



Compilation Details

Layer Name: Surficial Geology dataset

Layer Type: Surficial Geology

Feature Type: Dataset

General Information

Release Date: 2023-08-11

Released By: Yukon Geological Survey

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Summary

A Yukon-wide compilation of spatial data derived from over 195 surficial geology maps originally published at scales ranging from 1:10,000 to 1:250,000. Polygon features describe surficial material, texture, age, surface expression and geomorphological processes. Line features include surficial geological contacts, glacial limits and linear landforms. Point features include field stations and small site specific landforms.

Description

Last Updated: Aug 11, 2023

Over 195 surficial geology maps have been compiled by the Yukon Geological Survey (YGS) into a standardized GIS format. The maps provide approximately 80% coverage of the territory at scales ranging between 1:250,000 and 1:10,000, with some overlap between scales.

Source maps were originally produced by a variety of agencies, including: the Geological Survey of Canada (GSC) (112), Yukon Geological Survey (48), Yukon Government (12), universities (2) and the City of Whitehorse (1). 22 of these maps were previously unpublished. A complete list of map sources included in the compilation is found at the end of this document.

While all original feature descriptions have been preserved in the compilation, they have also been converted to standardized values following the Yukon terrain classification system (based on the British Columbia terrain classification system with minor modifications; see section below).

The compilation consists of 4 Geographic Information System (GIS) datasets and supporting documents, all of which are available for download by searching for "surficial compilation" on the [YGS integrated data system \(YGSIDS\)](#) or by accessing [GeoYukon](#). Territory-wide point, line and polygon GIS datasets are available in ESRI geodatabase (v10), shapefile and Google Earth (kmz) formats. There is a .lyr file supplied to both symbolize the feature classes and differentiate between overlapping maps at different scales. One additional dataset is a surficial geology map index.

Polygon attributes captured include: surficial material, texture, age, surface expression and geomorphological processes.

Line features captured include: surficial geological contacts; glacial limits; glacial landforms such as cirques, arêtes, eskers, meltwater channels and moraines; and non-glacial landforms such as faults, lineaments, landslides, and escarpments.

Point features captured include: field station, fossil and sample locations; glacial landforms such as erratics, kames, kettles, drumlins and flutings; permafrost features such as pingos, palsas, patterned ground and thermokarst depressions; and other non-glacial landforms such as landslides and tors. These data are a valuable resource for a variety of land-use applications in the territory, including: mineral and placer exploration, geotechnical engineering, infrastructure planning, granular resource assessments, permafrost modeling, agricultural assessments, forest management and biophysical or ecological land classification.

Downloads

Name	Location	Public	Comment
Surficial Geology - GeoYukon	https://mapservices.gov.yk.ca/GeoYukon/?layers=1UQ3ku2NQY3A2g0Fza	Yes	GeoYukon web map for viewing Surficial Geology layers.
Surficial Geology Line- Data	https://map-data.service.yukon.ca/GeoYukon/Geological/Surficial_Geology_Line/	Yes	Surficial Geology Lines - Spatial Data (GDB, SHP, KMZ)
			Surficial Geology

Surficial Geology Point - Data	https://map-data.service.yukon.ca/GeoYukon/Geological/Surficial_Geology_Point/	Yes	Geology Points - Spatial Data (GDB, SHP, KMZ)
Surficial Geology Index- Data	https://map-data.service.yukon.ca/GeoYukon/Geological/Surficial_Geology_Map_Index/	Yes	Surficial Geology Map Index - Spatial Data (GDB, SHP, KMZ)
Surficial Geology Polygon- Data	https://map-data.service.yukon.ca/geoyukon/Geological/Surficial_Geology_Polygon/	Yes	Surficial Geology Polygons - Spatial Data (GDB, SHP, KMZ)
Surficial Geology - Metadata	https://ygsftp.gov.yk.ca/YGSIDS/metadata/Surficial_Geology_Metadata.zip	Yes	This zip contains the metadata related to the Surficial Geology dataset.

Revision History

Finished Date	Comment
Jul 17, 2019	Compiled surficial geology dataset to be easier to access. Dataset was previously separated by scale, and by geometry. It is now available as a single downloadable zip in either file geodatabase or zip formats. This zip file contains the metadata, documentation, feature classes, layer files and map documents.
Aug 11, 2023	Added (20) all new surficial datasets collected since 2014. Restructured data to a simpler format, combining all geometry types into single feature sets differentiated using symbology. Added dataset to GeoYukon and CSW for easier distribution and updates.

Related References

Number	Reference Type	Document Type	Title	Year	Page(s)
2000-9	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial geology and till geochemistry of Weasel Lake (105G/13), central Yukon	2000	
GM1998-4	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Geoscience Map (Geological - Surficial)	Surficial Geology of Keno Hill, Central Yukon (105M/14)	1998	
GM1998-2	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Geoscience Map (Geological - Surficial)	Surficial Geology of Seattle Creek, Central Yukon (115P/16)	1998	
GM1998-6	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Geoscience Map (Geological - Surficial)	Surficial Geology of Dublin Gulch Map Area, Central Yukon (106D/4)	1998	

2005-7	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial Geology of Watson Lake (NTS 105A/2), Yukon (1:50 000 scale)	2005	
GM2005-3	Yukon Geological Survey	Geoscience Map (Geological - Surficial)	Surficial Geology of Fenwick Creek (NTS 105D/3), Yukon (1:50 000 scale)	2005	
2008-19	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial Geology of the Howard's Pass area (NTS 105I/12 and parts of 105I/11, 6 and 5 and 105J/9 and 8), Yukon and Northwest Territories	2008	
2008-20	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial Geology of the Howard's Pass Area (NTS 105I/11 and parts of 105I/10, 6 and 7), Yukon and Northwest Territories	2008	
2005-1	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial Geology of Seagull Creek (parts of NTS 105F/10 and 7), Yukon (1:50,000 scale)	2005	
2009-43	Yukon Geological Survey	Open File (Geological - Surficial)	Preliminary assessment of aggregate potential in Peel River basin (including parts of 106E, 106F, 106K, 106L, 116H and 116I).	2009	
1999-18	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial Geology Map and Till Geochemistry of Rose Mountain (105K/5 NW), Central Yukon	1999	
1999-20	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial Geology Map and Till Geochemistry of Blind Creek (105K/7 SE), Central Yukon	1999	
1999-19	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial Geology Map and Till Geochemistry of Swim Lakes (105K/2 NE), Central Yukon	1999	
1999-5	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial Geology Map and Till Geochemistry of Swim Lakes (105K/2 NW), Central Yukon	1999	
GM2005-5	Yukon Geological Survey	Geoscience Map (Geological - Surficial)	Surficial Geology of Robinson (NTS 105D/7), Yukon (1:50 000 scale)	2005	
1999-16	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial Geology Map and Till Geochemistry of Rose Mountain (105K/5 NE), Central Yukon	1999	
1999-17	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial Geology Map of Rose Mountain (105K/5 SE), Central Yukon	1999	
GM2005-8	Yukon Geological Survey	Geoscience Map (Geological - Surficial)	Surficial Geology of Upper Laberge (NTS 105D/14), Yukon (1:50 000 scale)	2005	
GM2005-7	Yukon Geological Survey	Geoscience Map (Geological - Surficial)	Surficial Geology of Whitehorse (NTS 105D/11), Yukon (1:50 000 scale)	2005	

GM2005-6	Yukon Geological Survey	Geoscience Map (Geological - Surficial)	Surficial Geology of MacRae (NTS 105D/10), Yukon (1:50 000 scale)	2005	
GM2005-4	Yukon Geological Survey	Geoscience Map (Geological - Surficial)	Surficial Geology of Alligator Lake (NTS 105D/6), Yukon (1:50 000 scale)	2005	
2012-5	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Home Creek (115J/13), Yukon (1:50 000 scale)	2012	
2012-4	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Tom Creek (115J/12), Yukon (1:50 000 scale)	2012	
2012-3	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Doyle Creek (115J/11), Yukon (1:50 000 scale)	2012	
2012-2	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Colorado Creek (115J/10), Yukon (1:50 000 scale)	2012	
2012-1	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Selwyn River (115J/09), Yukon (1:50 000)	2012	
2020-43	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology, Carmacks area, Yukon	2020	
2009-48	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Talbot Creek (115G/09), Yukon (1: 50 000 scale)	2009	
2009-45	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Toshingermann Lakes (115G/14), Yukon (1: 50 000 scale)	2009	
2024-2	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of greater Haines Junction area, Yukon; parts of NTS 115A/11, 12, 13 & 14, 1:15 000 scale.	2024	
GM1998-3	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Geoscience Map (Geological - Surficial)	Surficial Geology of Mount Haldane Map Area, Central Yukon (105M/13)	1998	
GM1998-1	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Geoscience Map (Geological - Surficial)	Surficial geology of Sprague Creek, central Yukon, NTS 115P/15	1998	
GM1998-5	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Geoscience Map (Geological - Surficial)	Surficial Geology Map of North McQuesten River, Central Yukon (116A/1)	1998	
1999-6	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial geology map and till geochemistry of Blind Creek (105K/7 SW), central Yukon (1:25,000 scale)	1999	
1999-7	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial Geology Map and Till Geochemistry of Mt. Mye and Faro (105K/3 E & 6 E), central Yukon	1999	

1999-8	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial Geology Map of Mount Mye and Faro (105K/3 & 6 W), central Yukon	1999	
1999-10	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial geology map and till geochemistry of Mount Mye (105K/6 W), central Yukon (1:25,000 scale)	1999	
1999-9	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Surficial)	Surficial geology map and till geochemistry of Mount Mye (105K/6 E), central Yukon (1:25,000 scale)	1999	
2013-8	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Onion Creek (115J/02), Yukon	2013	
2015-4	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Mackinnon Creek (NTS 115J/4)	2015	
2013-9	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Wellesley Lake (115J/05)	2013	
2013-11	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Mount Pattison (115J/07), Yukon	2013	
GM2005-2	Yukon Geological Survey	Geoscience Map (Geological - Surficial)	Surficial Geology of Carcross (NTS 105D/2), Yukon (1:50 000 scale)	2005	
2023-1	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology and geohazards of the greater Whitehorse area.	2023	
2014-12	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology, Dawson Region, Yukon, parts of NTS 115O/14 & 15 and 116B/1, 2, 3, & 4	2014	
2013-12	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Apex Mountain (115J/08), Yukon	2013	
2013-7	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Klaza River (115J/01), Yukon	2013	
2013-10	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology, 115J/06, Yukon	2013	
2015-5	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial Geology (NTS 115J/3)	2015	
2013-14	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Burwash Landing and Destruction Bay (parts of NTS 115G/2, 6 and 7), Yukon	2013	
2014-13	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology, Ross River Region, Yukon, parts of NTS 105K/1 & 2 and 105F/15 & 16	2014	
2014-14	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology, Faro Region, Yukon, parts of	2014	

2017-17	Yukon Geological Survey	(Geological - Surficial)	NTS 105K/3, 4, 5 & 6	2017	
2018-20	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Gladstone Creek (NTS 115G/8 and part of 115G/7)	2018	
2016-16	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology, Old Crow, Yukon, parts of NTS 116O/12	2016	
2020-5	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of the northern Kluane Ranges (parts of NTS 115G/5, 6, 11, 12)	2020	
2009-46	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Kiyera Lake (115G/15), Yukon (1: 50 000 scale).	2009	
2009-47	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial geology of Rhyolite Creek (115G/16), Yukon (1: 50 000 scale)	2009	
2011-3	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial Geology of the Village of Mayo (parts of NTS 105M/12) Yukon (1:20 000-scale)	2011	
2011-4	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial Geology of Pelly Crossing (part of NTS 115I/15) Yukon (1:20 000-scale)	2011	
2024-1	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial Geology of the Beaver Creek Area, Yukon	2024	
PALMER2024-01	Property File Collection	Report	Physical Land Development Constraints Mapping, Whitehorse City Limits Portion of the Kwanlin Dün Traditional Territory, Yukon	2023	
2023-2	Yukon Geological Survey	Open File (Geological - Surficial)	Surficial Geology of Granite Creek (part of NTS 105M/14 and 105M/15)	2023	