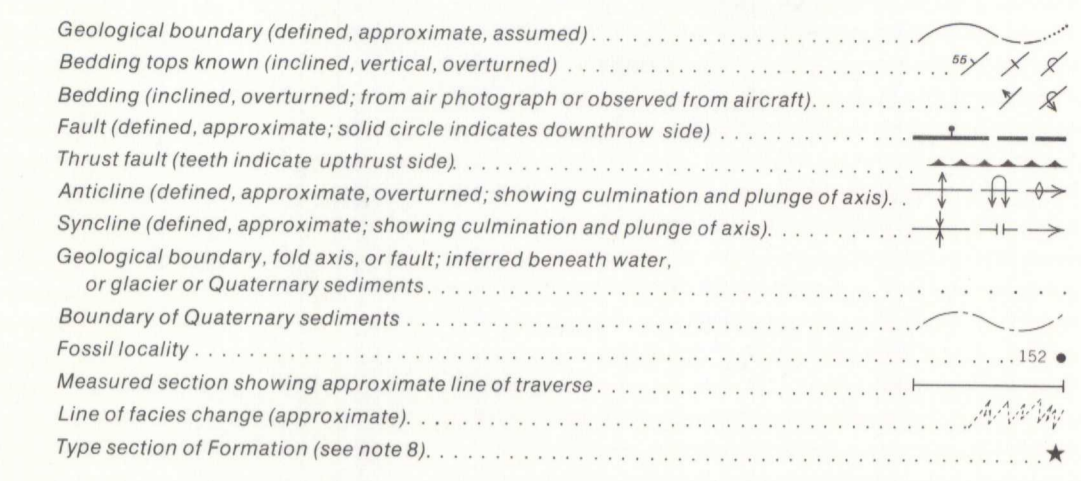


LEGEND

SEDIMENTARY ROCKS

CENOZOIC	QUATERNARY	
	Q	Stream, deltaic, glacial, and marine beach sediments (mapped only where underlying bedrock geology cannot be inferred with reasonable certainty)
	TERTIARY	
	Te	EUREKA SOUND FORMATION: sandstone, siltstone; minor shale, conglomerate and coal
	CRETACEOUS	
	UPPER CRETACEOUS	
	Kk	KANGUK FORMATION: dark coloured shale; minor siltstone, sandstone and mudstone
	Kh	HASSEL FORMATION: sandstone; minor siltstone and shale
	LOWER CRETACEOUS	
	Kc	CHRISTOPHER FORMATION: dark coloured shale; minor siltstone, sandstone and mudstone
Ki	ISACHSEN FORMATION: sandstone; minor siltstone, shale, and conglomerate	
JURASSIC AND CRETACEOUS		
UPPER JURASSIC AND LOWER CRETACEOUS		
JKd	DEER BAY FORMATION: dark coloured shale; minor siltstone, sandstone and mudstone	
JURASSIC		
UPPER JURASSIC		
Ja	AWINGAK FORMATION: sandstone, siltstone, minor shale	
LOWER, MIDDLE AND UPPER JURASSIC		
Js	SAVIK FORMATION: dark coloured shale; minor siltstone and sandstone	
TRIASSIC		
UPPER TRIASSIC		
Rh	HEIBERG FORMATION: sandstone, siltstone; minor shale (see note 4)	
MIDDLE AND UPPER TRIASSIC		
Rba	BLAA MOUNTAIN FORMATION: dark coloured shale, siltstone, light grey calcareous siltstone; minor sandstone	
LOWER TRIASSIC		
Rbl	BLIND FIORD FORMATION: siltstone; minor shale and sandstone	
MIDDLE AND UPPER TRIASSIC		
Rs	SCHEI POINT FORMATION: calcareous siltstone and sandstone, shale; minor limestone	
LOWER TRIASSIC		
Rb	BJORNE FORMATION: sandstone (mainly red); minor siltstone and shale	
PERMIAN		
UPPER PERMIAN		
Ptt	TROLD FIORD FORMATION: green sandstone; minor siltstone, chert, bioclastic limestone, minor conglomerate	
LOWER PERMIAN		
Pv	VAN HAUEN FORMATION: dark coloured shale, chert and siltstone	
CARBONIFEROUS AND PERMIAN		
UPPER CARBONIFEROUS AND LOWER PERMIAN		
CPbc	BELCHER CHANNEL FORMATION: limestone, sandstone, siltstone	
UPPER CARBONIFEROUS AND LOWER PERMIAN		
CPn	NANSEN FORMATION: limestone, siltstone, sandstone (see note 5)	
CARBONIFEROUS		
UPPER CARBONIFEROUS		
Cc	CANYON FIORD FORMATION: red sandstone, siltstone; minor limestone, anhydrite and conglomerate (see note 3)	
DEVONIAN		
LOWER AND MIDDLE DEVONIAN		
Dc	Unnamed clastics: siltstone, sandstone (see note 6)	
ORDOVICIAN, SILURIAN AND DEVONIAN		
UPPER ORDOVICIAN, SILURIAN AND LOWER DEVONIAN		
O-Dcp	CAPE PHILLIPS FORMATION: shale, limestone, dolomite, siltstone	
ORDOVICIAN		
MIDDLE ORDOVICIAN		
CORNWALLIS GROUP		
Oci	IRENE BAY FORMATION: limestone, green shale, recessive;	
Ocl	THUMB MOUNTAIN FORMATION: limestone, bluff forming;	
Ocb	BAY FIORD FORMATION: limestone, dolomite, greenish siltstone and shale	
Oc	(Undivided) Cornwallis Group	
LOWER AND MIDDLE ORDOVICIAN		
Oe	ELEANOR RIVER FORMATION: limestone	
LOWER ORDOVICIAN		
Ob	BAUMANN FIORD FORMATION: light coloured anhydrite, gypsum; minor limestone; recessive	
Oco	COPE'S BAY FORMATION: limestone, flat-pebble conglomerate; minor anhydrite, gypsum	
CAMBRIAN		
MIDDLE CAMBRIAN		
Cpg	PARRISH GLACIER FORMATION: sandstone, siltstone, limestone; minor dolomite and flat-pebble conglomerate	

INTRUSIVE ROCKS  
CRETACEOUS  
Gabbro, diabase, and basalt dykes (see note 7)

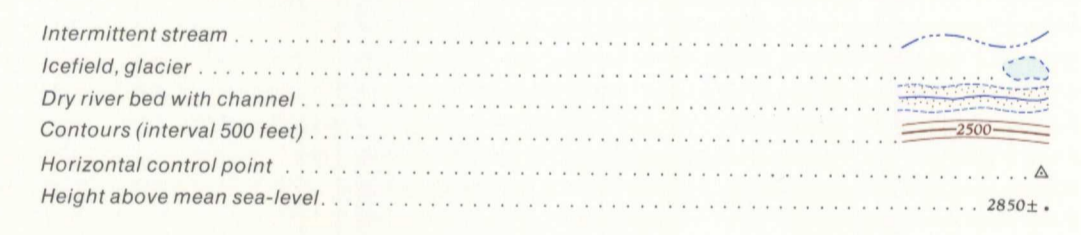


Geology of Devonian and older by J. Wm. Kerr, 1961, 1962  
Geology of Carboniferous and younger rocks by R. Thorsteinsson, 1962, 1963 and E.T. Tozer, 1957, 1961, 1962  
Compilation by R. Thorsteinsson, 1970, 1971

NOTES

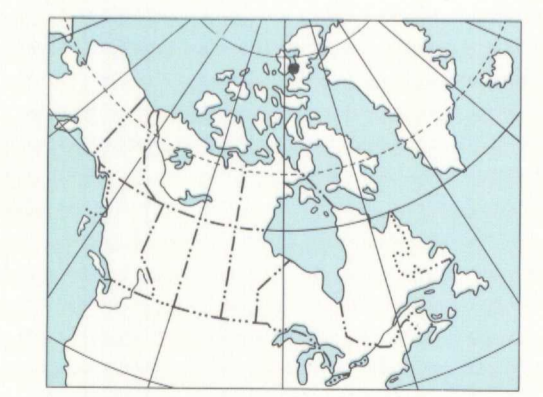
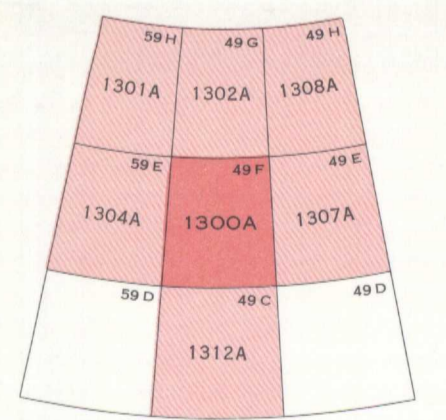
- A limestone bioherm occurs in the upper part of the Nansen Formation on the west side of Blind Fiord and constitutes a conspicuous landmark. It is Permian in age, lens-shaped in cross-section, about 2,200 feet long and has a maximum thickness of about 500 feet.
- Basal beds of the Canyon Fiord Formation that overlie with angular unconformity the Cornwallis Group at locality 137 west of Trold Fiord include: 1. basal limestone and chert-pebble conglomerate, 20 feet thick; 2. covered interval apparently concealing red beds, 15 feet thick; 3. anhydrite, 200 feet thick. No fossils were obtained from these units. The anhydrite is overlain by several hundred feet of beds that are typical of the Canyon Fiord Formation. Fusulines of Moscovian age (Late Carboniferous) were collected in strata immediately overlying the anhydrite. The anhydrite forms a belt of outcrops that extends about a mile along strike. Covered intervals occupy either end of the belt so that the stratigraphic relations of the anhydrite to alternating limestone and sandstone that normally occupies the position of the anhydrite in this area could not be determined. The anhydrite, if assigned correctly to the Canyon Fiord Formation, represents a unique occurrence of evaporitic rocks in this formation. On the other hand it is possible that the anhydrite represents a thin outlier of the Lower and Upper Carboniferous Otto Fiord Formation that crops out in eastern Axel Heiberg Island and northwestern Ellesmere Island.
- The Trold Fiord Formation crops out between the mouth of Blind Fiord and the Trold Fiord Thrust where it overlies the van Hauen Formation and underlies the Blind Fiord Formation, and is about 100 feet. It has not been mapped as a separate entity, but is included in the belt of van Hauen rocks on the map.
- The Lower Jurassic Borden Island Formation which consists of about 200 feet of grey sand with interbeds of dusky red ferruginous sandstone crops out on the west side of Stolz Peninsula and is included with the Heiberg Formation on this map. The Borden Island Formation is present also on Storöarna where it has been included with the undivided Savik and Awingak Formations. It is apparently absent elsewhere in the map-area.
- The Savik Formation on the west side of Stolz Peninsula consists mainly of shale with minor sandstone and siltstone, and constitutes a mappable unit that is readily distinguished from the Borden Island and Awingak Formations. The Savik, on Storöarna, appears to be composed mainly of sandstone with lesser amounts of shale and siltstone, and it is not readily distinguished in the topography from either the Borden Island or Awingak Formations. Because of this the three Formations have been mapped as one stratigraphic unit bearing the map symbol, J.
- Strata assigned to the Nansen Formation between Blind Fiord and the Trold Fiord Thrust consists mainly of limestone, but also contains larger amounts of sandstone and siltstone than normal for the formation. Many units of sandstone and siltstone weather red, lending a characteristic banded appearance to the landscape. Evidently exposures of the Nansen in this region represents a facies that is transitional between typical developments of that formation and the combined Canyon Fiord and Belcher Channel Formations.
- A long belt of overturned beds on the west side of Trold Fiord consists of resistant, calcareous siltstone and sandstone with common groove casts, that indicate a source in the west. Its age of Early Devonian and possibly younger is similar to the age of the Eids Formation to the south. Its lithology is similar to that of the Imina Formation farther north. Further work may show that this occurrence is a younger tongue of the Imina, but until such time the unit is mapped as unnamed Devonian clastics.
- Basic dykes and sills intrude upper Paleozoic and Mesozoic sediments of the Sverdrup Basin throughout much of Axel Heiberg Island and western Ellesmere Island. They intrude all formations older than, and including the upper Cretaceous Strand Fiord Formation, a volcanic sequence that crops out in western Axel Heiberg Island. Dykes and sills have not been observed to intrude the Kanguk or Eureka Sound Formations. They are especially common in Mesozoic rocks that predate the Kanguk, and while it is possible that more than one episode of intrusion is represented, it is probable that the vast majority of dykes and sills are Cretaceous in age. The larger and more conspicuous dykes are shown on the map, but sills have not been mapped. In the map-area sills are common west of the longitude 85°45'W. In this region sills occur in the Blind Fiord, Blaa Mountain and Heiberg Formations. Sills are especially numerous and commonly thick (up to about 300 feet) in the Blaa Mountain Formation. The map-area contains the type sections of the Baumann Fiord Formation and Blind Fiord Formation.

Geological cartography by the Institute of Sedimentary and Petroleum Geology, Geological Survey of Canada, 1971



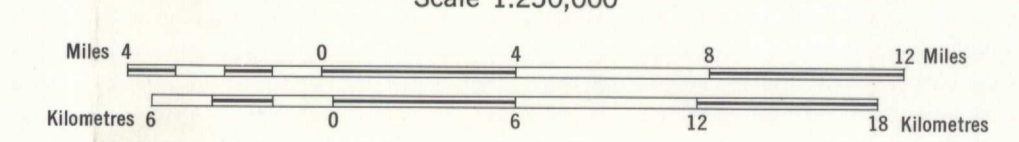
Topographic base-map at the same scale published by Surveys and Mapping Branch, 1967 with revisions by the Institute of Sedimentary and Petroleum Geology, 1972

The daily change of the North Magnetic Pole causes the magnetic compass to be very erratic in this area



MAP 1300A  
GEOLOGY  
EUREKA SOUND SOUTH  
DISTRICT OF FRANKLIN

Scale 1:250,000



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