

**FIELD STATION LOCATIONS AND MAGNETIC SUSCEPTIBILITY DATA
COLLECTED IN 2019 FOR THE EASTERN TANACROSS PROJECT,
TANACROSS AND NABESNA QUADRANGLES, ALASKA**

Travis J. Naibert, Evan Twelker, Alicja Wypych, Jennifer E. Athey, Rainer J. Newberry, Julian A. Lopez, Sean P. Regan, Karri R. Sicard, Alec D. Wildland, and W. Chris Wyatt

Raw Data File 2019-9

This report has not been reviewed for technical content or for conformity to the editorial standards of DGGS.

2020
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS



STATE OF ALASKA

Mike Dunleavy, Governor

DEPARTMENT OF NATURAL RESOURCES

Corri A. Feige, Commissioner

DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

Steve Masterman, State Geologist & Director

Publications produced by the Division of Geological & Geophysical Surveys are available to download from the DGGs website (dgggs.alaska.gov). Publications on hard-copy or digital media can be examined or purchased in the Fairbanks office:

Alaska Division of Geological & Geophysical Surveys (DGGs)

3354 College Road | Fairbanks, Alaska 99709-3707

Phone: 907.451.5010 | Fax 907.451.5050

dggspubs@alaska.gov | dgggs.alaska.gov

DGGs publications are also available at:

Alaska State Library, Historical
Collections & Talking Book Center
395 Whittier Street
Juneau, Alaska 99801

Alaska Resource Library and
Information Services (ARLIS)
3150 C Street, Suite 100
Anchorage, Alaska 99503

Suggested citation:

Naibert, T.J., Twelker, Evan, Wypych, Alicja, Athey, J.E., Newberry, R.J., Lopez, J.A., Regan, S.P., Sicard, K.R., Wildland, A.D., and Wyatt, W.C., 2020, Field station locations and magnetic susceptibility data collected in 2019 for the Eastern Tanacross Project, Tanacross and Nabesna quadrangles, Alaska: Alaska Division of Geological & Geophysical Surveys Raw Data File 2019-9, 2 p. <http://doi.org/10.14509/30268>



FIELD STATION LOCATIONS AND MAGNETIC SUSCEPTIBILITY DATA COLLECTED IN 2019 FOR THE EASTERN TANACROSS PROJECT, TANACROSS AND NABESNA QUADRANGLES, ALASKA

Travis J. Naibert¹, Evan Twelker¹, Alicja Wypych¹, Jennifer E. Athey¹, Rainer J. Newberry², Julian A. Lopez³, Sean P. Regan², Karri R. Sicard¹, Alec D. Wildland², and W. Chris Wyatt¹

INTRODUCTION

During the 2019 field season, geologists from the Alaska Division of Geological & Geophysical Surveys (DGGS) conducted 1:100,000-scale geologic mapping and sampling of a 1,900-square-mile area in the eastern Tanacross and Nabesna quadrangles. The area lies approximately 15 miles east of Tok and 12 miles north of Northway. The area is of present and historical interest for its potential mineral resources, including porphyry copper-molybdenum-gold, intrusion-related gold, volcanogenic massive sulfides, and rare-earth-element enriched mineralization. It encompasses prospects including Oreo, Ladue, Pushbush, Honks, Goodrich, and Mount Fairplay. The majority of the area was previously mapped at reconnaissance 1:250,000 scale by the USGS during the 1960s (Foster, 1970). The purpose of this project is to produce a more accurate and modern geologic map and supporting data that will promote mineral discovery in eastern Interior Alaska.

This report provides locations, field descriptions of rocks, and magnetic susceptibility measurements from rock outcrop and/or hand samples throughout the map area. The data associated with this report are available in digital format as a comma-separated value (CSV) file. All files can be downloaded from the DGGS website (<http://doi.org/10.14509/30268>).

DOCUMENTATION OF METHODS

Location data for field stations were collected using GPS-enabled tablets or smartphones running the ESRI Collector App. Data were merged into an ArcGIS geodatabase. The devices have a reported error of about 10 m. Latitude and longitude are reported in the WGS84 datum.

Field rock descriptions are composed of observations and interpretations made by project geologists in the field or in the field office and may not be updated to reflect further observations, geochemical data, microscopic investigation, or other information. Field rock descriptions in this data file have not been reviewed for technical content and should be considered preliminary.

Magnetic susceptibility measurements were collected using Terraplus KT-10 model handheld magnetic susceptibility meters. The KT-10 meters have a maximum sensitivity of 1×10^{-6} SI units on smooth surfaces and a measurable susceptibility range between 0.001×10^{-3} to 1999.99×10^{-3} SI. The values reported here are for individual measurements performed on representative surfaces of the sampled rock outcrop and/or hand samples. Up to twelve susceptibility readings were recorded at each field station. Efforts were

¹ Alaska Division of Geological & Geophysical Surveys, 3354 College Road, Fairbanks, Alaska 99709-3707

² Department of Geology & Geophysics, University of Alaska, P.O. Box 755780, Fairbanks, AK 99775-5780

³ Colorado College, Department of Geology, 14 East Cache la Poudre St., Colorado Springs, CO 80903

made to avoid anisotropic effects by measuring multiple sides of outcrops and/or hand samples whenever possible. Magnetic susceptibility was not measured at a minority of field stations because hand samples were intensely weathered or were not large enough to cover the coil of the KT-10 meter for accurate measurement. These station locations are provided with zero measurements for completeness.

ACKNOWLEDGMENTS

The DGGS Eastern Tanacross Project was funded by State of Alaska general funds and by the U.S. Geological Survey under Cooperative Agreement Number G19AC00262.

Disclaimer: The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Geological Survey. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Geological Survey.

REFERENCES

Foster, H.L., 1970, Reconnaissance geologic map of the Tanacross Quadrangle, Alaska: U.S. Geological Survey Miscellaneous Geologic Investigations Map 593, 1 sheet, scale 1:250,000.