

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Digital data for the preliminary bedrock geologic map
of the Roseau 1°x2° quadrangle,
Minnesota, U.S.A., and Ontario, Canada,
in GSMAP Version 7.0 format

By

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Brief Description of the Computer Files

1_README.DOC - Documentation of methodology used for the map preparation
ROSFINAL.TXT - ASCII file containing map unit descripts for the geologic map
ROSFINAL.LSF - GSMAP data file
ROSFINAL.NDX - GSMAP data file
ROSFINAL.PRJ - Cartographic projection file (UTM projection, Grid Zone 15, 95o West Longitude central meridian)
ROSFINAL.PLT - Plot control file containing line and symbol code information for use with GSMAP Version 7.0
ROSFINAL.PL6 - Plot control file for use with GSMAP Version 6.0
20.FNT - Font file necessary for unit names with subscripts
2.FNT - Font file

Note for Plotting

The file will plot from an IBM PC compatible microcomputer on an Hewlett-Packard compatible pen plotter. Two plotting pens are specified in the plot file. Pen #1 should be a thin pen to plot contacts, lettering, and symbols. Pen #2 should be a thicker pen and is used for faults and the Proterozoic diabase dikes.

Introduction

The geologic map for the Roseau 1°x2° quadrangle is released herein in digital format so that users in both the public and private sectors may have access to the original data as it was prepared for the standard Open-File and Miscellaneous Map Series formats (Day and others, 1990). The map was originally compiled at 1:250,000. Therefore, the accuracy of some of the digital data, such as the location of the geologic contacts, faults, and structural symbols, are valid at a scale of 1:250,000 and smaller.

The locations of the diamond drill holes were compiled from original company reports on file at the Minnesota Department of Natural Resources in Hibbing, Minnesota. The drill holes were replotted and digitized from 1:100,000-scale base maps. The locations for most diamond drill holes are in Klein and Day (1989). However, a few new drill holes, which were reported to the Minnesota Department of Natural Resources subsequent to the release of Klein and Day (1989), have been included in this report.

The original geologic map was compiled and digitized at a scale of 1:250,000 using GSMAP Version 6.0 (Selner and Taylor, 1989). GSMAP Version 7.0 (Selner and Taylor, 1991) was used for final preparation of this report. The data files ROSFINAL.LSF and ROSFINAL.NDX, as well as the projection file ROSFINAL.PRJ, are compatible with GSMAP Version 6.0. There are only a few minor changes between the plot files of the different versions of GSMAP. Therefore, users of GSMAP Version 6.0 can easily access the data using the plot file ROSFINAL.PL6.

The original base topographic map was prepared using the Universal Mecator Grid Zone 15 projection with the 95° West

Longitude as central meridian. All geologic compilation and digitization was done using these parameters.

Concluding Remarks

As is the nature of all geologic maps, the "accuracy" of the map is only as good as the data available at the time of preparation. Every attempt was made to visit all known outcrops within the United States and several in the Ontario parts of the map. A large majority of the available drill core was examined. The most current geophysical compilations (at 1:250,000 scale) were used. Undoubtedly there will be geologic and geophysical information either not currently available to the public sector or obtained after release of this report. Hopefully that new information will improve our understanding of the geology of the Roseau area, and, therefore, the cartography of this map will correspondingly change.

References Cited

- Day, W.C., Klein, T.L., and Schulz, K.J., 1990, Preliminary bedrock geologic map of the Roseau 1 x 2 quadrangle, Minnesota, U.S.A. and Ontario, Canada. U.S. Geological Survey Open-File Report OF 90-0544A, 1:250,000 scale.
- Klein, T.L., and Day, W.C., Tabular summary of lithologic logs and geologic characterists from diamond drill holes in the western International Falls and the Roseau 1ox2o quadrangles, northern Minnesota. U.S. Geological Survey Open-File Report 89-346.
- Selner, G.I., and Taylor, R.B., 1989, GSDRAW and GSMAP System Version 6.0: Graphics programs and utility programs for the IBM PC and compatible microcomputers to assist compilation and publication of geologic maps and illustrations. U.S. Geological Survey Open-File Reports 89-373A and 89-373B.
- Selner, G.I., and Taylor, R.B., 1991, GSMAP System Version 7.0: Graphics programs and related utility programs for the IBM PC and compatible microcomputers to assist compilation and publication of geologic maps and illustrations using geodetic or cartesian coordinates. U.S. Geological Survey Open-File Report 91-1.