

Yukon Digital Bedrock Geology

April 2018 update

Release notes

This update of the Yukon Digital Bedrock Geology dataset integrates new detailed maps and compilations by YGS for the following areas:

1. Eastern Lake Laberge (105E) – Bordet (2018)
2. The Mount Freegold district, west of Carmacks (115I) – Allan and Friend (2018), including compilation of detailed mapping by Carlson (1987) and unpublished company reports that were omitted in the original digital compilation by Gordey and Makepeace (1999)
3. Frances Lake (105H) – Moynihan (2016, and unpublished), including compilation of unpublished regional mapping by G. Jilson and colleagues for the Anvil Range Corp. in the early 1980s

Also compiled in this update are detailed mapping and structural interpretation of the Tintina fault zone between Faro and Ross River by N. Hinz (Mira Geoscience, 2017), as well as a digital trace map of the Denali fault between Haines Junction and the Alaska border by Bender and Haeussler (2017). Minor revisions of some linework in southeast Yukon (95/C-D) were also made. Finally, as with previous updates, a number of corrections and enhancements to the geodatabase were made. We thank users who contributed comments and pointed out errors in the data. We welcome your feedback as we strive to continue improving the geoscience dataset for Yukon.

A layer file with symbology for the UNIT_250K field, including a Short Description for each unit, is provided for ArcGIS users. The necessary information to recreate the symbology and simplified legend of the Yukon map is also provided as attributes in the shapefile for users of other GIS platforms.

The updated GIS dataset can be downloaded from:

http://www.geology.gov.yk.ca/update_yukon_bedrock_geology_map.html.

As always, the Yukon Geological Survey welcomes any revisions or additional geological information known to the user.

Contact: Maurice.Colpron@gov.yk.ca

Recent publications relevant to this update:

- Allan, M.M. and Friend, M., 2018. Bedrock geological map of the Mount Freegold district, Dawson Range (NTS 115I/6 and parts of 115I/2,3,5,7,10,11,12). Yukon Geological Survey, Open File 2018-2, scale 1:50 000.
- Bender, A.M. and Haeussler, P.J., 2017. Digital Linework (1979-2008) Associated With Eastern Denali Fault Surface Trace Map, Eastern Alaska and Adjacent Canada. U.S. Geological Survey, data release, <https://dx.doi.org/10.5066/F7T151WC>.
- Bordet, E., 2018. Bedrock geology map of the Teslin Mountain and east Lake Laberge areas. Yukon Geological Survey, Open File 2018-1, scale 1:50 000. *2 sheets and appendices*.
- Carlson, G.G., 1987. Geology of Mount Nansen (115I/3) and Stoddart Creek (115I/6), Dawson Range, central Yukon. Yukon Geological Survey, Open File 1987-2, scale 1:30 000. *2 sheets and report, 194 p.*
- Gordey, S.P. and Makepeace, A.J., 1999. Yukon digital geology. Geological Survey of Canada, Open File D3826, scale *also: Yukon Geological Survey, Open File 1999-1(D)*.
- Mira Geoscience, 2017. Ross River geothermal exploration project: Review of the 2014 work program. Yukon Geological Survey, Miscellaneous Report 18, 141 p., including 1 map (scale 1:50 000).
- Moynihan, D.P., 2016. Bedrock geology of the upper Hyland River area (NTS 105H/8, 9, 10, 15, 16 and 105I/2), southeast Yukon. Yukon Geological Survey, Open File 2016-36, scale 1:50 000.

Yukon Bedrock Geology Map

This update of the Yukon bedrock geology map builds upon the previous compilation by Gordey and Makepeace (1999, 2001). It includes new, detailed bedrock geology maps and regional compilations that have been published by the Yukon Geological Survey and the Geological Survey of Canada between 1999 and 2015, as well as some recent thesis works. A few of these maps were partially integrated into the digital dataset by Gordey and Makepeace (2003), but only as overlay to the 1999 compilation. A number of errors and omissions from the 1999 compilation of Gordey and Makepeace were also noted and corrected during compilation of this version of the map.

The Yukon bedrock geology GIS dataset is regularly updated and can be downloaded from the Yukon Geological Survey's website: www.geology.gov.yk.ca. Users are advised to consult the website regularly to ensure they are working with the latest version of the geodatabase or shape files. This update of the GIS dataset includes an expanded attribute structure (compared to the 1999 dataset) that facilitates searching of the geodatabase.

This dataset requires the gscGeology font in order to properly label the bedrock polygons using the LABEL_1M or LABEL_250K fields. This font file is packaged with the dataset when downloaded from geomaticsyukon.ca or geology.gov.yk.ca.

The Yukon Geological Survey aims to provide users with the best available geoscience data for Yukon. Any revisions or additional geological information known to the user would be welcomed by the Yukon Geological Survey.

Contact Person: Maurice Colpron (Maurice.Colpron@gov.yk.ca)

Projection information:

```
Projection ALBERS
Datum NAD83
Zunits NO
Units METERS
Spheroid GRS1980
Xshift 0.0000000000
Yshift 0.0000000000
Parameters
61 40 0.000 /* 1st standard parallel
68 0 0.000 /* 2nd standard parallel
-132 30 0.000 /* central meridian
59 0 0.000 /* latitude of projection's origin
500000.00000 /* false easting (meters)
500000.00000 /* false northing (meters)
```

Yukon Geology Centroids (Polygons) Attributes – April 2018

UNIT_1M	1 million-scale map unit	TEXT	25
UNIT_250K	1:250 000-scale map unit	TEXT	25
UNIT_ORIGINAL	Original map unit – at scale of capture (from published map)	TEXT	25
SUPERGROUP	Supergroup	TEXT	50
GP_SUITE	Group (stratigraphic); Suite (plutonic, metamorphic); Complex; Assemblage	TEXT	50
FORMATION	Formation (stratigraphic) and equivalents	TEXT	50
MEMBER	Member (stratigraphic) and equivalents	TEXT	50
NAME	Name of geological features such as plutons and batholiths	TEXT	50
TERRANE	Terrane	TEXT	50
TERRANE_LABEL	Short label for terrane (e.g. YT, AX, SM...)	TEXT	10
TECTONIC_ELEMENT	Tectonic element (e.g. Selwyn basin, Whitehorse trough)	TEXT	50
ERA_MAX	Maximum age – Era (timescale)	TEXT	50
PERIOD_MAX	Maximum age – Period/System (timescale)	TEXT	50
EPOCH_MAX	Maximum age – Epoch/Series (timescale)	TEXT	50
STAGE_MAX	Maximum age – Stage/Age (timescale)	TEXT	50
AGE_MAX_MA	Maximum age – numerical (in m.y.); derived from IUGS timescale for stratigraphic units OR from geochronological constraints for igneous rocks (date + error)	NUMBER	FLOAT
ERA_MIN	Minimum age – Era (timescale)	TEXT	50
PERIOD_MIN	Minimum age – Period/System (timescale)	TEXT	50
EPOCH_MIN	Minimum age – Epoch/Series (timescale)	TEXT	50
STAGE_MIN	Minimum age – Stage/Age (timescale)	TEXT	50
AGE_MIN_MA	Minimum age – numerical (in m.y.); derived from IUGS timescale for stratigraphic units OR from geochronological constraints for igneous rocks (date - error)	NUMBER	FLOAT
ROCK_CLASS	Rock classification – sedimentary, metamorphic, plutonic, volcanic	TEXT	50
ROCK_SUBCLASS	Rock subclassification – clastic, carbonate, chert...; Prefix – ‘m’ = metamorphic, v = volcanic, p = plutonic; Suffix – for igneous rocks: ‘mafic’, ‘inter’ = intermediate, ‘felsic’, ‘ultram’ = ultramafic	TEXT	50
SHORT_DESCRIPTION	Abbreviated map unit description	TEXT	150
ROCK_MAJOR	Major lithology(ies) within map unit	TEXT	100
ROCK_MINOR	Minor lithology(ies) within map unit	TEXT	100
ROCK_NOTES	Comment(s) for rock type	TEXT	254
REFERENCE	Source for polygon (publication – e.g. Tempelman-Kluit (1984) - GSC OF 1101)	TEXT	254
LABEL_250K	Code for 250k label using gscGeology font	TEXT	12
LABEL_1M	Code for 1M label using gscGeology font	TEXT	12
COMMENTS	Version Tracking Notes	TEXT	250
RED	Red component of RGB colour for map info users	SHORT	SHORT
GREEN	Green component of RGB colour for map info users	SHORT	SHORT

BLUE	Blue component of RGB colour for map info users	SHORT	SHORT
MI_COLOUR	Map Info Colour Setting	LONG INT	LONG INT

Yukon Geology Fault Attributes – April 2018

FEATURE	fault (<i>needed for query from merge line set</i>)	TEXT	25
TYPE	Type of fault – thrust, normal, strike-slip, oblique, unknown	TEXT	30
SUBTYPE	Dextral, sinistral, upright, overturned, unknown	TEXT	30
CONFIDENCE	Reliability – defined, approximate, inferred, covered	TEXT	15
NAME	Name of fault	TEXT	50
REFERENCE	Source (publication)	TEXT	254
SCALE	Minimum scale for display (x 1000) – 1000, 250, 50...	NUMBER	INTEGER
SYMBOL_DIR	Direction of symbols for faults (e.g. NE, SW, etc...)	TEXT	10

Yukon Geology Contact Attributes – April 2018

FEATURE	contact (<i>needed for query from merge line set</i>)	TEXT	25
TYPE	Type of contact – stratigraphic, intrusive	TEXT	30
SUBTYPE	Unconformity, facies change, gradational... BLANK = Conformable	TEXT	30
CONFIDENCE	Reliability – defined, approximate, inferred, covered	TEXT	15
NAME	Name of fault (<i>ignore for contacts</i>)	TEXT	50
REFERENCE	Source (publication)	TEXT	254
SCALE	Minimum scale for display (x 1000) – 1000, 250, 50...	NUMBER	INTEGER
SYMBOL_DIR	Direction of symbols for faults (<i>ignore for contacts</i>)	TEXT	10