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# **Technical Report for MINES Assessment Purposes: Fall 2022 Bluffpoint Property**

**Bluffpoint Lake Area, Kaiarskons Lake Area  
Kenora Mining Division,  
Northwestern Ontario, Canada**

**NTS Map Sheet 52F/03  
UTM Zone 15 (NAD83)**

Prepared For:

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**Date: February 13, 2023**



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## 1 Introduction

The following report summarizes the results from the Summer-Fall 2022 Exploration Program carried out on the Bluffpoint Property (the “**Property**”), situated in Bluffpoint Lake Area and Kaiarskons Lake Area of the Kenora Mining Division, Northwestern Ontario, approximately 400 km west of the City of Thunder Bay. This property comprises 441 contiguous unpatented claims totaling 8814.92 hectares. It is wholly-owned by Kesselrun Resources Ltd.

From the beginning of August to the end of September, Kesselrun Resources Ltd. (“**Kesselrun**”) contracted Fladgate Exploration Consulting Corporation (“**Fladgate**”) to conduct an exploration program on its Bluffpoint Property, following up on diamond drilling in 2012-2013 and alteration mapping in 2016. This work for this program included prospecting, alteration mapping, and whole-rock geochemical sampling. Fladgate provided all of the required geological, geotechnical, and sub-contractor services on the program described herein.

The alteration and structural mapping were successful with respect to the area covered and data collected, however, further data compilation should be performed in order to better delineate structural and geochemical trends associated with gold bearing events. Results have defined envelopes of overlapping chalcophile enriched areas hosted within the north-south trending granitic unit in proximity to the Lawrence Lake Batholith. Further structural mapping and modeling should be performed throughout the unexplored areas of the property in future programs in order to fit current trends to regional structural regimes and events.

Due to the lack of outcrop exposure throughout many portions of the property, it is also advised that a detailed geophysical study be performed in order to aid in locating new zones currently covered by overburden and to explore the potential within lower lying drainage systems.

## 2 Terms of Reference

This report was prepared at the request of Kesselrun for the use of filing assessment as required under the Ontario Mining Act.

## 3 Disclaimer

This report is based on information from assessment reports, private reports and general geological reports and maps listed in Section 13 “References and Literature”. These reports are considered by the Authors to be non-43-101 compliant, as many were written before the implementation of NI 43-101. The Authors do not take responsibility for the information provided from such sources.



## 4 Property Description and Location

The Property is located in the Kenora Mining District in Northwestern Ontario, in the Bluffpoint Lake Area and Kaiarskons Lake Area, roughly 400 km west of the City of Thunder Bay (Figure 9). The town of Fort Frances with a population of ~8000 is approximately 120 km south of the property.

The Property consists of 441 contiguous unpatented mining claims within the Bluffpoint Lake Area (Figure 1 to Figure 8). All claims are 100% owned by Kesselrun. There are no leases or patents as part of the property. A full list of claims is presented in Table 1

Bluffpoint lies within NTS Sheet 52F/03, and is centered at 472,400 mE and 5,447,300 mN in UTM coordinates (NAD83, Zone 15).

**Table 1:** Bluffpoint operational mining claims

Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	341361	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	552946	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	552947	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	552948	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	552949	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	338394	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	552942	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	552943	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	552944	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	552945	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Kaiarskons Lake Area	552950	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Kaiarskons Lake Area	552951	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Kaiarskons Lake Area	552952	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	552956	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Kaiarskons Lake Area	552953	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Kaiarskons Lake Area	552954	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Kaiarskons Lake Area	552955	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.



Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	340552	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	340553	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	539440	Single Cell Mining Claim	Active	2024-01-18	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	539441	Single Cell Mining Claim	Active	2024-01-18	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	539442	Single Cell Mining Claim	Active	2024-01-18	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	539443	Single Cell Mining Claim	Active	2024-01-18	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	539444	Single Cell Mining Claim	Active	2024-01-18	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	101777	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	101778	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	552957	Single Cell Mining Claim	Active	2024-07-02	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	101692	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	101712	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	101713	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	101172	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537999	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	538000	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	538001	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	101317	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	104245	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	104346	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	110442	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	110443	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	110324	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	110811	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	107216	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	115114	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	117808	Single Cell Mining Claim	Active	2025-12-1	(100) KESSELRUN RESOURCES LTD.





Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	117820	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	116727	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	116728	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	116180	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	116181	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	116195	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	120170	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	120171	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	122343	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	122344	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	122370	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	122514	Boundary Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	121364	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	121011	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	124214	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	124340	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	124093	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	123691	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	123843	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	123844	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	123845	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	127622	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	127623	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	127624	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	127625	Single Cell Mining Claim	Active	2025-05-06	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	124371	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	124377	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.



Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	129494	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537936	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537937	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537938	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537939	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537931	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537932	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537933	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537934	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537935	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	546060	Single Cell Mining Claim	Active	2024-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	130998	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	135734	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	136065	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	136095	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	136096	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	548699	Single Cell Mining Claim	Active	2024-04-17	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	141635	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	547854	Single Cell Mining Claim	Active	2024-04-09	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	142471	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	144813	Single Cell Mining Claim	Active	2025-01-14	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	148814	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	152352	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	152367	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	151701	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	156912	Boundary Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537940	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.



Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	537941	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537942	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537943	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537944	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537945	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537947	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537946	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	159470	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Kaiarskons Lake Area	548704	Single Cell Mining Claim	Active	2024-04-17	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	161758	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	160167	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	160168	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	161491	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	161492	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	548721	Single Cell Mining Claim	Active	2024-04-17	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	161544	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	166188	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561282	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561281	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561283	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561284	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561285	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561286	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561287	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561288	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	164552	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	168958	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.



Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	167548	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	168980	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	166980	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	168297	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	173417	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561289	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561290	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561291	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561292	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561293	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561294	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561295	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561296	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561297	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561299	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561298	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	178321	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	176820	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	176821	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	179009	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	180338	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	180339	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	547844	Single Cell Mining Claim	Active	2024-04-09	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	547845	Single Cell Mining Claim	Active	2024-04-09	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	547846	Single Cell Mining Claim	Active	2024-04-09	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	547847	Single Cell Mining Claim	Active	2024-04-09	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	547848	Single Cell Mining Claim	Active	2024-04-09	(100) KESSELRUN RESOURCES LTD.



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Bluffpoint Lake Area	547849	Single Cell Mining Claim	Active	2024-04-09	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	547850	Single Cell Mining Claim	Active	2024-04-09	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	547851	Single Cell Mining Claim	Active	2024-04-09	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	178078	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	180268	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561300	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561301	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561302	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561303	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561304	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561305	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561306	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561307	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561308	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	180897	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	181771	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	181782	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	181783	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	181784	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	181236	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	180399	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561309	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561310	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561311	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561312	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561313	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561314	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.



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Bluffpoint Lake Area	561315	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561316	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	183685	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	183686	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	539313	Single Cell Mining Claim	Active	2024-01-14	(100) KESSELRUN RESOURCES LTD.
Kaiarskons Lake Area	539311	Single Cell Mining Claim	Active	2024-01-14	(100) KESSELRUN RESOURCES LTD.
Kaiarskons Lake Area	539312	Single Cell Mining Claim	Active	2024-01-14	(100) KESSELRUN RESOURCES LTD.
Kaiarskons Lake Area	539314	Single Cell Mining Claim	Active	2024-01-14	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	539445	Single Cell Mining Claim	Active	2024-01-18	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	539446	Single Cell Mining Claim	Active	2024-01-18	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	187282	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	186023	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	539447	Single Cell Mining Claim	Active	2024-01-18	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	187560	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	192187	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	192188	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	194218	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	194947	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	196243	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	196244	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	196245	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	196246	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	196247	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	196302	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	196303	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	196836	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	196837	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.



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Bluffpoint Lake Area	196850	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561318	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561319	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561317	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561320	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561321	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561322	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561327	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561323	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561324	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561325	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561326	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561328	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	561329	Single Cell Mining Claim	Active	2023-10-07	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	201029	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	202982	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537948	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537949	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537950	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537951	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537952	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537953	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	202734	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	204291	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	204292	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	204870	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	204871	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.



Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	205640	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	204937	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	207871	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	207751	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537954	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537955	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537956	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537957	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537958	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537959	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537960	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	206285	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	206286	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	210928	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	210795	Boundary Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	210796	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	212275	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	212276	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	212277	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	212278	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	214911	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	214912	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	214913	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	214914	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	213047	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	213048	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	215671	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.





Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	215674	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	215675	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	216998	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	216574	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	217906	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	215751	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	215752	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	215753	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	215754	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	215194	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	215643	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	217653	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	217654	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	217655	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537961	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	225864	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	229472	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	232877	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	229611	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537968	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537969	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537970	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537971	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537972	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537973	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537974	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537975	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.



Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	232191	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	235125	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	235702	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537962	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537963	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537964	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537965	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537966	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537967	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537976	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	235365	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	233668	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	233695	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	233697	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	233851	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537977	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	237017	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	242181	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	242915	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	242916	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	244816	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	244817	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	248340	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	249680	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	254850	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	252679	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	252185	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.



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Bluffpoint Lake Area	253929	Single Cell Mining Claim	Active	2025-01-14	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	255669	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	258792	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	257051	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	257052	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	256372	Boundary Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	257929	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	257930	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	262873	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	262874	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	262991	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	261564	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	264195	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	264887	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	264898	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	264899	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	267149	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	267150	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	270328	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	270329	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	270330	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	267030	Boundary Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	270928	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	269538	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537979	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537980	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537978	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.



Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	537981	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537982	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537983	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537984	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537985	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537986	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	270864	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	271678	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	271679	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
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Bluffpoint Lake Area	271741	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	271742	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	273779	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	272357	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	272358	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	272359	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
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Bluffpoint Lake Area	279472	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	278737	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	280683	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	280684	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
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Bluffpoint Lake Area	282964	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	282965	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	282966	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537987	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	283030	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.



Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	284949	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	284950	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	284936	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	284937	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	284938	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	291148	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	291149	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	289278	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	291092	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	290371	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	290372	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	290373	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	287973	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
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Bluffpoint Lake Area	290311	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	291750	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	291766	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
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Bluffpoint Lake Area	289773	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
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Bluffpoint Lake Area	291436	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
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Bluffpoint Lake Area	291951	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	296827	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	294165	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.



Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	301422	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	298912	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	304246	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	303551	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	306845	Boundary Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	313559	Boundary Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	312426	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	313401	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537994	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
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Bluffpoint Lake Area	537988	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
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Bluffpoint Lake Area	537992	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
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Bluffpoint Lake Area	314904	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	314905	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	314906	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	314907	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	317528	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	320987	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	327503	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	325462	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.



Township	Tenure Number	Type	Status	Anniversary Date	(%) Holder
Bluffpoint Lake Area	330140	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	329607	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	537998	Single Cell Mining Claim	Active	2023-12-25	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	329528	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	330843	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	345058	Boundary Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	341970	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	342317	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	341899	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	341474	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	343363	Single Cell Mining Claim	Active	2025-02-10	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	343364	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	343380	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	343381	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	343386	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	339655	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	339656	Single Cell Mining Claim	Active	2025-12-15	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	342409	Single Cell Mining Claim	Active	2025-03-21	(100) KESSELRUN RESOURCES LTD.
Bluffpoint Lake Area	342708	Single Cell Mining Claim	Active	2025-11-23	(100) KESSELRUN RESOURCES LTD.

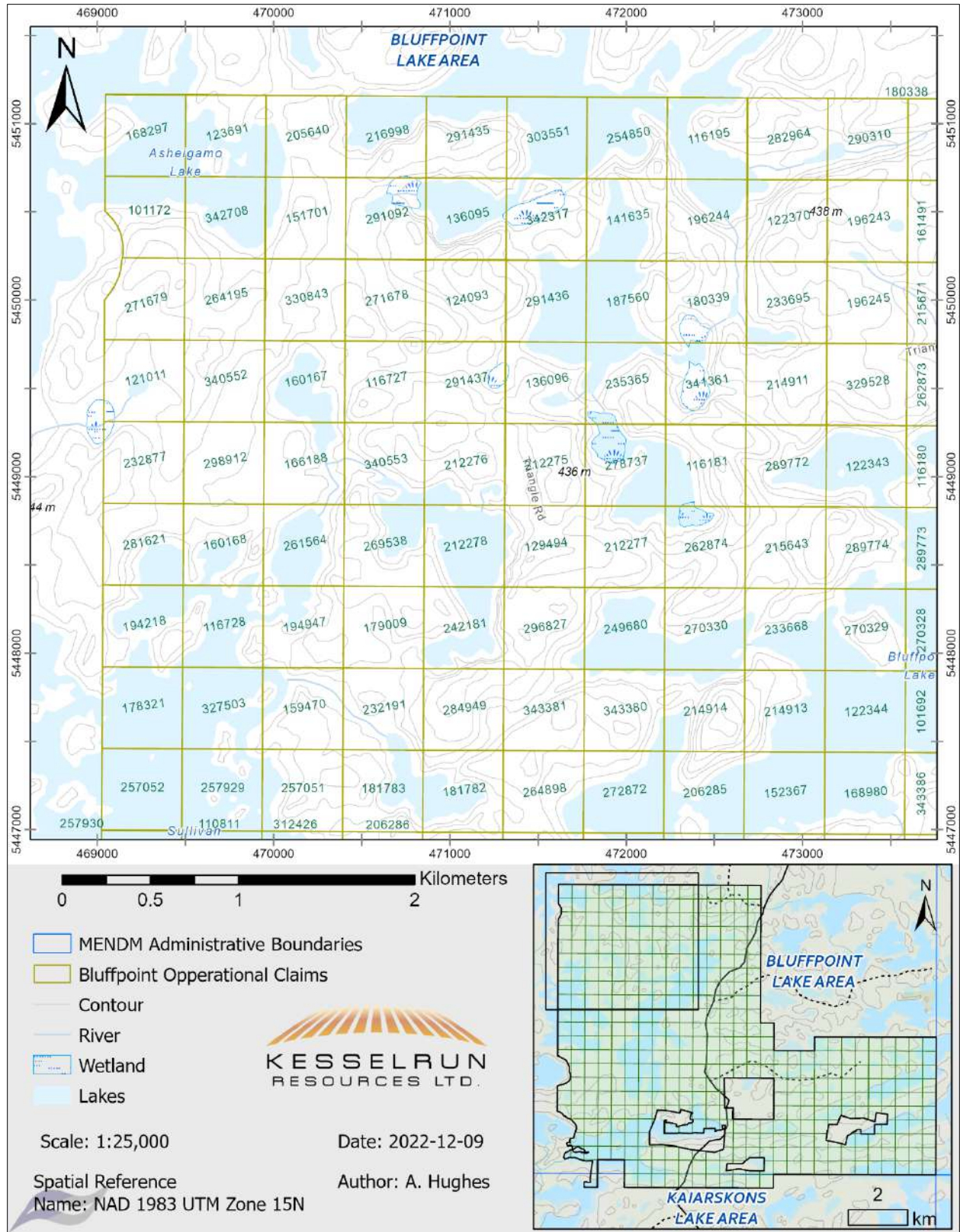


Figure 1: Active mining claims of the Bluffpoint Property. 1 of 8



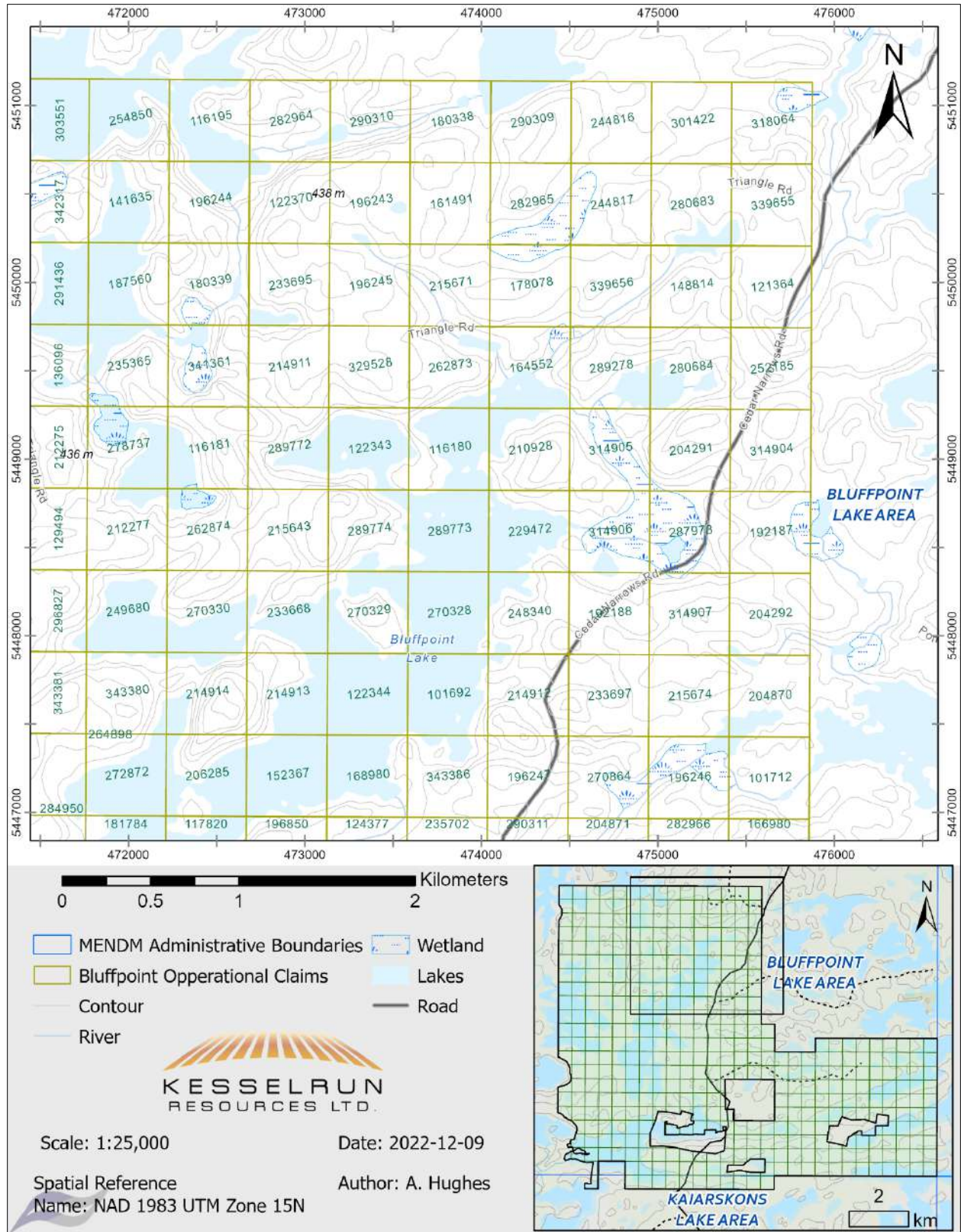


Figure 2: Active mining claims of the Bluffpoint Property. 2 of 8

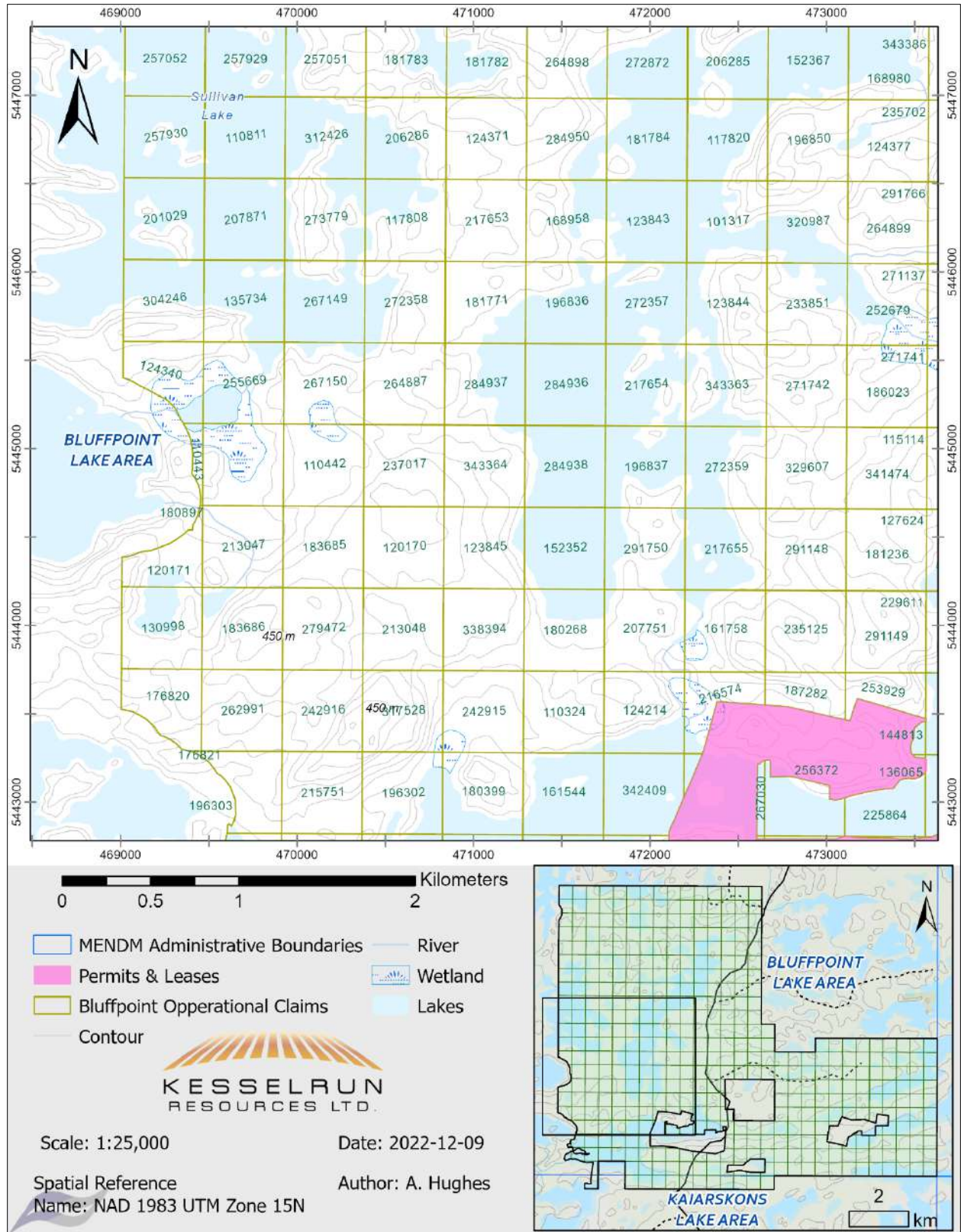


Figure 3: Active mining claims of the Bluffpoint Property. 3 of 8

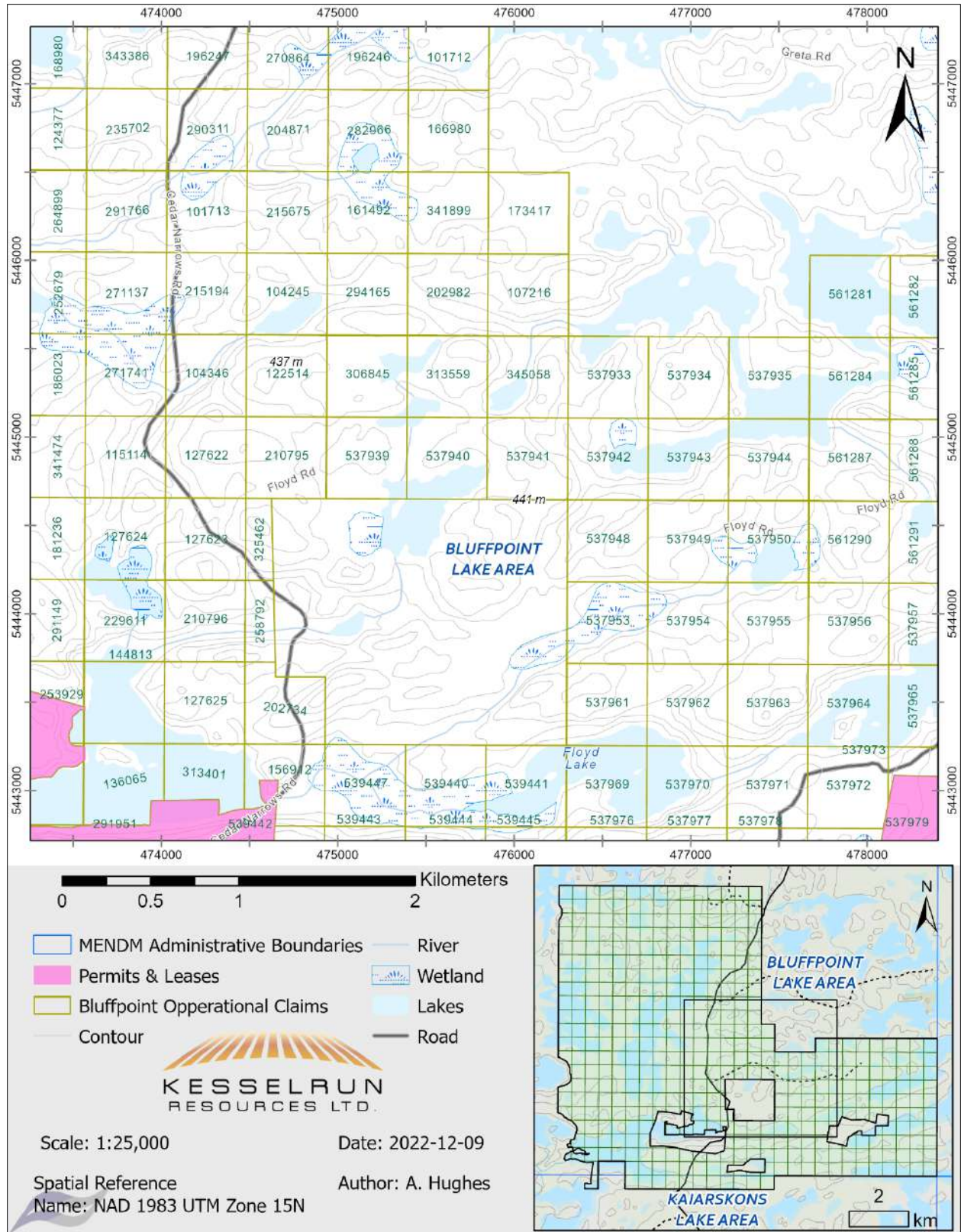


Figure 4: Active mining claims of the Bluffpoint Property. 4 of 8

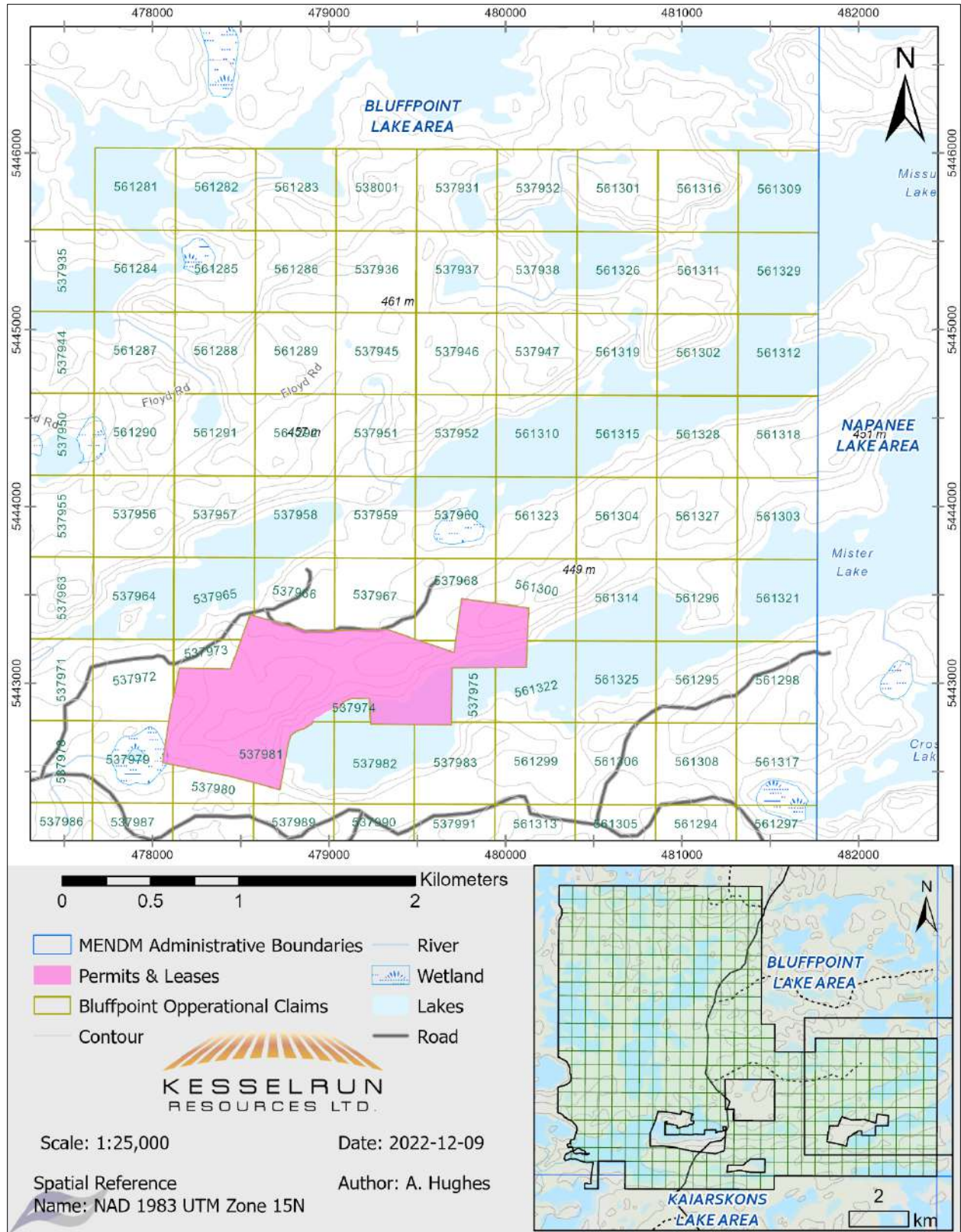


Figure 5: Active mining claims of the Bluffpoint Property. 5 of 8

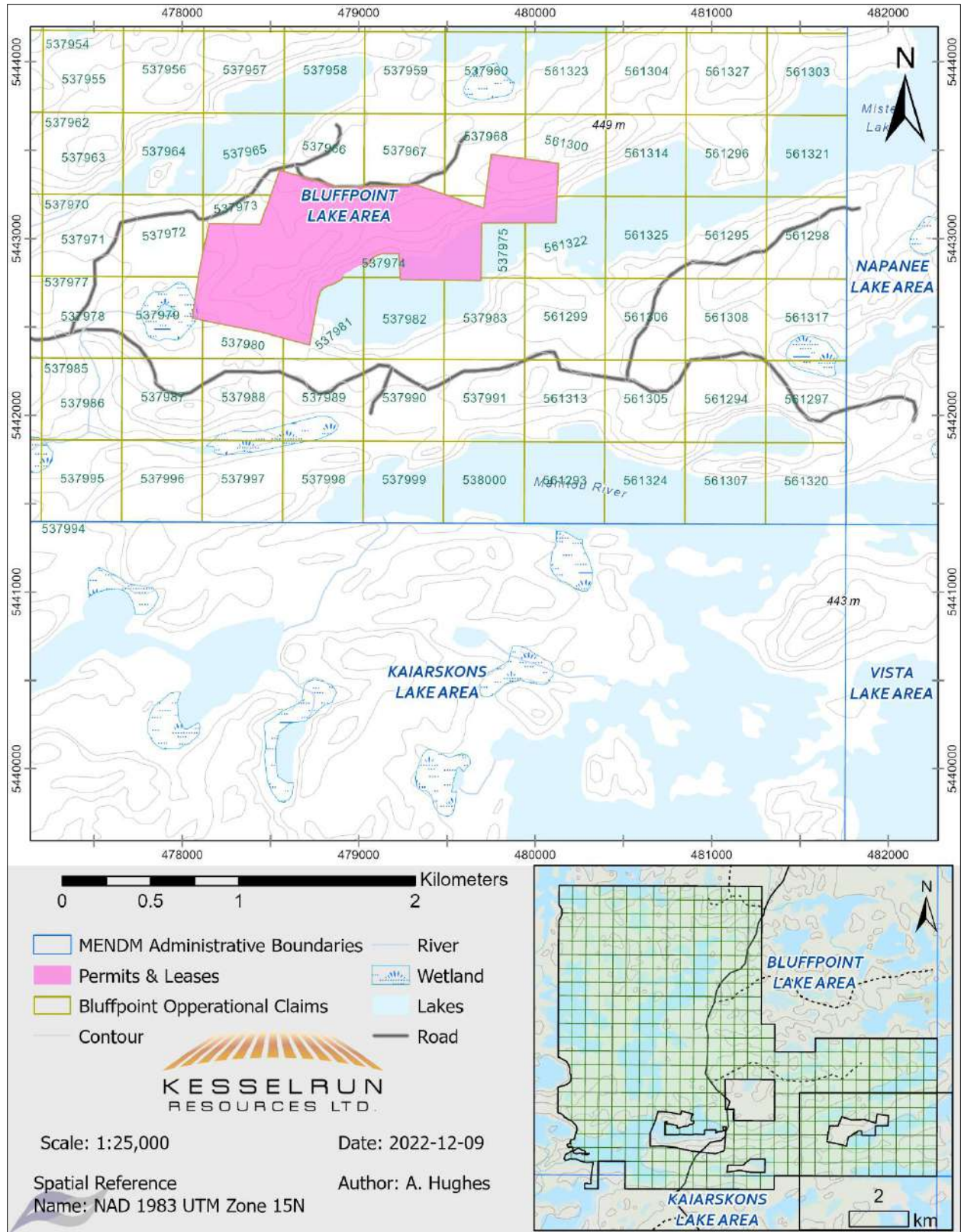


Figure 6: Active mining claims of the Bluffpoint Property. 6 of 8

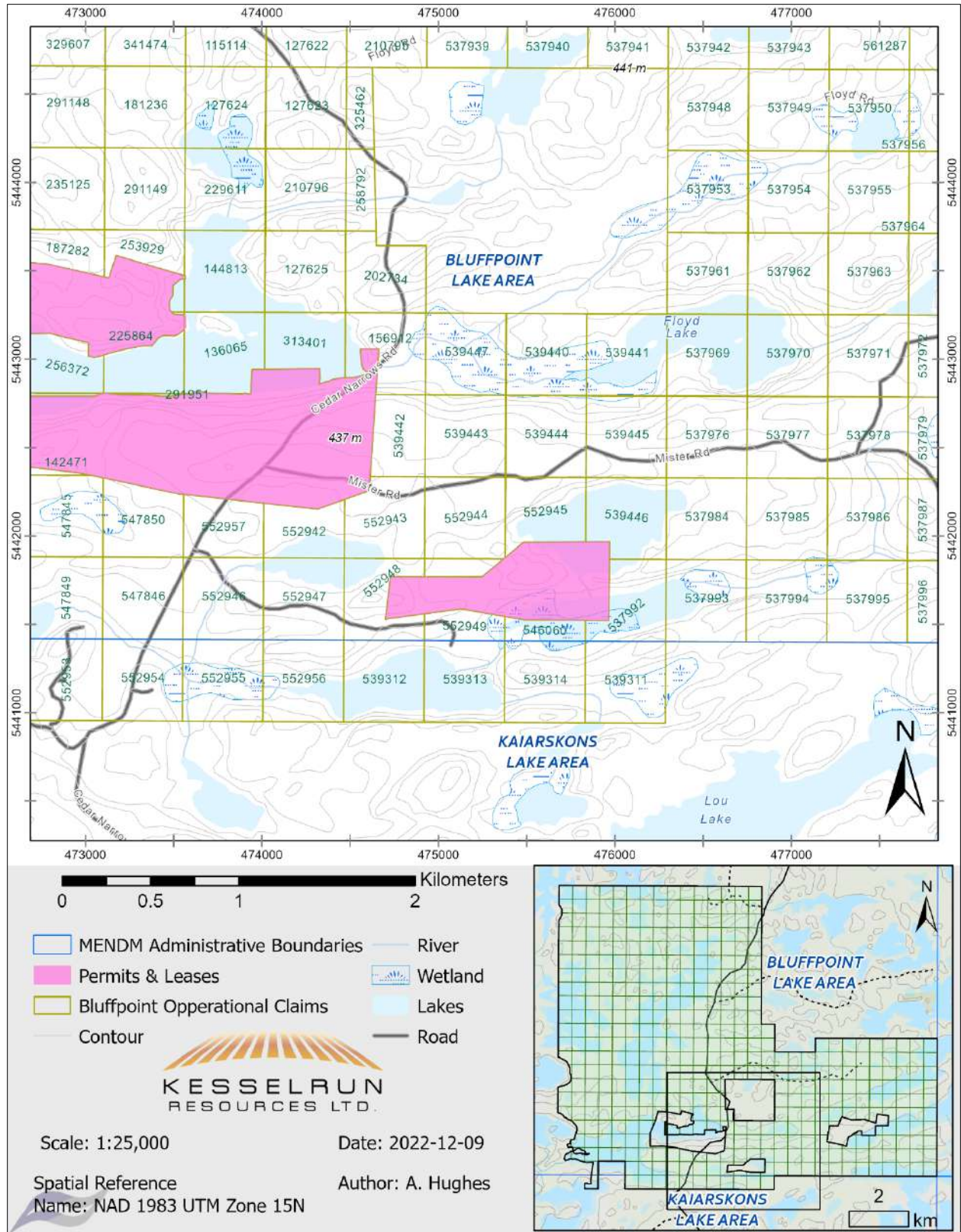


Figure 7: Active mining claims of the Bluffpoint Property. 7 of 8

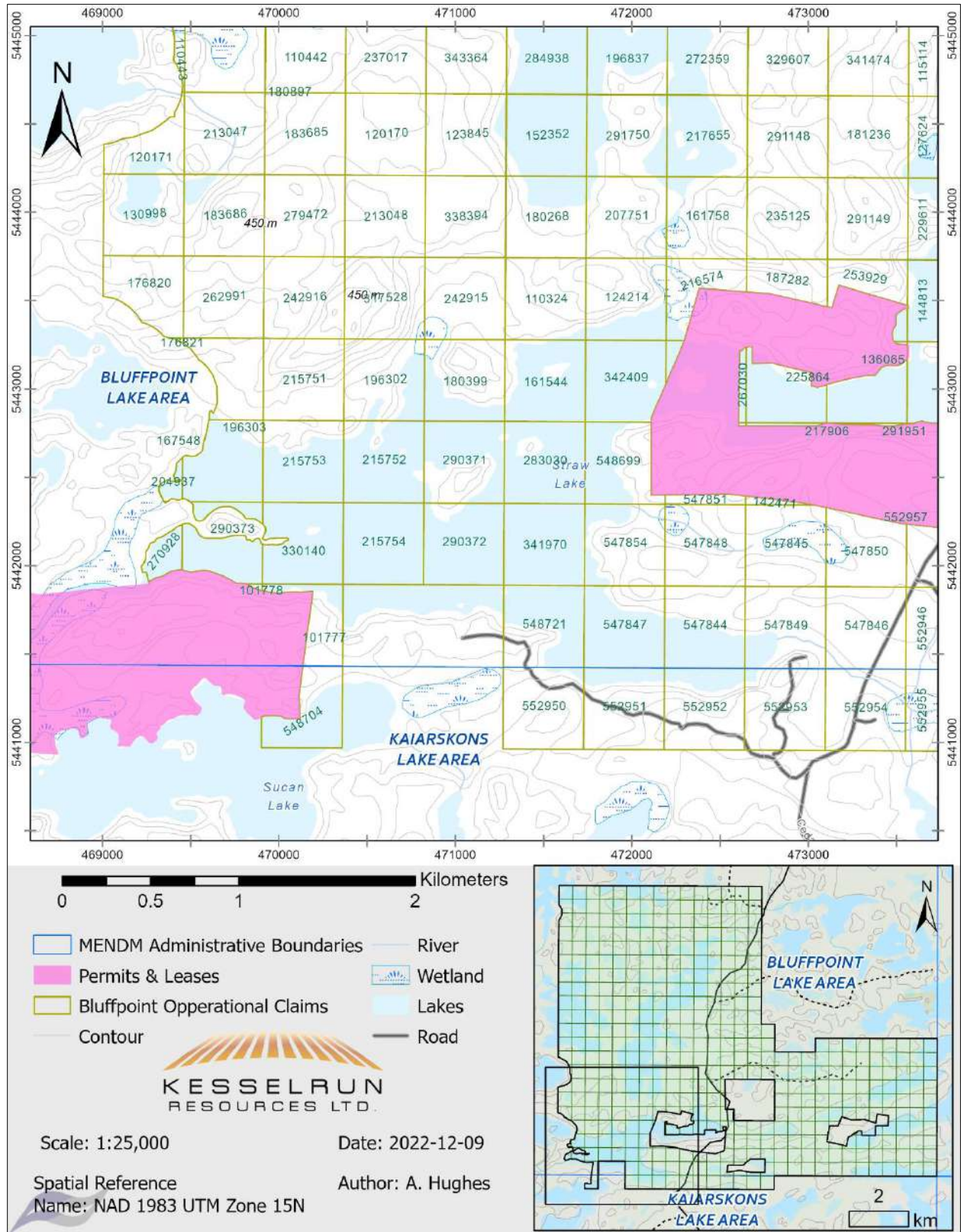


Figure 8: Active mining claims of the Bluffpoint Property. 8 of 8



## 5 Accessibility, Local Resources, and Infrastructure

The Property is roughly 400 km west of the City of Thunder Bay, Ontario (Figure 9). It is accessed by driving west along Trans-Canada Hwy 11 from Thunder Bay for ~250 km, and turning north onto Provincial Hwy 502. Both highways are paved and well-maintained throughout the year. Continue driving north along Hwy 502 for ~40 km and turn left onto a year-round well-maintained gravel logging road called the Cedar Narrows Road. The Bluffpoint Property is located 50 km down the Cedar Narrows Rd. Fairly good access to most areas within the property is provided by a number of smaller (and in some cases abandoned) tertiary logging roads. Some parts of the property are inaccessible by road due to obstruction by lakes; in these places access by boat is a viable alternative.

Fort Frances (population ~8000) is 120 km south of the Property, offering basic amenities to perform field exploration activities. Most supplies and services such as groceries, hardware, accommodation is available in Fort Frances. The nearest large regional centre is Winnipeg, Manitoba (population ~665,000), 280 km to the west, however Kesselrun and Fladgate operate out of Thunder Bay, Ontario, which lies 400 km to the east. Most major supplies and services are available in Thunder Bay. The Thunder Bay International Airport has daily scheduled flights to major cities in Canada such as Toronto, Calgary, Ottawa, and Winnipeg, allowing easy connections to other Canadian cities and international destinations. Local experienced labour is readily available. Thunder Bay is the main Mineral Titles center and has topographic and geological maps.

Aside from Highway 11, both the CN railway line from Thunder Bay to Fort Francis, and a major power line pass through the northern reaches of the property. The property lies 16 km north of the main trans-continental Canadian Pacific Rail Line. A major east-west trending Hydro Transmission line passes 12 km south of the claim block.



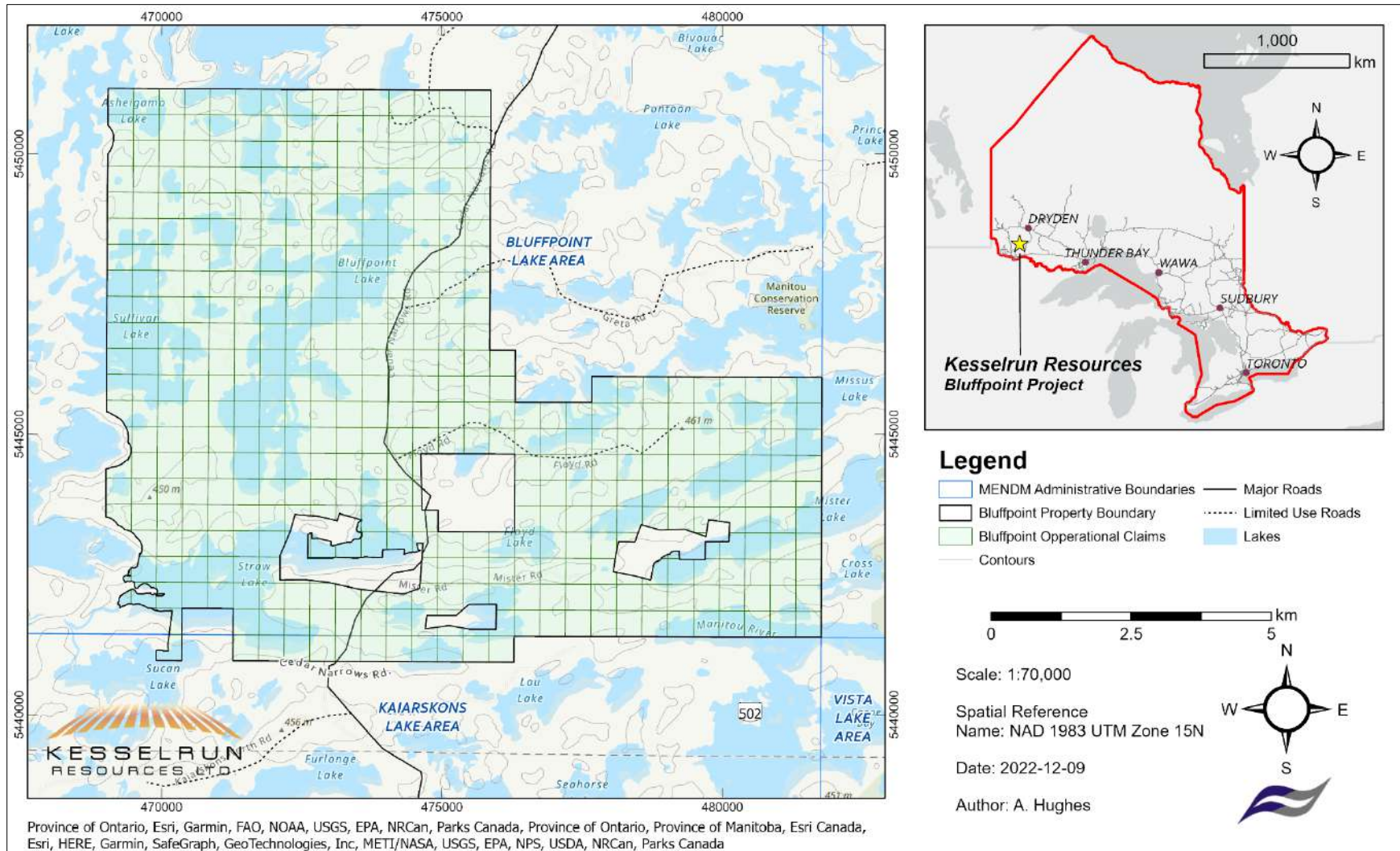


Figure 9: Location of the Bluffpoint Property within the Province of Ontario, Canada



## 6 Climate and Physiography

The Bluffpoint Property is located within the Canadian Shield, which is a major physiographic division of Canada. The property is situated in an area of swamps, small lakes, and low rolling hills, with scattered areas of outcrop. Beaver ponds and cedar swamps border its base and cover much of the balance of the property.

Climate in the area is typical of Northern Ontario, with cold winters and warm summers. Average January minimum temperatures range from -18°C to -32°C, and average July temperatures are between 24°C and 32°C ([www.meteoblue.com](http://www.meteoblue.com)). Work can be done (subject to snow and freezing) for most of the year. Certain mapping and mechanized stripping activities and soil sampling are done only without snow cover, whereas drilling can occur at any time of the year.

The annual average precipitation for the Fort Frances area is 720 mm including 580 mm of rainfall and 139 mm of snowfall. June sees an average rainfall of 113 mm, while November receives the highest monthly average of 33 cm of snow. The area is classified as a ‘hemi-boreal’ climate according to the Köppen climate classification.

Elevation ranges from 1100 ft (270 m) to 1500 ft (450 m). The claims are covered with a thick secondary growth of birch, balsam fir, black spruce, cedar and some jack pine and poplar. The underbrush can be very dense with intergrowths of maple, alder, and hazel.

Water for drilling is readily available from small lakes located within the claim block and from two major creeks. Water is also available on the southwestern portion of the property from Bluffpoint Lake year-round, and also from the small intermittent creeks during high run-off periods.

Rock exposures are abundant in the northern portion of the claims where the claim block straddles a prominent ridge in the area. Outcrops in this area are typically found as moss-covered knolls or forming occasional cliffs. Total rock exposure and areas with thin overburden cover comprise only ~10% of the property.

## 7 Geological Setting

### 7.1 Regional Geology

The Property is located within the volcano-plutonic Wabigoon Subprovince, part of the Superior Province of the Canadian Shield (Figure 10). All rocks in the Bluffpoint Property area are Archean in age. The claims are situated on the southern margin of the Savant Lake – Crow Lake metavolcanic-metasedimentary belt, a large (approximately 6,600 km<sup>2</sup>) irregularly shaped greenstone assemblage in the west-central part of the Wabigoon Subprovince (Figure 11). The greenstone in the claims area is composed mainly of interlayered steeply-dipping to sub-vertical mafic, intermediate and felsic metavolcanics, with intercalated metasediments. The greenstone assemblage has been intruded by



large plutonic bodies; in the claims area, the two major plutonic bodies are the Lawrence Lake Batholith to the north, and the Jackfish Lake Complex to the south. The two batholiths are entirely surrounded by greenstone belt rocks and, in between them, is the vertically-dipping crustal-scale Pipestone-Cameron-Manitou Deformation Zone (“PCMDZ”), which divides the greenstone belt into two structurally distinct regions.

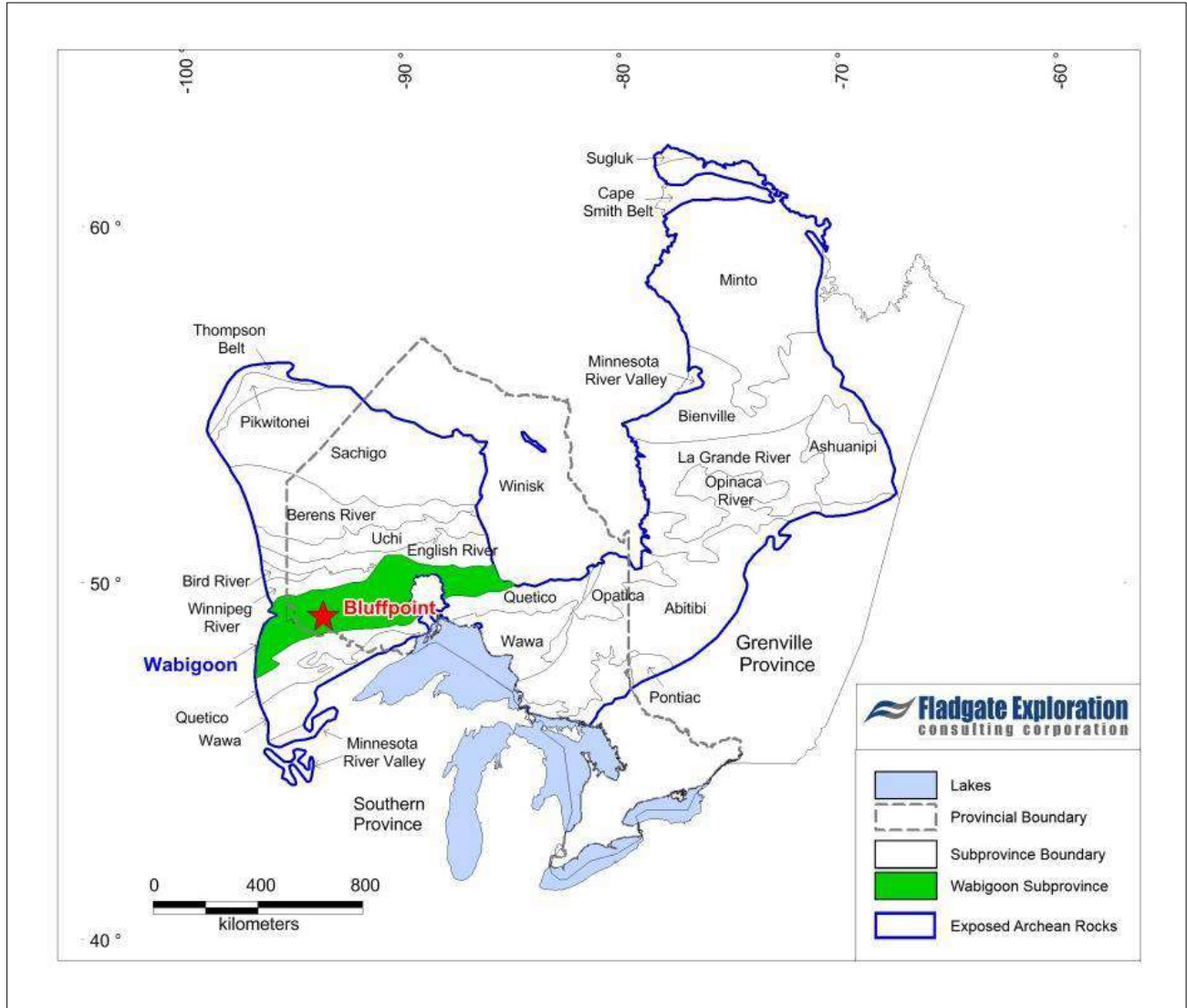


Figure 10: Superior Province and sub-provinces within the Canadian Shield.

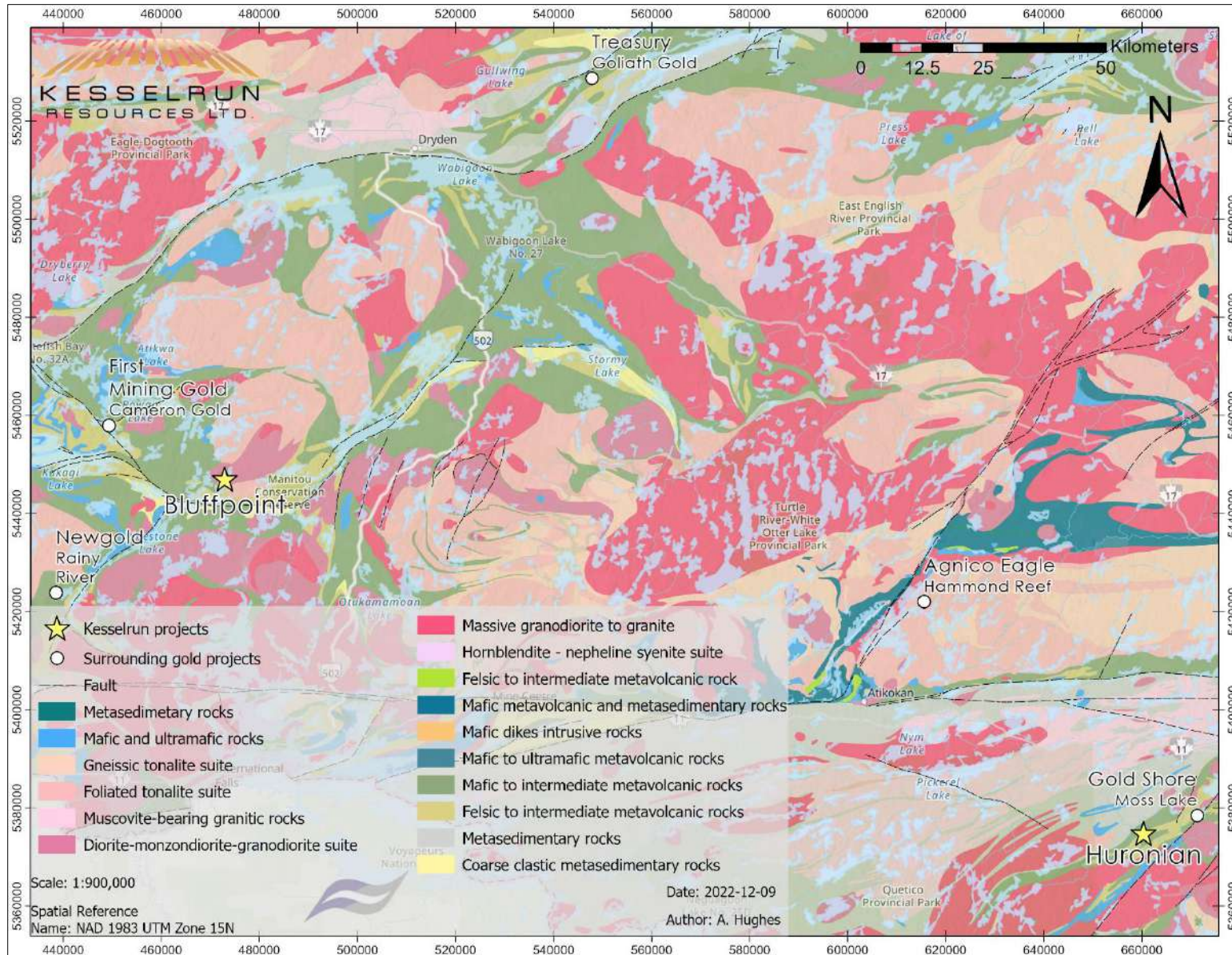


Figure 11: Regional geology of the Wabigoon Subprovince. (Ontario Geological Survey, 2011)



## 7.2 Property Geology

The Bluffpoint property covers a substantial portion of the Lawrence Lake Batholith and a segment of the greenstone assemblage both to the west and southwest of the batholith (Figure 12). The principal characteristics of the lithological units encountered on the Bluffpoint property are summarized below.

### 7.2.1 Lawrence Lake Batholith

The Lawrence Lake Batholith is a composite intrusive unit occupying ~371 km<sup>2</sup>. Four distinct roughly concentric phases have been recognized in the Lawrence Lake Batholith (Davis & Edwards, 1990). The oldest phases are a contact zone trondhjemite-granodiorite (“**CZT**”) which occupies the southern margin of the batholith, and the syngenetic Bluffpoint quartz diorite (“**BQD**”). The quartz diorite is intruded to the north by the Lawrence Lake trondhjemite, a fairly massive uniform unit, and the Chuck Lake pluton (a small granodiorite stock) intrudes at the contact between these units. Additionally, the batholith is overlain by (and appears to grade into) an intermediate-felsic volcanic pile in the south. Age estimates vary from 2733±1 Ma for the oldest units to 2715 Ma for the youngest units. Mineralization discovered to date has been confined to the CZT, specifically to zones within 1.6 km of the batholith contacts; these marginal rocks are more foliated, with a greater tendency towards faulting and intense fracturing. Some areas within this margin also show significant alteration (pyritization, sericitization, hematitization and quartz veining) which is generally associated with faults.

### 7.2.2 Metavolcanics

Metavolcanics within the property consist of interlayered, semi-continuous and interfingering zones of mafic, felsic and intermediate volcanics; these layers may also interlayer with metasediments. A variety of textures have been observed, including massive and foliated mafic tuffs, mafic lapilli tuffs, pillowed and amygdaloidal mafic flows, intermediate tuff, crystal tuff and lapilli tuff, and felsic tuff and crystal tuff. Some units contain significant magnetite. Mafic and intermediate volcanics tend to have gradational contacts, and differentiation between the two is frequently subjective. In zones of strong deformation, all primary structures may be completely obliterated, and highly sheared felsic volcanics have been altered to sericite schist. The metavolcanics to the south of the property are fairly well characterized as a result of mapping by the Ontario Geological Survey (Armstrong & Anastas, 1993) and by various other operators (e.g. Sparton Resources in 1983); however, those to the west of the Lawrence Lake Batholith are less well characterized, having been subjected to little or no exploration activity.

### 7.2.3 Mafic to Ultramafic Intrusive Rocks

A late swarm of north-trending lamprophyre dykes cuts various lithologies on the property, and is comprised mainly of hornblende and biotite. While these lamprophyre dykes are later than most other



lithologies, they are cut by late granitic dykes in the vicinity of Mirror Bay. To the west, gabbroic dykes of variable widths (up to ~10 m) also occur, intruding most lithologies in the area. Both units are largely restricted to the area south of the PCMDZ.

#### **7.2.4 Structure**

The Property area is truncated on its southernmost margin by the PCMDZ. This deformation zone is a wide composite system of discrete brittle faults and anastomosing brittle-ductile shear zones comprising the Pipestone-Cameron Deformation Zone, the Pipestone-Cameron Fault, the Manitou Straits Fault and the Manitou Stretch-Pipestone Lake Fault. In addition to these main structures, a number of parallel to sub-parallel splays (shear zones and faults) have been traced in close proximity to the PCMDZ. A well-defined foliation affects most volcano-sedimentary rocks in the south part of the Bluffpoint property, and is believed to be related to the PCMDZ. Towards the east end of the property, there is a significant (about 60°) inflection in the PCMDZ; this contributes to the structural complexity of the property, particularly to the south.

In the Bluffpoint Lake Area, the PCMDZ separates two very different structural regimes. To the north of the deformation zone, the structural regime is relatively simple and dominated by the Lawrence Lake Batholith, with supra-crustal rocks wrapping around the batholith and margin, and sub-parallel faults developed in both the batholith and adjoining lithologies. This regime appears to be modified towards the south where foliation is overprinted by the PCMDZ. Another direction of faulting has been identified extending out from the batholith and is interpreted as possibly related to continued uplift within the core of the batholith (Smith, 1993). Structural mapping during historic exploration of the northern part of the property (by Homestake Canada, proximal to the Bluffpoint Lake) has identified at least three distinct fracture directions, at approximately 45°, 100° and 340° (MacPherson, 1992), which may correspond to these three fault directions. Lineations within the batholith traced from aerial photography confirm at least 3 directions of structure in most areas, with the structures warping towards the margin of the batholith. There is, however, some controversy as to which of these lineations represent faults and which are fractures associated with the cooling batholith (Edwards, 1983).

To the south of the deformation zone the structural regime is significantly more complex. In total, three separate folding events have been distinguished (Smith, 1993).  $F_1$  is a subtle folding event consisting of a broad isoclinal synclinorium with a north-trending axis centred on Vista Lake and causing all rocks to the west to dip eastwards; no penetrative foliation or cleavage has been observed in the  $F_1$  and no other associated structures have been discovered on the property.  $F_1$  is thought to be possibly synvolcanic.  $F_2$  consists of steeply-plunging folds with east-trending axes and a well-developed axial-planar foliation; associated lineations also dip steeply.  $F_2$  affects the oldest units on the property (both metavolcanics and some metasediments) but the latest sediments (in particular the Esos Lake sedimentary package) and the intrusive rocks are unaffected.  $F_2$  is modified in some places by  $F_3$ , which forms large-scale steeply-plunging folds with north-trending fold axes; these are believed to be related to deformation on



the PCMDZ. A number of distinct fold structures have been identified related to competency contrasts and fold interference; and both  $F_2$  and  $F_3$  have been observed to form parasitic 'S' and 'Z' folds.

### 7.3 Mineralization and Alteration

Several mineralized zones have been encountered on the Bluffpoint Property of which the most important are the Homestake, Sande and Fingas Showings; all three are located to the west of Bluffpoint Lake (Figure 12).

#### 7.3.1 Homestake Showing

The Homestake Showing is a zone of heavily jointed and strongly altered trondhjemite/granodiorite located approximately 60 m from the west shore of the central portion of Bluffpoint Lake. The showing is hosted within the contact zone of the Lawrence Lake Batholith (about 550 m from the batholith-metavolcanic contact).

According to a report for Homestake Canada Ltd. (MacPherson, 1992), the Homestake Showing zone is an area approximately 50 m wide x 350 m in length; the zone is slightly arcuate with a strike of approximately  $340^\circ$ . Despite this estimate, the edges of the zone are not particularly well defined. A number of factors complicate definition of zone extents, including poor bedrock exposure (particularly to the north of the showing), nuggety sampling results (Clark, 1991), widespread alteration throughout the area peripheral to the Island Showing, and a poor understanding of the structural controls on the deposit. For instance, to the north the showing exhibits strong alteration and grade until it encounters an area with little outcrop, where it is interpreted as abruptly terminating; the reasons for this termination, as well as its exact position, remain uncertain. Further uncertainty is provided by the close proximity of Bluffpoint Lake; relatively high grade grab samples (up to 1.2 g/t) have been taken along the shore directly to the east of the interpreted zone, and at its closest, the zone is only 20 m from the edge of the lake, leaving open the possibility of a zone extension (or parallel zone) beneath the lake.

Alteration within the showing consists of silica flooding, stockworks and veins, as well as saussurite, sericite, pyrite, carbonate, Fe-carbonate and hematite alteration. Alteration is concentrated around joints, with alteration intensity increasing with joint density. Average gold grades range from 0.005 – 6.6 g/t, with grab samples going up to 28.1 g/t; MacPherson (1992) gave a bulk grade for the mineralized zone as 0.509 g/t based on 160 linear meters of sampling. Gold grade is positively correlated with pyrite content, which is in turn correlated with fracture density and intensity of alteration; the most intense alteration (and highest Au grades) are found in areas where fractures of different orientations intersect.

Drilling on the showing by Kesselrun in 2012-2013 encountered anomalous gold mineralization over a strike length of >350 m, with assays up to 9.28 g/t Au over 0.7 m, but failed to establish a coherent mineralized body. The Homestake Showing was identified as an important remaining target, with



intense alteration, a large footprint and widespread low- to moderate-grade Au assays. The controls on mineralization and grade distribution within the Homestake Showing need to be better defined.

### ***7.3.2 Sande Showing***

The Sande Showing consists of a series of shallowly-dipping pyritic quartz stringers hosted within the trondhjemite but is proximal to a fine-grained felsic dyke within the batholith. Mineralization is mostly restricted to the veins, with only minor pyritic wallrock alteration. Grades are variable up to 11 g/t with an average for the showing of 0.923 g/t. The footprint of this showing is quite small and was therefore deemed a lower priority target.

### ***7.3.3 Fingas Showing***

The Fingas Showing was an original discovery made by Kesselrun Resources in 2011 (Escarrage & Sheridan, 2011) as a result of prospecting work on the westernmost part of the Bluffpoint Property. The Fingas Showing is hosted within the Contact Zone Trondhjemite and consists of a 15-cm wide grainy dark grey quartz vein hosted in a 2 m wide shear zone striking 280°/88°. While the structure is fairly narrow, it shows strong deformation and can be described as mylonitized. Alteration within the shear is strong hematite-sericite-quartz-chlorite; despite the absence of sulfides on surface, evident instead is strong alteration and gossanous mineralogy. Minor malachite was noted staining the vein surface in places, suggesting the presence of chalcopryrite. Visible gold was also noted on fracture surfaces within the vein. Outcropping is restricted in the vicinity of the Fingas Showing, so that the shear was only exposed for ~5 m on surface. Four grab samples of the vein ranged from 13.7 - 101.8 g/t Au, while two samples of the sheared wallrock yielded 1.5 and 2.7 g/t Au. A gossanous boulder of similar appearance was also sampled ~100 m SW of the Fingas Showing, returning 5.1 g/t Au.



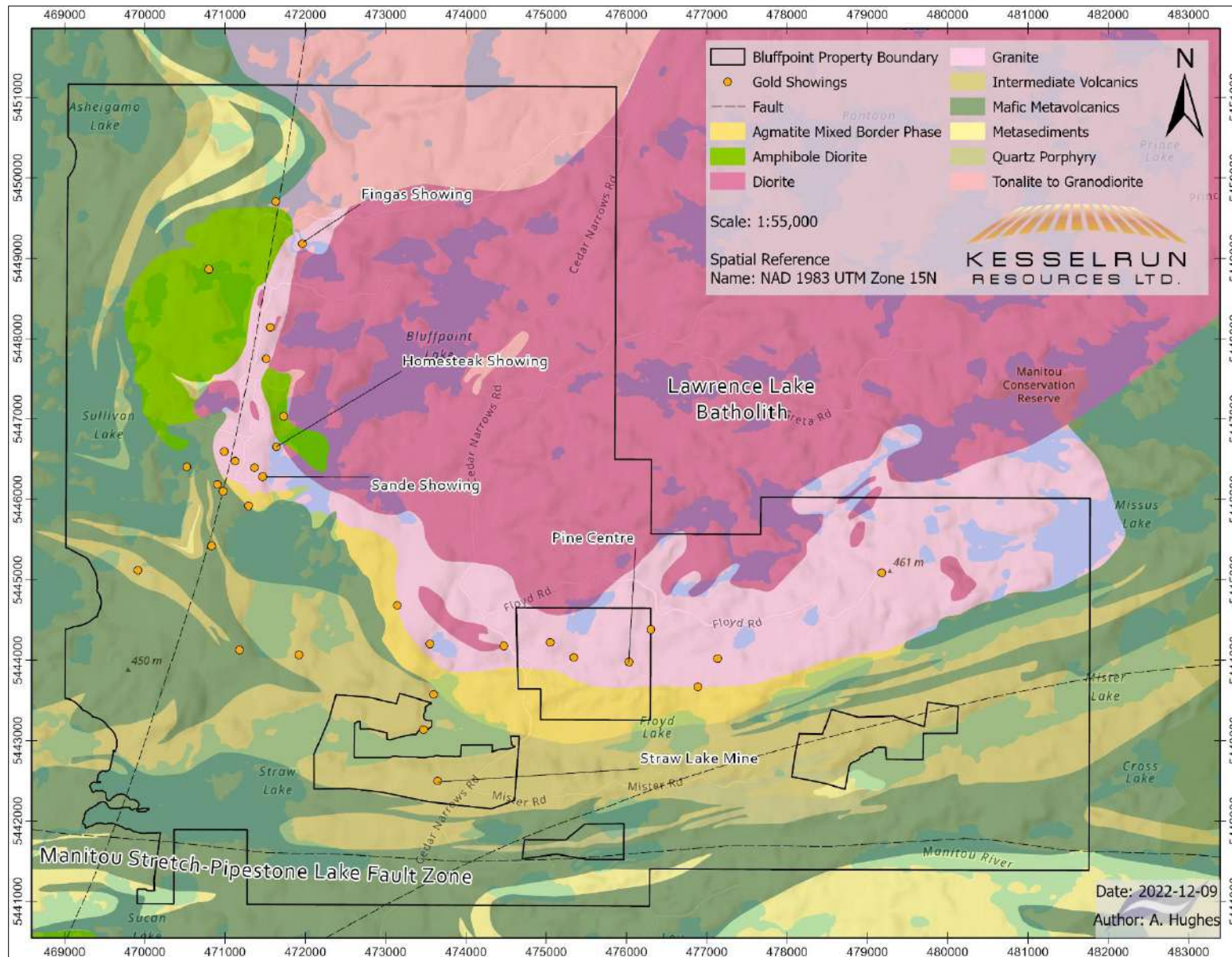


Figure 12: Local geology and known gold showings located on the Property.



## 8 Deposit Types

The interpreted geology in and around the Bluffpoint property is conducive to epigenetic mesothermal gold mineralization of two types; namely bulk-tonnage granodiorite batholith-hosted and high-grade narrow vein shear hosted deposits.

### 8.1 Bulk-tonnage Granodiorite Batholith-hosted Deposits

Bulk-tonnage granodiorite batholith-hosted gold is currently the priority target on the Bluffpoint property. Granodiorite batholith-hosted gold is a relatively new deposit type first identified at Osisko's Hammond Reef project (6.7 million ounces averaging 0.8 g/t) in Atikokan, Ontario, and now recognized at Trelawney Mining's Chester Township property (the Cote Lake Deposit) between Sudbury and Timmins. Note, however, that no official terminology has been adopted and some geologists consider Hammond Reef to be similar to the Fort Knox deposit in central Alaska (Rennie, Lambert, & Krutzmann, 2009). Granodiorite batholith-hosted gold presents significant potential for exploration both because it has only recently been recognized as a deposit type and because of its occurrence in batholiths, a terrain which is typically under-explored relative to the surrounding rocks. Many aspects of batholith-hosted gold are poorly understood since little research has been performed and no deposits have yet been brought into production. The deposit model is described below, with an emphasis on the Hammond Reef deposit which can be considered as the "type" deposit.

#### 8.1.1 Characteristics

The deposits tend to occur in close proximity to faults and shears, particularly at structural intersections. Known deposits (including Hammond Reef and Cote Lake) are localized along the relatively deformed margins of batholiths. Despite the close association with shears and faults, the batholith-hosted deposits are not localized directly within the shears but instead occur as shallow-dipping roughly tabular bodies with significant thickness and strike length (about 450 m by 3 km at Hammond Reef).

Mineralization within the zone consists of subparallel slabs and pods showing stockworks, fracturing and alteration. Quartz alteration is ubiquitous, both as silica flooding and as vein-filling material forming veins, stringers and stockworks. Rocks may also show varying degrees of chlorite, calcite, ankerite, sericite, saussurite, pyrite, hematite and fuchsite alteration. A number of other minerals have been identified in trace amounts including galena, chalcopryrite, sphalerite, bornite, bismuth telluride, stromeyerite (AuCuS) and molybdenite. Based on this mineralogy, a fairly typical (for Archean gold) Au-Ag-Cu-Pb-Zn-Te-Mo-Bi association can be inferred for Hammond Reef; whether this association also applies to other deposits of this type is unknown.

Within the mineralized zone grades typically range from 0.2 to 2 g/t, although much higher grades have been reported at Hammond Reef (up to 68.9 g/t), generally within quartz veins. Gold occurs as free



native gold, with most grains less than 15 µm in size. The most important control on gold appears to be the presence of significant densities of brittle fractures. Gold is also broadly correlative with pyrite content and is preferentially sited on pyrite aggregate grain boundaries (Rennie, Lambert, & Krutzmann, 2009). The presence of bismuth tellurides (generally as greyish smear and stains) is also considered a reliable indicator of significant grade.

### ***8.1.2 Bluffpoint Granodiorite Batholith-Hosted Deposits***

In the Bluffpoint project area, two deposits have been identified which share many characteristics with the Hammond Reef deposit; these are the Pine Centre Showing north of Floyd Lake and the Island Showing. Both deposits are developed within the CZT phase of the Lawrence Lake Batholith, both show a strong association with intersecting structures, and both are relatively large but low grade (average grades range from ~0 – 6 g/t, with an estimated average of 509 ppb for the Island Showing (MacPherson, 1992). Because drilling has never been performed, the subsurface morphology of the Island Showing is unknown; however, the Pine Centre Showing is thought to be a shallow-dipping tabular body 5 m to 20 m thick with 700 m strike length.

The mineralized zones consist of intensely fractured (in places >10 fractures per linear metre) trondhjemite (granodiorite) exhibiting quartz veining, stockworks and flooding and a variety of alteration phases including silica, saussaurite, sericite, pyrite, chlorite, pale greenish carbonate, ankerite and hematite. Gold occurs as fine native gold, and is visible within some quartz veinlets. Gold grade is correlative with fracturing/alteration intensity, with pyrite content (which may be up to 10% at fracture intersections), with quartz veining (which often shows elevated gold grades) and possibly with cross-cutting fault structures. Gold is inversely correlative with magnetite content and pyrite is thought to replace magnetite within the zone. To date, detailed geochemistry has not been carried out on either deposit and the geochemical signature of these deposits is unknown.

Apart from these two main zones, a number of other showings have been identified within the batholith, including the Original Showing just south of the Island Showing and the Pine Hill Showing just to the west of the Pine Centre Showing; of these, only the Original Showing is situated within the Bluffpoint property. These showings consist of much smaller zones of shallow-dipping pyritic quartz stringers and veins exhibiting only minor wall-rock alteration haloes. Most of the gold in these showings is concentrated within the veins. Significant gold values (up to 11 g/t at the Original Showing) have been recorded within these showings but due to their limited extent, they are considered to be much less prospective than those showings exhibiting significant wall-rock alteration.

Another showing of interest is the Harris Lake Showing south of Harris Lake where gold mineralization appears to be hosted in a slightly pyritic (<1%) lightly altered or visibly unaltered granitoid (Sande, 1994); best assay results were 4.4 g/t Au. The sampling site is approximately 1.5 km from the batholith margin and is thus situated similarly to the Island and Pine Centre Showings. Further work is needed to determine whether this could be part of a larger zone and what characteristics (if any) it shares with other granodiorite batholith-hosted gold deposits.



## **8.2 High-grade Shear-hosted Quartz-carbonate Veins**

This deposit type has a long history of exploitation throughout the Canadian shield and includes many of Canada's most important gold producers (e.g. Sigma-Lamaque, Dome, Hollinger-McIntyre, Pickle Crow). The deposit model is briefly outlined below.

### ***8.2.1 Characteristics***

Shear-hosted quartz-carbonate deposits are characterized by the formation of gold-bearing quartz carbonate veins in shear zones within deformed greenstone belts. Veins can be hosted in any lithology within the greenstone belt; generally, each district has particular host rocks which may be most favourable on chemical or structural grounds (Dubé & Gosselin, 2007). Host structures tend to be moderately to steeply dipping compressional brittle-ductile shear zones and faults in proximity to major crustal fault zones. Although any greenstone is a potential host, world-class deposits tend to show associations with tholeiitic basalts and ultramafic komatiitic flows, swarms of albitite and lamprophyre dykes and regional unconformities.

The principal vein gangue minerals are quartz and carbonate (Ca, Mg and Fe carbonates) with variable sericite, chlorite, tourmaline and scheelite. Sulfides may also be present, including pyrite, pyrrhotite, chalcopyrite, molybdenite and arsenopyrite; they typically constitute less than 10% of the vein by volume. The geochemical signature of quartz-carbonate deposits is typically Au, Ag, As, W, B, Sb, Te, and Mo, sometimes with anomalous Cu, Pb and Zn. Gold usually occurs in the native form, and is often visible to the naked eye. The average grade for Canadian quartz-carbonate deposits is about 10 g/t Au, while Au:Ag ratios usually range from 5:1 to 10:1. Gold is largely confined to the quartz-carbonate veins, but sulfidized wall-rock can also attain economic grades.

### ***8.2.2 Bluffpoint Shear-Hosted Quartz-Carbonate Deposits***

The primary example of a shear-hosted gold vein deposit in the Bluffpoint project area is the Straw Lake Beach Mine, located just south of Straw Lake. All development at the mine was along a single quartz vein, which was mined to a depth of 220 m and drifted on over a strike length of about 325 m; post-closure drilling has indicated that the gold-bearing horizon may actually stretch for 1.4 km or more. The vein is generally 5 cm to 65 cm in width, although in places it branches into sets of smaller parallel veins. The vein is hosted along the contact between a 'sericite-schist' (a highly sheared and altered felsic volcanic unit) and a vertically dipping mafic volcanic unit, in a shear zone associated with Manitou Stretch-Pipestone Lake Fault. Although mineralization is primarily in the vein, economic grades (up to 12 g/t) have also been encountered within the host felsic volcanics and within sulfide iron formation intersected during mining.



Average gold grades within the vein are ~6 g/t, although locally much higher assays have been recorded (including a 24.43 oz/ton gold sample taken from the mine dump in 2006). The gold to silver ratio is approximately 10:1. The vein is primarily quartz with some pyrite and lesser amounts of magnetite, carbonate, sphalerite, galena, tetradymite, chalcopyrite and native gold; pyrite alteration and low anomalous gold extends into the wall-rock on both sides. It has been noted that gold content in the vein is inversely proportional to tetradymite content.

Apart from the Straw Lake Beach Gold Mine, a number of other smaller gold-bearing veins are known from the Bluffpoint Lake area; these include the Konigson Showing on the north shore of Straw Lake, the Johnston Vein (about 400 m north of the Konigson vein) and the Cracker Jack occurrence (somewhere to the east of the Bluffpoint property). Based on the presence of significant shear zones (particularly the PCMDZ) as well as an expansive package of underexplored volcano-sedimentary rocks and a widespread distribution of gold mineralization in the area, there is considerable potential for further gold bearing shear-hosted quartz vein deposits on the property.

### 8.3 Other Significant Deposit Types

The Gates Bay and Sorry Mac occurrences just to the east of the property are of the disseminated type in volcano-sedimentary rock, and thus represent a type of deposit distinct from the deposits discussed above. These deposits consist of strongly sheared, rusty, mineralized schists which have been silicified, sericitized, carbonatized, pyritized and occasionally chloritized and locally contain quartz veinlets and stringers. They may be of significant width (up to 50 m) and extend for considerable strike lengths. The mineralogy is quite distinct from the shear hosted quartz veins, with the major gangue minerals being pyrite and arsenopyrite. Gold grades seem to be highest in areas of very high arsenic concentration, with assays up to about 18 g/t in very arsenic rich areas (Jaworski, 1990). Although neither the Gates Bay nor the Sorry Mac deposits are on Fladgate's claim block, there is potential for further occurrences of this type of mineralization within the volcano-sedimentary units on the Property.

Potential for another type of deposit also exists to the northwest of the property in a highly altered, quartz-veined and pyritized biotite granodiorite plug to the south of Hill Lake (Chivers, 1986). Currently it is unknown whether this granodiorite is gold-bearing; additionally, it is unknown whether the observed alteration is intrusion-related or whether the alteration is externally derived (e.g., alteration related to a shear zone). In any case, gold related to intrusive bodies is a fourth possible exploration target in the Bluffpoint project area.

## 9 History of Exploration on the Property

### 9.1 Previous Exploration Programs



The Bluffpoint project area, in particular to the south (within the greenstone belt), has a long history of exploration. Mining activity was initiated in 1899 by the CrackerJack Gold Mining Company, which sank 3 small shafts on a discontinuous 80 cm thick gold-bearing quartz vein to the east of the property. Since then, exploration involving several different companies and individuals has continued intermittently up to the present time. A summary/overview of historical exploration activities on and adjacent to the Bluffpoint Property is presented in Table 2. Historically, the best explored area in proximity to the property is the Straw Lake area, where the Straw Lake Beach Gold Mine was operated from 1938 – 1941. The mine patents are currently held by prospector Todd Ryznar. Most of the Lawrence Lake Batholith (and thus most of the Bluffpoint Property) is relatively unexplored, with exploration efforts to date concentrated on the Pine Centre and Homestake Showing. Pine Centre is currently controlled by Mineral Mountain Resources, while Kesselrun owns the Homestake Showing.

**Table 2:** Summary of Past Exploration on the Bluffpoint Property.

Year	Operator	Nature of Work	Principal Reference
1899	CrackerJack Gold Mining Company	Shaft sinking	OFR 5753, p. 89, 90, 1990
1901	Pan American Exposition	Prospecting	-
1914	Drummond Mines	Prospecting	Historical Files, 52F/03 SW00005, EMR#508937 (1974), Kenora Resident Geologist Office
1927	Ed Konigson	Prospecting, shaft sinking	"The Evening News-Chronicle" - Saturday, October 27th, 1934
1933	Murdock Mosher, Fred Grozelle	Prospecting	52F03NW0043
1933	William Lucy	Prospecting	Historical Files 52F/03NW00003, SMDR#01402, Kenora Resident Geologist Office
1934-1938	Straw Lake Beach Gold Mines Syndicate	Development, trenching, drilling	Report on the Straw Lake Beach Gold Mines Limited, Assessment File, Kenora Assessment Files, MNM
1935	Ontario Department of Mines	Report	Geology of the Straw Lake-Manitou Lakes Area, O.D.M. Annual Report., Vol 43., pg 4.
1938-1941	Straw Lake Beach Gold Mines Syndicate	Mining, drilling	Report on the Straw Lake Beach Gold Mines Limited, Assessment File, Kenora Assessment Files, MNM
1940	Sylvanite Gold Mines/Noranda Mines	Geologic mapping and sampling	-
1942	Golddale Mines/Birch Bay Gold Mines	Trenching, drilling	-
1944	Sylvanite Gold Mines/Noranda Mines	Drilling	-
1944	Golddale Mines/Birch Bay Gold Mines	Drilling	-
1952	Conwest Exploration	MAG survey, drilling	AFRI 52F03SW0005
1969	Canadian Nickel Company	Drilling	-
1970	Freeport Canadian Exploration	Airborne EM + MAG	AFRI 52F11NE0050
1971	Freeport Canadian Exploration	Drilling	AFRI 52F03NW0040, etc.
1971	Canadian Nickel Company	Drilling	AFRI 52F03NE0036



1976	Mindel Mines	Sampling, drilling	-
1976	Ontario Geological Survey	Regional geologic mapping	OFR r222
1979	Robert Fairservice	Prospecting, sampling, trenching	AFRI 52F03NW2001
1980	Selco Mining	Drilling	AFRI 52F03NW0036
1980-1981	Selco Mining	Prospecting, geologic mapping, MAG and EM surveys	AFRI 52F03NW0033
1981	Noranda	Drilling	AFRI 52F03NW0032
1981	Teck Exploration	Drilling	AFRI 52F03SW0004
1981	R. Portelance	Trenching	-
1981	The Sulphide Syndicate	EM and MAG surveys	AFRI 52F03SE0006
1982	Noranda	Geochemical and geophysical (IP) surveys, trenching, drilling	AFRI 52F03NW0029
1983	Norontex Exploration Ltd.	Prospecting	AFRI 52F03NE0024
1983	J. Scouten	Staking	-
1983	Sparton Resources	Geologic mapping, trenching, soil sampling, VFL-EM/MAG/IP surveys, drilling	AFRIs 52F03NE0019, 52F03NE0029
1984	Sparton Resources	Geologic mapping, trenching, soil sampling, geophysical surveys, drilling	AFRI 52F03NE0013
1984	Canadian Nickel Company	MAG + EM survey	AFRI 52F03NW0026
1985	Minnova/Corporation Falconbridge	Geologic mapping, sampling, trenching, IP survey, humus survey and diamond drilling	AFRI 52F03NW0016
1985	J. A. Bolen	Prospecting, geologic mapping, MAG and EM surveys	AFRI 52F03NW0021
1986	Consolidated Silver Standard Mines	VLF-EM and MAG surveys	AFRI 52F03NW0020
1987	Robert Fairservice	Staking	-
1987	Consolidated Silver Standard Mines	Geologic mapping, geochemical survey	AFRI 52F03NW0019
1987	Noranda Exploration	Airborne magnetic, VLF + radiometric surveys	AFRIs 52F03NE0009, 52F04NE0775
1988	J.A. Bolen	MAG + EM survey	AFRI 52F03NW0013
1988	J.A. Bolen	Drilling	AFRIs 52F03NW0014, 52F03NW0017
1988	Dayton Porcupine Gold Mines	MAG survey, waste dump sampling, diamond drilling	AFRI 52F03NW0010
1988	David Sande	Prospecting, sampling	AFRI 52F03NW0011
1989	Homestake Mineral Development Co.	Ground VLF-EM, mag, IP, soil geochemistry, geologic survey, trench cleaning, sampling	AFRI 52F03SE0003
1989	Minnova	Drilling	AFRI 52F03NW0016
1989	David Sande	Trenching, sampling	AFRI 52F03NW0006
1990	David Sande	Trenching, sampling, geologic mapping	AFRI 52F03NW0004



1990	Homestake Mineral Development Co.	Drilling	AFRI 52F03NE0005
1990	Dennis Sweany	Sampling	AFRI 52F03SE0003
1990	J.A. Bolen	Drilling	AFRI 52F03NW0007
1991	William Ross	Trenching, prospecting, sampling	AFRI 52F02NE0002
1992	Homestake Canada	Trenching, sampling, prospecting, geological mapping, geophysical surveys (VLF + MAG)	AFRI 52F03NW8180
1992-1994	David Sande	Prospecting, trenching, sampling	AFRI 52F03NW0030
1993	Ontario Geological Survey	Geologic Mapping	OFR r282
1994	Tri-Origin	Grid cutting, IP survey, trenching	AFRI 52F03NW0003
1995	Tri-Origin	HLEM survey, diamond drilling	AFRI 52F03NW0044
1996	Tri-Origin	Ground TDEM survey, geologic survey, sampling	AFRI 52F03NW0046
2000	Robert Fairservice	Prospecting, sampling	-
2003	Opawica Explorations	Trenching, sampling, geologic mapping	AFRI 52F03NW2002
2004	Opawica Explorations	Diamond drilling	Opawica Press Release
2005	Shotgun Exploration	Sampling	<a href="http://www.shotgunexploration.com/">www.shotgunexploration.com/</a>
2010	OGS	Airborne mag	M60146
2011	Kesselrun Resources	Mapping, prospecting, sampling	AFRI 20000007530
2012	Kesselrun Resources	Drilling, mapping, prospecting, sampling, stripping	20000007502, 20000007503
2013	Kesselrun Resources	Drilling, Prospecting	20000008042
2016	Kesselrun Resources	Prospecting, mapping, sampling, trenching	20000015255

## 9.2 Historic Exploration in the Bluffpoint Area (Breakhouse, 1988) (Chivers, 1986)

In 1976, the Ontario Geologic Survey (OGS) published Report 222 “Geology of the Straw Lake Area”. In this report, mention was made of a 0.54 oz/ton Au grab sample taken in the Lawrence Lake Batholith north of Floyd Lake. In 1979 the area was staked, trenched and sampled by Robert Fairservice who obtained an average of 5.79 g/t Au from 11 samples. The property was optioned and drilled by Selco Mining in 1980. Initial drill results were disappointing (best assay 1.03 g/t Au over 0.61 m) but Selco continued its program in 1981 with EM/MAG surveys, geologic mapping, prospecting and further drilling. The company returned the property to Fairservice at the end of 1981 and he then optioned it to Noranda Exploration in 1982. Noranda carried out geochemical and geophysical (IP) surveys over a larger area as well as trenching and drilling; trenching results were positive (16.8 g/t Au over 3.05 m and 3.77 g/t Au over 3.05 m) but drill results were disappointing and the property was once again returned





to R. Fairservice. In 1985 the property was optioned out to Minnova which undertook a program of geologic mapping, IP survey, humus survey, soil sampling and trenching; and identified multiple anomalies. Extensive drilling was carried out over the next 4 years, with a total of 28 holes being drilled on the property; the best results were 2.02 g/t Au over 5.6 m, 3.12 g/t Au over 4.8 m and 4.32 g/t Au over 1.5 m. The program delineated a gold-bearing alteration system approximately 244 m x 23 m around the Pine Centre gold showing before the claims were allowed to lapse.

In 2000, Robert Fairservice re-staked part of the claim block and discovered a new showing. He subsequently optioned the claims to Opawica Explorations (Opawica) in 2003. Opawica conducted extensive trenching and sampling across the property and obtained the best results near the Pine Centre showing with about 2.85 g/t Au over 20 m. Subsequently, Opawica drilled 22 holes on the property; while initial results were encouraging (highlights include 1.25 g/t Au over 14.5 m, 1.0 g/t over 15.7 m, 3.43 g/t over 3.2 m and 6.39 g/t over 0.8 m), later drilling results were disappointing and Opawica dropped the option. The claims were transferred in 2006 to Western Warrior (later Whetstone Minerals), which sold its option to the current holder Mineral Mountain in 2011.

In 1988, David Sande staked and prospected a claim block in the Lawrence Lake Batholith to the west of Fairservice Showing. Two samples of altered granitoid returned 2.74 g/t Au, and trenching in 1989 returned a best result of 10.3 g/t over 1.5 m. In 1990, D. Sande conducted a larger program of geologic mapping, trenching and sampling. The results confirmed the 1989 trenching results (Original Showing) and identified another gold showing a little further to the north (Island Showing). In 1992, Sande optioned the property to Homestake Canada (Homestake). Homestake carried out soil humus and geophysical (EM + MAG) surveys, geologic mapping, trenching, sampling and prospecting over a fairly large area, with trenching focusing on the Island Showing. Geologic mapping delineated a gold-bearing alteration zone approximately 345 m x 40 m in area (Island Showing) from which a total of 160 linear m of channel sampling yielded an average grade of 0.509 g/t Au. A number of additional showings were also identified to the north and southwest. Homestake considered the mineralization to be insufficient to warrant further work, and the claims were allowed to lapse. No drilling was carried out on the property. The Showings and surrounding area were re-staked by Michael Thompson in late 2010; these were later transferred to Kesselrun Resources.

In 2011, Kesselrun Resources completed a program of mapping/prospecting, soil sampling and channel sampling focussed on the historic Homestake Showing. Work was primarily concerned with relocating historic zones and performing due diligence on past sampling work. Kesselrun was successful in locating the Homestake and Northern showings, and resampling the Homestake stripped areas. Highlights of Fladgate's channel sampling include 7.37 g/t Au over 1.0 m, 6.07 g/t Au over 1.3 m, and 3.52 g/t Au over 1.0 m. Out of a total of 73 channel samples collected, 33 assayed above 0.5 g/t Au. A B-horizon soil grid over the Homestake showing showed a moderate response, with soil samples up to 0.226 g/t Au (see Figure 5). A further 356 reconnaissance soil samples in the northern portion of the property also returned interesting values, including a 1.27 g/t B-horizon sample. Prospecting uncovered a new showing, dubbed the Fingas showing, approximately 2.5 km north of the Homestake Showing (and ~1



km north of any other known showings on the property); a grab sample on the Fingas showing returned 17.85 g/t Au and was stripped during this program.

Following up on results from the previous year, Kesselrun initiated an extensive exploration program in 2012-2013, including mapping, prospecting, soil sampling, stripping, channel sampling and ultimately drilling. Mapping and 60 grab samples in the vicinity of the Homestake showing helped in the selection of stripping locations. Highlights of the grab sampling include 0.29 g/t Au near the northern-most exploratory trenches, and a 2.26 g/t Au sample collected approximately a kilometer along strike to the north of the Homestake Showing. The 2.26 g/t Au sample may correlate to the historic Northern Showing. Other significant assays confirmed the presence of gold mineralization at both the Homestake and the Original showings.

## 10 Current Program

During the period September 10 2022 to October 28 2022, Fladgate conducted a property wide alteration and prospecting program on Kesselruns Bluffpoint property. Fladgate provided all personnel and equipment for the duration of the program. Field crews stayed on site for the duration of the program. Personnel specific to the program can be found in Table 3 while daily logs are found in Table 4. The crew for this part of the program involved 2 geologists and various rotating geotechnical helpers.

A total of 206 grab samples were collected to be analyzed for whole rock geochemistry by Activation Laboratories (“Actlabs”) in Ancaster, Ontario. A segment of each collected sample was held for future petrographic work. The 2022 program was designed to follow-up on the multi-disciplinary program conducted in 2016. The results of this previous work indicate samples with higher gold contents generally exhibited hematite-sericite-silica alteration with pyrite ± chalcopyrite ± specularite mineralization of the CZT.

Prospecting was focused across the CTZ proximal to the west contact of the Lawrance Lake Batholith. Rock types targeted included hematite-sericite-silica altered, pyrite-chalcopyrite-specularite mineralized felsic to intermediate intrusive, along with any units exhibiting structural deformation.

A summary of fieldwork can be found in Figure 13 and Table 9.

**Table 3: Personnel Log**

Name	Title	Start Date	End Date	Job Description
Sean Israelson	Project Geologist	Sept 19 2022, Oct 24 2022	Oct 11 2022, Nov 3, 2022	Traverse planning, sample collection, sample QAQC
Kyle Pederson	Project Geologist	Sept 10 2022, Oct 19 2022	Sept 22 2022, Oct 28 2022	Traverse planning, sample collection, sample QAQC
Marcel Lacoste	Geology Technician	Sept 10 2022, Oct 15 2022	Sept 22 2022, Oct 28 2022	Assist project geologist with field work, camp mobilization and prep



Name	Title	Start Date	End Date	Job Description
William Bellhouse	Geology Technician	Sept 19 2022,	Oct 18 2022,	Assist project geologist with field work
Alexander Hughes	Geologist	Sept 10 2022	Sept 15, 2022	GIS database QAQC. Report writing

**Table 4: Daily Logs**

Date (YYYY-MM-DD)	Work Description
2022-09-19	Program mobilization from Thunder Bay to Bluffpoint Property
2022-09-20	Setup camp, GPS and Tablet layer creation and validation, basemap preparation and troubleshooting
2022-09-21	Prospecting and mapping near SE shore of Bluffpoint lake
2022-09-22	Prospecting and mapping near SE shore of Bluffpoint lake
2022-09-23	Finish prospecting near SE shore of Bluffpoint lake. Check access using Triangle Rd
2022-09-24	West Showings, Evaluate Lake Access
2022-09-25	Inland prospecting east of Bluffpoint Lake
2022-09-26	East Inland Prospecting, 1/2 Day Mapping, Laundry and Supplies
2022-09-27	Boat into Bluffpoint Lake. Begin prospecting Bluffpoint Lake south shore
2022-09-28	Shoreline Bluff Prospecting
2022-09-29	Fuel run. Inland Prospecting around Floyd Lake
2022-09-30	Inland Trap Line and Shoreline Burn South Bluffpoint Lake Prospecting
2022-10-01	Coordination with Mag Team, Shoreline North Bluffpoint Lake Prospecting
2022-10-02	South Bluffpoint Lake Prospecting, Fuel
2022-10-03	Inland prospecting along Mister Rd. Sample QA/QC,
2022-10-04	Bluffpoint Lake Prospecting
2022-10-05	Camp maintenance and winterization. No Sampling
2022-10-06	East Prospecting, Historic Core Database Creation
2022-10-07	Boat out of Bluffpoint Lake. Half day prospecting on Cedar Narrows rd. Trailer Parts, Food, Fuel
2022-10-08	Camp maintenance and winterization. No Sampling
2022-10-09	Prospecting N of Bluffpoint Lake
2022-10-10	Camp maintenance and winterization. No Sampling



Date (YYYY-MM-DD)	Work Description
2022-10-11	Data QA/QC
2022-10-12	Data QA/QC
2022-10-13	Data QA/QC
2022-10-14	Prospecting and mapping W of Bluffpoint Lake
2022-10-15	Prospecting and mapping W of Bluffpoint Lake
2022-10-17	Data QA/QC. Supply run
2022-10-18	Prospecting and mapping in SE corner of property, N of Manitou River
2022-10-19	Weather day. Data QA/QC
2022-10-20	Weather day. Data QA/QC
2022-10-20	Inland mapping and prospecting N of Bluffpoint Lake
2022-10-21	Inland mapping and prospecting N of Bluffpoint Lake
2022-10-22	Inland mapping and prospecting long N border of the property
2022-10-23	Further mapping and prospecting in area done on the 20th and 21st
2022-10-24	Straw Lake shoreline mapping and prospecting
2022-10-25	Prospecting and napping at S border of the property
2022-10-26	Follow-up prospecting along Cedar Narrows Rd.
2022-10-27	Prospecting near Straw Lake
2022-10-28	Data QA/QC
2022-10-29	Data QA/QC
2022-10-30	Camp demobilization

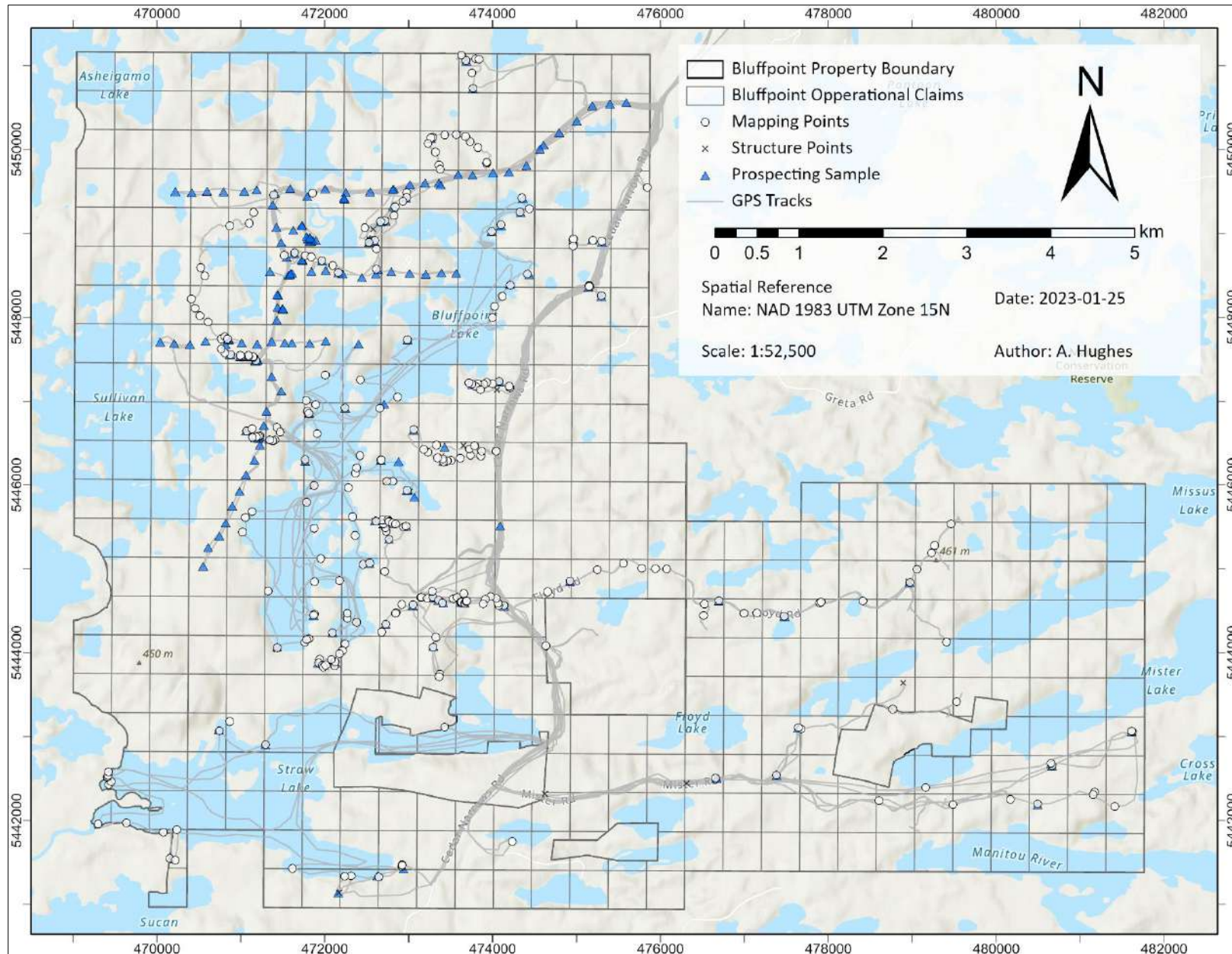


Figure 13: Bluffpoint 2022 Alteration and Prospecting Program overview



## 11 Sampling, Analytical Methods, and QA/QC

Grab samples were collected by first breaking off a representative sample using a rock hammer. The sample number from the booklet was written onto the sample bag, and then the rock sample and corresponding tag were placed into the bag. An outcrop picture was taken with the sample number on the scale bar card, and another picture was taken to illustrate any important textures observed.

The location of each grab sample was marked on the ground and in a tree directly above using flagging tape. Bagged grab samples were combined into rice bags and transported by Fladgate personnel to the secured Fladgate Exploration warehouse in Thunder Bay, Ontario. No QA-QC samples were inserted into the analytical stream. Samples were then transported by Fladgate personnel to Activation Laboratory in Thunder Bay, Ontario.

Samples were sent in two batches each with their own respective analysis; (1) ICP-MS Ultratrace-4 Acid Total Digestion and (2) ICP-MS Ultratrace-1 Aqua Regia “Partial Digestion.

## 12 Results

The 2022 exploration program at Bluffpoint was multi-faceted, with several different activities occurring simultaneously, across a large area of the property. The field season’s activities are summarized and illustrated in Section 10.

### 12.1 Lithology, Alteration, and Structure Mapping

Lithology, alteration and mineralization were mapped at 314 outcrop stations throughout the fall of 2022. Sample locations, along with detailed alteration mineralogy and mineralization descriptions are presented within Section 16 - Appendix I.

Analysis of results supports observations from previous programs of a hematite-pyrite-magnetite alteration corridor defining the contact zone trondhjemite (“CZT”). Observations have also demonstrated that the lower magnetic signature of the CZT may be caused by the destruction of an early magnetite phase by Au-bearing mineralizing fluids.

### 12.2 Structural Measurements

Structural measurements were taken at 66 outcrop stations during the course of the program. Structures were identified, measured, and recorded. A detailed list of outcrop stations including their coordinates, structures identified, and measurements taken can be found in Section 16 - Appendix I.



Structures such as jointing, fracturing, faulting, or shearing represent areas of weakness, which may have created pathways for gold-bearing mineralizing fluids within an otherwise competent granitic system. Further examples of these structures include both high- and low-density brittle fracture sets, brittle shearing, and also ductile shearing along less competent contact zones between mafic intrusive and granitic units.

### 12.3 Prospecting and Whole Rock Geochemistry

A total of 203 grab samples were collected during the prospecting program. Results of this program including sample locations, descriptions, and illustrated maps are listed in Section 17 – Appendix II.

Samples with higher gold contents generally exhibit hematite-sericite-silica alteration with pyrite ± chalcopyrite ± specularite mineralization. Universally, all samples with significant gold contents have been structurally deformed to some degree.

Geochemical results indicated multiple prospective targets surrounding Bluffpoint Lake (Figure 34) and Straw Lake (Figure 35). Anomalous areas are characterized by elevated levels of chalcophile elements including Ga, In, Tl, and Zn. Chalcophile enrichment west of Bluffpoint Lake occurred in proximity to the Fingas showing with a similar azimuth trend to the granitic lithology that the samples are hosted in. A similar chalcophile enrichment is also seen north of Straw Lake which follows the regional-scale structural trend caused by the Lawrence Lake Batholith.

## 13 Conclusions and Recommendations

The 2022 field program was successful in delineating new gold bearing geochemical zones within Kesselrun's Bluffpoint project. Mineralized joint sets were often associated with the shear zones and demonstrated the potential for high density joint sets to act as conduits to gold bearing fluids and in turn the potential for a low-grade high tonnage type deposit.

Combined with historic observations, current alteration data shows a developed correlation of pyrite-ankerite-sericite-hematite-magnetite alteration within lower grade gold bearing zones, however, the genesis of this specific alteration suite is not yet completely understood. Geochemically, this alteration package is characterized by increased chalcophile elements (Ga, In, Tl, and Zn). This envelop was noted in multiple locations along the Lawrence Lake Batholith and granite contact

Primary structural interpretations have demonstrated a correlation of dominant east west trending shear zones to gold bearing fluids within the north western and south western extent of the CZT. Most shear zones are associated with the emplacement of late mafic to intermediate dikes which seem to act as structurally incompetent units in contrast to a competent granitic body.



Structural mapping and geochemical sampling should be continued in future programs along with an expanded mechanized stripping program set out to target new showings identified in the 2016 field program. Detailed geophysics should also be performed over the extent of the CZT as well as over low-lying areas and drainage systems in order to identify any targets at depth.





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## 15 Statements of Qualifications

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**CERTIFICATE OF THE AUTHOR**

I, Alexander Hughes, do hereby certify that:

1. I am an employee of Fladgate Exploration Consulting Corporation, the geological consulting firm tasked with this report.
2. I am a member in good standing of the Association of Professional Geoscientists of Ontario (APGO #3669).
3. I am a graduate of the Lakehead University (Hons. B.Sc., 2017).
4. I have practiced geology for 6 years in a variety of settings, mostly in Northwestern Ontario, Canada. I have specific experience in Archean lode gold deposits in Ontario as both a production and exploration geologist at various gold mines throughout Ontario.
5. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
6. I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their website accessible by the public

Dated February 13, 2023

Alexander Hughes, HB.Sc, P.Geo (APGO # 3669)



## 16 Appendix I – Lithology and Structure Data

**Table 5:** Lithology Field Notes

Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
3	473290	5444067	Quartz Diorite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
4	473372	5443745	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
5	477673	5443095	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
6	475301	5448906	Quartz Diorite	Medium Grained	Biotite	Potassic	Fresh	Pyrite	weak		None	
7	475194	5448917	Diorite	Fine Grained	Silica	Mica	Fresh	Pyrite	very weak		None	
8	474954	5448914	Diorite	Fine Grained	Silica	Biotite	Fresh	Pyrite	v weak		None	
9	474962	5448933	Quartz Diorite	Coarse Grained	Silica	Potassic	Fresh	None			None	
6	475301	5448906	Quartz Diorite	Medium Grained	Biotite	Potassic	Fresh	Pyrite	weak		None	
7	475194	5448917	Diorite	Fine Grained	Silica	Mica	Fresh	Pyrite	very weak		None	
8	474954	5448914	Diorite	Fine Grained	Silica	Biotite	Fresh	Pyrite	v weak		None	
9	474962	5448933	Quartz Diorite	Coarse Grained	Silica	Potassic	Fresh	None			None	
10	471428	5446689	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	None			None	cg pink felsic intrusive
11	471467	5446632	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
12	471405	5446537	Felsic Intrusive	Coarse Grained	Potassic	Silica	Fresh	None			None	
13	471379	5446528	Felsic Intrusive	Coarse Grained	Sericite	Potassic	Fresh	Pyrite	1	Pyrite		high qz content
14	471343	5446540	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	Pyrite	1	Pyrite		
15	472769	5445357	Quartz Diorite	Medium Grained	Silica	Silica	Weathered	None			None	
16	472732	5445450	Quartz Diorite	Medium Grained	Silica	none	Fresh	None			None	similar to 857, more cg plag no defined fol/lin
17	472721	5445488	Quartz Diorite	Medium Grained	Silica	none	Fresh	None			Pyrite	higher qz surface oxidation



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
18	472699	5445542	Quartz Diorite	Medium Grained	Chlorite	Silica	Fresh	None		None		qd contact with felsic intrusive pink granite heavy oxidization and chlor mm scale mafic non mag veining
19	472700	5445540	Felsic Intrusive	Medium Grained	Silica	Silica	Fresh	None		None		my felsic intrusive pink grey
20	472687	5445583	Felsic Intrusive	Medium Grained	Silica	Silica	Weathered	None		None		felsic intrusive with quartz xenolith
21	472612	5445569	Diorite	Medium Grained	Silica	Silica	Weathered	None		None		diorite with quartz and plagioclase
22	472752	5445584	Felsic Intrusive	Coarse Grained	Potassic	Silica	Fresh	None		None		pink to white granitic mg to CG
23	472773	5445570	Quartz Diorite	Medium Grained	Silica	Silica	Fresh	None		Pyrite		
24	472762	5445565	Felsic Intrusive	Coarse Grained	Potassic	Silica	Fresh	None		None		cg linated fii
25	472808	5445544	Felsic Intrusive	Medium Grained	Silica	Silica	Weathered	None		None		felsic intrusive with quartz veining
26	472808	5445547	Felsic Intrusive	Medium Grained	Potassic	Silica	Fresh	None		None		qd clast in granite? granite intruded around qd?
27	472844	5445540	Felsic Intrusive	Medium Grained	Silica	Potassic	Fresh	None		None		grey pink granite
28	472938	5445499	Felsic Intrusive	Coarse Grained	Silica	none	Fresh	None		None		pink granite
29	472965	5445512	Quartz Diorite	Medium Grained	Silica	Chlorite	Fresh	Pyrite	1	Arsenopyrite	2	fg dissem sulfides
30	473146	5444661	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	None		None		CG pink msv granite
31	473154	5444661	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	None		None		cg granite higher qz - less pink
32	473218	5444651	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	None		None		same
33	473293	5444664	Quartz Diorite	Medium Grained	Silica	Chlorite	Fresh	None		None		qd mg
34	473356	5444626	Quartz Diorite	Medium Grained	Silica	Chlorite	Fresh	None		None		finer grained qd sm mafic min in mtx
35	473401	5444595	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	None		None		mg pink fi
36	473530	5444645	Felsic Intrusive	Coarse Grained	Potassic	Silica	Weathered	None		None		
37	473574	5444662	Felsic	Medium	Chlorite	Silica	Weathered	None		None		granite with mafic vein chlor at



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
			Intrusive	Grained								vein boundary
38	473621	5444604	Felsic Intrusive	Fine Grained	Chlorite	Silica	Fresh	None		None		much finer heavily chlor, oxidized on fractures
39	473629	5444603	Quartz Vein	Massive	Potassic	Chlorite	Fresh	None		Pyrite		1-4cm red qzv bordered by 5-10cm qd in pink felsic intrusive
40	473667	5444589	Quartz Diorite	Medium Grained	Chlorite	Silica	Fresh	Pyrite		None		
41	473684	5444614	Felsic Intrusive	Coarse Grained	Silica	Potassic	Weathered	None		None		
42	473690	5444615	Quartz Diorite	Medium Grained	Chlorite	Chlorite	Weathered	None		None		
43	473655	5444708	Felsic Intrusive	Medium Grained	Silica	Potassic	Weathered	None		None		
44	473284	5444733	Felsic Intrusive	Medium Grained	Silica	Potassic	Weathered	None		None		
45	474959	5448851	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
46	472850	5444481	Quartz Diorite	Medium Grained	Chlorite	Silica	Fresh	None		None		
47	472841	5444472	Felsic Intrusive	Coarse Grained	Silica	none	Fresh	None		None		
48	472727	5444342	Mafic Volcanic	Massive	Chlorite	Chlorite	Fresh	Pyrite	>Trace	Pyrite		Massive with chlorite altered quartz in dark matrix
49	472679	5444249	Mafic Volcanic	Massive	Chlorite	Chlorite	Fresh	None		None		
50	472918	5444577	Mafic Volcanic	Massive	Chlorite	Chlorite	Fresh	None		None		
51	473051	5444574	Felsic Intrusive	Coarse Grained	Potassic	Silica	Fresh	Pyrite	1	None		cg oxidized tr py high qz pinkish
52	472714	5444970	Mafic Volcanic	Fine Grained	Chlorite	Chlorite	Fresh	None		None		
53	474134	5444564	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	Pyrite	1	Pyrite		
54	474072	5444564	Felsic Intrusive	Coarse Grained	Potassic	Silica	Fresh	None		None		mg to CG pink
55	474067	5444590	Felsic Intrusive	Coarse Grained	Potassic	Silica	Fresh	None		Pyrite		
56	474042	5444647	Felsic Intrusive	Medium Grained	Silica	Potassic	Fresh	None		None		finer grained and less pink than previous outcrop
57	473974	5444672	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	None		None		
58	473916	5444638	Felsic	Medium	Potassic	Silica	Fresh	None		None		mg pink to white fi



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
			Intrusive	Grained								
59	473888	5444587	Felsic Intrusive	Medium Grained	none	none	Fresh	Pyrite	5-7%	Pyrite		
60	471229	5446585	Felsic Intrusive	Medium Grained	Potassic	Potassic	Weathered	Pyrite	2	Arsenopyrite	2	felsic intrusive with quartz veining and visible sulphide mineralization (1 - 5%).
61	471213	5446582	Felsic Intrusive	Medium Grained	Silica	Potassic	Transition	Sulphide	1	None		felsic intrusive with quartz veining and various sulphides
62	471182	5446575	Felsic Intrusive	Medium Grained	Biotite	Silica	Fresh	Pyrite		Pyrite		Py mineralization 1%, massive granite high Si alteration
63	471142	5446567	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
64	471067	5446643	Felsic Intrusive	Medium Grained	Silica	Potassic	Weathered	Sulphide	10 - 15%	None		
65	471137	5446673	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	Sulphide	trace	None		
66	473859	5446348	Quartz Diorite	Medium Grained	Chlorite	none	Fresh	None		None		quartz dio with minor quartz veining
67	473737	5446357	Quartz Diorite	Coarse Grained	Potassic	none	Fresh	None		None		possible hematite alteration
68	473614	5446319	Quartz Diorite	Coarse Grained	Potassic	none	Fresh	None		None		
69	473507	5446295	Felsic Intrusive	Medium Grained	none	none	Fresh	None		None		possible granodiorite dike?
70	473458	5446290	Quartz Diorite	Medium Grained	Potassic	none	Fresh	None		None		
71	473411	5446289	Felsic Intrusive	Medium Grained	Chlorite	Potassic	Weathered	Pyrite		None		strongly oxidized surfaces, felsic intrusive with ~2-3% Py mineralization
72	473414	5446276	Felsic Intrusive	Medium Grained	Chlorite	Silica	Fresh	Pyrite		None		chlorite altered felsic intrusive with Tr Py mineralization
73	473409	5446312	Felsic Intrusive	Coarse Grained	Potassic	Chlorite	Fresh	Pyrite	1	None		felsic intrusive with quartz diorite clasts and minor py min
74	473344	5446324	Felsic Intrusive	Medium Grained	Potassic	none	Fresh	None		None		
75	473229	5446392	Felsic Intrusive	Medium Grained	Chlorite	none	Fresh	Pyrite	1	None		
76	473178	5446428	Felsic Intrusive	Coarse Grained	Chlorite	Potassic	Fresh	None		None		felsic intrusive. numerous foliations/mounds of rock approx. 2 - 3 high observed around the peak of the hill.
77	473332	5446476	Felsic	Medium	Chlorite	Biotite	Fresh	None		None		



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
			Intrusive	Grained								
78	473722	5446430	Felsic Intrusive	Medium Grained	Potassic	Biotite	Fresh	None			None	
79	473787	5446469	Felsic Intrusive	Medium Grained	Potassic	Biotite	Fresh	None			None	
80	473871	5446406	Felsic Intrusive	Medium Grained	Silica	none	Fresh	None			None	
81	474206	5447158	Felsic Intrusive	Medium Grained	Silica	none	Fresh	None			None	fine to coarse grained felsic intrusive
82	474198	5447179	Felsic Intrusive	Clastic	Silica	none	Fresh	None			None	
83	474078	5447236	Felsic Intrusive	Coarse Grained	Chlorite	Biotite	Fresh	Pyrite	1		None	
84	473998	5447210	Felsic Intrusive	Coarse Grained	Silica	none	Fresh	None			None	
85	473930	5447220	Felsic Intrusive	Medium Grained	Biotite	none	Fresh	None			None	
86	473896	5447201	Felsic Intrusive	Coarse Grained	Biotite	Silica	Fresh	None			None	
87	473823	5447204	Quartz Diorite	Fine Grained	Chlorite	Silica	Fresh	Pyrite	1		None	
88	473794	5447176	Felsic Intrusive	Medium Grained	Chlorite	none	Fresh	None			None	chlorite veining
89	473753	5447202	Quartz Diorite	Fine Grained	Silica	none	Fresh	None			None	high quartz content
90	473719	5447218	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite			Pyrite	
91	473855	5447139	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite			Pyrite	
92	472284	5445969	Felsic Intrusive	Medium Grained	Potassic	none	Fresh	None			None	
93	471137	5445686	Mafic Volcanic	Fine Grained	Chlorite	none	Fresh	None			None	
94	471056	5445612	Mafic Volcanic	Fine Grained	Chlorite	Mica	Fresh	None			None	
95	471019	5445439	Mafic Volcanic	Fine Grained	Chlorite	none	Fresh	Pyrite	1		None	
96	471880	5444463	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite			Pyrite	
97	471870	5444447	Mafic Volcanic	Fine Grained	Chlorite	none	Fresh	None			None	
98	471878	5444850	Mafic Volcanic	Fine Grained	Chlorite	Silica	Fresh	None			None	finer grained more qtz
99	471911	5446614	Quartz Diorite	Medium Grained	Chlorite	Mica	Fresh	None			None	



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
100	471792	5446878	Diorite	Coarse Grained	Chlorite	Silica	Fresh	None		None		coarser grained green
101	471811	5446854	Felsic Intrusive	Medium Grained	Chlorite	Silica	Fresh	None		None		pink felsic intrusion in greenish diorite
102	471891	5446959	Quartz Diorite	Medium Grained	Chlorite	Mica	Fresh	None		None		
103	471779	5447009	Quartz Diorite	Coarse Grained	Chlorite	Mica	Transition	Pyrite	1	None		
104	472008	5447311	Quartz Diorite	Medium Grained	Chlorite	Mica	Fresh	None		None		
105	472242	5446921	Quartz Diorite	Aphanitic	Chlorite	Mica	Fresh	None		None		
106	472657	5446917	Quartz Diorite	Fine Grained	Chlorite	none	Fresh	Pyrite	1	None		
107	472868	5447049	Felsic Intrusive	Medium Grained	Silica	Muscovite	Fresh	None		None		
108	472423	5447252	Quartz Diorite	Coarse Grained	Silica	none	Fresh	None		None		
109	471837	5448721	Quartz Diorite	Coarse Grained	Silica	none	Fresh	Pyrite	1	None		
110	472986	5447734	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	Pyrite	1	None		
111	473999	5447994	Felsic Intrusive	Medium Grained	Silica	none	Fresh	None		None		
112	479264	5445282	Felsic Intrusive	Coarse Grained	Silica	Mica	Fresh	None		None		
113	479461	5445538	Diorite	Fine Grained	Chlorite	none	Fresh	None		None		
114	479231	5445191	Felsic Intrusive	Coarse Grained	Chlorite	none	Fresh	None		None		
115	479409	5444127	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
116	476994	5444472	Felsic Intrusive	Medium Grained	Silica	none	Fresh	None		None		
117	476515	5444444	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
118	475774	5445007	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	None		None		
120	479529	5443418	Mafic Volcanic	Fine Grained	Chlorite	Sericite	Fresh	None		None		
121	478767	5443327	Mafic Volcanic	Fine Grained	none	none	Fresh	None		None		
122	471765	5446304	Felsic Intrusive	Coarse Grained	Silica	none	Transition	Pyrite	1	Arsenopyrite	1	
123	471872	5445997	Felsic Intrusive	Coarse Grained	Silica	none	Fresh	None		None		





Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
124	471782	5445794	Mafic Volcanic	Clastic	Chlorite	Silica	Fresh	None		None		
125	471872	5445486	Mafic Volcanic	Fine Grained	Chlorite	Silica	Fresh	None		None		
126	471952	5445124	Mafic Volcanic	Fine Grained	Silica	none	Fresh	None		None		
127	472177	5444861	Mafic Volcanic	Medium Grained	Chlorite	Silica	Fresh	None		None		
128	472267	5444414	Mafic Volcanic	Fine Grained	Chlorite	none	Weathered	Sulphide	1	None		highly oxidized, possibly due to forest fire temperatures. quartz veining observed.
129	472271	5444471	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
130	472241	5444106	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
131	472110	5443885	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
132	472118	5443892	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
133	472116	5443844	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
134	473060	5446661	Quartz Diorite	Fine Grained	Silica	Chlorite	Fresh	Pyrite		Arsenopyrite		fg quartz rich trace py/apy
135	472382	5444364	Quartz Diorite	Fine Grained	Chlorite	Biotite	Fresh	None		None		
136	472455	5445053	Mafic Volcanic	Fine Grained	Chlorite	none	Fresh	None		None		
137	472535	5445070	Mafic Volcanic	Fine Grained	Chlorite	Mica	Fresh	Sulphide	1	None		
138	472361	5445401	Mafic Volcanic	Fine Grained	Chlorite	none	Fresh	None		None		
139	472329	5445624	Mafic Volcanic	Fine Grained	Chlorite	Silica	Fresh	None		None		
140	474026	5448127	Quartz Diorite	Coarse Grained	Silica	Biotite	Fresh	Sulphide	1	None		
141	474116	5448250	Quartz Diorite	Coarse Grained	Silica	Biotite	Fresh	None		None		
142	474212	5448383	Felsic Intrusive	Coarse Grained	Chlorite	Silica	Fresh	Pyrite	1	None		
143	474416	5448515	Felsic Intrusive	Coarse Grained	Chlorite	Mica	Fresh	Pyrite	1	None		
144	473987	5449021	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	Pyrite	1	None		
145	474101	5449100	Felsic Intrusive	Coarse Grained	Chlorite	Silica	Fresh	Pyrite	1	Gold	1	possible gold min
146	474327	5449255	Felsic Intrusive	Coarse Grained	Chlorite	Silica	Fresh	None		None		



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
147	474439	5449296	Quartz Diorite	Coarse Grained	Silica	Mica	Fresh	Pyrite	1	None		
148	474349	5449424	Felsic Intrusive	Coarse Grained	Chlorite	Biotite	Fresh	Pyrite	1-2%	None		possible biotite clasts?
149	471327	5444736	Mafic Volcanic	Fine Grained	Silica	none	Fresh	Pyrite	1	None		
150	471435	5444063	Felsic Volcanic	Fine Grained	Silica	Chlorite	Fresh	Pyrite	1	Arsenopyrite	1	
151	471763	5444126	Mafic Volcanic	Fine Grained	Chlorite	Muscovite	Fresh	None		None		
152	471809	5444170	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
153	471786	5444159	Mafic Volcanic	Fine Grained	Chlorite	Biotite	Fresh	None		None		
154	472367	5446142	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	None		None		
155	472813	5446045	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	None		None		
156	472738	5446045	Felsic Intrusive	Coarse Grained	Mica	Chlorite	Fresh	None		None		
157	472980	5445937	Quartz Diorite	Fine Grained	Chlorite	none	Fresh	Pyrite	1	None		
158	472668	5446299	Quartz Diorite	Fine Grained	Chlorite	Mica	Fresh	Pyrite	1-2%	Gold		
159	472672	5446300	Quartz Diorite	Coarse Grained	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
160	472382	5446206	Quartz Diorite	Coarse Grained	Silica	none	Fresh	None		None		
161	472421	5446349	Quartz Diorite	Coarse Grained	Silica	Mica	Fresh	Pyrite	1	None		
162	474656	5444730	Schist	Shear	Chlorite	Epidote	Fresh	Pyrite	1	None		
163	476656	5442508	Schist	Aphanitic	Chlorite	Epidote	Fresh	None		None		
164	477379	5442543	Mafic Volcanic	Aphanitic	Chlorite	Epidote	Fresh	None		None		strike 76
165	477641	5443109	Mafic Volcanic	Fine Grained	Chlorite	Epidote	Fresh	Pyrite	1	None		quartz clasts in fine grained matrix.
166	472209	5444024	Mafic Volcanic	Aphanitic	Silica	Chlorite	Fresh	None		None		
167	472175	5443991	Mafic Volcanic	Clastic	Chlorite	Silica	Fresh	None		None		
168	472127	5443895	Mafic Volcanic	Aphanitic	Chlorite	Silica	Fresh	Sulphide	1	None		
169	472078	5443920	Mafic Volcanic	Aphanitic	Chlorite	Silica	Fresh	None		None		



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
170	471941	5443926	Mafic Volcanic	Aphanitic	Chlorite	Silica	Fresh	Pyrite	tr dissem py green grey aph. ox sfc	Pyrite		
171	471925	5443879	Mafic Volcanic	Clastic	Chlorite	Silica	Fresh	Pyrite	2	None		mafic matrix with quartz clasts, brecciation, and disseminated to concentrated sulphides
172	471970	5443847	Mafic Volcanic	Aphanitic	Chlorite	Silica	Fresh	Pyrite	1	None		
173	471984	5443833	Mafic Volcanic	Aphanitic	Chlorite	Silica	Fresh	Pyrite	1	None		
174	472010	5443854	Mafic Volcanic	Aphanitic	Chlorite	Silica	Fresh	None		None		
175	472090	5444238	Felsic Volcanic	Aphanitic	Silica	Silica	Fresh	Pyrite		Pyrite		aph lght grey white tr py surf ox high qtz
176	471519	5448739	Quartz Diorite	Coarse Grained	Silica	Biotite	Fresh	None		None		
177	471099	5449120	Quartz Diorite	Coarse Grained	Silica	Potassic	Fresh	None		None		
178	471153	5449250	Quartz Diorite	Coarse Grained	Sericite	Silica	Fresh	Chalcopyrite	1	Pyrite	1	
179	473418	5443131	Schist	Aphanitic	Chlorite	Sericite	Fresh	Pyrite		Pyrite		past production
180	474656	5444728	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	Pyrite	1	None		
181	474921	5444859	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	Pyrite	1	None		
182	475247	5444992	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	Sulphide	1	None		
183	475559	5445067	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	None		None		
184	475939	5445003	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	None		None		
185	476075	5444999	Felsic Intrusive	Coarse Grained	Biotite	Silica	Fresh	None		None		
186	476525	5444582	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	Sulphide	1	None		
187	476698	5444623	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	Sulphide	1	None		
188	477151	5444476	Felsic Intrusive	Medium Grained	Silica	Muscovite	Fresh	Pyrite		Pyrite		1cm qzv w qz rich deformed mixed zone
189	477474	5444437	Felsic Intrusive	Coarse Grained	Silica	Potassic	Transition	Pyrite	1-2%	None		



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
190	477898	5444597	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	Pyrite	1	None		
191	477914	5444604	Diorite	Fine Grained	Chlorite	none	Fresh	None		None		
192	478413	5444616	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	None		None		
193	478970	5444838	Felsic Intrusive	Medium Grained	Silica	Chlorite	Fresh	Pyrite	2	Pyrite		
194	479058	5444994	Quartz Diorite	Coarse Grained	Chlorite	Chlorite	Fresh	None		None		
195	475151	5448380	Quartz Diorite	Medium Grained	Biotite	none	Fresh	None		None		
196	475157	5448368	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	None		None		
197	475154	5448367	Quartz Diorite	Fine Grained	Silica	Biotite	Fresh	Pyrite		Pyrite		
198	475150	5448369	Felsic Intrusive	Coarse Grained	Biotite	Potassic	Fresh	None		None		qd to fi gradational ctc ? alt boundary?
199	475294	5448257	Felsic Intrusive	Coarse Grained	Chlorite	none	Fresh	Pyrite	1	None		
200	474041	5446403	Quartz Vein	Aphanitic	Potassic	Silica	Fresh	None		None		4cm pink qtz vein in qd tr py in chlorite veins
202	473930	5449838	Quartz Diorite	Medium Grained	Silica	Chlorite	Fresh	None		None		5m sse from previous see next two for alteration halo
203	473930	5449837	Quartz Diorite	Coarse Grained	Biotite	Silica	Fresh	None		None		3m sse of previous, see next, alt halo
204	473925	5449835	Felsic Intrusive	Coarse Grained	Biotite	Silica	Fresh	None		None		5m sse from last vcg high bt
205	473931	5449849	Quartz Diorite	Fine Grained	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		diorite contact qd
206	473826	5450022	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
207	473729	5450092	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	None		None		
208	473679	5450155	Felsic Intrusive	Coarse Grained	none	none	Fresh	None		None		
209	473568	5450177	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	None		None		
210	473429	5450175	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	None		None		
211	473285	5450141	Quartz Diorite	Fine Grained	Chlorite	Silica	Fresh	None		None		
212	473264	5450140	Quartz Vein	Massive	Silica	Potassic	Fresh	None		None		qtzv 1cm to 50cm interbedded
213	473263	5450138	Quartz Diorite	Fine Grained	Chlorite	Silica	Fresh	None		None		



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
214	473229	5450072	Quartz Diorite	Fine Grained	Chlorite	Silica	Fresh	None		None		
215	473320	5449969	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	None		None		minor quartz veining
216	473362	5449812	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
217	473377	5449767	Quartz Diorite	Fine Grained	Chlorite	Silica	Fresh	Pyrite	1	None		
218	471856	5449481	Diorite	Fine Grained	Silica	none	Fresh	None		None		
219	471395	5449458	Quartz Diorite	Porphyritic	Silica	none	Fresh	None		None		
220	471180	5447485	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	Pyrite	2	Chalcopyrite	2	trenched outcrop. felsic intrusive with quartz veining and significant py min.
221	471149	5447519	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
222	471148	5447529	Quartz Diorite	Porphyritic	Silica	none	Fresh	None		None		
223	471096	5447532	Felsic Intrusive	Coarse Grained	Silica	Potassic	Fresh	Pyrite	1	None		
224	471091	5447549	Quartz Diorite	Porphyritic	Silica	none	Fresh	None		None		
225	471000	5447537	Felsic Intrusive	Coarse Grained	Silica	Biotite	Fresh	None		None		
226	470994	5447545	Quartz Diorite	Porphyritic	Silica	Biotite	Fresh	Pyrite	1	None		
227	470876	5447554	Felsic Intrusive	Interbedded	Silica	Potassic	Fresh	Pyrite	1	Chalcopyrite	1	possible felsic-intermediate contact
228	470812	5447572	Quartz Diorite	Porphyritic	Silica	none	Fresh	None		None		
229	470768	5447622	Quartz Diorite	Porphyritic	Silica	Potassic	Fresh	None		None		
230	470764	5447744	Quartz Diorite	Porphyritic	Silica	Potassic	Fresh	Pyrite	1	None		
231	470809	5447771	Quartz Diorite	Coarse Grained	Silica	none	Fresh	None		None		
232	470843	5447744	Quartz Diorite	Porphyritic	Silica	none	Fresh	Pyrite	1	Chalcopyrite	1	
233	470613	5447941	Quartz Diorite	Porphyritic	Silica	none	Fresh	None		None		
234	470512	5448016	Quartz Diorite	Porphyritic	Silica	Chlorite	Fresh	Pyrite	1	None		
235	470454	5448105	Quartz Diorite	Porphyritic	Silica	Chlorite	Fresh	Pyrite	1	None		
236	470413	5448220	Quartz Diorite	Coarse Grained	Silica	Chlorite	Fresh	None		None		
237	470573	5448493	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
238	470520	5448593	Felsic Intrusive	Coarse Grained	Silica	none	Fresh	None		None		
239	470870	5449091	Quartz Diorite	Coarse Grained	Silica	Chlorite	Fresh	None		None		



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
240	481411	5442170	Schist	Shear	Mica	Silica	Fresh	None		None		
241	481171	5442343	Schist	Fine Grained	none	none	Fresh	None		None		
242	481156	5442309	Schist	Shear	Mica	Silica	Fresh	None		None		
243	481623	5443063	Schist	Fine Grained	Silica	Rock Flour	Fresh	None		None		
244	480666	5442658	Schist	Shear	Mica	Silica	Fresh	None		None		mica schist with quartz veining
245	480490	5442198	Schist	Shear	Mica	Silica	Fresh	None		None		quartz veining at 70
246	480168	5442251	Schist	Interbedded	Silica	Mica	Fresh	None		None		mica schist and greenstone contact?
247	479484	5442189	Schist	Fine Grained	Chlorite	Mica	Fresh	None		None		quartz veining, with sub-cent. parallel veining and biotite min.
248	478601	5442237	Schist	Shear	Muscovite	Silica	Weathered	None		None		
249	471643	5448768	Felsic Volcanic	Coarse Grained	Silica	Silica	Fresh	Pyrite	trace -1%	Pyrite		cgr pinkish grey with sub cm veins containing trace to 1% fgr well developed Py
250	471766	5448734	Felsic Intrusive	Coarse Grained	none	none	Fresh	None		None		cgr pinkish grey granitic rint rock massive
251	471837	5448721	Felsic Intrusive	Coarse Grained	none	none	Fresh	None		None		cgr pinkish grey. massive equigranular.
252	471965	5448675	Felsic Volcanic	Equigranular	Silica	none	Fresh	None		Pyrite		mar light grey felsic intrusive. massive equigranular
253	472097	5448616	Diorite	Coarse Grained	none	none	Fresh	None		Pyrite		cgr equigranular felsic intrusive. unaltered. non min no inclusions
254	472162	5448533	Diorite	Coarse Grained	Silica	Chlorite	Fresh	Pyrite	tr	None		mgr to cgr weakly shear felsic intrusive. fractures run roughly 275/-60
255	472476	5449065	Quartz Diorite	Coarse Grained	Chlorite	none	Fresh	None		None		cgr equigranular felsic int
256	472616	5448575	Quartz Diorite	Coarse Grained	none	none	Fresh	None		None		cgr equigranular felsic intrusive. non min. massive
257	472616	5448814	Pegmatite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		overburden. no outcrop. boulders
258	472598	5448917	Felsic Intrusive	Coarse Grained	none	none	Fresh	None		None		cgr pink-white felsic intrusive common EW trending barren qz veins. very light. possible float but 3 adjacent OC look similar
259	472978	5449486	Felsic Volcanic	Coarse Grained	none	none	Fresh	None		Pyrite		cgr pink equigranular granite. non min wear east west mm scale fractures
260	472974	5449427	Felsic Intrusive	Coarse Grained	none	none	Fresh	None		Pyrite		non min unaltered granitic intrusion. non min weak



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
												fracturing.
261	472931	5449383	Felsic Intrusive	Coarse Grained	none	none	Fresh	None		None		cgr granitic intrusive
262	472840	5449317	Quartz Diorite	Coarse Grained	Silica	Mica	Fresh	Pyrite	tr	None		cgr granitic rock with tr fc py and hematite. granitic host appears to show weak e-w mineral lineation with more dioritic com
263	472823	5449213	Quartz Diorite	Equigranular	Silica	none	Fresh	None		None		cgr blue grey equigranular granitic rock with rare silica rich bands locally with increase k spar giving a more felsic granitic
264	472718	5449153	Quartz Diorite	Equigranular	none	none	Fresh	None		None		mgr blue grey equigranular felsic to l remediate intrusive. rare 3cm granitic bands. non min
265	472665	5449142	Felsic Intrusive	Equigranular	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		mgr light pinkish white. very felsic.
266	473765	5450730	Felsic Intrusive	Coarse Grained	Chlorite	none	Fresh	None		None		
267	473752	5450911	Andesite	none	none	none	Fresh	None		None		overburden with creek running between down the middle
268	473684	5451061	Felsic Intrusive	Medium Grained	Potassic	Chlorite	Fresh	None		None		Med grained F.I. lots of quartz like the previous sample although grain sizes have reduced and chlorite alteration is minimal t
269	473630	5451123	Felsic Intrusive	Medium Grained	Potassic	Chlorite	Fresh	None		None		Red felsic intrusive on the north boundary of claim, which the outcrop runs with the boundary north, north-east of last sampled
270	473797	5451079	Felsic Intrusive	Medium Grained	Potassic	Chlorite	Fresh	None		None		same composition as Last mapping point
271	473838	5451078	Felsic Intrusive	Medium Grained	Potassic	Chlorite	Fresh	None		None		part of the large-scale fold system?
272	472477	5449066	Quartz Diorite	Equigranular	Ankerite	none	Fresh	None		None		mgr pink grey equigranular QD. Non min. right side of photo is surface weather
273	472526	5448896	Quartz Diorite	Equigranular	Silica	none	Fresh	Pyrite	von associated 1%	Pyrite		cgr equigranular QD with cm scale folded qz veins running 120/-30. veins show at least 2



Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
												deformations amd appear bowled
274	470867	5443182	Mafic Volcanic	Aphanitic	Chlorite	Silica	Fresh	None		None		fgr dark grey MV. Weak FO at 60/-70
275	470742	5443073	Mafic Volcanic	Aphanitic	Chlorite	Silica	Fresh	None		None		fgr green grey Mv with common late 3-10. weak FO runs 35/-70 cm veins running 25/-70
276	471293	5442908	Mafic Volcanic	Shear	Chlorite	Chlorite	Fresh	None		None		fg, grn grey, mod sheared mafic volcanic. 305/-70
277	469430	5442432	Mafic Volcanic	Vesicular	Chlorite	Chlorite	Fresh	None		None		mafic volcanic contact with granite, mafic is massive, no mineralization, vesicles common, strongly silicified
278	469455	5442467	Quartz Diorite	Medium Grained	none	Chlorite	Fresh	None		Pyrite		granite mafic contact, granite contains 30% decimeter scale rounded inclusions, rip up areas of mafic and intermediate material
279	469409	5442521	Conglomerate	Shear	Chlorite	Chlorite	Fresh	None		None		sheared conglomerate, mafic matrix, semi rounded felsic clasts, no min, weakly elongate clasts, evidence of sigma displacement
280	469418	5442538	Quartz Diorite	Medium Grained	Potassic	none	Fresh	Pyrite		Pyrite		red granitic rock, equigranular
281	470143	5441553	Felsic Volcanic	Aphanitic	Silica	Chlorite	Fresh	None		None		vfg thinly laminated felsic volc to mudstone? high qtz sporadic and deformed
282	470221	5441530	Mafic Volcanic	Aphanitic	Chlorite	Chlorite	Fresh	None		None		thin lam dark grn grey metavolc
286	472916	5441455	Felsic Volcanic	Aphanitic	Silica	Chlorite	Fresh	Pyrite		Pyrite		vfg mafic int volc irregular qtzv near ddh
287	472924	5441475	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
288	472921	5441465	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
289	480652	5442685	Felsic Intrusive	Massive	Silica	Chlorite	Fresh	Pyrite		Pyrite		felsic int msv high qz ctc barre qzv
290	481613	5443068	Mafic Volcanic	Aphanitic	Chlorite	Epidote	Fresh	Pyrite		Gold		vfg high chlor / ep vis gold?





Waypoint	UTM X	UTM Y	Lithology	Lithology Texture	Alteration1	Alteration2	Weathering	Mineralization	Intensity	Mineralization2	Intensity2	Notes
291	479160	5442394	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
292	475841	5449548	Quartz Diorite	Coarse Grained	Chlorite	Silica	Fresh	None		None		intensely veined qd no vis min
293	474640	5444083	Quartz Diorite	Medium Grained	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		mg qd tr py chlor
295	474235	5441751	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
296	474235	5441750	Andesite	Aphanitic	Chlorite	Chlorite	Fresh	Pyrite		Pyrite		
298	473364	5443716	Mafic Volcanic	Aphanitic	Sericite	Chlorite	Fresh	None		None		fg miv qtz in mtx
299	473324	5444186	Felsic Intrusive	Medium Grained	Sericite	Silica	Fresh	None		None		high qz fint seric
300	469425	5442581	Mafic Volcanic	Aphanitic	Chlorite	Chlorite	Fresh	None		Pyrite		
301	469298	5441910	Schist	Aphanitic	Chlorite	Silica	Fresh	None		None		vfg layered schist
302	469637	5441949	Schist	Aphanitic	Chlorite	Chlorite	Fresh	None		None		
303	470079	5441864	Schist	Aphanitic	Chlorite	Chlorite	Fresh	None		None		
304	470238	5441891	Schist	Aphanitic	Chlorite	Chlorite	Fresh	None		None		
306	471617	5441430	Mafic Volcanic	Aphanitic	Chlorite	Silica	Fresh	None		None		vuggy miv
307	472314	5441341	Mafic Volcanic	Aphanitic	Chlorite	Silica	Fresh	None		None		
308	472237	5441339	Mafic Volcanic	Aphanitic	Sericite	Silica	Fresh	None		None		highly brittle
309	472643	5441327	Felsic Intrusive	Aphanitic	Chlorite	Silica	Fresh	None		None		vfg felsic

**Table 6:** Structure Field Notes

Waypoint	UTM X	UTM Y	Lithology	Structure	Strike	Dip	Structure2	Strike2	Dip2	Structure3	Strike3	Dip3	Notes
1	472768	5445359	quartz diorite	Lineation	20		Bedding						
2	472719	5445491	qd	Lineation	335		Lineation						
3	472701	5445544	qd to granite ctc	Contact			Contact						irregular contact grey qd to pink granite oxidization in qd (to purple?)
4	472689	5445587	quartz diorite/granite	Contact	0		Bedding						
5	472587	5445577	mii	Veining	13		Veining						mm mafic veins
6	472764	5445582	QD Granite ctc	Contact	240		Contact						irregular



7	472783	5445556	granite	Lineation	290	80	Bedding		
8	472812	5445549	quartz	Veining	256		Bedding		
9	473578	5444651	mv in granite	Veining	2		Jointing	50	27
10	473612	5444607	felsic int	Jointing	90	90	Bedding	336	80
11	473635	5444601	qzv	Veining	260	70	Bedding		
12	473668	5444605	qd	Jointing	300		Bedding		
13	472843	5444470	qd to fi	Contact	230		Contact		
14	474058	5444579	fi	Veining	350		Veining		cg pinker felsic vein in mg felsic
15	471229	5446584	quartz	Veining	0		Bedding		
16	471214	5446569	Diorite	Veining	95		Veining		First structure is a diorite dyke within the pink granite with 1% Py min. 2nd structure is 2 quartz veins (5-10cm wide) one continuing in the direction of the west side of the dyke and another branching off north containing 3-6% Sphalerite
17	471221	5446533	quartz	Veining	0	50	Veining	290	65
18	471067	5446651	quartz	Veining			Bedding		
19	473393	5446343	felsic int. / q. diorite	Contact			Bedding	Veining	194 felsic intrusive and quartz diorite contact""
21	473653	5446472	quartz vein	Veining	74	30	Bedding		
22	474079	5447235	quartz	Lineation	50	90	Bedding		
23	473891	5447199	quartz	Veining	320		Veining	90	
24	473755	5447202	quartz diorite	Lineation	330		Bedding		
25	474052	5447135	felsic with diorite clasts	Contact			Bedding		
26	472242	5446920		Jointing	120	85	Jointing	160	80 quartz at apex of joints
27	478753	5443314	quartz	Veining	60	50	Bedding		
28	478891	5443644	miv	Shear			Veining		
29	471767	5446291	felsic int	Jointing	303	70	Bedding		felsic int 25cm bw. joints
30	471857	5445986	quartz diorite	Fault	166	80	Fault	54	50
31	471782	5445789	felsic	Veining	182		Bedding		
32	472376	5444366	quartz diorite	Fault	348	78	Bedding		
33	472448	5445049	quartz diorite	Jointing	288	85	Bedding		
34	474332	5449249	mafic dike	Veining	63		Bedding		
35	471426	5444044	fg vx	Jointing	273		Bedding		



36	472736	5446036	felsic intrusive	Lineation	144	55	Bedding				
37	472722	5446042	quartz	Veining	98		Bedding				
38	473015	5445926	quartz vein	Veining		20	Bedding				
39	474470	5442334	fiv	Foliation	80		Shear	40			
40	476311	5442446	fiv	Shear			Bedding				
41	476668	5442507	quartz vein	Veining	74		Bedding	Veining		four visible roughly parallel quartz veins	
43	478971	5444842	fi	Jointing	94	85	Bedding				
44	478956	5444849		Shear	310		Shear	20			
45	478970	5444843	quartz	Veining	82		Bedding				
46	479056	5444999	qd	Veining			Bedding				
47	475152	5448363	qd to fi	Contact			Bedding			gradational but sharp ctc bw mg qd and coarse felsic	
48	475301	5448256	mafic intrusive	Veining	286	50	Bedding				
49	473929	5449839	diorite to qd	Contact		75	Bedding				
50	473711	5450102	quartz	Veining	22		Bedding				
51	473590	5450180	quartz	Veining	60		Bedding				
52	473294	5450150	quartz vein	Veining	60		Bedding				
53	473283	5450143	qtzv	Veining	100	85	Veining			qtzv 1cm to 50cm white to pink in sheared zone	
54	470849	5447727	quartz	Veining	276	42	Bedding				
55	472577	5449050	QD Granite	Contact	345	60	Lineation	340	60	contact btw granite and QD. qd breccia chunks with later granite to the east	
56	473766	5450729	Quartz vein in felsic intrusive	Veining	220	40	Bedding				
57	473682	5451058		S-fold axis			Bedding	Veining	300	Large scale folding on the downslope of the hill. qtz vein running with fold axis?	
59	472532	5448898	qz	Veining		20	S-fold axis	120	-30	folded veins	
60	472535	5448930	Quartz Diorite	Shear	135	90	Bedding			silica waters QD. No apparent min	
61	471292	5442910	mafic volcanic	Shear	305	70	Veining				
62	469430	5442468	mafic volcanic - granite	Contact	300	90	Bedding	Shear	250	-90	granite to the N
64	469418	5442530		Shear	250	90	Bedding				
65	470157	5441553	felsic volcanic	Foliation	80		Bedding				



66	472171	5441140	fiv ctc mint	Contact	80	Bedding
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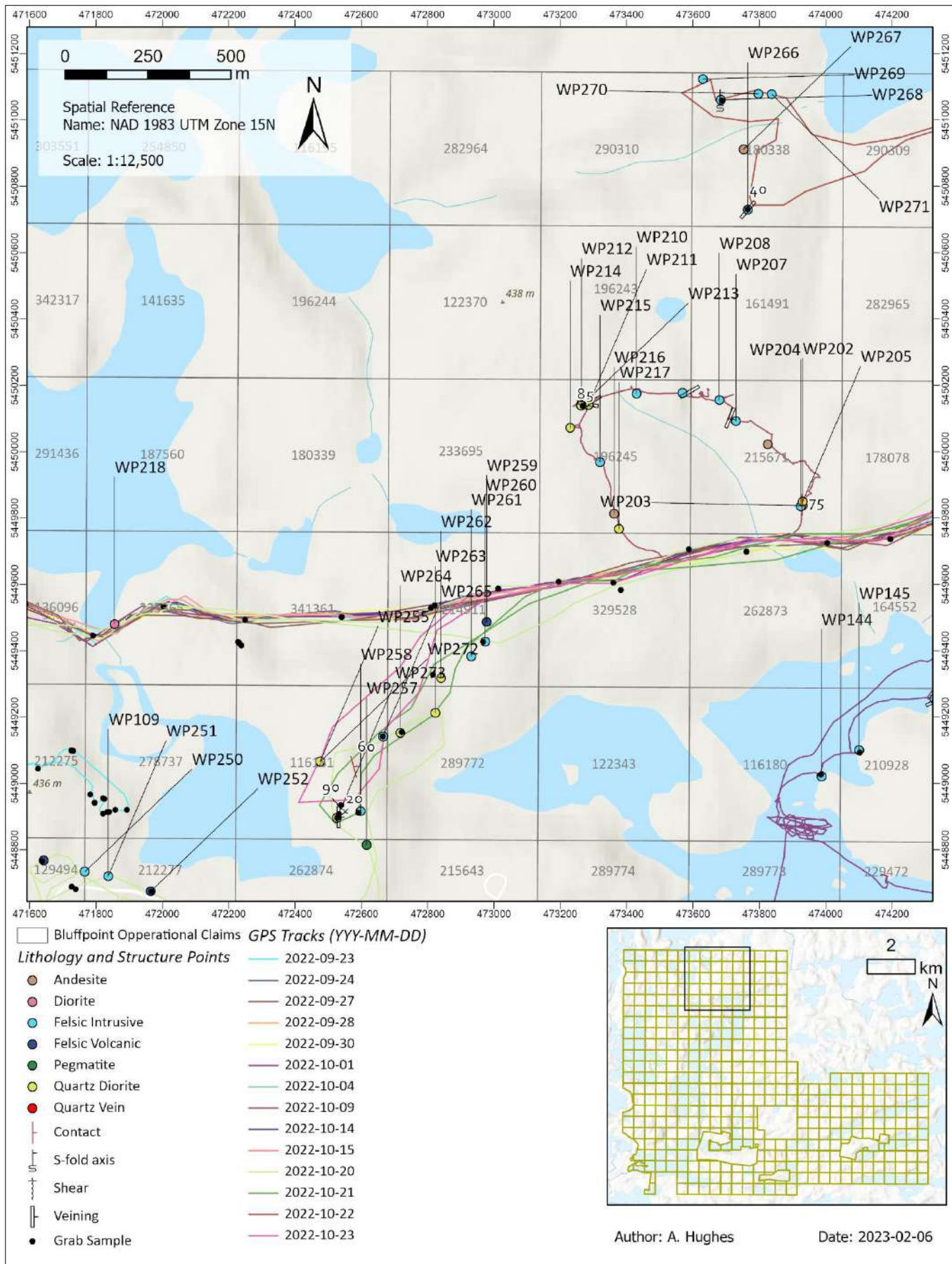


Figure 14: Lithology and Structure Points. 1 of 12

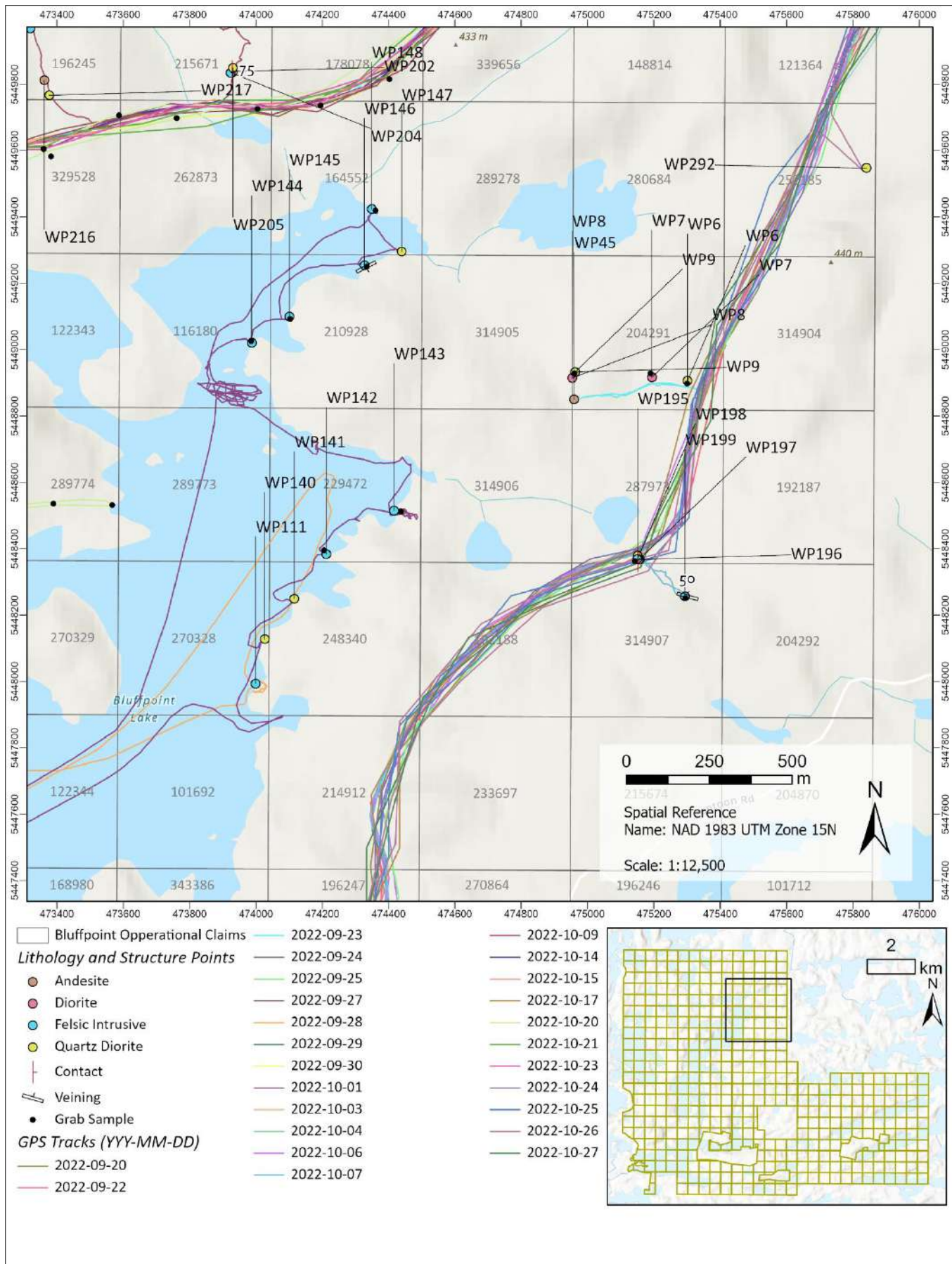


Figure 15: Lithology and Structure Points. 2 of 12

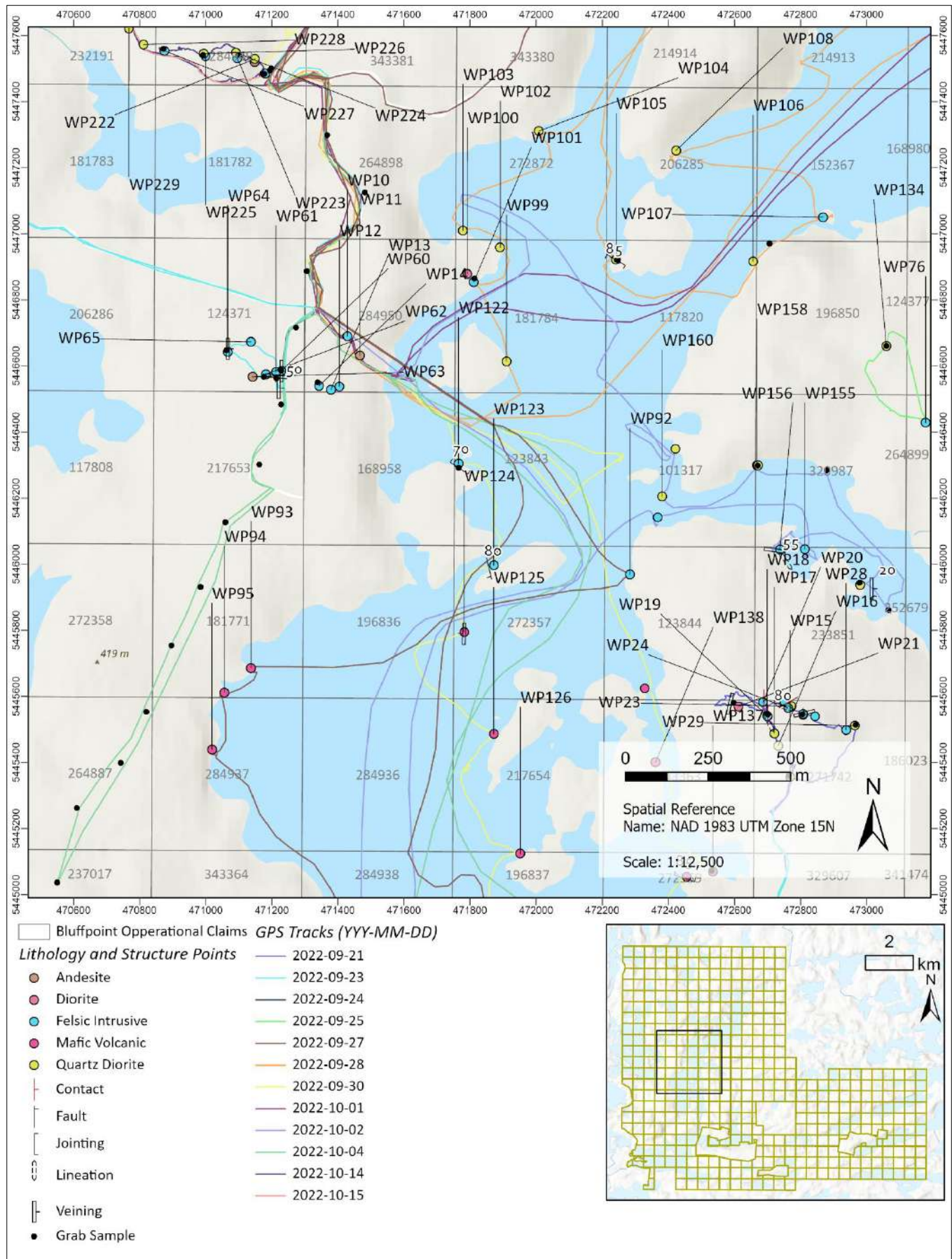


Figure 16: Lithology and Structure Points. 3 of 12

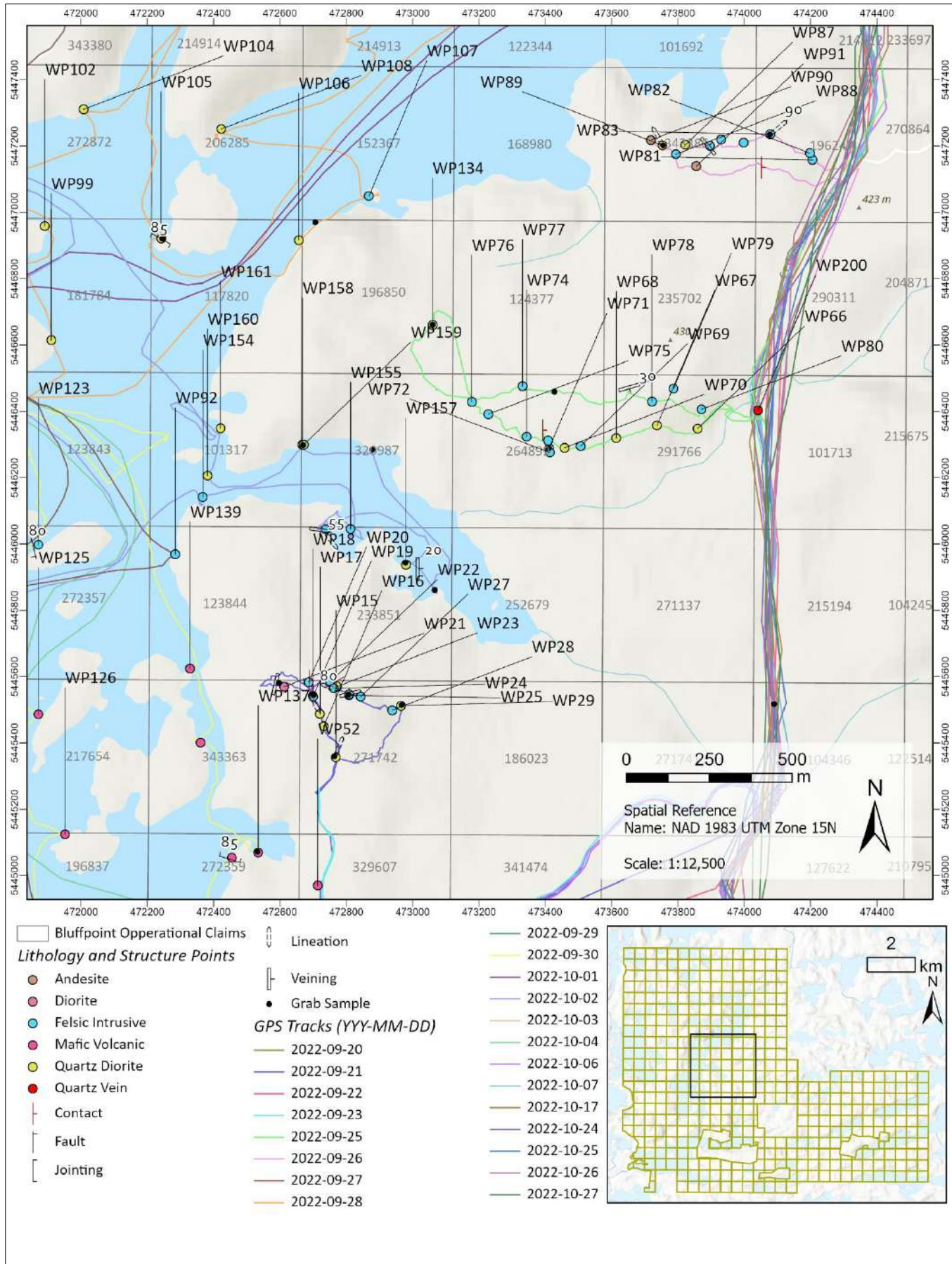


Figure 17: Lithology and Structure Points. 4 of 12



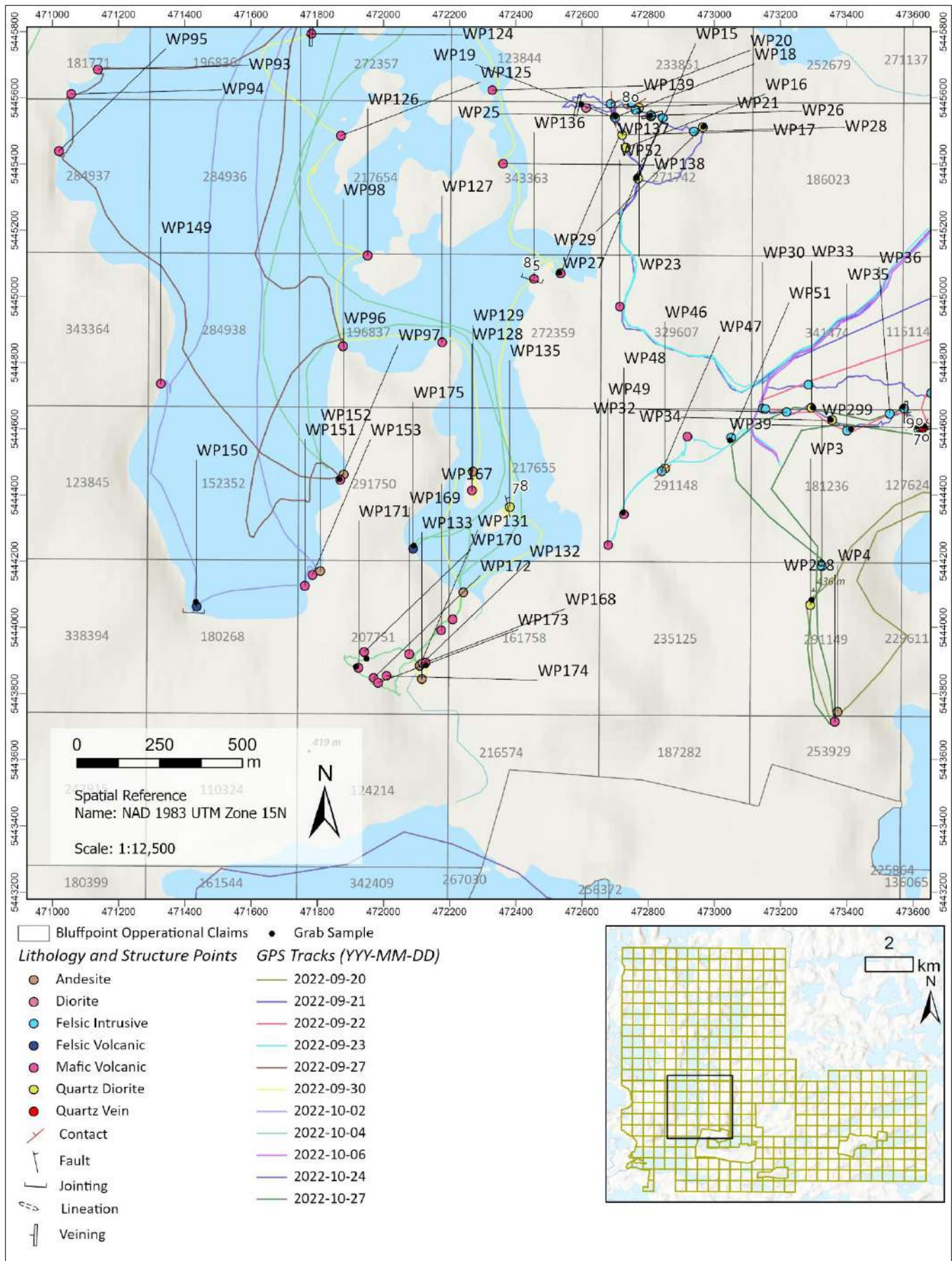


Figure 18: Lithology and Structure Points. 5 of 12

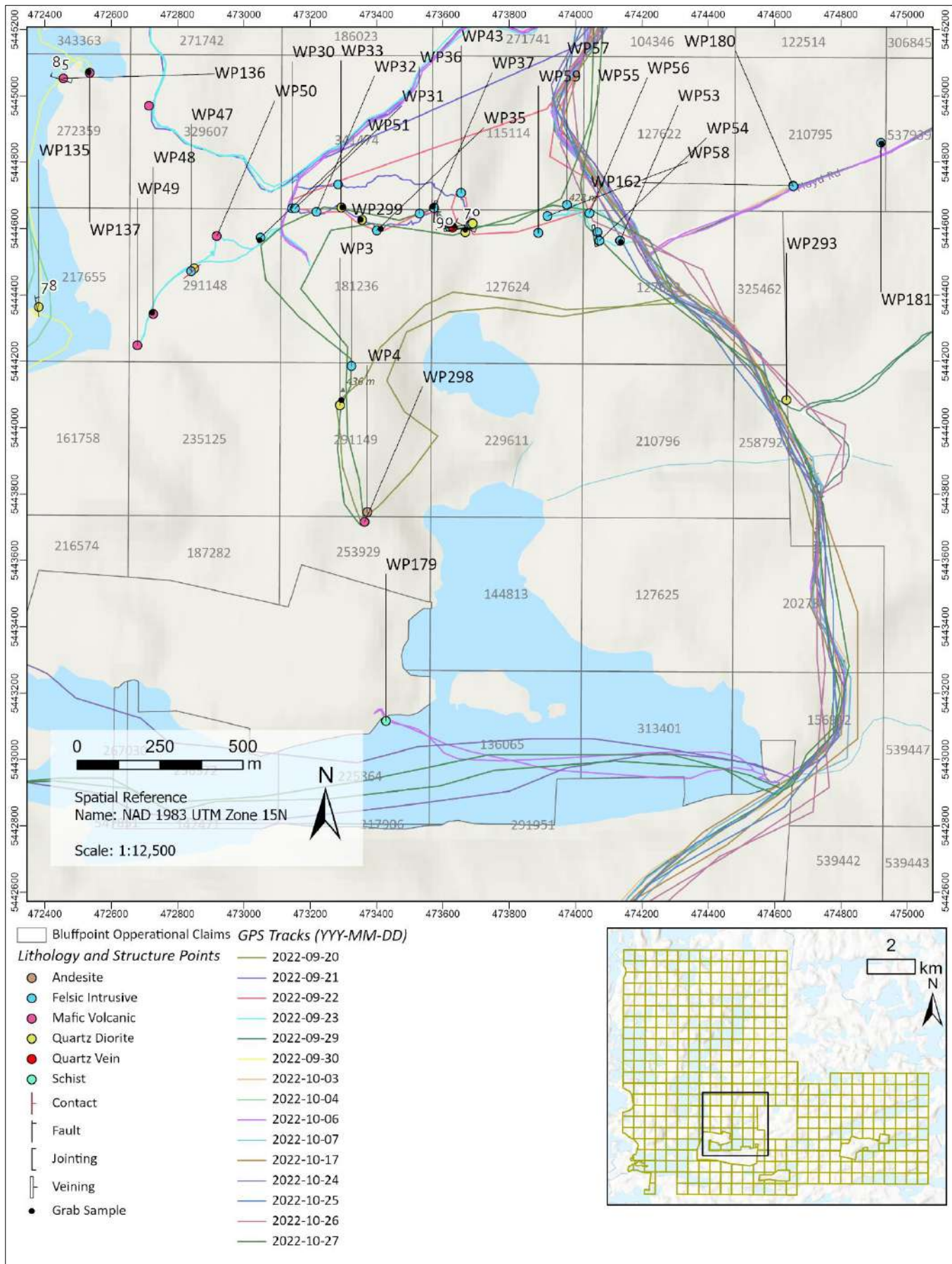


Figure 19: Lithology and Structure Points. 6 of 12

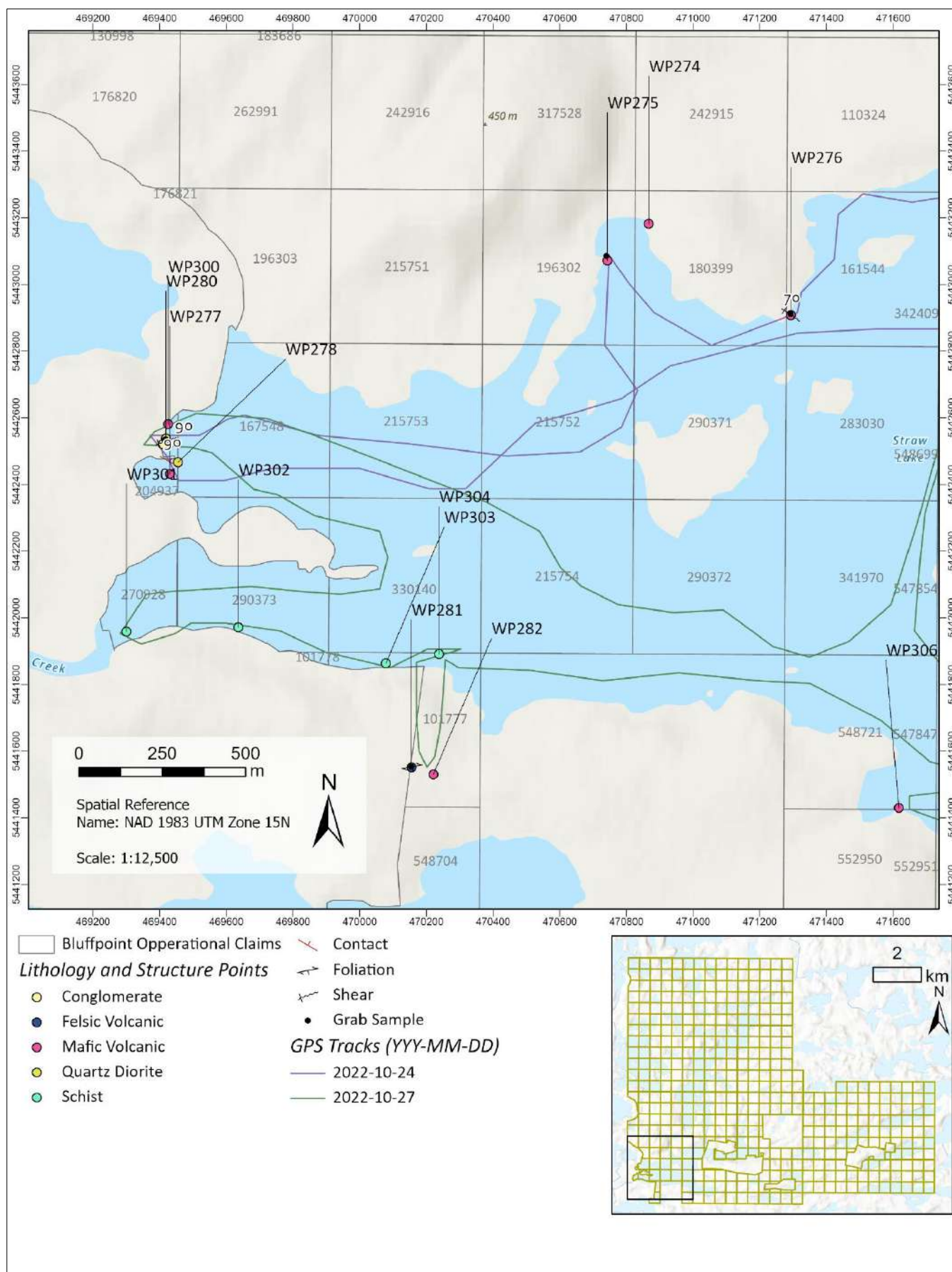


Figure 20: Lithology and Structure Points. 7 of 12

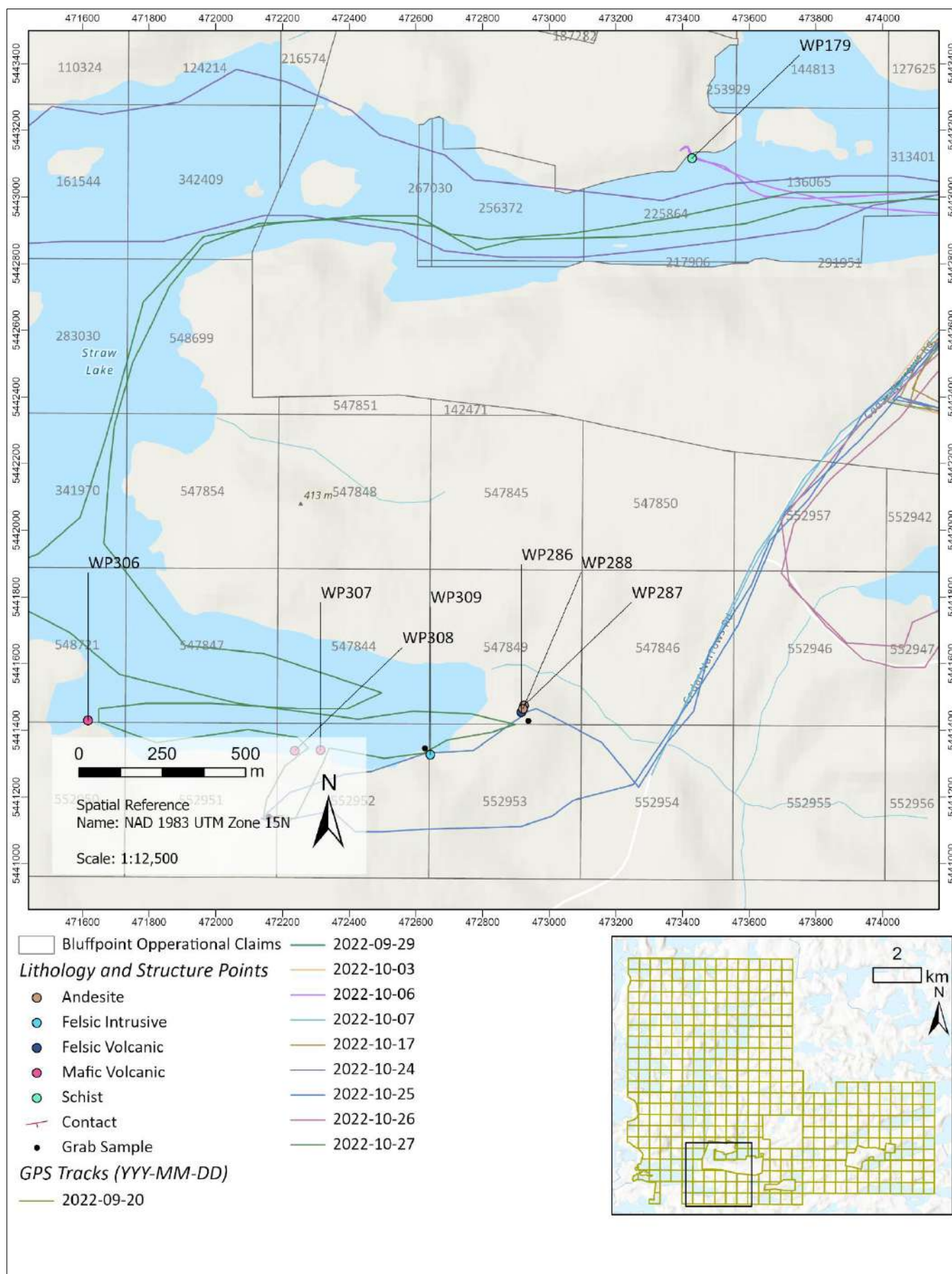


Figure 21: Lithology and Structure Points. 8 of 12

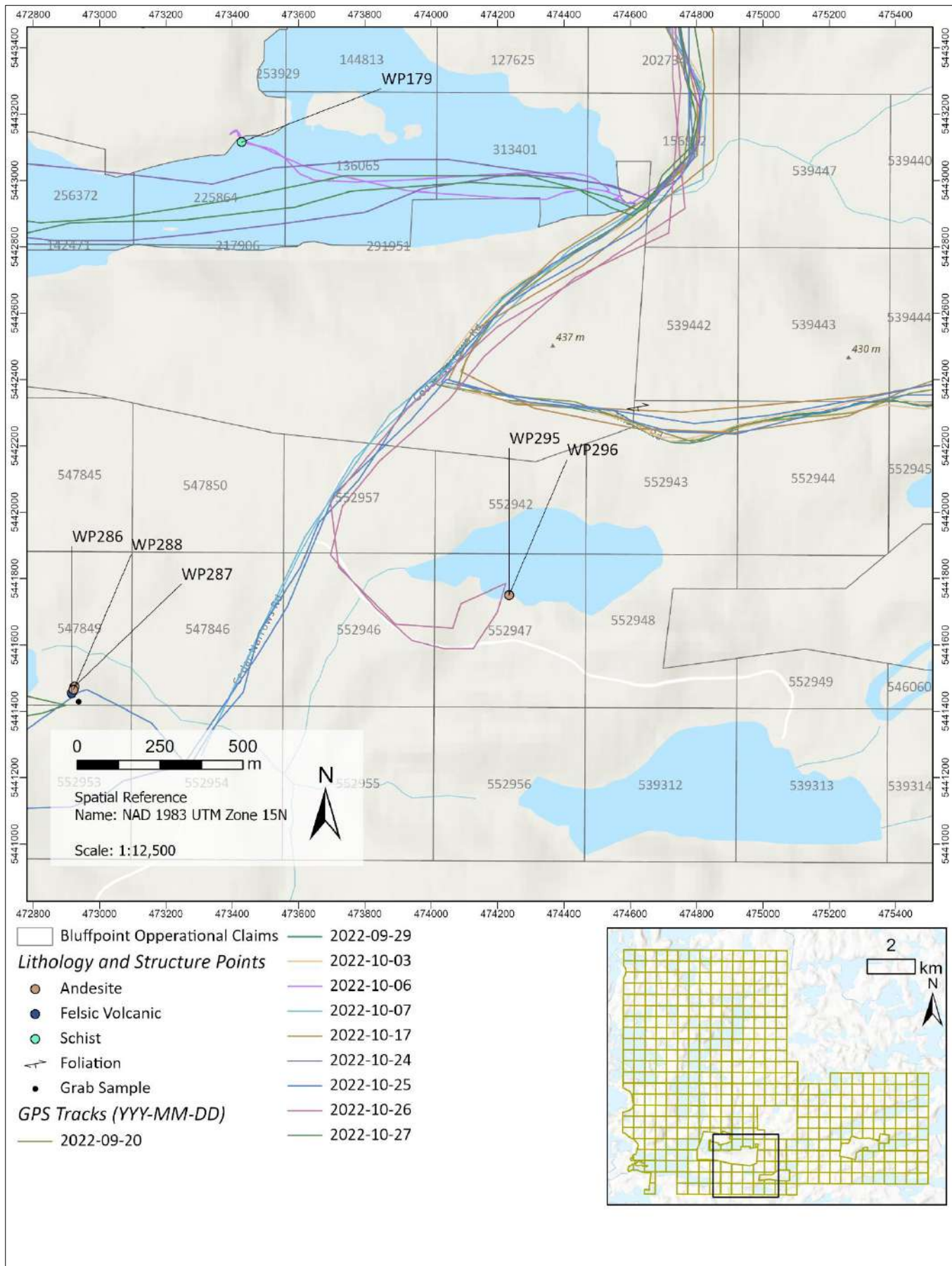


Figure 22: Lithology and Structure Points. 9 of 12

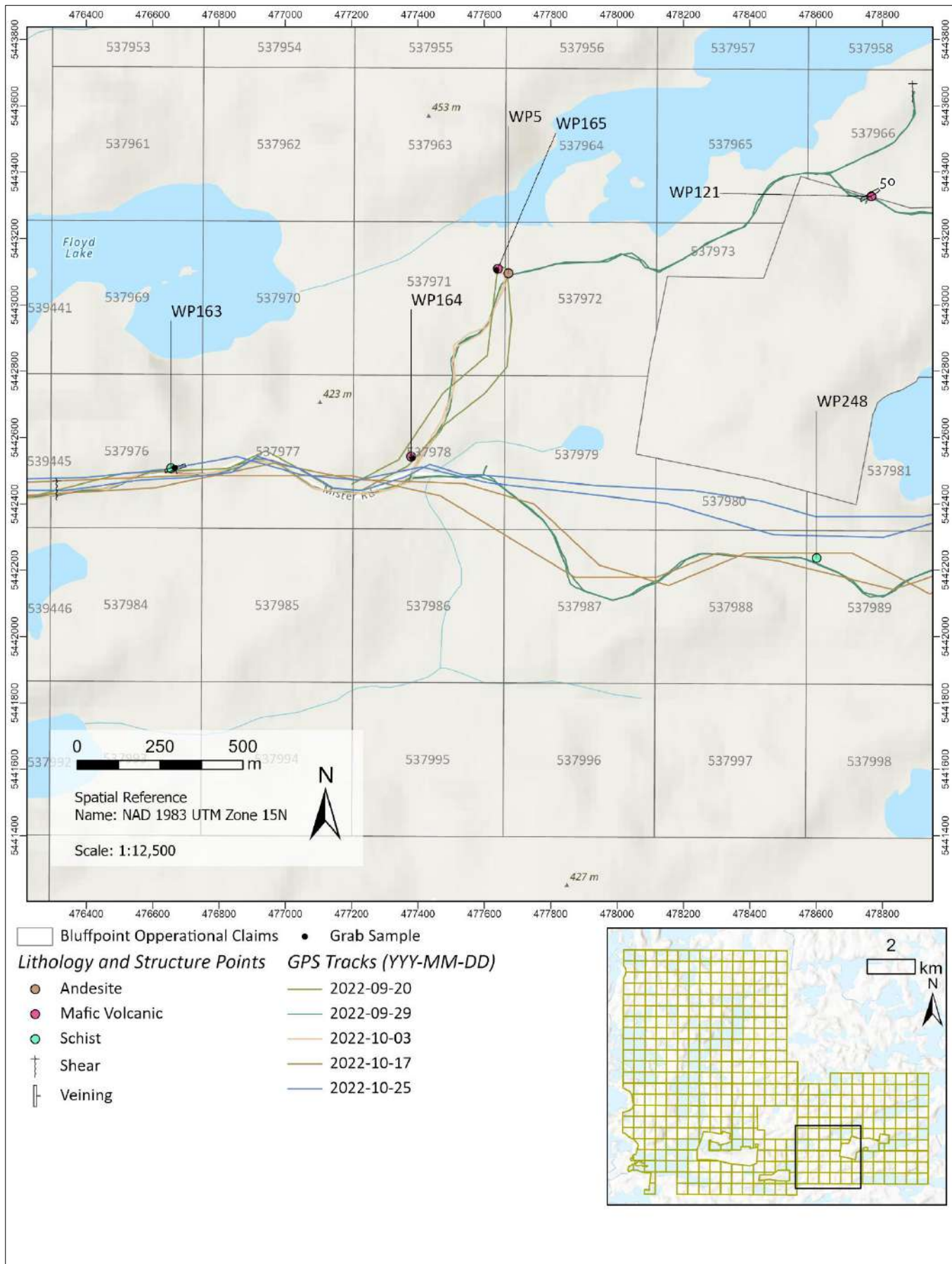


Figure 23: Lithology and Structure Points. 10 of 12

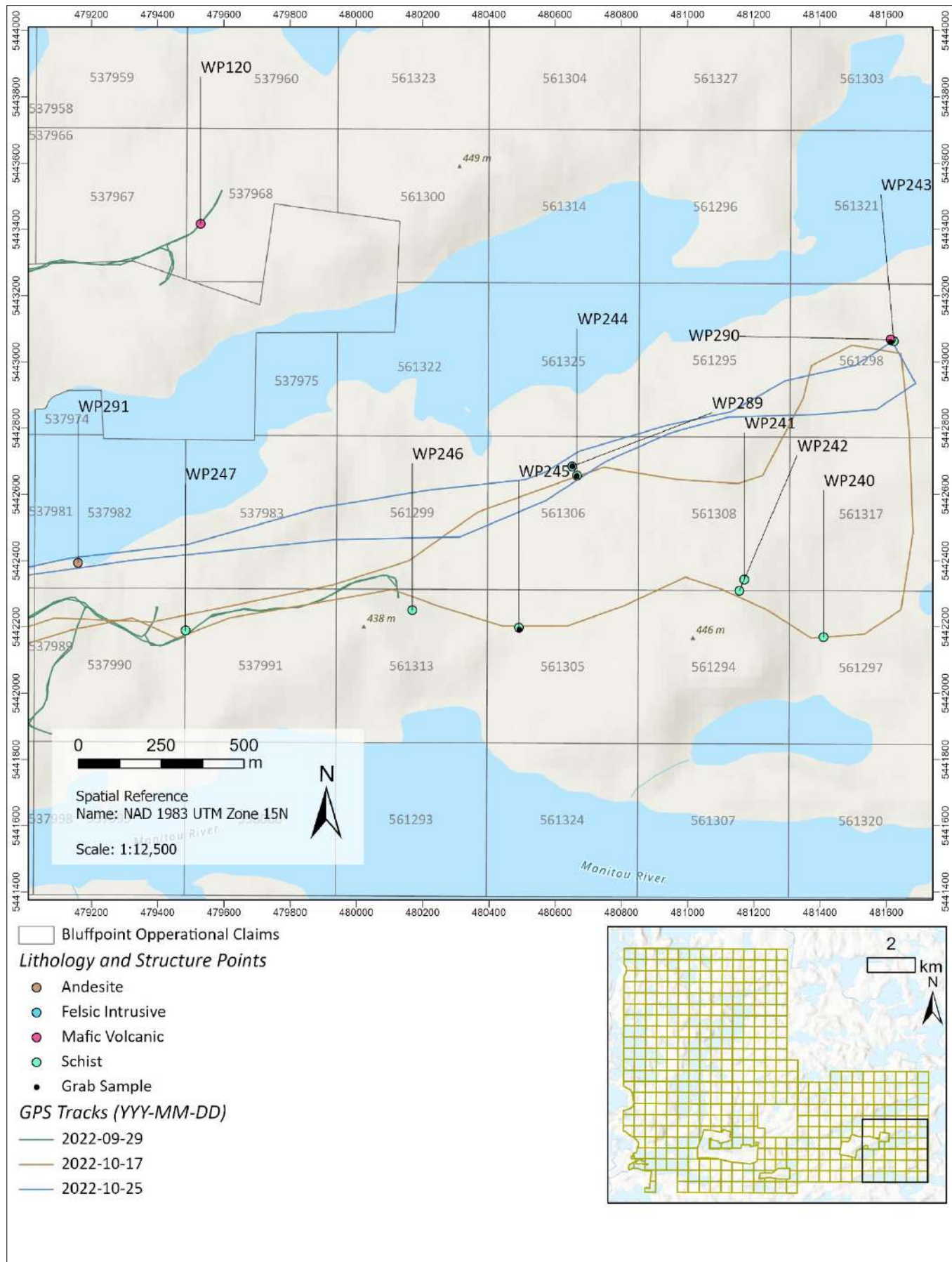


Figure 24: Lithology and Structure Points. 11 of 12

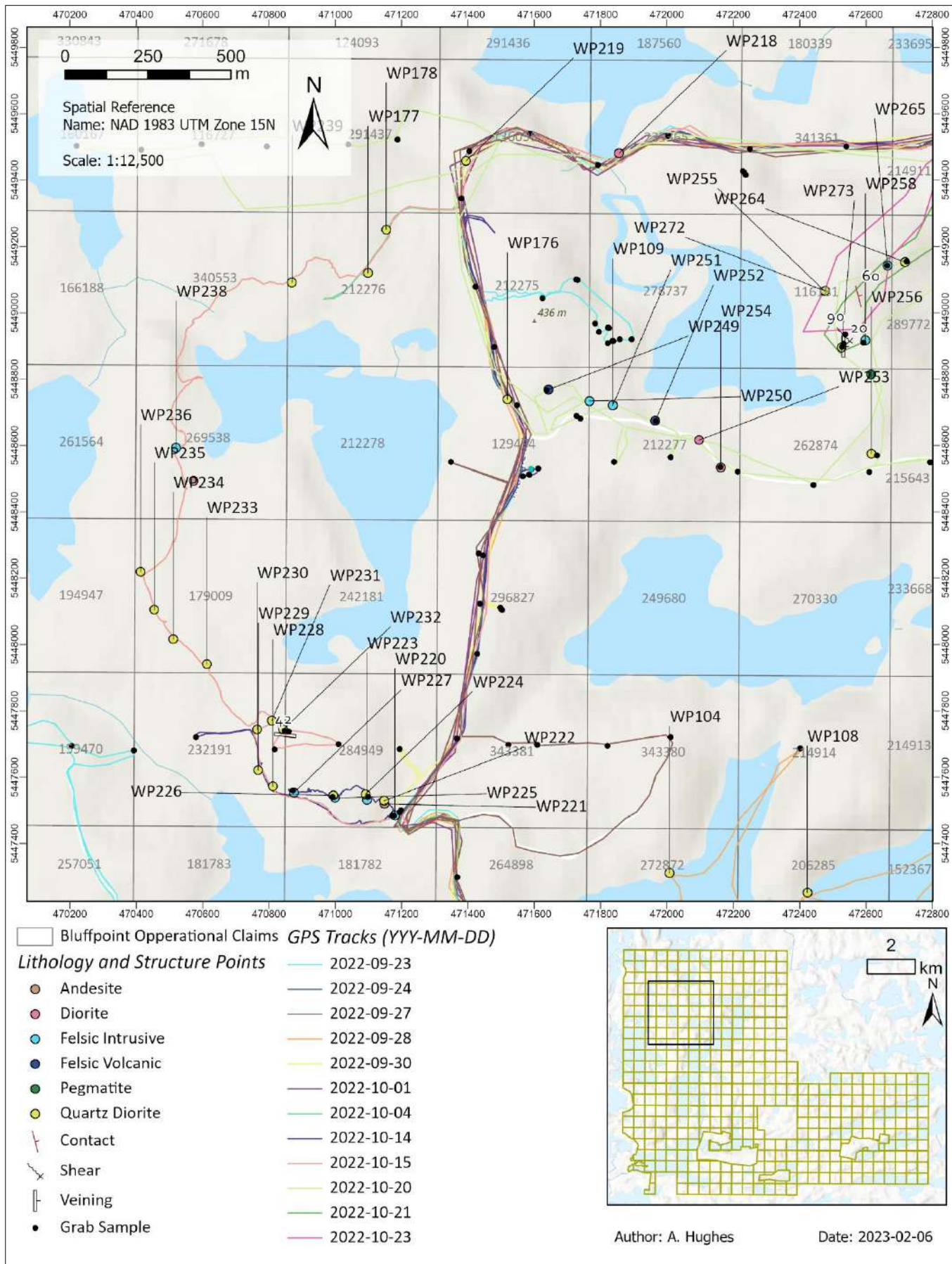


Figure 25: Lithology and Structure Points. 12 of 12





## 17 Appendix II – Geochemical Data and Field Observations

Note: The full certificate of analysis can be located in Appendix IV.

**Table 7:** Geochemical Sample Field Notes

Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300751	475593	5450565	amphibole diorite	mg to cg/massive		magnetite					
1300752	475397	5450547	diorite	mg to cg/massive		magnetite	epidote		pyrite	calcopyrite	fg
1300753	475188	5450528	diorite	mg to cg/massive		potassic	epidote				
1300754	475002	5450343	diorite			silica					
1300755	474793	5450206	diorite	mg to cg/massive		magnetite					
1300756	474606	5450060	granite	fg/massive		magnetite					
1300757	474563	5450011	granite			hematite	silica				
1300758	474402	5449815	granite	fg to mg/massive		potassic	epidote				
1300759	474195	5449736	diorite	mg to cg/massive		magnetite			pyrite		blebby
1300760	474004	5449725	basalt	vfg/massive							
1300761	473761	5449698	granite			silica					
1300762	473588	5449706	diorite	fg/massive							
1300763	473360	5449605	diorite	cg/massive		biotite					
1300764	473382	5449583	diorite	cg/massive		ankerite			pyrite		fg/disseminated
1300765	473195	5449608	diorite	mg to cg/massive		potassic	magnetite		pyrite		fg/fracture fill
1300766	473013	5449587	diorite	vfg to fg/massive		chlorite	magnetite		pyrite		disseminated/fracture fill
1300767	472821	5449536	diorite	mg to cg/massive		potassic	epidote				
1300768	472810	5449529	diorite	mg to cg/massive		potassic	epidote		pyrite		fg/blebby/fracture fill
1300769	472541	5449501	diorite	mg to cg/massive		potassic	magnetite		pyrite		fg/fracture fill



Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300770	472250	5449493	feldspar porphyry	vfg to mg		chlorite					
1300771	472004	5449533	granite			potassic	magnetite		pyrite		fracture fill
1300772	471792	5449445	basalt	vfg/massive							
1300773	471587	5449540	feldspar porphyry			silica	hematite		pyrite		mg/fracture fill
1300774	471405	5449487	feldspar porphyry			hematite	ankerite				
1300775	471380	5449344	feldspar porphyry			potassic	hematite				
1300776	471423	5449078	Quartz Feldspar Porphyry	vfg to fg		silica					
1300777	471480	5448896	feldspar porphyry	massive		silica					
1300778	471547	5448721	agmatite	mg to cg/massive		potassic					
1300779	471565	5448507	trondhjemite	fg to cg/massive		potassic	hematite				
1300780	471612	5448530	trondhjemite	CZT		magnetite	hematite		pyrite		fg
1300781	471446	5448269	trondhjemite	CZT		magnetite			pyrite		fg/disseminated
1300782	471432	5448274	trondhjemite	fg to mg CZT.		hematite	magnetite				
1300783	471436	5448123	trondhjemite	mg to cg CZT		hematite	magnetite				
1300784	471428	5447971	trondhjemite	mg to cg/massive CZT		hematite	magnetite		pyrite		fg
1300785	471366	5447716	trondhjemite	mg to cg /massive		hematite	magnetite		pyrite		fg/disseminated
1300786	471198	5447500	trondhjemite	mg to cg/massive		hematite	magnetite		pyrite		fg
1300787	471368	5447298	trondhjemite	mg to cg/massive		hematite	magnetite				
1300788	471482	5447125	trondhjemite	mg to cg/massive		hematite	magnetite		pyrite		disseminated



Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300789	471306	5446887	trondhjemite	massive		hematite	magnetite		pyrite		fg/disseminated
1300790	471273	5446716	trondhjemite	fg to mg/massive		hematite	magnetite				
1300791	471228	5446483	trondhjemite	massive		hematite	magnetite				
1300792	471162	5446301	trondhjemite	mg to cg/massive		hematite	magnetite				
1300793	473010	5448530	diorite	fg to mg/diorite		potassic	magnetite				
1300794	473203	5448519	agmatite	mg to cg/massive		potassic					
1300795	473390	5448536	diorite	mg to cg/massive		potassic	magnetite				
1300796	473566	5448532	diorite	mg to cg/massive		biotite	magnetite				
1300797	472793	5448549	diorite	mg to cg/massive		epidote	hematite		pyrite		fg
1300798	472610	5448520	diorite	mg to cg/massive		epidote	hematite		pyrite		
1300799	472442	5448480	diorite	mg/massive		epidote			pyrite		fg
1300800	472213	5448521	diorite	fg to mg/massive			magnetite				
1300801	472011	5448564	diorite	mg		potassic	hematite				
1300802	471841	5448550	diorite	mg		hematite	epidote		pyrite		fg
1300803	471188	5449522	feldspar porphyry	mg to cg			epidote				
1300804	470220	5449503	feldspar porphyry	mg to cg		calcite	chlorite				
1300805	470415	5449491	gabbro	fg		calcite					
1300806	470597	5449508	diorite	fg to mg/very weakly foliated		hematite	potassic				
1300807	470794	5449501	feldspar porphyry	mg to cg		potassic					
1300808	471040	5449507	feldspar porphyry	mg to cg		potassic	hematite				



Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300809	470580	5447721	amphibole diorite	mg to cg/massive							
1300810	470393	5447680	amphibole diorite	massive		potassic					
1300811	470206	5447694	amphibole diorite	mg to cg/massive					pyrite		fg
1300812	470040	5447709	amphibole diorite	mg to cg/massive		potassic					
1300813	471348	5448550	diorite	mg to cg/massive		magnetite					
1300814	470817	5447684	diorite	mg to cg/massive		epidote					
1300815	471010	5447699	feldspar porphyry	mg to cg		epidote	magnetite				
1300816	471194	5447685	trondhjemite			hematite	silica		pyrite		fg
1300817	471060	5446127	basalt	vfg/massive		magnetite	chlorite		pyrite		fg
1300818	470984	5445931	feldspar porphyry	mg to cg		epidote					
1300819	470897	5445754	feldspar porphyry	mg to cg		epidote					
1300820	470820	5445553	basalt	vfg/massive							
1300821	470743	5445398	basalt	vfg/massive		calcite			pyrite		fg/disseminated
1300822	470610	5445262	shear zone	strongly foliated		silica	magnetite		pyrite		
1300823	470551	5445037	shear zone	strongly foliated		chlorite	calcite				
1300824	471609	5447697	amphibole diorite	mg to cg		potassic					
1300825	471821	5447694	amphibole diorite	mg/massive		magnetite	hematite				
1300826	472011	5447721	amphibole diorite	mg/massive		potassic	calcite				
1300827	472402	5447687	amphibole diorite	mg to cg/massive		calcite	epidote				
1300828	471522	5447697	trondhjemite			hematite	magnetite				



Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300829	471857.82	5448919.78	trondhjemite	fg to mg/slightly foliated		potassic	hematite				
1300830	471838.72	5448913.86	trondhjemite	mg		silica	hematite		pyrite		fg
1300831	471835.08	5448914.23	feldspar porphyry	fg to mg		hematite					
1300832	471821.21	5448908.15	trondhjemite	mg to cg		hematite	magnetite		pyrite		fg
1300833	471825.87	5448953.15	trondhjemite	mg		hematite	calcite		pyrite		fg to mg/pervasive
1300834	471821.55	5448954.8	trondhjemite	mg		potassic	hematite				
1300835	471795.65	5448941.42	trondhjemite	mg		hematite	magnetite				
1300836	471783.32	5448967.31	trondhjemite	mg		potassic	hematite				
1300837	472237.94	5449415.08	Quartz Feldspar Porphyry			potassic	silica				
1300838	472232.09	5449422.98	granite	mg		potassic	hematite		pyrite		fg
1300839	472228.96	5449426.5	aphanitic mafic dikes	mafic dyke					pyrite		fg
1300840	471739	5448681	trondhjemite	mg to cg		hematite	magnetite				
1300841	471586	5448511	trondhjemite	mg		magnetite	potassic		pyrite		fg/cleavage fill
1300842	471583	5448512	trondhjemite			magnetite	hematite		pyrite	malachite	fracture fill
1300843	471171.3	5447484.22	trondhjemite	mg/massive		hematite	potassic		pyrite		mg/fracture fill
1300844	471177.55	5447483.28	trondhjemite			hematite	magnetite		pyrite		fg
1300845	471193.96	5447494.32	aphanitic mafic dikes			epidote	hematite		pyrite		fg/disseminated/cleavage fill
1300846	471503.29	5448103.3	aphanitic mafic dikes			calcite					



Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300847	471497.77	5448111.16	feldspar porphyry	fg to mg		epidote	chlorite				
1300848	471501.03	5448105.47	trondhjemite			hematite	ankerite				
1300849	471590	5448529	magnetite vein								
1300850	471591.59	5448528.47	trondhjemite			hematite	ankerite		pyrite		fg to mg/fracture fill
1300851	471727	5448689	feldspar porphyry	mg to cg		epidote					
1300852	471624.95	5449043.91	aphanitic felsic intrusive (felsite or aplite)								
1300853	471823.802	5448954.561	Quartz Feldspar Porphyry								
1300854	471893.29	5448919.91	agmatite								
1300855	471731.07	5449098.12	diorite								
1300856	471725.94	5449099.32	feldspar porphyry								
1300857	472764.441	5445358.929	Quartz Diorite	Aphanitic	white	Silica	Silica	Weathered	Weathered	Weathered	no min
1300858	472701.1333	5445544.418	Quartz Diorite	Medium Grained	red	Chlorite	Silica	Fresh	None	Fresh	
1300859	472700.9608	5445545.385	Felsic Intrusive	Aphanitic	pink	Silica	Potassic	Fresh	None	Fresh	granite at ctc qd
1300860	472597.1532	5445580.552	Diorite	Medium Grained	white	Silica	Potassic	Fresh	None	Fresh	very brittle fii mafic porphroblast
1300861	472805.8546	5445545.769	Quartz Vein	Massive	pink	Silica	Silica	Weathered	None	Weathered	
1300862	472967.1689	5445513.642	Quartz Diorite	Medium Grained	gray	Silica	Chlorite	Fresh	Pyrite	Fresh	fg dissem 1-2% sulfide
1300863	473297.2891	5444664.07	Quartz Diorite	Medium Grained	gray	Silica	Chlorite	Fresh	None	Fresh	
1300864	473351.8723	5444627.061	Quartz Diorite	Medium Grained	gray	Silica	Chlorite	Fresh	None	Fresh	



Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300865	473412.327	5444598.505	Felsic Intrusive	Medium Grained	pink	Potassic	Silica	Fresh	None	Fresh	mg pink granite
1300866	473569.4444	5444666.709	Felsic Intrusive	Medium Grained	pink	Chlorite	Silica	Weathered	None	Fresh	
1300867	473617.1083	5444610.017	Felsic Intrusive	Aphanitic	gray	Chlorite	Chlorite	Fresh	None	Fresh	heavily chloritized felsic int oxidized oily sheen on joint planes much finer grained than prior
1300868	473633.2976	5444608.571	Quartz Vein	Coarse	red	Silica	Silica	Weathered	None	Fresh	
1300869	473666.8336	5444596.621	Quartz Diorite	Medium Grained	gray	Silica	Chlorite	Weathered	None	Fresh	
1300870	472723.2245	5444346.828	Mafic Volcanic	Massive	red	Chlorite	none	Fresh	None	Weathered	Massive dark host rock with chlorite altered quartz
1300871	473047.5754	5444564.86	Felsic Intrusive	Aphanitic	pink	Potassic	Chlorite	Fresh	Pyrite	Fresh	
1300872	474135.7002	5444558.949	Felsic Intrusive	Coarse Grained	red	Silica	Potassic	Fresh	Pyrite	Fresh	trace py observed
1300873	471227.8637	5446584.973	Quartz Vein	Coarse	red	Silica	Potassic	Weathered	Sulphide (describe in notes)	Fresh	quartz vein with various sulphides
1300874	471226.2563	5446587.837	Felsic Intrusive	Medium Grained	red	Silica	Potassic	Fresh	Sulphide (describe in notes)	Fresh	felsic intrusive with various sulphides
1300875	471214.0754	5446562.328	Quartz Vein	Massive	white	none	none	Fresh	Pyrite	Fresh	3-6% Sphalerite veins 5-10cm wide...check structure tab name Point 20" for more info"
1300876	471175.7045	5446566.863	Felsic Intrusive	Medium Grained	red	Silica	Biotite	Fresh	Pyrite	Fresh	Massive granite with Py min 1%
1300877	471062.6442	5446647.232	Felsic Intrusive	Aphanitic	red	Silica	Potassic	Weathered	Sulphide (describe in notes)	Fresh	various sulphides
1300878	473410.387	5446288.994	Felsic Intrusive	Medium Grained	orange	Potassic	Chlorite	Transition	Pyrite	Fresh	felsic intrusive with trace py
1300879	473427.7747	5446458.477	Quartz Vein	Coarse	pink	Potassic	none	Fresh	None	Fresh	
1300880	474077.3976	5447234.933	Felsic Intrusive	Coarse Grained	white	Chlorite	Biotite	Fresh	Pyrite	Fresh	
1300881	473755.1622	5447201.555	Quartz Diorite	Fine Grained	yellow	Silica	none	Fresh	None	Fresh	



Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300882	471867.1206	5444447.117	Mafic Volcanic	Fine Grained	red	Chlorite	Silica	Fresh	None	Fresh	Quartz diorite with altered qtz grains
1300883	471812.8098	5446864.378	Felsic Intrusive	Medium Grained	pink	Chlorite	Silica	Fresh	None	Fresh	felsic intrusive almost brecciated inside green coarser diorite
1300884	472245.036	5446920.375	Quartz Vein	Coarse	white	Silica	none	Fresh	None	Fresh	
1300885	472706.378	5446970.236	Quartz Diorite	Fine Grained	gray	Chlorite	none	Transition	Pyrite	Fresh	
1300886	472985.8993	5447736.275	Felsic Intrusive	Coarse Grained	white	Biotite	Silica	Fresh	Pyrite	Fresh	trace py
1300887	471765.9398	5446291.293	Felsic Intrusive	Aphanitic	gray	Silica	Potassic	Fresh	Pyrite	Fresh	
1300888	473059.9578	5446660.565	Quartz Diorite	Fine Grained	gray	Silica	Chlorite	Fresh	Pyrite	Fresh	fg tr py / apy
1300889	472531.9444	5445071.735	Mafic Volcanic	Fine Grained	gray	Chlorite	Mica	Fresh	Sulphide (describe in notes)	Fresh	
1300890	474205.6052	5448395.595	Felsic Intrusive	Coarse Grained	white	Chlorite	Silica	Fresh	Pyrite	Fresh	
1300891	474437.0365	5448511.119	Felsic Intrusive	Coarse Grained	red	Chlorite	Mica	Transition	Pyrite	Fresh	
1300892	473985.8944	5449025.847	Felsic Intrusive	Coarse Grained	red	Silica	Biotite	Fresh	Pyrite	Fresh	
1300893	474102.496	5449092.994	Felsic Intrusive	Coarse Grained	pink	Silica	Chlorite	Fresh	gold	Fresh	trace sulphides, possible gold min.
1300894	474334.0057	5449250.626	Mafic Intrusive	Fine Grained	black	none	none	Fresh	Pyrite	Fresh	
1300895	474360.6278	5449419.358	Felsic Intrusive	Coarse Grained	white	Chlorite	Biotite	Fresh	Pyrite	Fresh	
1300896	471433.228	5444076.763	Mafic Volcanic	Fine Grained	red	Silica	Chlorite	Fresh	Pyrite	Fresh	.5% py / apy dissem pink purple oxy
1300897	472978.417	5445943.397	Quartz Diorite	Fine Grained	gray	Chlorite	none	Fresh	Pyrite	Fresh	
1300898	473066.6591	5445861.337	Quartz Diorite	Aphanitic	gray	Chlorite	Silica	Fresh	Pyrite	Fresh	
1300899	472878.449	5446284.232	Quartz Diorite	Coarse Grained	green	Chlorite	Mica	Fresh	Pyrite	Fresh	





Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300900	472670.0079	5446298.475	Quartz Diorite	Aphanitic	red	Chlorite	Chlorite	Fresh	Pyrite	Transition	oxidized heavily; heavy chlor py stringer
1300901	476667.3837	5442508.466	Schist	Aphanitic	white	Chlorite	Epidote	Fresh	None	Fresh	
1300902	476666.2794	5442508.576	Quartz Vein	Aphanitic	white	Silica	none	Fresh	None	Fresh	
1300903	477636.8054	5443104.782	Mafic Volcanic	Fine Grained	green	Chlorite	Epidote	Fresh	Pyrite	Fresh	
1300904	472128.9029	5443885.949	Mafic Volcanic	Aphanitic	gray	Chlorite	Potassic	Fresh	Pyrite	Fresh	tr py associated with potassic alt sm clasts
1300905	471948.7637	5443905.831	Mafic Volcanic	Aphanitic	gray	Chlorite	Chlorite	Fresh	Pyrite	Fresh	tr py ox surf
1300906	471917.2529	5443880.949	Mafic Volcanic	Aphanitic	gray	Chlorite	Silica	Fresh	Pyrite	Fresh	aph w qz clast w mafic fragments and tr py in mtx and clast/lens/alt?
1300907	472092.1376	5444247.037	Felsic Volcanic	Aphanitic	white	Silica	Silica	Fresh	Pyrite	Fresh	tr py dissem bleb
1300908	474922.9379	5444856.284	Felsic Intrusive	Coarse Grained	gray	Silica	Biotite	Fresh	Pyrite	Fresh	
1300909	476691.5171	5444624.66	Felsic Intrusive	Coarse Grained	pink	Silica	Potassic	Fresh	Sulphide (describe in notes)	Fresh	
1300910	477477.1592	5444438.348	Felsic Intrusive	Coarse	pink	Silica	Potassic	Fresh	Pyrite	Fresh	cg pink felsic int qz py tr assc
1300911	478969.3	5444841.647	Felsic Intrusive	Medium Grained	gray	Silica	Chlorite	Fresh	Pyrite	Fresh	dissem to msv py in jointed layers
1300912	478969.3016	5444840.104	Quartz Vein	Coarse	white	none	none	Fresh	None	Fresh	
1300913	475142.6111	5448362.105	Felsic Intrusive	Aphanitic	gray	Muscovite	Silica	Fresh	Pyrite	Fresh	tr py alt boundary?
1300914	475294.798	5448251.625	Mafic Intrusive	Fine Grained	green	Chlorite	none	Fresh	Pyrite	Fresh	
1300915	474090.2995	5445517.367	Quartz Diorite	Medium Grained	gray	Chlorite	none	Fresh	Pyrite	Fresh	
1300916	473266.492	5450137.476	Quartz Vein	Coarse	pink	Silica	none	Fresh	None	Fresh	
1300917	471098.2735	5447541.001	Felsic Intrusive	Coarse Grained	pink	Silica	Potassic	Fresh	Pyrite	Fresh	
1300918	470991.839	5447540.244	Quartz Diorite	Porphyritic	gray	Silica	Biotite	Fresh	Pyrite	Fresh	
1300919	470872.0931	5447559.534	Felsic Intrusive	Interbedded	pink	Silica	Potassic	Fresh	Pyrite	Fresh	



Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300920	470859.523	5447737.111	Quartz Vein	Coarse	pink	none	none	Fresh	None	Fresh	
1300921	470846.864	5447739.24	Quartz Diorite	Porphyritic	gray	Silica	none	Fresh	Pyrite	Fresh	
1300922	480664.745	5442654.889	Quartz Vein	Coarse	white	none	none	Fresh	Sulphide (describe in notes)	Fresh	rusty
1300923	480491.7179	5442191.905	Quartz Vein	Coarse	pink	Silica	Mica	Fresh	None	Fresh	
1300924	471637.6516	5448765.983	Quartz Diorite	Coarse	gray	Chlorite	Silica	Fresh	Pyrite	Fresh	trace fgr py ass with early qz vein
1300925	471966.99	5448673.431	Felsic Intrusive	Aphanitic	gray	Chlorite	Chlorite	Fresh	None	Fresh	mgr massive. felsic intrusive
1300926	472161.6273	5448534.084	Diorite	Aphanitic	pink	Chlorite	Chlorite	Fresh	Pyrite	Fresh	mgr felsic intrusive. weak shear tr Py
1300927	472633.3362	5448569.648	Felsic Intrusive	Coarse	pink	none	none	Fresh	None	Fresh	mgr to cgr pinkish grey equigranular felsic intrusive. non min no structure
1300928	472591.9606	5448910.605	Felsic Intrusive	Aphanitic	pink	Silica	none	Fresh	Pyrite	Fresh	cgr equigranular granite with common sub cm z veins which trend E-W
1300929	472967.6581	5449425.858	Felsic Intrusive	Aphanitic	red	Mica	none	Fresh	Pyrite	Fresh	cgr granitic intrusive weak mica alt along fractured faces
1300930	472815.9953	5449327.435	Quartz Diorite	Coarse	gray	Silica	Mica	Fresh	Pyrite	Fresh	cgr QD with tr py and hematite
1300931	472721.8628	5449154.543	Quartz Diorite	Aphanitic	blue	none	Chlorite	Fresh	None	Fresh	
1300932	472664.3305	5449141.561	Felsic Intrusive	Equigranular	pink	none	none	Fresh	None	Fresh	mgr equigranular felsic intrusive. non min. much more felsic than previous sample
1300933	473765.0232	5450729.639	Felsic Intrusive	Coarse	red	Chlorite	none	Fresh	None	Fresh	Coarse grained felsic intrusive with qtz vein running SW (220 degrees). Large qtz eyes (1-5mm)
1300934	473686.7953	5451057.892	Felsic Intrusive	Medium Grained	red	Potassic	Chlorite	Fresh	None	Fresh	Red felsic intrusive, possibly part of a large scale fold system, multiple (6+ outcrops minimum) large outcrops spaced around 10-50m apart



Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300935	472527.2508	5448896.409	Quartz Diorite	Aphanitic	pink	Chlorite	Silica	Fresh	Pyrite	Fresh	veined QD 1%fgr FC and vein ass ynwith moderate hematite on fracture faces
1300936	472538.2987	5448934.45	Quartz Diorite	Aphanitic	white	Chlorite	Chlorite	Fresh	Pyrite	Fresh	qz altered QD with mafic inclusion. weak shearing. sample is sheared rock amd block of inclusion
1300937	472532.3336	5448907.463	Greenstone	Aphanitic	black	Chlorite	Chlorite	Fresh	Pyrite	Fresh	fgr dark grey INCLUSIIN of veined MV with 1% vn and diss Py. large inclusion 40 cm by 2 m. running along the shear 135/-80.
1300938	470739.3167	5443085.546	Quartz Vein	Aphanitic	white	Chlorite	none	Fresh	Pyrite	Fresh	sample of vein. barren
1300939	471291.8625	5442910.668	Mafic Volcanic	Shear	gray	Chlorite	Chlorite	Fresh	None	Fresh	
1300940	469416.0639	5442534.203	Conglomerate	Clastic	red	Chlorite	Chlorite	Fresh	None	Fresh	sheared conglomerate
1300941	469418.7217	5442534.158	Conglomerate	Shear	green	Chlorite	Chlorite	Fresh	None	Fresh	more sheared than previous sample, clasts are less pronounced
1300942	470154.3109	5441553.539	Quartz Vein	Massive	white	Epidote	Chlorite	Fresh	None	Fresh	10cm qtz vein epidote halo in felsic volcanic
1300943	470785.5972	5441560.69	Quartz Vein	Massive	white	Silica	Silica	Fresh	Pyrite	Fresh	2cm qtzv undulating
1300944	472159.3829	5441140.661	Mafic Intrusive	Aphanitic	gray	Chlorite	Chlorite	Fresh	None	Fresh	late mafic dyke?
1300945	472937.6101	5441428.642	Quartz Vein	Massive	white	Silica	Silica	Fresh	Pyrite	Fresh	irregular 5cm qzv in int volc
1300946	480653.0072	5442684.506	Felsic Intrusive	Aphanitic	white	Silica	Silica	Transition	Pyrite	Fresh	tr py in mtx
1300947	481613.4843	5443059.08	Mafic Volcanic	Aphanitic	green	Chlorite	Epidote	Fresh	Pyrite	Fresh	high chlor vg?
1300948	477381.8461	5442540.143	Schist	Aphanitic	orange	Silica	Silica	Fresh	Pyrite	Fresh	highly oxidized schist tr py float
1300949	472626.873	5441346.129	Felsic Volcanic	Aphanitic	white	Silica	Sericite	Fresh	None	Fresh	
1300950	473294.1496	5444083.574	Mafic Volcanic	Aphanitic	gray	Sericite	Potassic	Fresh	Pyrite	Fresh	vfg grey green pink high ser tr py sfc ox
1300951	475300.3465	5448897.778	Quartz Diorite	Aphanitic	gray	Biotite	Potassic	Fresh	Fresh	Fresh	
1300952	475190.1971	5448928.55	Diorite	Fine Grained	red	Silica	Mica	Fresh	Fresh	Fresh	pyrite



Sample ID	UTM X	UTM Y	Lithology	Lithology Texture	Color	Alteration1	Alteration2	Weathering	Mineralization1	Mineralization2	Notes
1300953	474960.2954	5448928.177	Felsic Volcanic	Coarse	pink	Potassic	Silica	Fresh	Fresh	Fresh	trace py
1300954	471339.3308	5446550.5	Quartz Vein	Coarse	white	Potassic	none	Fresh	Fresh	Fresh	
1300955	475229.5263	5443493.373	Felsic Intrusive	Aphanitic	pink	Potassic	Silica	Fresh	None	Fresh	porph (qtz) felsic int ctc qd
1300956	475225.9176	5443489.222	Quartz Diorite	Medium Grained	gray	Silica	Chlorite	Fresh	None	Fresh	

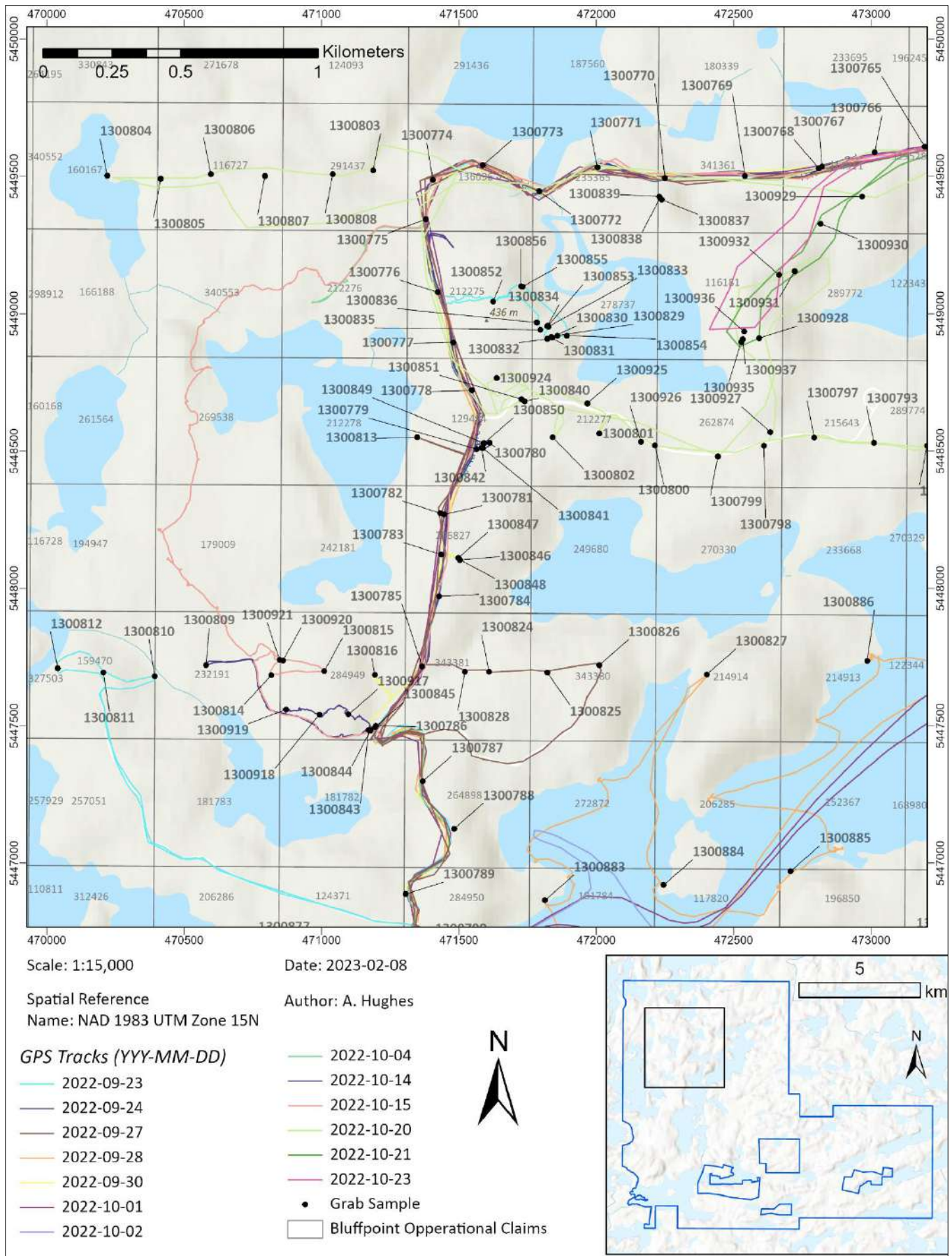


Figure 26: Gochemical Sample Index Map. 1 of 8

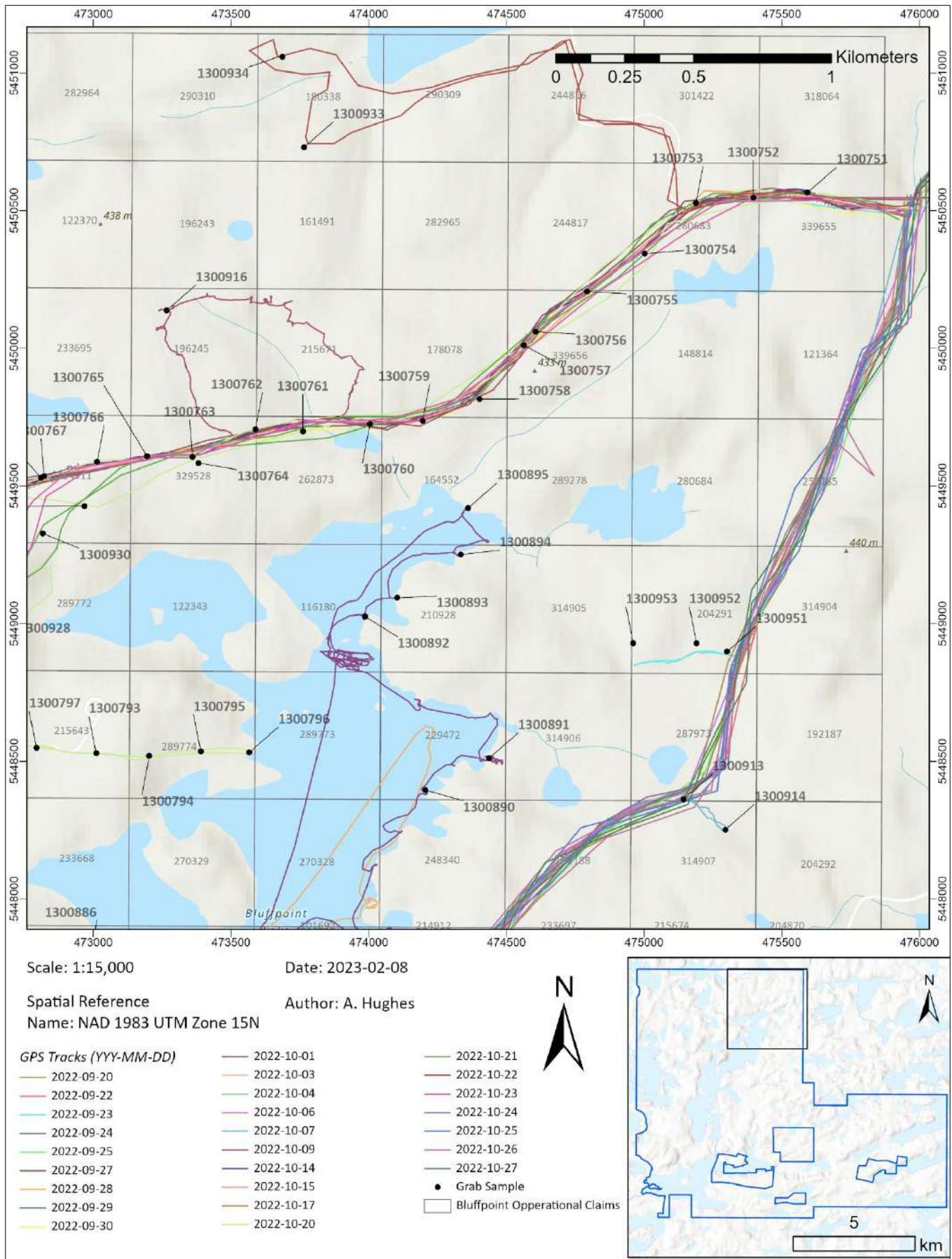


Figure 27: Gochemical Sample Index Map. 2 of 8

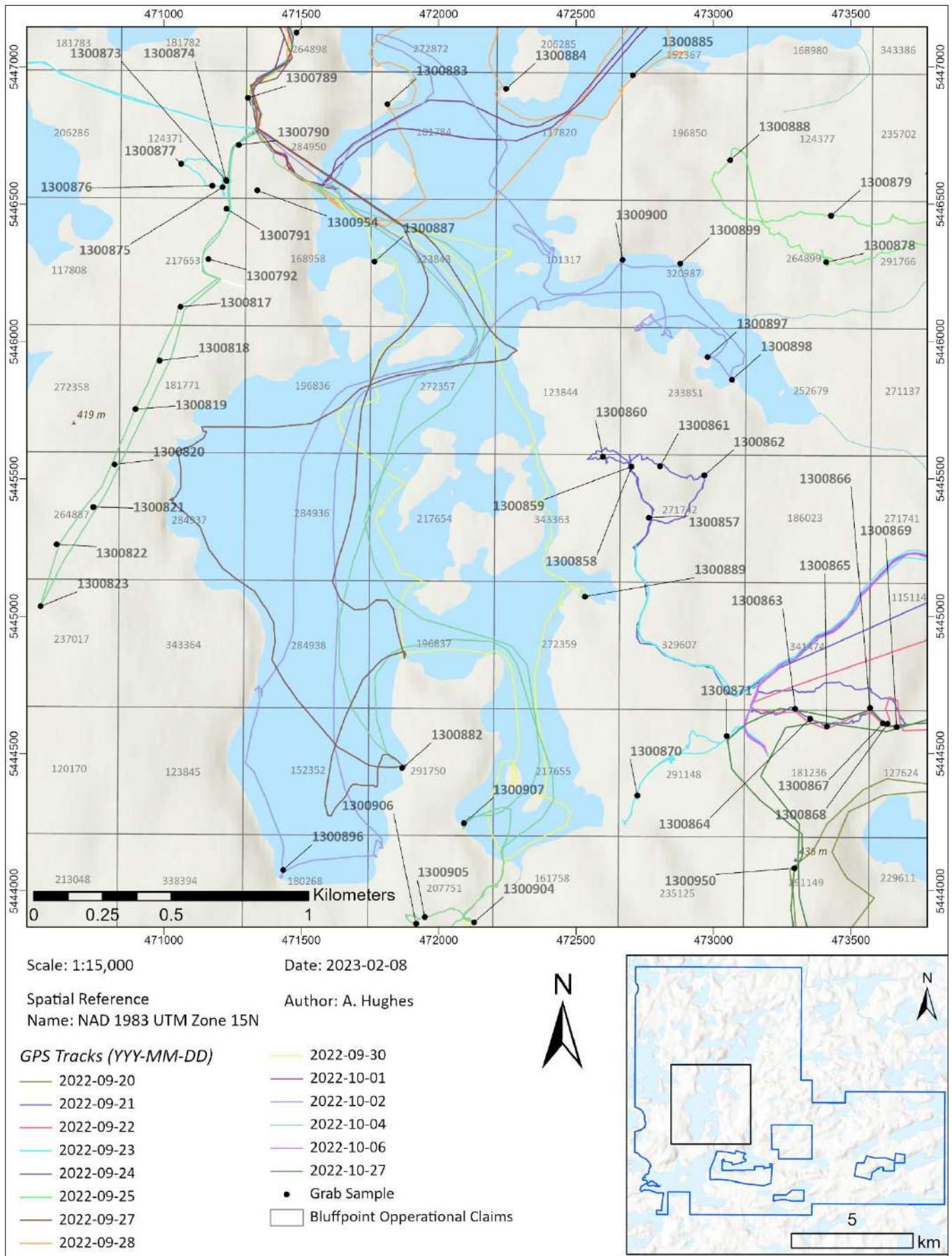


Figure 28: Gochemical Sample Index Map. 3 of 8

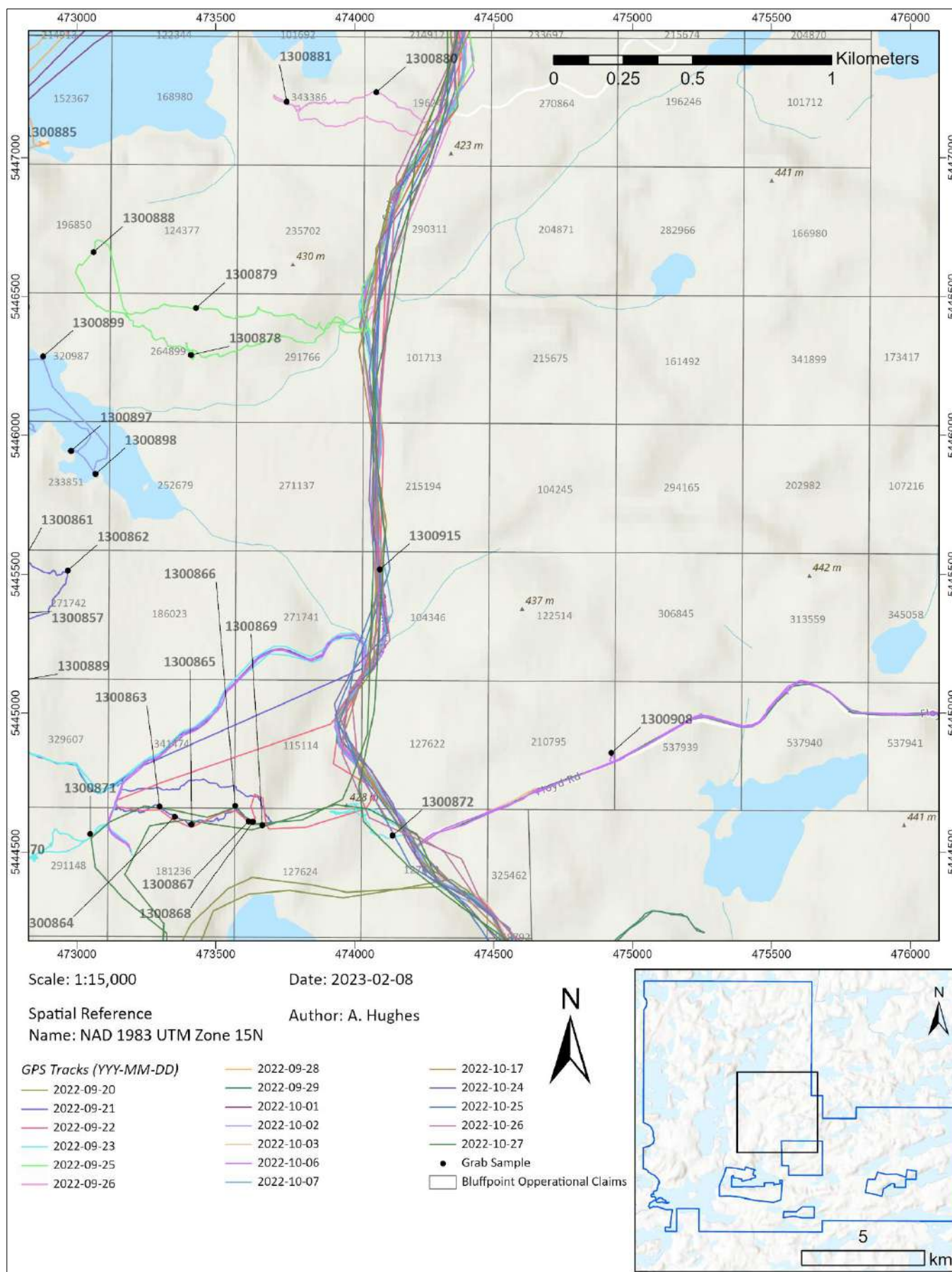


Figure 29: Gochemical Sample Index Map. 4 of 8



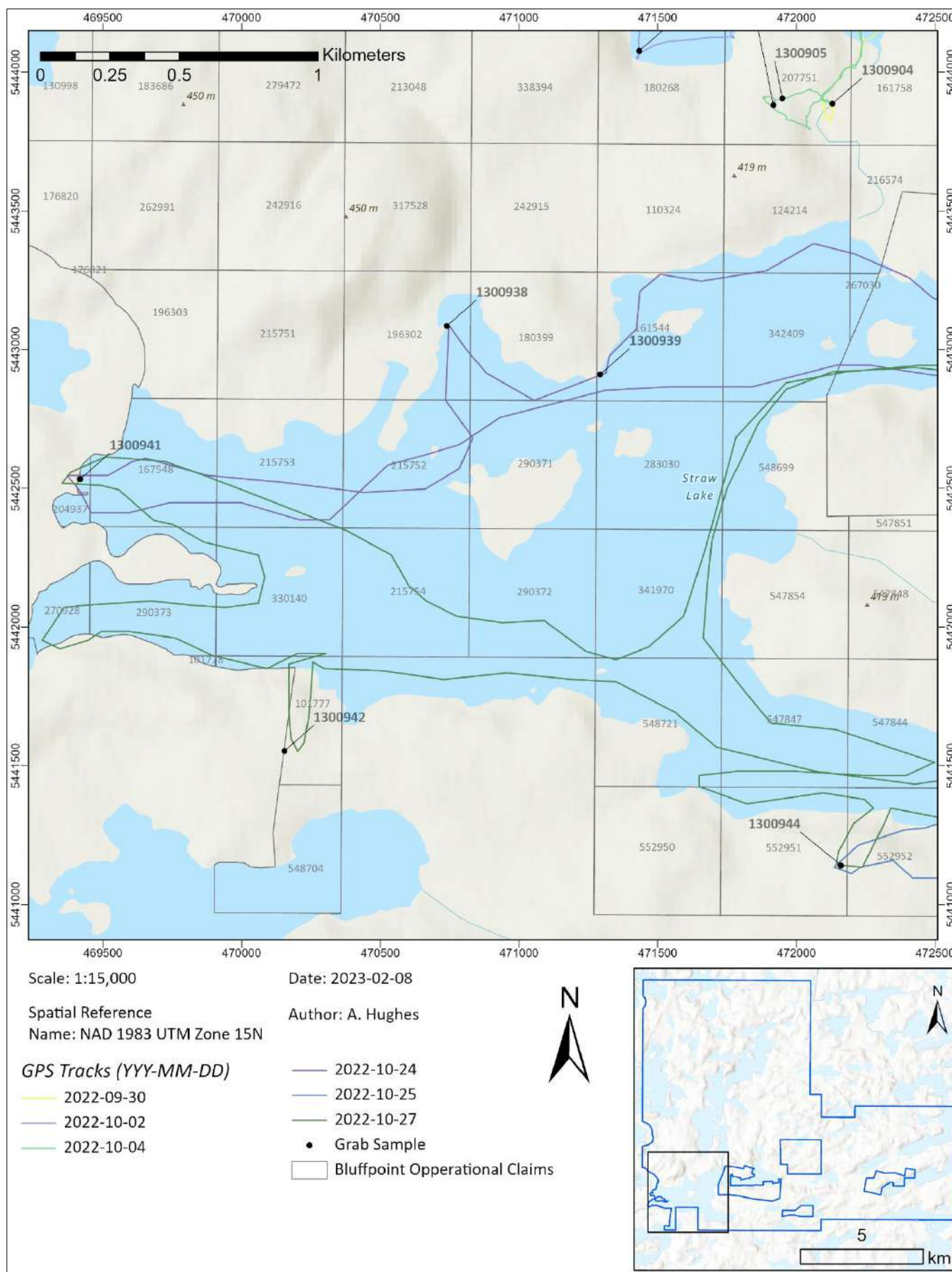


Figure 30: Gochemical Sample Index Map. 5 of 8

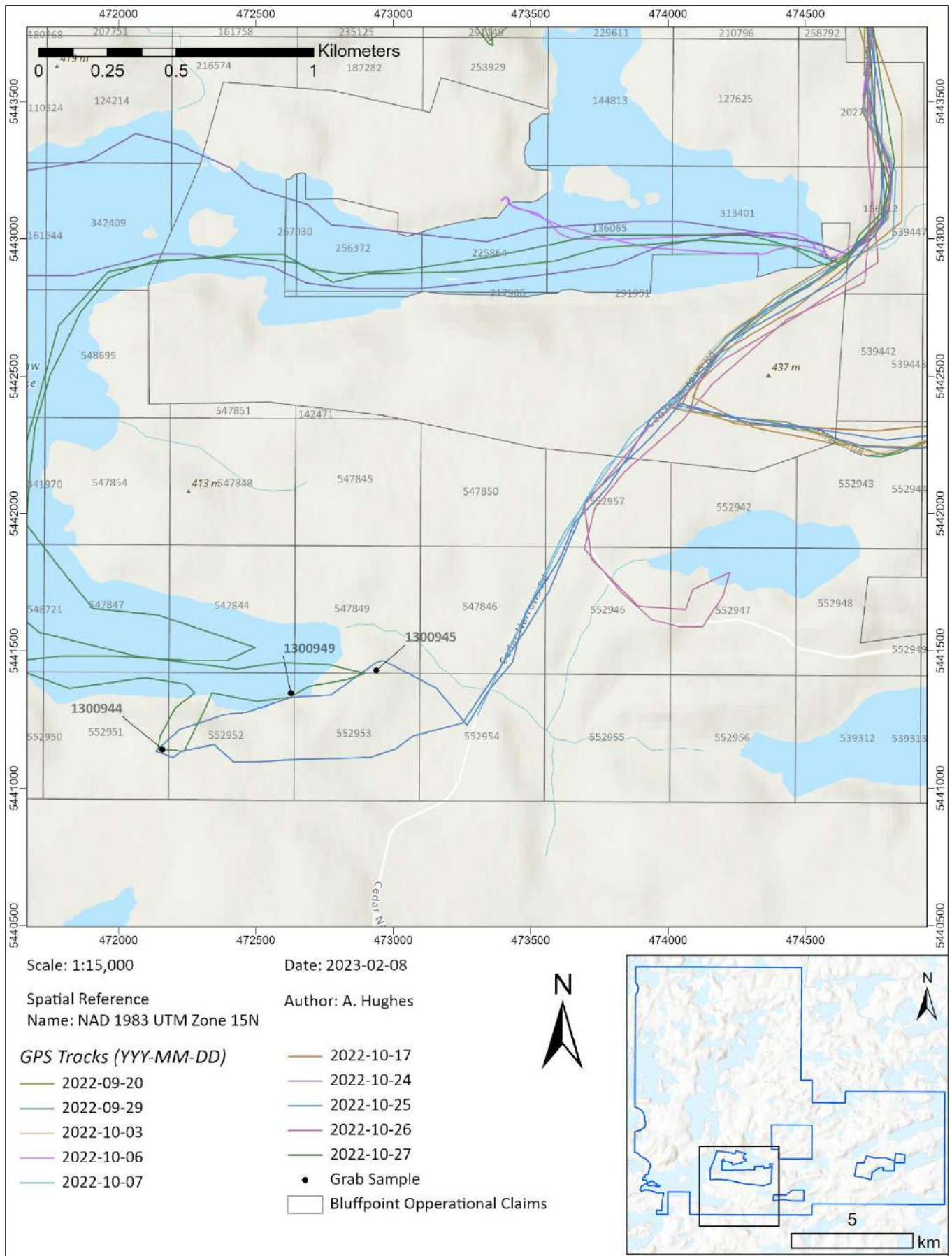


Figure 31: Gochemical Sample Index Map. 6 of 8

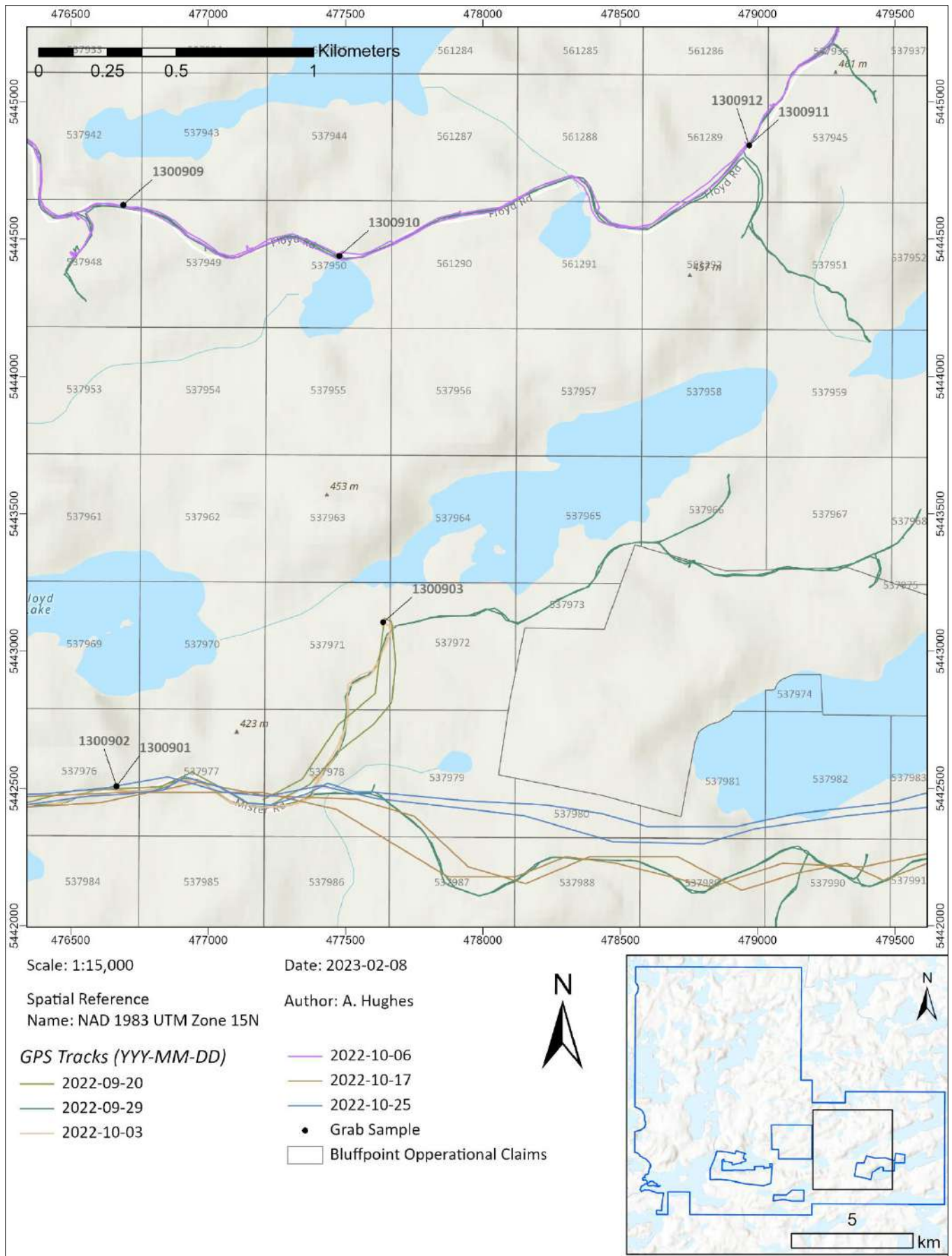


Figure 32: Gochemical Sample Index Map. 7 of 8

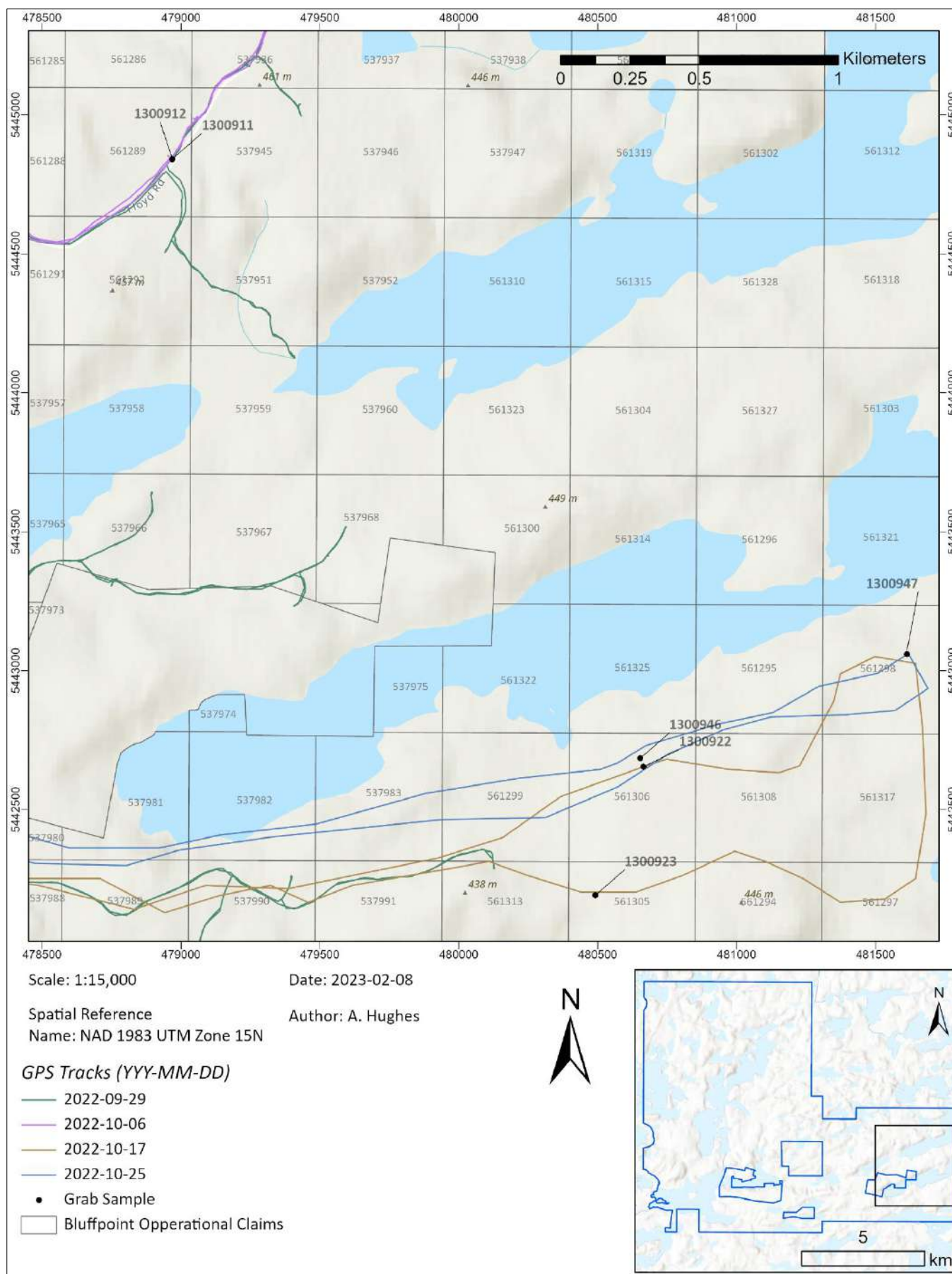
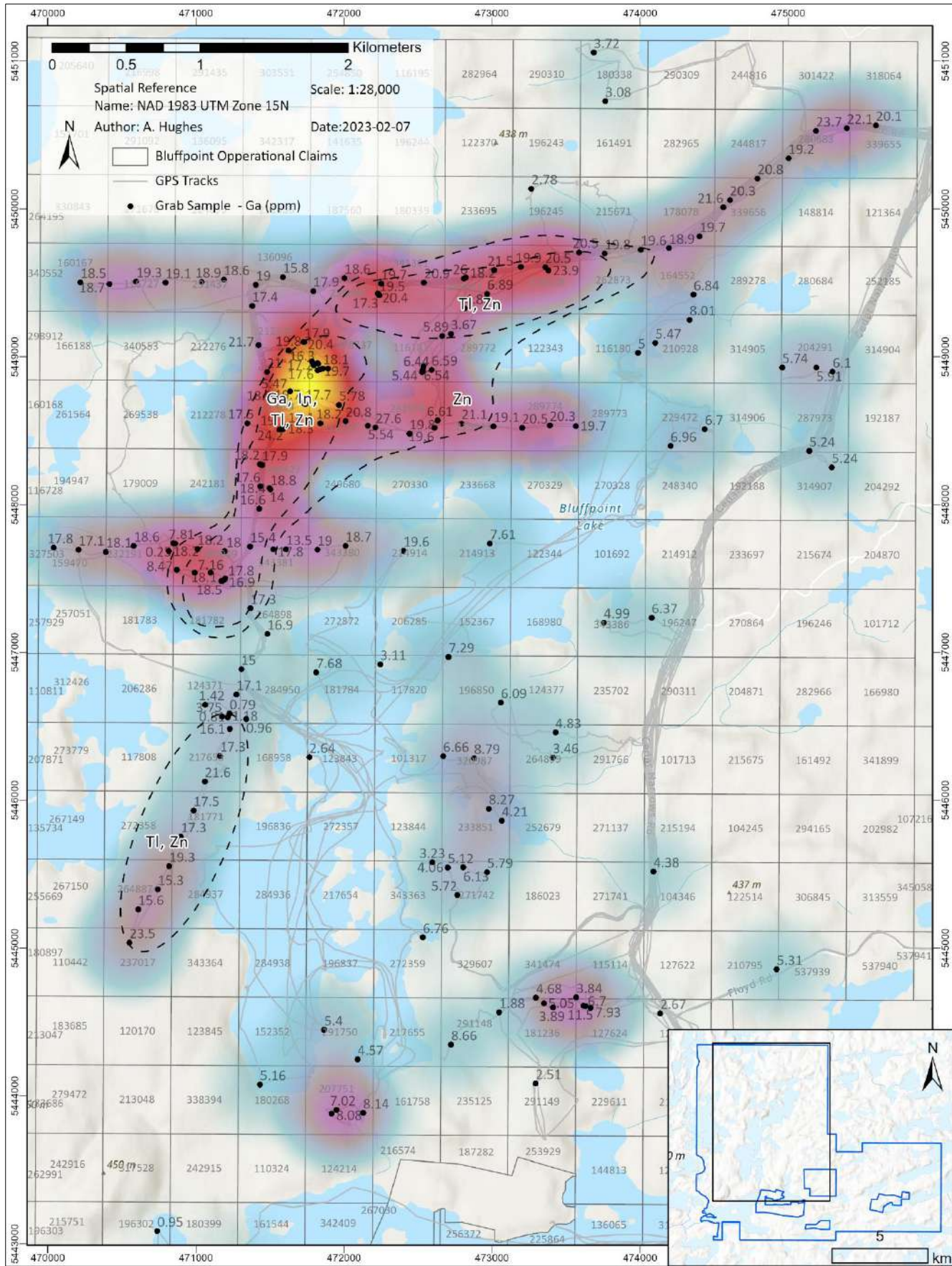
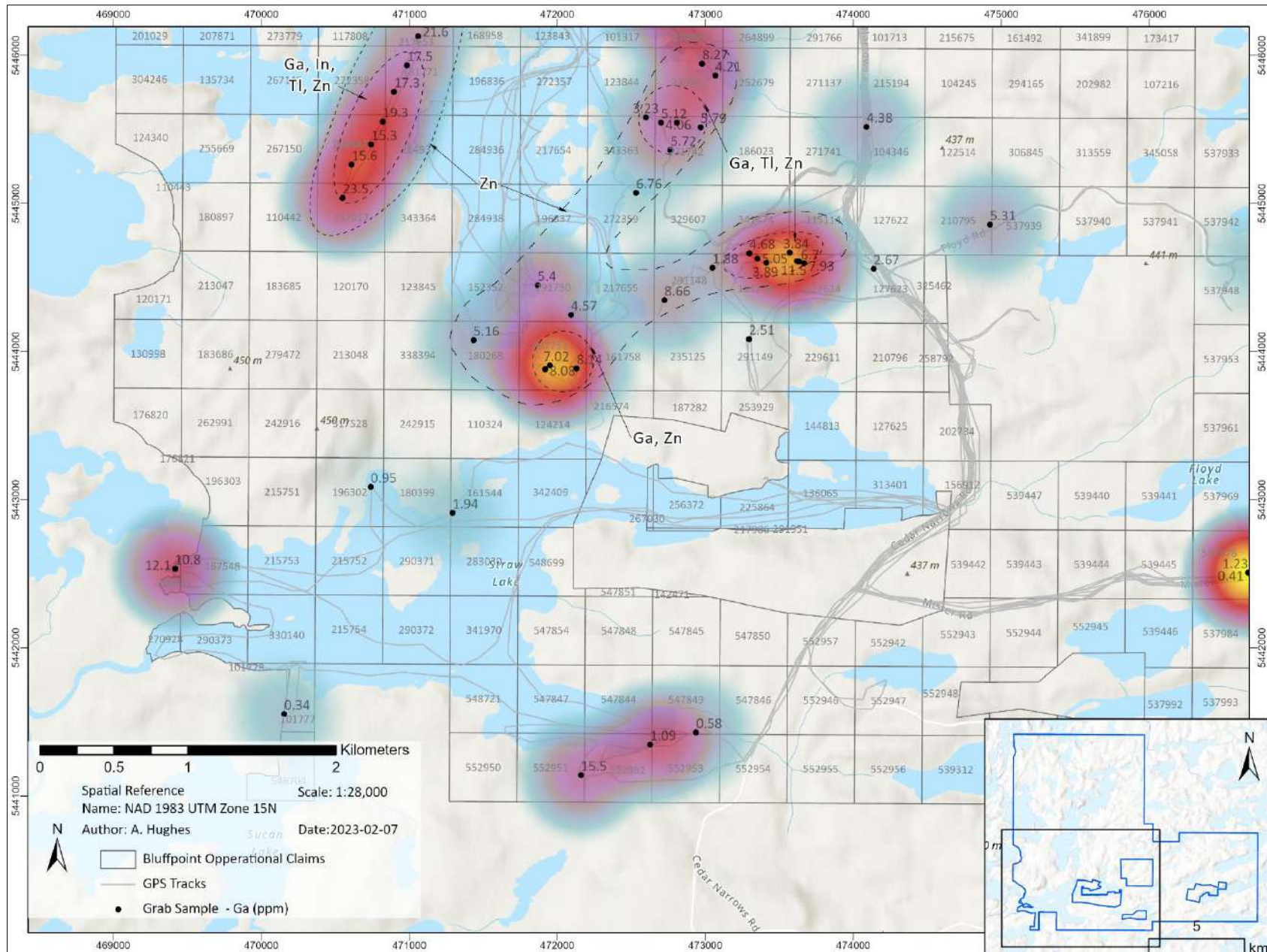
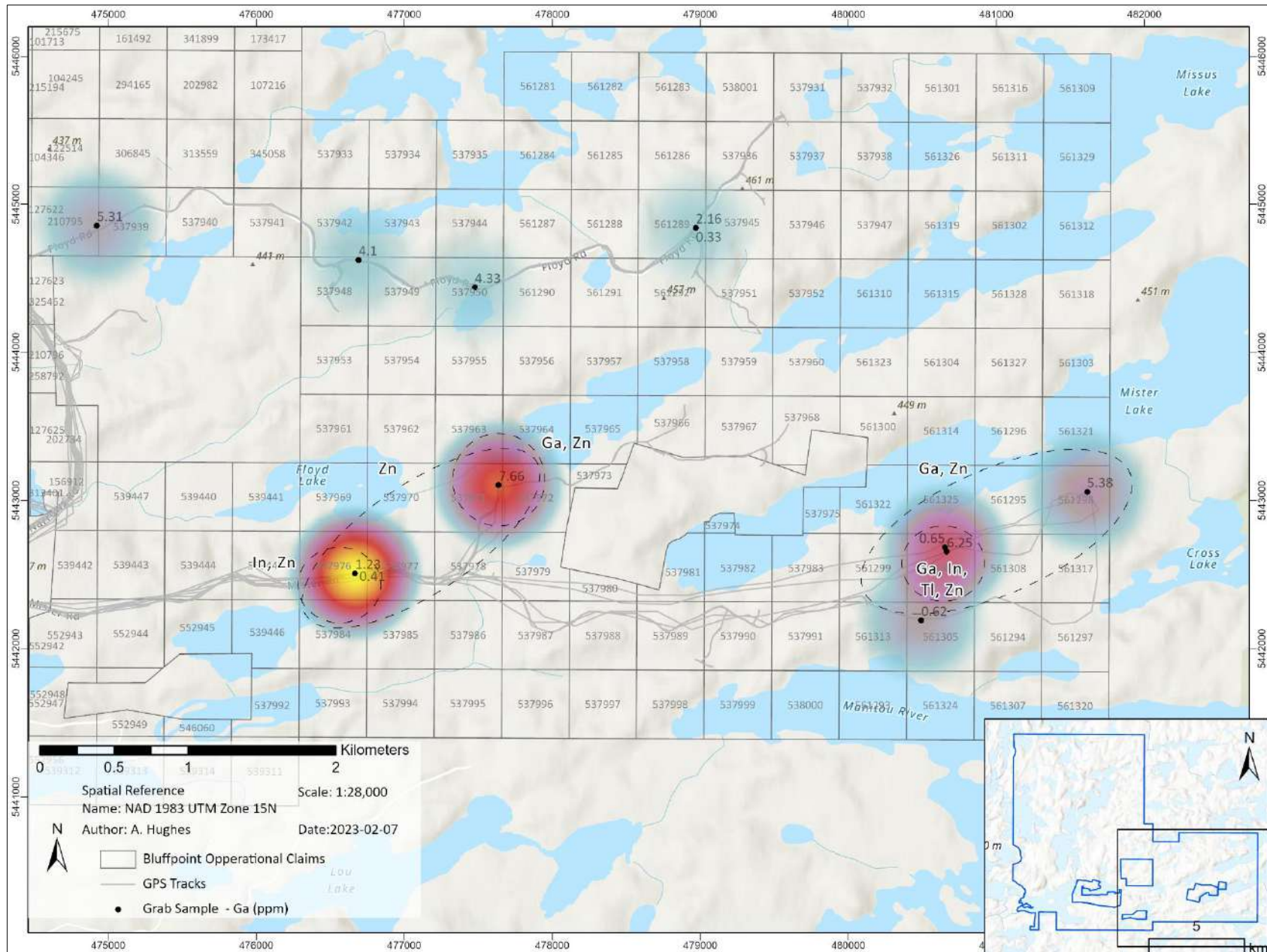


Figure 33: Goechemical Sample Index Map. 8 of 8



**Figure 34:** Geochemical survey surrounding Bluffpoint Lake illustrating the zinc heat map relative to the displayed gallium values in ppm. The dashed polygons represent anomalous areas characterized by overlapping of multiple elements.





**Figure 36:** Geochemical survey surrounding Mister Lake illustrating the zinc heat map relative to the displayed gallium values in ppm. The dashed polygons represent anomalous areas characterized by overlapping of multiple elements.

## 18 Appendix III – Program Expenditures

See attached expenditure documents and invoices

**Table 8:** Bluffpoint 2022 Fall Prospecting and Alteration Program Expenditures.

Expenditure Item	Date From	Date To	No of Units	Unit cost	Total Item Cost (incl. HST/GST)	HST/GST	Net Item Cost NO HST/GST	Invoice#	Supplier
<b>Labour</b>									
Kyle Pedersen - Project Geologist	Sept 10 2022, Oct 19 2022	Sept 22 2022, Oct 28 2022	23.00	\$700.00	\$18,193.00	\$2,093.00	\$16,100.00	22INV2183	Fladgate Exploration Consulting Corp.
Sean Isrealson - Project Geologist	Sept 19 2022, Oct 24 2022	Oct 11 2022, Nov 3, 2022	39.00	\$700.00	\$30,849.00	\$3,549.00	\$27,300.00	22INV2183	Fladgate Exploration Consulting Corp.
Marcel Lacoste - Geotechnician	Sept 10 2022, Oct 15 2022	Sept 22 2022, Oct 28 2022	33.50	\$550.00	\$20,820.25	\$2,395.25	\$18,425.00	22INV2183	Fladgate Exploration Consulting Corp.
William Bellhouse - Geotechnician	Sept 19 2022,	Oct 18 2022,	30.00	\$550.00	\$18,645.00	\$2,145.00	\$16,500.00	22INV2183	Fladgate Exploration Consulting Corp.
Alex Hughes - Project Geologist			5.50	\$700.00	\$4,350.50	\$500.50	\$3,850.00	22INV2183	Fladgate Exploration Consulting Corp.
<b>Subtotal</b>					<b>\$92,857.75</b>	<b>\$10,682.75</b>	<b>\$82,175.00</b>		
<b>Analytical</b>									
Activation Laboratories Ltd.			1	\$8,886.24	\$10,041.45	\$1,155.21	\$8,886.24	A22-11728, A22-16945	Activation Laboratories Ltd.
<b>Subtotal</b>					<b>\$10,041.45</b>	<b>\$1,155.21</b>	<b>\$8,886.24</b>		
<b>Personal Transportation (personnel to and from site)</b>									
Urider/Taxi			1	\$135.06	\$152.62	\$17.56	\$135.06	22INV2183	Fladgate Exploration Consulting Corp.
Porter Airlines			1	\$738.95	\$835.01	\$96.06	\$738.95	22INV2183	Fladgate Exploration Consulting Corp.
<b>Subtotal</b>					<b>\$987.63</b>	<b>\$113.62</b>	<b>\$874.01</b>		
<b>Supplies</b>									
Sample Supplies - bags, tags, markers,			100	\$2.00	\$226.00	\$26.00	\$200.00	22INV2183	Fladgate Exploration Consulting Corp.



Expenditure Item	Date From	Date To	No of Units	Unit cost	Total Item Cost (incl. HST/GST)	HST/GST	Net Item Cost NO HST/GST	Invoice#	Supplier
zipties									
<b>Subtotal</b>					<b>\$226.00</b>	<b>\$26.00</b>	<b>\$200.00</b>		
<b>Rental (equipment/trucks)</b>									
Trailer Camp - generators, trailers, sleeper tents, kitchen, wash tent, heaters, fuel			2	\$5,000.00	\$11,300.00	\$1,300.00	\$10,000.00	22INV2183	Fladgate Exploration Consulting Corp.
Light duty truck - monthly rental			2	\$2,000.00	\$4,520.00	\$520.00	\$4,000.00	22INV2183	Fladgate Exploration Consulting Corp.
Truck kilometers			7230	\$0.70	\$5,718.93	\$657.93	\$5,061.00	22INV2183	Fladgate Exploration Consulting Corp.
Light duty truck - monthly rental			1	\$2,000.00	\$2,260.00	\$260.00	\$2,000.00	22INV2183	Fladgate Exploration Consulting Corp.
Truck kilometers			1522	\$0.70	\$1,203.90	\$138.50	\$1,065.40	22INV2183	Fladgate Exploration Consulting Corp.
<b>Subtotal</b>					<b>\$25,002.83</b>	<b>\$2,876.43</b>	<b>\$22,126.40</b>		
<b>Food</b>									
Meals			100	\$30.00	\$3,390.00	\$390.00	\$3,000.00	22INV2183	Fladgate Exploration Consulting Corp.
<b>Subtotal</b>					<b>\$3,390.00</b>	<b>\$390.00</b>	<b>\$3,000.00</b>		
<b>Maps/Reports</b>									
Alex Hughes - Report writing			1	\$5,000.00	\$5,650.00	\$650.00	\$5,000.00	23INV2210	Fladgate Exploration Consulting Corp.
<b>Subtotal</b>					<b>\$5,650.00</b>	<b>\$650.00</b>	<b>\$5,000.00</b>		
<b>Program Total</b>					<b>\$138,155.66</b>	<b>\$15,894.01</b>	<b>\$122,261.65</b>		

**Table 9: Work Amount Per Claim**

Tenure Number	Grab Samples Per Claim	Mapped Locations Per Claim	Structure Points Per Claim	Kilometers traversed Per Claim	Work %	Cost Per Claim
101317	0	3	0	2.00	0.434	\$530.76
101692	0	0	0	0.91	0.079	\$96.18
101713	0	1	0	9.69	0.928	\$1,135.00
101777	1	4	1	0.98	0.607	\$741.81
101778	0	0	0	0.01	0.001	\$0.86
104346	1	0	0	11.03	1.045	\$1,277.41
115114	1	3	0	8.97	1.127	\$1,377.88
116180	1	1	0	2.67	0.406	\$496.43
116181	5	5	3	2.21	1.321	\$1,614.97
116727	3	0	0	1.01	0.348	\$425.75
117820	1	2	1	2.54	0.569	\$695.06
121364	0	0	0	8.05	0.700	\$855.40
122344	0	0	0	2.09	0.182	\$222.25
123843	1	1	1	5.53	0.741	\$905.39
123844	0	2	0	0.84	0.247	\$301.85
124214	0	0	0	0.38	0.033	\$40.79
124371	6	6	4	3.01	1.651	\$2,018.40
124377	0	0	0	0.15	0.013	\$15.62
127622	0	0	0	3.96	0.344	\$421.06
127623	1	4	1	12.94	1.645	\$2,011.12
127624	3	7	4	2.74	1.454	\$1,778.00
129494	11	2	0	8.29	1.849	\$2,260.67
136065	0	0	0	2.81	0.244	\$297.94
136096	3	1	0	10.08	1.223	\$1,495.29
152352	0	0	0	2.00	0.174	\$212.45
152367	0	1	0	2.46	0.300	\$367.11

Tenure Number	Grab Samples Per Claim	Mapped Locations Per Claim	Structure Points Per Claim	Kilometers traversed Per Claim	Work %	Cost Per Claim
156912	0	0	0	7.56	0.656	\$802.49
159470	3	0	0	1.25	0.369	\$450.86
160167	1	0	0	0.33	0.115	\$141.00
161544	1	1	1	1.16	0.361	\$441.55
161758	0	2	0	1.01	0.261	\$319.17
164552	2	2	0	3.27	0.632	\$772.57
167548	0	1	0	1.78	0.241	\$295.25
168958	0	0	0	1.37	0.119	\$146.03
178078	1	0	0	7.90	0.773	\$945.33
179009	0	4	0	0.92	0.428	\$522.72
180268	1	1	1	0.54	0.308	\$375.98
180338	2	6	2	1.44	0.994	\$1,214.90
180399	0	1	0	0.64	0.143	\$174.70
181236	2	4	0	3.73	0.845	\$1,033.37
181771	2	2	0	1.33	0.463	\$566.38
181782	0	0	0	0.45	0.039	\$47.51
181783	0	0	0	0.48	0.042	\$51.14
181784	1	4	0	2.48	0.650	\$794.50
186023	0	0	0	0.01	0.001	\$0.80
192188	0	0	0	14.04	1.220	\$1,491.56
196245	1	9	3	1.31	1.243	\$1,519.71
196247	1	3	2	12.71	1.625	\$1,986.96
196302	1	1	0	0.40	0.208	\$254.74
196836	0	0	0	1.72	0.150	\$183.12
196837	0	3	0	2.37	0.466	\$569.93
196850	2	1	0	0.43	0.298	\$364.57
202734	0	0	0	6.70	0.582	\$711.76

Tenure Number	Grab Samples Per Claim	Mapped Locations Per Claim	Structure Points Per Claim	Kilometers traversed Per Claim	Work %	Cost Per Claim
204291	3	7	0	6.32	1.417	\$1,732.80
204937	2	4	2	0.21	0.714	\$872.45
206285	0	1	0	1.18	0.190	\$231.70
206286	0	0	0	0.51	0.044	\$54.20
207751	3	14	0	2.32	1.678	\$2,052.05
210795	1	3	0	2.45	0.560	\$684.72
210796	0	0	0	0.00	0.000	\$0.21
210928	2	2	1	0.80	0.504	\$616.23
212275	5	0	0	8.55	1.177	\$1,439.48
212276	0	3	0	1.41	0.383	\$468.59
212277	5	6	0	1.39	1.076	\$1,315.59
214911	5	4	0	9.44	1.602	\$1,958.09
214912	0	0	0	11.28	0.980	\$1,198.01
214913	1	1	0	1.29	0.286	\$349.11
214914	1	0	0	0.61	0.140	\$171.22
215194	0	0	0	10.24	0.889	\$1,087.15
215643	2	0	0	0.92	0.254	\$310.35
215671	0	7	2	1.45	0.907	\$1,109.37
215752	0	0	0	1.22	0.106	\$129.65
215753	0	0	0	1.42	0.123	\$150.40
215754	0	0	0	0.58	0.050	\$61.17
216574	0	0	0	0.12	0.011	\$12.92
217653	3	0	0	1.36	0.378	\$462.52
217654	0	1	0	1.30	0.200	\$244.30
217655	0	3	1	2.56	0.570	\$696.97
225864	0	1	0	2.15	0.274	\$334.45
229472	2	2	0	2.24	0.542	\$662.77

Tenure Number	Grab Samples Per Claim	Mapped Locations Per Claim	Structure Points Per Claim	Kilometers traversed Per Claim	Work %	Cost Per Claim
229611	0	0	0	0.06	0.005	\$6.14
232191	3	5	1	1.76	0.935	\$1,142.94
233697	0	0	0	0.21	0.018	\$21.85
233851	2	3	3	0.95	0.777	\$950.12
235365	2	1	0	7.93	0.949	\$1,160.78
235702	0	0	0	0.08	0.007	\$8.37
237017	1	0	0	0.23	0.107	\$130.46
244816	0	0	0	1.48	0.128	\$156.81
244817	0	0	0	4.03	0.350	\$427.72
248340	0	1	0	1.12	0.184	\$224.88
252185	0	1	0	11.92	1.122	\$1,371.82
253929	0	1	0	0.10	0.096	\$117.02
256372	0	0	0	1.82	0.158	\$193.48
257051	0	0	0	0.86	0.075	\$91.11
258792	0	1	0	3.70	0.409	\$499.54
262873	2	0	0	9.04	0.959	\$1,172.60
262874	3	2	0	1.50	0.565	\$690.35
264887	3	0	0	1.01	0.348	\$425.81
264898	2	0	0	5.58	0.658	\$804.76
264899	2	9	1	1.66	1.187	\$1,450.96
267030	0	0	0	0.18	0.015	\$18.83
269538	0	2	0	0.71	0.236	\$288.19
270328	0	2	0	2.38	0.380	\$465.08
270928	0	1	0	0.28	0.111	\$135.41
271741	0	0	0	3.33	0.289	\$353.39
271742	5	14	7	2.56	2.481	\$3,032.92
272357	0	2	2	3.45	0.647	\$790.74

Tenure Number	Grab Samples Per Claim	Mapped Locations Per Claim	Structure Points Per Claim	Kilometers traversed Per Claim	Work %	Cost Per Claim
272358	0	0	0	0.03	0.002	\$2.67
272359	1	2	1	1.65	0.491	\$600.55
272872	0	2	0	1.95	0.344	\$419.99
278737	10	0	0	0.47	0.909	\$1,111.96
280683	3	0	0	11.60	1.268	\$1,550.71
283030	0	0	0	0.26	0.023	\$27.74
284936	0	0	0	1.84	0.159	\$194.98
284937	0	1	0	0.66	0.144	\$175.82
284938	0	1	0	2.45	0.299	\$365.88
284949	10	8	0	6.31	2.112	\$2,582.22
284950	2	5	0	8.81	1.374	\$1,679.27
287973	1	4	1	13.82	1.721	\$2,104.50
289772	1	2	0	1.08	0.354	\$433.07
289773	0	0	0	0.61	0.053	\$65.24
289774	3	0	0	0.88	0.337	\$412.57
290309	0	0	0	0.97	0.084	\$102.85
290310	0	0	0	0.07	0.006	\$7.93
290311	0	0	0	11.82	1.027	\$1,255.13
290371	0	0	0	0.42	0.036	\$44.46
290372	0	0	0	0.49	0.043	\$52.52
290373	0	1	0	1.06	0.179	\$218.79
291148	2	6	1	1.93	0.949	\$1,160.49
291149	1	3	0	2.03	0.524	\$640.28
291437	2	0	0	1.36	0.292	\$357.26
291750	2	3	0	1.37	0.553	\$676.05
291766	0	6	1	2.37	0.814	\$994.70
296827	7	0	0	6.31	1.156	\$1,413.51

Tenure Number	Grab Samples Per Claim	Mapped Locations Per Claim	Structure Points Per Claim	Kilometers traversed Per Claim	Work %	Cost Per Claim
301422	0	0	0	0.48	0.041	\$50.47
313401	0	0	0	2.67	0.232	\$283.83
313559	0	0	0	0.05	0.004	\$5.14
314904	0	0	0	6.27	0.545	\$666.06
314907	1	1	1	3.40	0.556	\$679.18
320987	2	2	0	1.45	0.473	\$578.39
325462	0	0	0	1.96	0.171	\$208.54
329528	4	0	0	9.23	1.149	\$1,404.75
329607	0	1	0	2.06	0.266	\$324.62
330140	0	0	0	0.67	0.058	\$70.69
339655	1	0	0	10.22	0.974	\$1,191.22
339656	3	0	0	7.97	0.953	\$1,165.51
340553	0	0	0	0.52	0.046	\$55.64
341361	5	0	0	7.36	1.074	\$1,312.55
341474	1	4	0	6.04	0.959	\$1,172.10
341970	0	0	0	1.14	0.099	\$120.98
342409	0	0	0	1.06	0.092	\$113.03
343363	1	2	1	0.89	0.425	\$519.75
343364	0	0	0	0.03	0.002	\$2.88
343380	2	0	0	0.61	0.227	\$277.56
343381	3	0	0	5.67	0.753	\$921.12
343386	1	8	2	0.92	1.035	\$1,265.89
537931	0	0	0	0.45	0.039	\$48.19
537936	0	3	0	2.97	0.519	\$634.51
537937	0	0	0	0.08	0.007	\$8.29
537939	0	1	0	2.06	0.266	\$324.68
537940	0	2	0	2.28	0.372	\$454.73

Tenure Number	Grab Samples Per Claim	Mapped Locations Per Claim	Structure Points Per Claim	Kilometers traversed Per Claim	Work %	Cost Per Claim
537941	0	2	0	2.00	0.347	\$424.34
537942	0	0	0	1.13	0.098	\$120.07
537945	0	1	1	1.01	0.261	\$319.50
537948	1	3	0	3.26	0.631	\$771.42
537949	0	2	0	2.24	0.368	\$449.87
537950	1	1	0	2.02	0.349	\$426.77
537951	0	0	0	0.99	0.086	\$104.94
537959	0	1	0	0.11	0.097	\$118.31
537965	0	0	0	0.51	0.045	\$54.65
537966	0	1	2	1.22	0.367	\$448.62
537967	0	0	0	0.77	0.067	\$81.54
537968	0	1	0	0.38	0.120	\$146.42
537971	1	1	0	1.92	0.340	\$415.94
537972	0	1	0	1.41	0.209	\$255.92
537973	0	0	0	0.63	0.055	\$66.69
537976	2	1	2	4.32	0.809	\$989.66
537977	0	0	0	4.33	0.376	\$460.18
537978	1	1	0	5.87	0.683	\$835.66
537979	0	0	0	1.49	0.130	\$158.62
537980	0	0	0	0.79	0.068	\$83.49
537981	0	0	0	0.62	0.054	\$66.10
537982	0	1	0	0.92	0.167	\$204.04
537983	0	0	0	1.00	0.087	\$106.43
537986	0	0	0	0.03	0.003	\$3.26
537987	0	0	0	1.73	0.150	\$183.23
537988	0	0	0	2.07	0.180	\$219.78
537989	0	1	0	2.51	0.305	\$372.85



Tenure Number	Grab Samples Per Claim	Mapped Locations Per Claim	Structure Points Per Claim	Kilometers traversed Per Claim	Work %	Cost Per Claim
537990	0	0	0	3.05	0.265	\$324.34
537991	0	1	0	1.84	0.247	\$302.03
538001	0	0	0	0.02	0.002	\$1.97
539443	0	0	0	0.69	0.060	\$72.92
539444	0	0	0	3.83	0.332	\$406.28
539445	0	0	0	4.26	0.370	\$452.56
547844	0	0	0	1.11	0.097	\$118.16
547846	0	0	0	1.52	0.132	\$161.74
547847	0	0	0	1.49	0.129	\$157.98
547849	1	3	0	0.46	0.388	\$473.77
548699	0	0	0	0.78	0.067	\$82.51
548721	0	1	0	0.71	0.149	\$182.07
552943	0	0	1	2.95	0.343	\$419.22
552944	0	0	0	3.48	0.302	\$369.69
552945	0	0	0	0.61	0.053	\$65.05
552946	0	0	0	1.40	0.121	\$148.22
552947	0	2	0	0.62	0.228	\$278.43
552950	0	0	0	0.08	0.007	\$8.50
552951	1	0	1	0.73	0.238	\$290.43
552952	1	2	0	1.82	0.419	\$512.26
552953	0	1	0	1.06	0.179	\$219.22
552954	0	0	0	1.18	0.102	\$125.31
552957	0	0	0	2.36	0.205	\$250.72
561287	0	0	0	0.06	0.005	\$6.67
561288	0	0	0	1.39	0.121	\$147.45
561289	2	1	3	2.30	0.721	\$881.64
561290	0	2	0	1.95	0.343	\$419.26

Tenure Number	Grab Samples Per Claim	Mapped Locations Per Claim	Structure Points Per Claim	Kilometers traversed Per Claim	Work %	Cost Per Claim
561291	0	1	0	0.94	0.169	\$206.40
561292	0	0	0	1.31	0.114	\$139.02
561294	0	1	0	0.29	0.112	\$136.50
561295	0	0	0	0.93	0.081	\$99.00
561297	0	1	0	0.43	0.124	\$151.86
561298	1	2	0	1.61	0.401	\$489.98
561299	0	0	0	1.85	0.160	\$195.99
561305	1	1	0	0.47	0.215	\$262.70
561306	2	2	0	1.45	0.473	\$578.81
561308	0	1	0	0.80	0.157	\$191.55
561313	0	1	0	0.56	0.136	\$166.20
561317	0	0	0	0.47	0.040	\$49.46
561325	0	0	0	0.03	0.003	\$3.46
<b>TOTALS</b>	<b>203</b>	<b>301</b>	<b>62</b>	<b>585.214</b>	<b>100%</b>	<b>\$122,261.65</b>

## 19 Appendix IV – Certificate of Analysis

See attached document.



Report No.: A22-16945
Report Date: 26-Jan-23
Date Submitted: 15-Nov-22
Your Reference: KES-BFP

Fladgate Exploration
278 Bay St.
Thunder Bay ON P7B 1R8
Canada

ATTN: Caitlin Jeffs

CERTIFICATE OF ANALYSIS

100 Rock samples were submitted for analysis.

Table with 2 columns: Analytical package(s) requested, Testing Date. Row 1: UT-1-15g, QOP Ultratrace-1 (Aqua Regia ICPMS), 2022-12-12 15:47:19

REPORT A22-16945

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Assays are recommended for values above the upper limit. The Au from AR-MS is for information purposes, for accurate Au fire assay 1A2 should be requested.



LabID: 266

ACTIVATION LABORATORIES LTD.
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5
TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613
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CERTIFIED BY:

Handwritten signature of Mark Vandergeest

Mark Vandergeest
Quality Control Coordinator

## Results

## Activation Laboratories Ltd.

## Report: A22-16945

Analyte Symbol	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.2	0.1	0.02	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
1300857	0.235	< 1	0.078	10.2	0.1	1	0.116	0.87	1.30	0.05	0.02	1.03	3.0	64	31	190	1.98	6.5	26.0	13.8	17.7	5.72	< 0.1
1300858	0.198	< 1	0.117	6.5	0.2	1	0.177	0.56	1.05	0.16	< 0.02	1.28	4.6	60	7	216	2.19	3.4	8.9	2.7	22.4	5.12	< 0.1
1300859	0.156	< 1	0.016	5.3	0.2	1	0.136	0.13	0.56	0.10	0.02	0.40	4.6	4	11	115	1.36	1.4	4.9	3.5	16.7	4.06	< 0.1
1300860	0.155	< 1	0.115	3.2	0.1	1	0.105	0.17	0.64	0.06	< 0.02	0.96	1.8	22	6	111	0.40	0.7	4.9	3.5	19.1	3.23	< 0.1
1300861	0.144	< 1	0.025	12.6	0.1	< 1	0.121	0.67	1.10	0.11	0.03	0.56	3.9	25	20	255	2.37	3.3	23.8	1.9	32.7	6.13	< 0.1
1300862	0.163	3	0.114	23.4	0.1	< 1	0.059	1.84	1.88	0.47	0.29	0.43	3.9	59	15	347	4.52	24.8	16.3	6.4	32.0	5.79	< 0.1
1300863	0.066	< 1	0.042	10.0	0.1	< 1	0.062	0.24	0.83	0.35	0.03	0.51	0.8	7	7	280	1.28	4.3	3.7	1.2	37.8	4.68	< 0.1
1300864	0.079	< 1	0.037	9.0	< 0.1	< 1	0.067	0.56	1.09	0.23	0.02	0.94	2.0	26	11	318	2.16	6.0	9.7	2.6	51.6	5.05	< 0.1
1300865	0.120	< 1	0.018	5.1	0.2	< 1	0.128	0.06	0.45	0.11	0.04	0.31	4.5	2	9	211	2.04	0.6	1.3	2.2	23.1	3.89	< 0.1
1300866	0.188	< 1	0.096	0.9	0.1	< 1	0.123	0.08	0.57	0.02	0.04	1.21	1.4	17	7	194	0.67	0.6	1.3	2.6	14.6	3.84	< 0.1
1300867	0.198	< 1	0.110	25.2	0.2	< 1	0.091	1.22	2.01	0.14	0.03	1.18	4.2	72	10	407	3.70	9.4	21.6	2.4	53.7	6.70	< 0.1
1300868	0.135	< 1	0.099	41.8	0.2	< 1	0.068	1.83	2.21	0.01	0.03	1.69	6.0	74	8	650	5.85	15.8	22.8	1.7	86.7	11.5	0.1
1300869	0.148	< 1	0.102	26.8	0.2	< 1	0.067	1.46	1.79	0.42	< 0.02	1.49	5.7	103	14	506	5.01	13.9	23.0	1.5	50.6	7.93	< 0.1
1300870	0.150	< 1	0.063	18.1	0.2	1	0.243	2.57	4.01	0.02	0.04	1.92	3.8	58	68	958	4.39	20.0	53.6	1.6	70.2	8.66	< 0.1
1300871	0.036	< 1	0.012	2.1	0.2	< 1	0.125	0.03	0.27	0.13	0.03	0.15	1.8	1	9	192	1.75	2.2	1.1	7.2	15.6	1.88	< 0.1
1300872	0.002	< 1	0.030	3.2	0.2	1	0.071	0.07	0.53	0.31	0.02	1.14	0.9	5	11	190	1.53	2.9	2.3	2.6	11.0	2.67	< 0.1
1300873	0.003	< 1	0.005	0.6	< 0.1	< 1	0.045	0.01	0.12	0.09	2.23	0.01	0.3	2	17	67	2.35	1.6	1.5	13.3	5.9	0.79	< 0.1
1300874	0.004	2	0.007	0.8	< 0.1	< 1	0.101	0.01	0.19	0.12	0.53	0.02	0.7	6	9	51	3.12	4.3	1.1	35.0	5.0	0.81	< 0.1
1300875	0.014	< 1	0.010	1.7	0.1	< 1	0.078	0.02	0.21	0.11	0.13	0.03	2.7	6	11	446	2.71	2.3	2.7	27.4	16.1	1.18	< 0.1
1300876	0.067	< 1	0.013	19.8	0.2	< 1	0.095	0.22	0.49	0.42	0.05	0.03	2.7	5	8	164	3.34	2.3	1.0	15.0	29.9	3.75	< 0.1
1300877	0.004	< 1	0.011	1.3	0.1	< 1	0.103	0.03	0.26	0.12	0.71	0.06	0.9	8	8	72	3.06	2.2	1.3	24.5	6.3	1.42	< 0.1
1300878	0.203	1	0.098	5.8	< 0.1	< 1	0.086	0.62	0.99	0.09	0.09	0.74	2.2	34	9	140	2.37	22.9	24.1	21.1	19.3	3.46	< 0.1
1300879	0.048	< 1	0.048	10.3	< 0.1	1	0.060	0.57	1.01	0.18	< 0.02	0.32	1.3	14	12	334	2.29	4.2	6.5	2.7	49.3	4.83	< 0.1
1300880	0.132	< 1	0.209	12.1	0.1	1	0.171	1.28	1.69	0.22	< 0.02	1.52	5.6	188	19	360	4.29	22.1	16.3	73.4	57.6	6.37	< 0.1
1300881	0.086	< 1	0.037	7.5	0.1	< 1	0.106	0.45	0.82	0.11	0.04	0.69	1.7	21	9	227	1.49	5.4	4.8	7.4	30.3	4.99	< 0.1
1300882	0.198	< 1	0.098	12.3	0.3	< 1	0.152	1.85	2.88	0.70	0.07	1.14	3.5	37	46	691	3.58	15.3	43.5	21.1	98.3	5.40	< 0.1
1300883	0.127	< 1	0.034	23.6	< 0.1	< 1	0.050	4.00	3.17	0.10	0.07	0.66	3.6	47	259	616	3.95	27.8	154	14.8	50.9	7.68	< 0.1
1300884	0.066	< 1	0.009	5.3	< 0.1	< 1	0.030	1.03	1.28	0.01	< 0.02	1.79	2.2	47	24	323	2.17	8.0	25.6	2.1	26.8	3.11	< 0.1
1300885	0.262	< 1	0.020	16.5	< 0.1	1	0.033	2.64	3.32	0.02	< 0.02	1.12	3.0	131	88	512	7.08	47.9	65.7	74.9	85.3	7.29	< 0.1
1300886	0.202	< 1	0.121	21.2	0.1	1	0.106	1.32	1.88	0.73	0.02	1.08	5.3	74	13	525	4.32	17.4	14.8	41.7	78.9	7.61	< 0.1
1300887	0.061	< 1	0.016	2.5	0.2	< 1	0.109	0.09	0.36	0.11	0.14	0.35	2.4	2	8	122	1.67	3.3	1.0	8.2	14.1	2.64	< 0.1
1300888	0.153	< 1	0.051	9.9	0.2	2	0.099	0.99	1.57	0.25	0.04	0.65	3.7	17	16	414	2.85	6.0	6.3	9.6	56.0	6.09	< 0.1
1300889	0.215	< 1	0.156	14.6	0.1	2	0.249	2.06	2.77	0.62	< 0.02	1.52	3.7	91	210	254	3.40	19.8	93.4	50.2	21.9	6.76	< 0.1
1300890	0.242	< 1	0.089	21.1	0.2	3	0.145	1.97	2.59	0.27	0.02	1.58	5.9	89	48	476	3.74	20.4	40.1	40.2	69.1	6.96	< 0.1
1300891	0.235	< 1	0.084	19.9	0.2	2	0.100	1.78	2.06	0.12	0.02	1.52	5.6	79	37	477	3.34	17.5	31.7	34.8	59.4	6.70	< 0.1
1300892	0.149	< 1	0.030	18.6	< 0.1	< 1	0.071	2.10	2.28	0.10	0.04	0.78	3.1	53	81	482	3.37	21.5	61.9	18.9	56.4	5.00	< 0.1
1300893	0.154	< 1	0.103	17.9	< 0.1	1	0.066	0.84	1.44	0.32	< 0.02	0.77	2.7	27	10	217	2.95	11.1	5.1	30.2	38.1	5.47	< 0.1
1300894	0.157	< 1	0.063	14.1	0.1	< 1	0.273	1.12	2.18	0.77	0.03	1.27	5.9	89	15	320	3.09	14.2	16.4	38.4	49.3	8.01	< 0.1
1300895	0.205	< 1	0.097	25.5	0.1	< 1	0.059	1.57	2.05	0.65	< 0.02	0.74	3.5	58	38	477	3.13	15.7	32.1	5.0	57.4	6.84	< 0.1
1300896	0.002	2	0.022	9.5	0.2	< 1	0.041	0.88	1.29	0.08	0.65	0.67	2.1	2	3	342	3.80	11.9	30.6	9.3	58.0	5.16	< 0.1
1300897	0.152	< 1	0.160	29.9	0.1	< 1	0.045	2.85	3.24	0.34	0.04	0.74	3.0	73	38	666	5.34	15.9	34.6	19.0	92.0	8.27	< 0.1
1300898	0.103	< 1	0.231	11.8	< 0.1	< 1	0.062	0.96	1.18	0.03	0.13	3.14	3.2	76	4	865	2.42	27.0	11.1	5.3	41.8	4.21	< 0.1
1300899	0.244	< 1	0.089	29.3	0.1	< 1	0.028	3.14	3.31	0.70	0.19	0.65	4.4	52	20	691	5.26	17.2	15.7	124	87.6	8.79	< 0.1
1300900	0.211	< 1	0.076	9.1	0.1	2	0.237	1.13	1.96	0.44	0.03	1.30	4.8	313	32	285	5.85	33.2	45.5	75.7	61.9	6.66	< 0.1
1300901	0.001	< 1	0.041	0.4	0.2	< 1	0.036	0.03	0.27	0.12	0.12	0.27	1.8	2	2	382	1.10	1.8	0.8	7.8	280	1.23	< 0.1
1300902	0.002	< 1	0.029	0.1	< 0.1	< 1	0.030	0.02	0.08	0.01	0.08	0.09	1.0	2	5	476	1.49	0.6	1.1	0.9	47.9	0.41	< 0.1
1300903	0.128	< 1	0.110	18.9	0.1	< 1	0.025	3.02	3.61	0.02	< 0.02	1.32	3.2	68	46	1570	5.11	28.2	55.0	1.8	223	7.66	< 0.1
1300904	0.166	< 1	0.096	17.8	0.2	< 1	0.033	1.79	2.52	0.13	0.02	1.11	6.0	53	22	646	4.97	26.1	56.9	10.1	86.5	8.14	< 0.1
1300905	0.227	< 1	0.100	10.6	0.2	< 1	0.035	1.89	2.70	0.16	0.04	1.17	4.5	45	30	718	4.73	26.3	56.2	34.6	96.9	7.02	< 0.1
1300906	0.232	< 1	0.072	32.2	0.2	< 1	0.034	2.23	3.03	0.11	0.09	1.60	5.0	51	46	691	5.00	22.1	71.2	28.3	112	8.08	< 0.1
1300907	0.004	< 1	0.047	7.1	< 0.1	< 1	0.058	0.46	0.80	0.09	0.05	0.12	0.8	12	7	202	1.30	4.9	3.5	2.6	19.7	4.57	< 0.1

## Results

## Activation Laboratories Ltd.

## Report: A22-16945

Analyte Symbol	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	0.1	0.2	0.1	0.02	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
1300908	0.036	< 1	0.503	12.5	0.1	< 1	0.036	1.45	1.68	0.12	< 0.02	1.62	3.5	131	2	325	5.48	23.0	2.3	24.6	65.9	5.31	< 0.1
1300909	0.048	< 1	0.067	9.1	0.1	< 1	0.044	0.47	0.84	0.19	0.03	0.65	2.0	22	4	242	2.64	8.9	2.7	16.6	29.4	4.10	< 0.1
1300910	0.057	< 1	0.016	8.3	0.3	1	0.063	0.09	0.48	0.25	0.03	0.05	4.0	1	3	133	2.28	2.3	1.3	10.6	24.8	4.33	< 0.1
1300911	0.007	< 1	0.042	1.7	< 0.1	1	0.046	0.06	0.30	0.14	0.93	0.04	1.5	3	4	43	3.43	4.5	1.0	10.3	7.3	2.16	< 0.1
1300912	0.038	< 1	0.011	0.9	< 0.1	1	0.023	0.01	0.11	0.08	< 0.02	0.32	0.1	1	5	113	0.45	0.3	0.9	0.8	19.1	0.33	< 0.1
1300913	0.166	< 1	0.058	16.8	< 0.1	2	0.102	1.18	1.70	0.34	< 0.02	0.90	3.9	100	49	342	3.01	16.3	38.2	48.9	50.2	5.24	< 0.1
1300914	0.177	< 1	0.082	19.4	< 0.1	1	0.050	2.28	2.42	0.03	0.02	0.86	2.6	52	51	397	2.71	23.1	138	14.5	51.1	5.24	< 0.1
1300915	0.125	2	0.062	11.4	< 0.1	1	0.049	0.87	1.29	0.14	0.22	0.33	1.8	14	3	244	3.94	72.3	24.4	1430	58.2	4.38	< 0.1
1300916	0.056	< 1	0.020	8.6	< 0.1	2	0.015	0.40	0.56	0.05	0.45	0.21	1.1	23	10	169	1.38	13.1	12.4	19.9	20.5	2.78	< 0.1
1300917	0.149	< 1	0.091	15.3	0.1	1	0.051	0.90	1.22	0.35	0.17	0.86	2.6	66	91	226	2.52	8.1	46.8	10.6	32.1	4.99	< 0.1
1300918	0.166	< 1	0.090	20.7	0.2	< 1	0.057	1.81	1.88	0.10	0.14	0.81	3.4	57	110	354	2.81	39.5	89.8	16.2	56.1	7.16	< 0.1
1300919	0.169	< 1	0.077	19.8	0.2	< 1	0.055	1.49	1.65	0.09	0.15	0.77	3.4	58	118	404	3.34	48.2	95.0	19.5	63.4	8.47	< 0.1
1300920	0.138	< 1	0.082	26.5	0.1	< 1	0.051	1.94	2.18	0.36	0.10	1.02	3.4	74	139	547	3.28	20.2	104	21.3	56.5	7.81	< 0.1
1300921	0.001	< 1	0.008	0.5	< 0.1	2	0.009	< 0.01	0.04	0.03	2.54	< 0.01	0.3	< 1	4	110	0.70	0.2	0.8	0.7	15.9	0.25	< 0.1
1300922	0.156	< 1	0.088	28.0	0.2	1	0.059	2.03	2.16	0.55	0.06	0.82	3.3	90	102	470	3.13	18.6	96.1	13.1	57.3	6.25	< 0.1
1300923	0.017	< 1	0.032	0.6	0.2	2	0.034	0.03	0.27	0.14	0.11	0.14	1.3	< 1	3	463	1.69	1.9	0.6	83.6	72.7	0.62	< 0.1
1300924	0.125	< 1	0.082	9.0	0.2	3	0.083	0.57	0.94	0.32	0.09	0.71	3.1	31	6	246	3.79	6.7	12.4	23.0	32.9	5.47	< 0.1
1300925	0.134	< 1	0.119	17.0	0.1	1	0.052	1.52	2.09	0.07	2.05	0.91	3.2	110	9	364	3.69	20.7	21.3	36.7	66.3	5.78	< 0.1
1300926	0.153	< 1	0.081	16.8	0.1	3	0.084	0.93	1.62	0.29	0.04	0.88	3.5	108	11	276	3.12	13.1	21.5	26.5	55.6	5.54	< 0.1
1300927	0.161	< 1	0.155	18.1	0.2	2	0.068	1.48	2.32	0.35	0.15	0.86	4.0	85	10	419	3.74	7.6	13.9	31.5	59.3	6.61	< 0.1
1300928	0.212	< 1	0.099	46.4	0.4	3	0.123	1.35	1.47	0.93	0.08	1.02	5.5	60	41	500	2.45	12.2	30.4	39.4	72.5	6.59	< 0.1
1300929	0.196	< 1	0.099	25.0	0.2	2	0.067	1.56	2.13	0.50	0.08	0.95	4.8	96	14	479	3.68	16.6	26.5	28.1	71.7	6.89	< 0.1
1300930	0.155	< 1	0.033	21.5	< 0.1	1	0.037	2.06	2.31	0.04	0.07	0.65	2.7	64	32	417	2.94	20.1	77.7	25.9	49.3	4.88	< 0.1
1300931	0.106	< 1	0.030	7.6	< 0.1	< 1	0.064	0.25	0.74	0.34	0.02	0.26	0.7	12	7	142	1.02	2.5	2.9	5.1	41.0	3.67	< 0.1
1300932	0.233	< 1	0.103	15.8	0.2	3	0.071	1.03	1.42	0.60	0.04	0.86	4.9	76	23	364	3.35	11.2	21.1	30.7	64.6	5.89	< 0.1
1300933	0.044	< 1	0.018	24.3	0.1	< 1	0.045	0.11	0.44	0.14	0.38	0.20	0.5	6	5	127	0.66	1.1	1.4	9.2	23.9	3.08	< 0.1
1300934	0.049	< 1	0.022	19.3	< 0.1	1	0.043	0.16	0.54	0.18	0.03	0.21	0.6	8	4	156	0.70	1.4	1.2	4.6	31.3	3.72	< 0.1
1300935	0.133	< 1	0.180	14.1	0.2	7	0.110	0.94	1.61	0.17	0.96	1.56	5.0	110	22	294	2.93	13.8	22.8	49.4	51.2	5.44	< 0.1
1300936	0.255	< 1	0.103	51.3	0.1	2	0.062	2.07	2.30	0.56	0.05	0.90	2.9	79	53	403	3.54	20.5	52.3	12.2	74.6	6.54	< 0.1
1300937	0.197	< 1	0.047	31.7	0.1	2	0.105	1.37	1.68	0.17	0.11	0.89	5.0	65	61	283	2.63	11.6	39.4	10.2	56.1	6.44	< 0.1
1300938	0.056	< 1	0.016	1.5	< 0.1	< 1	0.006	0.22	0.32	0.01	< 0.02	0.27	0.6	9	14	115	0.74	2.5	9.2	10.4	11.2	0.95	< 0.1
1300939	< 0.001	< 1	0.043	2.2	0.2	1	0.028	0.10	0.52	0.18	0.09	0.43	0.5	2	3	327	0.82	1.6	1.5	7.2	29.9	1.94	< 0.1
1300940	0.005	< 1	0.076	27.4	0.2	1	0.020	2.60	3.15	0.07	0.08	5.39	7.3	76	73	997	4.80	23.0	62.4	55.9	67.8	10.8	< 0.1
1300941	0.004	< 1	0.248	37.4	0.3	1	0.024	3.51	4.19	0.09	0.09	2.60	6.7	86	81	775	5.67	25.7	99.6	55.0	90.6	12.1	< 0.1
1300942	< 0.001	< 1	0.092	1.0	< 0.1	1	0.031	1.22	0.19	0.06	< 0.02	2.85	3.6	6	17	665	2.32	10.7	57.9	5.6	38.2	0.34	< 0.1
1300943	< 0.001	< 1	0.032	0.2	< 0.1	1	0.013	0.01	0.11	0.05	0.16	0.06	0.4	3	4	336	0.96	2.9	4.8	9.2	30.2	0.45	< 0.1
1300944	0.009	< 1	0.285	29.9	0.4	< 1	0.030	4.19	3.34	0.02	0.10	2.36	13.8	142	367	810	5.77	31.1	125	71.6	118	15.5	< 0.1
1300945	0.002	2	0.191	0.7	0.2	2	0.021	0.39	0.22	0.12	0.19	3.60	5.1	8	4	1070	4.50	17.1	22.7	30.0	59.9	0.58	< 0.1
1300946	< 0.001	< 1	0.006	0.7	< 0.1	1	0.059	0.03	0.13	0.05	0.14	0.05	2.9	< 1	6	335	1.81	3.1	0.8	64.3	105	0.65	< 0.1
1300947	0.127	< 1	0.078	19.7	0.2	1	0.019	3.29	3.25	0.01	0.02	0.86	2.1	58	82	970	4.95	28.2	73.4	299	90.1	5.38	< 0.1
1300948	0.002	3	0.037	1.4	0.2	1	0.011	0.05	0.25	0.10	0.14	0.05	2.9	4	4	788	6.91	14.4	14.3	31.7	137	0.56	< 0.1
1300949	< 0.001	< 1	0.041	0.6	< 0.1	2	0.034	0.05	0.29	0.13	0.06	1.08	0.2	< 1	2	244	0.79	1.2	0.9	1.5	128	1.09	< 0.1
1300950	0.174	< 1	0.073	1.1	0.1	< 1	0.047	0.18	0.52	0.03	0.10	0.72	1.4	27	26	85	1.69	9.8	23.3	44.1	6.6	2.51	< 0.1
1300951	0.158	< 1	0.082	22.1	0.1	3	0.077	1.42	1.83	0.59	< 0.02	0.68	3.4	65	37	366	3.24	14.6	30.4	11.9	60.3	6.10	< 0.1
1300952	0.174	< 1	0.057	19.4	0.1	2	0.091	1.16	1.59	0.81	0.03	0.51	3.1	67	34	300	2.67	13.0	29.3	5.4	49.8	5.91	< 0.1
1300953	0.175	< 1	0.075	17.2	0.2	3	0.088	1.25	1.55	0.32	< 0.02	1.12	4.3	66	30	389	2.88	13.3	26.5	33.9	60.5	5.74	< 0.1
1300954	0.005	1	0.015	1.9	< 0.1	1	0.059	0.03	0.16	0.11	0.61	0.03	0.8	3	4	67	2.35	2.9	1.5	16.0	8.1	0.96	< 0.1
1300955	0.003	< 1	0.010	6.3	0.1	1	0.068	0.21	0.40	0.02	0.03	0.30	2.7	11	4	144	1.02	0.9	2.9	1.8	9.5	2.66	< 0.1
1300956	0.151	< 1	0.113	23.2	0.2	< 1	0.068	1.45	1.19	0.23	0.03	0.86	6.4	132	5	251	5.77	5.5	18.5	1.7	36.6	6.52	0.1

## Results

## Activation Laboratories Ltd.

## Report: A22-16945

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
1300857	1.0	1.6	68.3	9.16	10.3	0.6	0.61	0.019	< 0.02	1.05	0.04	< 0.02	0.07	18.3	9.2	20.6	0.06	2.5	9.48	1.9	0.5	0.5	1.8
1300858	0.7	7.9	53.5	15.5	4.2	0.5	0.56	0.021	0.06	2.00	0.05	< 0.02	0.24	19.8	9.5	25.0	0.03	3.4	13.5	3.1	0.6	0.6	2.9
1300859	0.6	6.1	33.1	34.4	25.2	1.3	0.83	0.026	0.02	2.58	0.04	< 0.02	0.21	28.4	18.9	54.8	0.01	6.7	26.9	6.4	0.9	0.9	5.7
1300860	0.3	1.6	37.4	10.5	1.7	0.5	0.37	0.031	< 0.02	0.86	0.05	< 0.02	0.05	17.2	11.9	28.0	0.06	3.5	13.4	2.5	0.4	0.5	2.3
1300861	1.0	6.4	51.6	16.9	19.4	0.5	0.84	0.027	0.03	1.89	0.05	< 0.02	0.40	19.3	12.9	32.6	0.01	3.8	15.1	3.3	0.6	0.6	2.8
1300862	1.4	17.5	19.6	8.59	7.2	0.4	2.19	0.043	< 0.02	0.94	0.03	0.08	0.37	4.5	7.7	20.2	< 0.01	2.6	10.2	2.0	2.1	0.3	1.8
1300863	0.5	10.4	20.4	1.68	3.3	0.2	0.25	0.006	< 0.02	0.34	0.04	< 0.02	0.14	104	14.5	28.0	0.04	2.9	8.68	1.2	0.3	0.3	0.7
1300864	1.8	11.5	30.5	2.78	5.4	0.2	0.45	0.007	< 0.02	0.54	0.03	< 0.02	0.31	73.3	13.3	24.6	0.03	2.5	7.98	0.9	0.3	0.3	0.8
1300865	0.9	5.5	25.9	21.6	24.4	1.5	0.79	0.058	0.05	1.53	0.05	< 0.02	0.32	38.6	22.7	59.1	0.05	6.1	21.2	4.2	0.6	0.5	3.8
1300866	0.7	0.4	85.3	19.0	2.9	2.3	0.50	0.034	0.03	3.02	0.06	< 0.02	0.04	21.7	13.7	40.8	0.03	5.6	21.3	4.4	0.6	0.6	3.7
1300867	1.6	5.2	128	8.78	13.4	0.6	0.53	0.029	0.02	1.46	0.07	< 0.02	0.47	28.3	11.2	30.1	0.04	3.7	13.7	2.3	0.5	0.5	2.0
1300868	2.2	1.8	76.7	12.1	11.2	0.3	0.47	0.020	0.03	1.67	0.05	< 0.02	0.22	15.6	12.9	38.9	0.08	5.0	17.3	2.7	0.5	0.7	2.2
1300869	0.7	18.7	69.0	10.2	10.1	0.3	0.39	0.012	0.02	0.54	0.03	< 0.02	1.01	95.2	16.9	38.8	0.04	4.7	17.2	3.2	0.5	0.6	2.3
1300870	0.6	0.8	102	4.37	7.1	< 0.1	0.70	0.007	0.03	0.61	0.02	< 0.02	0.09	14.9	7.6	17.9	< 0.01	2.2	8.54	1.7	0.4	0.4	1.2
1300871	6.6	4.7	9.4	8.13	15.9	0.4	0.89	0.024	0.02	0.88	0.04	< 0.02	0.10	46.6	32.5	81.9	0.02	9.9	36.5	7.1	0.4	0.9	4.3
1300872	0.2	10.2	29.7	4.96	2.3	< 0.1	0.73	0.013	< 0.02	0.56	0.04	< 0.02	0.09	103	28.0	59.1	0.03	6.5	20.9	3.3	0.3	0.5	2.1
1300873	0.7	2.1	5.1	0.78	8.2	0.2	2.16	0.104	< 0.02	0.76	0.04	0.14	0.07	14.3	1.1	2.78	< 0.01	0.3	1.27	0.2	0.9	< 0.1	0.2
1300874	0.8	3.8	5.8	2.73	34.1	0.2	1.53	0.094	< 0.02	0.69	0.03	0.09	0.06	3.3	2.1	7.42	< 0.01	0.9	3.47	0.8	0.9	0.1	0.6
1300875	0.3	4.9	5.5	5.44	21.0	0.2	5.02	0.035	< 0.02	0.94	0.03	0.03	0.08	36.6	33.1	82.4	0.05	8.7	31.5	6.5	0.4	0.8	4.1
1300876	0.2	59.7	2.7	8.76	87.8	1.7	3.45	0.056	< 0.02	1.57	0.04	0.02	2.01	71.1	8.3	26.3	< 0.01	2.7	10.1	2.5	0.5	0.3	2.3
1300877	0.3	6.0	6.7	4.17	21.9	0.2	2.09	0.089	< 0.02	0.62	0.03	0.20	0.11	4.9	13.8	34.7	< 0.01	4.4	16.7	3.5	1.0	0.5	2.4
1300878	1.6	2.8	51.6	6.46	7.8	0.8	0.84	0.190	< 0.02	0.77	0.04	0.12	0.06	14.7	6.4	17.3	0.01	2.4	9.26	1.9	1.6	0.4	1.5
1300879	0.5	6.5	12.6	5.19	4.3	0.2	0.79	0.027	< 0.02	0.70	0.02	< 0.02	0.12	54.4	7.2	14.6	0.06	1.5	5.10	0.9	0.4	0.2	0.9
1300880	0.3	11.1	43.2	7.43	2.8	0.2	0.68	0.050	< 0.02	0.52	< 0.02	< 0.02	0.33	83.4	10.8	25.1	0.06	2.9	11.2	2.0	0.4	0.4	1.8
1300881	4.9	3.5	11.1	1.61	5.9	0.2	0.34	0.034	< 0.02	0.47	< 0.02	0.05	0.16	48.2	10.2	20.4	0.03	1.9	6.59	0.9	0.2	0.2	0.7
1300882	12.7	28.6	40.5	8.00	15.8	0.3	2.71	0.041	< 0.02	0.55	0.05	< 0.02	0.67	68.4	15.5	35.4	0.07	3.5	15.6	3.2	0.4	0.9	2.6
1300883	0.4	5.2	24.2	4.06	2.4	< 0.1	1.00	0.019	< 0.02	0.32	< 0.02	< 0.02	0.75	43.2	7.2	15.1	0.05	1.6	5.97	1.0	0.2	0.3	0.9
1300884	0.5	0.7	56.7	0.82	1.5	0.2	0.96	0.046	< 0.02	0.75	0.03	< 0.02	0.15	9.3	1.2	2.43	0.03	0.2	0.96	0.2	0.2	0.1	0.2
1300885	1.0	0.6	47.5	1.29	3.2	< 0.1	0.42	0.112	< 0.02	0.40	< 0.02	0.03	0.12	16.7	1.4	2.87	0.02	0.3	1.33	0.2	0.5	0.1	0.3
1300886	1.0	25.6	31.7	8.48	3.0	0.4	1.03	0.057	< 0.02	0.67	< 0.02	< 0.02	0.82	174	12.8	27.7	0.07	2.9	11.3	2.0	0.3	0.5	1.9
1300887	0.3	4.3	10.8	20.1	26.8	1.4	1.48	0.047	< 0.02	1.40	< 0.02	0.03	0.14	56.5	26.0	62.6	< 0.01	6.7	26.0	5.2	0.5	1.1	4.6
1300888	0.4	7.3	33.7	16.8	15.8	0.3	2.17	0.023	0.03	1.09	0.04	< 0.02	0.22	65.8	26.2	59.8	0.05	6.2	23.9	4.2	0.4	1.0	4.0
1300889	0.1	28.7	53.7	4.40	12.7	0.4	0.79	0.038	< 0.02	0.56	< 0.02	< 0.02	1.06	80.0	11.6	26.8	0.01	2.8	10.9	1.6	0.3	0.5	1.3
1300890	1.1	8.5	55.9	4.64	5.4	0.2	0.61	0.047	< 0.02	0.37	< 0.02	< 0.02	0.25	76.3	7.4	15.7	0.03	1.6	6.04	1.1	0.3	0.3	1.0
1300891	0.7	4.1	41.7	6.65	5.8	0.3	0.40	0.050	< 0.02	0.52	< 0.02	< 0.02	0.08	34.3	9.6	20.8	0.03	2.1	7.96	1.5	0.3	0.4	1.5
1300892	2.4	2.8	28.0	3.15	3.4	< 0.1	0.82	0.031	< 0.02	0.29	< 0.02	< 0.02	0.06	30.8	5.0	10.3	0.02	1.0	3.95	0.6	0.3	0.2	0.7
1300893	0.5	11.2	35.8	6.11	7.4	0.4	0.68	0.023	< 0.02	0.44	< 0.02	< 0.02	0.35	77.6	11.5	23.9	0.02	2.4	9.60	1.5	0.3	0.5	1.6
1300894	< 0.1	22.8	41.0	4.71	7.4	< 0.1	0.57	0.044	< 0.02	0.38	< 0.02	< 0.02	0.90	202	7.8	17.7	0.03	2.0	7.41	1.2	0.3	0.4	1.1
1300895	0.5	22.6	22.8	5.16	3.3	0.4	0.91	0.021	< 0.02	0.57	< 0.02	< 0.02	0.81	144	11.7	24.1	0.02	2.4	8.51	1.3	0.3	0.4	1.3
1300896	2.0	1.8	14.5	7.56	39.1	< 0.1	2.21	0.177	< 0.02	0.24	< 0.02	0.11	0.05	7.6	9.3	21.3	0.03	2.4	9.41	1.9	0.4	0.4	1.7
1300897	0.8	12.6	23.1	3.46	3.3	0.2	0.49	0.023	< 0.02	0.39	< 0.02	0.04	0.45	76.0	8.4	17.2	0.01	1.8	6.32	1.0	0.3	0.3	0.9
1300898	1.6	1.1	20.3	4.86	2.0	0.3	0.63	0.062	< 0.02	0.33	0.03	0.11	0.05	24.0	6.3	14.9	0.07	1.7	7.25	1.3	0.3	0.3	1.3
1300899	1.3	27.0	13.3	6.47	4.9	0.3	0.57	0.175	< 0.02	0.43	< 0.02	0.15	0.64	81.9	10.8	24.9	0.06	2.7	10.8	1.9	0.5	0.4	1.7
1300900	0.9	16.6	51.0	2.94	5.0	0.1	0.77	0.078	< 0.02	0.39	< 0.02	0.03	0.52	51.1	6.8	13.9	0.10	1.4	5.23	0.9	0.4	0.2	0.7
1300901	1.4	3.1	11.0	5.47	1.7	< 0.1	1.05	0.256	0.03	0.41	0.09	< 0.02	0.13	47.4	31.2	70.0	1.67	7.6	30.2	5.3	0.3	1.3	4.0
1300902	0.8	0.4	8.0	1.73	5.5	0.3	0.59	0.118	< 0.02	0.42	0.04	< 0.02	0.04	18.7	2.3	5.59	0.16	0.7	2.77	0.5	0.2	0.2	0.6
1300903	0.6	0.5	34.1	3.30	5.0	0.1	0.27	0.008	< 0.02	0.29	0.03	< 0.02	< 0.02	23.0	3.9	9.21	0.04	1.1	4.72	0.9	0.2	0.2	0.8
1300904	3.0	3.5	20.1	6.96	16.5	0.2	0.38	0.026	< 0.02	0.31	< 0.02	< 0.02	0.09	45.8	11.0	25.8	0.02	3.0	11.6	2.3	0.3	0.7	1.9
1300905	3.3	5.2	42.0	6.13	21.8	0.5	0.93	0.092	< 0.02	0.43	0.05	< 0.02	0.12	63.1	9.2	21.2	0.04	2.5	10.2	2.0	0.3	0.5	1.7
1300906	1.8	2.2	33.6	5.82	11.9	0.2	0.66	0.075	< 0.02	0.31	0.03	< 0.02	0.04	42.6	8.2	18.2	0.03	2.1	8.43	1.5	0.3	0.5	1.6
1300907	1.5	3.1	4.6	0.86	3.3	< 0.1	0.15	0.234	< 0.02	0.44	0.03	< 0.02	0.08	24.1	2.2	4.46	0.01	0.5	1.75	0.4	0.2	< 0.1	0.3

## Results

## Activation Laboratories Ltd.

## Report: A22-16945

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
1300908	0.6	5.1	52.5	8.53	1.3	< 0.1	0.55	0.021	< 0.02	0.41	0.03	< 0.02	0.16	35.0	18.1	41.0	0.04	4.7	19.5	3.1	0.4	0.7	2.7
1300909	1.6	7.8	15.4	10.4	5.2	0.3	0.58	0.020	< 0.02	0.31	< 0.02	< 0.02	0.11	54.7	31.1	63.4	0.02	6.1	21.5	3.9	0.3	0.7	3.0
1300910	0.3	18.2	7.3	14.7	29.0	0.9	0.53	0.037	< 0.02	0.88	0.03	< 0.02	0.61	96.6	33.8	85.7	0.01	9.7	36.7	7.1	0.4	0.7	5.0
1300911	3.5	5.4	9.3	3.24	14.2	0.2	1.57	0.052	< 0.02	0.60	0.05	0.46	0.10	11.0	12.0	19.6	0.01	2.0	7.44	1.3	0.6	0.2	1.0
1300912	0.5	2.7	20.1	10.0	8.2	2.1	0.43	0.050	< 0.02	1.21	0.03	< 0.02	0.10	31.9	1.3	3.03	0.09	0.3	1.11	0.2	0.2	< 0.1	0.4
1300913	0.6	13.3	30.8	2.58	4.6	< 0.1	0.40	0.035	< 0.02	0.35	< 0.02	< 0.02	0.53	89.2	5.3	9.39	0.05	1.0	3.58	0.6	0.3	0.2	0.5
1300914	1.6	0.9	39.1	2.30	5.6	0.1	0.44	0.017	< 0.02	0.28	< 0.02	< 0.02	0.05	16.7	4.8	11.2	0.01	1.3	4.88	0.8	0.3	0.2	0.6
1300915	11.0	5.4	12.6	4.81	6.0	0.4	2.52	1.23	< 0.02	0.42	0.02	0.29	0.10	4.6	8.3	16.7	0.16	1.8	7.13	1.3	1.9	0.3	1.2
1300916	1.2	2.7	18.2	1.10	3.5	0.3	0.72	0.041	< 0.02	0.88	0.04	0.27	0.39	18.6	2.0	4.90	0.02	0.5	1.97	0.4	0.3	< 0.1	0.3
1300917	0.6	22.4	51.5	5.23	9.8	0.3	0.79	0.022	< 0.02	0.37	0.02	< 0.02	3.84	42.9	8.1	20.5	0.04	2.1	8.52	1.5	0.2	0.3	1.3
1300918	3.3	4.3	54.8	4.17	16.2	0.3	0.49	0.046	< 0.02	0.42	0.03	< 0.02	0.42	16.5	12.2	26.6	0.03	2.9	11.3	1.9	0.2	0.3	1.4
1300919	3.5	4.9	74.9	4.51	9.2	0.2	0.49	0.039	< 0.02	0.44	0.11	0.02	0.39	12.1	12.6	26.5	0.01	3.0	11.2	1.8	0.3	0.4	1.4
1300920	0.5	19.9	25.8	5.19	14.4	< 0.1	6.38	0.024	< 0.02	0.42	< 0.02	< 0.02	6.68	30.3	12.0	26.5	0.02	3.0	12.3	2.1	0.2	0.4	1.7
1300921	0.8	0.7	1.9	1.02	10.8	0.2	0.44	0.654	< 0.02	0.78	0.13	0.06	0.05	6.9	3.7	7.97	< 0.01	1.0	3.91	0.7	0.3	0.1	0.5
1300922	0.6	28.3	31.6	3.75	11.0	0.2	2.74	0.033	< 0.02	0.52	< 0.02	< 0.02	4.79	50.0	11.2	23.4	0.02	2.6	10.8	1.7	0.3	0.4	1.5
1300923	12.6	3.7	10.8	13.1	2.4	0.3	0.72	0.187	< 0.02	0.27	1.14	< 0.02	0.18	55.9	45.1	93.8	0.09	10.8	44.8	7.7	0.2	1.4	5.7
1300924	0.5	18.4	29.4	13.4	5.6	0.4	0.74	0.082	< 0.02	1.19	0.03	0.04	1.99	68.8	11.9	30.1	0.07	4.0	18.6	3.7	0.3	1.0	3.2
1300925	0.6	2.6	40.2	3.16	3.9	0.1	1.61	0.191	< 0.02	0.28	< 0.02	1.24	0.20	18.7	6.2	12.0	0.02	1.3	5.19	0.9	0.3	0.2	0.8
1300926	0.6	13.9	27.4	3.58	2.9	0.2	1.59	0.053	< 0.02	0.45	< 0.02	< 0.02	0.92	74.4	6.8	13.6	0.04	1.4	5.46	0.9	0.3	0.3	0.8
1300927	3.5	18.0	27.5	4.97	2.6	0.4	0.89	0.140	< 0.02	0.42	< 0.02	1.07	0.69	95.6	9.6	19.1	0.05	2.0	8.32	1.3	0.4	0.3	1.2
1300928	0.3	53.7	27.2	9.51	5.1	0.5	0.46	0.091	< 0.02	1.02	< 0.02	< 0.02	5.25	110	14.1	32.7	0.05	4.1	17.7	3.5	0.2	0.8	2.8
1300929	0.6	27.0	26.2	8.13	4.2	0.4	2.92	0.056	< 0.02	0.56	< 0.02	< 0.02	2.27	126	12.4	25.7	0.05	2.8	10.9	1.9	0.3	0.4	1.8
1300930	0.7	1.6	31.0	1.53	4.1	< 0.1	5.00	0.032	< 0.02	0.35	0.03	< 0.02	0.09	15.4	3.0	6.05	0.03	0.6	2.43	0.4	0.3	0.1	0.3
1300931	0.3	19.8	19.8	1.40	20.4	0.6	0.78	0.031	< 0.02	0.49	< 0.02	< 0.02	0.86	48.6	11.0	20.5	0.04	2.0	7.02	1.0	0.2	0.2	0.7
1300932	0.3	25.4	30.3	10.3	1.9	0.5	3.28	0.053	< 0.02	0.74	< 0.02	< 0.02	1.25	171	17.0	38.6	0.05	4.6	19.7	3.0	0.3	0.5	2.8
1300933	0.4	10.3	29.9	1.42	6.9	0.3	0.36	0.021	< 0.02	0.54	< 0.02	< 0.02	1.17	28.5	5.0	9.97	0.01	1.0	3.46	0.5	0.2	< 0.1	0.4
1300934	0.5	14.4	28.0	1.32	7.2	0.4	0.27	0.014	< 0.02	0.73	< 0.02	< 0.02	1.52	44.0	6.8	12.2	0.01	1.3	4.28	0.5	0.3	< 0.1	0.5
1300935	0.3	6.9	22.9	5.48	2.1	0.1	0.85	0.975	< 0.02	0.38	< 0.02	0.74	0.34	37.1	9.0	18.2	0.06	2.0	8.51	1.5	0.3	0.4	1.4
1300936	0.6	26.9	41.1	4.63	6.6	0.2	1.01	0.047	< 0.02	0.42	< 0.02	0.03	2.10	72.9	12.2	24.9	0.03	2.8	11.1	1.9	0.3	0.5	1.4
1300937	0.2	6.4	39.8	4.38	10.2	0.1	1.86	0.021	< 0.02	0.49	< 0.02	< 0.02	0.69	31.4	11.2	21.5	0.04	2.3	8.77	1.6	0.3	0.4	1.3
1300938	0.6	0.5	11.5	0.51	1.8	0.4	0.39	0.019	< 0.02	0.76	0.03	< 0.02	0.03	10.0	0.9	1.87	0.02	0.2	0.90	0.2	0.2	< 0.1	0.1
1300939	1.1	5.3	22.9	1.93	1.4	< 0.1	0.26	0.051	< 0.02	0.22	0.03	< 0.02	0.11	55.8	14.1	25.0	0.05	2.7	10.1	1.7	0.2	0.4	1.2
1300940	0.6	1.7	354	4.25	4.0	< 0.1	0.15	0.088	< 0.02	0.25	0.14	< 0.02	0.12	49.1	15.1	33.8	0.11	4.1	17.4	3.3	0.3	0.7	2.0
1300941	1.0	2.1	179	7.38	2.1	< 0.1	0.16	0.087	0.02	0.18	0.42	< 0.02	0.15	54.8	32.7	76.2	0.06	9.7	41.4	7.3	0.3	1.6	4.5
1300942	1050	1.5	389	4.24	1.5	0.1	0.37	0.064	< 0.02	0.46	0.95	0.02	0.09	43.1	18.8	39.7	0.09	4.6	19.4	3.7	0.3	0.9	2.6
1300943	95.8	1.5	20.2	1.61	6.2	0.2	0.76	0.489	< 0.02	0.59	0.81	0.18	0.05	33.7	10.6	19.7	0.03	2.0	7.57	1.2	0.3	0.3	0.9
1300944	4.9	0.7	292	6.29	4.3	< 0.1	0.19	0.049	0.03	0.10	0.33	< 0.02	0.15	49.7	23.3	49.6	0.10	5.8	24.6	4.3	0.3	1.1	3.4
1300945	382	3.1	359	5.55	4.5	0.1	6.05	0.166	0.03	0.42	0.64	0.19	0.08	28.5	9.9	22.8	0.10	2.9	12.8	2.6	0.5	0.8	2.1
1300946	3.0	0.9	5.8	10.1	28.4	< 0.1	0.87	0.702	0.05	0.33	1.39	< 0.02	0.05	51.4	11.9	26.1	0.15	3.2	13.4	2.6	0.2	0.5	2.4
1300947	6.0	0.3	26.5	4.63	4.7	< 0.1	0.66	0.093	< 0.02	0.28	0.27	< 0.02	0.05	23.7	4.9	11.7	0.19	1.5	6.90	1.4	0.4	0.1	1.3
1300948	38.2	2.6	4.7	5.08	53.4	0.2	1.07	0.385	0.03	0.47	0.65	0.05	0.22	4.7	7.3	14.2	0.30	1.9	7.94	1.8	0.8	0.4	1.5
1300949	2.8	3.1	43.8	1.22	1.3	< 0.1	0.31	0.023	< 0.02	0.21	0.05	< 0.02	0.14	43.2	15.1	27.9	0.15	2.9	10.5	1.5	0.2	0.4	1.0
1300950	1.1	0.8	32.5	7.28	9.8	0.6	0.63	0.069	0.02	1.52	0.04	0.05	0.11	12.0	11.7	33.6	0.03	4.3	17.8	3.4	1.8	0.5	2.3
1300951	0.4	23.0	22.8	3.62	3.7	0.1	0.36	0.025	< 0.02	0.35	< 0.02	< 0.02	1.06	155	10.3	20.7	< 0.01	2.1	8.00	1.1	0.2	0.3	1.1
1300952	0.4	24.1	14.5	2.89	4.6	0.1	0.41	0.018	< 0.02	0.49	< 0.02	< 0.02	0.85	222	5.6	11.5	0.02	1.2	5.01	0.9	0.2	0.2	0.8
1300953	0.6	9.5	35.9	6.70	4.7	0.2	0.34	0.048	< 0.02	0.49	0.02	< 0.02	0.35	79.5	13.6	27.8	0.07	3.0	11.5	2.0	0.2	0.3	1.6
1300954	27.6	5.3	3.0	2.41	27.4	0.5	3.92	0.155	< 0.02	0.80	< 0.02	0.19	0.19	11.3	4.5	10.7	0.01	1.1	4.33	1.0	0.4	0.1	0.7
1300955	0.8	0.8	10.3	3.46	26.7	0.1	0.50	0.017	< 0.02	0.66	0.03	< 0.02	0.10	9.9	10.6	31.5	0.02	3.6	16.6	3.0	0.2	0.5	2.2
1300956	1.1	12.9	24.0	25.1	15.1	1.2	0.30	0.042	0.03	2.97	0.04	< 0.02	1.01	25.1	12.9	38.3	0.03	5.8	28.4	6.3	0.3	0.9	5.3

Analyte Symbol	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
1300857	0.3	1.6	0.3	0.9	0.1	1.0	0.1	0.3	< 0.05	0.2	< 0.001	< 0.5	< 0.02	1.9	1.4	0.2	20
1300858	0.5	2.7	0.6	1.6	0.2	1.5	0.2	< 0.1	< 0.05	0.1	< 0.001	< 0.5	0.03	1.9	3.0	0.4	20
1300859	1.0	5.5	1.2	3.4	0.5	3.2	0.4	0.8	< 0.05	0.4	< 0.001	< 0.5	0.02	1.6	5.0	0.5	10
1300860	0.3	1.8	0.4	1.0	0.1	1.0	0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	2.2	2.0	0.2	10
1300861	0.5	2.7	0.6	1.7	0.2	1.7	0.2	0.5	< 0.05	0.3	< 0.001	< 0.5	0.02	2.0	3.0	0.4	10
1300862	0.3	1.5	0.3	0.9	0.1	0.8	< 0.1	0.2	< 0.05	0.2	0.001	5.8	0.13	2.9	3.0	0.2	20
1300863	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.05	0.2	< 0.001	< 0.5	0.04	0.9	1.7	0.2	20
1300864	0.1	0.5	< 0.1	0.3	< 0.1	0.3	< 0.1	< 0.1	< 0.05	0.1	< 0.001	< 0.5	0.04	1.5	2.2	0.4	20
1300865	0.6	3.5	0.8	2.3	0.3	2.4	0.3	0.8	< 0.05	0.3	< 0.001	< 0.5	< 0.02	3.3	5.6	0.7	20
1300866	0.6	3.0	0.7	1.9	0.3	1.8	0.2	< 0.1	< 0.05	0.2	< 0.001	< 0.5	< 0.02	2.0	4.7	0.3	10
1300867	0.3	1.4	0.3	0.9	0.1	0.9	0.1	0.3	< 0.05	0.2	< 0.001	< 0.5	0.03	2.4	2.4	0.4	10
1300868	0.3	1.9	0.4	1.2	0.2	1.2	0.1	0.3	< 0.05	0.3	< 0.001	< 0.5	< 0.02	5.6	3.4	0.3	20
1300869	0.3	1.7	0.4	1.1	0.1	1.0	0.1	0.3	< 0.05	0.2	< 0.001	< 0.5	0.07	1.6	2.8	0.2	10
1300870	0.2	0.8	0.2	0.4	< 0.1	0.3	< 0.1	0.1	< 0.05	0.1	< 0.001	< 0.5	< 0.02	1.0	0.8	0.1	20
1300871	0.5	1.8	0.3	0.9	0.1	0.8	0.1	0.4	< 0.05	0.5	< 0.001	24.2	0.02	1.8	6.0	0.7	20
1300872	0.2	0.8	0.2	0.5	< 0.1	0.6	< 0.1	< 0.1	< 0.05	0.2	< 0.001	< 0.5	0.03	1.4	6.9	0.4	20
1300873	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.05	0.5	< 0.001	4.3	< 0.02	1.2	0.8	< 0.1	20
1300874	< 0.1	0.5	< 0.1	0.3	< 0.1	0.3	< 0.1	1.0	< 0.05	0.3	0.001	11.2	< 0.02	1.3	4.1	0.4	20
1300875	0.4	1.4	0.2	0.5	< 0.1	0.5	< 0.1	0.6	< 0.05	0.5	0.001	< 0.5	< 0.02	1.4	3.6	0.4	10
1300876	0.4	2.1	0.4	1.2	0.2	1.2	0.2	2.6	< 0.05	0.6	< 0.001	< 0.5	0.24	1.8	4.2	0.6	10
1300877	0.2	1.0	0.2	0.5	< 0.1	0.4	< 0.1	0.6	< 0.05	0.2	< 0.001	3.6	0.02	1.5	2.6	0.3	10
1300878	0.3	1.3	0.3	0.8	0.1	0.7	< 0.1	0.2	< 0.05	0.2	0.002	1.6	< 0.02	1.6	1.6	0.3	10
1300879	0.1	0.8	0.2	0.5	< 0.1	0.4	< 0.1	< 0.1	< 0.05	0.2	< 0.001	< 0.5	0.03	3.0	1.1	0.3	20
1300880	0.2	1.3	0.3	0.7	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.04	1.3	1.7	0.3	20
1300881	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.05	0.3	< 0.001	6.9	< 0.02	1.2	1.5	0.3	10
1300882	0.4	1.9	0.3	0.6	< 0.1	0.4	< 0.1	0.3	< 0.05	0.2	< 0.001	1.5	0.24	2.1	1.6	0.2	20
1300883	0.1	0.8	0.1	0.4	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.03	0.9	1.8	0.2	20
1300884	< 0.1	0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.05	0.4	< 0.001	< 0.5	< 0.02	1.5	0.4	< 0.1	10
1300885	< 0.1	0.2	< 0.1	0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.4	< 0.02	1.3	0.7	< 0.1	30
1300886	0.3	1.5	0.3	0.8	0.1	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.12	1.6	2.6	0.4	20
1300887	0.6	3.7	0.7	1.9	0.3	2.0	0.2	0.4	< 0.05	0.3	< 0.001	< 0.5	0.02	1.3	5.3	0.5	20
1300888	0.6	3.2	0.6	1.5	0.2	1.7	0.2	0.1	< 0.05	0.4	< 0.001	< 0.5	0.05	1.9	4.3	0.7	20
1300889	0.2	0.9	0.2	0.4	< 0.1	0.5	< 0.1	0.2	< 0.05	0.1	< 0.001	4.0	0.17	1.1	1.6	0.1	20
1300890	0.1	0.9	0.2	0.5	< 0.1	0.6	< 0.1	0.2	< 0.05	0.2	< 0.001	< 0.5	0.04	2.4	2.1	0.3	20
1300891	0.2	1.2	0.2	0.7	0.1	0.8	0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	3.1	3.6	0.5	20
1300892	0.1	0.6	0.1	0.4	< 0.1	0.4	< 0.1	0.1	< 0.05	0.1	< 0.001	< 0.5	< 0.02	1.2	1.8	0.2	10
1300893	0.2	1.1	0.2	0.6	< 0.1	0.7	< 0.1	0.2	< 0.05	0.2	< 0.001	< 0.5	0.06	1.2	5.1	0.5	20
1300894	0.1	0.8	0.2	0.5	< 0.1	0.5	< 0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.11	0.9	1.1	0.2	20
1300895	0.2	0.9	0.2	0.5	< 0.1	0.6	< 0.1	0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.13	1.9	3.4	0.6	20
1300896	0.2	1.3	0.3	0.9	0.1	1.1	0.2	0.5	< 0.05	< 0.1	< 0.001	52.6	< 0.02	3.3	2.8	0.4	20
1300897	0.1	0.7	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	0.1	< 0.001	< 0.5	0.07	1.5	1.4	0.2	20
1300898	0.2	1.0	0.2	0.5	< 0.1	0.6	< 0.1	< 0.1	< 0.05	0.2	< 0.001	8.7	< 0.02	1.2	2.0	0.3	20
1300899	0.2	1.2	0.2	0.6	0.1	0.8	0.1	0.1	< 0.05	< 0.1	< 0.001	1.6	0.14	3.0	2.3	0.6	10
1300900	0.1	0.5	< 0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.11	4.1	2.3	0.4	10
1300901	0.4	1.3	0.2	0.6	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.5	0.03	74.3	4.0	0.4	20
1300902	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	13.2	0.3	< 0.1	30
1300903	0.1	0.6	0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	1.1	1.1	< 0.1	20
1300904	0.3	1.5	0.3	0.6	< 0.1	0.5	< 0.1	0.3	< 0.05	< 0.1	< 0.001	0.8	< 0.02	1.2	1.5	0.2	20
1300905	0.2	1.3	0.2	0.6	< 0.1	0.5	< 0.1	0.4	< 0.05	< 0.1	< 0.001	< 0.5	0.03	2.3	1.4	0.2	30
1300906	0.2	1.2	0.2	0.6	< 0.1	0.5	< 0.1	0.2	< 0.05	< 0.1	< 0.001	1.4	< 0.02	1.5	1.3	0.1	20
1300907	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	0.7	0.02	0.7	0.9	0.2	20



Analyte Symbol	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
1300908	0.3	1.7	0.3	0.8	0.1	0.7	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	0.7	0.03	1.4	1.9	0.5	20
1300909	0.4	2.1	0.4	1.0	0.2	1.1	0.2	0.1	< 0.05	0.2	< 0.001	23.7	0.03	1.2	5.4	0.7	20
1300910	0.7	3.6	0.6	1.6	0.2	1.5	0.2	0.9	< 0.05	0.3	< 0.001	1.8	0.08	2.1	11.8	0.8	30
1300911	0.1	0.7	0.1	0.3	< 0.1	0.4	< 0.1	0.3	< 0.05	< 0.1	< 0.001	2.8	0.02	2.5	4.6	0.4	20
1300912	0.1	1.3	0.3	1.1	0.2	0.9	< 0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	2.9	0.4	< 0.1	10
1300913	< 0.1	0.5	< 0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.07	1.5	1.7	0.3	10
1300914	< 0.1	0.5	< 0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	0.7	1.1	0.2	20
1300915	0.2	1.0	0.2	0.5	< 0.1	0.5	< 0.1	0.2	< 0.05	< 0.1	0.003	70.9	0.17	29.5	1.3	0.4	30
1300916	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.05	0.3	< 0.001	1.0	< 0.02	0.7	0.3	< 0.1	20
1300917	0.2	1.1	0.2	0.6	< 0.1	0.5	< 0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.11	1.9	2.4	0.2	20
1300918	0.2	0.9	0.2	0.5	< 0.1	0.4	< 0.1	0.4	< 0.05	< 0.1	< 0.001	< 0.5	0.03	2.0	2.0	0.2	20
1300919	0.2	1.0	0.2	0.5	< 0.1	0.4	< 0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.03	1.9	1.9	0.2	< 10
1300920	0.2	1.2	0.2	0.6	< 0.1	0.5	< 0.1	0.2	< 0.05	< 0.1	0.001	< 0.5	0.14	1.4	2.1	0.2	< 10
1300921	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	0.2	< 0.05	0.6	< 0.001	< 0.5	< 0.02	3.8	0.5	< 0.1	20
1300922	0.2	0.9	0.2	0.4	< 0.1	0.4	< 0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.16	1.5	1.9	0.2	10
1300923	0.6	3.0	0.5	1.4	0.2	1.6	0.2	< 0.1	< 0.05	< 0.1	< 0.001	2.2	< 0.02	7.8	5.4	1.0	30
1300924	0.5	2.7	0.5	1.3	0.2	1.2	0.2	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.08	2.5	2.3	0.3	20
1300925	0.1	0.6	0.1	0.4	< 0.1	0.3	< 0.1	0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	1.1	2.1	0.3	30
1300926	0.1	0.7	0.1	0.4	< 0.1	0.4	< 0.1	0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.05	2.5	1.7	0.3	20
1300927	0.2	1.0	0.2	0.5	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	0.7	0.08	6.1	2.5	0.4	20
1300928	0.4	2.1	0.4	0.9	0.1	0.8	0.1	0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.29	2.3	2.8	1.2	20
1300929	0.3	1.6	0.3	0.9	0.1	0.8	0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.14	1.8	2.4	0.4	10
1300930	< 0.1	0.3	< 0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.05	< 0.1	< 0.001	0.6	< 0.02	1.1	1.0	0.2	30
1300931	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	0.4	< 0.05	< 0.1	< 0.001	< 0.5	0.12	2.6	2.6	0.5	20
1300932	0.4	2.1	0.4	1.0	0.1	1.0	0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.11	2.0	2.8	0.4	20
1300933	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.06	4.4	2.5	0.6	20
1300934	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.09	5.4	3.1	0.4	20
1300935	0.2	1.0	0.2	0.5	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.2	0.03	8.8	1.9	0.4	20
1300936	0.2	1.0	0.2	0.5	< 0.1	0.4	< 0.1	0.1	< 0.05	0.1	< 0.001	0.7	0.13	1.4	1.4	0.2	20
1300937	0.2	0.9	0.2	0.5	< 0.1	0.4	< 0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.03	1.5	3.0	0.5	10
1300938	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	0.9	< 0.1	< 0.1	10
1300939	0.1	0.5	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.03	7.2	2.1	0.3	30
1300940	0.2	1.2	0.2	0.5	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.9	< 0.02	4.1	1.4	0.1	20
1300941	0.5	2.1	0.3	0.8	< 0.1	0.6	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	6.4	< 0.02	2.6	2.8	0.2	20
1300942	0.3	1.2	0.2	0.4	< 0.1	0.3	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	8.3	< 0.02	8.8	2.8	0.4	20
1300943	< 0.1	0.4	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2720	< 0.02	37.9	2.3	0.3	20
1300944	0.4	1.8	0.3	0.6	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.9	< 0.02	3.8	4.8	0.7	20
1300945	0.3	1.5	0.3	0.6	< 0.1	0.5	< 0.1	< 0.1	< 0.05	0.9	< 0.001	155	0.03	14.7	1.1	0.3	20
1300946	0.4	2.2	0.5	1.2	0.2	1.4	0.2	0.4	< 0.05	< 0.1	< 0.001	14.2	< 0.02	9.8	2.2	2.5	10
1300947	0.2	1.0	0.2	0.5	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.8	< 0.02	0.6	0.4	< 0.1	< 10
1300948	0.2	1.3	0.3	0.6	0.1	0.7	0.1	0.9	< 0.05	< 0.1	< 0.001	1.2	0.75	28.6	1.0	0.4	30
1300949	< 0.1	0.3	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	13.6	2.6	0.5	20
1300950	0.3	1.8	0.3	0.9	0.1	0.8	< 0.1	0.2	< 0.05	< 0.1	0.003	< 0.5	< 0.02	1.4	1.3	0.3	10
1300951	0.1	0.8	0.2	0.4	< 0.1	0.4	< 0.1	0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.13	0.9	3.2	0.5	< 10
1300952	0.1	0.6	0.1	0.3	< 0.1	0.3	< 0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.11	1.1	2.0	0.3	20
1300953	0.2	1.3	0.3	0.8	0.1	0.7	0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.05	2.3	1.9	0.2	20
1300954	< 0.1	0.5	0.1	0.3	< 0.1	0.3	< 0.1	0.7	< 0.05	0.2	< 0.001	271	< 0.02	1.6	4.0	0.3	10
1300955	0.2	1.0	0.1	0.4	< 0.1	0.3	< 0.1	0.6	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	1.1	5.6	0.2	< 10
1300956	0.8	4.7	1.0	2.8	0.4	2.5	0.3	0.4	< 0.05	< 0.1	< 0.001	< 0.5	0.06	1.9	2.5	0.4	20

Analyte Symbol	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.2	0.1	0.02	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
OREAS 520 (Aqua Regia) Meas	0.111	1	0.078	16.2	0.6		0.051	1.14	1.55	0.50	3.07	3.95	11.4	254	36	2210	14.3	186	72.1	2860	22.2	14.2	< 0.1
OREAS 520 (Aqua Regia) Cert	0.135	1.03	0.0740	16.6	0.540		0.0520	1.14	1.56	0.506	2.90	3.84	11.8	247	37.4	2280	15.74	196	73.0	2960	20.7	13.7	0.250
OREAS 520 (Aqua Regia) Meas	0.111	< 1	0.077	16.2	0.5		0.049	1.20	1.44	0.53	2.97	3.91	11.7	260	36	2340	15.3	194	71.2	2820	21.7	14.0	0.2
OREAS 520 (Aqua Regia) Cert	0.135	1.03	0.0740	16.6	0.540		0.0520	1.14	1.56	0.506	2.90	3.84	11.8	247	37.4	2280	15.74	196	73.0	2960	20.7	13.7	0.250
OREAS 520 (Aqua Regia) Meas	0.120	1	0.077	16.1	0.5		0.045	1.12	1.35	0.53	3.12	4.10	11.6	288	40	2400	18.6	229	78.0	3030	23.2	12.4	0.1
OREAS 520 (Aqua Regia) Cert	0.135	1.03	0.0740	16.6	0.540		0.0520	1.14	1.56	0.506	2.90	3.84	11.8	247	37.4	2280	15.74	196	73.0	2960	20.7	13.7	0.250
OREAS 908 (Aqua Regia) Meas	0.016	< 1	0.023	3.4	0.8		0.065	0.40	1.13	0.26	41.9	0.23	2.9	8	10	312	13.7	79.0	6.0	> 10000	231	26.9	
OREAS 908 (Aqua Regia) Cert	0.0180	0.123	0.0230	3.62	0.800		0.0730	0.389	1.18	0.237	42.0	0.230	3.07	7.91	9.17	300	13.9	84.0	5.62	12500	226	25.3	
OREAS 908 (Aqua Regia) Meas	0.018	< 1	0.025	3.6	0.8		0.069	0.44	1.10	0.24	42.3	0.23	3.3	8	9	303	14.3	86.5	5.5	> 10000	224	23.4	
OREAS 908 (Aqua Regia) Cert	0.0180	0.123	0.0230	3.62	0.800		0.0730	0.389	1.18	0.237	42.0	0.230	3.07	7.91	9.17	300	13.9	84.0	5.62	12500	226	25.3	
OREAS 908 (Aqua Regia) Meas	0.016	< 1	0.025	3.9	0.8		0.069	0.40	1.14	0.22	44.0	0.21	3.1	7	9	297	14.9	83.4	5.6	> 10000	230	24.7	
OREAS 908 (Aqua Regia) Cert	0.0180	0.123	0.0230	3.62	0.800		0.0730	0.389	1.18	0.237	42.0	0.230	3.07	7.91	9.17	300	13.9	84.0	5.62	12500	226	25.3	
OREAS 45f (Aqua Regia) Meas	0.058	< 1	0.022		0.9		0.036	0.15	5.11	0.08	0.16	0.07	33.7	215	345	150	14.6	40.1	206	346	20.7	20.5	0.1
OREAS 45f (Aqua Regia) Cert	0.0970	0.0270	0.0220		0.980		0.0320	0.152	4.81	0.0820	0.170	0.0750	31.4	217	341	150	13.7	39.2	192	336	22.2	20.3	0.120
OREAS 45f (Aqua Regia) Meas	0.036	< 1	0.022		1.0		0.031	0.16	4.86	0.08	0.15	0.08	32.0	210	330	149	13.7	37.2	191	328	21.8	19.6	0.1
OREAS 45f (Aqua Regia) Cert	0.0970	0.0270	0.0220		0.980		0.0320	0.152	4.81	0.0820	0.170	0.0750	31.4	217	341	150	13.7	39.2	192	336	22.2	20.3	0.120
OREAS 45f (Aqua Regia) Meas	0.030	< 1	0.024		0.9		0.032	0.16	5.23	0.09	0.16	0.08	31.6	216	359	165	15.8	41.1	195	380	26.0	21.1	0.1
OREAS 45f (Aqua Regia) Cert	0.0970	0.0270	0.0220		0.980		0.0320	0.152	4.81	0.0820	0.170	0.0750	31.4	217	341	150	13.7	39.2	192	336	22.2	20.3	0.120
OREAS 906 (Aqua Regia) Meas	0.017	< 1	0.023	4.0	0.9		0.088	0.11	0.77	0.32	10.8	0.30	1.6		9	328	4.80	23.2	4.6	3070	122	10.5	
OREAS 906 (Aqua Regia) Cert	0.017	0.04	0.024	4.2	0.9		0.090	0.13	0.79	0.30	11.0	0.32	1.8		9	340	4.98	22.8	4.5	3150	89.0	8.98	
OREAS 906 (Aqua Regia) Meas	0.018	< 1	0.022	4.7	0.9		0.099	0.13	0.91	0.35	11.6	0.30	1.7		10	367	5.29	23.2	4.8	3300	93.1	11.0	
OREAS 906 (Aqua Regia) Cert	0.017	0.04	0.024	4.2	0.9		0.090	0.13	0.79	0.30	11.0	0.32	1.8		9	340	4.98	22.8	4.5	3150	89.0	8.98	
1300865 Orig	0.121	< 1	0.018	5.2	0.2	< 1	0.121	0.06	0.47	0.11	0.04	0.32	4.7	2	9	206	1.99	0.6	1.3	2.2	22.5	3.85	< 0.1
1300865 Dup	0.119	< 1	0.017	5.1	0.2	1	0.136	0.06	0.44	0.11	0.04	0.31	4.4	2	9	216	2.10	0.7	1.3	2.2	23.7	3.92	< 0.1
1300893 Orig	0.161	< 1	0.103	17.8	0.1	1	0.065	0.88	1.34	0.32	< 0.02	0.81	2.7	27	11	218	3.00	11.1	5.1	30.8	38.4	5.36	< 0.1
1300893 Dup	0.147	< 1	0.102	18.0	< 0.1	1	0.067	0.80	1.55	0.32	< 0.02	0.73	2.7	26	10	216	2.91	11.1	5.0	29.5	37.8	5.59	< 0.1
1300906 Orig	0.232	< 1	0.072	32.2	0.2	< 1	0.034	2.23	3.03	0.11	0.09	1.60	5.0	51	46	691	5.00	22.1	71.2	28.3	112	8.08	< 0.1
1300906 Split PREP DUP	0.230	< 1	0.065	30.8	0.2	< 1	0.027	2.01	2.86	0.10	0.09	1.61	4.7	47	42	680	4.82	21.5	68.3	27.0	105	7.69	< 0.1

Analyte Symbol	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.2	0.1	0.02	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
1300928 Orig	0.205	< 1	0.096	46.8	0.4	3	0.124	1.38	1.49	0.96	0.08	0.99	5.3	60	42	521	2.50	12.3	30.0	40.3	73.1	6.60	< 0.1
1300928 Dup	0.219	< 1	0.101	46.0	0.5	3	0.122	1.31	1.45	0.90	0.08	1.04	5.7	60	41	480	2.40	12.1	30.8	38.4	71.8	6.59	< 0.1
1300955 Orig	0.003	< 1	0.010	6.1	0.1	1	0.066	0.21	0.37	0.02	0.03	0.30	2.7	11	5	139	1.01	0.9	2.9	1.7	9.5	2.62	< 0.1
1300955 Dup	0.003	< 1	0.010	6.4	0.1	1	0.069	0.21	0.42	0.02	0.03	0.30	2.7	11	4	148	1.04	0.9	2.8	1.8	9.6	2.70	< 0.1
1300956 Orig	0.151	< 1	0.113	23.2	0.2	< 1	0.068	1.45	1.19	0.23	0.03	0.86	6.4	132	5	251	5.77	5.5	18.5	1.7	36.6	6.52	0.1
1300956 Split PREP DUP	0.170	< 1	0.107	23.3	0.2	< 1	0.076	1.49	1.21	0.22	0.03	0.94	7.1	128	5	251	5.68	5.3	18.3	1.7	36.0	6.36	0.1
Method Blank	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	< 0.001	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	< 0.2	0.9	0.06	< 0.1
Method Blank	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	< 0.001	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	0.1	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	< 0.2	0.8	0.06	< 0.1
Method Blank	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	< 0.001	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	< 0.2	0.5	0.04	< 0.1
Method Blank	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	< 0.001	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	< 1	< 1	< 1	< 0.01	< 0.1	0.2	< 0.2	0.3	< 0.02	< 0.1
Method Blank	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	< 0.001	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	< 0.2	< 0.1	0.09	< 0.1
Method Blank	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	< 0.001	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	< 0.2	1.0	0.04	< 0.1
Method Blank	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	< 0.001	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	< 0.2	0.5	0.04	< 0.1

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
OREAS 520 (Aqua Regia) Meas	153	33.2	33.3	13.2	20.5		63.0		0.11	3.62	0.66	0.26	0.57		86.9	82.0					1.3		
OREAS 520 (Aqua Regia) Cert	152	31.5	36.0	14.3	28.0		62.0		0.110	3.42	1.97	0.33	0.570		83.0	79.0					1.73		
OREAS 520 (Aqua Regia) Meas	156	34.1	29.1	13.9	18.9		66.7		0.10	3.44	1.55	0.32	0.54		84.8	83.7					1.5		
OREAS 520 (Aqua Regia) Cert	152	31.5	36.0	14.3	28.0		62.0		0.110	3.42	1.97	0.33	0.570		83.0	79.0					1.73		
OREAS 520 (Aqua Regia) Meas	158	32.9	30.9	14.7	15.5		76.0		0.12	3.49	2.32	0.39	0.56		81.8	86.6					1.6		
OREAS 520 (Aqua Regia) Cert	152	31.5	36.0	14.3	28.0		62.0		0.110	3.42	1.97	0.33	0.570		83.0	79.0					1.73		
OREAS 908 (Aqua Regia) Meas	68.8	15.5	12.7	6.31	21.6		8.95	2.54	5.04	4.07	3.47	0.48	1.05	134	29.9	57.9	0.89	6.4	24.7	4.1	21.4	1.0	3.1
OREAS 908 (Aqua Regia) Cert	62.0	14.2	11.8	6.01	38.5		9.29	2.32	4.55	3.57	3.69	0.450	1.01	171	30.1	61.0	0.780	6.07	22.5	4.09	17.3	1.02	2.91
OREAS 908 (Aqua Regia) Meas	63.8	15.2	12.1	6.34	23.6		9.90	2.54	4.91	3.89	3.58	0.45	1.01	139	30.1	61.8	0.86	6.3	23.4	4.0	18.4	1.0	3.0
OREAS 908 (Aqua Regia) Cert	62.0	14.2	11.8	6.01	38.5		9.29	2.32	4.55	3.57	3.69	0.450	1.01	171	30.1	61.0	0.780	6.07	22.5	4.09	17.3	1.02	2.91
OREAS 908 (Aqua Regia) Meas	65.7	14.0	12.9	6.44	21.9		9.67	2.40	4.72	3.72	1.86	0.50	1.02	82.2	28.9	60.4	0.75	6.7	22.6	4.8	17.2	1.0	3.0
OREAS 908 (Aqua Regia) Cert	62.0	14.2	11.8	6.01	38.5		9.29	2.32	4.55	3.57	3.69	0.450	1.01	171	30.1	61.0	0.780	6.07	22.5	4.09	17.3	1.02	2.91
OREAS 45f (Aqua Regia) Meas		13.7	15.3	6.98	14.2		0.31		0.09	1.82			1.56	163	11.4	22.2		2.5	9.61	1.9		0.5	1.7
OREAS 45f (Aqua Regia) Cert		14.4	13.2	6.74	30.0		1.19		0.0870	1.97			1.88	158	10.7	22.3		2.63	10.1	1.91		0.490	1.70
OREAS 45f (Aqua Regia) Meas		12.2	12.9	6.84	18.8		0.72		0.08	1.81			1.24	184	9.9	19.9		2.1	8.53	1.6		0.4	1.5
OREAS 45f (Aqua Regia) Cert		14.4	13.2	6.74	30.0		1.19		0.0870	1.97			1.88	158	10.7	22.3		2.63	10.1	1.91		0.490	1.70
OREAS 45f (Aqua Regia) Meas		13.5	14.4	7.18	13.0		0.78		0.09	1.90			1.38	163	10.3	21.6		2.3	8.68	1.8		0.5	1.6
OREAS 45f (Aqua Regia) Cert		14.4	13.2	6.74	30.0		1.19		0.0870	1.97			1.88	158	10.7	22.3		2.63	10.1	1.91		0.490	1.70
OREAS 906 (Aqua Regia) Meas	19.4	16.9	11.4	6.99	6.8		3.81	0.697	1.12	1.57	1.55	0.11	1.13	277	38.0	76.9	0.37	8.1	29.4	4.6	4.4	1.0	3.5
OREAS 906 (Aqua Regia) Cert	20.4	16.7	11.8	6.91	48		3.85	0.735	1.16	1.64	1.52	0.11	1.22	241	40.0	79.0	0.41	8.6	30.6	5.2	4.5	1.0	3.6
OREAS 906 (Aqua Regia) Meas	21.9	19.8	14.1	8.05	4.1		3.97	0.748	1.20	1.72	0.87	0.13	1.20	247	40.4	85.8	0.44	8.9	31.5	4.8	4.6	1.0	3.9
OREAS 906 (Aqua Regia) Cert	20.4	16.7	11.8	6.91	48		3.85	0.735	1.16	1.64	1.5	0.11	1.22	241	40.0	79.0	0.41	8.6	30.6	5.2	4.5	1.0	3.6
1300865 Orig	0.9	5.3	25.2	20.9	23.8	1.5	0.78	0.055	0.05	1.48	0.05	< 0.02	0.31	38.2	21.8	57.2	0.06	6.0	20.6	3.8	0.6	0.5	3.7
1300865 Dup	0.9	5.6	26.6	22.3	25.1	1.6	0.80	0.061	0.06	1.57	0.06	< 0.02	0.32	38.9	23.6	61.0	0.04	6.2	21.7	4.6	0.6	0.6	3.9
1300893 Orig	0.5	11.3	35.8	6.19	7.7	0.3	0.68	0.024	< 0.02	0.49	< 0.02	< 0.02	0.34	78.8	11.7	24.0	0.02	2.4	9.61	1.6	0.3	0.5	1.6
1300893 Dup	0.6	11.1	35.9	6.03	7.1	0.4	0.68	0.023	< 0.02	0.38	< 0.02	< 0.02	0.35	76.5	11.4	23.7	0.02	2.4	9.60	1.5	0.3	0.5	1.6
1300906 Orig	1.8	2.2	33.6	5.82	11.9	0.2	0.66	0.075	< 0.02	0.31	0.03	< 0.02	0.04	42.6	8.2	18.2	0.03	2.1	8.43	1.5	0.3	0.5	1.6
1300906 Split PREP DUP	1.6	2.1	34.1	5.75	11.8	0.2	0.63	0.074	< 0.02	0.31	0.03	< 0.02	0.04	39.3	8.1	17.7	0.02	2.0	8.16	1.5	0.3	0.5	1.6

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
1300928 Orig	0.4	54.1	27.0	9.57	4.5	0.5	0.47	0.092	< 0.02	1.03	< 0.02	< 0.02	5.36	113	14.5	33.2	0.06	4.2	18.0	3.6	0.2	0.8	2.9
1300928 Dup	0.2	53.3	27.3	9.46	5.7	0.5	0.46	0.090	< 0.02	1.01	< 0.02	< 0.02	5.14	108	13.8	32.2	0.04	4.0	17.4	3.5	0.2	0.8	2.6
1300955 Orig	0.9	0.8	10.3	3.43	27.3	0.1	0.54	0.018	< 0.02	0.67	0.03	< 0.02	0.10	9.7	10.6	31.8	0.02	3.7	16.6	3.0	0.2	0.5	2.3
1300955 Dup	0.7	0.8	10.4	3.49	26.2	0.1	0.47	0.017	< 0.02	0.66	0.03	< 0.02	0.10	10.1	10.7	31.2	0.03	3.6	16.6	3.0	0.2	0.5	2.2
1300956 Orig	1.1	12.9	24.0	25.1	15.1	1.2	0.30	0.042	0.03	2.97	0.04	< 0.02	1.01	25.1	12.9	38.3	0.03	5.8	28.4	6.3	0.3	0.9	5.3
1300956 Split PREP DUP	1.2	12.3	27.7	27.3	14.3	1.3	0.30	0.039	0.02	3.28	0.05	< 0.02	0.95	24.2	12.6	38.4	0.03	5.8	28.9	6.9	0.3	0.9	5.6
Method Blank	< 0.1	< 0.1	< 0.5	< 0.01	< 0.1	< 0.1	< 0.01	< 0.002	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.5	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.5	< 0.01	< 0.1	< 0.1	< 0.01	< 0.002	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.5	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	0.2	< 0.1	< 0.1
Method Blank	0.2	< 0.1	< 0.5	< 0.01	< 0.1	< 0.1	< 0.01	< 0.002	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.5	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	0.2	< 0.1	< 0.1
Method Blank	0.4	< 0.1	< 0.5	< 0.01	< 0.1	< 0.1	0.01	< 0.002	< 0.02	< 0.05	0.10	< 0.02	< 0.02	< 0.5	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	0.3	< 0.1	< 0.1
Method Blank	0.3	< 0.1	< 0.5	< 0.01	< 0.1	< 0.1	0.02	< 0.002	< 0.02	< 0.05	0.02	< 0.02	< 0.02	< 0.5	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	0.3	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.5	< 0.01	< 0.1	< 0.1	< 0.01	< 0.002	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.5	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.5	< 0.01	< 0.1	< 0.1	0.01	< 0.002	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.5	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	0.2	< 0.1	< 0.1

Analyte Symbol	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
OREAS 520 (Aqua Regia) Meas	0.5					1.3	0.2	0.4		29.6		175	0.09	6.5	7.7	14.9	
OREAS 520 (Aqua Regia) Cert	0.500					1.36	0.200	0.810		29.6		169	0.0900	5.22	8.03	14.9	
OREAS 520 (Aqua Regia) Meas	0.5					1.3	0.2	0.3		23.0		187	0.09	5.4	7.6	14.6	
OREAS 520 (Aqua Regia) Cert	0.500					1.36	0.200	0.810		29.6		169	0.0900	5.22	8.03	14.9	
OREAS 520 (Aqua Regia) Meas	0.5					1.4	0.2	0.2		31.0		192	0.10	5.5	7.4	15.0	
OREAS 520 (Aqua Regia) Cert	0.500					1.36	0.200	0.810		29.6		169	0.0900	5.22	8.03	14.9	
OREAS 908 (Aqua Regia) Meas	0.4	1.6	0.2	0.5	< 0.1	0.4	< 0.1	0.2		1.0		176	0.14	56.3	6.7	1.7	
OREAS 908 (Aqua Regia) Cert	0.360	1.46	0.200	0.450	0.0570	0.370	0.0520	0.990		1.51		186	0.140	56.0	6.61	1.77	
OREAS 908 (Aqua Regia) Meas	0.3	1.4	0.2	0.4	< 0.1	0.4	< 0.1	0.3		1.2		224	0.14	56.5	6.5	1.7	
OREAS 908 (Aqua Regia) Cert	0.360	1.46	0.200	0.450	0.0570	0.370	0.0520	0.990		1.51		186	0.140	56.0	6.61	1.77	
OREAS 908 (Aqua Regia) Meas	0.4	1.5	0.2	0.5	< 0.1	0.4	< 0.1	0.4		1.2		211	0.15	57.6	6.3	1.7	
OREAS 908 (Aqua Regia) Cert	0.360	1.46	0.200	0.450	0.0570	0.370	0.0520	0.990		1.51		186	0.140	56.0	6.61	1.77	
OREAS 45f (Aqua Regia) Meas	0.3	1.7	0.3	0.9	0.1	0.7	< 0.1	0.3					0.12	13.0	8.2	1.1	30
OREAS 45f (Aqua Regia) Cert	0.250	1.49	0.280	0.780	0.110	0.690	0.0970	0.930					0.120	12.4	7.67	1.09	31.0
OREAS 45f (Aqua Regia) Meas	0.2	1.5	0.3	0.7	0.1	0.7	< 0.1	0.4					0.11	12.3	7.9	1.0	30
OREAS 45f (Aqua Regia) Cert	0.250	1.49	0.280	0.780	0.110	0.690	0.0970	0.930					0.120	12.4	7.67	1.09	31.0
OREAS 45f (Aqua Regia) Meas	0.3	1.4	0.3	0.7	0.1	0.7	< 0.1	0.3					0.13	13.4	7.9	1.1	40
OREAS 45f (Aqua Regia) Cert	0.250	1.49	0.280	0.780	0.110	0.690	0.0970	0.930					0.120	12.4	7.67	1.09	31.0
OREAS 906 (Aqua Regia) Meas	0.4	1.7	0.2	0.5	< 0.1		< 0.1	< 0.1		0.6		45.5	0.09	21.9	8.7	2.3	
OREAS 906 (Aqua Regia) Cert	0.4	1.7	0.2	0.4	0.04		0.03	1		0.6		51.0	0.1	22.5	8.8	2.3	
OREAS 906 (Aqua Regia) Meas	0.5	1.7	0.2	0.5	< 0.1		< 0.1	< 0.1		0.5		51.1	0.12	23.6	9.2	2.5	
OREAS 906 (Aqua Regia) Cert	0.4	1.7	0.2	0.4	0.04		0.03	1		0.6		51.0	0.10	22.5	8.8	2.3	
1300865 Orig	0.6	3.4	0.7	2.2	0.3	2.3	0.3	0.8	< 0.05	0.3	< 0.001	< 0.5	< 0.02	3.2	5.6	0.7	20
1300865 Dup	0.6	3.6	0.8	2.3	0.4	2.5	0.3	0.8	< 0.05	0.3	< 0.001	< 0.5	0.02	3.3	5.5	0.7	10
1300893 Orig	0.2	1.1	0.2	0.6	< 0.1	0.7	< 0.1	0.2	< 0.05	0.2	< 0.001	< 0.5	0.06	1.2	5.2	0.5	20
1300893 Dup	0.2	1.2	0.2	0.6	< 0.1	0.7	< 0.1	0.2	< 0.05	0.2	< 0.001	< 0.5	0.06	1.2	5.0	0.5	30
1300906 Orig	0.2	1.2	0.2	0.6	< 0.1	0.5	< 0.1	0.2	< 0.05	< 0.1	< 0.001	1.4	< 0.02	1.5	1.3	0.1	20
1300906 Split PREP DUP	0.2	1.3	0.2	0.6	< 0.1	0.5	< 0.1	0.2	< 0.05	< 0.1	< 0.001	5.9	< 0.02	1.4	1.2	0.2	10

Analyte Symbol	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
1300928 Orig	0.4	2.1	0.4	1.0	0.1	0.9	0.1	0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.29	2.3	2.9	1.2	20
1300928 Dup	0.4	2.0	0.3	0.9	0.1	0.8	0.1	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.28	2.3	2.8	1.2	20
1300955 Orig	0.2	0.9	0.1	0.4	< 0.1	0.3	< 0.1	0.6	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	1.1	5.6	0.2	10
1300955 Dup	0.2	1.0	0.1	0.3	< 0.1	0.3	< 0.1	0.6	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	1.1	5.7	0.2	< 10
1300956 Orig	0.8	4.7	1.0	2.8	0.4	2.5	0.3	0.4	< 0.05	< 0.1	< 0.001	< 0.5	0.06	1.9	2.5	0.4	20
1300956 Split PREP DUP	0.9	5.4	1.1	3.0	0.4	2.9	0.4	0.4	< 0.05	< 0.1	< 0.001	< 0.5	0.05	1.9	2.5	0.4	10
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.1	< 0.1	< 0.1	10
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.1	< 0.1	< 0.1	20
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.1	< 0.1	< 0.1	30
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.1	< 0.1	< 0.1	< 10
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.1	< 0.1	< 0.1	10
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.1	< 0.1	< 0.1	20
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.1	< 0.1	< 0.1	10



Report No.: A22-11728
Report Date: 18-Nov-22
Date Submitted: 17-Aug-22
Your Reference: KES-BFP

Fladgate Exploration
278 Bay St.
Thunder Bay ON P7B 1R8
Canada

ATTN: Caitlin Jeffs

CERTIFICATE OF ANALYSIS

106 Rock samples were submitted for analysis.

Table with 2 columns: Analytical package(s) requested and Testing Date. Row 1: UT-4, QOP Total/QOP Ultratrace- 4acid Digest (Total Digestion ICPOES/ICPMS), 2022-11-05 16:31:27

REPORT A22-11728

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.



LabID: 266

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CERTIFIED BY:

Handwritten signature of Mark Vandergeest

Mark Vandergeest
Quality Control Coordinator



## Results

## Activation Laboratories Ltd.

## Report: A22-11728

Analyte Symbol	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se
Unit Symbol	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	20	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
1300751	< 20	17.8	2.90	1.85	9.21	0.84	4.61	< 0.1	115	47	905	5.47	0.9	32.0	1.6	0.8	0.6	< 0.05	0.74	22.6	1.19	0.11	0.3
1300752	< 20	23.3	1.87	2.31	9.42	0.47	5.83	0.1	147	38	1050	6.33	0.6	38.6	1.2	0.6	0.4	0.07	0.36	27.0	1.04	0.10	0.3
1300753	< 20	16.5	2.65	1.79	9.57	0.67	5.69	< 0.1	89	18	935	5.71	0.8	12.9	2.3	0.7	< 0.05	0.59	19.6	1.44	0.07	0.4	
1300754	< 20	13.4	> 3.00	0.25	7.11	1.48	1.50	< 0.1	17	16	223	1.31	3.2	2.8	0.2	1.1	< 0.1	0.10	3.21	2.9	0.38	0.05	0.3
1300755	< 20	27.6	2.85	1.70	8.73	0.86	4.52	0.1	111	39	857	5.15	1.3	29.4	1.3	0.7	0.4	0.06	1.27	20.5	0.92	0.05	0.4
1300756	< 20	29.7	2.89	1.14	8.07	0.87	3.51	< 0.1	79	22	712	4.24	2.2	17.4	1.4	0.8	0.5	< 0.05	1.40	13.9	0.80	0.03	0.4
1300757	< 20	11.7	> 3.00	0.28	7.51	1.15	1.51	< 0.1	18	19	208	1.40	3.4	3.2	0.3	0.9	0.1	0.07	0.71	3.0	0.51	0.05	0.4
1300758	< 20	23.1	2.46	2.20	8.35	1.03	4.75	0.1	100	106	1040	6.17	2.5	58.4	2.5	0.8	0.8	0.06	0.94	25.5	1.27	0.06	0.6
1300759	< 20	26.1	2.78	1.64	7.95	0.89	3.84	< 0.1	84	62	787	4.69	1.4	40.4	2.0	0.8	0.7	< 0.05	1.24	18.9	1.11	0.10	0.5
1300760	< 20	21.8	2.79	1.66	7.78	0.88	3.83	< 0.1	85	82	780	4.87	3.5	38.3	1.6	0.8	0.6	0.08	1.15	19.7	0.98	0.10	0.4
1300761	< 20	13.3	> 3.00	0.17	6.81	1.35	0.88	< 0.1	12	12	151	1.12	3.0	1.8	0.3	1.1	< 0.1	0.10	1.35	1.6	0.40	0.10	0.3
1300762	< 20	27.4	2.66	2.07	8.47	1.07	4.37	0.1	94	112	848	5.07	2.7	55.7	1.5	0.9	0.5	< 0.05	2.03	22.9	0.88	0.11	0.3
1300763	< 20	19.7	2.27	2.55	8.57	0.54	5.39	0.1	83	42	1310	7.77	0.7	39.7	2.9	0.7	1.0	< 0.05	0.88	26.6	1.49	0.05	< 0.1
1300764	< 20	33.6	2.15	1.67	8.63	1.65	4.42	0.2	114	23	1170	6.45	0.8	26.9	1.3	0.9	0.5	0.12	1.53	20.7	1.34	0.24	0.4
1300765	< 20	19.4	2.88	2.17	8.43	0.88	4.94	< 0.1	127	24	1120	6.97	1.4	25.2	3.1	1.1	1.0	0.07	0.99	24.8	2.40	0.09	0.3
1300766	< 20	14.8	2.12	1.59	7.62	0.33	3.41	< 0.1	21	17	1120	5.89	4.5	6.1	3.5	1.0	1.2	< 0.05	1.30	17.5	1.83	0.06	< 0.1
1300767	< 20	22.9	2.47	1.38	8.09	0.81	3.42	< 0.1	70	31	895	4.24	0.6	32.4	0.7	0.8	0.2	< 0.05	1.48	14.0	0.87	0.10	< 0.1
1300768	< 20	24.5	2.81	2.14	9.04	0.56	5.51	< 0.1	131	45	911	6.51	0.9	43.0	1.8	0.8	0.6	0.12	1.07	25.4	1.11	1.26	0.3
1300769	< 20	11.3	2.66	2.16	8.89	1.00	5.32	< 0.1	73	36	1000	6.42	0.6	43.0	1.5	0.6	0.5	< 0.05	1.73	26.7	1.14	0.10	0.1
1300770	< 20	40.7	1.42	2.66	8.51	1.96	4.74	0.2	73	105	1190	6.75	1.8	74.2	2.1	1.0	0.7	< 0.05	4.96	24.7	1.25	0.43	< 0.1
1300771	< 20	21.1	2.69	2.23	7.74	1.37	3.46	< 0.1	51	88	876	5.42	1.7	81.4	2.3	1.0	0.8	< 0.05	4.09	20.4	1.54	0.08	< 0.1
1300772	< 20	10.4	2.31	2.47	8.51	0.66	5.06	< 0.1	93	60	1100	6.15	1.4	61.4	1.7	0.5	0.6	0.09	0.84	30.3	0.87	0.07	< 0.1
1300773	< 20	6.5	2.62	0.20	6.28	0.71	2.14	< 0.1	3	23	337	3.37	7.7	2.2	3.6	1.1	1.1	0.15	0.29	4.4	1.57	0.11	< 0.1
1300774	< 20	13.8	> 3.00	0.64	6.99	0.74	0.53	< 0.1	18	9	163	1.87	4.3	3.4	0.4	0.7	0.1	0.07	0.34	4.5	0.46	< 0.02	< 0.1
1300775	< 20	28.1	2.05	3.26	7.98	1.26	3.71	< 0.1	93	116	882	5.53	2.8	124	1.6	0.6	0.5	< 0.05	1.42	27.2	0.88	0.03	< 0.1
1300776	< 20	8.9	> 3.00	0.44	7.75	0.70	1.91	< 0.1	28	20	262	1.99	3.4	6.1	0.3	0.9	0.1	0.07	0.70	5.4	0.51	0.08	< 0.1
1300777	< 20	9.9	> 3.00	0.39	7.92	1.30	1.29	< 0.1	29	14	228	1.82	3.1	5.8	0.3	0.9	0.1	0.08	0.85	5.0	0.51	0.06	< 0.1
1300778	< 20	20.5	2.82	1.95	7.59	1.01	4.20	< 0.1	31	78	1400	6.75	1.3	70.8	3.5	1.1	1.2	< 0.05	1.21	16.5	1.84	0.05	< 0.1
1300779	< 20	6.9	> 3.00	0.24	6.49	2.19	0.58	< 0.1	4	11	322	3.00	4.9	2.1	4.6	1.8	1.5	0.20	0.35	1.6	1.44	0.03	< 0.1
1300780	< 20	5.3	> 3.00	0.14	6.57	1.65	0.74	< 0.1	3	11	325	2.45	4.9	1.7	4.7	1.7	1.5	0.23	0.36	1.6	1.37	0.04	1.2
1300781	< 20	12.2	> 3.00	0.12	6.18	1.23	0.48	< 0.1	6	12	229	2.75	4.7	1.9	2.4	1.6	0.8	0.30	0.76	2.4	0.91	0.18	3.6
1300782	< 20	5.3	> 3.00	0.09	6.16	1.51	0.43	< 0.1	3	13	231	2.63	6.1	1.9	3.9	1.6	1.3	0.20	0.51	2.7	1.22	0.04	1.4
1300783	< 20	5.4	> 3.00	0.08	5.98	1.67	0.44	< 0.1	4	12	247	2.13	5.2	1.3	4.4	1.6	1.4	0.22	0.49	1.3	1.09	0.04	1.0
1300784	< 20	3.6	> 3.00	0.10	6.14	1.28	0.56	< 0.1	6	12	217	2.44	5.4	1.6	4.1	1.2	1.3	0.25	0.43	2.0	1.42	0.07	0.8
1300785	< 20	6.0	> 3.00	0.14	6.02	1.03	0.40	< 0.1	4	21	172	2.81	5.2	3.4	4.5	1.3	1.4	0.29	0.39	5.9	1.03	0.08	0.4
1300786	< 20	6.2	> 3.00	0.09	6.04	1.73	0.53	< 0.1	3	17	192	2.51	6.0	1.6	3.4	1.8	1.1	0.23	0.69	1.1	1.18	0.10	0.2
1300787	< 20	6.5	> 3.00	0.09	5.98	1.54	0.45	< 0.1	2	14	221	2.38	5.9	1.1	4.6	1.6	1.4	0.21	0.54	1.4	1.15	< 0.02	0.2
1300788	< 20	6.0	> 3.00	0.07	6.27	1.53	0.32	< 0.1	4	15	174	2.55	6.5	1.4	2.7	1.5	0.9	0.21	0.84	2.7	0.92	0.07	0.5
1300789	< 20	3.0	2.83	0.14	5.72	1.32	0.59	< 0.1	8	19	167	2.45	5.6	2.4	2.2	1.3	0.8	0.28	0.74	2.4	0.94	0.07	1.5
1300790	< 20	5.5	> 3.00	0.08	6.06	1.88	0.22	< 0.1	4	15	141	2.68	6.4	1.1	2.9	1.6	0.9	0.23	0.94	2.1	1.05	0.94	0.2
1300791	< 20	7.5	> 3.00	0.07	5.68	1.83	0.27	< 0.1	5	14	214	2.70	5.5	0.8	2.2	1.1	0.7	0.23	0.92	1.5	0.96	0.20	0.3
1300792	< 20	4.0	> 3.00	0.16	6.20	2.11	0.38	< 0.1	2	68	163	2.07	7.0	3.0	3.2	1.3	1.0	0.20	0.35	1.8	1.06	0.06	0.1
1300793	< 20	16.2	2.20	2.30	8.07	0.95	4.88	0.1	171	15	1030	7.56	1.0	34.0	1.8	0.5	0.6	0.08	0.73	34.7	0.90	0.08	< 0.1
1300794	< 20	20.1	2.56	2.14	8.29	1.04	5.07	< 0.1	68	30	1150	6.84	0.8	41.4	3.5	1.1	1.1	< 0.05	0.91	23.9	1.27	0.18	0.1
1300795	< 20	15.6	2.63	1.89	8.47	1.03	4.23	< 0.1	111	9	1360	7.80	0.9	11.4	1.9	0.7	0.6	< 0.05	0.61	27.7	1.31	0.06	< 0.1
1300796	< 20	14.2	2.04	2.70	8.91	0.75	6.55	0.1	94	134	1150	7.42	0.8	55.0	2.2	0.6	0.8	0.10	0.47	29.8	1.14	0.09	0.2
1300797	< 20	15.9	2.08	2.12	7.72	0.81	5.06	0.1	81	14	1180	8.47	0.6	23.6	2.6	0.7	0.9	0.12	0.94	29.9	1.36	0.22	0.2
1300798	< 20	20.5	2.75	1.64	8.33	0.99	4.39	< 0.1	53	24	1090	6.25	0.9	21.8	2.2	0.8	0.8	0.07	1.38	23.9	1.31	0.12	< 0.1
1300799	< 20	24.0	2.71	2.67	9.22	0.90	5.34	< 0.1	113	42	841	6.17	1.1	68.2	1.6	0.8	0.5	0.05	1.72	21.9	1.07	0.05	< 0.1
1300800	< 20	19.6	1.83	1.46	9.19	0.04	7.65	< 0.1	98	22	1200	7.78	0.8	19.2	2.0	0.4	0.7	< 0.05	0.16	16.6	1.46	0.07	0.2
1300801	< 20	19.5	2.46	2.00	9.33	1.23	4.60	< 0.1	113	44	993	6.70	1.2	31.1	1.8	0.8	0.6	0.07	1.96	23.2	1.29	0.21	< 0.1

## Results

## Activation Laboratories Ltd.

## Report: A22-11728

Analyte Symbol	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se
Unit Symbol	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	20	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
1300802	< 20	13.3	2.27	2.48	8.70	1.30	5.36	< 0.1	96	34	1060	6.45	1.3	67.4	1.9	0.5	0.6	0.08	1.16	29.5	0.93	0.09	< 0.1
1300803	< 20	17.0	2.40	3.08	8.50	1.04	4.75	< 0.1	46	104	857	5.69	1.7	124	1.9	0.7	0.6	< 0.05	0.69	28.5	0.96	0.02	< 0.1
1300804	< 20	18.1	2.44	2.59	8.33	0.83	4.46	< 0.1	52	105	997	5.91	2.3	104	2.1	0.8	0.7	< 0.05	0.48	25.9	1.04	0.10	< 0.1
1300805	< 20	35.7	2.81	3.08	8.70	1.04	3.86	< 0.1	66	112	803	5.76	1.9	119	1.8	0.8	0.5	< 0.05	1.01	26.2	0.84	< 0.02	< 0.1
1300806	< 20	18.7	2.66	3.62	9.13	0.72	4.79	< 0.1	115	146	1040	6.19	3.0	146	1.8	0.7	0.6	0.08	0.97	32.2	0.92	0.04	< 0.1
1300807	< 20	18.2	2.51	3.42	8.59	0.76	4.58	< 0.1	107	140	1020	6.10	3.0	130	1.8	0.7	0.6	0.05	0.61	29.8	0.94	0.04	< 0.1
1300808	< 20	16.1	2.48	3.39	8.47	0.89	4.76	< 0.1	78	131	971	5.84	2.6	127	1.9	0.6	0.6	< 0.05	0.77	28.6	1.01	0.03	< 0.1
1300809	< 20	23.8	2.67	3.00	8.41	1.07	3.90	< 0.1	96	156	836	6.08	3.0	112	2.0	0.7	0.6	< 0.05	4.02	26.8	1.08	0.27	< 0.1
1300810	< 20	37.7	2.33	3.25	8.14	1.07	4.62	< 0.1	65	120	1170	6.09	1.6	127	1.8	0.7	0.6	0.17	11.8	29.1	0.91	0.80	< 0.1
1300811	< 20	18.2	2.35	3.43	8.51	0.86	3.95	< 0.1	89	122	850	5.99	2.2	132	1.5	0.5	0.5	< 0.05	2.78	29.0	0.89	0.03	< 0.1
1300812	< 20	19.6	2.47	3.49	8.42	0.83	4.06	< 0.1	72	124	706	5.74	2.1	131	1.7	0.6	0.5	< 0.05	2.27	29.1	0.91	0.07	< 0.1
1300813	< 20	30.1	2.13	3.56	9.26	1.15	4.76	< 0.1	106	139	1570	6.16	2.9	131	1.5	0.6	0.5	0.11	2.72	30.7	0.83	0.08	< 0.1
1300814	< 20	24.1	2.00	3.30	8.74	1.09	4.61	< 0.1	70	135	1100	6.25	2.1	125	1.9	0.6	0.6	< 0.05	2.50	27.8	0.92	0.05	< 0.1
1300815	< 20	27.6	2.25	3.87	9.02	1.41	4.72	< 0.1	112	174	958	5.94	2.7	153	1.5	0.7	0.5	< 0.05	2.21	31.3	0.85	0.07	< 0.1
1300816	< 20	10.4	> 3.00	0.24	7.58	1.28	1.04	< 0.1	12	9	185	1.34	2.3	2.3	0.2	1.1	< 0.1	0.06	1.77	2.3	0.32	0.17	< 0.1
1300817	< 20	22.1	> 3.00	1.33	8.44	1.18	1.50	< 0.1	66	116	471	6.26	4.8	30.8	3.6	1.5	1.1	0.05	0.92	12.8	1.09	0.15	< 0.1
1300818	< 20	22.6	2.81	2.48	8.17	1.85	2.37	< 0.1	62	103	627	6.90	2.5	88.2	4.3	1.0	1.4	< 0.05	1.52	20.3	1.07	0.19	< 0.1
1300819	< 20	16.6	1.74	2.64	7.85	1.30	3.76	< 0.1	80	117	682	6.54	3.1	96.8	2.4	0.7	0.7	< 0.05	0.76	23.0	0.90	0.16	< 0.1
1300820	< 20	22.6	2.08	1.49	8.42	1.59	1.72	< 0.1	68	6	890	7.91	2.9	7.7	2.6	0.9	0.9	< 0.05	0.57	20.6	1.14	0.13	< 0.1
1300821	< 20	24.1	1.37	1.00	7.26	3.45	0.74	0.3	24	13	437	5.17	5.3	6.5	2.8	1.5	0.9	0.38	0.88	23.4	1.55	0.37	< 0.1
1300822	< 20	6.3	2.89	0.12	6.05	1.64	0.15	< 0.1	2	11	239	2.07	8.0	< 0.5	2.6	0.9	0.7	0.42	0.33	7.2	1.28	0.32	< 0.1
1300823	< 20	14.1	1.52	0.95	8.03	1.33	1.38	0.1	21	7	651	5.53	3.8	0.7	3.7	1.7	1.1	< 0.05	0.87	21.4	2.11	0.12	< 0.1
1300824	< 20	20.5	1.11	6.26	6.62	0.53	5.92	0.1	119	564	1190	6.72	0.8	315	1.1	0.3	0.4	< 0.05	1.28	47.2	0.51	0.06	< 0.1
1300825	< 20	17.9	2.01	2.71	8.28	0.81	5.79	0.1	87	38	1080	7.38	0.4	60.9	1.9	0.5	0.7	0.10	1.75	33.8	1.02	0.05	< 0.1
1300826	< 20	15.0	2.87	2.78	8.95	1.04	5.38	0.1	51	97	1190	6.14	0.7	80.2	1.8	0.6	0.6	0.06	1.82	27.6	1.07	0.06	< 0.1
1300827	< 20	16.2	2.35	2.87	9.27	0.67	6.05	< 0.1	118	87	964	5.58	0.8	85.8	1.4	0.5	0.4	0.08	0.67	26.9	0.76	0.06	< 0.1
1300828	< 20	7.7	> 3.00	0.11	6.36	2.48	0.56	< 0.1	4	26	265	2.60	6.3	1.5	3.5	1.3	1.1	0.21	0.51	2.2	1.02	0.03	< 0.1
1300829	< 20	8.2	> 3.00	0.12	6.40	2.00	0.60	< 0.1	3	20	383	2.22	5.5	1.7	4.1	1.6	1.3	0.16	0.71	1.3	1.11	0.03	< 0.1
1300830	< 20	4.6	> 3.00	0.10	6.13	1.50	0.61	< 0.1	6	20	278	2.25	5.5	1.8	3.5	1.4	1.1	0.38	0.46	2.8	1.22	0.17	< 0.1
1300831	< 20	12.6	> 3.00	0.33	7.14	1.16	1.65	< 0.1	19	15	215	1.52	3.3	3.5	0.3	0.8	0.1	0.07	0.96	3.7	0.46	0.05	< 0.1
1300832	< 20	9.0	> 3.00	0.21	6.26	1.27	0.84	< 0.1	5	14	373	2.32	4.5	1.8	3.8	1.3	1.2	0.24	1.25	1.9	1.40	0.09	< 0.1
1300833	< 20	3.9	> 3.00	0.09	5.69	1.33	0.46	< 0.1	10	15	216	2.05	4.9	1.3	3.5	1.0	1.1	1.07	0.43	1.4	1.13	0.27	< 0.1
1300834	< 20	7.7	> 3.00	0.10	6.11	1.95	0.59	< 0.1	4	22	387	2.00	5.0	2.8	4.0	1.1	1.3	0.30	0.77	1.4	1.31	0.12	< 0.1
1300835	< 20	5.1	> 3.00	0.10	5.87	1.10	0.69	< 0.1	8	15	212	1.97	3.9	1.5	2.4	1.2	0.8	0.18	0.34	2.3	1.30	0.10	< 0.1
1300836	< 20	4.8	> 3.00	0.15	7.17	0.74	0.80	< 0.1	4	13	199	0.91	3.6	2.9	2.2	1.4	0.6	0.08	0.37	1.4	1.04	0.07	< 0.1
1300837	< 20	12.0	> 3.00	0.39	7.83	1.27	1.83	< 0.1	23	16	254	1.65	3.1	4.6	0.3	0.8	0.1	< 0.05	0.71	4.3	0.52	0.10	< 0.1
1300838	< 20	5.0	> 3.00	0.11	6.19	1.36	0.83	< 0.1	6	20	226	1.54	6.0	2.7	3.3	1.7	1.0	0.17	0.31	2.0	1.03	0.08	< 0.1
1300839	< 20	30.1	> 3.00	2.02	7.88	1.64	5.00	< 0.1	110	33	1050	6.17	2.1	42.5	1.9	0.8	0.6	0.13	6.20	20.5	0.90	0.14	< 0.1
1300840	< 20	4.1	> 3.00	0.14	6.40	1.86	0.72	< 0.1	5	17	145	1.93	5.5	2.8	2.1	1.2	0.6	0.17	0.63	1.5	1.11	0.06	< 0.1
1300841	< 20	4.8	> 3.00	0.07	6.08	1.41	0.40	< 0.1	3	18	181	1.88	4.3	1.9	1.3	1.5	0.4	0.23	0.52	2.8	1.02	0.11	< 0.1
1300842	< 20	2.2	> 3.00	0.03	5.70	0.53	0.33	< 0.1	7	21	142	1.23	5.0	3.6	1.8	1.0	0.6	0.76	0.25	2.6	0.61	0.15	< 0.1
1300843	< 20	8.4	> 3.00	0.07	6.51	0.79	0.45	< 0.1	9	18	216	2.47	5.8	3.8	1.7	1.2	0.5	0.24	0.76	3.4	1.00	0.47	< 0.1
1300844	< 20	10.5	> 3.00	0.09	6.23	1.37	0.58	< 0.1	4	17	197	2.38	6.7	1.9	2.3	1.4	0.8	0.21	0.97	1.5	1.09	0.14	< 0.1
1300845	< 20	23.5	2.67	0.63	6.79	1.52	2.26	< 0.1	25	18	390	3.37	5.1	4.2	4.2	1.1	1.4	0.12	1.28	7.2	2.22	0.11	< 0.1
1300846	< 20	40.5	2.10	1.75	7.78	1.52	2.80	< 0.1	74	53	709	4.29	1.8	41.3	1.1	0.6	0.4	< 0.05	1.74	17.2	0.79	0.04	< 0.1
1300847	< 20	30.8	1.65	4.99	7.24	1.03	6.46	0.1	177	320	1220	6.80	2.1	148	1.9	0.7	0.7	0.12	1.77	39.0	1.83	0.04	< 0.1
1300848	< 20	8.2	> 3.00	0.10	6.64	1.66	0.29	< 0.1	6	19	151	2.66	5.2	2.0	1.4	1.4	0.4	0.21	0.62	1.1	0.87	0.34	< 0.1
1300849	< 20	43.6	2.32	0.80	5.28	2.14	0.43	< 0.1	10	21	516	8.93	3.9	6.3	18.9	2.3	6.1	1.16	4.00	16.9	2.27	0.13	< 0.1
1300850	< 20	5.8	> 3.00	0.06	6.08	0.58	0.13	< 0.1	13	21	60	2.44	4.6	1.3	1.0	1.0	0.3	0.45	0.32	1.0	0.39	0.14	< 0.1
1300851	< 20	23.5	2.63	1.55	8.39	1.12	3.47	< 0.1	82	30	871	4.79	2.8	30.6	2.0	0.8	0.6	< 0.05	0.98	15.8	0.97	0.22	< 0.1
1300852	< 20	10.5	> 3.00	0.35	6.88	1.44	0.98	< 0.1	21	14	210	1.58	3.3	4.1	0.3	0.7	0.1	0.10	0.63	4.0	0.37	0.12	< 0.1

Results

Activation Laboratories Ltd.

Report: A22-11728

Analyte Symbol	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se
Unit Symbol	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	20	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
1300853	< 20	19.6	> 3.00	0.39	7.61	1.69	1.30	< 0.1	25	14	329	1.64	2.8	3.9	0.4	0.9	0.1	0.17	1.79	4.2	0.52	0.08	< 0.1
1300854	< 20	19.7	1.62	4.02	> 10.0	1.15	7.22	< 0.1	169	91	950	5.68	1.0	119	0.9	0.3	0.3	0.08	1.82	34.7	0.57	0.05	< 0.1
1300855	< 20	27.4	2.55	3.75	8.24	0.82	4.86	< 0.1	114	148	1100	5.91	2.0	146	1.7	0.7	0.5	0.05	0.51	30.4	0.88	0.07	< 0.1
1300856	< 20	10.1	> 3.00	0.43	8.04	1.49	1.74	< 0.1	25	17	300	1.68	3.4	4.9	0.3	0.8	0.1	0.11	0.48	3.6	0.55	0.16	< 0.1

## Results

## Activation Laboratories Ltd.

## Report: A22-11728

Analyte Symbol	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu	Ge
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
1300751	94.4	20.1	0.8	24.5	13.9	26	0.2	0.37	< 0.1	< 1	< 0.1	< 0.1	307	15.7	38.2	4.9	21.1	4.2	3.2	0.5	2.7	34.5	< 0.1
1300752	101	22.1	0.3	11.5	11.5	17	0.1	0.29	< 0.1	< 1	< 0.1	< 0.1	206	12.2	28.4	3.5	16.1	2.5	2.7	0.4	2.4	54.4	< 0.1
1300753	113	23.7	0.6	15.8	20.4	20	0.1	0.22	< 0.1	< 1	< 0.1	< 0.1	177	18.9	47.0	5.8	25.7	4.9	4.3	0.6	3.9	29.7	< 0.1
1300754	52.9	19.2	1.0	64.1	2.9	106	3.9	0.54	< 0.1	< 1	< 0.1	< 0.1	587	11.5	20.6	2.0	7.3	1.3	1.0	0.1	0.6	10.8	< 0.1
1300755	99.8	20.8	< 0.1	28.8	11.7	37	0.6	0.31	< 0.1	< 1	< 0.1	< 0.1	248	13.3	30.2	3.5	15.3	2.7	2.6	0.4	2.4	28.4	< 0.1
1300756	80.4	20.3	0.7	37.2	12.0	73	0.5	0.48	< 0.1	< 1	< 0.1	< 0.1	309	10.3	23.3	2.7	12.3	2.4	2.2	0.3	2.3	8.9	0.1
1300757	32.7	21.6	1.1	31.2	3.3	123	5.0	0.52	< 0.1	< 1	< 0.1	< 0.1	440	15.9	30.8	2.9	10.9	1.8	1.3	0.1	0.7	5.3	< 0.1
1300758	102	19.7	1.5	34.8	21.9	91	0.4	0.23	< 0.1	< 1	< 0.1	< 0.1	307	18.1	44.3	5.4	23.8	4.7	4.2	0.7	4.0	51.7	0.1
1300759	84.8	18.9	0.9	29.9	18.3	44	0.3	0.25	< 0.1	< 1	< 0.1	< 0.1	354	18.9	44.6	5.4	23.9	3.9	3.9	0.5	3.3	28.4	< 0.1
1300760	94.0	19.6	0.9	26.3	14.7	136	0.7	0.55	< 0.1	< 1	< 0.1	< 0.1	222	17.1	38.5	4.3	18.2	3.3	3.2	0.5	2.9	36.6	< 0.1
1300761	40.8	19.8	1.8	62.8	3.2	91	4.7	0.52	< 0.1	< 1	0.1	< 0.1	579	17.3	31.4	3.0	10.9	1.6	1.3	0.1	0.7	10.3	< 0.1
1300762	104	20.5	0.4	38.7	13.2	102	0.8	0.59	< 0.1	< 1	< 0.1	< 0.1	240	14.6	32.4	3.7	15.7	2.8	2.7	0.4	2.4	23.5	0.1
1300763	136	20.5	< 0.1	14.0	25.7	18	< 0.1	0.14	< 0.1	< 1	< 0.1	< 0.1	141	20.0	50.0	6.3	28.4	6.1	5.5	0.8	5.1	38.4	< 0.1
1300764	135	23.9	2.5	69.6	12.0	22	< 0.1	0.19	< 0.1	< 1	< 0.1	< 0.1	408	19.8	44.8	5.5	25.3	4.8	3.8	0.5	2.5	158	< 0.1
1300765	111	19.9	0.5	31.6	28.4	38	0.3	0.38	< 0.1	< 1	< 0.1	< 0.1	355	40.8	97.1	12.2	56.0	8.5	7.2	0.9	5.2	101	< 0.1
1300766	65.8	21.5	1.0	12.5	31.9	171	0.2	0.16	< 0.1	< 1	< 0.1	< 0.1	114	28.0	63.0	7.4	33.0	6.0	6.3	1.0	5.8	23.6	< 0.1
1300767	85.1	18.2	0.7	27.2	6.0	17	0.4	0.22	< 0.1	< 1	< 0.1	< 0.1	228	11.7	23.1	2.4	9.6	1.4	1.3	0.2	1.1	24.8	0.1
1300768	91.5	26.0	1.0	17.1	15.8	26	< 0.1	0.36	< 0.1	< 1	< 0.1	< 0.1	161	15.9	36.4	4.4	20.1	3.7	3.5	0.5	3.1	73.9	0.1
1300769	88.4	20.9	0.8	39.4	14.5	17	0.1	0.12	< 0.1	< 1	< 0.1	< 0.1	249	14.4	32.2	3.9	17.5	3.7	3.1	0.5	2.7	37.0	< 0.1
1300770	183	19.7	< 0.1	82.5	20.7	77	< 0.1	0.11	< 0.1	< 1	< 0.1	< 0.1	395	16.9	40.5	5.1	21.9	4.3	4.0	0.6	3.7	32.7	0.1
1300771	78.5	18.6	0.7	58.6	20.9	57	0.2	0.14	< 0.1	< 1	< 0.1	< 0.1	293	18.8	43.0	5.1	22.2	4.7	4.1	0.6	3.9	31.2	0.1
1300772	81.8	17.9	< 0.1	19.8	15.3	52	< 0.1	0.25	< 0.1	< 1	< 0.1	< 0.1	180	11.3	25.5	3.1	13.9	3.1	2.8	0.5	2.9	94.9	0.2
1300773	36.1	15.8	< 0.1	18.9	30.7	299	12.4	3.07	< 0.1	2	< 0.1	< 0.1	195	27.8	66.3	7.9	32.7	6.8	5.9	0.9	5.7	11.1	< 0.1
1300774	47.9	19.0	0.3	17.8	3.7	171	5.8	0.47	< 0.1	< 1	< 0.1	< 0.1	212	10.9	27.1	2.3	9.0	1.7	1.2	0.1	0.8	1.8	< 0.1
1300775	66.3	17.4	< 0.1	59.7	15.2	106	0.1	0.20	< 0.1	< 1	< 0.1	< 0.1	197	13.1	30.0	3.5	15.0	2.9	2.9	0.5	2.8	12.1	< 0.1
1300776	38.8	21.7	0.3	25.5	3.4	125	3.4	1.49	< 0.1	< 1	< 0.1	< 0.1	309	15.3	30.3	2.9	11.2	1.6	1.3	0.2	0.7	26.7	< 0.1
1300777	37.1	21.0	0.8	42.9	3.3	115	4.0	0.64	< 0.1	< 1	< 0.1	< 0.1	415	14.7	28.3	2.8	10.5	1.7	1.4	0.1	0.7	10.9	< 0.1
1300778	82.1	18.9	< 0.1	44.9	32.4	39	0.3	0.17	0.1	< 1	< 0.1	< 0.1	309	21.3	56.8	7.6	35.6	7.2	6.6	1.0	6.1	6.2	0.1
1300779	38.2	19.2	0.5	38.9	41.9	143	13.4	1.12	< 0.1	2	< 0.1	< 0.1	462	10.9	36.9	5.1	27.0	6.5	6.9	1.2	7.8	10.9	0.2
1300780	27.8	18.1	1.0	48.3	43.8	144	14.0	0.65	< 0.1	2	< 0.1	< 0.1	574	17.2	45.5	6.2	31.2	7.1	7.4	1.2	7.9	10.3	< 0.1
1300781	26.3	17.9	6.0	42.1	20.7	151	15.8	1.17	< 0.1	4	< 0.1	0.2	543	12.0	29.6	4.1	19.9	4.6	4.1	0.6	4.0	52.0	< 0.1
1300782	31.7	18.2	1.4	44.5	34.1	172	13.8	0.54	< 0.1	2	< 0.1	< 0.1	622	12.8	35.6	4.4	20.7	4.8	5.2	0.9	6.1	12.2	< 0.1
1300783	23.9	17.6	0.6	49.1	36.0	160	14.0	0.84	< 0.1	2	< 0.1	< 0.1	475	11.3	35.3	4.2	20.2	5.2	5.5	1.0	6.6	7.8	< 0.1
1300784	24.2	16.6	0.5	39.9	33.8	153	14.4	0.74	< 0.1	2	0.1	< 0.1	511	37.8	90.0	10.1	41.9	6.8	6.6	1.0	6.4	8.3	< 0.1
1300785	26.1	15.4	0.7	23.8	37.5	154	13.9	0.61	< 0.1	2	< 0.1	< 0.1	446	30.0	81.2	7.8	32.0	5.7	5.5	0.9	6.4	23.1	< 0.1
1300786	20.6	17.8	0.4	47.9	29.2	175	13.1	1.55	< 0.1	3	< 0.1	< 0.1	482	37.1	90.1	10.4	43.9	7.6	6.6	1.0	6.0	5.6	< 0.1
1300787	21.9	17.3	1.0	58.0	36.3	181	14.2	0.72	< 0.1	2	< 0.1	< 0.1	492	33.0	78.0	9.0	37.6	7.1	6.7	1.1	6.9	1.7	< 0.1
1300788	15.9	16.9	0.6	42.5	20.3	193	12.2	1.01	< 0.1	2	< 0.1	< 0.1	487	24.3	53.2	6.8	29.5	5.3	5.0	0.7	4.2	30.1	< 0.1
1300789	22.1	15.0	0.1	46.4	19.3	175	12.5	1.22	< 0.1	2	< 0.1	0.1	408	27.3	63.1	7.4	31.4	6.0	5.0	0.7	4.1	164	< 0.1
1300790	21.2	17.1	1.0	83.1	21.6	196	14.6	1.13	< 0.1	3	< 0.1	< 0.1	588	38.7	88.8	10.1	41.7	7.1	6.1	0.8	4.9	33.7	0.2
1300791	16.1	16.1	0.3	75.7	16.6	172	14.3	2.19	< 0.1	3	< 0.1	< 0.1	586	24.7	60.3	6.9	28.7	5.5	4.6	0.6	3.7	11.0	< 0.1
1300792	22.5	17.3	0.6	32.7	26.0	233	12.7	0.62	< 0.1	1	< 0.1	< 0.1	715	43.3	102	9.8	37.5	6.3	5.1	0.8	4.9	4.9	0.7
1300793	96.3	19.1	0.4	33.9	15.8	28	0.6	0.23	< 0.1	< 1	< 0.1	< 0.1	216	14.2	32.1	3.8	16.0	3.1	3.2	0.5	2.9	61.6	0.2
1300794	113	20.5	0.9	28.1	29.4	20	0.4	0.14	< 0.1	< 1	< 0.1	< 0.1	271	22.2	54.2	6.5	29.0	5.2	5.4	0.8	5.4	28.6	0.2
1300795	131	20.3	0.1	34.5	15.8	24	< 0.1	0.13	< 0.1	< 1	< 0.1	< 0.1	246	12.4	28.0	3.3	14.7	3.3	3.1	0.5	3.0	44.3	0.1
1300796	110	19.7	0.9	18.8	19.2	23	0.1	0.09	< 0.1	< 1	< 0.1	< 0.1	205	10.0	25.9	3.5	17.3	3.8	3.8	0.6	3.9	78.1	< 0.1
1300797	130	21.1	0.2	23.5	22.9	13	0.1	0.13	< 0.1	< 1	< 0.1	< 0.1	157	19.1	46.4	5.7	25.4	5.0	4.8	0.7	4.5	35.7	< 0.1
1300798	95.1	19.6	0.6	36.1	20.0	24	0.2	0.12	< 0.1	< 1	< 0.1	< 0.1	288	19.8	45.1	5.4	23.5	4.6	4.3	0.6	3.7	41.4	0.1
1300799	60.9	19.8	0.7	32.9	15.1	27	1.4	0.23	< 0.1	< 1	< 0.1	< 0.1	230	17.5	41.3	4.9	20.6	3.5	3.1	0.5	2.9	12.8	0.4
1300800	96.9	27.6	1.5	1.3	17.8	18	1.3	0.25	< 0.1	< 1	< 0.1	< 0.1	16	20.1	50.4	6.2	25.8	4.6	3.9	0.5	3.3	17.5	0.3
1300801	107	20.8	0.2	66.0	16.2	34	0.2	0.33	< 0.1	< 1	< 0.1	< 0.1	303	18.0	42.3	5.2	22.7	4.1	3.7	0.5	3.0	43.0	< 0.1

## Results

## Activation Laboratories Ltd.

## Report: A22-11728

Analyte Symbol	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu	Ge
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
1300802	93.2	18.2	0.7	49.3	16.1	34	0.1	0.13	< 0.1	< 1	< 0.1	< 0.1	261	12.8	28.7	3.6	15.5	3.1	3.1	0.5	3.0	51.1	< 0.1
1300803	61.9	18.6	0.1	39.2	16.3	62	< 0.1	0.19	< 0.1	< 1	< 0.1	< 0.1	176	14.5	33.4	4.1	17.4	3.4	3.1	0.5	3.0	6.9	0.2
1300804	67.2	18.5	0.4	21.8	18.3	91	0.1	0.18	< 0.1	< 1	< 0.1	< 0.1	204	17.7	40.8	4.9	20.8	4.3	3.8	0.6	3.6	44.4	0.2
1300805	109	18.7	< 0.1	40.4	15.1	72	0.1	0.26	< 0.1	< 1	< 0.1	< 0.1	226	14.5	32.7	3.8	16.3	3.4	2.9	0.4	2.9	2.2	0.3
1300806	92.6	19.3	< 0.1	22.0	15.5	117	2.9	0.58	< 0.1	< 1	< 0.1	< 0.1	138	14.2	32.2	3.9	16.5	3.2	3.1	0.5	2.7	61.7	0.3
1300807	70.3	19.1	0.5	27.8	15.1	112	2.9	1.05	< 0.1	< 1	< 0.1	< 0.1	156	13.7	31.6	3.8	16.0	3.2	3.1	0.4	2.9	17.0	0.5
1300808	82.0	18.9	< 0.1	30.8	16.3	98	0.2	0.86	< 0.1	< 1	< 0.1	< 0.1	193	15.3	34.9	4.3	18.2	3.5	3.3	0.5	3.1	7.2	0.3
1300809	58.4	18.6	0.9	46.5	17.2	119	0.1	0.17	< 0.1	< 1	< 0.1	< 0.1	171	14.7	33.8	4.1	17.6	3.6	3.4	0.5	3.3	7.7	< 0.1
1300810	111	18.1	0.2	61.3	14.8	57	< 0.1	0.36	< 0.1	< 1	< 0.1	< 0.1	158	13.7	31.5	3.8	15.9	3.3	2.9	0.5	2.9	65.1	0.2
1300811	47.4	17.1	1.5	32.9	13.3	78	0.3	0.43	< 0.1	< 1	< 0.1	< 0.1	178	13.2	29.9	3.5	15.0	3.2	2.7	0.4	2.5	32.1	0.4
1300812	55.6	17.8	< 0.1	34.1	14.8	79	0.1	0.32	< 0.1	< 1	< 0.1	< 0.1	143	14.4	32.1	3.9	16.1	3.4	3.0	0.4	2.8	10.5	0.4
1300813	134	17.5	< 0.1	38.0	12.5	105	1.7	1.04	< 0.1	< 1	< 0.1	< 0.1	313	8.4	19.3	2.5	11.1	2.1	2.3	0.4	2.2	31.7	0.5
1300814	77.9	18.2	0.6	43.6	15.4	76	0.2	0.30	< 0.1	< 1	< 0.1	< 0.1	195	13.1	29.7	3.7	15.8	3.3	3.1	0.5	2.8	17.4	0.4
1300815	79.0	18.2	1.1	73.7	13.6	102	2.7	0.87	< 0.1	< 1	< 0.1	< 0.1	184	12.2	28.0	3.5	14.8	2.7	2.7	0.4	2.7	2.2	0.3
1300816	32.5	18.0	< 0.1	53.0	2.6	74	3.7	1.21	< 0.1	< 1	< 0.1	< 0.1	534	11.5	21.3	2.2	7.7	1.3	0.9	0.1	0.4	5.0	< 0.1
1300817	36.4	21.6	0.2	38.2	30.6	183	1.1	0.19	< 0.1	1	< 0.1	< 0.1	531	25.5	48.7	5.3	21.7	4.3	4.6	0.8	5.4	7.0	0.2
1300818	49.9	17.5	0.6	89.7	37.7	95	0.2	0.21	< 0.1	< 1	< 0.1	< 0.1	271	18.4	43.8	6.1	28.5	6.5	6.6	1.1	7.4	25.3	0.3
1300819	35.2	17.3	< 0.1	59.3	20.4	118	0.9	0.23	0.1	< 1	< 0.1	< 0.1	185	13.2	30.3	3.7	16.2	3.6	3.3	0.6	3.7	3.4	0.4
1300820	76.7	19.3	< 0.1	58.6	22.7	109	0.6	0.38	< 0.1	2	< 0.1	< 0.1	341	19.5	43.6	5.6	23.7	4.3	4.5	0.7	4.4	10.0	0.3
1300821	114	15.3	4.0	103	22.5	183	1.4	0.68	< 0.1	3	< 0.1	< 0.1	1170	31.5	71.2	8.9	37.1	6.9	5.9	0.8	4.7	465	0.3
1300822	13.2	15.6	< 0.1	50.8	19.1	283	16.9	1.92	< 0.1	2	< 0.1	< 0.1	499	41.6	96.6	11.6	48.2	8.9	6.4	0.8	3.7	94.9	< 0.1
1300823	161	23.5	1.8	63.6	27.5	180	0.1	0.15	0.1	< 1	< 0.1	< 0.1	624	37.9	85.2	10.4	44.7	8.5	7.3	1.0	5.7	23.4	0.1
1300824	93.1	13.5	1.0	19.7	9.3	26	0.3	0.40	< 0.1	< 1	< 0.1	< 0.1	97	4.6	11.2	1.5	7.0	1.6	1.6	0.3	1.8	56.1	0.1
1300825	96.8	19.0	< 0.1	24.8	16.5	11	< 0.1	0.09	< 0.1	< 1	< 0.1	< 0.1	196	13.2	31.4	4.2	18.6	3.8	3.4	0.5	3.3	64.9	0.2
1300826	107	18.7	< 0.1	38.0	15.8	16	0.2	0.12	< 0.1	< 1	< 0.1	< 0.1	276	14.7	35.4	4.6	19.8	4.1	3.4	0.5	3.0	15.0	0.2
1300827	77.4	19.6	< 0.1	17.1	11.5	19	2.5	0.72	< 0.1	< 1	< 0.1	< 0.1	151	9.3	20.5	2.5	10.4	2.1	2.1	0.3	2.2	24.1	0.5
1300828	24.2	17.8	< 0.1	52.0	27.4	207	15.3	2.61	< 0.1	1	< 0.1	< 0.1	599	27.9	68.6	7.7	31.0	5.8	5.3	0.8	5.4	13.2	0.2
1300829	26.6	18.1	< 0.1	43.9	35.0	164	10.8	1.16	< 0.1	2	< 0.1	< 0.1	513	25.3	63.7	7.5	31.8	6.9	6.2	1.0	6.4	3.7	0.6
1300830	25.5	17.7	1.0	27.4	28.7	164	17.5	1.38	< 0.1	2	< 0.1	0.2	572	22.0	53.0	6.7	30.0	5.3	5.5	0.9	5.4	36.0	< 0.1
1300831	53.9	19.7	< 0.1	44.4	3.6	119	4.0	0.60	< 0.1	< 1	< 0.1	< 0.1	439	14.0	26.8	2.6	9.8	1.8	1.3	0.1	0.7	9.8	< 0.1
1300832	28.2	17.4	< 0.1	26.1	31.1	149	11.8	1.48	< 0.1	1	< 0.1	< 0.1	594	36.1	80.7	9.6	41.3	6.9	6.5	1.0	6.2	10.9	< 0.1
1300833	20.6	16.3	6.7	33.8	28.5	146	15.3	1.60	< 0.1	2	< 0.1	0.9	344	25.2	60.2	7.3	32.2	6.1	5.4	0.8	5.5	13.8	< 0.1
1300834	33.8	17.2	1.8	40.0	32.7	149	13.1	2.30	< 0.1	2	< 0.1	0.2	564	41.4	95.5	11.3	47.2	7.7	6.7	1.0	6.2	10.4	< 0.1
1300835	26.8	17.6	< 0.1	19.3	21.4	116	3.5	0.87	< 0.1	1	< 0.1	< 0.1	499	17.3	43.7	5.2	23.4	4.5	4.1	0.6	3.9	94.9	0.2
1300836	34.5	18.7	< 0.1	16.1	18.6	102	1.5	0.23	< 0.1	< 1	< 0.1	< 0.1	335	8.8	24.6	3.2	15.1	3.3	3.0	0.5	3.1	31.2	0.2
1300837	65.7	19.5	< 0.1	38.7	3.3	112	1.4	0.84	< 0.1	< 1	< 0.1	< 0.1	482	16.2	29.8	3.1	11.5	2.0	1.4	0.1	0.7	35.6	0.4
1300838	20.2	17.3	0.5	19.9	26.5	201	11.8	1.61	< 0.1	< 1	< 0.1	< 0.1	474	30.3	75.9	8.4	35.3	5.8	5.1	0.8	4.9	9.7	< 0.1
1300839	93.4	20.4	0.5	72.3	15.7	82	0.2	0.17	< 0.1	< 1	< 0.1	< 0.1	391	7.4	19.6	2.7	12.8	3.1	2.9	0.5	3.0	75.7	0.2
1300840	20.1	17.7	< 0.1	34.1	16.9	162	10.7	1.04	< 0.1	< 1	< 0.1	< 0.1	605	10.8	26.4	3.3	15.2	3.2	3.1	0.5	3.1	13.2	0.1
1300841	20.8	18.4	0.3	34.3	10.5	130	12.4	1.03	< 0.1	2	< 0.1	< 0.1	531	4.7	13.0	2.0	10.2	2.8	2.1	0.3	2.0	82.2	0.1
1300842	17.3	15.3	< 0.1	13.9	18.6	152	15.4	2.13	< 0.1	2	< 0.1	< 0.1	235	4.0	11.2	1.7	8.9	2.6	2.4	0.4	2.8	339	0.1
1300843	20.7	18.1	1.3	28.4	12.9	179	11.7	4.20	< 0.1	3	< 0.1	< 0.1	273	48.7	106	11.9	49.1	8.8	5.6	0.6	2.7	30.2	0.2
1300844	20.6	18.5	< 0.1	41.3	18.8	195	13.3	2.46	< 0.1	3	< 0.1	< 0.1	495	38.6	88.7	10.2	43.3	8.6	6.1	0.7	3.9	9.7	< 0.1
1300845	51.3	16.9	< 0.1	66.3	37.2	195	2.0	2.13	< 0.1	6	< 0.1	< 0.1	496	34.7	86.3	10.6	46.8	8.6	7.2	1.0	6.1	33.6	0.4
1300846	125	18.8	0.1	62.0	10.2	63	< 0.1	0.17	< 0.1	< 1	< 0.1	< 0.1	442	11.1	24.3	2.8	12.8	2.1	2.2	0.3	1.9	63.9	0.2
1300847	92.8	14.0	< 0.1	37.5	17.2	85	3.1	0.74	< 0.1	1	< 0.1	< 0.1	325	32.8	82.4	10.4	47.2	7.2	5.5	0.6	3.4	81.4	0.4
1300848	17.4	18.4	0.7	43.4	10.3	147	13.3	1.02	< 0.1	2	< 0.1	< 0.1	435	10.4	29.1	4.1	20.1	4.1	3.0	0.4	2.3	22.5	< 0.1
1300849	73.3	24.2	1.5	208	140	100	67.3	2.34	< 0.1	5	< 0.1	0.3	262	42.8	130	20.2	108	27.9	25.7	4.5	28.8	233	0.1
1300850	19.3	18.3	< 0.1	15.5	7.0	133	18.8	1.56	< 0.1	2	< 0.1	< 0.1	317	1.4	4.2	0.7	3.8	1.0	1.2	0.2	1.5	60.2	< 0.1
1300851	117	19.7	< 0.1	33.7	15.9	101	1.5	0.37	< 0.1	< 1	< 0.1	< 0.1	396	14.3	32.1	3.9	17.2	3.7	3.1	0.5	3.0	27.5	0.5
1300852	53.7	19.8	< 0.1	41.9	3.0	119	3.0	0.49	< 0.1	< 1	< 0.1	0.1	454	11.1	27.1	2.3	8.3	1.4	1.1	0.1	0.6	10.0	0.2

Results

Activation Laboratories Ltd.

Report: A22-11728

Analyte Symbol	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu	Ge	
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
1300853	78.9	19.9	< 0.1	57.9	4.4	98	3.6	0.80	< 0.1	< 1	< 0.1	0.1	500	17.4	34.6	3.5	13.2	2.0	1.5	0.2	0.9	9.5	< 0.1	
1300854	71.7	17.6	1.3	52.4	6.8	36	2.0	0.81	< 0.1	< 1	< 0.1	< 0.1	177	6.9	15.9	1.9	8.3	2.0	1.5	0.2	1.4	71.2	0.3	
1300855	123	17.9	< 0.1	30.5	14.1	70	2.7	1.64	< 0.1	< 1	< 0.1	< 0.1	178	14.0	30.9	3.6	15.2	3.0	2.7	0.4	2.6	28.7	0.6	
1300856	31.4	20.4	< 0.1	40.1	3.8	119	3.8	0.73	< 0.1	1	< 0.1	< 0.1	564	14.1	28.5	2.8	10.6	1.9	1.3	0.2	0.8	2.8	0.3	

Analyte Symbol	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
1300751	0.2	1.4	0.2	< 0.1	480	< 0.1	< 0.001	0.12	4.4	1.1	0.4
1300752	0.2	1.1	0.2	< 0.1	432	4.0	< 0.001	0.06	3.5	0.9	0.3
1300753	0.3	2.1	0.3	< 0.1	468	< 0.1	< 0.001	0.09	4.8	1.9	0.5
1300754	< 0.1	0.2	< 0.1	0.3	256	0.4	< 0.001	0.33	10.0	2.6	0.9
1300755	0.2	1.2	0.2	< 0.1	417	< 0.1	< 0.001	0.13	7.1	4.1	0.7
1300756	0.2	1.3	0.2	< 0.1	348	0.1	< 0.001	0.16	4.0	2.6	0.6
1300757	< 0.1	0.2	< 0.1	0.4	353	0.4	< 0.001	0.14	6.2	3.7	1.1
1300758	0.3	2.2	0.4	< 0.1	342	< 0.1	< 0.001	0.17	4.3	1.7	0.5
1300759	0.3	1.8	0.3	< 0.1	360	0.1	< 0.001	0.14	3.7	1.6	0.3
1300760	0.2	1.4	0.2	< 0.1	261	0.3	< 0.001	0.14	5.5	2.6	0.6
1300761	< 0.1	0.2	< 0.1	0.4	200	2.0	< 0.001	0.30	5.0	4.1	1.1
1300762	0.2	1.3	0.2	< 0.1	283	0.1	< 0.001	0.21	4.4	2.3	0.5
1300763	0.4	2.5	0.4	< 0.1	285	< 0.1	< 0.001	0.07	3.0	1.7	0.4
1300764	0.2	1.3	0.2	< 0.1	243	< 0.1	< 0.001	0.39	2.7	2.4	0.6
1300765	0.4	2.9	0.4	< 0.1	686	0.1	< 0.001	0.15	4.6	5.7	1.2
1300766	0.5	3.4	0.5	< 0.1	283	0.1	< 0.001	0.07	2.4	2.3	0.6
1300767	< 0.1	0.7	0.1	< 0.1	302	< 0.1	< 0.001	0.13	2.6	1.6	0.4
1300768	0.3	1.7	0.3	< 0.1	515	< 0.1	0.001	0.07	6.7	3.8	0.9
1300769	0.2	1.4	0.2	< 0.1	377	< 0.1	< 0.001	0.18	2.9	2.4	0.6
1300770	0.3	1.9	0.2	< 0.1	314	< 0.1	< 0.001	0.45	4.1	2.0	0.5
1300771	0.3	2.1	0.3	< 0.1	280	< 0.1	< 0.001	0.27	3.2	2.7	0.6
1300772	0.2	1.6	0.3	< 0.1	325	< 0.1	< 0.001	0.11	2.4	1.7	0.4
1300773	0.5	3.7	0.6	0.6	247	0.9	< 0.001	0.08	4.6	5.8	1.5
1300774	< 0.1	0.3	< 0.1	0.4	147	0.4	< 0.001	0.08	2.3	2.1	0.7
1300775	0.2	1.6	0.3	< 0.1	263	0.3	< 0.001	0.27	1.3	2.4	0.6
1300776	< 0.1	0.3	< 0.1	< 0.1	317	0.3	< 0.001	0.13	5.7	2.9	0.8
1300777	< 0.1	0.2	< 0.1	0.2	313	0.4	< 0.001	0.17	5.5	3.0	0.8
1300778	0.5	3.3	0.5	< 0.1	270	< 0.1	< 0.001	0.12	3.0	3.6	0.8
1300779	0.6	4.3	0.6	0.2	88.5	0.3	< 0.001	0.09	1.9	3.5	1.0
1300780	0.6	4.2	0.6	0.3	77.2	0.7	< 0.001	0.12	1.8	4.4	1.1
1300781	0.3	2.4	0.4	0.4	73.7	1.7	< 0.001	0.10	2.5	2.8	1.0
1300782	0.6	3.7	0.6	0.6	90.7	0.8	< 0.001	0.14	2.7	7.3	1.8
1300783	0.6	3.9	0.5	0.5	72.7	0.5	< 0.001	0.14	2.4	6.0	1.4
1300784	0.6	3.9	0.6	0.5	89.6	1.5	< 0.001	0.12	2.8	5.9	1.3
1300785	0.6	4.7	0.7	0.7	117	0.6	< 0.001	0.07	3.5	7.1	0.9
1300786	0.5	3.5	0.5	0.4	65.6	0.9	< 0.001	0.15	3.1	6.5	1.4
1300787	0.6	4.1	0.6	0.7	72.9	0.6	< 0.001	0.14	2.1	5.9	1.4
1300788	0.4	2.6	0.4	0.4	66.6	0.6	0.001	0.13	3.0	6.0	1.5
1300789	0.3	2.3	0.4	0.8	86.2	1.1	< 0.001	0.16	6.8	5.6	1.3
1300790	0.4	2.8	0.4	0.7	48.7	1.2	< 0.001	0.27	2.6	5.8	1.1
1300791	0.3	2.3	0.4	0.7	58.4	1.7	< 0.001	0.22	3.1	4.4	1.2
1300792	0.4	3.3	0.5	0.4	84.2	0.3	< 0.001	0.09	1.9	5.4	1.2
1300793	0.2	1.8	0.3	< 0.1	256	0.9	< 0.001	0.15	2.4	2.1	0.5
1300794	0.5	3.4	0.5	< 0.1	225	< 0.1	< 0.001	0.12	4.6	3.2	0.8
1300795	0.3	1.7	0.3	< 0.1	277	< 0.1	< 0.001	0.13	3.1	2.6	0.6
1300796	0.3	2.0	0.3	< 0.1	360	< 0.1	< 0.001	0.08	3.1	1.7	0.3
1300797	0.3	2.4	0.4	< 0.1	286	0.2	< 0.001	0.11	6.0	3.2	0.7
1300798	0.3	2.1	0.3	< 0.1	315	< 0.1	< 0.001	0.15	4.7	3.7	0.8
1300799	0.2	1.7	0.2	< 0.1	328	< 0.1	< 0.001	0.12	3.4	3.7	0.7
1300800	0.3	1.9	0.3	< 0.1	594	< 0.1	< 0.001	< 0.05	6.1	2.6	0.6
1300801	0.2	1.6	0.3	< 0.1	400	0.1	< 0.001	0.30	4.2	3.8	0.8

Analyte Symbol	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
1300802	0.2	1.7	0.3	< 0.1	272	0.2	< 0.001	0.18	4.3	3.1	0.7
1300803	0.2	1.7	0.3	< 0.1	254	< 0.1	< 0.001	0.15	2.5	2.5	0.6
1300804	0.3	1.9	0.3	< 0.1	277	< 0.1	< 0.001	0.08	2.6	2.9	0.7
1300805	0.2	1.6	0.3	< 0.1	151	0.3	< 0.001	0.13	1.6	2.6	0.6
1300806	0.2	1.6	0.3	< 0.1	274	0.1	< 0.001	0.08	2.7	2.3	0.5
1300807	0.2	1.7	0.2	< 0.1	314	0.1	< 0.001	0.10	2.1	2.4	0.6
1300808	0.3	1.7	0.3	< 0.1	261	< 0.1	< 0.001	0.13	2.3	2.6	0.6
1300809	0.3	1.8	0.3	< 0.1	240	< 0.1	< 0.001	0.17	3.1	2.6	0.7
1300810	0.2	1.6	0.2	< 0.1	288	< 0.1	< 0.001	0.30	4.7	2.2	0.5
1300811	0.2	1.4	0.2	< 0.1	266	0.4	< 0.001	0.17	3.2	2.1	0.5
1300812	0.2	1.6	0.2	< 0.1	257	0.2	< 0.001	0.14	1.9	2.4	0.6
1300813	0.2	1.4	0.2	< 0.1	245	< 0.1	< 0.001	0.17	2.6	2.1	0.5
1300814	0.2	1.7	0.3	< 0.1	278	< 0.1	< 0.001	0.19	2.1	2.3	0.6
1300815	0.2	1.4	0.2	< 0.1	310	< 0.1	< 0.001	0.23	2.1	2.0	0.5
1300816	< 0.1	0.2	< 0.1	0.3	240	0.6	< 0.001	0.25	6.1	2.7	0.7
1300817	0.5	3.5	0.5	< 0.1	264	0.1	< 0.001	0.11	2.1	2.7	0.9
1300818	0.6	3.6	0.5	< 0.1	234	< 0.1	< 0.001	0.18	2.0	4.0	0.8
1300819	0.3	2.2	0.3	< 0.1	242	< 0.1	< 0.001	0.09	1.5	2.9	0.8
1300820	0.4	2.4	0.4	< 0.1	234	< 0.1	< 0.001	0.12	2.8	3.0	0.9
1300821	0.4	3.0	0.5	< 0.1	131	0.1	< 0.001	0.34	7.0	5.0	1.6
1300822	0.4	3.2	0.5	1.0	85.0	0.7	< 0.001	0.16	3.5	6.4	1.6
1300823	0.5	3.9	0.7	< 0.1	98.3	< 0.1	< 0.001	0.32	2.6	5.3	1.2
1300824	0.2	1.1	0.2	< 0.1	240	< 0.1	< 0.001	0.08	2.0	0.9	0.2
1300825	0.3	1.7	0.3	< 0.1	360	< 0.1	< 0.001	0.10	5.1	1.9	0.4
1300826	0.2	1.7	0.2	< 0.1	302	0.4	< 0.001	0.16	2.9	2.3	0.5
1300827	0.2	1.3	0.2	< 0.1	283	< 0.1	< 0.001	0.08	3.5	1.8	0.4
1300828	0.5	3.3	0.5	0.9	77.0	0.5	< 0.001	0.11	2.1	5.0	1.1
1300829	0.6	4.0	0.6	0.2	84.8	0.3	< 0.001	0.11	1.9	7.2	1.5
1300830	0.5	3.2	0.5	0.8	107	0.7	< 0.001	0.10	3.4	4.9	1.2
1300831	< 0.1	0.2	< 0.1	0.2	286	0.7	< 0.001	0.21	5.6	3.2	0.9
1300832	0.5	3.6	0.5	0.3	137	0.5	< 0.001	0.10	3.1	5.8	1.2
1300833	0.5	3.3	0.5	0.9	83.6	2.3	< 0.001	0.12	3.4	5.7	1.3
1300834	0.6	3.7	0.6	0.6	96.1	1.5	< 0.001	0.16	3.0	5.9	1.1
1300835	0.3	2.5	0.4	0.2	130	0.1	< 0.001	0.06	3.4	4.4	0.8
1300836	0.3	2.0	0.3	< 0.1	180	0.1	< 0.001	0.05	2.7	1.4	0.6
1300837	< 0.1	0.2	< 0.1	< 0.1	321	0.9	< 0.001	0.16	5.4	3.1	0.8
1300838	0.5	3.3	0.5	0.6	129	0.7	< 0.001	0.07	3.2	9.2	1.4
1300839	0.2	1.6	0.2	< 0.1	337	< 0.1	< 0.001	0.44	4.6	2.3	0.5
1300840	0.3	2.0	0.3	0.2	122	0.5	< 0.001	0.11	2.4	4.6	1.0
1300841	0.2	1.3	0.2	< 0.1	101	1.0	< 0.001	0.09	2.6	0.4	0.6
1300842	0.2	1.7	0.3	< 0.1	117	0.7	0.007	< 0.05	4.2	0.5	0.8
1300843	0.3	2.1	0.4	0.3	107	1.1	< 0.001	0.09	4.2	5.1	1.6
1300844	0.3	2.4	0.4	0.6	105	0.9	< 0.001	0.11	5.5	6.7	1.7
1300845	0.6	3.8	0.6	< 0.1	240	< 0.1	< 0.001	0.16	4.1	5.0	1.8
1300846	0.1	1.0	0.1	< 0.1	181	0.2	< 0.001	0.24	3.2	1.8	0.4
1300847	0.2	1.6	0.3	< 0.1	609	0.3	< 0.001	0.13	3.3	4.0	0.7
1300848	0.2	1.4	0.2	0.6	107	0.9	< 0.001	0.11	2.7	4.9	1.0
1300849	2.4	15.7	2.1	2.2	43.0	1.6	< 0.001	0.54	2.8	5.0	2.1
1300850	0.1	1.1	0.2	0.9	74.9	1.1	< 0.001	< 0.05	3.1	1.0	0.7
1300851	0.3	1.7	0.2	< 0.1	400	2.1	< 0.001	0.11	5.0	2.6	0.7
1300852	< 0.1	0.2	< 0.1	< 0.1	253	0.4	< 0.001	0.19	4.5	2.6	0.7



Analyte Symbol	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
1300853	< 0.1	0.3	< 0.1	< 0.1	232	1.4	< 0.001	0.31	3.3	2.9	0.8
1300854	0.1	0.8	0.1	0.1	396	0.3	< 0.001	0.21	2.2	1.0	0.2
1300855	0.2	1.5	0.2	< 0.1	278	0.4	< 0.001	0.11	2.7	2.2	0.6
1300856	< 0.1	0.3	< 0.1	0.2	236	0.5	< 0.001	0.14	4.2	3.0	0.9

Analyte Symbol	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se
Unit Symbol	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	20	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
OREAS 101b (4 Acid) Meas				1.23		2.00			72		897	10.5		8.6	14.5		4.9			44.5	7.61		
OREAS 101b (4 Acid) Cert				1.23		2.36			77		927	10.7		8.2	15		5.2			45	8.1		
OREAS 101b (4 Acid) Meas				1.28		2.19			75		905	10.5		8.4	15.3		5.0			43.7	7.37		
OREAS 101b (4 Acid) Cert				1.23		2.36			77		927	10.7		8.2	15		5.2			45	8.1		
OREAS 98 (4 Acid) Meas																		46.8		132		101	164
OREAS 98 (4 Acid) Cert																		45.1		121		97.2	158
OREAS 98 (4 Acid) Meas																		48.2		136		100.0	186
OREAS 98 (4 Acid) Cert																		45.1		121		97.2	158
OREAS 98 (4 Acid) Meas																		46.8		121		96.1	176
OREAS 98 (4 Acid) Cert																		45.1		121		97.2	158
OREAS 13b (4-Acid) Meas										> 5000				2260				0.93		72.5			
OREAS 13b (4-Acid) Cert										8650.000				2247.000				0.86		75			
OREAS 13b (4-Acid) Meas										> 5000				2190				0.85		66.1			
OREAS 13b (4-Acid) Cert										8650.000				2247.000				0.86		75			
OREAS 13b (4-Acid) Meas										> 5000				2250				0.89		68.4			
OREAS 13b (4-Acid) Cert										8650.000				2247.000				0.86		75			
OREAS 13b (4-Acid) Meas										> 5000				2180				0.95		72.5			
OREAS 13b (4-Acid) Cert										8650.000				2247.000				0.86		75			
OREAS 45d (4-Acid) Meas		20.6	0.09	0.17	7.51	0.45	0.17		171	522	464	13.7	3.3	220	1.3	0.6	0.4		3.61	27.3	0.62	0.32	
OREAS 45d (4-Acid) Cert		21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46		3.910	29.50	0.57	0.31	
OREAS 45d (4-Acid) Meas		21.3	0.09	0.23	7.87	0.44	0.17		120	547	475	14.5	2.1	222	1.4	0.7	0.5		3.81	29.4	0.59	0.31	
OREAS 45d (4-Acid) Cert		21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46		3.910	29.50	0.57	0.31	
OREAS 96 (4 Acid) Meas																		12.0		49.0		28.6	43.3
OREAS 96 (4 Acid) Cert																		11.5		49.9		26.3	40.7
OREAS 96 (4 Acid) Meas																		11.7		50.5		27.8	44.0
OREAS 96 (4 Acid) Cert																		11.5		49.9		26.3	40.7
OREAS 96 (4 Acid) Meas																		11.5		48.1		28.1	43.7
OREAS 96 (4 Acid) Cert																		11.5		49.9		26.3	40.7
OREAS 77b (4 Acid) Meas		17.9	0.40	2.37	1.71	0.36	2.95	1.1	35	344	682	29.3	1.1	> 5000		0.4		1.57	1.99	> 500		3.47	

Analyte Symbol	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se
Unit Symbol	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	20	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
Oreas 77b (4 Acid) Cert		18.8	0.434	2.59	1.94	0.361	3.06	1.20	33.6	280	640	29.9	1.15	113000		0.470		1.62	2.32	1550		3.44	
Oreas 77b (4 Acid) Meas		21.6	0.42	2.56	1.82	0.37	3.04	1.2	29	267	684	27.1	1.1	> 5000		0.5		1.72	2.25	> 500		3.28	
Oreas 77b (4 Acid) Cert		18.8	0.434	2.59	1.94	0.361	3.06	1.20	33.6	280	640	29.9	1.15	113000		0.470		1.62	2.32	1550		3.44	
Oreas 72b (4 Acid) Meas		30.1	0.90	8.62	4.36	1.14	2.61	0.3	66	651	955	6.27	2.4	> 5000		1.0		0.30	3.12	126		0.64	
Oreas 72b (4 Acid) Cert		33.3	1.01	9.59	4.79	1.14	2.79	0.310	73.6	771	1010	6.84	2.51	6860		1.02		0.230	3.37	131		0.680	
OREAS 681 (4 Acid) Meas		13.2	1.59	5.44	8.05	1.47	6.13		243	1560	1310	7.66	1.9	516	2.1	1.4	0.7	0.18	3.90	52.4	1.34	0.10	
OREAS 681 (4 Acid) Cert		13.0	1.61	5.19	7.91	1.35	5.98		253	1640	1310	7.47	1.70	503	1.97	1.41	0.690	0.118	4.02	51.0	1.37	0.0980	
OREAS 147 (4 Acid) Meas		> 400	0.98	0.53	5.16	1.66	1.08		43	51	390	3.26	0.4	29.0	2.7	33.8			> 100	7.0	9.49	13.1	
OREAS 147 (4 Acid) Cert		2260	0.948	0.535	4.90	1.60	1.09		60.0	57.0	390	3.23	2.99	21.2	3.00	31.2			238	6.90	10.4	12.5	
OREAS 147 (4 Acid) Meas		> 400	0.91	0.54	4.76	1.62	1.04		42	55	363	3.14	1.2	21.2	2.6	30.5			> 100	6.4	9.84	12.6	
OREAS 147 (4 Acid) Cert		2260	0.948	0.535	4.90	1.60	1.09		60.0	57.0	390	3.23	2.99	21.2	3.00	31.2			238	6.90	10.4	12.5	
Oreas 521 (4 Acid) Meas		15.3	0.91	1.14	4.72	3.00	3.83		219	43	3170	19.7	3.2	68.5	2.0	0.8	0.7	0.89	0.73	355	1.59	5.83	1.9
Oreas 521 (4 Acid) Cert		16.4	0.98	1.13	4.77	3.16	3.86		209	31	3210	20.7	3.2	73.0	2.1	0.9	0.7	0.89	0.72	386	1.64	5.85	2.4
Oreas 521 (4 Acid) Meas		16.3	0.94	1.06	4.52	3.25	3.87		198	34	3270	20.0	3.2	71.6	2.2	0.9	0.8	0.82	0.67	395	1.60	6.09	1.9
Oreas 521 (4 Acid) Cert		16.4	0.98	1.13	4.77	3.16	3.86		209	31	3210	20.7	3.2	73.0	2.1	0.9	0.7	0.89	0.72	386	1.64	5.85	2.4
Oreas 521 (4 Acid) Meas		16.5	0.99	1.16	4.68	3.52	4.11		233	38	3410	21.4	3.3	77.0	2.2	0.9	0.8	0.92	0.68	426	1.72	6.13	2.4
Oreas 521 (4 Acid) Cert		16.4	0.98	1.13	4.77	3.16	3.86		209	31	3210	20.7	3.2	73.0	2.1	0.9	0.7	0.89	0.72	386	1.64	5.85	2.4
Oreas 521 (4 Acid) Meas		17.3	0.95	1.18	4.74	3.37	3.88		230	49	3150	19.8	3.5	69.3	2.4	0.9	0.8	0.99	0.74	362	1.60	5.84	1.2
Oreas 521 (4 Acid) Cert		16.4	0.98	1.13	4.77	3.16	3.86		209	31	3210	20.7	3.2	73.0	2.1	0.9	0.7	0.89	0.72	386	1.64	5.85	2.4
OREAS 70b (4 Acid) Meas		33.6	0.79	13.2	3.77	0.63	3.16	0.4	56		1230	5.75	1.8	2170		1.0		0.22	3.41	79.1		0.80	
OREAS 70b (4 Acid) Cert		34.4	0.77	13.4	3.87	0.62	3.05	0.4	67		1150	5.52	1.9	2180		1.0		0.17	3.44	78.0		0.84	
OREAS 620 (4 Acid) Meas		20.0	1.84	0.35	6.31	2.28	1.58	169	21	16	396	2.98	5.3	14.0		2.3		38.8	4.91	12.6		1.93	
OREAS 620 (4 Acid) Cert		20.0	1.94	0.34	6.72	2.63	1.60	163	21	22	440	2.94	5.6	15.2		2.4		38.5	5.01	12.1		1.93	
OREAS 620 (4 Acid) Meas		20.3	1.95	0.26	7.03	2.01	1.63	158	22	27	435	2.90	5.5	13.4		2.4		37.5	5.02	12.7		1.98	
OREAS 620 (4 Acid) Cert		20.0	1.94	0.34	6.72	2.63	1.60	163	21	22	440	2.94	5.6	15.2		2.4		38.5	5.01	12.1		1.93	
OREAS 620 (4 Acid) Meas		22.6	2.00	0.27	7.19	1.80	1.72	159	23	25	460	3.06	5.7	14.4		2.5		38.7	5.07	12.8		2.01	
OREAS 620 (4 Acid) Cert		20.0	1.94	0.34	6.72	2.63	1.60	163	21	22	440	2.94	5.6	15.2		2.4		38.5	5.01	12.1		1.93	
OREAS 753 (4 Acid) Meas		> 400	2.23	0.01	9.30	2.12	0.12	1.7	3	16	711	0.88	0.9	11.0	< 0.1	112	< 0.1		65.1	1.0		2.28	
OREAS 753 (4 Acid) Cert		9850.00	2.16	0.011	8.22	1.93	0.113	1.54	1.16	20.8	740.000	0.839	1.06	10.8	0.048	118	0.017		64	0.96		2.20	

Analyte Symbol	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se
Unit Symbol	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	20	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
OREAS 753 (4 Acid) Meas		> 400	2.14	< 0.01	7.74	2.10	0.11	1.7	2	15	696	0.89	0.9	11.3	< 0.1	102	< 0.1		64.2	1.0		2.24	
OREAS 753 (4 Acid) Cert		9850.00	2.16	0.011	8.22	1.93	0.113	1.54	1.16	20.8	740.000	0.839	1.06	10.8	0.048	118	0.017		64	0.96		2.20	
OREAS 753 (4 Acid) Meas		> 400	2.25	< 0.01	8.11	1.35	0.12	1.9	2	20	716	0.70	0.9	11.7	< 0.1	114	< 0.1		61.3	0.9		2.29	
OREAS 753 (4 Acid) Cert		9850.00	2.16	0.011	8.22	1.93	0.113	1.54	1.16	20.8	740.000	0.839	1.06	10.8	0.048	118	0.017		64	0.96		2.20	
OREAS 753 (4 Acid) Meas		> 400	2.16	0.01	7.93	1.53	0.12	1.4	2	17	701	0.89	1.0	11.4	< 0.1	118	< 0.1		64.3	0.9		2.29	
OREAS 753 (4 Acid) Cert		9850.00	2.16	0.011	8.22	1.93	0.113	1.54	1.16	20.8	740.000	0.839	1.06	10.8	0.048	118	0.017		64	0.96		2.20	
1300764 Orig	< 20	34.2	2.20	1.65	8.78	1.54	4.60	0.2	118	25	1170	6.46	0.8	26.6	1.3	0.9	0.5	0.12	1.54	20.9	1.34	0.25	0.4
1300764 Dup	< 20	33.1	2.09	1.68	8.48	1.76	4.23	0.2	110	21	1170	6.45	0.8	27.2	1.3	1.0	0.5	0.12	1.51	20.5	1.34	0.24	0.4
1300774 Orig	< 20	13.7	> 3.00	0.62	6.46	0.72	0.50	< 0.1	18	10	164	1.85	4.3	3.6	0.3	0.7	0.1	0.07	0.33	4.5	0.37	< 0.02	< 0.1
1300774 Dup	< 20	13.9	> 3.00	0.65	7.53	0.76	0.56	< 0.1	19	8	162	1.89	4.3	3.2	0.4	0.7	0.2	0.07	0.35	4.4	0.55	0.02	< 0.1
1300785 Orig	< 20	6.1	> 3.00	0.14	5.95	1.02	0.39	< 0.1	4	28	175	2.83	5.2	3.6	4.7	1.3	1.4	0.30	0.39	6.1	1.03	0.08	0.4
1300785 Dup	< 20	6.0	> 3.00	0.14	6.09	1.04	0.40	< 0.1	4	15	168	2.80	5.2	3.3	4.4	1.3	1.3	0.28	0.38	5.8	1.02	0.08	0.4
1300798 Orig	< 20	20.7	2.73	1.60	8.19	0.99	4.39	< 0.1	49	25	1110	6.28	0.9	22.5	2.2	0.9	0.8	0.07	1.39	24.0	1.32	0.12	0.1
1300798 Dup	< 20	20.2	2.76	1.69	8.47	1.00	4.39	< 0.1	57	22	1080	6.21	1.0	21.0	2.2	0.8	0.8	0.07	1.37	23.9	1.29	0.12	< 0.1
1300800 Orig	< 20	19.6	1.83	1.46	9.19	0.04	7.65	< 0.1	98	22	1200	7.78	0.8	19.2	2.0	0.4	0.7	< 0.05	0.16	16.6	1.46	0.07	0.2
1300800 Split PREP DUP	< 20	18.0	1.86	1.37	9.01	0.04	7.72	0.1	95	15	1100	7.23	0.9	19.5	2.0	0.4	0.6	< 0.05	0.15	15.9	1.45	0.07	< 0.1
1300815 Orig	< 20	27.3	2.27	3.95	8.95	1.39	4.75	< 0.1	110	158	941	5.84	2.7	149	1.6	0.7	0.5	0.07	2.21	30.9	0.86	0.07	< 0.1
1300815 Dup	< 20	28.0	2.22	3.79	9.09	1.43	4.68	< 0.1	113	190	975	6.05	2.7	157	1.5	0.6	0.5	< 0.05	2.20	31.6	0.84	0.07	< 0.1
1300827 Orig	< 20	15.9	2.27	2.90	9.53	0.67	5.95	< 0.1	109	78	942	5.55	0.8	87.4	1.4	0.5	0.5	0.07	0.66	26.8	0.75	0.06	< 0.1
1300827 Dup	< 20	16.5	2.42	2.85	9.02	0.68	6.15	0.1	127	96	985	5.61	0.9	84.3	1.4	0.5	0.4	0.09	0.67	27.0	0.77	0.06	< 0.1
1300843 Orig	< 20	8.3	> 3.00	0.07	6.33	0.78	0.45	< 0.1	8	18	213	2.46	5.8	3.8	1.6	1.3	0.5	0.20	0.78	3.5	1.00	0.51	< 0.1
1300843 Dup	< 20	8.5	> 3.00	0.07	6.69	0.79	0.46	< 0.1	10	19	220	2.48	5.9	3.8	1.7	1.2	0.5	0.28	0.74	3.3	1.00	0.44	< 0.1
1300850 Orig	< 20	5.8	> 3.00	0.06	6.08	0.58	0.13	< 0.1	13	21	60	2.44	4.6	1.3	1.0	1.0	0.3	0.45	0.32	1.0	0.39	0.14	< 0.1
1300850 Split PREP DUP	< 20	5.5	> 3.00	0.07	5.83	0.56	0.12	< 0.1	12	21	60	2.31	4.7	1.2	1.0	1.0	0.3	0.45	0.32	0.9	0.40	0.15	< 0.1
1300853 Orig	< 20	19.1	2.96	0.39	7.29	1.67	1.24	< 0.1	23	14	323	1.59	2.8	4.0	0.4	0.9	0.1	0.17	1.81	4.1	0.51	0.08	< 0.1
1300853 Dup	< 20	20.1	> 3.00	0.39	7.92	1.70	1.35	< 0.1	26	15	335	1.68	2.8	3.8	0.5	1.0	0.1	0.17	1.76	4.3	0.53	0.08	< 0.1
Method Blank	< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	9	13	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	0.2
Method Blank	< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	2	7	12	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	< 0.1
Method Blank	< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	8	8	< 0.01	< 0.1	1.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	< 0.1
Method Blank	< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	3	15	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	< 0.1
Method Blank	< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	2	6	11	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	0.5
Method Blank	< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	2	5	7	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	0.7
Method Blank	< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	2	3	13	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	0.5
Method Blank	< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	1	8	11	< 0.01	< 0.1	< 0.5	< 0.1	0.2	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	0.9

Analyte Symbol	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu	Ge
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
OREAS 101b (4 Acid) Meas					130			19.7						897	1430	139	372	41.8	36.3	4.7	25.6	406	
OREAS 101b (4 Acid) Cert					133			20.1						754	1325	127	388	48	40	5.4	27	412	
OREAS 101b (4 Acid) Meas					126			19.6						732	1330	126	399	46.9	38.0	4.4	25.7	413	
OREAS 101b (4 Acid) Cert					133			20.1						754	1325	127	388	48	40	5.4	27	412	
OREAS 98 (4 Acid) Meas	1400									> 200	10.1											> 10000	
OREAS 98 (4 Acid) Cert	1360									206	20.1											14800 0.0	
OREAS 98 (4 Acid) Meas	1550									> 200	9.5											> 10000	
OREAS 98 (4 Acid) Cert	1360									206	20.1											14800 0.0	
OREAS 98 (4 Acid) Meas	1420									> 200	6.2											> 10000	
OREAS 98 (4 Acid) Cert	1360									206	20.1											14800 0.0	
OREAS 13b (4-Acid) Meas	142		54.1					9.12														2350	
OREAS 13b (4-Acid) Cert	133		57					9.00														2327.0 000	
OREAS 13b (4-Acid) Meas	131		53.6					8.80														2180	
OREAS 13b (4-Acid) Cert	133		57					9.00														2327.0 000	
OREAS 13b (4-Acid) Meas	134		55.7					8.98														2240	
OREAS 13b (4-Acid) Cert	133		57					9.00														2327.0 000	
OREAS 13b (4-Acid) Meas	147		53.5					8.93														2290	
OREAS 13b (4-Acid) Cert	133		57					9.00														2327.0 000	
OREAS 45d (4-Acid) Meas	42.3	18.7	11.2	42.8	9.5	121	4.1	1.22	< 0.1	1	< 0.1		187	17.0	33.9	3.6	12.8	3.0	2.3	0.4	2.1	338	
OREAS 45d (4-Acid) Cert	45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26	371	
OREAS 45d (4-Acid) Meas	46.8	22.6	5.2	44.7	10.7	78	0.5	0.81	< 0.1	< 1	< 0.1		185	16.3	37.3	3.7	14.9	2.9	2.4	0.4	2.4	356	
OREAS 45d (4-Acid) Cert	45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26	371	
OREAS 96 (4 Acid) Meas	463									69	4.2											> 10000	
OREAS 96 (4 Acid) Cert	457									65.6	5.09											39300	
OREAS 96 (4 Acid) Meas	482									63	5.2											> 10000	
OREAS 96 (4 Acid) Cert	457									65.6	5.09											39300	
OREAS 96 (4 Acid) Meas	480									62	5.4											> 10000	
OREAS 96 (4 Acid) Cert	457									65.6	5.09											39300	
Oreas 77b (4 Acid) Meas	211	4.3	1780	19.4	6.3	38	3.2		0.1	2	3.7	1.0	17	16.4	26.5							3420	

Analyte Symbol	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu	Ge
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
Oreas 77b (4 Acid) Cert	205	4.61	2050	19.1	6.55	37.9	3.26		0.112	1.59	9.100	1.35	118	15.8	27.7								3430
Oreas 77b (4 Acid) Meas	215	4.2	1670	19.1	6.7	40	3.2		0.1	2	10.5	1.5	39	14.4	26.8								3300
Oreas 77b (4 Acid) Cert	205	4.61	2050	19.1	6.55	37.9	3.26		0.112	1.59	9.100	1.35	118	15.8	27.7								3430
Oreas 72b (4 Acid) Meas	105	10.7	136	48.1	11.7	85	6.0	4.16	< 0.1	1	1.0	< 0.1	211	22.7	42.7					0.4			212
Oreas 72b (4 Acid) Cert	99.0	11.7	146	50.8	12.8	88.0	5.50	4.01	0.0490	1.43	0.870	0.0920	330	24.4	43.6					0.440			222
OREAS 681 (4 Acid) Meas	88.2	14.8		81.4	17.7	65	6.8	1.67	< 0.1	2	0.3		489	18.8	39.3	5.4	21.6	4.7	4.1	0.6	3.3		262
OREAS 681 (4 Acid) Cert	88.0	17.6		80.0	17.5	58.0	6.17	1.38	0.0420	1.89	0.240		442	18.8	40.6	5.32	21.9	4.82	4.06	0.580	3.40		264
OREAS 147 (4 Acid) Meas	152	13.4	15.8	1210	24.8	17	78.7	2.89	2.5		1.4		2030	656	1150	115		44.2	26.0	2.1	8.6	302	0.3
OREAS 147 (4 Acid) Cert	138	22.6	36.0	1160	26.3	105	1110	7.99	2.61		10.6		1940	663	1110	121		48.7	24.2	2.35	9.20	298	0.750
OREAS 147 (4 Acid) Meas	143	14.4	19.1	1190	24.8	48	208	3.92	2.7		3.0		2000	653	1140	114		42.0	26.2	2.0	7.9	290	0.6
OREAS 147 (4 Acid) Cert	138	22.6	36.0	1160	26.3	105	1110	7.99	2.61		10.6		1940	663	1110	121		48.7	24.2	2.35	9.20	298	0.750
Oreas 521 (4 Acid) Meas	23.5	16.8	311	99.4	17.8	126	6.2	134	0.2	8	4.6	0.8		64.6	88.9	7.6	24.7	3.5	4.2	0.6	3.6		5700
Oreas 521 (4 Acid) Cert	24.4	17.4	336	98.0	19.9	123	5.6	138	0.2	7	5.7	0.8		139	123	8.4	25.4	4.2	4.0	0.6	3.5		6070
Oreas 521 (4 Acid) Meas	26.6	16.6	265	101	19.0	125	2.1	127	0.2	7	3.6	0.2		87.6	97.1	7.6	24.2	3.2	4.1	0.6	3.4		6070
Oreas 521 (4 Acid) Cert	24.4	17.4	336	98.0	19.9	123	5.6	138	0.2	7	5.7	0.8		139	123	8.4	25.4	4.2	4.0	0.6	3.5		6070
Oreas 521 (4 Acid) Meas	30.0	17.0	331	107	19.2	131	5.4	146	0.2	7	3.3	0.4		76.8	96.4	8.4	24.7	4.8	4.4	0.6	3.6		6410
Oreas 521 (4 Acid) Cert	24.4	17.4	336	98.0	19.9	123	5.6	138	0.2	7	5.7	0.8		139	123	8.4	25.4	4.2	4.0	0.6	3.5		6070
Oreas 521 (4 Acid) Meas	26.1	17.1	323	104	19.1	128	6.7	150	0.2	7	6.3	0.8		58.2	81.6	7.2	25.8	4.4	4.2	0.6	3.7		5820
Oreas 521 (4 Acid) Cert	24.4	17.4	336	98.0	19.9	123	5.6	138	0.2	7	5.7	0.8		139	123	8.4	25.4	4.2	4.0	0.6	3.5		6070
OREAS 70b (4 Acid) Meas	120	9.2	151		9.5	70	3.9	3.53	< 0.1	1	0.6		212	14.4	27.0								52.8
OREAS 70b (4 Acid) Cert	112	10	148		9.8	66	3.7	3.30	0.05	1	0.6		202	15.3	28.2								52.0
OREAS 620 (4 Acid) Meas	> 10000	25.2	50.7	100.0	12.5	193	13.4	8.74	1.1	5	11.3		58	27.7	60.3					0.6			1740
OREAS 620 (4 Acid) Cert	31500	23.7	50.0	116	12.3	202	13.1	9.47	1.1	5	76.0		2500	29.7	64.0					0.6			1730
OREAS 620 (4 Acid) Meas	> 10000	22.7	54.6	109	12.5	213	12.7	8.78	1.2	5	22.9		96	32.7	67.5					0.6			1720
OREAS 620 (4 Acid) Cert	31500	23.7	50.0	116	12.3	202	13.1	9.47	1.1	5	76.0		2500	29.7	64.0					0.6			1730
OREAS 620 (4 Acid) Meas	> 10000	23.7	55.3	102	12.9	214	11.1	8.78	1.2	5	17.1		55	31.0	67.1					0.6			1810
OREAS 620 (4 Acid) Cert	31500	23.7	50.0	116	12.3	202	13.1	9.47	1.1	5	76.0		2500	29.7	64.0					0.6			1730
OREAS 753 (4 Acid) Meas	97.3	16.7	6.0	671	0.6	13	26.3	3.18		87	0.3		18	0.3			0.3					0.1	22.7
OREAS 753 (4 Acid) Cert	87	16.1	5.33	612	0.65	11.4	36.3	3.32		84	0.27		18.2	0.36			0.28					0.15	18.4

Analyte Symbol	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu	Ge
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
OREAS 753 (4 Acid) Meas	89.2	16.7	5.8	610	0.6	10	28.0	3.33		84	0.3		18	0.2			0.2				0.1	27.2	
OREAS 753 (4 Acid) Cert	87	16.1	5.33	612	0.65	11.4	36.3	3.32		84	0.27		18.2	0.36			0.28				0.15	18.4	
OREAS 753 (4 Acid) Meas	82.8	14.7	5.9	538	0.6	10	14.2	3.09		73	0.2		16	0.3			0.2				0.1	17.9	
OREAS 753 (4 Acid) Cert	87	16.1	5.33	612	0.65	11.4	36.3	3.32		84	0.27		18.2	0.36			0.28				0.15	18.4	
OREAS 753 (4 Acid) Meas	91.5	15.9	4.8	504	0.6	11	29.6	3.08		76	0.3		17	0.3			0.3				0.1	18.0	
OREAS 753 (4 Acid) Cert	87	16.1	5.33	612	0.65	11.4	36.3	3.32		84	0.27		18.2	0.36			0.28				0.15	18.4	
1300764 Orig	136	23.5	2.7	67.1	11.8	21	< 0.1	0.21	< 0.1	< 1	< 0.1	< 0.1	408	19.7	45.1	5.4	25.1	4.7	3.8	0.5	2.5	159	< 0.1
1300764 Dup	134	24.3	2.3	72.0	12.1	23	< 0.1	0.17	< 0.1	< 1	< 0.1	< 0.1	408	19.8	44.6	5.5	25.5	4.9	3.8	0.5	2.5	157	< 0.1
1300774 Orig	49.2	18.8	0.3	16.4	3.2	172	6.0	0.51	< 0.1	< 1	< 0.1	< 0.1	208	8.1	23.8	1.9	6.8	1.5	1.0	0.1	0.7	1.9	< 0.1
1300774 Dup	46.5	19.1	0.3	19.2	4.1	170	5.7	0.43	< 0.1	< 1	< 0.1	< 0.1	215	13.7	30.3	2.8	11.2	1.9	1.4	0.2	0.9	1.8	< 0.1
1300785 Orig	26.6	15.7	0.6	24.0	37.8	153	13.9	0.62	< 0.1	2	< 0.1	< 0.1	451	30.3	81.9	7.9	32.0	5.8	5.6	0.9	6.4	23.6	< 0.1
1300785 Dup	25.7	15.1	0.7	23.7	37.1	156	13.9	0.60	< 0.1	2	< 0.1	< 0.1	441	29.7	80.5	7.7	31.9	5.7	5.3	0.9	6.5	22.6	< 0.1
1300798 Orig	94.8	19.7	1.0	36.2	20.2	23	0.1	0.11	< 0.1	< 1	< 0.1	< 0.1	289	20.0	45.0	5.4	23.7	4.6	4.3	0.6	3.9	41.9	0.1
1300798 Dup	95.5	19.6	0.1	36.0	19.8	24	0.3	0.13	< 0.1	< 1	< 0.1	< 0.1	286	19.6	45.3	5.4	23.3	4.6	4.2	0.6	3.6	40.8	0.1
1300800 Orig	96.9	27.6	1.5	1.3	17.8	18	1.3	0.25	< 0.1	< 1	< 0.1	< 0.1	16	20.1	50.4	6.2	25.8	4.6	3.9	0.5	3.3	17.5	0.3
1300800 Split PREP DUP	90.1	26.4	0.9	1.1	17.0	21	0.4	0.16	< 0.1	< 1	< 0.1	< 0.1	15	19.8	49.2	6.3	25.5	4.1	3.6	0.5	3.2	16.7	0.1
1300815 Orig	79.8	18.1	0.6	74.5	14.0	104	3.8	1.01	< 0.1	< 1	< 0.1	< 0.1	185	12.2	28.2	3.5	14.9	2.9	2.8	0.4	2.7	2.1	0.6
1300815 Dup	78.2	18.3	1.5	72.8	13.1	100	1.6	0.72	< 0.1	< 1	< 0.1	< 0.1	184	12.3	27.8	3.4	14.8	2.6	2.7	0.4	2.6	2.3	0.1
1300827 Orig	76.0	19.6	< 0.1	16.8	11.2	18	1.4	0.48	< 0.1	< 1	< 0.1	< 0.1	149	9.2	20.3	2.4	10.2	2.2	2.1	0.3	2.1	24.6	0.5
1300827 Dup	78.7	19.6	< 0.1	17.5	11.7	20	3.6	0.97	< 0.1	< 1	< 0.1	< 0.1	153	9.4	20.7	2.5	10.6	2.0	2.2	0.3	2.3	23.6	0.5
1300843 Orig	20.6	18.0	1.4	28.2	12.9	175	8.0	3.51	< 0.1	3	< 0.1	< 0.1	269	48.1	104	11.8	48.5	8.3	5.5	0.6	2.7	31.9	0.1
1300843 Dup	20.9	18.1	1.3	28.7	12.9	184	15.5	4.89	< 0.1	3	0.1	< 0.1	276	49.4	107	12.1	49.7	9.2	5.6	0.6	2.8	28.6	0.2
1300850 Orig	19.3	18.3	< 0.1	15.5	7.0	133	18.8	1.56	< 0.1	2	< 0.1	< 0.1	317	1.4	4.2	0.7	3.8	1.0	1.2	0.2	1.5	60.2	< 0.1
1300850 Split PREP DUP	19.5	17.4	< 0.1	16.5	7.4	136	19.0	1.35	< 0.1	2	< 0.1	< 0.1	320	1.5	4.6	0.7	3.6	1.1	1.1	0.2	1.5	59.9	< 0.1
1300853 Orig	78.2	19.4	0.2	57.8	4.4	98	3.5	0.57	< 0.1	< 1	< 0.1	0.1	500	17.4	34.1	3.5	13.0	1.9	1.5	0.2	0.8	9.6	< 0.1
1300853 Dup	79.7	20.3	< 0.1	58.1	4.5	98	3.6	1.03	< 0.1	< 1	< 0.1	0.1	501	17.5	35.2	3.5	13.4	2.0	1.5	0.2	0.9	9.4	0.1
Method Blank	0.7	< 0.1	0.7	< 0.2	< 0.1	1	< 0.1	0.11	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.5	< 0.1
Method Blank	< 0.2	< 0.1	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.16	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.5	< 0.1
Method Blank	1.6	< 0.1	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.4	< 0.1
Method Blank	0.8	< 0.1	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.06	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.6	< 0.1
Method Blank	0.3	0.1	< 0.1	< 0.2	< 0.1	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.4	< 0.1
Method Blank	0.7	< 0.1	< 0.1	< 0.2	< 0.1	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1
Method Blank	< 0.2	0.1	< 0.1	< 0.2	< 0.1	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1
Method Blank	1.0	0.2	0.8	< 0.2	< 0.1	< 1	< 0.1	0.13	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1.6	< 0.1

Analyte Symbol	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
OREAS 101b (4 Acid) Meas	1.9	12.6	1.9						23.5	39.8	404
OREAS 101b (4 Acid) Cert	2.08	13.9	1.96						23	36.4	387
OREAS 101b (4 Acid) Meas	2.0	13.0	1.8						24.0	37.1	395
OREAS 101b (4 Acid) Cert	2.08	13.9	1.96						23	36.4	387
OREAS 98 (4 Acid) Meas									337		
OREAS 98 (4 Acid) Cert									345		
OREAS 98 (4 Acid) Meas									363		
OREAS 98 (4 Acid) Cert									345		
OREAS 98 (4 Acid) Meas									355		
OREAS 98 (4 Acid) Cert									345		
OREAS 13b (4-Acid) Meas											
OREAS 13b (4-Acid) Cert											
OREAS 13b (4-Acid) Meas											
OREAS 13b (4-Acid) Cert											
OREAS 13b (4-Acid) Meas											
OREAS 13b (4-Acid) Cert											
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OREAS 13b (4-Acid) Cert											
OREAS 13b (4-Acid) Meas											
OREAS 13b (4-Acid) Cert											
OREAS 45d (4-Acid) Meas		1.3	0.2	< 0.1	30.7	0.2		0.25	21.2	14.1	2.5
OREAS 45d (4-Acid) Cert		1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 45d (4-Acid) Meas		1.4	0.2	< 0.1	33.9	0.2		0.25	22.3	14.9	2.7
OREAS 45d (4-Acid) Cert		1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 96 (4 Acid) Meas									102		
OREAS 96 (4 Acid) Cert									101		
OREAS 96 (4 Acid) Meas									105		
OREAS 96 (4 Acid) Cert									101		
OREAS 96 (4 Acid) Meas									106		
OREAS 96 (4 Acid) Cert									101		
Oreas 77b (4 Acid) Meas				0.2	32.5	3.0	0.022	1.36	55.8	6.9	1.8



Analyte Symbol	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
Oreas 77b (4 Acid) Cert				0.280	34.4	3.07	0.0220	1.37	61.0	6.61	1.71
Oreas 77b (4 Acid) Meas				0.3	34.8	3.0	0.018	1.36	59.8	6.0	1.7
Oreas 77b (4 Acid) Cert				0.280	34.4	3.07	0.0220	1.37	61.0	6.61	1.71
Oreas 72b (4 Acid) Meas				0.4	64.4	4.7		0.35	15.0	10.5	4.5
Oreas 72b (4 Acid) Cert				0.430	63.8	4.00		0.350	14.9	11.3	4.68
OREAS 681 (4 Acid) Meas	0.3	1.7	0.3	0.4	496	1.2			9.7	7.3	1.4
OREAS 681 (4 Acid) Cert	0.280	1.77	0.270	0.420	478	1.09			10.2	6.55	1.44
OREAS 147 (4 Acid) Meas	0.3	1.4	0.2	1.0	303			11.7	31.5	101	17.0
OREAS 147 (4 Acid) Cert	0.270	1.46	0.200	17.8	299			10.8	27.8	93.0	15.8
OREAS 147 (4 Acid) Meas	0.3	1.4	0.2	2.8	302			11.5	30.1	97.8	15.7
OREAS 147 (4 Acid) Cert	0.270	1.46	0.200	17.8	299			10.8	27.8	93.0	15.8
Oreas 521 (4 Acid) Meas	0.3	2.0	0.3	0.4	84.3	94.8	0.066	0.27	7.4	5.7	29.9
Oreas 521 (4 Acid) Cert	0.3	2.1	0.3	0.5	158	92.0	0.064	0.27	9.3	8.3	31.0
Oreas 521 (4 Acid) Meas	0.3	2.0	0.3	< 0.1	93.1	25.8	0.063	0.27	7.1	3.5	30.6
Oreas 521 (4 Acid) Cert	0.3	2.1	0.3	0.5	158	92.0	0.064	0.27	9.3	8.3	31.0
Oreas 521 (4 Acid) Meas	0.3	2.1	0.4	0.2	96.0	56.5	0.068	0.28	7.8	5.1	31.9
Oreas 521 (4 Acid) Cert	0.3	2.1	0.3	0.5	158	92.0	0.064	0.27	9.3	8.3	31.0
Oreas 521 (4 Acid) Meas	0.3	2.0	0.3	0.4	81.3	95.5	0.065	0.29	9.1	5.4	31.2
Oreas 521 (4 Acid) Cert	0.3	2.1	0.3	0.5	158	92.0	0.064	0.27	9.3	8.3	31.0
OREAS 70b (4 Acid) Meas				0.2	79.1	4.3		0.34	13.8	6.5	1.6
OREAS 70b (4 Acid) Cert				0.3	74.0	4.9		0.33	13.7	6.9	1.7
OREAS 620 (4 Acid) Meas		0.7	< 0.1	0.2	107	1.9		1.61	> 5000	7.1	3.8
OREAS 620 (4 Acid) Cert		0.7	0.1	1	131	2.2		1.61	7740	11	4.2
OREAS 620 (4 Acid) Meas		0.7	< 0.1	< 0.1	116	1.3		1.63	> 5000	8.9	4.1
OREAS 620 (4 Acid) Cert		0.7	0.1	1	131	2.2		1.61	7740	11	4.2
OREAS 620 (4 Acid) Meas		0.7	0.1	< 0.1	106	1.4		1.65	> 5000	8.0	4.2
OREAS 620 (4 Acid) Cert		0.7	0.1	1	131	2.2		1.61	7740	11	4.2
OREAS 753 (4 Acid) Meas				7.0	22.7	5.4		3.77	12.1	0.2	4.4
OREAS 753 (4 Acid) Cert				20.0	25.5	5.62		3.67	10.9	0.26	5.83

Analyte Symbol	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
OREAS 753 (4 Acid) Meas				8.0	23.0	5.5		3.76	10.7	0.2	4.0
OREAS 753 (4 Acid) Cert				20.0	25.5	5.62		3.67	10.9	0.26	5.83
OREAS 753 (4 Acid) Meas				3.7	22.1	4.1		3.63	11.2	0.2	4.1
OREAS 753 (4 Acid) Cert				20.0	25.5	5.62		3.67	10.9	0.26	5.83
OREAS 753 (4 Acid) Meas				12.3	23.7	5.1		3.72	12.1	0.2	4.8
OREAS 753 (4 Acid) Cert				20.0	25.5	5.62		3.67	10.9	0.26	5.83
1300764 Orig	0.2	1.3	0.2	< 0.1	239	< 0.1	0.001	0.39	2.8	2.2	0.6
1300764 Dup	0.2	1.3	0.2	< 0.1	248	0.5	< 0.001	0.39	2.7	2.5	0.6
1300774 Orig	< 0.1	0.2	< 0.1	0.4	139	0.4	< 0.001	0.08	2.3	1.6	0.6
1300774 Dup	< 0.1	0.3	< 0.1	0.4	155	0.5	< 0.001	0.09	2.3	2.7	0.8
1300785 Orig	0.7	4.7	0.7	0.7	120	0.6	< 0.001	0.06	3.5	7.1	0.9
1300785 Dup	0.6	4.6	0.7	0.7	115	0.6	< 0.001	0.07	3.4	7.1	0.9
1300798 Orig	0.3	2.1	0.3	< 0.1	316	< 0.1	< 0.001	0.15	4.7	3.9	0.8
1300798 Dup	0.3	2.1	0.3	< 0.1	313	< 0.1	< 0.001	0.15	4.7	3.5	0.8
1300800 Orig	0.3	1.9	0.3	< 0.1	594	< 0.1	< 0.001	< 0.05	6.1	2.6	0.6
1300800 Split PREP DUP	0.3	2.0	0.3	< 0.1	587	0.1	< 0.001	< 0.05	6.1	2.4	0.6
1300815 Orig	0.2	1.5	0.2	0.2	314	0.3	< 0.001	0.24	1.9	2.0	0.5
1300815 Dup	0.2	1.4	0.2	< 0.1	306	< 0.1	< 0.001	0.23	2.2	2.1	0.5
1300827 Orig	0.2	1.2	0.2	< 0.1	276	< 0.1	< 0.001	0.08	3.5	1.8	0.4
1300827 Dup	0.2	1.3	0.2	0.2	290	0.3	< 0.001	0.08	3.5	1.7	0.4
1300843 Orig	0.3	2.1	0.4	0.1	107	1.1	< 0.001	0.09	4.2	5.1	1.6
1300843 Dup	0.3	2.0	0.4	0.4	107	1.2	0.003	0.09	4.2	5.1	1.6
1300850 Orig	0.1	1.1	0.2	0.9	74.9	1.1	< 0.001	< 0.05	3.1	1.0	0.7
1300850 Split PREP DUP	0.1	1.1	0.2	0.9	73.6	3.3	< 0.001	< 0.05	3.1	1.0	0.8
1300853 Orig	< 0.1	0.3	< 0.1	< 0.1	231	1.4	< 0.001	0.31	3.3	2.8	0.7
1300853 Dup	< 0.1	0.3	< 0.1	< 0.1	234	1.4	< 0.001	0.32	3.4	2.9	0.8
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	0.3	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	0.5	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1