

## Re-Release of the Mineral Deposit Research Unit's Iskut River Area Maps (1989–1993), Northwestern British Columbia (NTS 104B/08, /09, /10, Parts of 104B/01, /07, /11)

P.D. Lewis, Eldorado Gold Corporation, Vancouver, BC, peterl@eldoradogold.com

C.J.R. Hart, Mineral Deposit Research Unit, University of British Columbia, Vancouver, BC

K.A. Simpson, Geoscience BC, Vancouver, BC

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### Introduction

Between 1989 and 1993, the Mineral Deposit Research Unit (MDRU) at the University of British Columbia conducted the study *Metallogenesis of the Iskut River Area, Northwestern British Columbia* (the Iskut River Area Project). This project was undertaken in response to intense interest by the mineral exploration and mining industry and the need for an integrated approach to metallogenesis and discovery in the region. The original maps associated with this project were released in Lewis et al. (2001) as Adobe Acrobat® PDF files of AutoCAD® line drawings. Geoscience BC and MDRU are re-releasing these highly detailed maps to the public in a modern GIS format, which will be a valuable contribution to the BC exploration industry.

### Iskut River Area Project

The MDRU's Iskut River Area Project was sponsored by 17 companies, and received additional financial support from the Natural Sciences and Engineering Research Council of Canada (NSERC) and the Science Council of British Columbia. The study included collaboration with the Geological Survey of Canada and the British Columbia Geological Survey, and involved one research associate, three postdoctoral fellows and five M.Sc. students at the University of British Columbia. Supporting companies included at the time BP Canada, Inc., International Corona Corp., Homestake Canada Ltd., Kenrich Mining Corp., Noranda Inc., Teck Corporation, Cominco Ltd., Granges Inc., Kennecott Canada Inc., Lac Minerals Ltd., Placer Dome Inc., and partial support from Ecstall Mining Corp., Newhawk Gold Mines Ltd., Skyline Gold Corp., Gulf In-

ternational Minerals Ltd., Prime Resources Group Inc. and Solomon Resources Ltd.

The Iskut River area (Figure 1) is a relatively small (approximately 100 by 60 km) but metallogenically well-endowed segment of the Canadian Cordillera. It is host to a range of economically significant ore deposits and styles of mineralization including porphyry Cu and Cu-Au, skarn Cu-Au, shear-hosted Au-Ag, epithermal Au-Ag and volcanic-hosted massive sulphide-sulphosalt systems. The past-producing Eskay Creek, Snip and Johnny Mountain gold mines are within the project area. To the south are the past-producing Granduc volcanogenic massive sulphide deposit and the active Stewart mining camp. Recent exploration in the region continues to demonstrate the significant discovery potential of the region and in particular the substantial Au and Cu-Au endowment. Discovery successes are evident at projects such as Brucejack, Snowfield and Kerr-Sulphurets-Mitchell (KSM).

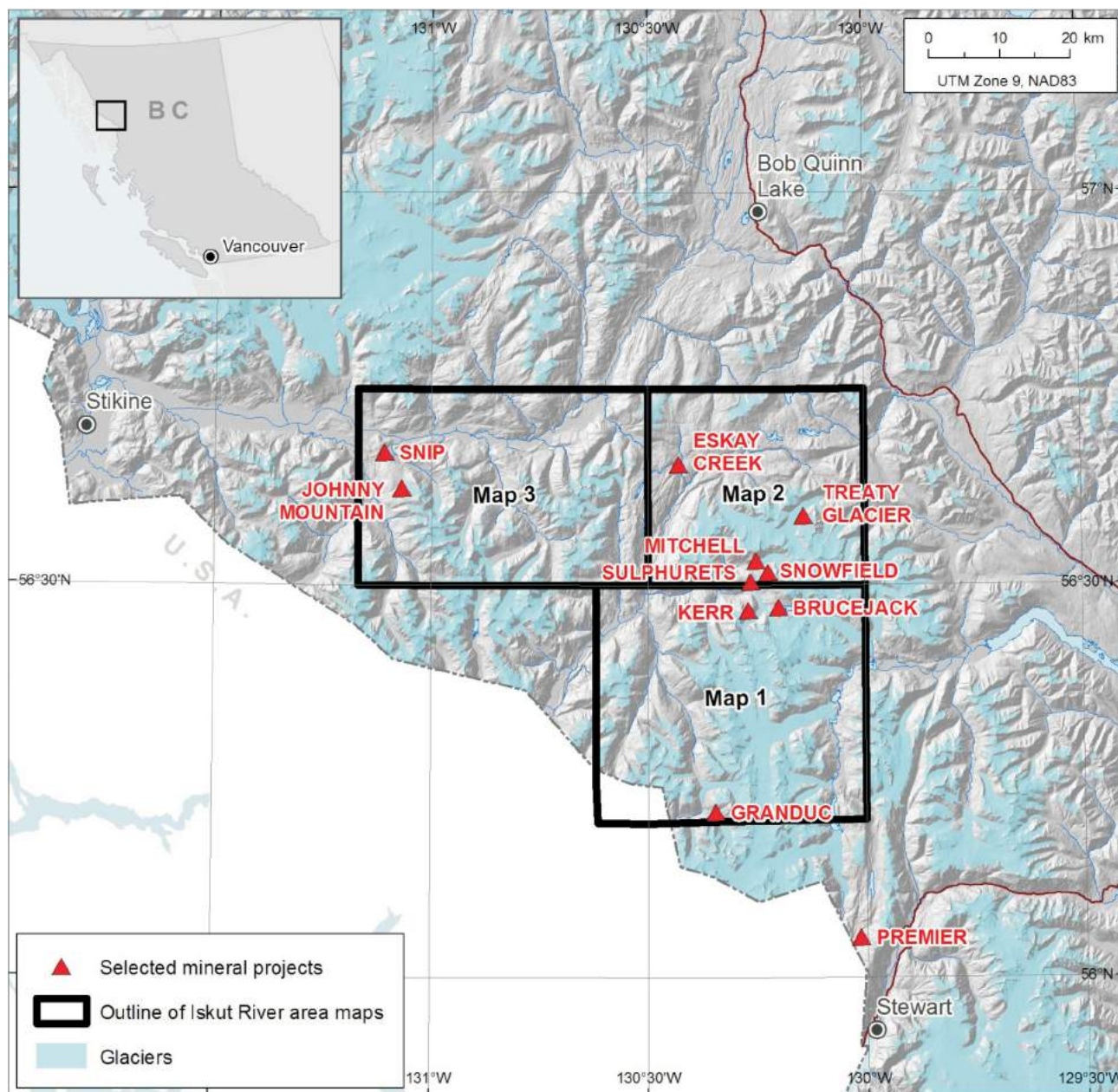
The MDRU's Iskut River Area Project was established to develop a better understanding of the variety of mineral occurrences, their settings and controls within the Iskut River area. The project integrated numerous deposit-specific studies and metallogenic research with regional structural and stratigraphic mapping. Details of the project are principally contained within a 26 chapter volume published by MDRU in June 2001 (Lewis et al., 2001). Other project details were published as theses and as provincial and federal geological survey papers.

The major deliverable of the project, 1:50 000 maps of NTS 104B/08, /09, /10 and parts of 104B/01, /07, /11, resulted from four years of intense field mapping led by the senior author. These maps were based on a lithofacies mapping approach and integrated lithochemical sampling, radiometric dating and biostratigraphic studies to unravel the complex volcano-sedimentary succession in the Iskut River area. Also incorporated were data from industry supporters of the project. Detailed geological information sup-

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**Keywords:** *Iskut River, northwestern British Columbia, volcanic facies mapping, structural mapping*

*This publication is also available, free of charge, as colour digital files in Adobe Acrobat® PDF format from the Geoscience BC website: <http://www.geosciencebc.com/s/DataReleases.asp>.*



**Figure 1.** Location of the Iskut River area showing the outlines of the three revised 1:50 000 scale maps (Maps 1, 2, 3), which include NTS map sheets 104B/08, /09, /10 and parts of 104B/01, /07, /11, northwestern British Columbia. Select mineral projects are shown. Kerr, Sulphurets and Mitchell are collectively referred to as the KSM project. Data from GeoBase® (2004), Massey et al. (2005), Natural Resources Canada (2007), GeoBC (2008) and BC Geological Survey (2012).

porting the maps can be found in Chapter 6 of Lewis et al. (2001).

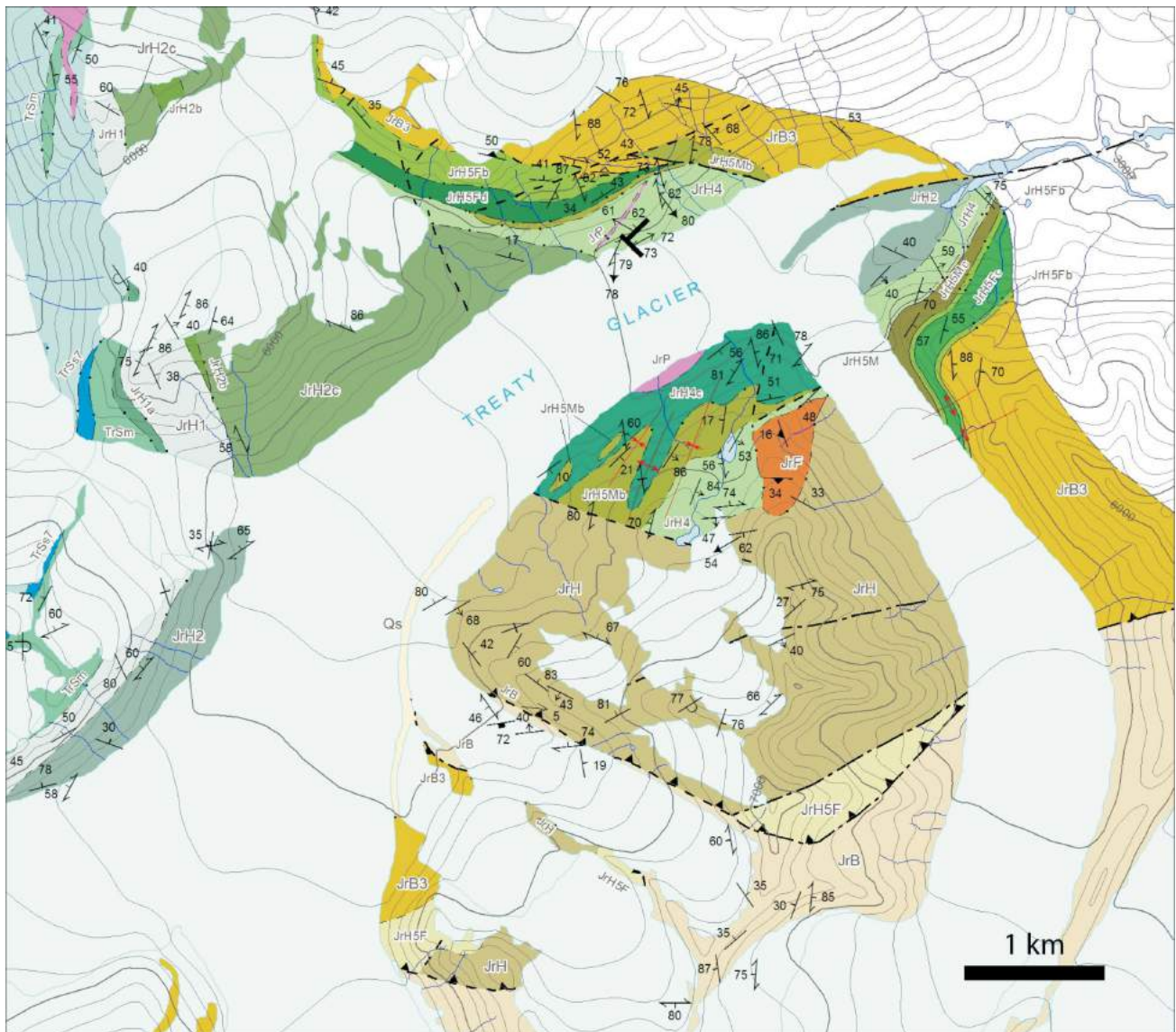
### Revised Maps

The MDRU’s Iskut River area maps were originally produced and released as AutoCAD line drawings in Lewis et al. (2001). Geoscience BC converted the original AutoCAD linework to topologically correct features in ArcGIS format and the revised maps will be released as ArcGIS shapefiles and PDF digital maps. The three 1:50 000 scale maps (Figure 1; Maps 1, 2, 3) cover an area

of approximately 1512 km<sup>2</sup> and include NTS map sheets 104B/08, /09, /10 and parts of 104B/01, /07, /11. They illustrate the complex volcano-sedimentary stratigraphy, structural architecture and intrusive complexity of this highly prospective region of the province and provide some of the most detailed and comprehensive mapping data available to the public for this region (Figure 2).

### Summary

As an ArcGIS product, Geoscience BC and the Mineral Deposit Research Unit’s newly revised maps of the Iskut River



**Figure 2.** Portion of Map 2 from the Treaty glacier area, northwestern British Columbia, illustrating the level of detail of the mapping and the quality of the newly released maps.

area will provide the mining and exploration industry with some of the most detailed volcano-sedimentary facies and structural information available for this highly prospective part of the province. The new maps will be available for download free of charge from both Geoscience BC's website ([www.geosciencebc.com](http://www.geosciencebc.com)) and the Mineral Deposit Research Unit's website ([www.mdru.ubc.ca](http://www.mdru.ubc.ca)) in early 2013.

### Acknowledgments

The digital elevation model in Figure 1 was prepared by K. Shimamura and F. Ma created the final figure. F. Ma is thanked for providing Figure 2. The manuscript benefited from reviews by C. Sluggett.

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