i>rest_K</i>		Migmatite with abundant dark phases































PALAEOPROTEROZOIC: Ketilidian Orogen, syn- and late-tectonic intrusive igneous rocks: Granite derived from melting of metasedimentary rocks

<i>s2_K</i>		Granite, heterogeneous, garnet- and biotite-rich
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PALAEOPROTEROZOIC: Ketilidian Orogen, syn- and late-tectonic intrusive igneous rocks: Stendalen Gabbro Complex

<i>ga_SG</i>		Stendalen Layered Gabbro Complex
<i>lga_SG</i>		Leucogabbro of the Stendalen Layered Gabbro Complex






PALAEOPROTEROZOIC: Ketilidian Orogen, metasedimentary and metavolcanic rocks





















<i>rh_K</i>		Acid metavolcanics
<i>fv_K</i>		Felsic volcanics
<i>aek</i>		Mafic metavolcanic rocks
<i>a_K</i>		Amphibolite, undifferentiated
<i>mk</i>		Calcareous and dolomitic siltstone and shale
<i>ck</i>		Carbonate, mainly dolomite
<i>ma_K</i>		Marly metasediments
<i>fk</i>		Greywacke
<i>sp_K</i>		Semipelite
<i>p_K</i>		Pelite and semipelite, variably migmatized, locally graphitic
<i>rs_K</i>		Rusty weathered semipelitic horizon (\pm graphite)
<i>pk</i>		Pelite and pelitic shale
<i>qsk</i>		Pelitic schist, black, with dolomite and quartzite
<i>dsk</i>		Shale and schist, dark pyritic
<i>ps_K</i>		Psammite, arkosic, variably migmatized
<i>psud_K</i>		Undifferentiated psammite and semipelite
<i>stq_K</i>		Sandstone, including chert and quartzite, locally conglomeratic
<i>sms_K</i>		Siliceous metasediments, undifferentiated
<i>qs_cgl</i>		Sandstone, with conglomerate
<i>Cgl2_K</i>		Conglomerate, with gritty quartzitic-greywacke matrix
<i>Cgl1_K</i>		Conglomerate, with hornblendic matrix
<i>Cgl_K</i>		Conglomeratic horizons
<i>vs_K</i>		Mixed metasedimentary and metavolcanic rocks
<i>qv_K</i>		Clastic metasedimentary rocks
<i>gw_K</i>		Metagreywacke, metasilstone and metamudstone
<i>qs_K</i>		Metasandstone, and local conglomerate
<i>ms_K</i>		Mica schist
<i>pgn_K</i>		Gneiss, pelitic to semipelitic
<i>ggw_K</i>		Granite (greywacke)
<i>qs_gm</i>		Granite (sandstone)

PALAEOPROTEROZOIC









<i>deltaP</i>		Dolerite dyke
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MESOARCHAEAN TO NEOARCHAEAN: Igneous and metamorphic rocks




<i>gi</i>		Granite, undifferentiated (sensu lato)
<i>gi_px</i>		Granite, undifferentiated (sensu lato), orthopyroxene-bearing
<i>P</i>		Pegmatite, undifferentiated
<i>Qgi</i>		Qôrqt granite complex (leucogranite, grey biotite granite and composite granite)
<i>Mgi</i>		Marraq granite

<i>Tgi</i>		Taserssuatsiait granite
<i>ldgi</i>		Ilivertalik tonalite, diorite and gabbro
<i>lgi</i>		Ilivertalik granite, dominantly K-feldspar augen granite, variably deformed, usually orthopyroxene-bearing
<i>lgi_px</i>		Ilivertalik granite, pyroxene-bearing
<i>Nggi</i>		Nukagpiarsuaq granite
<i>qgn</i>		Siliceous gneiss
<i>gn</i>		Orthogneiss, mainly tonalitic to granodioritic
<i>gn_px</i>		Orthogneiss, undifferentiated, mainly tonalitic, orthopyroxene-bearing
<i>ga</i>		Orthogneiss, with gabbro-anorthositic enclaves
<i>d</i>		Diorite and tonalite, undifferentiated
<i>d_net</i>		Diorite and tonalite, undifferentiated, with net-veins of gneiss
<i>an</i>		Leucogabbro and anorthosite
<i>ai</i>		Gabbro and leucogabbro
<i>ub</i>		Ultramafic rocks
<i>Qai</i>		Qáqatsiaq dyke
<i>a</i>		Amphibolite, undifferentiated, includes mafic granulite
<i>a_net</i>		Amphibolite, undifferentiated, with net-veins of gneiss
<i>a_px</i>		Amphibolite, undifferentiated, orthopyroxene-bearing
<i>ae</i>		Amphibolite of extrusive origin, includes mafic granulite
<i>ms</i>		Mica schist and gneiss, undifferentiated, mainly biotite schist \pm garnet, cordierite or silimanite




MESOARCHAEAN TO NEOARCHAEAN: Igneous and metamorphic rocks: Fiskensæset Complex

<i>Fdelta</i>		Fiskensæset Complex upper gabbro unit
<i>Fd_net</i>		Fiskensæset Complex upper gabbro unit with net-veins of gneiss
<i>Fgamma</i>		Fiskensæset Complex anorthosite and upper leucogabbro units
<i>Fg_net</i>		Fiskensæset Complex anorthosite and upper leucogabbro units with net-veins of gneiss
<i>Fbeta</i>		Fiskensæset Complex middle gabbro and lower leucogabbro units
<i>Fb_net</i>		Fiskensæset Complex middle gabbro and lower leucogabbro units with net-veins of gneiss
<i>Falfa</i>		Fiskensæset Complex ultramafic and lower gabbro units
<i>Fa_net</i>		Fiskensæset Complex ultramafic and lower gabbro units with net-veins of gneiss

MESOARCHAEAN TO NEOARCHAEAN: Igneous and metamorphic rocks: Tartoq Group

<i>Tgn</i>		Tartoq Group quartz diorite gneiss
<i>vs</i>		Tartoq Group, mixed volcanic and sedimentary rocks
<i>qst</i>		Grey siliceous schist, locally talc- and mica-bearing quartzites

EOARCHAEAN TO PALAEOARCHAEAN: Igneous and metamorphic rocks

<i>Agn</i>		Tonalitic and granodioritic gneiss (formerly Amítsoq gneiss)
<i>At</i>		Tonalitic gneiss (formerly Amítsoq gneiss)
<i>Aa_in</i>		Inclusions of amphibolite in tonalitic and granodioritic gneiss (formerly Amítsoq gneiss)
<i>Ams_in</i>		Inclusions of mafic amphibolite and ultramafic rocks in tonalitic and granodioritic gneiss (formerly Amítsoq gneiss)
<i>Agi</i>		Granitic and ferrodioritic gneiss, with K-feldspar augen (formerly Amítsoq gneiss)
<i>Ams</i>		Supracrustal rocks, undifferentiated (formerly Akilia metasedimentary rocks)
<i>Aa</i>		Amphibolite, including metagabbro (formerly Akilia amphibolite)
<i>Aub</i>		Ultramafic rocks (formerly Akilia ultramafic rocks)
<i>d_ai</i>		Ameralik amphibolitic dyke swarms

del_M	——	Dolerite dyke of Mesozoic age	INC_cs	••••	Inclusions of calc-silicates
deltaP	——	Dolerite dyke	INC_ub	••••	Inclusions of ultramafic rocks
delta	——	Dolerite dyke, undifferentiated	INC_ms	••••	Inclusions of metasediments
a	——	Amphibolite dyke	BDest	——	Boundary
a_inf	-----	Amphibolite dyke, inferred	BDinf	-----	Boundary, inferred
ap_SS	——	Appinite dyke, mainly diorite, locally net-veined	BDtrs	-----	Boundary, transitional
chi	——	Kimberlite dyke	shz	——	Trend of schistosity or lithological layering
omega	——	Lamprophyre dyke	FLTest	- - - -	Fault
sigma	——	Trachyte and microsyenite dykes, both saturated and undersaturated	FLTinf	-----	Fault, inferred
PEGM	~ ~	Pegmatite	HsgZSS	——	High-strain gneiss zone
MIGM	~ ~	Migmatization	THRest	▲▲	Thrust
BandBi	= =	Banded biotitic	THRinf	-----	Thrust, inferred
BandBd	- -	Banded biotitic, with streaks	TRAX1	××	Trace of axial surface, synform
BandHo	= =	Banded hornblendic	TRAX2	◇◇	Trace of axial surface, antiform
BandHb	- -	Banded hornblendic, with streaks	UNCONF	→→	Unconformity
INC_a	••••	Inclusions of amphibolite	augen	○ ○ ○ ○	Augen texture
INC_an	••••	Inclusions of anorthosite and leucogabbro	crysts	□ □ □ □	Feldspar megacrystic
INC_ch	••••	Inclusions of lenticular chromite	Tuff	Tuff
			POR	□ □	Porphyritic texture

○	Augen texture
π	Pillow structure
○-○	Fold axis, measured
○-○	Fold axis, measured
→•	Fold axis, constructed
••	Fold axis, constructed
†	Strike and dip
†	Vertical dip
+	Horizontal dip
†	Foliation
†	Vertical foliation
→	Lineation



The geological map in scale 1 : 100 000 is an amalgamation of the harmonised, seamless map of southern West and South-West Greenland between 61° 30' N and 64° N (Keulen et al. 2010) and additional digitised and harmonised maps of South Greenland.

The maps of South Greenland include the following seven published GEUS map sheets in scale 1 : 100 000:

Ivigtut 61 V. 1 Syd, Nunarssuit 60 V. 1 Nord, Julianehåb 60 V. 2 Nord, Nassarssuaq 61 V. 3 Syd, Søndre Sermilik 60 V. 3 Nord, Nanortalik 60 V. 1 Syd, and Lindenow Fjord 60 Ø. 1 Nord.

In the areas of South Greenland with no 1 : 100 000 map coverage the 1 : 500 000 scale map sheet Sheet 1, Sydgrønland, 2'nd edition was used.

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Geological Survey of Denmark and Greenland (GEUS), Danish Ministry of Energy, Utilities and Climate.

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