

Appendix 1B Metadata

Project and Sample Metadata

Metadata Category	OF 8726
Project Lead Name	Rod Smith
	Northwest Territories
Project or Activity Name	Banks Island activity in Western Arctic Margins Project
Funding Source	GEM-2
Datum for sample location coordinates	NAD83
Context of current work as it relates to earlier or ongoing work	Compilation and dissemination of all 2015 and 2016 sample analytical results. No prior release of data.
Supporting Publications	Report of Activities – GSC Open File 7972 and 8150
Sampling Access Method	helicopter
Sampling Design/Pattern	Focused on retrieval of samples from areas industry had reported higher KIM recoveries (enabling more detailed chemical analysis of KIMs); collections in areas beyond those sampled by industry (e.g., Aulavik NP); collections to test new models of glacial history; collections to test for potential bedrock inheritance of KIMs from areas of known and previously unidentified Beaufort Formation strata.
Sampling Method	Stream sediment samples (wet sieved in field at 2.38 mm) and hand dug pits (bulk samples)
Sample Medium/Media Number of samples for each medium	17 bulk samples (7 Beaufort Fm., 4 till, 3 glaciofluvial, 2 stream sediments (dry stream beds), 1 bedrock (unconsolidated) 31 sieved samples (28 stream sediments, 1 glaciofluvial, 1 till, 1 bedrock)
Sample Density	n/a
Sample Collection Date Range	July 1-18, 2015 July 4-24, 2016

Sample Preparation Metadata

Lab Name	Screening – mesh size	Screening – Wentworth scale grain size	Methodology	Number of Samples Prepared	Published Reference(s) for the Preparation Techniques Used	Commercial Lab Preparation Package Code
ODM Ltd, Ottawa, Canada	-10 mesh for heavy minerals	< 2mm	<2 mm: ~15-30 kg disaggregated in water and screened at 2 mm	all collected samples prepared	McClenaghan et al., 2013; Plouffe et al., 2013	

Geochemical Analysis Metadata

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Lab Name	Work Order# or Certificate Name (usually a number)	Date Samples Submitted to Lab	Date Sample Data Reported to GSC	Size Fraction Analysed	Analytical Digestion (if applicable): list each digestion on a separate line	Analytical Method / Aliquot Mass	Name and Abbreviation of Laboratory's Analytical Package
Arctic Resources Laboratory, U. Alberta, Edmonton, AB, Canada	130833, 130865 136524	11/01/2016 12/12/2016	16/02/2016 03/02/2017	KIM grains (1.0-0.5 mm; 0.5-0.25 mm; 0.25-0.18 mm)	n/a	EPMA LA-ICPMS	

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Upper and Lower Detection Limits (for each element)	PDF of Price Brochure	Deviations from Methods Described in Lab Brochure	List Different Types of QA/QC Samples Inserted
	http://www.eas.ualberta.ca/eml/?page=rates http://www.eas.ualberta.ca/ccim/files/MTI-Lab_Costs_2014.pdf		Lab standards used to test and calibrate machines ahead of all batch analyses

Indicator Mineral Metadata

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Sample Medium/Media	Number of Samples of Each Medium	Processing Laboratory Name	Mineral Picking Laboratory Name	Work Order Number	Date Samples Submitted to Lab for Processing	Date Sample Data Reported to GSC
Stream sediments, Beaufort Fm. fluvial bedrock, till, glaciofluvial	34: 23 stream seds, (1 duplicate); 5 Beaufort Fm. (1 duplicate), 3 till, 1 glaciofluvial, 2 GSC blanks	Overburden Drilling Management Ltd.	Overburden Drilling Management Ltd.	20157051	08/09/2015	02/12/2015
Beaufort Fm. fluvial bedrock	5 Beaufort Fm.	Overburden Drilling Management Ltd.	Overburden Drilling Management Ltd.	20157051	07/01/2016	05/02/2016
Stream sediments, glaciofluvial, Beaufort Fm. fluvial bedrock, Isachsen sandstone bedrock, till	18: 7 stream seds, 3 glaciofluvial, 2 Beaufort Fm., 2 sandstone bedrock, 2 till, 2 GSC blanks	Overburden Drilling Management Ltd.	Overburden Drilling Management Ltd.	20167295	12/09/2016	25/11/2016

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Flow Chart (PDF)	Initial Sample Mass Before Processing (Range)	Grain Size Range Used for Sample Processing	Pre-Concentration Method(s)	Rock Disaggregation Method	Rock Disaggregation Laboratory Name	Name and Density of Heavy Liquid(s)	Ferromagnetic Separation Method
Figure 6	15-30 kg	<2.0 mm	Sieving, panning, tabling			Dilute methylene iodide at SG 3.2	Frantz magnetic separator
Figure 6	HMC fraction; 4-28 g	0.18-0.25 mm	Sieving, panning, tabling			Dilute methylene iodide at SG 3.2	Frantz magnetic separator
Figure 6	15-30 kg	<2.0 mm	Sieving, panning, tabling			Dilute methylene iodide at SG 3.2	Frantz magnetic separator

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Size Fractions Prepared	Size Fraction(s) Examined and Picked for Indicator Minerals	% of Heavy Mineral Concentrate Examined for Each Sample	Mineral Identification Method	Mineral Grain Picking Criteria	Mineral Chemistry Determination Method	Mineral Chemistry Lab Name
<0.25 mm, 0.25-0.5 mm, 0.5-1.0 mm, 1.0-2.0 mm	0.25-0.5 mm, 0.5-1.0 mm, 1.0-2.0 mm	100	Binocular microscope, SEM	KIM, MMSIM, gold grains	EPMA, LA-ICPMS	Arctic Resources Laboratory, U. Alberta, Edmonton, Canada
0.18-0.25 mm	0.18 – 0.25 mm	100	Binocular microscope, SEM	KIM	EPMA, LA-ICPMS	Arctic Resources Laboratory, U. Alberta, Edmonton, Canada
. <0.25 mm, 0.25-0.5 mm, 0.5-1.0 mm, 1.0-2.0 mm	0.25-0.5 mm, 0.5-1.0 mm, 1.0-2.0 mm (all samples); 0.18-0.25 mm (1 sample)	100	Binocular microscope, SEM	KIM, MMSIM, gold grains	EPMA, LA-ICPMS	Arctic Resources Laboratory, U. Alberta, Edmonton, Canada

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Report Mineral Count Data as Raw Data Reported by the Picking Laboratory	Report mineral count data corrected for minerals as confirmed by EMP, SEM or other methods	Report mineral count data as values normalized to total mass of sediment processed: (e.g. number of grains per 10 kg table feed)
Appendix_3A_ODM_2015.xls	Appendix_4.xls; Tab 4C	Appendix_4.xls; Tab 4D
Appendix_3A_ODM_2015.xls	Appendix_4.xls; Tab 4C	Appendix_4.xls; Tab 4D
Appendix_3B_ODM_2016.xls	Appendix_4.xls; Tab 4C	Appendix_4.xls; Tab 4D