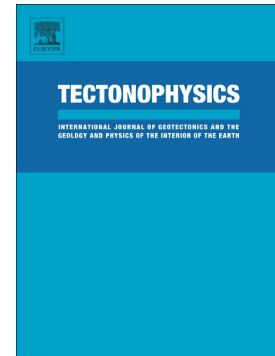


Accepted Manuscript

Interpretation of aeromagnetic data in the Jameson Land Basin, central East Greenland: Structures and related mineralized systems

Anaïs Brethes, Pierpaolo Guarnieri, Thorkild Maack Rasmussen, Tobias Erich Bauer



PII: S0040-1951(18)30018-0
DOI: <https://doi.org/10.1016/j.tecto.2018.01.008>
Reference: TECTO 127746
To appear in: *Tectonophysics*
Received date: 21 June 2017
Revised date: 13 December 2017
Accepted date: 4 January 2018

Please cite this article as: Anaïs Brethes, Pierpaolo Guarnieri, Thorkild Maack Rasmussen, Tobias Erich Bauer , Interpretation of aeromagnetic data in the Jameson Land Basin, central East Greenland: Structures and related mineralized systems. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Tecto(2017), <https://doi.org/10.1016/j.tecto.2018.01.008>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Title: Interpretation of aeromagnetic data in the Jameson Land Basin, central East Greenland: structures and related mineralized systems

Order of authors: Brethes Anaïs^{1,2} (anais.brethes@ltu.se), Guarnieri Pierpaolo¹ (pgua@geus.dk), Rasmussen Thorkild Maack² (thorkild.maack.rasmussen@ltu.se), Bauer Tobias Erich² (tobias.bauer@ltu.se)

Corresponding author: Brethes Anaïs^{1,2} (anais.brethes@ltu.se)

Affiliations:

¹Geological Survey of Denmark and Greenland (GEUS) – Department of Petrology and Economic Geology - Øster Voldgade 10 - 1350 København K - Denmark

Corresponding author: Anaïs Brethes (anais.brethes@ltu.se);

²Luleå University of Technology (LTU), Department of Civil, Environmental and Natural Resources Engineering 971 87 – Luleå, Sweden

Color in print is required for this paper

ABSTRACT

This paper provides a detailed interpretation of several aeromagnetic datasets over the Jameson Land Basin in central East Greenland. The interpretation is based on texture and lineament analysis of magnetic data and derivatives of these, in combination with geological field observations. Numerous faults and Cenozoic intrusions were identified and a chronological interpretation of the events responsible for the magnetic features is proposed built on crosscutting relationships and correlated with absolute ages. Lineaments identified in enhanced magnetic data are compared with structures controlling the mineralized systems occurring in the area and form the basis for the interpretations presented in this paper. Several structures associated with base metal mineralization systems that were known at a local scale are here delineated at a larger scale; allowing the identification of areas displaying favorable geological settings for mineralization. This study demonstrates the usefulness of high-resolution airborne magnetic data for detailed structural interpretation and mineral exploration in geological contexts such as the Jameson Land Basin.

Keywords: East Greenland, Jameson Land Basin, mineralization, aeromagnetic data, structures

Download English Version:

<https://daneshyari.com/en/article/8908767>

Download Persian Version:

<https://daneshyari.com/article/8908767>

[Daneshyari.com](https://daneshyari.com)