GEOSCIENCE BC FINAL REPORT - 2016-12

DISTRIBUTION AND NATURE OF THE EOCENE OOTSA LAKE GROUP IN THE CHILCOTIN PLATEAU, PARTS OF QUESNEL AND ANAHIM LAKE MAP AREAS (NTS 093B & 093C), CENTRAL BRITISH COLUMBIA

Prepared for Geoscience BC

By

Esther Bordet and Craig J.R. Hart

University of British Columbia, Mineral Deposit Research Unit

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PROJECT BACKGROUND

In July 2009, Geoscience BC issued a request for proposal to stimulate exploration activity and attract oil and gas investment in the Nechako Basin, British Columbia. The Mineral Deposit Research Unit (MDRU) submitted a successful proposal to address the following indicated Areas of Interest:

- Constraints on the distribution and thickness of the Eocene volcanic rocks from either direct sampling or remote sensing methods
- Development of regional tectonic models that integrate a wide variety of relevant geoscience datasets, including faulting history, and have the potential to indicate the thickness of Cretaceous and/or Eocene sedimentary rocks across the basin
- Heat flow and thermal evolution of the Nechako basin

The project, from January 2010 to April 2014, was led by MDRU Director Craig Hart. The project's main components, including field work, data collection, analytical work, and data integration and interpretations were conducted by Esther Bordet, an MDRU PhD candidate.

A preliminary project report was published in 2011, and included primary results on the geology and structure of the Eocene volcanic sequence: "Bordet, E., Hart, C. and Mitchinson, D. (2011): Preliminary Lithological and Structural Framework of Eocene Volcanic Rocks in the Nechako Region, Central British Columbia; Geoscience BC, Report 2011-13, 81 p."

The present report contains the most up to date information, based on two additional field seasons, a new batch of geochemical analyses, and a complete physical property database. This report comprises three main sections, detailed below.

SECTION 1 – COMPILED REFERENCES

This section outlines the main publications related to this project, including a journal article, technical reports and a thesis. These publications together constitute the most up to date and comprehensive datasets and interpretations of the geology of Eocene volcanic rocks of the Chilcotin and Nechako Plateaus, central British Columbia. The reader is invited to refer to these publications for further information.

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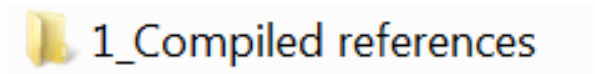

SECTION 2 – FIELD AND ANALYTICAL DATABASE

The second section is a complete database (Excel format) of all field and analytical data collected during this research, including description and location of outcrops, physical property measurements, structural measurements, and geochemistry. This database replaces the one submitted along with the 2011 report (Bordet et al. 2011).

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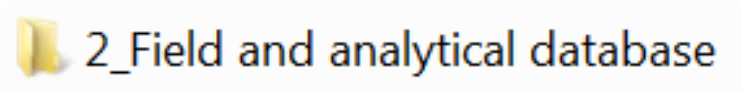

SECTION 3 – GEOLOGICAL MAP

The third section is a geological map of a portion of the Chilcotin and Nechako Plateau, central British Columbia. A geological map (PDF format) displays the distribution of all newly discovered outcrops and attributed map units. Outcrop positions can be correlated with the field database of Section 2.

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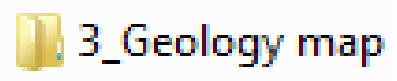

SECTION 4 – GIS FILES

The fourth section is the project GIS files used in the geological map in ArcGIS and MapInfo formats. This includes the geology, field stations, geochemistry and geochronology sample locations and structure measurement database.

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ACKNOWLEDGEMENTS

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