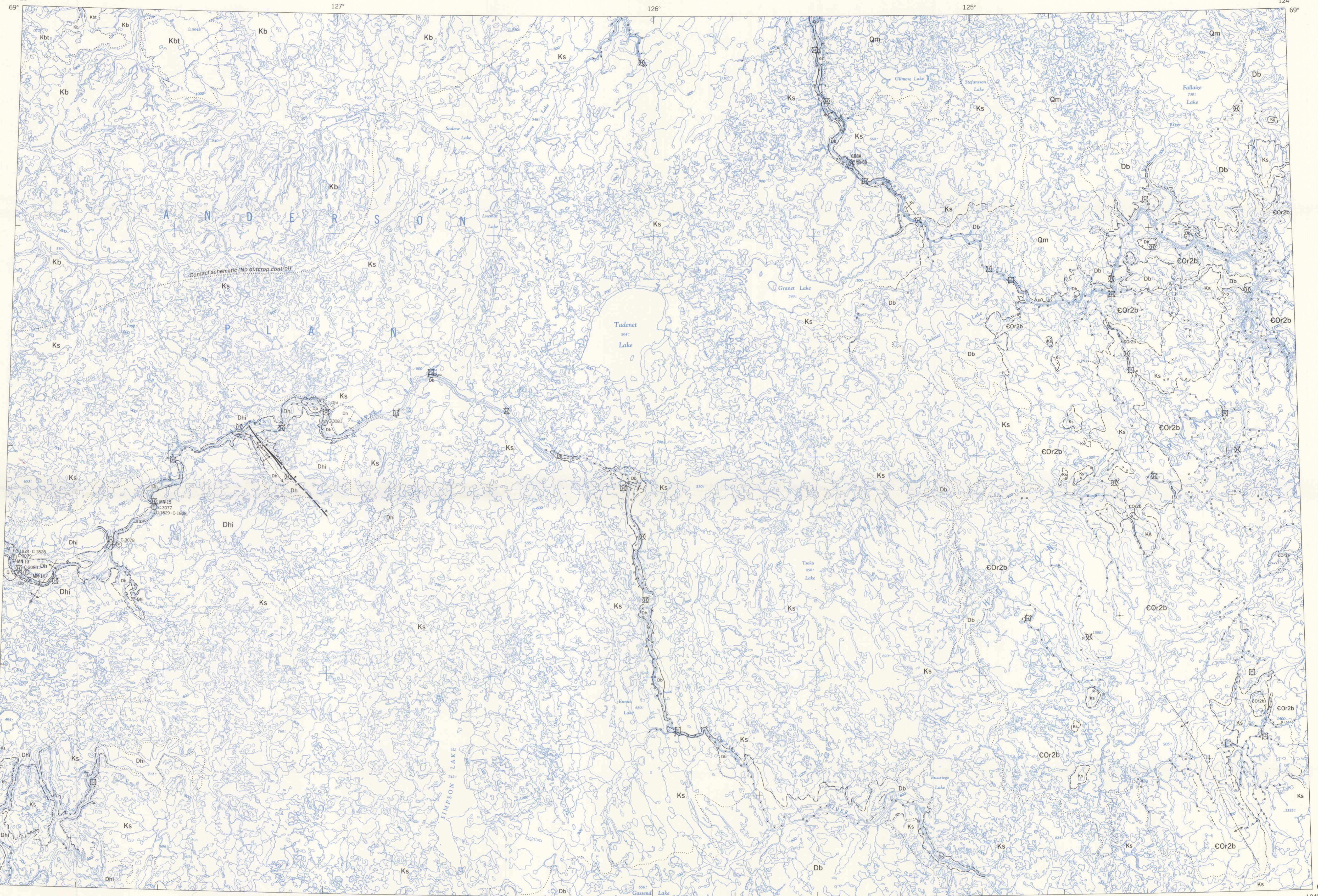


GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

PRELIMINARY SERIES



- LEGEND**
- QUATERNARY**
- Q Alluvium
 - Qm Thick moraine deposits forming prominent topography
- CRETACEOUS**
- UPPER CRETACEOUS**
- Kbt "Bituminous zone": black bituminous shale; bedded, yellow jarosite; local earthy hematite; pale grey clay; local basal ironstone-peat and shale-chip conglomerate
- LOWER CRETACEOUS**
- Kb "Bentonitic zone": black, soft, plastic shale; fossiliferous, orange, concretionary ironstone beds
 - Ks "Silty zone": upper division - argillaceous siltstone and mudstone; lower division - light grey, friable sandstone and coal
- DEVONIAN**
- MIDDLE DEVONIAN**
- Dhi HARE INDIAN FORMATION: black, fissile shale at base; green-grey shale above
 - Dh HUME FORMATION: thin-bedded, grey limestone; very fossiliferous; subordinate dark grey shale
- LOWER (?) AND MIDDLE DEVONIAN**
- Db BEAR ROCK FORMATION: bedded limestone in upper part; calcareous and gypsiferous dolomite and limestone solution breccia in lower part
- CAMBRIAN AND ORDOVICIAN**
- UPPER CAMBRIAN AND LOWER ORDOVICIAN**
- RONNING GROUP**
- CoR2b Unit 1b: grey and buff, thick-bedded dolomite; drusy quartz; stromatolitic and oolitic chert
 - CoR2a Unit 2a: pale grey dolomite interbedded with greyish orange dolomite

- Rock outcrop (observed from air or air photo)
- Rock outcrop visited by helicopter
- Geological boundary (defined, approximate, assumed; includes contacts extended by air photo interpretation)
- Bedding tops known (horizontal, inclined)
- Bedding tops known, estimated from air photos or from aircraft (horizontal, dip 5-15)
- Fault (defined, approximate; solid circle indicates downthrown side)
- Anticline (defined, approximate; arrow indicates direction of plunge)
- Syncline (defined; arrow indicates direction of plunge)
- Fossil locality (GSC catalogue number where collection taken)
- Stratigraphic section studied

Stratigraphic Section References

- T. P. Chamney C85-68
- W. S. MacKenzie MN-13
- C. J. Yorath TB-21

Geology by H. R. Balkwill, C. J. Yorath, T. P. Chamney, and W. S. MacKenzie, 1968

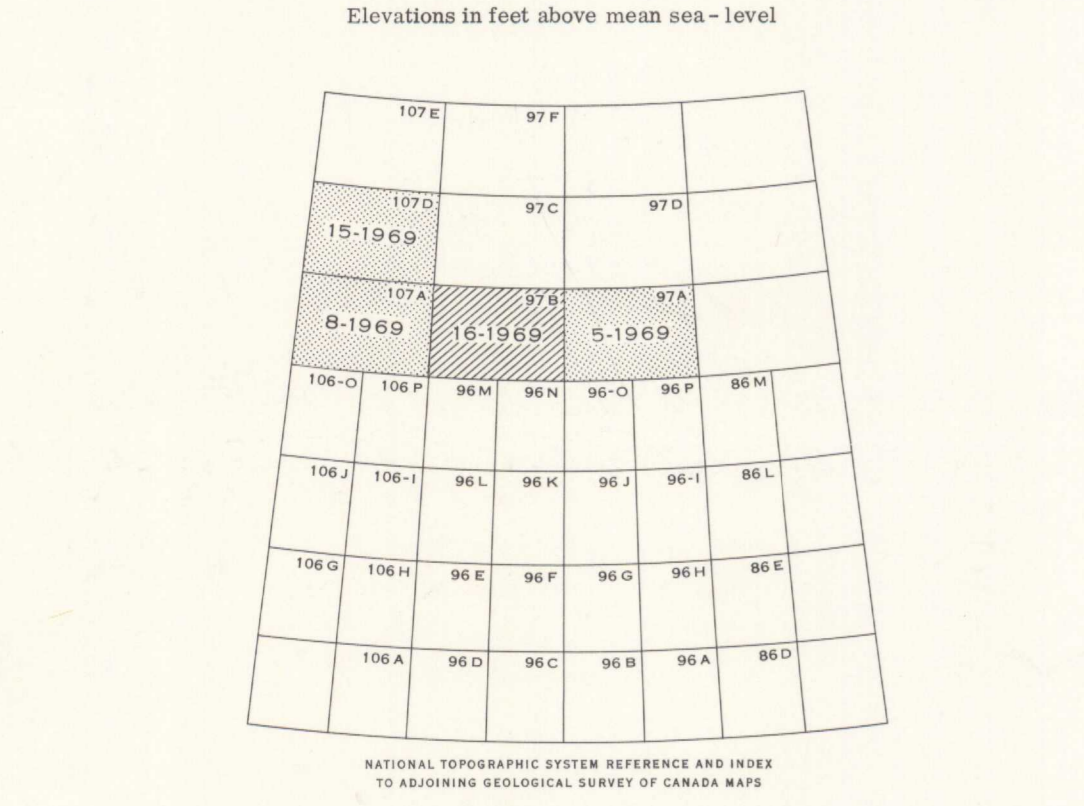
Compiled by H. R. Balkwill and C. J. Yorath, 1969

To accompany GSC Paper 69-10, by H. R. Balkwill and C. J. Yorath

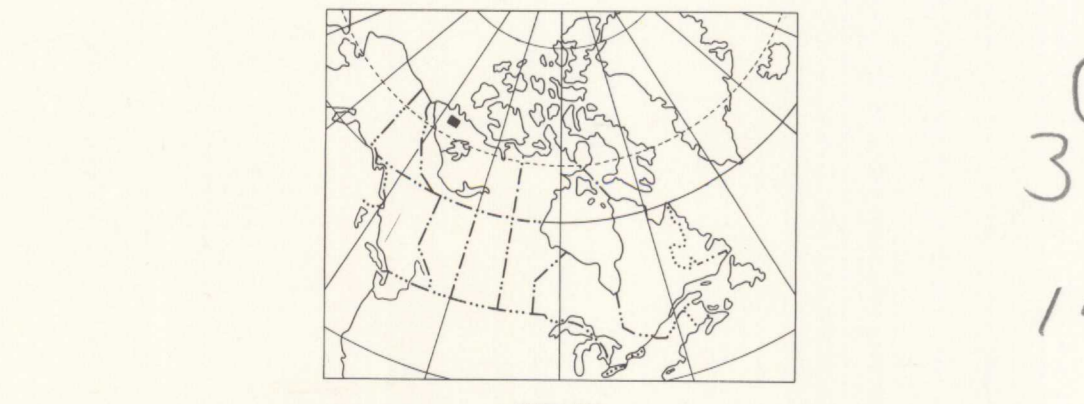
Geological cartography by the Institute of Sedimentary and Petroleum Geology, Geological Survey of Canada

Topographic base-map at the same scale published by the Mapping and Charting Establishment, Department of National Defence, 1967

Magnetic declination 1970 varies from 41° 03' easterly at centre of west edge to 42° 04' easterly at centre of east edge. Mean annual change 7.5' westerly



National Topographical System designations indicate other quadrangles mapped geologically during Operation Norman

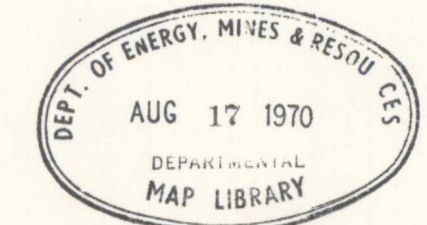


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MAP 16-1969
PAPER 69-10
GEOLOGY
SIMPSON LAKE
DISTRICT OF MACKENZIE
Scale 1:250,000

Miles 4 0 4 8 12 Miles
Kilometres 6 0 6 12 18 Kilometres

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