# FIELD STATION LOCATIONS AND MAGNETIC SUSCEPTIBILITY DATA COLLECTED IN 2025 FOR THE STEESE PROJECT, YUKON–TANANA UPLANDS, ALASKA

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**Raw Data File 2025-28**

DGGS geologist, Sandra Walser, conducting geologic bedrock mapping fieldwork in 2025.



2025
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

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# FIELD STATION LOCATIONS AND MAGNETIC SUSCEPTIBILITY DATA COLLECTED IN 2025 FOR THE STEESE PROJECT, YUKON–TANANA UPLANDS, ALASKA

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## INTRODUCTION

During the 2025 field season, geologists from the Alaska Division of Geological & Geophysical Surveys (DGGS) conducted 1:100,000-scale bedrock geologic mapping in the Yukon-Tanana Uplands of eastern Interior Alaska, including parts of the Big Delta, Circle, Fairbanks, and Livengood quadrangles: areas that are included within the boundaries of the Steese, Chena, and Tolovana mapping projects. Most of the 2025 fieldwork campaign occurred within the Steese project boundary (fig. 1).

The project areas were identified by the U.S. Geological Survey (USGS) as prospective for rare-earth elements (REEs) and both critical and non-critical mineral resources (Karl and others, 2016) and include multiple mineral prospects with current or historic mineral exploration. The Chena and Steese project areas were previously mapped at 1:250,000 scale (Foster and others, 1983; Weber and others, 1978), and more detailed geologic maps are available for certain portions of the project areas (e.g., Foster and others, 1977; Smith and others, 1994; Wiltse and others, 1995; Newberry and others, 1996; Day and others, 2003; Werdon and others, 2004; Lessard and others, 2022). The 2025 fieldwork conducted by DGGS builds on ongoing USGS and DGGS collaborative efforts to upgrade the geologic data in the Yukon-Tanana Uplands.

This report provides locations, field descriptions of rocks, and magnetic susceptibility measurements from rock outcrops and/or hand samples throughout each map area. These data are provided as a Raw Data File under an open end-user license and are available on the DGGS website https://doi.org/10.14509/31736.

## METHODS

**Location data** for field stations were collected using GPS-enabled tablets or smartphones running the Esri Field Maps app. Data were merged into an ArcGIS geodatabase. The devices have a reported error of 10–12 m. Latitude and longitude are reported in the WGS84 datum.

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

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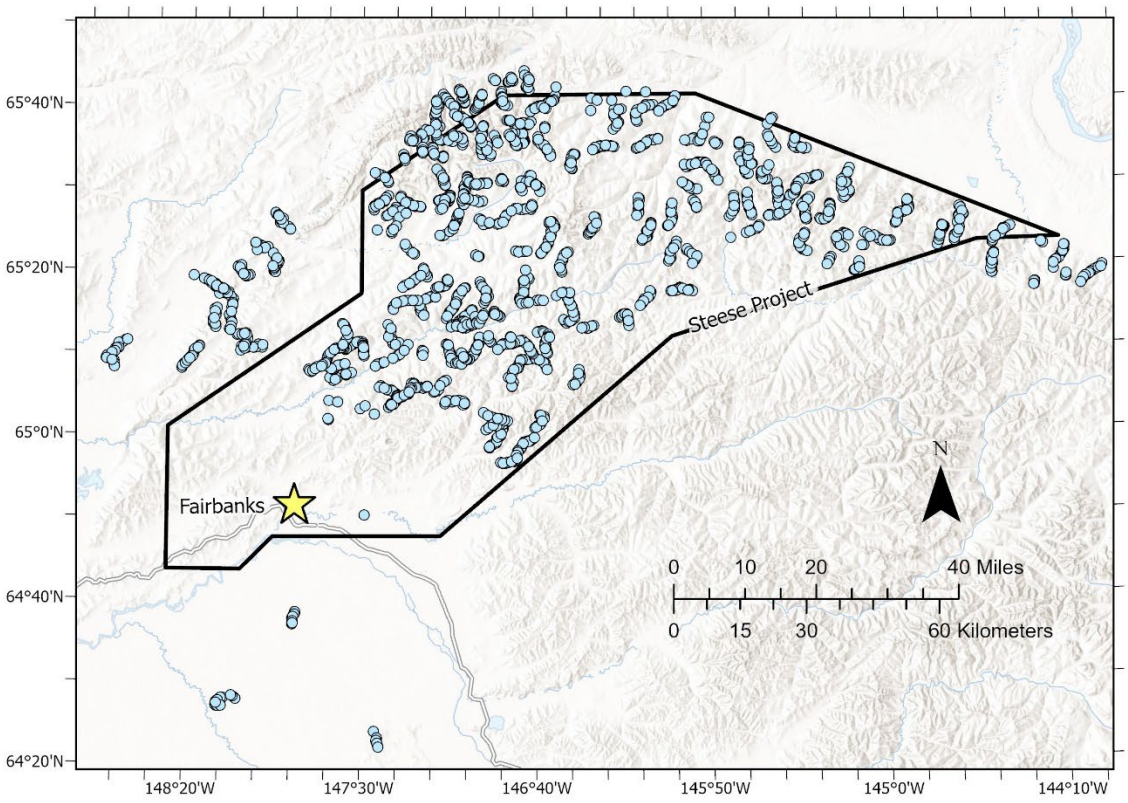


**Figure 1**. Station locations (blue points) from the 2025 geologic field mapping campaign. The black solid line represents the Steese project outline.

**Magnetic susceptibility measurements** were collected using the Terraplus KT-10 model handheld magnetic susceptibility meters. The KT-10 meters have a maximum sensitivity of 1 x $10^{-6}$ Système International (SI) units on smooth surfaces and a measurable susceptibility range between 0.001 x $10^{-3}$ and 1,999.99 x $10^{-3}$ SI. The values reported here are for individual measurements performed on representative surfaces of the sampled rock outcrop and/or hand samples. We recorded up to 12 susceptibility readings at each field station, measuring multiple sides of outcrops and/or hand samples whenever possible. We did not measure magnetic susceptibility at a small subset of field stations because hand samples were severely weathered or too small to fit the KT-10 coil for accurate measurement.

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G23AC00372. 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 USGS. Mention of trade names or commercial products does not constitute their endorsement by the USGS.

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