

Bedrock Geology of the Western Gunflint Trail area, northeastern Minnesota; Jirsa, Mark A.

Minnesota Geological Survey  
MGS Miscellaneous Map Series, M-191  
2011

Projection: UTM, NAD83, zone 15

Files associated with project:

m191\_extras.zip--supplementary GIS and other files.

GIS:

str\_ptsdM191--point shapefile of structure measurements and locations acquired by the author, 2006-2010. Those in the Duluth Complex are transferred graphically from Morey and others, 1981, m46 and from field mapping by Costello and others, 2009, uses str\_pts\_M191.lyr to draw symbols.

map\_area--polygon shapefile of map area boundary

xsection\_lns--line shapefile showing locations of bedrock cross sections.

drg373a, 373b, 373c, 373d--USGS quad maps trimmed to map area, use bwtiff.lyr to obtain black and white image.

outcrop--polygon shapefile of outcrop delineated from field work by the author and transferred from prior mapping in the southern part of the area.

inferred outcrop--polygon shapefile of outcrop delineated by the author from post-forest fire air photography.

anticline\_syncline--line shapefile depicting the inferred axial surface trace of folds, uses anticline\_syncline.lyr file to symbolize the lines.

dike--line shapefile depicting location of diabasic and lamprophyric dikes taken from outcrop and extrapolation from exposures using digital aeromagnetic maps.

inferred dikes--line shapefile depicting location of mafic dikes inferred from digital aeromagnetic maps.

contacts\_faults--line shapefile of unit contacts and faults, uses contact\_fault.lyr to symbolize lines.

bedrock\_geology--polygon shapefile of bedrock units, uses bedrock geology.lyr to symbolize unit polygons

Non-Gis files:

cross\_sections.pdf--pdf image of the bedrock geology cross sections on the map plate

m191\_mMetadata.pdf--metadata for the bedrock map (an xml version is also included in the supplementary zip file)

M-191.pdf--pdf image of the Western Gunflint Trail bedrock map