



Natural Resources
Canada

Ressources naturelles
Canada

CANADIAN GEOSCIENCE MAP 444

BEDROCK GEOLOGY

RAMPARTS RIVER SOUTHEAST

Northwest Territories
NTS 106-G/SE



Map Information Document

Geological Survey of Canada Canadian Geoscience Maps

2022

Canada 



MAP NUMBER

Natural Resources Canada, Geological Survey of Canada
Canadian Geoscience Map 444

TITLE

Bedrock geology, Ramparts River southeast, Northwest Territories, NTS 106-G/SE

SCALE

1:100 000

CATALOGUE INFORMATION

Catalogue No. M183-1/444-2022E-PDF
ISBN 978-0-660-41575-8
<https://doi.org/10.4095/329408>

COPYRIGHT

© Her Majesty the Queen in Right of Canada, as represented by the Minister of Natural Resources, 2022

Information contained in this publication or product may be reproduced, in part or in whole, and by any means, for personal or public non-commercial purposes, without charge or further permission, unless otherwise specified.

You are asked to:

- exercise due diligence in ensuring the accuracy of the materials reproduced;
- indicate the complete title of the materials reproduced, and the name of the author organization; and
- indicate that the reproduction is a copy of an official work that is published by Natural Resources Canada (NRCan) and that the reproduction has not been produced in affiliation with, or with the endorsement of, NRCan.

Commercial reproduction and distribution is prohibited except with written permission from NRCan. For more information, contact NRCan at nrcan.copyrightdroitdauteur.mcan@canada.ca.

RECOMMENDED CITATION

Fallas, K.M. and MacNaughton, R.B., 2022. Bedrock geology, Ramparts River southeast, Northwest Territories, NTS 106-G/SE; Geological Survey of Canada, Canadian Geoscience Map 444, scale 1:100 000. <https://doi.org/10.4095/329408>

ABSTRACT

The southeast Ramparts River map area (NTS 106-G/SE) covers part of the northern Mackenzie Mountains and Peel Plateau, Northwest Territories. Bedrock exposures in

the area include carbonate and siliciclastic strata ranging from Neoproterozoic (Tonian) to Cretaceous age. These strata were deformed in Cretaceous to Eocene time by folding and contractional faulting associated with Cordilleran deformation. Major structures include the Deadend fault, Tawu anticline, Stony anticline, and Shattered Range anticline. A set of minor pre-Cordilleran extensional faults is preserved within Neoproterozoic strata of the Mackenzie Mountains Supergroup, and are locally associated with diabase or gabbro dykes assigned to the Gunbarrel magmatic event (~780 Ma). Truncation of Neoproterozoic units beneath the sub-Cambrian unconformity indicates tilting or folding of strata before Cambrian time. A second major unconformity between Devonian and Cretaceous strata is marked by low-angle truncation of Paleozoic strata beneath Cretaceous units.

RÉSUMÉ

La région cartographique de Ramparts River Sud-Est (SNRC 106-G/SE) couvre une partie du nord des monts Mackenzie et du plateau Peel, dans les Territoires du Nord-Ouest. Les affleurements du substratum rocheux dans la région comprennent des strates carbonatées et des strates silicoclastiques s'échelonnant en âge du Néoprotérozoïque (Tonien) au Crétacé. Ces strates ont été déformées du Crétacé à l'Éocène par plissement et par le jeu de failles de compression associés à la déformation de la Cordillère. Les structures d'importance comprennent la faille de Deadend, l'anticlinal de Tawu, l'anticlinal de Stony et l'anticlinal de Shattered Range. Un ensemble mineur de failles d'extension antérieur à la déformation de la Cordillère a été conservé dans les strates néoprotérozoïques du Supergroupe de Mackenzie Mountains et est localement associé à des dykes de diabase ou de gabbro attribués à l'événement magmatique de Gunbarrel (~ 780 Ma). La troncature des unités néoprotérozoïques sous la discordance subcambrienne indique un basculement ou un plissement des strates avant le Cambrien. Une deuxième discordance majeure entre les strates du Dévonien et du Crétacé est signalée par la troncature suivant un angle peu prononcé des strates paléozoïques sous les unités du Crétacé.

LICENCE AGREEMENT

View the licence agreement at

<https://open.canada.ca/en/open-government-licence-canada>

ACCORD DE LICENCE

Voir l'accord de licence à

<https://ouvert.canada.ca/fr/licence-du-gouvernement-ouvert-canada>

SHEET 1 OF 1, BEDROCK GEOLOGY

GENERAL INFORMATION

Authors: K.M. Fallas and R.B. MacNaughton

Geological compilation by K.M. Fallas and R.B. MacNaughton, 2016 to 2019

Geological data conforms to Bedrock Data Model v.4.0

Geological field observations by K.M. Fallas, R.B. MacNaughton, and G.S. Stockmal, Geological Survey of Canada, 2016; Y. Lemieux, Geological Survey of Canada, 2006 and 2007; T. Hadlari, Northwest Territories Geological Survey, 2006 and 2007; Rio Tinto geologists, 1975; J.D. Aitken, H.R. Balkwill, D.G. Cook, C.W. Thayer, and C.J. Yorath, Geological Survey of Canada, 1968 to 1970

Stratigraphic sections measured by E.C. Turner, Laurentian University, 2008; L.P. Gal, T. Hadlari, D. Thomson, and W. Zantvoort, Northwest Territories Geological Survey, 2006 and 2007; L.J. Pyle, contractor, 2006 and 2007; J.D. Aitken, D.G.F. Long, and A.W. Norris, Geological Survey of Canada, 1977 and 1978; C.W. Thayer, J.L. Usher, and C.J. Yorath, Geological Survey of Canada, 1968 and 1969; Chevron geologists, 1961

Reflection-seismic data interpreted by B.C. MacLean and K.M. Fallas, 2015 to 2019

Geomatics by K.M. Fallas and M. Le

Cartography by M. Le and K. Rentmeister

Scientific editing by L. Ewert

Initiative of the Geological Survey of Canada, conducted under the auspices of the Mackenzie Project as part of Natural Resources Canada's Geo-mapping for Energy and Minerals (GEM) program

Logistical support provided by the Polar Continental Shelf Program (PCSP) as part of its mandate to promote scientific research in the Canadian north, PCSP 055-16

Map projection Universal Transverse Mercator, zone 9
North American Datum 1983

Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications
Elevations in metres above mean sea level

Mean magnetic declination 2022, 20°09'E, decreasing 17.2' annually
Readings vary from 20°05'E in the SW corner to 20°12'E in the NE corner of the map.

This map is not to be used for navigational purposes.

Title photograph: View looking southeast at a mafic dyke of the Gunbarrel intrusions (dark brown) cutting through grey dolostone of the Neoproterozoic Tabasco Formation. Photograph by K.M. Fallas. NRCan photo 2019-678

The Geological Survey of Canada welcomes corrections or additional information from users (gscpublications-cgcpublishations@nrcan-rncan.gc.ca).

Data may include additional observations not portrayed on this map. See map info document accompanying the downloaded data for more information about this publication.

This publication is available for free download through GEOSCAN (<https://geoscan.nrcan.gc.ca/>).

MAP VIEWING FILES

The published map is distributed as a Portable Document File (PDF), and may contain a subset of the overall geological data for legibility reasons at the publication scale.

DEFINITION QUERIES USED ON MAP

This map utilizes definition queries in order to customize the display for visualization on the PDF of the map only and does not affect the digital data. The following features have a definition query applied:

- Linear
- Fossils
- Planar
- Stations
- MeasuredSections
- Folds

DESCRIPTIVE NOTES

Initial bedrock mapping and stratigraphic studies by the Geological Survey of Canada (GSC) in the Ramparts River map area (NTS 106-G) were conducted in 1968 to 1970 as part of Operation Norman. This operation and subsequent stratigraphic work up to 1977 led to the release of a GSC Memoir and 1:250 000 scale map of the area (Aitken et al., 1982). In the present compilation, observations collected from 2016 to 2018 as part of the Geo-mapping for Energy and Minerals (GEM) Program were combined with observations from Operation Norman, along with observations from the Peel Project of the Northwest Territories Geological Survey collected in 2006 to 2007 (Pyle and Gal, 2007; Pyle and Jones, 2009; Pierce and Jones, 2009). Petroleum exploration wells and reflection-seismic data drilled or collected since 1970 also helped constrain the map interpretation. Bedrock units are interpreted beneath local Quaternary cover to provide a seamless bedrock interpretation.

Formal stratigraphic nomenclature used for the Operation Norman maps in the area (Aitken et al., 1982) is largely still in use, although more recent stratigraphic work has added new formal terms for previously informal units found in southeast Ramparts River map area. An outline of updated stratigraphic relationships in the northern Mackenzie Mountains was provided by Fallas et al. (2016), and schematic relationships within southeast Ramparts River map area are illustrated in Figure 1. Within the Mackenzie Mountains Supergroup, the Katherine Group is subdivided into seven formations (Long and Turner, 2014), replacing the “lower” and “upper” subdivisions of Aitken et al. (1982). Although typically not well exposed, these seven formations have been mapped within this area as outlined by Fallas (2019). Two geochronological analyses on gabbro intrusions within Mackenzie Mountains Supergroup strata of southeast Ramparts River map area record dates of 770 ± 23 Ma and 778 ± 10 Ma (S.

Kamo and K. Fallas, unpublished data), confirming these are part of the Gunbarrel mafic magmatic event of Harlan et al. (2003).

Within the Cambrian succession, the Nainlin Formation of MacNaughton and Fallas (2014) is introduced in place of the “basal red beds” of the Franklin Mountain Formation, and is considered to be a lateral equivalent of the Saline River Formation found to the east. Nainlin Formation is a clastic-dominated unit beneath dolostone of the Franklin Mountain Formation, and lacks the evaporite deposits of the Saline River Formation. It lies unconformably on Neoproterozoic (Tonian) strata of the Katherine and Little Dal groups. Aside from the exclusion of the basal red beds, Franklin Mountain Formation follows the usage of Aitken et al. (1982), as does Mount Kindle Formation. The unnamed SD unit of Aitken et al. (1982) has more recently been identified as Tsetso Formation within the Mackenzie Mountains (Morrow, 1991) and Peel and Tatsieta formations along the mountain front (Pyle and Gal, 2007). Devonian units in the southeast Ramparts River map area follow the usage of Aitken et al. (1982).

Unconformably overlying the Devonian succession, the Cretaceous succession was treated as an undivided package of Arctic Red River and Trevor formations by Aitken et al. (1982), largely following the work of Yorath and Cook (1981). Subsequent work by Dixon (1999) and Thomson et al. (2011) provided a basis for subdividing the Cretaceous into four units: the Lower Cretaceous Martin House and Arctic Red formations, and Upper Cretaceous Slater River and Trevor formations. Subsurface data from petroleum exploration wells and reflection-seismic surveys helped constrain the distribution of these Cretaceous units.

The names of major structures identified by Aitken et al. (1982) for the southeast Ramparts River area have been retained as revisions to the structural interpretation of these features is minor. Subsurface data have aided with the delineation of previously known and newly identified structures along the mountain front and within Cretaceous strata of Peel Plateau. In particular the Beeline Fault, north of the Ovis anticline, was added on the basis of relationships identified in seismic-reflection data. The Upper Hume Fault is introduced as a transverse fault dissecting the west end of the Stony anticline and links two previously mapped fault segments of Aitken et al. (1982). The linkage is recognizable in high-resolution satellite imagery used during compilation. Some adjustments have been made to the distribution of normal faults in the core of Tawu anticline based on offsets of Katherine Group strata and sills, and the association with Gunbarrel suite dykes.

NOTE: The name Tawu anticline was introduced by Aitken et al. (1982) to indicate the broad culmination cored by Tabasco and Tsezotene formations without differentiating individual anticlinal hinges. As refined mapping has revealed that this structure comprises multiple en échelon anticlinal hinges along its full strike length, these are differentiated on this map as segments, each of which is named for a nearby geographic feature.

ACKNOWLEDGMENTS

This work was carried out on lands within the Sahtu Settlement Area as identified in the Sahtu Dene and Métis Comprehensive Land Claim Agreement, and the Gwich'in Settlement Area as identified in the Gwich'in Comprehensive Land Claim Agreement. Field transportation for 2016 was provided by Sahtu Helicopters, based in Norman Wells. G.S. Stockmal is thanked for his ideas and insight in the field. Excellent field assistance was provided by W.C. Chan and T.D. Finley, and the geology team was kept

safe by the wildlife monitoring of S. Rabisca and R. Andre. The authors also thank G.S. Stockmal for a critical review of the map.

REFERENCES

Aitken, J.D., Macqueen, R.W., and Usher, J.L., 1973. Reconnaissance studies of Proterozoic and Cambrian stratigraphy, lower Mackenzie River area (Operation Norman), District of Mackenzie; Geological Survey of Canada, Paper 73-9, 178 p. <https://doi.org/10.4095/103313>

Aitken, J.D., Turner, E.C., and MacNaughton, R.B., 2011. Thirty-six archival stratigraphic sections in the Katherine, Little Dal, Coates Lake, and Rapitan groups (Neoproterozoic), Mackenzie Mountains, Northwest Territories; Geological Survey of Canada, Open File 6391, 9 p. <https://doi.org/10.4095/288059>

Aitken, J.D., Cook, D.G., and Yorath, C.J., 1982. Upper Ramparts River (106G) and Sans Sault Rapids (106H) map areas, District of Mackenzie; Geological Survey of Canada, Memoir 388, 48 p. <https://doi.org/10.4095/116165>

Dixon, J., 1999. Mesozoic-Cenozoic stratigraphy of the northern Interior Plains and Plateaux, Northwest Territories; Geological Survey of Canada, Bulletin 536, 56 p. <https://doi.org/10.4095/210800>

Fallas, K.M., 2019. A reconnaissance section through the Neoproterozoic Katherine Group of the northern Mackenzie Mountains, Northwest Territories, and implications for mapping its subdivisions; Geological Survey of Canada, Open File 8554, 22 p. <https://doi.org/10.4095/314498>

Fallas, K.M., MacNaughton, R.B., Finley, T.D., and Gouwy, S.A., 2016. Report of activities for the GEM 2 Mackenzie project: northern Mackenzie Mountains bedrock mapping, stratigraphy, and related studies; Geological Survey of Canada, Open File 8132, 17 p. <https://doi.org/10.4095/299297>

Harlan, S.S., Heaman, L., LeCheminant, A.N., and Premo, W.R., 2003. Gunbarrel mafic magmatic event: a key 780 Ma time marker for Rodinia plate reconstructions; *Geology*, v. 31, p. 1053–1056. <https://doi.org/10.1130/G19944.1>

Long, D.G.F. and Turner, E.C., 2014. Formal definition of the Neoproterozoic Mackenzie Mountains Supergroup (Northwest Territories), and formal stratigraphic nomenclature for terrigenous clastic units of the Katherine Group; Geological Survey of Canada, Open File 7113, (ed. rev.), 118 p. <https://doi.org/10.4095/293417>

Long, D.G.F., Rainbird, R.H., Turner, E.C., and MacNaughton, R.B., 2008. Early Neoproterozoic Strata (Sequence B) of mainland Northern Canada and Victoria and Banks Islands: a contribution to the Geological Atlas of the Northern Canadian Mainland Sedimentary Basin; Geological Survey of Canada, Open File 5700, 27 p. <https://doi.org/10.4095/226070>

MacNaughton, R.B. and Fallas, K.M., 2014. Nainlin Formation, a new Middle Cambrian map unit from the Mackenzie Mountains, Northwest Territories; Bulletin of Canadian Petroleum Geology, v. 62, p. 37–67. <https://doi.org/10.2113/gscpgbull.62.2.37>

Morrow, D.W., 1991. The Silurian-Devonian sequence in the northern part of the Mackenzie Shelf, Northwest Territories; Geological Survey of Canada, Bulletin 413, 128 p. <https://doi.org/10.4095/132170>

Norris, A.W., 1985. Stratigraphy of Devonian outcrop belts in northern Yukon Territory and northwestern District of Mackenzie (Operation Porcupine area); Geological Survey of Canada, Memoir 410, 81 p. <https://doi.org/10.4095/120309>

Pierce, K.L. and Jones, A.L. (compilers), 2009. ArcGIS® 9.x Digital atlas to accompany regional geoscience studies and petroleum potential, Peel Plateau and Plain, Northwest Territories and Yukon: project volume; Northwest Territories Geoscience Office, NWT Open File 2009-03. Digital files.

Pyle, L.J. and Gal, L.P., 2007. Lower to Middle Paleozoic stratigraphy and measured sections, NTS 106F, G, H, I, Northwest Territories; Northwest Territories Geoscience Office, NWT Open Report 2007-004, 95 p.

Pyle, L.J. and Jones, A.L. (editors), 2009. Regional geoscience studies and petroleum potential, Peel Plateau and Plain, Northwest Territories and Yukon: project volume; Northwest Territories Geoscience Office and Yukon Geological Survey, NWT Open File 2009-02 and YGS Open File 2009-25, 549 p.

Thomson, D., Schröder-Adams, C.J., Hadlari, T., Dix, G., and Davis, W.J., 2011. Albian to Turonian stratigraphy and palaeoenvironmental history of the northern Western Interior Sea in the Peel Plateau region, Northwest Territories, Canada; Palaeogeography, Palaeoclimatology, Palaeoecology, v. 302, p. 270–300. <https://doi.org/10.1016/j.palaeo.2011.01.017>

Turner, E.C. and Long, D.G.F., 2012. Formal definition of the Neoproterozoic Mackenzie Mountains Supergroup (Northwest Territories), and formal stratigraphic nomenclature for its carbonate and evaporate formations; Geological Survey of Canada, Open File 7112, 57 p. <https://doi.org/10.4095/292167>

Yorath, C.J. and Cook, D.G., 1981. Cretaceous and Tertiary stratigraphy and paleogeography, northern Interior Plains, District of Mackenzie; Geological Survey of Canada, Memoir 398, 76 p. <https://doi.org/10.4095/109299>

Geological Survey of Canada Paleontological Reports (available from GSC Calgary):

Gouwy, S.A., 2018. Report on seven samples from the Hume, Hare Indian and Canol formations from the Arctic Red River East and Flyaway Creek sections, Northern Mackenzie Mountains, NWT, NTS 106G, NTS 106F collected by Viktor Terlaky (NTGS) and submitted under R.B. MacNaughton's Northern Mackenzie Mountains Bedrock

Mapping and Stratigraphic Studies project (GEM2 Shield-to-Selwyn) CON NO 1818-1 to 1818-7; Geological Survey of Canada, Paleontological Report 2-SAG-2018, 11 p.

Jeletzky, J.A., 1961. Report on a fossil collected by Mr. C. Reece, Sproule and Associates in Mackenzie District, N.W.T. in 1959 and submitted for identification in November 1959; Geological Survey of Canada, Paleontological Report Km-1-1961-JAJ, 1 p.

Jeletzky, J.A., 1970. Report on Cretaceous fossils collected by Dr. C.J. Yorath in Hume River area (lower Mackenzie River region; NTS-95N, 96C, 96E, 106G, 106H) in 1969, and submitted for identification on December 20, 1969; Geological Survey of Canada, Paleontological Report Km-1-1970-JAJ, 5 p.

Jeletzky, J.A., 1971. Report on a collection of Cretaceous and Jurassic fossils from the northeastern Yukon and northwestern N.W.T. collected by Shell Oil Company between 1958 and 1961, and submitted for identification in January 1971. (NTS-106G, 106M; 107B; 116O, 116P; 117A); Geological Survey of Canada, Paleontological Report Km-3-1971-JAJ, 39 p.

McCracken, A.D., 2007. Report on the preparation results for 46 conodont samples from Northwest Territories collected in 2006 as part of the collaborative GSC-NTGO study and submitted by L. Pyle (GSC-P) and E. Martel (Northwest Territories Geoscience Office); Geological Survey of Canada, Paleontological Report 2-ADM-2007, 15 p.

McIntyre, D.J., 1996. Dinoflagellates from Hume River Northwest Territories. Seven samples from a section along Hume River, Northwest Territories, (YB69081, NTS 106G, 65 25N, 130 21W), report prepared for J. Dixon, Geological Survey of Canada, Calgary; Geological Survey of Canada, Paleontological Report 1-DJM-1996, 4 p.

McLaren, D.J., 1961. Report on fossils from N.W.T., submitted by Texaco Exploration Company, collected in 1960; Geological Survey of Canada, Paleontological Report D9-61 McL/N, 3 p.

McNeil, D.H., 2007. Micropaleontology report on 13 outcrop samples from the Peel Plateau area, Northwest Territories (NTS 106F, G, H); report requested by Thomas Hadlari, Northwest Territories Geoscience Office, Yellowknife; Geological Survey of Canada, Paleontological Report 02-DHM-2007, 6 p.

Norford, B.S., 1961. Report on seven collections of fossils collected from the Sid Lake region (136 40W, 65 40N) of the Yukon Territory, and the Yadek Lake region (130 05W, 65 20N) of the Northwest Territories, by Texaco Exploration Company; Geological Survey of Canada, Paleontological Report S 9 1961 BSN, 2 p.

Norford, B.S., 1969. Report on five lots of Cambrian and Ordovician fossils from northwestern District of Mackenzie, collected by Dr. D.G. Cook, Operation Norman, 1969 (NTS 96B, 96F, 106G); Geological Survey of Canada, Paleontological Report C-O 9 BSN 1969, 2 p.

Norford, B.S., 1969. Report on four lots of fossils from the Mackenzie Mountains, District of Mackenzie; collected by D.K. Norris, Project 660020, 1968. (NTS 96D, 96E, 106G); Geological Survey of Canada, Paleontological Report O-S 5 BSN 1969, 2 p.

Norford, B.S., 1971. Report on six lots of fossils from the District of Mackenzie, collected by Drs. J.D. Aitken and D.G. Cook, 1970. (NTS 106A, B, G); Geological Survey of Canada, Paleontological Report C-S 8 BSN 1971, 2 p.

Norris, A.W., 1982. Report on three lots of Devonian fossils from section at Powell Creek (NTS 106H) and Arctic Red River (NTS 106G), District of Mackenzie; submitted by Drs. L.V. Hills and D.R. Braman; Geological Survey of Canada, Paleontological Report 6-AWN-1982, 2 p.

Pedder, A.E.H., 1968. Report on sixty-two lots of Devonian fossils from the Yukon Territory and District of Mackenzie; collected by Dr. W.S. Mackenzie, 1967. (NTS 96B, C, E, 106E-H, 116H); Geological Survey of Canada, Paleontological Report WSM 1 AEHP 1968, 9 p.

Pedder, A.E.H., 1969. Report on nine lots of Middle Devonian fossils from the District of Mackenzie collected by D.K. Norris, 1968. (NTS 96D, 106G, H); Geological Survey of Canada, Paleontological Report DKN 11 AEHP 1969, 3 p.

Utting, J., 2007. Palynological investigation of 36 outcrop samples from the Devonian, western District of Mackenzie, submitted by W.G. Zantvoort, Geoscience Office, Northwest Territories, Canada (NTS 095M/06,07,08; 096D; 105P/06,07,08); Geological Survey of Canada, Paleontological Report 01-JU-2007, 13 p.

Utting, J., 2008. Palynological investigation of 69 outcrop samples from the Devonian and Cretaceous, western District of Mackenzie, submitted by W.G. Zantvoort, Geoscience Office, Northwest Territories, Canada (NTS 96D/14; 96E/4; 106A; 106F/8; 106F/9; 106F/10; 106F/11; 106G/6; 106G/7; 106G/11; 106H/5; 106H/7); Geological Survey of Canada, Paleontological Report 03-JU-2008, 26 p.

White, J.M., 2004. Palynological report on 6 samples of Tertiary or younger and undeterminable ages from the Mackenzie Corridor, N.W.T. (NTS 096-C-01, 15 and 106-G-07), as requested by A. Duk-Rodkin, GSC, Calgary; Geological Survey of Canada, Paleontological Report 1-JMW-2004, 3 p.

ADDITIONAL INFORMATION

The Additional Information folder of this product's digital download contains figures and tables that appear in the map surround as well as additional geological information not depicted on the map, nor this document, nor the geodatabase.

-PDF of each figure/table that appears in the CGM surround.

-Excel file of the Master Legend Table (legend symbols, descriptions, headings, etc.).

AUTHOR CONTACT

Questions, suggestions, and comments regarding the geological information contained in the data sets should be addressed to:

K.M. Fallas

Geological Survey of Canada

3303 33 Street NW

Calgary AB

T2L 2A7

karen.fallas@nrcan-rncan.gc.ca

COORDINATE SYSTEM

Projection: Universal Transverse Mercator

Units: metres

Zone: 9

Horizontal Datum: NAD83

Vertical Datum: mean sea level

BOUNDING COORDINATES

Western longitude: 131°00'00"W

Eastern longitude: 130°00'00"W

Northern latitude: 65°30'00"N

Southern latitude: 65°00'00"N

SOFTWARE VERSION

Data has been originally compiled and formatted for use with ArcGIS™ desktop version 10.7.1 developed by ESRI®.

DATA MODEL INFORMATION

Bedrock (Calgary)

Surface bedrock data are organized into feature classes and themes consistent with logical groupings of geological features. All field observation point data are related through the Station_ID property of the Station theme. These feature attribute names and definitions are identical in the shapefiles and the XML files.

Consult PDFs in Data folder for complete description of the feature classes, feature attributes, and attribute domains.

The Bedrock Data Model and the Bedrock Domains documents are intended to describe all bedrock features which may be compiled at the 1:50 000 scale. Therefore, some of the feature classes and feature attributes described in these documents may not be present.