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ASSESSMENT REPORT

May 3, 2022

Manitou Project – 2021 Prospecting Program

For: Cross River Ventures Corp.
800 West Pender Street
Suite 1430
Vancouver BC
V6C 1J8

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Bayside Geoscience Inc.
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Contents

Assessment Report

MANITOU PROJECT – 2021 PROSPECTING PROGRAM

INTRODUCTION

Between May 12th and May 27th, 2021, Cross River Ventures initiated a prospecting and mapping program on their 100% owned Manitou Project, located in the Kenora Mining District, Ontario Canada. Cross River contracted Bayside Geoscience to complete the program which was staffed by a team of 4 personnel: Joseph Suk (Geologist in Training), Daniel Barrett (Geologist in Training), Carson Gdanski (Field Assistant) and Myles Harding (Field Assistant). Steven Flank, P.Geo, did regular site visits, oversaw all operations remotely and was responsible for final data compilation, interpretation and the technical contents of this report.

Three general target areas were investigated to follow up on historic mineral occurrences as well as structural and geological targets generated by Cross River's technical management team:

- Queen Alexandra Mine
- Reliance Shear
- Western Claims

A total of 207 outcrop stations were recorded and 83 grab samples were collected by the team during the work program. The team located and sampled a series of historic pits and mineshafts on the property and returned 6 samples that contained greater than 1 g/t from the historic Queen Alexadra Mine site.

The co-ordinate system used throughout this report is in UTM NAD 83 Zone 15U

1. LOCATION AND ACCESS

The Manitou Property is located within the Kenora Mining Division in northwestern Ontario (NTS 52 F/07 and O/12), approximately 50 km south of Dryden and 120 km north of Fort Frances (Figure 1).

The Manitou Property is accessible by land vehicle. The directions from Thunder Bay, Ontario to the property are as follows: Take HWY 11 westward and turn off onto HWY 502 northbound. Continue north and turn west on Cedar Narrows Road. Follow along Cedar Narrows Road for 120km and turn east on Lost Axe Road. The property is located approximately 20km along Lost Axe Road.

The crew's campsite was setup near the intersection of Cedar Narrows Road and Lost Axe Road in a large clearing near a small lake.

There is limited access into the property as it can only be accessed by an ATV or a vehicle similar. A

washout, located one kilometer away from the Lost Axe turnoff, makes it impossible to drive a truck in to the property so ATV's were utilized. Beyond the washout, the road is extremely grown in with alders, making the commute to site slow and/or hazardous. The work crews spent two days brushing it out so it could be travelled safely during the program.

2. Property Ownership and Claims

The Manitou Property is located in the Kenora Mining Division and is comprised of 33 contiguous mining claims totaling 6,561 ha (Figure 1). All claims are either 100% owned by Cross River Ventures, or currently under option to own, with current owners summarized in Appendix A. A claim location map is shown in Figure 2.

3. Exploration History

Mineral exploration within the Manitou Property has occurred sporadically since the 1890's with a focus on gold mineralization. A summary of exploration is presented below in Table 1.

Table 1: Summary of Exploration at the Manitou Project

Company	Year	Activity	Target Area
Various prospectors	**1890's**	**Prospecting, sampling, etc.**	**Frenchman Island**
McInnes	**1902**	**Geological survey**	**Manitou Lakes area**
Ontario Department of Mines	**1933**	**Geological mapping**	**Manitou Lakes area**
Ontario Geological Survey	**1979**	**Geological mapping**	**Manitou Lakes area**
Ministry of Northern Affairs	**1980**	**Airborne magnetic and electromagnetic surveys**	**Manitou Lakes area**
Beth Canada Mining Company	**1981**	**Line cutting, geological mapping, humus and rock sampling, magnetometer survey, VLF-EM survey.**	**Frenchman Island and surrounding area**
St. Joe Canada	**1983**	**Line cutting, geological mapping, prospecting, grab sampling, soil sampling**	**Manitou Lakes area**
St. Joe Canada	**1984-1987**	**Drilling (3420 m)**	**Harper Lake property claims covering: the Frenchman**

			Island, North Island, Bird Island, Peninsula and Reliance Zones.
Manitou Gold	**2011-2012**	**Prospecting and sampling of main showings**	**Frenchman Island, North Island, Bird Island, and Reliance Zones**
Manitou Gold	**2013**	**Mapping and sampling**	**Harper Lake property**
David Healey	**2015**	**Sampling and prospecting**	**Queen Alexandra**

4. REGIONAL GEOLOGY

The Manitou property is located within the Western Wabigoon Subprovince in a package of mafic-intermediate volcanic rocks (Figure 3). The following summary of the Regional Geology of the Manitou Lakes area is summarized from Zammit, 2020.

The Manitou Lakes area represents a roughly 400 km^2 area, located at the intersection of the Mosher Bay-Washeibemaga deformation zone (MBWdz) and Manitou Dinorwic deformation zone (MDdz) (Figure 4). The map area is bounded to the northwest by the 2740-2720 Ma Atikwa Lawrence batholith (Davis et al., 1982b; Edwards and Davis, 1991), and to the southeast by the syn- to late-orogenic 2705-2695 Ma Taylor Lake and Scattergood stocks (Davis et al., 1982; Kamo, 2014).

The MDdz truncates the stratigraphy of the region into two distinct areas. Lithologies to the northwest of the MDdz are composed of mafic to felsic volcanic and volcaniclastic rocks of the 2755-2730 Ma Blanchard Lake, Upper Manitou Lake, and Pincher Lake groups (Figure 4, Thomson, 1934; Goodwin, 1965; Blackburn, 1978b, 1982). Lithologies to the southeast of the MDdz are composed of mafic to felsic volcanic rocks of the 2755-2700 Ma Wapageisi and Boyer Lake groups (Davis et al., 1982). Volcanic successions in both domains locally contain thin mudstone or chemical sedimentary units (Davis et al., 1982; Blackburn et al., 1982). They are unconformably overlain by, or structurally juxtaposed with, younger 2705-2695 Ma clastic and volcaniclastic sedimentary rocks of the E-SE-trending Manitou group (Teal and Walker, 1977; Dostal et al., 2004).

The MBWdz and the MDdz represent regional, possibly crustal-scale, brittle-ductile deformation zones that are E- and NE- trending, respectively. The MBWdz is identified based on the structural juxtaposition of the Boyer Lake and Manitou groups. Adjacent to the MBWdz, penetrative fabric is E- to ENE-trending, steeply dipping (Blackburn, 1981; Kresz, 1987), and is axial planar to tight km-scale folds (Blackburn, 1981). The MDdz is primarily identified by NE-trending steeply dipping zones of penetrative chlorite-mica foliation (Blackburn, 1982; Melling et al., 1988), and occurs as a ~30 m wide high-strain corridor and locally, with pervasive carbonate alteration and abundant quartz veins (Parker, 1989). NE-trending kink folds have also been documented in the Manitou Lakes area, which are more common adjacent to the MDdz (Wallace and

Clifford, 1983). Early deformation in the Manitou Lakes area has been interpreted as the result of N-S shortening (Blackburn 1980c, 1982).

Figure 1: Manitou Project Location

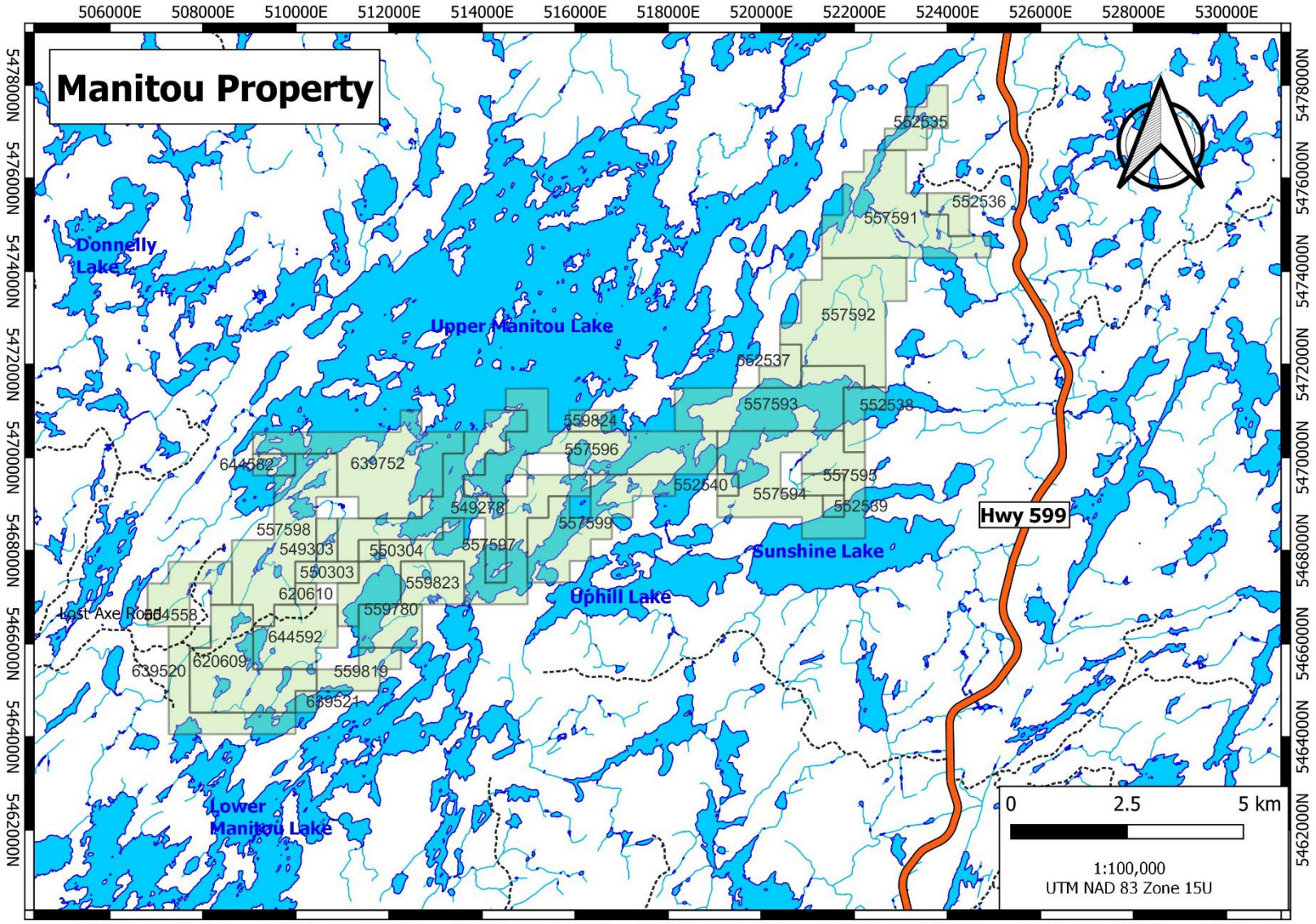

Figure 2: Manitou Claim Map

4.1 Mineralization

The following summary of gold mineralization in the Manitou Project locations is quoted from *Assessment Report for Manitou Gold: Harper Lake Property (Taras, 2014).*

The Manitou Lakes area has been the scene of mining exploration for almost a hundred years. In this time numerous gold prospects have been discovered. Gold occurrences in the area are variously in quartz veins, shears, and sulphide zones. Mineralization associated with the gold occurrences is pyrite, chalcopyrite, arsenopyrite, and galena. Alteration products include iron carbonate, chlorite, calcite, sericite, and silica. Gold deposits in the area are typical of Archean lode-gold deposits, and work by the OGS has indicated that almost all of the gold deposits in the Manitou Lakes area are controlled by shear and fracture zones which appear to be regionally related to movement along the Manitou Straits Fault. Gold-bearing quartz veins are commonly controlled by northeast- and east-trending shear zones which may be secondary shear bands subparallel to the shear boundaries of the Manitou Straits Fault. Most of the shearing and fracturing was developed after the emplacement of the Atikwa Batholith. However, there are other occurrences of gold mineralization that appear to be stratigraphically controlled, and possibly genetically related to volcanism (Parker, 1989). Davis and Smith (1991) indicate that the gold occurring in faults, shears, and tension veins developed in response to a late Archean northwest-directed contraction and emplacement of contemporaneous plutons, such as the Atikwa Batholith. Their work indicated that gold mineralization was closely linked in time to the emplacement of late intrusions and was likely a short-lived event that occurred at about 2709 Ma. The Harper Lake Property is located southeast of the Atikwa Batholith, northwest of the Miggisi Pluton and is proximal to the Manitou Anticline and the Manitou Straits Fault. There is excellent potential for gold mineralization in quartz veins related to shearing and fracturing caused by the emplacement of a late pluton.

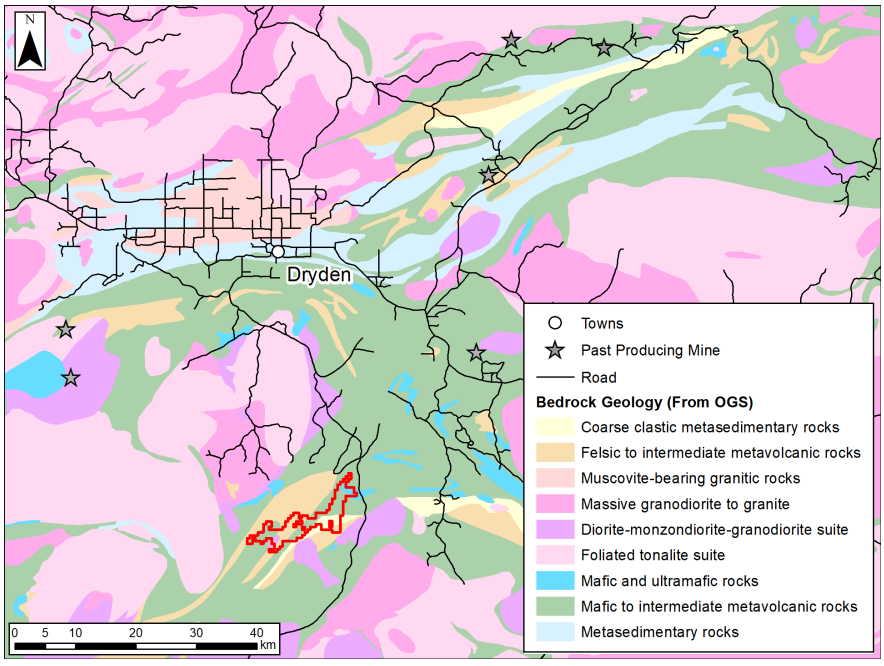

Figure 3: Regional Geology of the Manitou Property. Property outline in red.

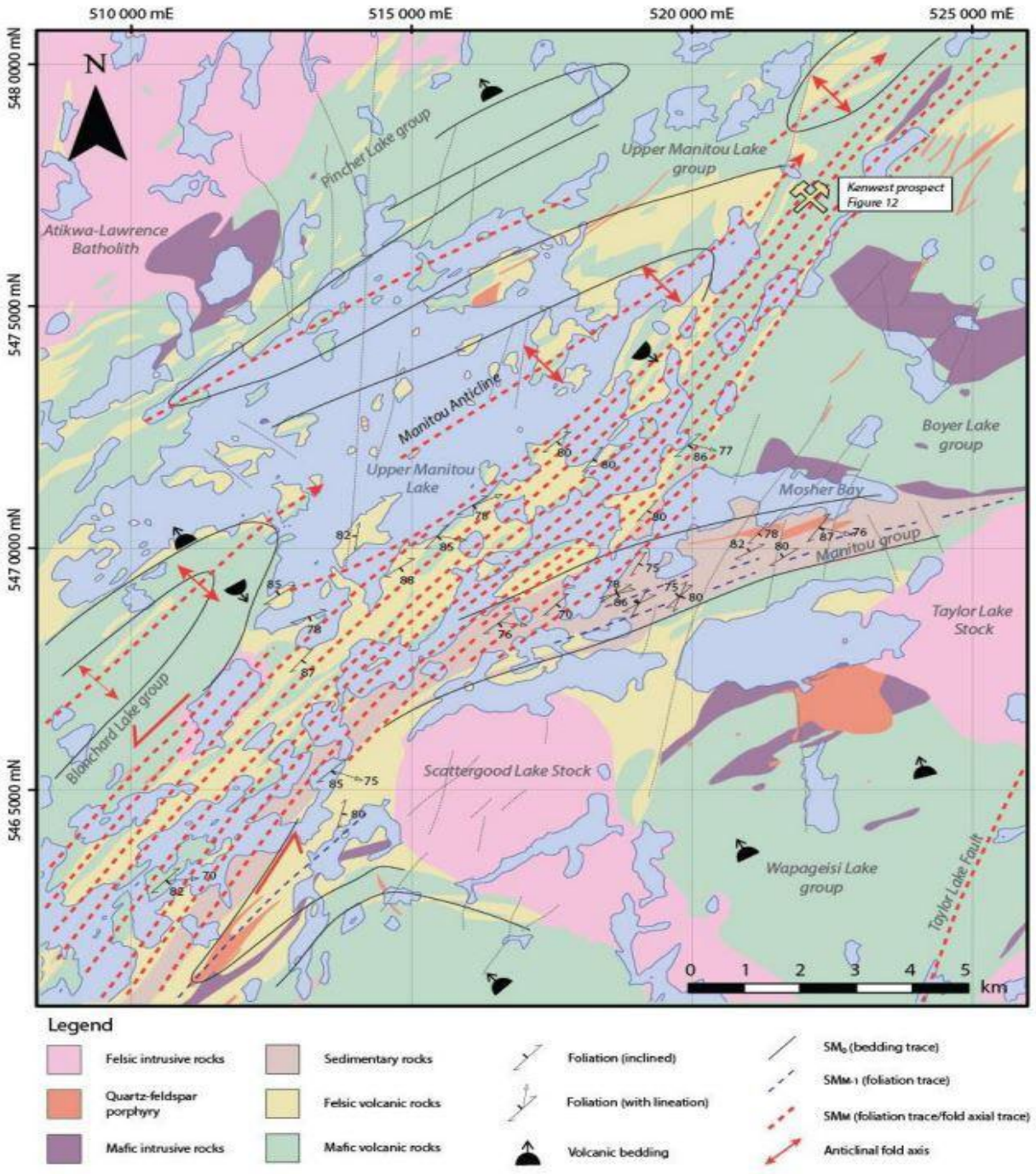

Figure 4: Geology and Structure of the Manitou Lakes area (Zammit, 2020)

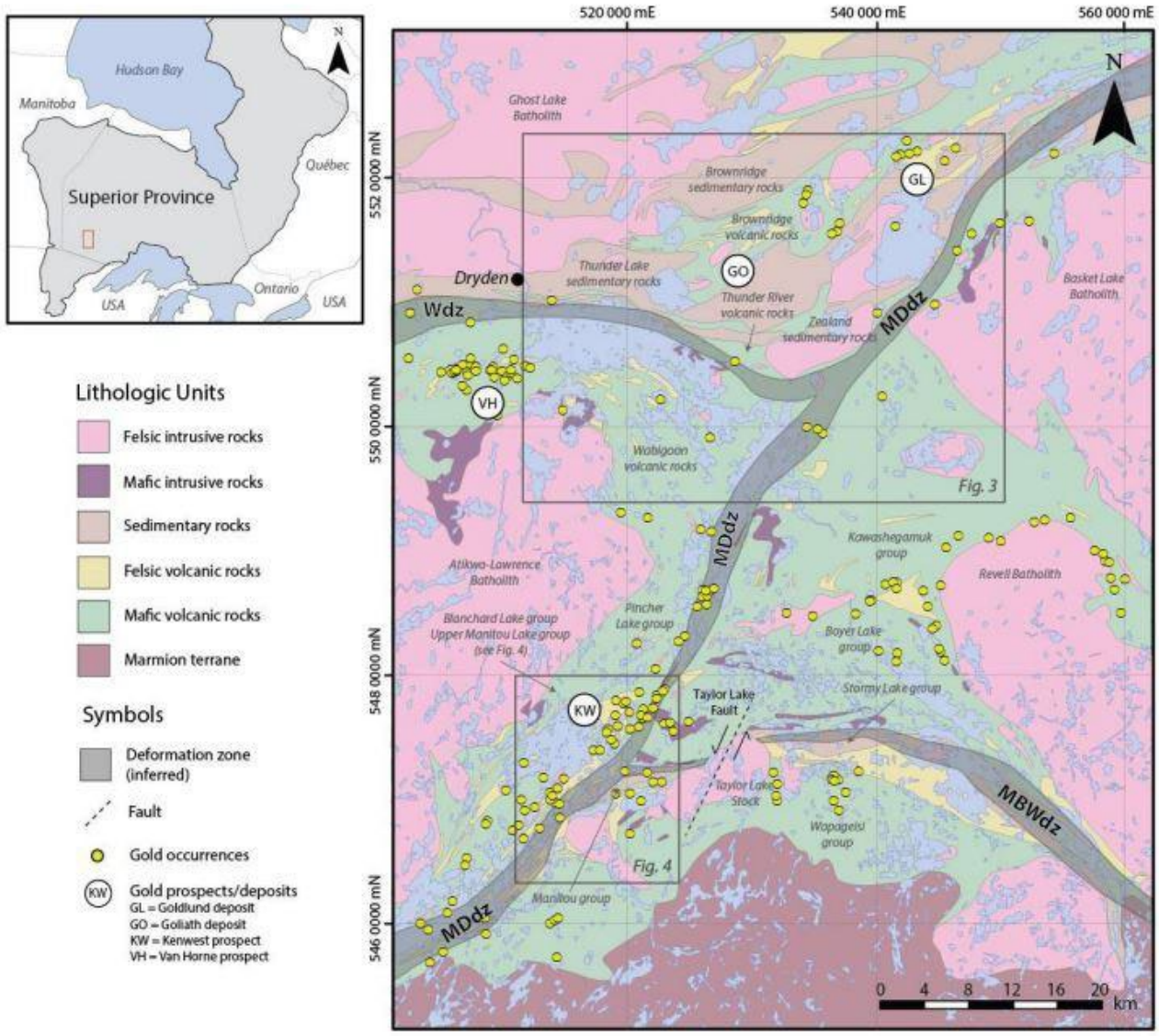

Figure 5: Deformation zones and gold occurrences surrounding the Manitou property. From Zammit, 2020.

5. 2021 Prospecting Program

Summary

The work crew mobilized from Thunder Bay and setup up a remote campsite near the intersection of Lost Axe Road and and Cedar Narrows Road, on May 12, 2021 and demobilized from camp to Thunder Bay on May 27, 2021. A total of 15 days were spent in the field by the crew with daily logs of their activities included in Appendix B. The objective of the program was to follow up on past exploration and prospecting in 3 areas: the Queen Alexander Shaft, the Reliance Shear, and the Western claims (Figure 5).

A total of 207 geological stations were recorded utilizing the QField application on a Samsung Tab A tablet. A sample database was setup in QField to capture predetermined fields consisting of sample ID, sample medium, lithology, structure, alteration, mineralization, photos and notes. A Garmin 64s handheld GPS was utilized to collect waypoints at each station as well as tracks. All coordinates are recorded in NAD 83 UTM Zone 15N.

A digital printout of the station database is included in Appendix C. Maps showing station and sample locations, as well as GPS tracks from each traverse are included in Appendix D. A total of 83 grab samples were collected during the program. Sample locations and results are included in Appendix E and assay certificates in Appendix F.

Sampling Procedures & QA/QC

Rock samples were collected by field personnel utilizing rock hammers and placed into poly bags labelled with a unique station ID and sample number. Field personnel recorded sample information in a digital data collector and recorded GPS coordinates, geological observations, and photographs at each sample location.

Field standards and blanks were not utilized on this sampling program. QAQC samples inserted by the laboratory were reviewed and found to show acceptable results for standards and duplicates.

Samples were transported by Bayside personnel to the ALS Chemex preparation laboratory in Thunder Bay, Ontario. ALS then ships sample pulps to ALS Chemex Vancouver for analysis. Au values were determined via fire assay with an ICP-AES finish. Any Au samples that were above the detection limits for this method were analyzed via fire assay with a gravimetric finish. Major and trace element geochemistry was analyzed via Aqua Regia digest followed by an ICP-MS finish.

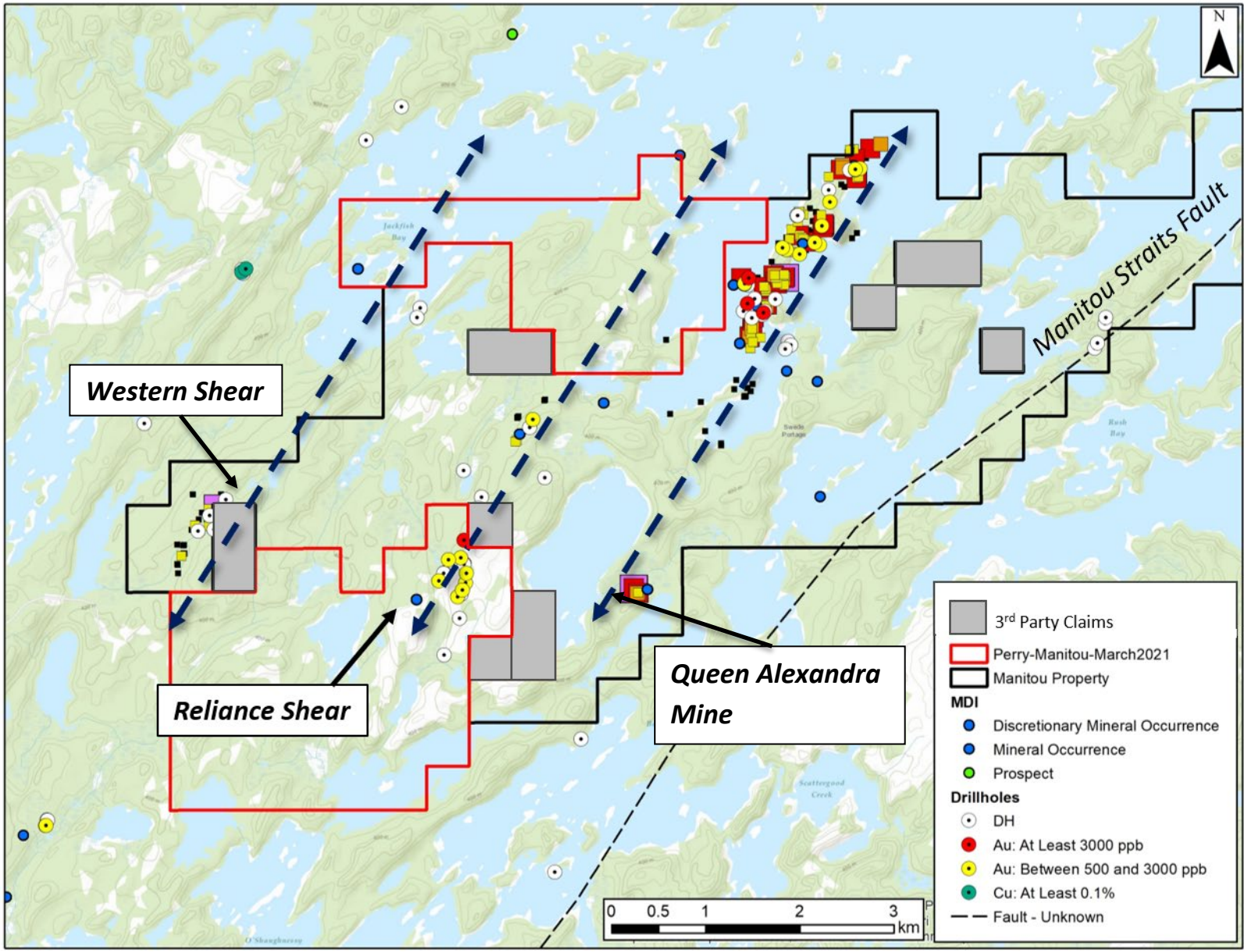

Figure 6: Manitou Property with historic sampling and interpreted shear zones

Results

Of the 83 grab samples collected, 6 returned values greater than 1 g/t Au and 3 values of 10 g/t Au or more. These results are summarized in Table 2 with assay results shown on Figure 7. All 6 of these samples were taken from dump piles from the Queen Alexander Shaft and an open cut located about 50m to the north. The mineralized samples were comprised of quartz veins with chalcopyrite, pyrite and minor arsenopyrite. Crack and seal textures are noted in the vein material as shown in Figure 6. These samples verified the high grade of the Queen Alexander vein and are consistent with sampling completed by previous operators.

The area around the Queen Alexandra shaft was thoroughly prospected with no further signs of mineralization noted. However, the area is extremely overgrown with brush, obscuring outcrop and a large swamp to the NE of the shaft covers a large area of ground on trend from the shear zone hosting the Queen Alexandra vein.

Anomalous gold was returned within historic pits located along the Reliance Shear, southwest of the historic Orion Mine shaft. The pits are water filled and poorly blockaded, so caution needed to be exercised when approaching them. Mineralization was hosted in mafic to intermediate sheared volcanics that contained small amounts of pyrite and chalcopyrite. Quartz veins here are boudinaged and discontinuous along the shear zone.

Sampling along a shear zone along the western portion of the property also returned minor anomalous gold. The shear zone here intersects gabbro and mafic volcanics and is characterized by schistose textures and boudinaged and discontinuous quartz veins.

Table 2: Significant results from the 2021 prospecting program

Sample ID	Easting	Northing	Target Area	Au (g/t)
B731503	**512199**	**5466403**	**Queen Alexandra**	**26.70**
B731724	**512204**	**5466406**	**Queen Alexandra**	**24.60**
B731501	**512244**	**5466359**	**Queen Alexandra**	**15.50**
B731502	**512199**	**5466403**	**Queen Alexandra**	**5.35**
B731531	**512238**	**5466365**	**Queen Alexandra**	**4.68**
B731530	**512238**	**5466365**	**Queen Alexandra**	**2.40**

Figure 7: Sample of mineralized quartz vein from dump pile adjacent to Queen Alexandra shaft (left). Overgrown shaft from the Queen Alexandra mine (right).

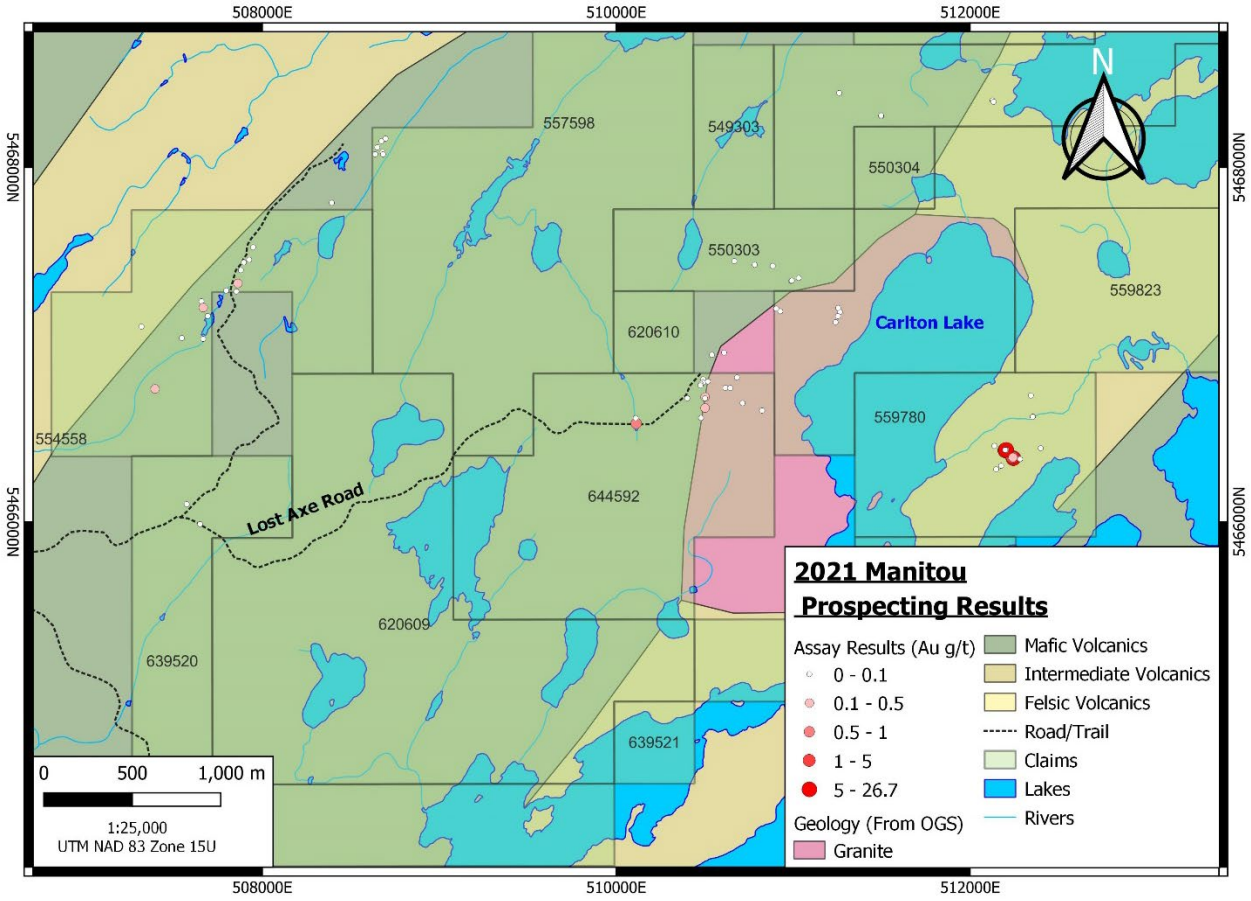

Figure 8: Results of 2021 Manitou Prospecting Program

6. CONCLUSIONS

The 2021 prospecting program focused on three areas of known mineralization, which appear to be controlled by NE-SW oriented shear zones. Sampling resulted in six samples that returned over 1 g/t of Au from dump piles surrounding the historic Queen Alexandra minesite, including two very high grade samples that returned 24.6 g/t and 26.7 g/t Au respectively. This area has seen no documented diamond drilling or sustained exploration since it's production and has emerged as the most intriguing target on the property so far.

Given the sparsity of outcrop in this location, follow up work consisting of stripping in the area of the Queen Alexandra shaft is recommended to better understand the structural controls on mineralization in this area.

Anomalous gold returned along the Reliance shear zone and the Western shear zone is encouraging. Additional prospecting along strike of these structures is recommended.

Finally a property wide lidar survey may be useful in identifying structural trends that control gold mineralization at Queen Alexandra and possibly elsewhere on the property. Recessive shear zones could be remotely mapped then ground truthed more effectively.

7. STATEMENT OF EXPENDITURES

The total value of work completed during the 2021 Manitou Prospecting Project is summarized in Table 3. Allocations of expenditures by individual claim cell is summarized in Table 4.

Table 2: Total Expenditures on the 2021 Manitou Prospecting Program

Description	Cost
Mobilization	$5,800
Demobilization	$5,800
Senior Geologist	$18,000
Junior Geologist	$4,550
Field Assistant	$13,050
Assay Costs	$4,840
Truck Rental	$2,340
UTV Rental	$5,600
Camp Rental	$6,300
Assessment Report	$4,000
Total	$70,280

Table 3: Expenditure distribution on Manitou Claim Cells

Claim Cell ID	Samples	Sample Costs	Stations	Porportion of Stations/Cells	Labour/Fixed Costs	Total Cost/Cell
549278	5	$302.47	15	0.080213904	$5,249	$5,551.67
557598	6	$362.96	6	0.032085561	$2,100	$2,462.64
557594		$0.00	0	0	$0	$0.00
554558	15	$907.41	41	0.219251337	$14,348	$15,255.22
550303	6	$362.96	16	0.085561497	$5,599	$5,962.11
549303		$0.00	0	0	$0	$0.00
552540		$0.00	0	0	$0	$0.00
557597	6	$362.96	18	0.096256684	$6,299	$6,662.00
557591		$0.00	0	0	$0	$0.00
557592		$0.00	0	0	$0	$0.00
557593		$0.00	0	0	$0	$0.00
557595		$0.00	0	0	$0	$0.00
552535		$0.00	0	0	$0	$0.00
550304		$0.00	0	0	$0	$0.00
559780	22	$1,330.87	44	0.235294118	$15,398	$16,728.51
552537		$0.00	0	0	$0	$0.00
552536		$0.00	0	0	$0	$0.00
557596		$0.00	0	0	$0	$0.00
557599		$0.00	0	0	$0	$0.00
559823		$0.00	0	0	$0	$0.00
559819		$0.00	6	0.032085561	$2,100	$2,099.68
552538		$0.00	0	0	$0	$0.00
552539		$0.00	0	0	$0	$0.00
559824		$0.00	0	0	$0	$0.00
620610		$0.00	0	0	$0	$0.00
644592	18	$1,088.89	33	0.176470588	$11,548	$12,637.13
639520	2	$120.99	6	0.032085561	$2,100	$2,220.67
644582		$0.00	0	0	$0	$0.00
639752		$0.00	0	0	$0	$0.00
620609		$0.00	2	0.010695187	$700	$699.89
639521		$0.00	0	0	$0	$0.00
Samples Taken off Property and Excluded	3	$181.48	Excluded from Assessment Credits			
Total Costs to File	**80**	**$4,839.52**	**187**		**$65,440**	**$70,279.52**

8. SIGNATURES

I, Steven D. Flank, of the City of Thunder Bay, in the Province of Ontario, do hereby certify that:

1. I am the President and Principal Geoscientist of Bayside Geoscience Inc., a geological consulting company based in Thunder Bay, Ontario.
2. I am a member in good standing with the Association of Professional Geoscientists of Ontario (#2695), residing at 124 Sherwood Drive, Thunder Bay, Ontario, P7B 6L1.
3. I attained an H.BSc. in Geology from Lakehead University in Thunder Bay, Ontario (2011) and an M.Sc. in Mineral Exploration from Laurentian University in Sudbury, Ontario (2017).
4. I have worked as an exploration geologist for over 10 years focussing on project generation and early-stage gold projects including shear zone hosted lode gold and intrusion related disseminated gold deposits and intrusion related Ni-Cu-PGE deposits.
5. I personally supervised the 2021 Prospecting Program at the Manitou Project as described in this report.

Dated

Type text here

May 3rd, 2022

Thunder Bay, Ontario, Canada

_____

Steven D. Flank, M.Sc., P.Geo.

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Appendix A: Claim Details

Tenure Number	Tenure Type	Issue Date	Anniversary Date	Holder
549278	Multi-cell Mining Claim	2019-05-04	2021-05-04	(100) EMX Properties (Canada) Inc.
549303	Multi-cell Mining Claim	2019-05-04	2021-05-04	(100) EMX Properties (Canada) Inc.
550303	Multi-cell Mining Claim	2019-05-22	2021-05-22	(100) EMX Properties (Canada) Inc.
550304	Single Cell Mining Claim	2019-05-22	2021-05-22	(100) EMX Properties (Canada) Inc.
552535	Multi-cell Mining Claim	2019-06-23	2021-06-23	(100) EMX Properties (Canada) Inc.
552536	Multi-cell Mining Claim	2019-06-23	2021-06-23	(100) EMX Properties (Canada) Inc.
552537	Multi-cell Mining Claim	2019-06-23	2021-06-23	(100) EMX Properties (Canada) Inc.
552538	Multi-cell Mining Claim	2019-06-23	2021-06-23	(100) EMX Properties (Canada) Inc.
552539	Single Cell Mining Claim	2019-06-23	2021-06-23	(100) EMX Properties (Canada) Inc.
552540	Single Cell Mining Claim	2019-06-23	2021-06-23	(100) EMX Properties (Canada) Inc.
552541	Single Cell Mining Claim	2019-06-23	2022-06-23	(100) EMX Properties (Canada) Inc.
554558	Multi-cell Mining Claim	2019-07-21	2021-07-21	(100) EMX Properties (Canada) Inc.
556480	Multi-cell Mining Claim	2019-08-26	2022-08-26	(100) EMX Properties (Canada) Inc.
557591	Multi-cell Mining Claim	2019-09-12	2021-09-12	(100) EMX Properties (Canada) Inc.
557592	Multi-cell Mining Claim	2019-09-12	2021-09-12	(100) EMX Properties (Canada) Inc.
557593	Multi-cell Mining Claim	2019-09-12	2021-09-12	(100) EMX Properties (Canada) Inc.
557594	Multi-cell Mining Claim	2019-09-12	2021-09-12	(100) EMX Properties (Canada) Inc.
557595	Multi-cell Mining Claim	2019-09-12	2021-09-12	(100) EMX Properties (Canada) Inc.
557596	Multi-cell Mining Claim	2019-09-12	2021-09-12	(100) EMX Properties (Canada) Inc.
557597	Multi-cell Mining Claim	2019-09-12	2021-09-12	(100) EMX Properties (Canada) Inc.
557598	Multi-cell Mining Claim	2019-09-12	2021-09-12	(100) EMX Properties (Canada) Inc.
557599	Multi-cell Mining Claim	2019-09-12	2021-09-12	(100) EMX Properties (Canada) Inc.
559780	Multi-cell Mining Claim	2019-09-27	2021-09-27	(100) EMX Properties (Canada) Inc.
559819	Multi-cell Mining Claim	2019-09-27	2021-09-27	(100) EMX Properties (Canada) Inc.
559823	Multi-cell Mining Claim	2019-09-27	2021-09-27	(100) EMX Properties (Canada) Inc.
559824	Multi-cell Mining Claim	2019-09-27	2021-09-27	(100) EMX Properties (Canada) Inc.
620609	Multi-cell Mining Claim	2020-11-25	2022-11-25	(100) Solstice Gold Corp.
620610	Single Cell Mining Claim	2020-11-25	2022-11-25	(100) Solstice Gold Corp.
639520	Multi-cell Mining Claim	2021-02-25	2023-02-25	(100) Solstice Gold Corp.
639521	Single Cell Mining Claim	2021-02-25	2023-02-25	(100) Solstice Gold Corp.
639752	Multi-cell Mining Claim	2021-02-25	2023-02-25	(100) Solstice Gold Corp.
644582	Multi-cell Mining Claim	2021-03-19	2022-05-22	(100) Solstice Gold Corp.
644592	Multi-cell Mining Claim	2021-03-19	2022-05-22	(100) Solstice Gold Corp.

APPENDIX B: DAILY WORK LOGS

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 12, 2021

Team: Steven Flank, Joseph Suk, Myles Harding, Daniel Barrett, Carson Gdanski

Summary:

Location: Manitou Property
Objective: Mobilize to site from Thunder Bay
Notes:

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 13, 2021

Team: Steven Flank, Joseph Suk, Daniel Barrett, Carson Gdanski, Myles Harding

Summary:

Location: Manitou Property and Queen Alexandria Mine Site
Objective: Reconnaissance trip into site to determine access points and location of Queen Alexandria Mine Site
Notes:
Drove to property via Lost Axe Road with 2 UTV's and chainsaws. ~15km ride each way. Road very overgrown in places and needs to be cleaned up for safe access. Walked into Queen Alexandria area and located historic shaft and open cut and sampled.

Field assistant suffered eye injury while clearing trail. Had to drive to hospital in Fort Frances for assessment.

Sample ID's

B731501
B731502
B731503

Total Samples Taken: 3

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 14, 2021

Team: Steven Flank, Joseph Suk, Daniel Barrett, Carson Gdanski, Myles Harding

Summary:

Location: Manitou Property Access Trail
Objective: Clear Lost Axe Road of blowdown, overgrown areas for safe access.
Notes:
Dan, Carson and Joe worked with chainsaws and hand tools to open up Lost Axe Road for safe travel. Steve Flank and Myles returned from Fort Frances to camp from hospital visit.

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 15, 2021

Team: Steven Flank, Joseph Suk, Daniel Barrett, Carson Gdanski, Myles Harding

Summary:

Location: Manitou Property
Objective: Examine and sample road side outcrops on Lost Axe Road
Notes:
Sampled stripped outcrops along Lost Axe Road. Located historic Orion minesite and examined outcrops peripheral to it.
Field assistant eye injury got worse and requires a return to hospital. Steve Flank and Myles Harding return to Thunder Bay in evening.

Sample ID's

B731504
B731505
B731506
B731507
B731516

Total Samples Taken: 5

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 16, 2021

Team: Joseph Suk, Daniel Barrett, Carson Gdanski

Summary:

Location: Manitou Property: West Shear
Objective: Map and sample shear zone on western portion of property.
Notes:
Located and followed out quartz bearing shear zone on west side of property.

Sample ID's

B731707
B731706
B731508
B731509

Total Samples Taken: 4

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 17, 2021

Team: Joseph Suk, Daniel Barrett, Carson Gdanski

Summary:

Location: Manitou Property: West Shear
Objective: Map and sample shear zone on western portion of property.
Notes:
Continued following out quartz bearing shear zone on west side of property.

Sample ID's

B731708
B731713
B731714
B731510

Total Samples Taken: 4

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 18, 2021

Team: Joseph Suk, Daniel Barrett, Carson Gdanski

Summary:

Location: Manitou Property: West Shear
Objective: Map and sample shear zone on western portion of property.
Notes:
Continued following out quartz bearing shear zone on west side of property. Pushed further NE on trend.

Sample ID's

B731701
B731702
B731511
B731512
B731520

Total Samples Taken: 4

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 19, 2021

Team: Joseph Suk, Daniel Barrett, Carson Gdanski, Steve Flank

Summary:

Location: Manitou Property: West Shear
Objective: Map and sample shear zone on western portion of property.
Notes:
Followed shear zone to NE extent of property.
Steve Flank travelled back to site.

Sample ID's

B731704
B731709
B731711
B731712
B731513
B731514
B731521

Total Samples Taken: 7

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 20, 2021

Team: Steve Flank, Joseph Suk, Daniel Barrett, Carson Gdanski

Summary:

Location: Manitou Property: West Shear
Objective: Map and sample shear zone on western portion of property.
Notes:
Mapped further to south and west. Last day on this shear zone.

Sample ID's

B731703
B731705
B731541

Total Samples Taken: 3

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 21, 2021

Team: Steve Flank, Joseph Suk, Daniel Barrett, Carson Gdanski, Myles Harding

Summary:

Location: Manitou Property
Objective: Weather Day
Notes:
Thunderstorms, heavy rain and wind. Repair camp damaged in wind. Myles Harding return to site.

Sample ID's

Total Samples Taken:

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 22, 2021

Team: Steve Flank, Joseph Suk, Daniel Barrett, Carson Gdanski, Myles Harding

Summary:

Location: Manitou Property: Reliance Shear Area
Objective: Map East and SW of Orion Mine.
Notes:
Located shear zones along contact of volcanics and Carleton Lake diorite with sulfide mineralization.
Prospected area near King Edward showing.

Sample ID's

B731515
B731517
B731518
B731519
B731522
B731542

Total Samples Taken: 6

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 23, 2021

Team: Steve Flank, Joseph Suk, Daniel Barrett, Carson Gdanski, Myles Harding

Summary:

Location: Manitou Property: Reliance Shear Area
Objective: Map SW and NE of Orion Mine.
Notes:
Detailed prospecting and sampling near Orion Mine.

Steve Flank travel back to Thunder Bay.

Sample ID's

B731715
B731716
B731717
B731718
B731719
B731720
B731721
B731722
B731523
B731524
B731525
B731526
B731527
B731528

Total Samples Taken: 14

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 24, 2021

Team: Joseph Suk, Daniel Barrett, Carson Gdanski, Myles Harding

Summary:

Location: Manitou Property: Queen Alexandria Area
Objective: Detailed prospecting proximal to Queen Alexandria mine.
Notes: Focussed work on the shaft rubble pile and surrounding outcrops. Area is heavily overgrown with minimal exposure.

Sample ID's

B731723
B731724
B731725
B731726
B731727
B731529
B731530
B731531
B731532

Total Samples Taken: 9

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 25, 2021

Team: Joseph Suk, Daniel Barrett, Carson Gdanski, Myles Harding, Steve Flank

Summary:

Location: Manitou Property: Queen Alexandria Area
Objective: Detailed prospecting proximal to Queen Alexandria mine.
Notes: Focussed work on the shaft rubble pile and surrounding outcrops. Area is heavily overgrown with minimal exposure. Second team worked NE of mine, crossing swamp.
Steve Flank travel back to site from Thunder Bay.

Sample ID's

B731728
B731729
B731730
B731731
B731732
B731539
B731540
B731533

Total Samples Taken: 8

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 26, 2021

Team: Steve Flank, Joseph Suk, Daniel Barrett, Carson Gdanski, Myles Harding

Summary:

Location: Manitou Property: Reliance Shear Area
Objective: Map out historic workings along Reliance shear and prospect N extent of Reliance shear near magnetic anomalies
Notes: Located a series of 4 historic pits/shafts on the west side of trail. Some pits could be over 20' deep. All pits are poorly protected with old fencing being trampled down. To the North, quartz veins with malachite staining were located and sampled. Did not make it to furthest north part of planned traverse.

Sample ID's

B731734
B731735
B731736
B731737
B731738
B731739
B731740
B731741
B731534
B731535
B731536
B731537
B731538

Total Samples Taken: 13

Bayside Geoscience Daily Report

Client: Cross River Ventures

Project: Manitou

Date: May 27, 2021

Team: Steve Flank, Joseph Suk, Daniel Barrett, Carson Gdanski, Myles Harding

Summary:

Location: Manitou Property
Objective: Pack up camp and demobilize from site.
Notes:

Appendix C: Station Descriptions

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-JS-001	512244	5466360	402	JS	2021-05-13	B731501	Float	Quartz Vein	Rubble pile, no structures recorded
MT-JS-002	512198	5466404	391	JS	2021-05-13	B731502	Float	Intermediate Volcanic	Rubble pile, no structures recorded
MT-JS-003	512198	5466404	391	JS	2021-05-13	B731503	Float	Intermediate Volcanic	Rubble pile, no structures recorded
MT-JS-004	507647	5465988	395	JS	2021-05-15	B731504	Outcrop	Quartz Vein	Pinching and swelling quartz vein
MT-JS-006	510113	5466556	402	JS	2021-05-15	B731505	Outcrop	Quartz Vein	Red and orange quartz veins. Quartz veins were also caught up in the shear zone.
MT-JS-010	510541	5466943	437	JS	2021-05-15	B731506	Outcrop	Mafic Volcanic	Fg mafic-int. volcanic unit, strongly silicious. Trace sulfides observed.
MT-JS-011	510608	5466956	441	JS	2021-05-15	B731507	Outcrop	Gabbro	Mg gabbro with minor silica alteration. Mg pyroxene(+bt?) within a fine-grained grey groundmass. Trace weathered blebby sulfides. 2x2 outcrop.
MT-JS-018	507852	5467301	420	JS	2021-05-16	B731508	Outcrop	Quartz Vein	Mineralized quartz vein with gold potential(maybe a grain within a yellow-clear quartz crystal. Found within a gabbroic host.
MT-JS-020	507861	5467346	410	JS	2021-05-16	B731509	Outcrop	Quartz Vein	Reddish-orange qtz vein, sugary. Likely the same as 018 but down strike.
MT-JS-022	507690	5467162	414	JS	2021-05-17	B731510	Outcrop	Quartz Vein	qtz vein within mafic metavolcanics/gabbro/chlorite schist
MT-JS-029	507879	5467421	419	JS	2021-05-18	B731511	Outcrop	Mafic Volcanic	Up and to the East of 028, no acicular amphiboles.
MT-JS-032	507947	5467550	431	JS	2021-05-18	B731512	Outcrop	Chlorite Schist	South of 031. Strongly sheared, but less strained than 031. Oxidized pyrite.
MT-JS-035	508649	5468114	419	JS	2021-05-19	B731513	Outcrop	Mafic Volcanic	Silicified and sheared mafic metavolcanic. 30m x 30m outcrop with white spruces being the dominant tree in area. Oxidation stains on surface.
MT-JS-038	508393	5467801	414	JS	2021-05-19	B731514	Outcrop	Chlorite Schist	Strongly silicious and foliated schist unit with 0.5-1cm wide foliations. Minor amount of acicular amphiboles
MT-JS-043	510927	5467192		JS	2021-05-22	B731515	Outcrop	Mafic Volcanic	Shear zone with intercolated quartz. Reddish in appearance. Strongly foliated along strike. This is fg mv. Different than the more int. 042 point.
MT-JS-008	510110	5466586	402	JS	2021-05-15	B731516	Outcrop	Quartz Vein	Quartz vein North of 006. Weakly oxidized with quartz fracture infill. Pinch and swell vein.
MT-JS-050	511263	5467181		JS	2021-05-22	B731517	Outcrop	Mafic Volcanic	
MT-JS-051	511246	5467168		JS	2021-05-22	B731518	Outcrop	Mafic Volcanic	Fg mv silicious outcrop. Sample has 5% silver diseeminated and blebs of arseno. 1x1 m exposure.
MT-JS-052	511239	5467128		JS	2021-05-22	B731519	Outcrop	Mafic Volcanic	Sample taken from boulder pile. Strongly oxidized mafic volcanic with fg pyrite.
MT-JS-034	507572	5466100	406	JS	2021-05-18	B731520	Outcrop	Quartz Vein	1 meter wide bullish qtz vein with section of iron oxidation. Clasts of chloritized mv found within the vein.
MT-DB-071	510471	5466775		DB	2021-05-21	B731521	Outcrop	Mafic Volcanic	

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-JS-036	508673	5468150	420	JS	2021-05-19	B731521	Outcrop	Quartz Vein	5 cm wide qtz vein within sheared mafic metavolcanics. Reddish-orange in some sections. No sulfides observed.
MT-JS-049	511256	5467199		JS	2021-05-22	B731522	Outcrop	Mafic Volcanic	Strongly oxidized, gossany section of fg mv with potential mineralization. Quartz pieces associated.
MT-JS-063	510783	5467450		JS	2021-05-23	B731523	Outcrop	Mafic Volcanic	Pillow breccia made oc fg mv chloritic with thin oxidized quartz veins within the pillow borders. Sample taken of host with the oxidized borders. Trace stringer pyrite.
MT-JS-065	510884	5467444		JS	2021-05-23	B731524	Outcrop	Mafic Volcanic	Strongly sheared fg mv or chlorite schist + oxidized qtz. Minor disseminated and oxidated sulfides.
MT-JS-068	510989	5467359		JS	2021-05-23	B731525	Subcrop	Chlorite Schist	Chlorite schist adjacent to a qtz vein(69) which is next to a quartz porphyry (70)
MT-JS-069	510992	5467361		JS	2021-05-23	B731526	Subcrop	Quartz Vein	Strongly oxidized qtz vein within a chlorite schist/porphyry.
MT-JS-071	511031	5467376		JS	2021-05-23	B731527	Outcrop	Chlorite Schist	Super silicious chlorite schist/fg mv. Sampled along the side of a 5m cliff with nearby quartz vein. Flesic tuff unit with porphyritic quartz to the Southwest.
MT-DB-075	510536	5466603		DB	2021-05-22	B731528	Outcrop	Mafic Volcanic	
MT-JS-074	510667	5467471		JS	2021-05-23	B731528	Outcrop	Mafic Volcanic	Fg mv, strongly foliated with a thin vein with one bleb of chalcopyrite.
MT-JS-075	512234	5466356		JS	2021-05-24	B731529	Subcrop	Chlorite Schist	Fg chlorite schist, weakly foliated with mod silica alteration and fg silver dissemeniated pyrite. Located on the SW side of the pit.
MT-JS-079	512238	5466365		JS	2021-05-24	B731530	Float	Quartz Vein	Samples taken of the float pile w high sulfide content. Colorful quartz(red, orange, yellow) 5% py.
MT-JS-080	512238	5466365		JS	2021-05-24	B731531	Float	Quartz Vein	Samples taken of the float pile w high sulfide content. White quartz with some chlorite fracture fill + po and py; minor sericite alt. 81: host+ser
MT-JS-081	512238	5466365		JS	2021-05-24	B731532	Float	Quartz Vein	Samples taken of the float pile w high sulfide content. Host rock with sericite altn.
MT-JS-090	512339	5466715		JS	2021-05-25	B731533	Outcrop	Intermediate Volcanic	Intercolated felsic-int tuff(pyroclastic) and chlorit schist shear zone. Weak amount of quartz veins. Felsics with strong relief. Minor sulfides. Outcrop has strong amount of 0.1-1cm rounded qtz.
MT-JS-092	511258	5468418		JS	2021-05-26	B731534	Outcrop	Chlorite Schist	Chl schist shear zone with intercolated quartz vein. Collected a sample with a mix of the schist a quartz. Quartz is white and sugary with sections of strong oxidation. Minor chl fracture infill in vn

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-JS-094	511496	5468292		JS	2021-05-26	B731535	Outcrop	Quartz Vein	15-20 cm wide quartz vein trending 160 with an adjacent vein 1 meter away, same strike. Within atrongly chloritic schist(095). Chalcopyrite seen around the chlorite fracture fill, large grains.
MT-JS-095	511499	5468293		JS	2021-05-26	B731536	Outcrop	Chlorite Schist	MV unit (gabbroic when unstrained). Diss chalc associated with silica.
MT-JS-098	512128	5468370		JS	2021-05-26	B731537	Subcrop	Quartz Vein	Oxidized red quartz vein with fully formed large sericite crystals. Highly mineralized with chalco as the most predominant. Found within a schistose mv unit with weak strain. The vein curves.
MT-JS-099	512133	5468370		JS	2021-05-26	B731538	Outcrop	Mafic Volcanic	Mg mafic vol. /chlorite schist with weak strain. Silica and carbonate flooded quartz vein contact. Chalcopyrite is the main sulfide found within. Sampled near the quartz vein.
MT-JS-084	512355	5466594		JS	2021-05-25	B731539	Outcrop	Chlorite Schist	Sample taken of the chlorite schist with some quartz. Oxidized pyrite seen on surface.
MT-JS-085	512353	5466592		JS	2021-05-25	B731540	Outcrop	Quartz Vein	Sheared quartz vein intercolated with chlorite, sampled mostly the quartz, bullish white to clear and orange in colour. Strongly infkuenced by shear zone. Sulfides difficult to see, likely pyrite.
MT-JS-041	507390	5466749		JS	2021-05-20	B731541	Outcrop	Chlorite Schist	Bt chl schist with oxidized sulphides adjacent to quartz veins. The outcop is small and covered, no strike or dip achieved.
MT-JS-042	510906	5467208		JS	2021-05-22	B731542	Outcrop	Mafic Volcanic	Mafic lapilli tuff, potentially an intermediate. Feldspar phenocrysts and silica alt.
MT-DB-001	512242	5466364	399	DB	2021-05-13	B731733	Float	Mafic Volcanic	first Queen A pit
MT-DB-002	512200	5466414	396	DB	2021-05-13		Float	Felsic Volcanic	2nd Queen A pit
MT-DB-003	512196	5466405	386	DB	2021-05-13	B731710	Float	Intermediate Volcanic	distinct foliation
MT-DB-004	507792	5467271	395	DB	2021-05-14		Outcrop	Mafic Volcanic	qtz carbonate viens show a gradient of oxidization, blebby tp pervasive
MT-DB-005	507561	5465999		DB	2021-05-14		Outcrop	Mafic Volcanic	NOT ON CLAIM. aphanitic w/ gossanus weathering
MT-DB-006	510597	5466904		DB	2021-05-14		Outcrop	Mafic Volcanic	NOT ON CLAIM. possible lapilli tuff
MT-DB-007	510604	5466925		DB	2021-05-14		Outcrop	Mafic Volcanic	NOT ON CLAIM
MT-DB-008	510527	5466919		DB	2021-05-14		Outcrop	Mafic Volcanic	NOT ON CLAIM. Varried degee of oxidation/weathering of sulpides could indicate seprate species.
MT-DB-009	510533	5466912		DB	2021-05-14		Outcrop	Mafic Volcanic	NOT ON CLAIM. possible pyrrhotite.
MT-DB-010	510527	5466919		DB	2021-05-14		Outcrop	Mafic Volcanic	NOT ON CLAIM. Garnetiforus chlorite schist
MT-DB-011	510527	5466919		DB	2021-05-14		Outcrop	Quartz Vein	NOT ON CLAIM. Sulphide rich crack and seal textures with in a highly deformed qtz vein. INterlated chloritized vienlets host mineralization
MT-DB-012	510527	5466919		DB	2021-05-14		Outcrop	Mafic Volcanic	not on claim

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-DB-013	510527	5466919		DB	2021-05-14		Outcrop	Mafic Volcanic	not on claim. heavly gossanus qtz fragments from historic pit.
MT-DB-014	510527	5466913		DB	2021-05-14		Outcrop	Mafic Volcanic	not on claim
MT-DB-015	507798	5467297		DB	2021-05-15		Outcrop	Mafic Volcanic	NOT ON CLAIM
MT-DB-016	507795	5467304		DB	2021-05-15	B731707	Outcrop	Mafic Volcanic	less folliated wall rock from MT-DB-015
MT-DB-017	507724	5467214		DB	2021-05-15		Outcrop	Quartz vein	NOT ON CLAIM
MT-DB-018	507724	5467214		DB	2021-05-15		Outcrop	Mafic Volcanic	NOT ON CLAIM
MT-DB-019	507693	5467232		DB	2021-05-15		Outcrop	Mafic Volcanic	
MT-DB-020	507693	5467232		DB	2021-05-15		Outcrop	Mafic Volcanic	first ocurance of aciular black mineral, misoriented, medium-fine. (amphibole) weak to no folliation
MT-DB-021	507685	5461210		DB	2021-05-15	B731706	Float	Mafic Volcanic	Highly angular float found in proximity to drill hole 002. vaarrying degree's of gossanus weathering.
MT-DB-022	507685	5461210		DB	2021-05-15		Outcrop	Mafic Volcanic	distinct change in grain size of the metavolacanics in proximity to sample MT-DB-021
MT-DB-023	507691	5467162		DB	2021-05-16	B731708	Outcrop	Mafic Volcanic	mylontonized mafic meta volcanics. L
MT-DB-024	507655	5467033		DB	2021-05-16	B731714	Outcrop	Mafic Volcanic	
MT-DB-025	507545	54677036		DB	2021-05-16	B731713	Float	Mafic Volcanic	moderatly foilliated angular float with jointing oblique to folliation. sulfide rich.
MT-DB-026	507867	5467464		DB	2021-05-16		Outcrop	Quartz Vein	
MT-DB-027	507896	5467464		DB	2021-05-16	B731702	Outcrop	Mafic Volcanic	Very well folliated chlorite schist with discontinoius qtz veins. moiderate crenulations. Highest example of shearing found so far.
MT-DB-028	507926	5467479		DB	2021-05-16	B731701	Outcrop	Mafic Volcanic	NULLHost rock taken in proximiuty to sdample MT-DB-029
MT-DB-029	507926	5267479		DB	2021-05-16		Outcrop	Quartz Vein	possible evidence for amphibolite grade conditions (black apahmitic lustreous mineral)
MT-DB-030	507887	5467498		DB	2021-05-16		Outcrop	Quartz Vein	Qtz vein in ciontact with meta volocanics, smoke qtz eyes cross cut vein (Sample missing)
MT-DB-031	508010	5467771		DB	2021-05-17		Outcrop	Mafic Volcanic	out of claim. Mafic volcanic with accicular plg crystals visable on weathered surface, minor sulfides
MT-DB-032	507964	5467642		DB	2021-05-17		Outcrop	Quartz Vein	in contact with mafiuc volcanics
MT-DB-033	507575	5466055		DB	2021-05-17		Outcrop	Mafic Volcanic	
MT-DB-034	507609	5466037		DB	2021-05-17		Outcrop	Mafic Volcanic	
MT-DB-035	508671	5468145		DB	2021-05-18	B731709	Outcrop	Mafic Volcanic	well folliated with a seccondary weaker crenulating folliation
MT-DB-036	508680	5468088		DB	2021-05-18	B731704	Outcrop	Mafic Volcanic	
MT-DB-037	508681	5480751		DB	2021-05-18	B731712	Outcrop	Mafic Volcanic	deep red oxidation in place in contact with QTZ vein. Dimension prefred orientation (DPO) acicular amnphibole is present.
MT-DB-038	508637	5468075		DB	2021-05-18	B731711	Outcrop	Mafic Volcanic	

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-DB-039	508471	5467781		DB	2021-05-18		Outcrop	Mafic Volcanic	3 cm wide shear element with in mafic volvcanics
MT-DB-040	507659	5467244		DB	2021-05-19	B731703	Outcrop	Gabbro	
MT-DB-041	507668	5467244		DB	2021-05-19		Outcrop	Gabbro	Sampling qtz vien
MT-DB-042	507677	5467262		DB	2021-05-19		Outcrop	Gabbro	
MT-DB-043	507568	5467259		DB	2021-05-19		Outcrop	Gabbro	Porphritic plagiclase is present through out.some undeformed someappear stretched
MT-DB-044	507455	5467285		DB	2021-05-19		Float	Gabbro	Well followed float in proximity to tree crop
MT-DB-045	507462	5467261		DB	2021-05-19		Outcrop	Gabbro	
MT-DB-046	507409	5467215		DB	2021-05-19		Outcrop	Gabbro	Garnet bearing, very weak sulphide, meta gabbro
MT-DB-048	507212	5467184		DB	2021-05-19		Outcrop	Intermediate Volcanic	Intermediate Tuff to lapilli tuff
MT-DB-049	507210	5467160		DB	2021-05-19		Outcrop	Mafic Volcanic	Interbedded mafic volcanic in contact with porphyric? Or intermediate volcaniclastic unit. Mafic volcanics observed as f.g, foliated unit with acicular amphibole.
MT-DB-050	507194	5467091		DB	2021-05-19		Outcrop	Gabbro	
MT-DB-051	507314	5467108		DB	2021-05-19	B731705	Outcrop	Quartz Vein	Foliations in host mafic volcanic are not well developed but subparallel to strike of vein. 10 cm vein
MT-DB-053	510520	5466342		DB	2021-05-21		Outcrop	Mafic Volcanic	Beside road to QA
MT-DB-054	510543	5466160		DB	2021-05-21		Outcrop	Mafic Volcanic	
MT-DB-055	510620	5466010		DB	2021-05-21		Outcrop	Mafic Volcanic	
MT-DB-056	510860	5465513		DB	2021-05-21		Outcrop	Mafic Volcanic	Not on claim. Possible arseno pyrite
MT-DB-057	510832	5465434		DB	2021-05-21		Outcrop	Mafic Volcanic	Aphanitic volcanic,very well folliated. Stretched qtz eyes present further down strike (5m)
MT-DB-058	510837	5465438		DB	2021-05-21		Outcrop	Mafic Volcanic	
MT-DB-059	510780	5465342		DB	2021-05-21		Outcrop	Mafic Volcanic	
MT-DB-060	510774	5465322		DB	2021-05-21		Outcrop	Intermediate Volcanic	Strong porphyritic textures . Porphry? In proximity to coarse volcaniclastic
MT-DB-061	510761	5465322		DB	2021-05-21		Outcrop	Intermediate Volcanic	Coarse volcaniclastic with disseminated pyrite in proximity (lower elavation/stratigraphy) to MTDB60 Porphry.
MT-DB-062	510687	5465269		DB	2021-05-21		Outcrop	Mafic Volcanic	
MT-DB-063	510433	5465398		DB	2021-05-21		Outcrop	Mafic Volcanic	
MT-DB-064	510428	5465401		DB	2021-05-21		Outcrop	Quartz Vein	
MT-DB-065	510493	5466809		DB	2021-05-21	B731715	Outcrop	Mafic Volcanic	Attitude inconclusive. Dark v weakly chloritized, possible intermediates?
MT-DB-066	510490	5466799		DB	2021-05-21		Float	Feldspar Porphyry	Buried within crack under roots and moss. Porphry sample with weak oxidation and two possible species of sulfide. In proximity to HIGHLY silicsous sample of meta volcanic MTDB067.
MT-DB-067	510481	5466786		DB	2021-05-22	B731716	Outcrop	Mafic Volcanic	Mafic meta volcanic. Dip inconclusive.near vertical. In proximity to "intermediate"

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-DB-068	510492	5466800		DB	2021-05-22		Subcrop	Intermediate Volcanic	Intermediated volcanics in proximity to porphry float. Moderately oxidized.
MT-DB-069	510474	5466775		DB	2021-05-22	B731717	Float	Mafic Volcanic	Highly angular Float found under blowdown at whale back outcrop of same composition with folliation.
MT-DB-070	510471	5466776		DB	2021-05-22	B731718	Outcrop	Quartz Vein	Qtz vein that follows folliation of host sheared mafic volcanic. Crenulating folliation could indicate solid-state deformation.
MT-DB-072	510428	5466759		DB	2021-05-22		Outcrop	Mafic Volcanic	
MT-DB-073	510378	5466709		JS	2021-05-22		Outcrop	Mafic Volcanic	Attitude inconclusive weakly chloritized
MT-DB-074	510411	5466692		DB	2021-05-21	B731719	Outcrop	Mafic Volcanic	
MT-DB-076	510513	5466584		DB	2021-05-22		Outcrop	Mafic Volcanic	Itermediate to maf8c volcanic, moderately silicous with v weak chlorite alt.
MT-DB-077	510471	5466583		DB	2021-05-22	B731720	Outcrop	Gabbro	Sudden appearance of medium grained black lustrous mineral. V minor sulfides. 5 m to the east is continuation of mafic volcanic unit. Topography did not allow for contact tracing.See photos in master
MT-DB-078	510463	5466573		DB	2021-05-22		Outcrop	Mafic Volcanic	
MT-DB-079	510388	5466671		DB	2021-05-22		Outcrop	Mafic Volcanic	Mafic volcanic with tree wedging. Appears to dip WNW. minor sulfides. Breciated qtz vein present. See master dcim photo.
MT-DB-080	510500	5466649		DB	2021-05-22	B731721	Float	Quartz Vein	Takem in proximity to historical pit. In pit we see well foliated prevasivly oxidized sik8c9us rock.unable to safely get attitude from pit wall rock.
MT-DB-081	510498	5466650		DB	2021-05-22	B731722	Float	Mafic Volcanic	Well folliated float found in proximity to historical pit. Medium grained subhedral sulfides present, crenulating folliation and possible classic elemnt
MT-DB-082	512183	5466404		DB	2021-05-23	B731723	Outcrop	Intermediate Volcanic	Actual exposed OC, In proximity to shaft.
MT-DB-083	512189	5466411		DB	2021-05-23		Outcrop	Intermediate Volcanic	Intermediate volcanics in 30Â,Â°~ trend from shaft. Following for intersect with qtz vein. Secondary foliation is coincident to jointing.
MT-DB-084	512162	5466373		DB	2021-05-23		Outcrop	Mafic Volcanic	found small sheared out crop trending 70, strong chlorite sudgest mafic volcanic. potential trend from heealy report?
MT-DB-085	512196	5466407		DB	2021-05-22	B731725	Float	Intermediate Volcanic	Less than 2% medium fine chalco pyrite diffuse in chloritized portion, v fine pyrite or a Arseno pyrite (silvery sulfide) disseminated in more intermediated portion. Found within historical QA rubble

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-DB-086	512196	5466407		DB	2021-05-23	B731724	Float	Quartz Vein	Fragments of float uncovered from within QA shaftrubble pile .well oxidized qtz vein with minor pyrite. V sugary in some places
MT-DB-087	512196	5466407		DB	2021-05-23	B731726	Outcrop	Intermediate Volcanic	"Intermediates" with sulfides in the qtx veinletts. There are a few examples of this relationship in the historical pile
MT-DB-088	512196	5466407		DB	2021-05-22	B731727	Float	Mafic Volcanic	From historical pit. Medium grained sulfides, in an alteration zone?
MT-DB-089	512173	5466416		DB	2021-05-24		Outcrop	Intermediate Volcanic	
MT-DB-090	512137	5466436		DB	2021-05-24		Outcrop	Intermediate Volcanic	
MT-DB-091	512139	5466432		DB	2021-05-24	B731728	Outcrop	Intermediate Volcanic	Sample taken from inside displaced block from conjugate faults.
MT-DB-092	512168	5466325		DB	2021-05-24	B731729	Outcrop	Gabbro	
MT-DB-093	512161	5466322		DB	2021-05-24		Outcrop	Gabbro	Evidence for conjugate faulting along ridge. Striking 48 and 318, cross cutting fault dips 45 degrees to the Sw and terminal fault dips 65 degrees to the NE.
MT-DB-094	512142	5466298		DB	2021-05-24	B731730	Outcrop	Mafic Volcanic	Boudinage within folliation of mafic to intermediate volcanics. Qtz vein is sub paralle.
MT-DB-095	512285	5466351		DB	2021-05-24	B731731	Outcrop	Mafic Volcanic	Lapilli Tuff with coarse bombs on either side of shear zone (10 cm by 5 cm) clastsare pinched within shearzone. Lappilli are best preserved in proximity to coarse class. Qtz vein cuts at an oblique
MT-DB-096	512399	5466413		DB	2021-05-24	B731732	Outcrop	Intermediate Volcanic	Pyrclastic felicity unit with interclated chlorite schist. Further up strike
MT-DB-097	512231	5466407		DB	2021-05-24		Outcrop	Mafic Volcanic	Historic trench
MT-DB-098	510617	5466756		DB	2021-05-25	B731734	Float	Quartz Vein	Taken from rubble pile south east of Orion shaft. Qtz vein in contact with mafic volcanics
MT-DB-099	510645	5466755		DB	2021-05-25	B731735	Float	Intermediate Volcanic	Boulder SE of money pit, very angular.
MT-DB-100	510675	5466781		DB	2021-05-25		Outcrop	Mafic Volcanic	Ccontact between dyke and mafic volcanics
MT-DB-101	510682	5466814		DB	2021-05-25	B731736	Outcrop	Mafic Volcanic	
MT-DB-102	510824	5466628		DB	2021-05-25	B731737	Outcrop	Mafic Volcanic	Intersect between North and North East shearing
MT-DB-103	510714	5466670	409	DB	2021-05-25	B731738	Outcrop	Gabbro	
MT-DB-104	510506	5466702		DB	2021-05-25		Outcrop	Intermediate Volcanic	Gossanus shear zone exposed by historic pit. Possible malachite alt at bottom. Dirdct measurement of attitude not accessible
MT-DB-105	510502	5466704		DB	2021-05-25	B731739	Outcrop	Intermediate Volcanic	
MT-DB-106	510502	5466697		DB	2021-05-25	B731740	Outcrop	Quartz Vein	
MT-DB-107	510518	5466792		DB	2021-05-25	B731741	Outcrop	Quartz Vein	Taken in proximity to open hole. Approximately 15 meters deep 5 meters wide
MT-DB-108	507518	5467277		DB	2021-05-19		Outcrop	Gabbro	

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-DB-109	507382	5467234		DB	2021-05-19		Outcrop	Mafic Volcanic	Tuff breccia. Felsic clastss, with alteration halo
MT-DB-110	512289	5466521		DB	2021-05-23		Outcrop	Intermediate Volcanic	Intermediate volcanics in 30Ã‚Â°~ trend from shaft. Following for intersect with qtz vein. Secondary foliation is coincident to jointing.
MT-JS-005	507655	5466002	404	JS	2021-05-15		Outcrop	Quartz Vein	Pinching and swelling quartz vein. Bullish here.
MT-JS-007	510109	5466585	405	JS	2021-05-15		Outcrop	Chlorite Schist	Outcrop just left of the road coming in. There is a pit, filled wth wate, on the other side of the road; likely created to trace the shear zone. Channel samples were also taken on the outcrop.
MT-JS-009	510573	5466847	445	JS	2021-05-15		Outcrop	Intermediate Volcanic	Intermediate dyke composed of a fg dark-grey groundmass. Elongated amphibole crystals producing a lineation within. Roughly 1m wide. Downhill there is a porphyritic with mg feldspar clasts + amphibole
MT-JS-012	510613	5466947	440	JS	2021-05-15		Outcrop	Quartz Vein	Quartz vein within a shear zone, slightly oxidized with red coloration. Minor chlorite fracture infill.
MT-JS-013	507780	5467256	420	JS	2021-05-15		Outcrop	Gabbro	Soft, sheared gabbro/chlorite schist, micaceous(90% chl). Secoindary foliation measured on the fracture plane to be 30 degrees.
MT-JS-014	507792	5467271	413	JS	2021-05-16		Outcrop	Quartz Vein	Intercolated schist and quartz veins. sampled only the quartz. Offshoot of quartz vein strinking 70 degrees.
MT-JS-015	507792	5467271	413	JS	2021-05-16		Outcrop	Chlorite Schist	Super silcious section of the high strain schist, adjacen to the quartz vein.
MT-JS-016	507707	5467242	418	JS	2021-05-16		Outcrop	Gabbro	Weakly strained gabbro with large(1-3 cm) plag porphyroclasts. Weakly talcose?
MT-JS-017	507832	5467294	426	JS	2021-05-16		Outcrop	Chlorite Schist	Strongly silicified gabbro to chlorite schist with mg-cg quartz blobs forming a weak lineation.
MT-JS-019	507852	5467301	420	JS	2021-05-16		Outcrop	Gabbro	Mg-cg gabbro with occasional marble-sized plag porphyroclasts. Silicious.
MT-JS-021	507674	5467200	416	JS	2021-05-17		Outcrop	Chlorite Schist	schistose unit composed of mostly chlorite. Randomly orientated groundmass with acicular amphiboles. Carbonate veins coming in, potentially causing a contact metamorphism.
MT-JS-023	507559	5467027	412	JS	2021-05-17		Outcrop	Mafic Volcanic	strongly foliated, strongly silicified mafic volcanic wiith randomly orientated amphiboles scattered throughout. No sulfides observed.
MT-JS-024	510839	5467715	407	JS	2021-05-17		Outcrop	Chlorite Schist	sheared fg mafic-int metavolcanic or schist. Red garnets and little pits observed within the sample as well. Sampled a block of qtz + host rock.

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-JS-025	510950	5467972	411	JS	2021-05-17		Outcrop	Chlorite Schist	Strongly sheared and oxidized mafic volcanic + quartz. Located at the base of a 5m tall cliff face. Slickenlines common on the surface.
MT-JS-026	510948	5467970	414	JS	2021-05-17		Outcrop	Felsic Volcanic	Felsic tuff unit composed of primarily silica with mg acicular chlorite grains. Found just South and left of 025.
MT-JS-027	507813	5467411	419	JS	2021-05-18		Outcrop	Mafic Volcanic	Silicious and chloritic metavolcanic with randomly orientated black amphiboles. 1m x 0.5m outcrop.
MT-JS-028	507875	5467421	420	JS	2021-05-18		Outcrop	Mafic Volcanic	Mafic metavolcanic with lineated acicular amphiboles. Weak carbonate.
MT-JS-030	507936	5467520	427	JS	2021-05-18		Outcrop	Quartz Vein	Red quartz vein with minor chlorite fracture infill. Next to a silicified mafic volcanic unit.
MT-JS-031	507947	5467550	431	JS	2021-05-18		Outcrop	Chlorite Schist	Intensely sheared mylonitic schist with acicular amphiboles and mod silica alteration.
MT-JS-033	507951	5467654	429	JS	2021-05-18		Outcrop	Mafic Volcanic	Dark grey-black mafic volcanic with 30% qtz porphyroclasts. Moderately oxidized. Unable to attain strike or dip.
MT-JS-037	508680	5468086	416	JS	2021-05-19		Outcrop	Quartz Vein	Qtz vein within mafic metavolcanics. No sulfides observed. Dan took a sample of the host rock here. Reddish-pink colouration of the quartz.
MT-JS-039	507546	5466883	416	JS	2021-05-20		Outcrop	Gabbro	Acicular amphiboles, randomly orientated. Shearzone adjacent to Gaborone with plag porphyroclasts.
MT-JS-040	507552	5466870		JS	2021-05-20		Outcrop	Chlorite Schist	Silicious chlorite schist on East side of shear zone.
MT-JS-044	510978	5467197		JS	2021-05-22		Outcrop	Mafic Volcanic	Sample taken of quartz and the host rock. Host is fg mv, chlorite rich. Chl fracture infill within the quartz. Dip unattainable. No sulfides.
MT-JS-045	511025	5467175		JS	2021-05-22		Outcrop	Mafic Volcanic	Measured an aplitic dyke. Bull qtz vein in area as well.
MT-JS-046	511093	5467208		JS	2021-05-22		Outcrop	Mafic Volcanic	Thicker part of a massive flow, coarsening with some texture.
MT-JS-047	511151	5467185		JS	2021-05-22		Outcrop	Mafic Volcanic	MV fg dark black with a quartz veim coated on it. Potentiality low angle dip(<20).
MT-JS-048	511213	5467200		JS	2021-05-22		Outcrop	Mafic Volcanic	Fg mv unit with oxidized fault breccia and some feldspar veinlets to the West.
MT-JS-053	511292	5467116		JS	2021-05-22		Outcrop	Diorite	
MT-JS-054	511295	5467171		JS	2021-05-22		Outcrop	Mafic Volcanic	Fg mv with plag blocks within.
MT-JS-055	511294	5467186		JS	2021-05-22		Outcrop	Mafic Volcanic	Shear composed oc mv with stretched quartz phenocrysts elomgated along strike 5:1.
MT-JS-056	511294	5467201		JS	2021-05-22		Outcrop	Mafic Volcanic	MV with tan alteration, possibly bleaching or albitization caused ny the contact pf the diorite and mv.

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-JS-057	511291	5467246		JS	2021-05-22		Outcrop	Chlorite Schist	
MT-JS-058	511310	5467252		JS	2021-05-22		Outcrop	Diorite	Diorite that looks like a gabbro with felsic blocks 5cm wide within
MT-JS-059	511299	5467289		JS	2021-05-22		Outcrop	Mafic Volcanic	Fg mv with a mod-strong fabric. Potential felsic fluid injection from the nearby diorite. Mg black dense garnets found on surfac?
MT-JS-060	511283	5467321		JS	2021-05-22		Outcrop	Mafic Volcanic	Sheared pillowed mafic volcanic with the quartz vein. Stretched pillows and oxidized sugary quartz.
MT-JS-061	510709	5467369		JS	2021-05-23		Outcrop	Mafic Volcanic	Moderately sheared fg mv with trace sulfides occuring on one fracture surface, pyrite.
MT-JS-062	510757	5467410		JS	2021-05-23		Outcrop	Mafic Volcanic	Fg mv with beige weathering and minor oxidation.
MT-JS-064	510818	5467440		JS	2021-05-23		Outcrop	Mafic Volcanic	Strongly foliated fg mv, oxidized. Thin felsic stringer veins wrapped throughout.
MT-JS-066	510904	5467463		JS	2021-05-23		Outcrop	Mafic Volcanic	Fg mv outcrop with layered shelves. Weakly silicious. Tuffaceous.
MT-JS-067	510978	5467400		JS	2021-05-23		Outcrop	Mafic Volcanic	Moderately silicious fg mv with a strong foliation.
MT-JS-070	510991	5467359		JS	2021-05-23		Subcrop	Felsic Volcanic	Felsic tuffaceous unit composed of predominantly silica with quartz porphyroclasts.
MT-JS-072	510701	5467378		JS	2021-05-23		Outcrop	Mafic Volcanic	
MT-JS-073	510663	5467509		JS	2021-05-23		Outcrop	Chlorite Schist	Strongly sheared fg mv or chlorite schist. Has minor silica alt and oxidation.
MT-JS-076	512250	5466394		JS	2021-05-24		Outcrop	Felsic Volcanic	Contact between a felsic tuff unit and a chlorite schist. Felsic tuff composed of entirely of aphanitic blue silica with minor acicular bLc, amphiboles producing a lineation. No sulfides observed.
MT-JS-077	512247	5466390		JS	2021-05-24		Outcrop	Intermediate Volcanic	Strongly foliated mv(chl schist) shear zone in contact with strongly foliated felsic tuff.
MT-JS-078	512243	5466366		JS	2021-05-24		Outcrop	Chlorite Schist	Strongly foliated chloritw schist with strong silica injection foliated within. Weather red and orange, strong potential for sulfides. Just NE of the showing.
MT-JS-082	512329	5466549		JS	2021-05-25		Outcrop	Mafic Volcanic	Outcrop composed of schistose fg chloritic mv with felsic bombs. Felsic pyroclasts composed of predominately silica withporohyritic quartz and acicular amphiboles. Blobby high relief felsics on oc.
MT-JS-083	512320	5466529		JS	2021-05-25		Outcrop	Felsic Volcanic	Felsic-int tuff, looks like the bombs in 082.
MT-JS-086	512383	5466658		JS	2021-05-25		Outcrop	Intermediate Volcanic	Intermediate-felsic crystal tuff with rich amount weakly stretched 0.1-1cm wide qtz crystals, weak lineation. Weakly foliated, no dip possible. Groundmass looks int-mafic, dominantly chlorite.

Station_ID	Easting	Northing	Elevation	Sampler	Date	Sample_ID	Sample Medium	Lithology	Notes
MT-JS-087	512375	5466654		JS	2021-05-25		Subcrop	Felsic Volcanic	Difficult to conclude if outcrop, seen the edge. Contact bw crystal tuff with qtz crystals in a fg foliated chlorite groundmass and a fg silicious tuff.
MT-JS-088	512354	5466671		JS	2021-05-25		Outcrop	Chlorite Schist	Fg chloritic and silicious outcrop. Likely same unit as 087, just mor chloritic.
MT-JS-089	512343	5466685		JS	2021-05-25		Subcrop	Intermediate Volcanic	Int-felsic tuff, moderate foliation defined by the chlorite within. 2 percent quartz crystals, rounded mg.
MT-JS-091	511164	5468262		JS	2021-05-26		Outcrop	Chlorite Schist	Chloritized shear zone striking NE. Quartz vein 1cm wide slightly oblique.
MT-JS-093	511436	5468293		JS	2021-05-26		Outcrop	Chlorite Schist	Chlorite schist shear zone at same strike as 091. Wrapping around a dense felsic clast.
MT-JS-096	512101	5468329		JS	2021-05-26		Outcrop	Chlorite Schist	Chlorite schist strongly sheared and soft w minor silica. No sample. Unable to see structures.
MT-JS-097	512110	5468361		JS	2021-05-26		Outcrop	Quartz Vein	Bull quartz within chlorite schist. Not sampled.
MT-JS-100	512132	5468372		JS	2021-05-26		Outcrop	Mafic Volcanic	Silicious mv/weakly strained schist. Looks like a gabbro.
MT-JS-101	512132	5468234		JS	2021-05-26		Outcrop	Chlorite Schist	

Station_ID	Alteration	Intensity	Style	Alteration	Intensity	Style	Mineralization Type	Style	%	Mineralization Type	Style	%	Mineralization Type	Style	%
MT-JS-001	Chlorite	Strong	Fracture Controlled				Pyrite	Disseminated	1	Chalcopyrite	Disseminated				
MT-JS-002	Silica	Strong	Pervassive	Chlorite	Strong	Fracture Controlled	Chalcopyrite	Disseminated	1	Arsenopyrite	Disseminated		Pyrite	Disseminated	1
MT-JS-003	Silica	Strong	Pervassive	Chlorite	Strong	Fracture Controlled	Chalcopyrite	Disseminated	1	Arsenopyrite	Disseminated		Pyrite	Disseminated	1
MT-JS-004	Calcite	Weak	Patchy	Chlorite	Strong	Fracture Controlled	Pyrite	Disseminated	1	Arsenopyrite	Disseminated				
MT-JS-006	Chlorite	Moderate	Fracture Controlled				Pyrite	Disseminated	1						
MT-JS-010	Silica	Strong	Pervassive	Chlorite	Strong	Pervassive	Pyrite	Disseminated	1						
MT-JS-011	Silica	Moderate	Patchy	Chlorite	Strong	Pervassive	Pyrite	Disseminated	1						
MT-JS-018	Silica	Strong	Patchy	Calcite	Weak	Patchy	Pyrite	Disseminated	1						
MT-JS-020	Calcite	Weak	Pervassive												
MT-JS-022							Pyrite	Disseminated	1	Chalcopyrite		1			
MT-JS-029	Silica	Moderate	Pervassive	Calcite	Weak	Patchy	Pyrite	Disseminated	1						
MT-JS-032	Chlorite	Strong	Pervassive	Silica	Moderate	Pervassive	Pyrite	Disseminated	2						
MT-JS-035	Silica	Moderate	Pervassive	Calcite	Weak	Patchy									
MT-JS-038	Silica	Strong	Fracture Controlled	Amphibole	Weak	Patchy									
MT-JS-043	Chlorite	Strong	Pervassive												
MT-JS-008	Chlorite	Weak	Fracture Controlled												
MT-JS-050	Silica	Strong	Pervassive				Arsenopyrite	Whispy	2	Pyrite	Whispy	1			
MT-JS-051	Silica	Moderate	Pervassive				Arsenopyrite	Disseminated	5						
MT-JS-052	Silica	Moderate	Pervassive				Pyrite	Disseminated	1						
MT-JS-034	Chlorite	Weak	Fracture Controlled												
MT-DB-071	Chlorite	Strong													
MT-JS-049	Silica	Moderate	Pervassive												
MT-JS-063	Silica	Weak	Fracture Controlled				Pyrite	Stringers	1						
MT-JS-065	Chlorite	Strong	Pervassive	Silica	Weak	Patchy	Pyrite	Disseminated	1						
MT-JS-068	Chlorite	Strong	Pervassive				Pyrite	Disseminated							
MT-JS-069	Chlorite	Moderate	Fracture Controlled				Pyrite	Disseminated	2						
MT-JS-071	Silica	Strong	Patchy	Chlorite	Strong	Pervassive	Pyrite	Whispy	3						
MT-DB-075	Chlorite	Strong	Pervassive	Sericite	Weak	Pervassive									
MT-JS-074	Chlorite	Weak	Pervassive	Silica	Weak	Fracture Controlled	Chalcopyrite	Vein	1						
MT-JS-075	Silica	Moderate	Pervassive	Chlorite	Strong	Pervassive	Pyrite	Disseminated	1						
MT-JS-079	Sericite	Moderate	Banded	Chlorite	Strong	Fracture Controlled	Pyrite	Semi-Massive	5				Pyrrhotite	Stringers	5
MT-JS-080	Sericite	Moderate	Banded	Chlorite	Strong	Fracture Controlled	Pyrite	Semi-Massive	5				Pyrrhotite	Stringers	5
MT-JS-081	Sericite	Moderate	Banded	Chlorite	Strong	Fracture Controlled	Pyrite	Semi-Massive	5				Pyrrhotite	Stringers	5
MT-JS-090	Chlorite	Weak	Banded	Silica	Strong	Pervassive	Pyrite	Disseminated	1						
MT-JS-092	Chlorite	Strong	Pervassive	Silica	Weak	Fracture Controlled									
MT-JS-094	Chlorite	Moderate	Fracture Controlled				Chalcopyrite	Fracture Filling	3					Vein	
MT-JS-095	Silica	Moderate	Pervassive				Chalcopyrite	Disseminated	2						
MT-JS-098	Sericite	Strong	Massive				Chalcopyrite	Fracture Filling	2	Malachite	Semi-Massive		Pyrite	Disseminated	1
MT-JS-099	Silica	Moderate	Veins	Calcite	Moderate	Veins	Chalcopyrite	Stringers	2	Pyrite	Disseminated				
MT-JS-084	Chlorite	Strong	Pervassive	Silica	Moderate	Pervassive	Pyrite	Disseminated	1						
MT-JS-085	Chlorite	Moderate	Fracture Controlled				Pyrite	Disseminated	1						
MT-JS-041	Biotite	Strong	Pervassive	Calcite	Weak	Patchy	Pyrite	Disseminated	1						
MT-JS-042	Silica	Weak	Patchy												
MT-DB-001	Chlorite	Strong	Pervassive	Silica	Strong	Pervassive	Pyrite	Disseminated	1	Chalcopyrite	Disseminated				
MT-DB-002	Silica	Strong	Pervassive	Sulfide	Strong	Pervassive	Pyrite	Disseminated	1						
MT-DB-003	Silica	Strong	Pervassive												
MT-DB-004	Calcite	Moderate	Patchy												
MT-DB-005	Silica	Weak	Pervassive	Calcite	Weak	Fracture Controlled									
MT-DB-006	Sulfide	Moderate	Pervassive				Arsenopyrite	Disseminated	1						
MT-DB-007	Sulfide	Weak	Pervassive	Calcite	Weak	Patchy									
MT-DB-008	Sulfide	Weak	Patchy	Calcite	Weak	Patchy	Pyrite	Vein	1						

Station_ID	Alteration	Intensity	Style	Alteration	Intensity	Style	Mineralization Type	Style	%	Mineralization Type	Style	%	Mineralization Type	Style	%
MT-DB-009	Sulfide	Strong	Pervassive				Pyrite	Disseminated	5						
MT-DB-011	Chlorite	Strong	Fracture Controlled				Pyrite		5						
MT-DB-012	Chlorite	Strong													
MT-DB-013	Sulfide	Strong	Pervassive												
MT-DB-014	Sulfide	Moderate	Pervassive	Silica	Moderate	Pervassive	Pyrite	Disseminated	5						
MT-DB-015	Chlorite	Strong	Pervassive												
MT-DB-016	Chlorite	Strong	Pervassive												
MT-DB-017	Chlorite	Strong	Pervassive												
MT-DB-019	Chlorite	Moderate	Pervassive												
MT-DB-020	Chlorite	Moderate	Pervassive												
MT-DB-021	Sulfide	Strong	Pervassive	Chlorite	Moderate	Pervassive									
MT-DB-024							Pyrite	Disseminated	1						
MT-DB-025							Pyrite	Disseminated	2						
MT-DB-026	Sulfide	Moderate	Pervassive	Calcite	Weak	Patchy									
MT-DB-028	Silica	Strong	Pervassive												
MT-DB-029	Chlorite	Strong	Pervassive												
MT-DB-032	Chlorite	Strong	Pervassive												
MT-DB-033	Sulfide	Moderate	Pervassive				Pyrite	Disseminated	1						
MT-DB-034	Silica	Strong	Pervassive				Pyrite	Disseminated	1						
MT-DB-035	Silica	Strong	Pervassive	Sulfide	Weak	Pervassive	Pyrite	Disseminated	1						
MT-DB-036	Sulfide	Moderate	Pervassive												
MT-DB-037	Amphibole	Moderate	Pervassive												
MT-DB-038	Silica	Weak	Pervassive	Sulfide	Weak	Patchy									
MT-DB-040	Chlorite	Weak	Pervassive				Pyrite	Disseminated	5						
MT-DB-041	Chlorite	Moderate	Pervassive				Pyrite	Disseminated	5						
MT-DB-043	Chlorite	Moderate	Pervassive												
MT-DB-044	Chlorite	Moderate	Pervassive	Sericite	Strong	Pervassive	Pyrite	Disseminated	5						
MT-DB-045	Chlorite	Moderate	Pervassive												
MT-DB-046	Chlorite	Moderate	Pervassive	Silica	Weak	Pervassive									
MT-DB-050	Sulfide	Moderate	Patchy				Pyrite	Disseminated	1						
MT-DB-054	Silica	Moderate	Veins	Chlorite	Moderate	Pervassive									
MT-DB-055	Chlorite	Strong	Pervassive	Sulfide	Moderate	Pervassive									
MT-DB-057	Silica	Moderate	Fracture Controlled												
MT-DB-058	Silica	Moderate	Patchy	Epidote	Weak	Patchy									
MT-DB-059	Sericite	Strong	Pervassive												
MT-DB-061							Pyrite	Disseminated	1						
MT-DB-065	Silica	Strong	Pervassive	Chlorite	Weak	Pervassive									
MT-DB-066	Sulfide	Weak	Patchy	Silica	Strong	Pervassive	Pyrite	Disseminated	1	Chalcopyrite	Disseminated				
MT-DB-067	Chlorite	Strong	Pervassive												
MT-DB-068	Silica	Strong	Pervassive												
MT-DB-069							Pyrite	Disseminated	1						
MT-DB-073	Chlorite	Weak	Pervassive												
MT-DB-074	Chlorite	Weak	Pervassive												
MT-DB-077	Amphibole	Moderate		Sericite	Moderate	Patchy									
MT-DB-079	Silica	Strong	Pervassive				Pyrite	Disseminated	1						
MT-DB-080	Sulfide	Moderate	Pervassive				Pyrite	Disseminated	1						
MT-DB-081	Chlorite	Moderate	Pervassive	Silica	Moderate	Pervassive									
MT-DB-082	Silica	Strong	Pervassive												
MT-DB-084	Chlorite	Strong	Pervassive												
MT-DB-085	Silica	Moderate	Pervassive				Chalcopyrite	Disseminated	2	Pyrite	Disseminated				
MT-DB-086							Pyrite	Disseminated	1						

Station_ID	Alteration	Intensity	Style	Alteration	Intensity	Style	Mineralization Type	Style	%	Mineralization Type	Style	%	Mineralization Type	Style	%
MT-DB-087	Silica	Strong	Massive				Chalcopyrite	Disseminated	1						
MT-DB-088	Chlorite	Strong	Pervassive	Sericite	Weak	Pervassive	Pyrite	Disseminated	1						
MT-DB-091	Silica	Strong	Pervassive				Pyrite	Disseminated	1						
MT-DB-092	Chlorite	Moderate	Fracture Controlled	Silica	Weak	Pervassive	Pyrite	Disseminated							
MT-DB-094	Chlorite	Weak	Pervassive												
MT-DB-096	Silica	Strong	Pervassive												
MT-DB-098	Silica	Strong	Pervassive	Sulfide	Moderate	Pervassive	Pyrite	Disseminated	1						
MT-DB-099	Silica	Strong	Pervassive	Sulfide	Moderate	Pervassive	Pyrite	Disseminated	2						
MT-DB-101	Silica	Moderate	Massive	Sulfide	Moderate	Pervassive									
MT-DB-103	Chlorite	Moderate	Pervassive				Pyrite	Disseminated	1						
MT-DB-104	Sulfide	Strong	Pervassive										Bornite		
MT-DB-105	Sulfide	Strong	Pervassive												
MT-DB-106	Sulfide	Moderate	Pervassive												
MT-DB-108	Chlorite	Moderate	Pervassive	Silica	Moderate	Pervassive									
MT-JS-007	Chlorite	Strong	Pervassive												
MT-JS-012	Chlorite	Strong	Fracture Controlled												
MT-JS-013	Silica	Strong	Patchy	Calcite	Weak	Patchy									
MT-JS-014	Calcite	Weak	Patchy	Chlorite	Strong	Fracture Controlled									
MT-JS-015	Silica	Strong	Patchy	Calcite	Weak	Patchy									
MT-JS-016	Silica	Moderate	Patchy	Chlorite	Moderate	Pervassive									
MT-JS-019	Silica	Moderate	Patchy												
MT-JS-021	Calcite	Moderate	Fracture Controlled												
MT-JS-023	Silica	Strong	Pervassive	Amphibole	Weak	Patchy									
MT-JS-024	Chlorite	Strong	Pervassive	Silica	Weak	Pervassive									
MT-JS-025	Chlorite	Strong	Pervassive	Calcite	Moderate	Patchy									
MT-JS-026	Calcite	Moderate	Pervassive	Chlorite	Moderate	Fracture Controlled									
MT-JS-027	Silica	Moderate	Pervassive	Chlorite	Strong	Pervassive									
MT-JS-028	Chlorite	Strong	Pervassive	Amphibole	Weak	Patchy									
MT-JS-030	Chlorite	Weak	Fracture Controlled	Calcite	Weak	Pervassive									
MT-JS-031	Chlorite	Strong	Pervassive	Amphibole	Weak	Patchy									
MT-JS-033	Chlorite	Strong	Pervassive	Silica	Moderate	Patchy									
MT-JS-037	Chlorite	Weak	Fracture Controlled	Calcite	Moderate	Pervassive									
MT-JS-039	Silica	Moderate	Patchy	Calcite	Weak	Patchy									
MT-JS-040	Silica	Moderate	Fracture Controlled	Calcite	Moderate	Fracture Controlled	Chalcopyrite	Disseminated	1						
MT-JS-044	Chlorite	Strong	Fracture Controlled												
MT-JS-045	Silica	Strong	Pervassive												
MT-JS-046			Patchy	Silica	Weak										
MT-JS-053	Silica	Moderate	Pervassive												
MT-JS-055	Silica														
MT-JS-060	Chlorite	Strong	Pervassive												
MT-JS-061	Silica	Weak	Fracture Controlled				Pyrite	Stringers	1						
MT-JS-064	Silica	Weak	Fracture Controlled	Chlorite	Strong	Pervassive									
MT-JS-067	Silica	Moderate	Patchy												
MT-JS-073	Chlorite	Strong	Pervassive	Silica	Weak	Patchy									
MT-JS-076	Silica	Strong	Pervassive												
MT-JS-077	Silica	Weak	Fracture Controlled	Chlorite	Strong	Pervassive									
MT-JS-078	Silica	Strong	Banded	Chlorite	Strong	Banded									
MT-JS-086	Chlorite	Moderate	Pervassive												
MT-JS-089	Silica	Moderate	Pervassive	Chlorite	Moderate	Pervassive									
MT-JS-091	Chlorite	Strong	Pervassive	Silica	Weak	Fracture Controlled									
MT-JS-096	Chlorite	Strong	Pervassive	Silica	Weak	Patchy									

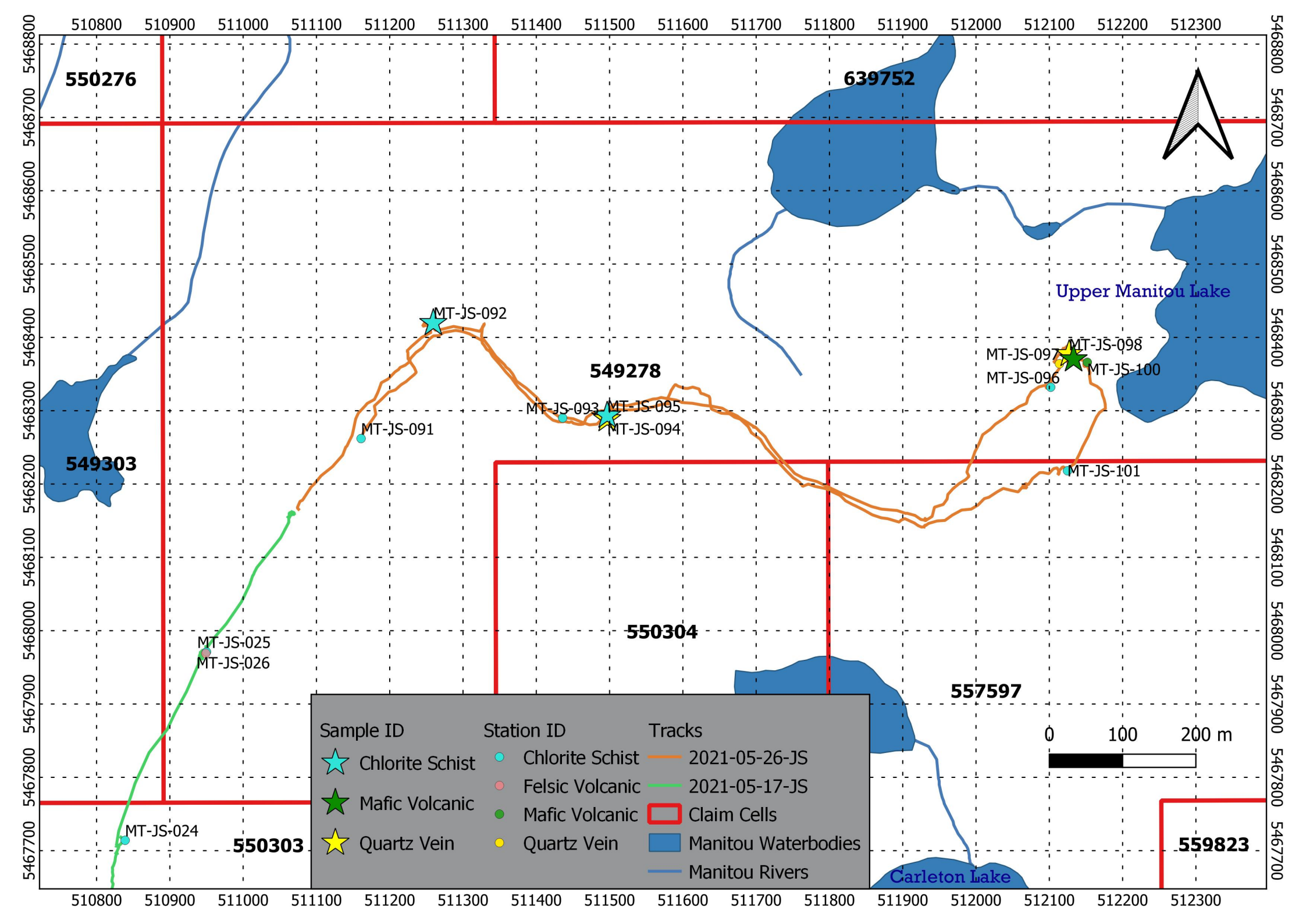
Station_ID	Alteration	Intensity	Style	Alteration	Intensity	Style	Mineralization Type	Style	%	Mineralization Type	Style	%	Mineralization Type	Style	%
MT-JS-100	Silica	Moderate	Patchy	Chlorite	Strong	Pervassive									

Station_ID	Structure Type	Az	Dip	Constructor	Structure Type	Az	Dip	Constructor	Structure Type	Az	Dip	Constructor
MT-DB-100	Dyke	290	88									
MT-JS-045	Dyke	204										
MT-JS-010	Foliation	48	86	Chlorite	Foliation	30	87	Chlorite				
MT-JS-029	Foliation	70	72									
MT-JS-032	Foliation	99	85									
MT-JS-035	Foliation	27	69									
MT-JS-038	Foliation	54	90									
MT-JS-051	Foliation	220	82									
MT-DB-071	Foliation	50	59	Chlorite								
MT-JS-049	Foliation	205	85									
MT-JS-071	Foliation	40	80									
MT-DB-075	Foliation	25	73	Chlorite								
MT-JS-074	Foliation	210	80									
MT-JS-099	Foliation	140										
MT-DB-014	Foliation	32	45	Chlorite								
MT-DB-018	Foliation	20	85	Chlorite								
MT-DB-023	Foliation	344	24									
MT-DB-027	Foliation	45	60	Chlorite								
MT-DB-034	Foliation	22	26	Chlorite								
MT-DB-035	Foliation	115	90	Chlorite								
MT-DB-036	Foliation	238	58	Chlorite								
MT-DB-038	Foliation	318	85	Chlorite	Vein	310	88	Quartz				
MT-DB-039	Foliation	352	44									
MT-DB-042	Foliation	24	68									
MT-DB-043	Foliation	50	65	Chlorite	Foliation	28		Chlorite				
MT-DB-045	Foliation	136	67	Chlorite	Vein	285	28	Quartz				
MT-DB-046	Foliation	40	72									
MT-DB-049	Foliation	50	40	Chlorite	Contact	58	26		Foliation	34	39	
MT-DB-050	Foliation	56										
MT-DB-053	Foliation	6	64	Chlorite								
MT-DB-054	Foliation	200	88									
MT-DB-055	Foliation	20	65	Chlorite	Vein	116	85					
MT-DB-056	Foliation	130	88	Chlorite								
MT-DB-057	Foliation	44	74									
MT-DB-058	Foliation	40	70									
MT-DB-063	Foliation	60	50									
MT-DB-067	Foliation	41	90									
MT-DB-069	Foliation	24		Chlorite								
MT-DB-072	Foliation	350	85									
MT-DB-076	Foliation	360	59	Chlorite								
MT-DB-078	Foliation	38	69	Chlorite								
MT-DB-082	Foliation	26	90									
MT-DB-083	Foliation	210	85									
MT-DB-084	Foliation	69	72									
MT-DB-089	Foliation	81	90		Vein	318	70					
MT-DB-090	Foliation	240	88		Vein	240	85					
MT-DB-091	Foliation	75	88		Fault	105	50		Fault	118	63	
MT-DB-094	Foliation	34	80		Vein	30	40					
MT-DB-095	Foliation	35	62		Vein	110	60					
MT-DB-096	Foliation	30	65									
MT-DB-102	Foliation	5	88	Sericite	Foliation	40	84	Quartz				
MT-DB-103	Foliation	360	71									
MT-DB-104	Foliation	10	85									
MT-DB-105	Foliation	360	76									

Station_ID	Structure Type	Az	Dip	Constructor	Structure Type	Az	Dip	Constructor	Structure Type	Az	Dip	Constructor
MT-DB-108	Foliation	25	70	Chlorite	Foliation	358		Chlorite				
MT-DB-110	Foliation	210	85		Foliation	360	88					
MT-JS-009	Foliation	220	90									
MT-JS-013	Foliation	40	56	Chlorite	Fracture	30		Chlorite				
MT-JS-015	Foliation	16	78	Chlorite								
MT-JS-016	Foliation	44	40	Chlorite								
MT-JS-019	Foliation	60										
MT-JS-023	Foliation	40	50									
MT-JS-024	Foliation	5	60	Chlorite								
MT-JS-025	Foliation	10	62	Chlorite								
MT-JS-026	Foliation	30	60	Chlorite								
MT-JS-027	Foliation	44	60									
MT-JS-031	Foliation	99	85									
MT-JS-048	Foliation	217	72		Foliation	210						
MT-JS-057	Foliation	206	67									
MT-JS-060	Foliation	55										
MT-JS-061	Foliation	92										
MT-JS-067	Foliation	210	80									
MT-JS-076	Foliation	45	85									
MT-JS-078	Foliation	232	88									
MT-JS-086	Foliation	50										
MT-JS-101	Foliation	70	81									
MT-JS-063	Fracture	350	85		Foliation	220	38					
MT-JS-043	Shear Zone	35	65	Chlorite	Vein	35	65	Quartz				
MT-JS-050	Shear Zone	224	82									
MT-JS-065	Shear Zone	204	90	Chlorite								
MT-JS-090	Shear Zone	50	65									
MT-JS-092	Shear Zone	70										
MT-JS-094	Shear Zone	160	85	Quartz								
MT-JS-095	Shear Zone	160	76	Chlorite								
MT-JS-084	Shear Zone	50	90	Chlorite	Vein	50		Quartz				
MT-JS-085	Shear Zone	50	90	Quartz								
MT-DB-015	Shear Zone	23	85	Chlorite								
MT-DB-062	Shear Zone	41	60									
MT-JS-007	Shear Zone	355	72	Chlorite	Foliation	355	70					
MT-JS-039	Shear Zone	38	50									
MT-JS-040	Shear Zone	38	50	Chlorite								
MT-JS-055	Shear Zone	198										
MT-JS-059	Shear Zone	30	85									
MT-JS-077	Shear Zone	45	85	Chlorite								
MT-JS-082	Shear Zone	50										
MT-JS-091	Shear Zone	37	82	Chlorite	Vein	34						
MT-JS-093	Shear Zone	37	55	Chlorite								
MT-JS-004	Vein	214	82	Quartz								
MT-JS-006	Vein	350	90	Quartz								
MT-JS-018	Vein	60		Quartz								
MT-JS-020	Vein	60										
MT-JS-022	Vein	152		Quartz								
MT-JS-008	Vein	350	90	Quartz								
MT-JS-034	Vein	50	90									
MT-JS-036	Vein	240	80	Quartz								
MT-JS-069	Vein	40										
MT-JS-098	Vein	142	50	Quartz								
MT-DB-026	Vein	54	85									

Station_ID	Structure Type	Az	Dip	Constructor	Structure Type	Az	Dip	Constructor	Structure Type	Az	Dip	Constructor
MT-DB-029	Vein	30	45									
MT-DB-032	Vein	216	85	Quartz								
MT-DB-041	Vein	40	55									
MT-DB-051	Vein	220	58									
MT-DB-064	Vein	49	40									
MT-DB-070	Vein	44	60	Quartz								
MT-JS-005	Vein	214	82	Quartz								
MT-JS-012	Vein	240	62	Quartz								
MT-JS-014	Vein	16	78	Quartz	Vein	70						
MT-JS-021	Vein	164										
MT-JS-030	Vein	20	90									
MT-JS-037	Vein	238		Quartz								
MT-JS-044	Vein	35		Quartz								
MT-JS-097	Vein	150	50									

Appendix D: Maps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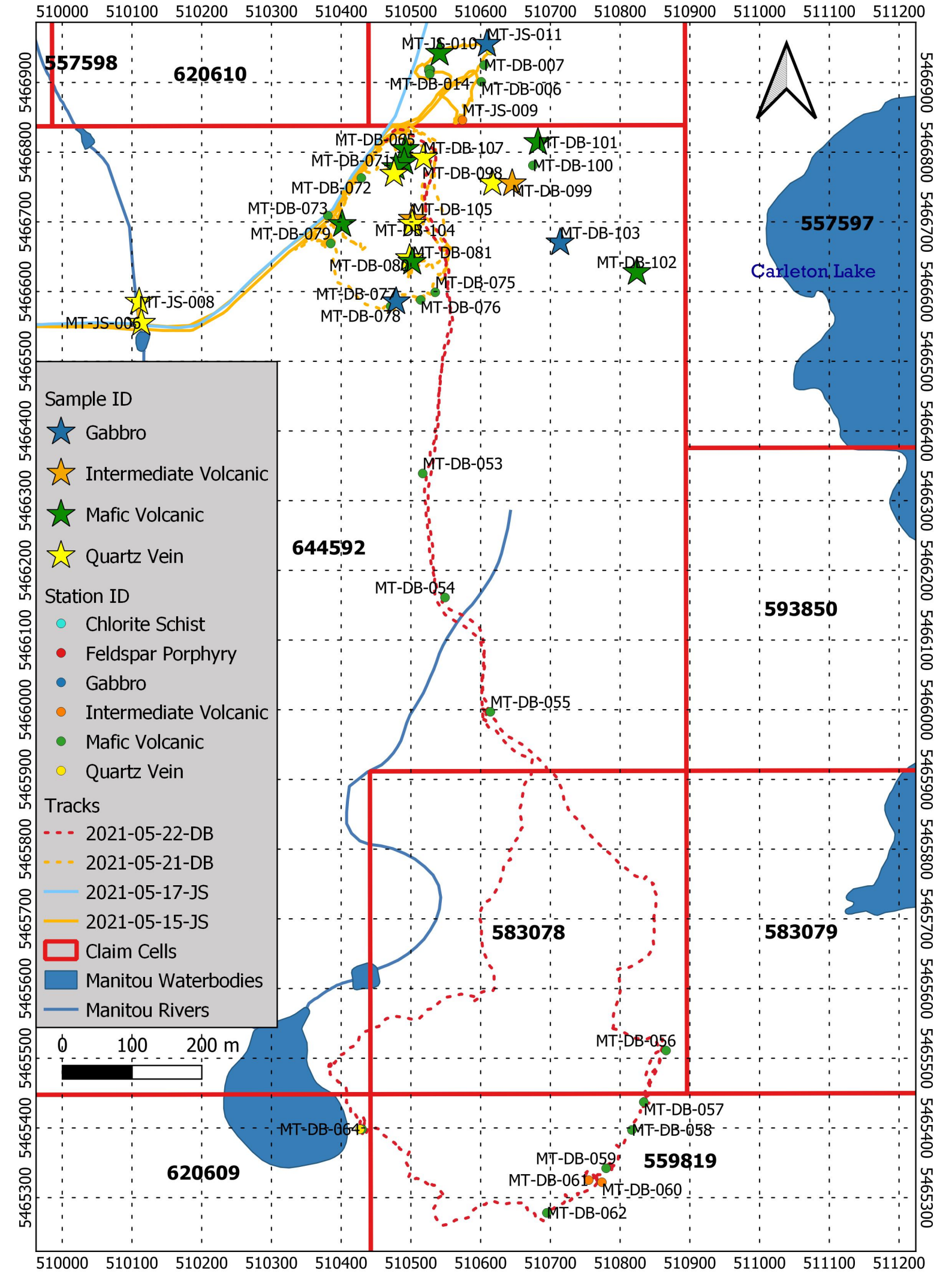
5468100
5468000
5467900
5467800
5467700
550276
639752
549303
549278
550304
550303
557597
559823
Upper Manitou Lake
Carleton Lake
MT-JS-092
MT-JS-091
MT-JS-093
MT-JS-095
MT-JS-094
MT-JS-097
MT-JS-098
MT-JS-096
MT-JS-100
MT-JS-101
MT-JS-025
MT-JS-026
MT-JS-024
Sample ID
Chlorite Schist
Mafic Volcanic
Quartz Vein
Station ID
Chlorite Schist
Felsic Volcanic
Mafic Volcanic
Quartz Vein
Tracks
2021-05-26-JS
2021-05-17-JS
Claim Cells
Manitou Waterbodies
Manitou Rivers
0
100
200 m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557598
620610
557597
Carleton Lake
644592
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583079
620609
559819
MT-JS-010
MT-JS-011
MT-DB-007
MT-DB-014
MT-DB-006
MT-JS-009
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MT-DB-071
MT-DB-100
MT-DB-098
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MT-DB-064
MT-DB-059
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MT-DB-062
Sample ID
Gabbro
Intermediate Volcanic
Mafic Volcanic
Quartz Vein
Station ID
Chlorite Schist
Feldspar Porphyry
Gabbro
Intermediate Volcanic
Mafic Volcanic
Quartz Vein
Tracks
2021-05-22-DB
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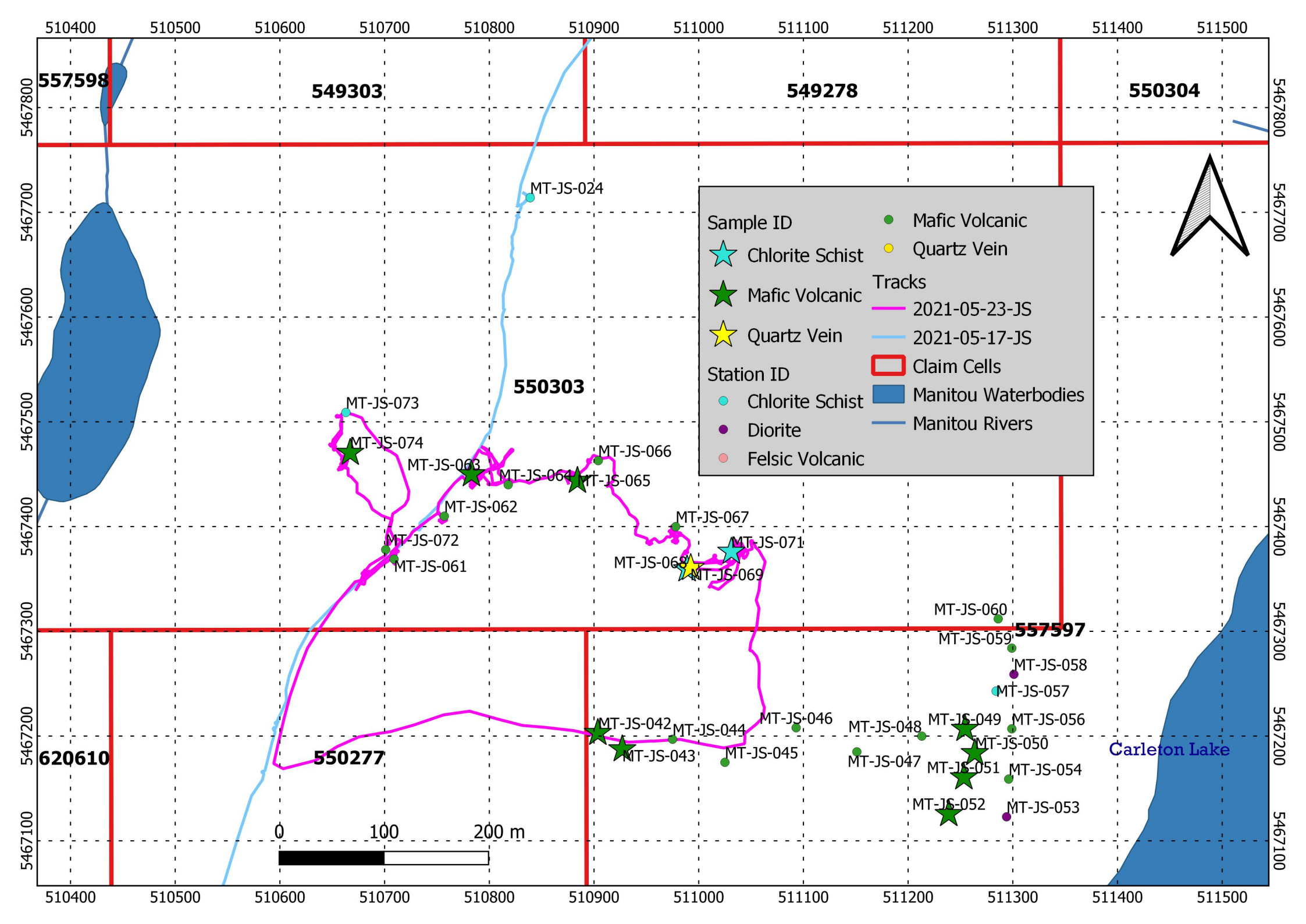
2021-05-17-JS
2021-05-15-JS
Claim Cells
Manitou Waterbodies
Manitou Rivers
0 100 200 m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550277
MT-JS-024
MT-JS-073
MT-JS-074
MT-JS-063
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MT-JS-047
MT-JS-051
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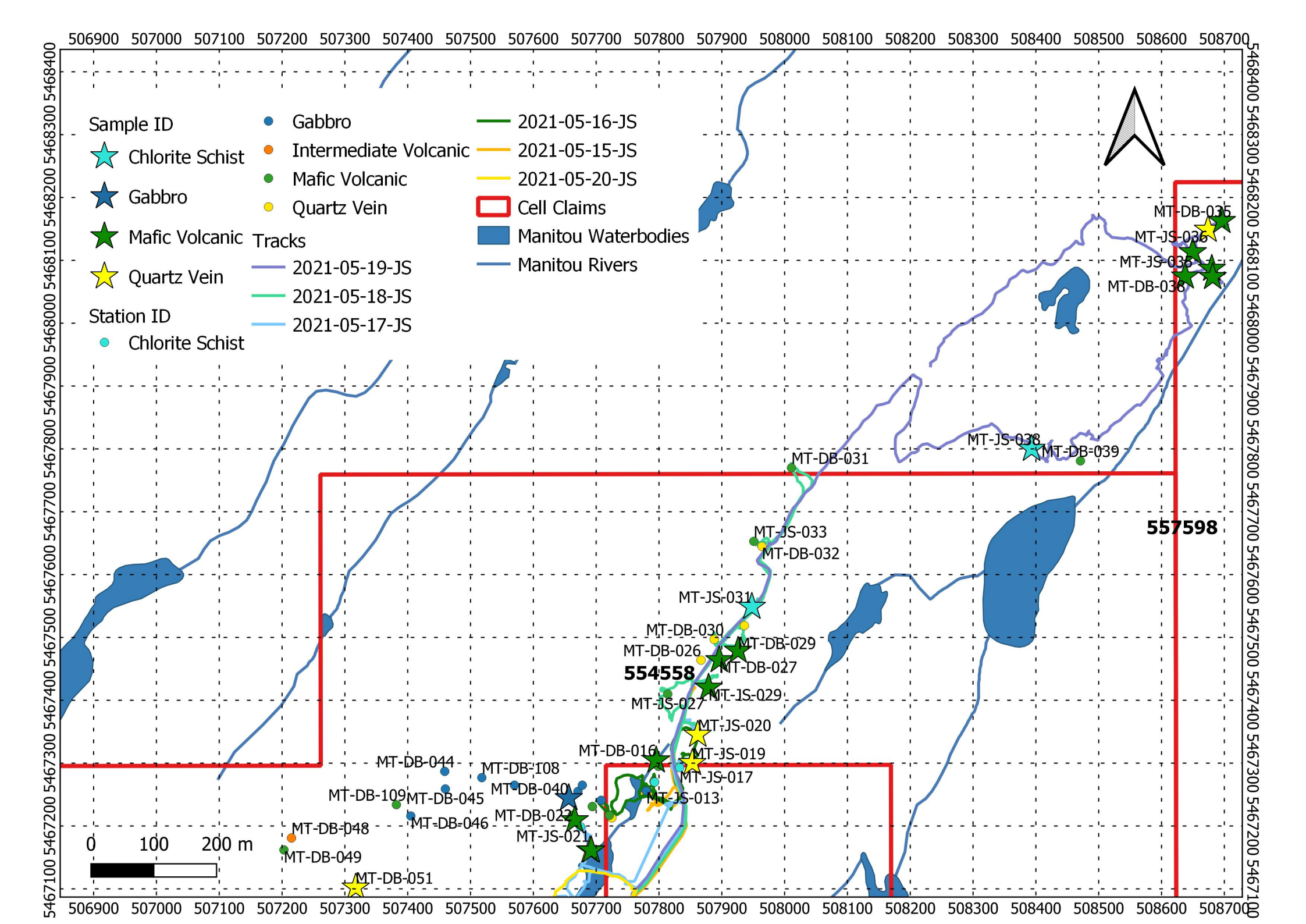
MT-JS-053
Carleton Lake
Sample ID
Chlorite Schist
Mafic Volcanic
Quartz Vein
Station ID
Chlorite Schist
Diorite
Felsic Volcanic
Mafic Volcanic
Quartz Vein
Tracks
2021-05-23-JS
2021-05-17-JS
Claim Cells
Manitou Waterbodies
Manitou Rivers
0
100
200 m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Chlorite Schist
Gabbro
Mafic Volcanic
Quartz Vein
Station ID
Chlorite Schist
Gabbro
Intermediate Volcanic
Mafic Volcanic
Quartz Vein
Tracks
2021-05-19-JS
2021-05-18-JS
2021-05-17-JS
2021-05-16-JS
2021-05-15-JS
2021-05-20-JS
Cell Claims
Manitou Waterbodies
Manitou Rivers
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100
200 m
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554558
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MT-JS-036
MT-JS-036
MT-DB-036
MT-JS-038
MT-DB-039
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MT-DB-030
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MT-JS-013
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MT-DB-045
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MT-DB-046
MT-JS-021
MT-DB-048
MT-DB-049
MT-DB-051
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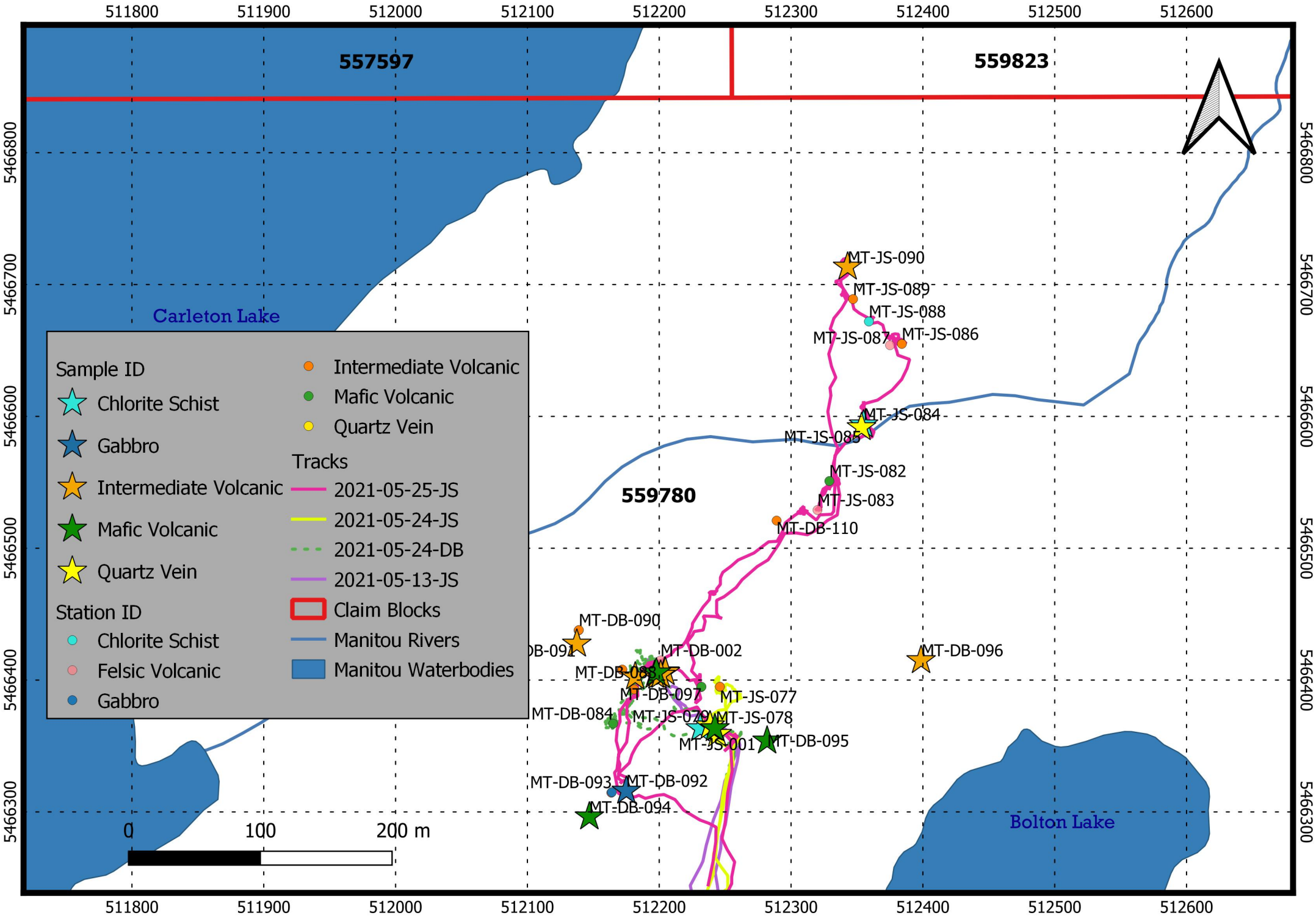
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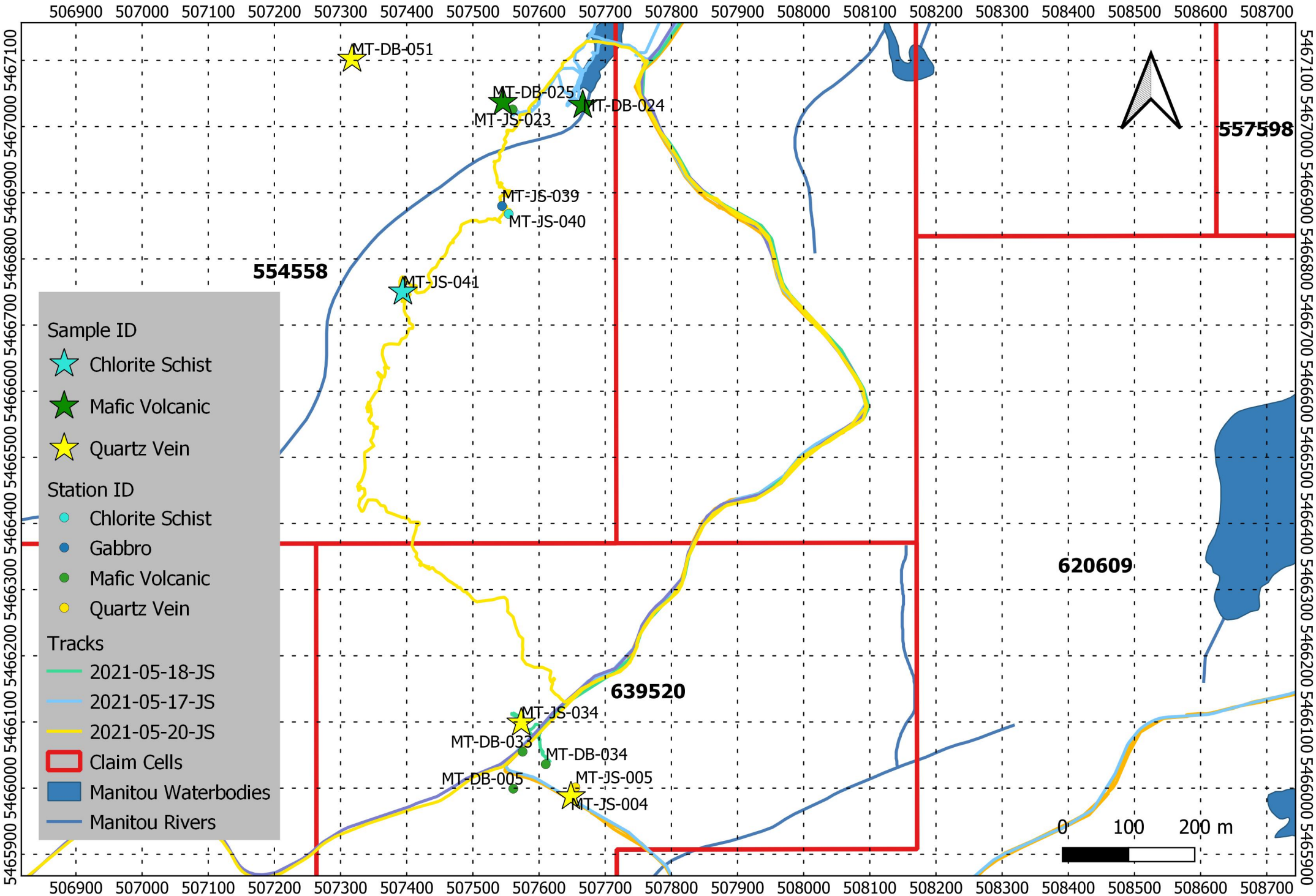
Carleton Lake
Bolton Lake
MT-JS-090
MT-JS-089
MT-JS-088
MT-JS-087
MT-JS-086
MT-JS-084
MT-JS-085
MT-JS-082
MT-JS-083
MT-DB-110
MT-DB-090
MT-DB-091
MT-DB-002
MT-DB-088
MT-DB-097
MT-JS-077
MT-DB-084
MT-JS-079
MT-JS-078
MT-JS-001
MT-DB-095
MT-DB-096
MT-DB-093
MT-DB-092
MT-DB-094
Sample ID
Chlorite Schist
Gabbro
Intermediate Volcanic
Mafic Volcanic
Quartz Vein
Station ID
Chlorite Schist
Felsic Volcanic
Gabbro
Intermediate Volcanic
Mafic Volcanic
Quartz Vein
Tracks
2021-05-25-JS
2021-05-24-JS
2021-05-24-DB
2021-05-13-JS
Claim Blocks
Manitou Rivers
Manitou Waterbodies
0
100
200 m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MT-DB-051
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MT-DB-024
MT-JS-023
MT-JS-039
MT-JS-040
MT-JS-041
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MT-DB-033
MT-DB-034
MT-DB-005
MT-JS-005
MT-JS-004
554558
557598
620609
639520
Sample ID
Chlorite Schist
Mafic Volcanic
Quartz Vein
Station ID
Chlorite Schist
Gabbro
Mafic Volcanic
Quartz Vein
Tracks
2021-05-18-JS
2021-05-17-JS
2021-05-20-JS
Claim Cells
Manitou Waterbodies
Manitou Rivers
0 100 200 m

APPENDIX E: SAMPLE LOCATIONS AND AU RESULTS

Station_ID	Easting	Northing	Elevation (m)	Sample_ID	Au_ppm	Ag_ppm	Cu_ppm
MT-JS-001	512244	5466359	402	B731501	15.5	2.64	64.2
MT-JS-002	512199	5466403	391	B731502	5.35	0.5	41.5
MT-JS-003	512199	5466403	391	B731503	26.7	6.93	123.5
MT-JS-004	507648	5465987	395	B731504	0.07	0.05	95.7
MT-JS-006	510113	5466555	402	B731505	0.59	0.09	19.9
MT-JS-010	510541	5466942	437	B731506	0.01	0.05	71.2
MT-JS-011	510609	5466955	441	B731507	0	0.03	31.2
MT-JS-018	507853	5467300	420	B731508	0.01	1.29	1355
MT-JS-020	507862	5467345	410	B731509	0.46	0.1	36.6
MT-JS-022	507690	5467161	414	B731510	0.07	0.87	2090
MT-JS-029	507879	5467420	419	B731511	0.01	0.05	121
MT-JS-032	507948	5467549	431	B731512	0	0.04	58.4
MT-JS-035	508650	5468113	419	B731513	0	0.03	25
MT-JS-038	508393	5467800	414	B731514	0	0.1	113.5
MT-JS-043	510927	5467188	419	B731515	0	0.02	28.6
MT-JS-008	510110	5466585	402	B731516	0	0.01	28.9
MT-JS-050	511264	5467184	427	B731517	0	0.09	189
MT-JS-051	511253	5467161	409	B731518	0	0.07	113.5
MT-JS-052	511239	5467126	424	B731519	0	0.05	122.5
MT-JS-034	507573	5466099	406	B731520	0.05	0.79	179.5
MT-JS-036	508674	5468149	420	B731521	0	0.01	4
MT-JS-049	511254	5467207	432	B731522	0	0.28	548
MT-JS-063	510783	5467450	420	B731523	0	0.06	134
MT-JS-065	510884	5467444	411	B731524	0	0.02	71.1
MT-JS-068	510989	5467359	409	B731525	0	0.01	28
MT-JS-069	510992	5467361	412	B731526	0	0.01	13
MT-JS-071	511031	5467376	400	B731527	0	0.04	91.9
MT-JS-074	510667	5467471	401	B731528	0	0.04	146
MT-JS-075	512231	5466363	403	B731529	0.01	0.05	91.8
MT-JS-079	512238	5466365	386	B731530	2.4	0.13	103.5
MT-JS-080	512238	5466365	386	B731531	4.68	0.4	179.5
MT-JS-081	512238	5466365	386	B731532	0.5	0.03	31.1
MT-JS-090	512343	5466713	396	B731533	0	0.04	17.5
MT-JS-092	511260	5468420	402	B731534	0	0.01	8.5
MT-JS-094	511497	5468288	402	B731535	0.04	0.36	692
MT-JS-095	511497	5468293	410	B731536	0.01	0.15	407
MT-JS-098	512127	5468377	397	B731537	0.01	0.49	1275
MT-JS-099	512133	5468370	395	B731538	0	0.13	407
MT-JS-084	512355	5466594	390	B731539	0	0.04	34.3
MT-JS-085	512353	5466592	389	B731540	0	0.02	6.4
MT-JS-041	507394	5466750	404	B731541	0.12	1.91	2670
MT-JS-042	510904	5467203	413	B731542	0.04	0.22	149.5
MT-DB-028	507926	5467479	417	B731701	0	0.04	136.5
MT-DB-027	507896	5467464	411	B731702	0.01	0.04	86.8
MT-DB-040	507656	5467244	411	B731703	0.07	0.21	114.5
MT-DB-036	508680	5468087	413	B731704	0	0.12	153.5

Station_ID	Easting	Northing	Elevation (m)	Sample_ID	Au_ppm	Ag_ppm	Cu_ppm
MT-DB-051	507317	5467102	417	B731705	0	<0.01	10.3
MT-DB-021	507666	5467209	414	B731706	0.16	1.63	144.5
MT-DB-016	507796	5467305	415	B731707	0.01	0.03	43.3
MT-DB-023	507692	5467161	412	B731708	0	0.03	71.7
MT-DB-035	508696	5468163	417	B731709	0	0.02	37.4
MT-DB-003	512197	5466404	386	B731710	0	0.03	3.2
MT-DB-038	508638	5468074	420	B731711	0	0.01	23
MT-DB-037	508682	5468074	396	B731712	0	0.02	94.7
MT-DB-025	507545	5467037	407	B731713	0.01	0.09	87.3
MT-DB-024	507666	5467032	406	B731714	0.01	0.04	78.3
MT-DB-065	510492	5466804	424	B731715	0	0.05	45.2
MT-DB-067	510490	5466786	422	B731716	0	0.01	10.9
MT-DB-069	510478	5466778	424	B731717	0	0.03	83.4
MT-DB-070	510476	5466769	428	B731718	0	0.01	8.7
MT-DB-074	510401	5466697	413	B731719	0	0.02	38.1
MT-DB-077	510479	5466586	426	B731720	0	0.04	113
MT-DB-080	510498	5466648	422	B731721	0	0.01	12.3
MT-DB-081	510502	5466642	423	B731722	0.33	0.13	96.3
MT-DB-082	512182	5466403	394	B731723	0	0.02	3.8
MT-DB-086	512204	5466406	400	B731724	24.6	20.5	403
MT-DB-085	512205	5466406	400	B731725	0.02	0.08	62.2
MT-DB-087	512201	5466404	400	B731726	0.02	0.07	16.5
MT-DB-088	512198	5466406	395	B731727	0.04	0.07	19.1
MT-DB-091	512137	5466428	394	B731728	0.01	0.24	30.3
MT-DB-092	512175	5466316	406	B731729	0	0.04	68.5
MT-DB-094	512147	5466296	409	B731730	0	0.07	15.6
MT-DB-095	512282	5466354	395	B731731	0	0.01	9.4
MT-DB-096	512399	5466415	387	B731732	0	0.01	2.4
MT-DB-001	512242	5466363	399	B731733	0.24	0.41	680
MT-DB-098	510617	5466756	390	B731734	0	0.01	28.9
MT-DB-099	510645	5466755	395	B731735	0.01	0.09	79.3
MT-DB-101	510682	5466814	389	B731736	0	0.04	118.5
MT-DB-102	510824	5466628	402	B731737	0	0.01	24
MT-DB-103	510714	5466670	409	B731738	0	0.01	42
MT-DB-105	510502	5466704	404	B731739	0.24	0.32	59.9
MT-DB-106	510502	5466697	404	B731740	0.01	0.07	17.9
MT-DB-107	510518	5466792	401	B731741	0.01	0.12	121.5

APPENDIX F: ASSAY CERTIFICATES

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: NORTHERN DOMINION METALS CORPORATION
1430-800 WEST PENDER STREET
VANCOUVER BC V6C 2V6

Finalized Date: 23-JUN-2021
Account: NDMCDEZG

CERTIFICATE TB21144106

Project: Manitou

This report is for 83 samples of Rock submitted to our lab in Thunder Bay, ON, Canada on 4-JUN-2021.

The following have access to data associated with this certificate:

ROB CARPENTER ALAN WAINWRIGHT	DAN MACNEIL	LORI PASLAWSKI

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um
LOG-21	Sample logging - ClientBarCode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
Au-GRA21	Au 30g FA-GRAV finish	WST-SIM
ME-MS41	Ultra Trace Aqua Regia ICP-MS	

This is the Final Report and supersedes any preliminary report with this certificate number.Results apply to samples as submitted.All pages of this report have been checked and approved for release.
***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 604 984 0221 Fax: +1 604 984 0218
www.alsglobal.com/geochemistry

To: NORTHERN DOMINION METALS CORPORATION
1430-800 WEST PENDER STREET
VANCOUVER BC V6C 2V6

Finalized Date: 23-JUN-2021
Account: NDMCDEZG

Project: Manitou

CERTIFICATE OF ANALYSIS TB21144106

Sample Description	Method	WEI-21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05
B731501		3.20	2.64	0.04	3.6	21.8	10	<10	<0.05	0.02	0.02	0.22	0.20	2.1	34	0.06
B731502		2.17	0.50	0.35	3.9	2.65	<10	20	0.07	0.06	0.65	3.61	11.85	2.6	21	0.11
B731503		2.13	6.93	1.07	1.9	23.5	<10	20	0.12	0.10	2.74	1.08	26.1	9.3	29	0.35
B731504		0.48	0.05	1.26	0.3	0.05	<10	20	<0.05	0.01	2.06	0.05	2.46	19.0	58	0.26
B731505		0.72	0.09	0.18	1.5	0.43	<10	10	<0.05	0.05	0.44	0.02	1.51	4.6	25	0.07
B731506		0.58	0.05	2.77	0.5	<0.02	<10	20	0.08	0.02	10.15	0.23	7.10	37.6	115	0.09
B731507		0.98	0.03	2.72	0.6	<0.02	<10	10	0.08	0.01	1.12	0.04	5.14	24.1	50	0.17
B731508		0.97	1.29	0.68	2.2	<0.02	<10	10	<0.05	0.02	1.23	0.22	0.27	15.0	52	0.10
B731509		0.46	0.10	0.96	0.7	0.30	<10	10	<0.05	0.01	0.22	0.09	0.44	7.1	117	0.11
B731510		0.82	0.87	1.28	7.4	0.18	<10	10	<0.05	0.02	3.17	0.38	0.37	36.7	107	0.06
B731511		1.82	0.05	4.17	0.1	<0.02	<10	10	<0.05	0.01	1.84	0.04	0.98	24.2	305	0.06
B731512		1.10	0.04	2.78	0.2	<0.02	<10	20	<0.05	0.01	2.28	0.06	2.45	20.2	170	0.12
B731513		0.85	0.03	1.68	0.2	<0.02	<10	20	0.10	0.02	1.80	0.06	12.85	15.3	39	0.13
B731514		0.49	0.10	1.74	<0.1	<0.02	<10	110	0.07	0.02	3.47	0.09	12.45	20.8	52	0.44
B731515		0.65	0.02	0.93	0.2	<0.02	<10	280	<0.05	0.01	0.65	0.05	6.50	7.6	29	1.22
B731516		0.96	0.01	0.40	1.5	<0.02	<10	10	<0.05	0.03	0.14	0.02	1.21	6.2	30	0.07
B731517		1.48	0.09	0.87	0.3	<0.02	<10	10	0.07	0.05	1.36	0.03	14.50	44.0	51	<0.05
B731518		0.71	0.07	2.29	0.4	0.05	<10	10	0.15	<0.01	1.58	0.04	17.85	29.9	87	<0.05
B731519		1.24	0.05	1.48	0.2	<0.02	<10	10	0.07	0.01	0.77	0.02	18.35	10.1	119	<0.05
B731520		0.73	0.79	0.06	0.8	0.03	<10	<10	<0.05	0.02	0.02	0.01	0.13	1.2	30	<0.05
B731521		0.83	0.01	0.07	0.1	<0.02	<10	<10	<0.05	<0.01	0.03	0.01	0.11	0.4	26	<0.05
B731522		0.42	0.28	1.20	1.7	<0.02	<10	10	0.15	0.09	1.14	0.21	3.07	68.7	35	0.05
B731523		0.77	0.06	4.11	0.3	<0.02	<10	50	0.14	0.02	0.85	0.12	8.72	45.6	91	0.38
B731524		0.89	0.02	2.26	0.7	<0.02	<10	20	0.09	0.01	3.54	0.06	5.99	20.8	45	0.08
B731525		0.75	0.01	3.87	0.6	<0.02	<10	50	0.13	0.02	1.55	0.05	26.0	33.4	46	0.08
B731526		0.71	0.01	1.35	2.6	<0.02	<10	50	0.07	0.14	0.14	0.04	12.85	11.1	22	0.06
B731527		0.57	0.04	4.02	0.4	<0.02	<10	10	0.11	0.01	0.92	0.08	6.52	38.3	87	0.07
B731528		1.05	0.04	4.87	0.4	<0.02	<10	10	0.10	0.01	3.33	0.15	16.00	38.6	78	0.14
B731529		0.63	0.05	3.94	1.7	<0.02	<10	160	0.24	0.02	1.52	0.13	4.24	47.8	200	7.46
B731530		1.16	0.13	0.32	5.3	0.96	<10	10	<0.05	0.03	1.64	0.53	1.44	5.9	27	0.37
B731531		0.81	0.40	0.16	1.1	4.35	<10	10	<0.05	0.02	0.38	1.56	0.20	5.4	37	0.10
B731532		1.15	0.03	0.94	0.4	0.05	<10	50	0.06	0.02	0.70	0.06	47.2	1.6	22	0.52
B731533		1.07	0.04	2.43	0.4	<0.02	<10	430	0.28	0.01	0.69	0.04	33.2	19.4	88	1.70
B731534		0.72	0.01	4.67	0.9	<0.02	<10	20	0.09	0.02	4.72	0.15	3.60	44.5	169	0.13
B731535		0.75	0.36	0.27	0.4	0.02	<10	<10	<0.05	<0.01	1.13	0.11	0.26	4.4	26	0.05
B731536		0.61	0.15	5.19	0.3	<0.02	<10	10	<0.05	<0.01	0.77	0.10	2.04	50.3	175	0.16
B731537		0.50	0.49	0.60	1.5	<0.02	<10	10	<0.05	0.01	1.29	0.15	0.77	28.0	45	0.06
B731538		0.93	0.13	2.79	0.6	<0.02	<10	10	0.05	0.01	3.50	0.12	1.06	40.2	306	0.05
B731539		0.76	0.04	2.02	0.5	<0.02	<10	40	0.19	0.02	0.65	0.02	20.5	16.6	89	0.44
B731540		0.69	0.02	0.20	0.2	<0.02	<10	10	<0.05	0.01	0.33	0.02	1.62	1.8	35	0.07

***** See Appendix Page for comments regarding this certificate *****

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To: NORTHERN DOMINION METALS CORPORATION
1430-800 WEST PENDER STREET
VANCOUVER BC V6C 2V6

Finalized Date: 23-JUN-2021
Account: NDMCDEZG

Project: Manitou

CERTIFICATE OF ANALYSIS TB21144106

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
	LOD	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01	0.05
B731501		64.2	0.47	0.19	<0.05	<0.02	0.09	0.006	0.01	<0.2	0.3	0.02	40	1.55	<0.01	0.10
B731502		41.5	0.99	1.14	<0.05	0.40	0.01	0.012	0.09	5.4	2.3	0.15	127	4.41	0.01	0.18
B731503		123.5	1.98	3.05	<0.05	0.45	0.06	0.011	0.15	12.0	5.0	0.70	477	3.77	0.01	0.24
B731504		95.7	2.38	3.05	0.06	<0.02	<0.01	<0.005	0.02	1.1	7.5	1.03	278	1.63	0.03	0.10
B731505		19.9	0.88	0.50	<0.05	0.02	<0.01	<0.005	0.02	0.8	0.6	0.15	178	1.84	<0.01	0.06
B731506		71.2	5.83	10.25	0.07	0.03	<0.01	0.031	0.06	2.7	9.4	1.66	1520	0.52	0.02	0.08
B731507		31.2	5.05	6.47	0.12	0.07	<0.01	0.008	0.02	2.0	6.1	1.97	566	0.76	0.07	0.51
B731508		1355	1.41	1.59	0.05	<0.02	<0.01	0.013	0.01	<0.2	2.2	0.34	211	1.40	0.03	0.12
B731509		36.6	1.14	2.05	<0.05	<0.02	0.01	<0.005	0.01	0.2	3.0	0.76	182	1.53	0.05	0.11
B731510		2090	1.76	2.82	0.06	<0.02	<0.01	0.036	0.01	0.2	3.4	0.87	395	1.35	0.06	0.10
B731511		121.0	2.45	5.33	0.07	0.02	<0.01	<0.005	0.01	0.4	10.3	2.41	303	0.75	0.27	<0.05
B731512		58.4	2.47	4.34	0.08	0.02	<0.01	0.007	0.02	1.0	10.1	1.74	515	0.78	0.21	0.09
B731513		25.0	3.11	5.11	0.13	0.04	<0.01	0.018	0.04	5.0	4.3	1.17	464	0.64	0.14	0.38
B731514		113.5	3.46	5.36	0.15	0.03	<0.01	0.019	0.21	4.8	6.7	1.07	735	0.12	0.13	0.46
B731515		28.6	1.89	3.54	0.05	0.03	<0.01	0.011	0.32	2.6	4.3	0.49	320	1.39	0.03	0.45
B731516		28.9	1.19	1.09	<0.05	<0.02	<0.01	<0.005	0.02	0.5	1.1	0.30	170	1.42	0.01	0.07
B731517		189.0	2.81	2.84	0.13	0.25	<0.01	0.008	0.02	6.8	1.3	0.26	210	1.28	0.05	1.22
B731518		113.5	4.78	5.79	0.13	0.10	<0.01	0.020	0.05	7.4	8.5	1.40	775	0.80	0.14	0.43
B731519		122.5	3.76	3.89	0.10	0.08	<0.01	0.008	0.04	7.5	5.4	0.79	300	0.78	0.07	0.79
B731520		179.5	0.73	0.24	<0.05	<0.02	<0.01	0.028	0.01	<0.2	0.4	0.03	44	1.69	0.01	0.11
B731521		4.0	0.32	0.15	<0.05	<0.02	<0.01	<0.005	<0.01	<0.2	0.3	0.01	74	1.46	0.02	0.10
B731522		548	11.75	7.23	0.23	0.12	<0.01	0.050	0.02	1.3	1.3	0.24	463	1.38	0.05	0.90
B731523		134.0	8.20	12.55	0.15	0.05	<0.01	0.029	0.04	3.4	13.8	2.91	1100	0.66	0.06	0.21
B731524		71.1	4.75	6.10	0.09	0.03	<0.01	0.014	0.03	2.3	5.8	1.56	1220	1.06	0.07	0.40
B731525		28.0	6.53	13.10	0.05	0.11	<0.01	0.014	0.10	12.7	20.4	2.90	576	0.60	0.03	<0.05
B731526		13.0	2.40	4.07	<0.05	0.05	<0.01	<0.005	0.12	4.5	5.0	0.84	393	1.43	0.02	0.07
B731527		91.9	7.71	12.60	0.13	0.03	<0.01	0.013	0.02	2.5	18.0	3.11	850	0.92	0.05	0.20
B731528		146.0	9.90	17.55	0.19	0.05	<0.01	0.066	0.01	6.1	13.4	3.45	960	0.46	0.03	0.06
B731529		91.8	6.07	6.68	0.12	0.04	<0.01	0.006	0.94	2.0	20.3	3.28	873	1.10	0.01	0.07
B731530		103.5	1.68	1.10	<0.05	0.06	0.01	0.007	0.05	0.7	1.0	0.25	251	1.56	0.01	0.09
B731531		179.5	0.91	0.43	<0.05	<0.02	0.03	<0.005	0.03	<0.2	0.6	0.09	76	2.59	0.01	0.08
B731532		31.1	1.30	2.65	0.05	0.61	<0.01	0.008	0.16	23.1	4.0	0.59	209	6.90	0.02	0.67
B731533		17.5	3.21	8.36	0.10	0.31	<0.01	0.008	1.18	15.3	14.6	1.99	506	1.13	0.04	0.21
B731534		8.5	7.30	9.73	0.07	0.03	<0.01	0.022	0.09	1.3	13.1	3.84	1280	1.03	0.01	0.06
B731535		692	0.92	0.74	<0.05	<0.02	<0.01	0.029	0.01	<0.2	0.7	0.20	160	1.81	0.01	0.12
B731536		407	8.83	13.00	0.11	0.03	<0.01	0.017	0.02	0.8	14.7	4.23	1090	0.84	0.03	0.07
B731537		1275	2.00	2.01	<0.05	<0.02	<0.01	0.027	0.02	0.4	1.2	0.21	299	1.40	0.01	0.12
B731538		407	4.46	5.81	0.12	0.05	<0.01	0.013	0.01	0.5	7.2	2.55	753	0.64	0.02	0.09
B731539		34.3	3.17	8.64	0.10	0.17	<0.01	0.014	0.10	10.2	18.5	1.74	429	1.01	0.04	0.24
B731540		6.4	0.55	0.78	<0.05	<0.02	<0.01	<0.005	0.02	0.9	1.1	0.15	85	1.28	0.01	0.15

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To: NORTHERN DOMINION METALS CORPORATION
1430-800 WEST PENDER STREET
VANCOUVER BC V6C 2V6

Finalized Date: 23-JUN-2021
Account: NDMCDEZG

Project: Manitou

CERTIFICATE OF ANALYSIS TB21144106

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2	0.005
B731501		7.2	20	2.7	0.3	<0.001	0.11	<0.05	0.3	0.4	<0.2	0.4	<0.01	0.02	<0.2	0.011
B731502		5.8	80	2.0	2.6	<0.001	0.20	0.05	0.5	0.5	0.2	8.4	<0.01	0.02	0.9	0.007
B731503		25.7	330	32.5	5.8	0.001	0.25	0.05	1.3	0.5	0.3	32.2	0.01	0.03	1.7	0.041
B731504		40.8	570	2.3	0.8	0.001	0.19	0.06	2.9	0.3	<0.2	4.8	<0.01	0.01	0.2	0.047
B731505		9.6	30	0.9	0.9	<0.001	0.04	0.05	1.0	<0.2	<0.2	4.1	<0.01	0.04	<0.2	<0.005
B731506		95.8	330	1.7	1.6	0.001	0.10	0.05	17.7	<0.2	<0.2	63.3	<0.01	0.01	0.3	0.086
B731507		35.8	700	2.1	1.2	0.001	0.03	0.05	6.1	<0.2	0.3	11.8	0.01	0.01	0.2	0.351
B731508		99.9	80	0.8	0.5	<0.001	0.14	0.05	1.1	1.8	<0.2	7.2	<0.01	0.40	<0.2	0.016
B731509		41.8	60	0.8	0.5	0.001	<0.01	<0.05	2.0	<0.2	<0.2	4.4	<0.01	0.02	<0.2	0.012
B731510		132.0	80	0.6	0.5	<0.001	0.23	<0.05	1.8	1.4	<0.2	13.4	<0.01	0.20	<0.2	0.028
B731511		147.5	110	0.8	0.5	<0.001	0.02	<0.05	2.4	<0.2	<0.2	45.2	<0.01	0.02	<0.2	0.052
B731512		77.9	220	1.0	1.5	0.001	0.02	<0.05	5.5	0.2	<0.2	27.9	<0.01	0.03	<0.2	0.131
B731513		27.8	580	4.0	1.7	<0.001	<0.01	0.05	7.5	<0.2	0.3	6.8	<0.01	0.01	0.5	0.157
B731514		63.6	630	1.1	11.4	<0.001	0.03	<0.05	9.5	<0.2	0.3	17.5	<0.01	0.01	0.5	0.168
B731515		13.1	350	0.6	25.8	0.001	0.01	<0.05	3.7	<0.2	0.3	6.3	<0.01	0.01	0.4	0.092
B731516		12.7	30	0.5	1.2	<0.001	0.03	<0.05	1.6	<0.2	<0.2	1.2	<0.01	0.02	<0.2	0.006
B731517		70.2	540	0.8	0.4	0.002	0.87	<0.05	6.6	1.1	0.5	7.4	0.01	0.09	0.6	0.390
B731518		67.8	630	0.6	0.4	0.002	0.25	<0.05	12.4	0.8	0.5	4.7	0.01	0.01	1.1	0.340
B731519		13.5	660	0.7	0.6	0.001	0.25	<0.05	10.4	0.4	0.2	4.7	0.01	0.04	0.9	0.307
B731520		5.4	30	0.8	0.4	0.001	0.04	<0.05	0.3	0.5	<0.2	0.9	<0.01	0.23	<0.2	0.005
B731521		2.3	30	0.3	0.1	<0.001	<0.01	<0.05	0.1	<0.2	<0.2	2.6	<0.01	<0.01	<0.2	<0.005
B731522		58.7	560	1.6	0.8	0.001	0.07	0.06	4.9	6.8	0.4	25.3	0.01	0.34	0.3	0.283
B731523		68.9	720	0.9	7.0	0.001	0.16	<0.05	16.0	0.6	0.3	10.2	<0.01	0.01	0.4	0.147
B731524		34.6	490	0.5	2.0	<0.001	0.02	<0.05	7.1	0.2	0.2	17.7	<0.01	0.01	0.3	0.129
B731525		74.3	690	1.2	2.3	<0.001	<0.01	<0.05	4.3	<0.2	<0.2	19.6	<0.01	<0.01	1.8	0.037
B731526		23.0	480	1.1	2.5	<0.001	<0.01	<0.05	1.0	<0.2	<0.2	3.1	<0.01	0.05	0.7	0.012
B731527		56.6	550	0.7	1.3	0.001	0.16	<0.05	9.3	0.6	0.2	7.5	<0.01	0.01	0.4	0.193
B731528		41.0	660	0.4	0.7	<0.001	0.02	<0.05	31.5	0.2	0.3	22.8	<0.01	0.01	0.7	0.109
B731529		128.5	250	1.1	46.4	0.002	0.16	<0.05	6.5	0.2	0.2	10.6	<0.01	0.02	<0.2	0.257
B731530		13.0	30	4.8	2.2	<0.001	0.53	0.05	1.6	1.0	<0.2	7.7	<0.01	0.04	0.2	0.018
B731531		12.5	10	3.0	0.8	0.001	0.48	<0.05	0.4	0.7	<0.2	3.2	<0.01	0.03	<0.2	0.013
B731532		2.1	90	1.3	5.2	0.003	0.10	<0.05	0.7	0.3	0.2	6.1	0.01	<0.01	2.8	0.029
B731533		51.1	830	2.0	35.4	<0.001	0.02	<0.05	3.3	<0.2	0.3	73.0	<0.01	<0.01	3.3	0.222
B731534		140.0	640	0.7	4.4	0.002	0.01	<0.05	15.2	0.2	<0.2	35.4	<0.01	0.02	0.3	0.060
B731535		10.8	30	0.4	0.6	<0.001	0.06	<0.05	0.9	0.4	<0.2	1.9	<0.01	0.06	<0.2	0.017
B731536		112.0	350	0.8	1.8	0.001	0.04	<0.05	4.8	0.2	<0.2	3.8	<0.01	0.03	<0.2	0.202
B731537		109.5	140	0.8	1.0	<0.001	0.10	0.05	1.5	2.1	<0.2	15.9	<0.01	0.27	<0.2	0.011
B731538		160.5	250	0.4	0.4	<0.001	0.03	<0.05	4.4	0.7	<0.2	17.9	<0.01	0.08	<0.2	0.178
B731539		47.6	410	1.1	3.4	<0.001	0.01	<0.05	6.1	<0.2	0.3	38.4	<0.01	0.01	1.5	0.158
B731540		6.3	220	0.6	0.7	<0.001	<0.01	<0.05	0.4	<0.2	<0.2	11.4	<0.01	<0.01	<0.2	0.012

***** See Appendix Page for comments regarding this certificate *****

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To: NORTHERN DOMINION METALS CORPORATION
1430-800 WEST PENDER STREET
VANCOUVER BC V6C 2V6

Finalized Date: 23-JUN-2021
Account: NDMCDEZG

Project: Manitou

CERTIFICATE OF ANALYSIS TB21144106

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	Au-ICP21	Au-GRA21
	Analyte	Tl	U	V	W	Y	Zn	Zr	Au	Au
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.05	1	0.05	0.05	2	0.5	0.001	0.05
B731501		<0.02	<0.05	2	0.14	0.39	8	<0.5	>10.0	15.50
B731502		0.03	0.15	3	0.09	3.38	224	18.2	5.35	
B731503		0.07	0.25	11	0.15	6.18	117	21.1	>10.0	26.7
B731504		<0.02	<0.05	35	0.07	2.43	38	<0.5	0.074	
B731505		<0.02	<0.05	6	0.17	1.43	5	0.8	0.588	
B731506		<0.02	0.05	167	0.14	12.30	85	0.8	0.008	
B731507		<0.02	<0.05	92	0.10	7.94	68	1.6	0.001	
B731508		<0.02	<0.05	13	0.07	0.56	14	<0.5	0.009	
B731509		<0.02	<0.05	33	0.08	0.44	14	<0.5	0.463	
B731510		<0.02	<0.05	28	0.06	1.10	22	<0.5	0.066	
B731511		<0.02	<0.05	23	0.05	1.37	25	0.6	0.008	
B731512		<0.02	<0.05	55	0.12	2.75	26	0.6	0.002	
B731513		<0.02	0.09	84	0.11	7.86	42	1.2	0.001	
B731514		0.04	0.10	107	0.07	8.61	55	1.1	0.001	
B731515		0.11	0.06	56	0.06	2.84	32	1.0	<0.001	
B731516		<0.02	<0.05	16	0.22	0.80	9	<0.5	<0.001	
B731517		<0.02	0.08	77	0.11	9.94	13	4.9	<0.001	
B731518		<0.02	0.10	136	0.08	10.35	74	2.7	<0.001	
B731519		<0.02	0.09	117	0.10	8.47	46	2.3	<0.001	
B731520		<0.02	<0.05	2	0.06	0.08	3	<0.5	0.045	
B731521		<0.02	<0.05	1	0.06	0.23	<2	<0.5	<0.001	
B731522		<0.02	0.05	77	<0.05	4.32	35	3.7	<0.001	
B731523		<0.02	0.06	163	0.05	9.54	116	1.1	<0.001	
B731524		<0.02	<0.05	104	0.06	5.45	60	0.7	<0.001	
B731525		<0.02	0.20	64	0.05	4.45	128	5.5	<0.001	
B731526		<0.02	0.07	18	0.05	1.87	45	2.7	0.002	
B731527		<0.02	0.06	140	0.09	7.71	98	1.0	<0.001	
B731528		<0.02	0.11	314	0.08	18.25	134	2.0	0.003	
B731529		0.28	<0.05	129	0.57	4.89	78	1.1	0.011	
B731530		0.03	0.05	13	0.12	1.96	21	2.2	2.40	
B731531		0.02	<0.05	6	0.75	0.42	36	<0.5	4.68	
B731532		0.03	0.36	3	0.14	10.65	22	25.8	0.497	
B731533		0.16	0.35	59	0.15	4.62	79	10.7	0.001	
B731534		<0.02	<0.05	121	0.37	8.15	85	0.9	<0.001	
B731535		<0.02	<0.05	10	0.08	0.56	12	<0.5	0.041	
B731536		<0.02	<0.05	123	0.13	4.43	108	1.1	0.009	
B731537		0.02	<0.05	19	0.08	0.93	12	<0.5	0.012	
B731538		<0.02	<0.05	77	0.07	3.32	40	1.2	0.002	
B731539		<0.02	0.22	59	0.14	4.39	72	6.1	<0.001	
B731540		<0.02	<0.05	5	0.05	0.32	9	0.5	<0.001	

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1430-800 WEST PENDER STREET
VANCOUVER BC V6C 2V6

Finalized Date: 23-JUN-2021
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Project: Manitou

CERTIFICATE OF ANALYSIS TB21144106

Sample Description	Method	WEI-21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05
B731541		1.54	1.91	2.07	0.4	0.13	<10	10	0.05	0.03	1.98	0.18	4.77	23.1	52	0.12
B731542		1.11	0.22	5.61	0.5	0.04	<10	120	0.09	0.08	3.02	0.17	6.66	50.0	201	1.69
B731701		0.95	0.04	3.42	0.2	<0.02	<10	10	<0.05	0.01	1.99	0.03	0.67	28.7	259	0.05
B731702		1.35	0.04	6.00	0.2	<0.02	<10	20	<0.05	0.01	1.49	0.06	1.20	54.3	741	0.12
B731703		0.75	0.21	3.08	24.5	0.03	<10	70	0.19	1.66	3.02	0.14	31.0	48.2	122	1.72
B731704		0.88	0.12	4.46	0.5	<0.02	<10	100	<0.05	0.03	0.32	0.04	9.76	41.1	125	1.11
B731705		1.20	<0.01	0.19	0.2	<0.02	<10	<10	<0.05	0.01	0.18	0.01	0.53	2.0	24	0.15
B731706		1.49	1.63	0.75	1.5	0.14	<10	10	0.09	0.25	1.10	0.01	5.80	55.3	30	0.05
B731707		1.15	0.03	2.95	0.1	<0.02	<10	10	<0.05	0.01	1.96	0.05	1.03	20.2	231	0.07
B731708		1.49	0.03	3.48	0.2	<0.02	<10	10	<0.05	<0.01	0.99	0.03	0.98	34.8	375	0.10
B731709		0.73	0.02	1.32	0.2	<0.02	<10	20	<0.05	0.02	1.35	0.06	16.70	15.5	35	0.25
B731710		0.66	0.03	0.77	0.3	<0.02	<10	20	0.19	0.02	1.39	0.04	63.9	1.6	9	0.37
B731711		0.47	0.01	1.86	0.2	<0.02	<10	40	0.06	0.04	0.91	0.04	8.28	21.0	45	1.61
B731712		1.40	0.02	2.61	0.4	<0.02	<10	<10	<0.05	0.01	0.41	0.03	2.93	31.4	50	0.07
B731713		0.85	0.09	1.23	1.0	<0.02	<10	50	0.07	0.07	1.15	0.03	2.32	28.3	58	0.36
B731714		0.81	0.04	2.82	0.3	<0.02	<10	<10	<0.05	<0.01	1.38	0.03	1.00	21.3	108	0.05
B731715		1.29	0.05	0.52	0.3	<0.02	<10	40	0.07	0.05	1.08	0.06	63.3	10.9	6	0.08
B731716		1.68	0.01	1.17	0.2	<0.02	<10	40	0.11	0.03	0.86	0.03	29.3	7.5	13	0.08
B731717		0.78	0.03	2.79	0.4	<0.02	<10	10	0.09	<0.01	0.95	0.04	4.69	29.3	46	0.05
B731718		1.23	0.01	3.81	0.5	<0.02	<10	50	0.05	<0.01	0.50	0.05	2.15	32.1	46	0.55
B731719		1.18	0.02	2.67	0.2	<0.02	<10	20	<0.05	<0.01	1.10	0.06	2.56	26.9	77	0.15
B731720		2.94	0.04	2.10	0.5	<0.02	<10	50	0.15	0.02	0.98	0.06	7.15	26.8	30	0.51
B731721		2.45	0.01	0.56	0.8	<0.02	<10	10	<0.05	0.01	1.86	0.04	2.26	1.7	26	0.29
B731722		1.21	0.13	4.11	1.1	0.11	<10	100	0.10	0.30	2.93	0.33	13.10	34.4	101	1.89
B731723		0.82	0.02	2.09	0.1	<0.02	<10	90	0.15	0.02	0.67	0.03	27.2	16.2	80	1.77
B731724		1.61	20.5	0.24	87.0	>25.0	<10	10	0.11	0.08	0.61	8.74	7.12	1.9	22	0.08
B731725		1.49	0.08	1.96	1.0	0.03	<10	110	0.19	0.04	2.92	0.08	47.5	15.0	48	1.41
B731726		1.30	0.07	1.49	1.0	<0.02	<10	50	0.20	0.09	2.96	0.12	27.2	10.3	24	1.97
B731727		0.85	0.07	1.74	2.2	0.03	<10	50	0.21	0.06	1.84	0.18	24.1	13.0	40	1.63
B731728		1.49	0.24	1.94	0.5	<0.02	<10	210	0.16	0.01	1.30	0.03	20.3	17.5	87	1.63
B731729		0.77	0.04	2.27	1.3	<0.02	<10	10	0.06	<0.01	0.76	0.04	1.61	27.6	100	0.13
B731730		0.59	0.07	3.54	1.7	<0.02	<10	90	0.46	0.01	7.66	0.22	60.3	33.7	273	7.43
B731731		0.61	0.01	2.20	0.2	<0.02	<10	110	0.22	0.01	0.99	0.06	13.65	18.2	82	1.38
B731732		0.78	0.01	2.09	0.3	<0.02	<10	30	0.16	0.01	1.21	0.05	34.9	20.3	54	0.33
B731733		1.10	0.41	1.74	20.2	0.23	<10	40	0.05	0.41	0.27	1.74	11.70	144.0	23	0.06
B731734		0.88	0.01	1.03	0.2	0.02	<10	10	0.05	0.01	0.75	0.03	7.63	16.3	39	<0.05
B731735		1.59	0.09	1.56	11.6	<0.02	<10	30	0.25	0.06	0.76	0.07	12.10	15.2	76	0.15
B731736		1.06	0.04	2.08	0.4	<0.02	<10	20	0.11	0.02	1.41	0.07	8.27	26.8	41	0.13
B731737		0.65	0.01	4.39	0.8	<0.02	<10	30	0.05	<0.01	2.88	0.09	14.75	41.9	144	0.43
B731738		0.63	0.01	3.80	0.6	<0.02	<10	70	0.11	0.01	1.97	0.07	3.79	38.7	165	0.44

***** See Appendix Page for comments regarding this certificate *****

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To: NORTHERN DOMINION METALS CORPORATION
1430-800 WEST PENDER STREET
VANCOUVER BC V6C 2V6

Finalized Date: 23-JUN-2021
Account: NDMCDEZG

Project: Manitou

CERTIFICATE OF ANALYSIS TB21144106

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
	LOD	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01	0.05
B731541		2670	3.08	4.46	0.07	0.07	<0.01	0.019	0.03	1.8	9.9	1.88	402	0.48	0.06	0.20
B731542		149.5	8.17	14.65	0.15	0.02	0.01	0.033	1.26	2.6	28.8	4.67	1120	1.77	0.06	0.09
B731701		136.5	2.39	4.91	0.07	0.02	<0.01	0.005	0.01	0.2	8.2	1.99	311	0.52	0.18	<0.05
B731702		86.8	6.40	10.00	0.19	<0.02	<0.01	0.020	0.01	0.5	22.7	6.49	786	0.50	0.01	<0.05
B731703		114.5	5.01	10.45	0.11	0.28	<0.01	0.022	1.39	12.6	15.2	1.85	514	4.85	0.19	0.06
B731704		153.5	9.91	13.65	0.20	0.07	<0.01	0.028	0.08	3.9	8.6	3.01	875	0.96	0.04	0.11
B731705		10.3	0.67	0.67	<0.05	<0.02	<0.01	<0.005	0.01	0.2	0.8	0.12	71	1.39	0.03	0.12
B731706		144.5	6.70	3.97	0.18	0.14	<0.01	0.028	0.05	2.7	1.0	0.43	168	1.04	0.11	0.68
B731707		43.3	2.09	4.20	0.07	<0.02	<0.01	0.005	0.01	0.4	6.5	1.98	342	0.54	0.19	<0.05
B731708		71.7	3.57	5.89	0.08	<0.02	<0.01	<0.005	<0.01	0.4	13.1	3.50	534	0.44	0.07	0.06
B731709		37.4	2.60	4.14	0.11	0.06	<0.01	0.015	0.04	6.4	4.0	0.94	389	0.70	0.13	0.32
B731710		3.2	1.84	4.18	0.07	1.08	0.01	0.010	0.15	30.4	4.8	0.23	366	2.21	0.04	0.64
B731711		23.0	3.21	5.43	0.10	0.04	<0.01	0.014	0.11	3.1	7.5	1.50	414	0.55	0.09	0.39
B731712		94.7	5.16	6.11	0.07	0.02	<0.01	0.006	0.01	1.1	6.6	2.02	443	0.92	0.04	0.10
B731713		87.3	2.73	3.41	0.10	0.05	<0.01	0.009	0.03	1.0	6.3	0.89	245	4.72	0.09	0.21
B731714		78.3	2.19	3.98	0.06	0.03	<0.01	<0.005	0.01	0.4	8.0	1.60	279	0.62	0.19	0.06
B731715		45.2	2.00	2.14	0.06	0.38	<0.01	0.008	0.11	34.0	2.0	0.20	470	0.39	0.04	0.14
B731716		10.9	2.19	5.54	<0.05	0.35	<0.01	0.010	0.10	14.9	5.1	0.63	208	0.46	0.04	0.15
B731717		83.4	5.15	5.93	0.11	0.04	<0.01	0.009	0.03	1.8	6.6	2.08	582	0.60	0.05	0.13
B731718		8.7	7.13	10.25	0.12	<0.02	<0.01	0.006	0.12	0.9	12.5	2.91	668	0.87	0.01	0.12
B731719		38.1	4.44	6.21	0.12	0.06	<0.01	0.008	0.02	1.0	10.2	2.24	632	0.42	0.03	0.14
B731720		113.0	4.25	6.22	0.13	0.07	<0.01	0.014	0.13	2.9	6.2	1.46	408	0.90	0.08	0.25
B731721		12.3	1.27	1.97	0.05	0.02	<0.01	0.011	0.07	1.0	3.3	0.51	430	0.97	<0.01	0.07
B731722		96.3	9.64	14.55	0.23	0.14	0.01	0.043	0.40	4.8	18.1	3.70	1580	0.53	0.02	0.19
B731723		3.8	2.91	8.52	0.07	0.30	<0.01	0.009	0.52	12.2	18.7	1.74	348	0.63	0.04	0.15
B731724		403	1.16	0.96	<0.05	0.14	0.31	0.032	0.05	3.1	1.4	0.13	111	2.00	<0.01	0.15
B731725		62.2	3.45	5.70	0.11	0.80	<0.01	0.015	0.53	22.3	10.6	1.25	674	3.50	0.03	0.43
B731726		16.5	2.04	2.98	0.05	0.20	<0.01	0.005	0.64	12.5	8.1	0.97	544	1.14	<0.01	0.14
B731727		19.1	2.41	4.03	0.05	0.36	<0.01	0.007	0.51	10.8	6.8	1.21	521	1.13	0.01	0.15
B731728		30.3	2.72	6.78	0.09	0.18	<0.01	0.007	0.54	9.3	13.6	1.67	433	0.64	0.04	0.18
B731729		68.5	3.51	4.19	0.09	0.04	0.01	0.005	0.02	0.7	7.7	1.91	443	0.60	0.04	0.10
B731730		15.6	5.54	12.25	0.30	0.22	<0.01	0.046	0.53	28.8	15.7	4.22	1050	0.44	0.02	<0.05
B731731		9.4	2.95	7.04	<0.05	0.09	<0.01	0.008	0.57	5.7	13.7	1.96	477	0.45	0.03	0.14
B731732		2.4	3.48	8.40	0.05	0.14	<0.01	0.013	0.10	16.1	16.2	1.53	631	0.50	0.03	<0.05
B731733		680	8.88	5.94	0.08	0.22	0.01	0.094	0.08	5.3	7.1	1.34	273	2.60	0.02	<0.05
B731734		28.9	2.20	2.81	0.08	0.06	<0.01	0.009	0.02	2.8	3.8	0.71	341	0.86	0.06	0.35
B731735		79.3	3.86	3.25	<0.05	0.27	<0.01	0.010	0.08	5.4	5.6	1.16	396	1.13	0.02	0.53
B731736		118.5	4.29	5.81	0.13	0.05	<0.01	0.016	0.05	3.1	6.0	1.39	667	0.69	0.10	0.36
B731737		24.0	7.52	11.25	0.18	<0.02	<0.01	0.056	0.05	5.5	18.5	3.88	1080	0.24	0.02	0.07
B731738		42.0	6.13	10.20	0.13	0.03	<0.01	0.024	0.08	1.3	10.6	3.43	1180	0.14	0.02	0.14

***** See Appendix Page for comments regarding this certificate *****

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To: NORTHERN DOMINION METALS CORPORATION
1430-800 WEST PENDER STREET
VANCOUVER BC V6C 2V6

Finalized Date: 23-JUN-2021
Account: NDMCDEZG

Project: Manitou

CERTIFICATE OF ANALYSIS TB21144106

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2	0.005
B731541		60.5	510	0.8	1.8	<0.001	0.21	<0.05	5.0	1.3	0.2	10.5	<0.01	0.14	0.2	0.259
B731542		120.5	300	0.7	42.3	0.001	0.14	<0.05	27.4	0.7	0.4	25.3	<0.01	0.15	0.3	0.198
B731701		149.5	90	<0.2	0.8	0.001	0.07	<0.05	2.5	0.7	<0.2	30.1	<0.01	0.03	<0.2	0.044
B731702		256	240	0.8	3.2	<0.001	<0.01	<0.05	20.7	0.2	<0.2	2.7	<0.01	0.06	<0.2	0.056
B731703		88.6	1140	1.9	36.1	0.002	2.80	<0.05	13.7	1.1	0.4	83.7	<0.01	0.32	1.3	0.174
B731704		42.2	400	0.7	13.2	<0.001	0.02	<0.05	8.9	1.5	0.3	6.1	<0.01	0.06	1.0	0.101
B731705		4.7	50	0.2	0.8	<0.001	<0.01	<0.05	1.1	<0.2	<0.2	1.1	<0.01	0.01	<0.2	0.021
B731706		19.4	520	1.2	1.4	0.001	1.25	0.08	6.8	3.8	0.5	16.9	<0.01	0.50	0.3	0.231
B731707		113.5	90	0.2	0.7	<0.001	<0.01	<0.05	1.8	0.2	<0.2	27.3	<0.01	0.04	<0.2	0.042
B731708		176.0	120	<0.2	0.4	<0.001	<0.01	<0.05	2.5	<0.2	<0.2	6.9	<0.01	0.03	<0.2	0.073
B731709		28.0	650	0.2	3.0	0.001	0.01	<0.05	7.4	0.2	0.3	5.1	<0.01	0.01	0.6	0.140
B731710		1.1	230	1.0	6.4	0.001	0.02	<0.05	0.8	<0.2	0.5	17.2	0.01	<0.01	4.1	0.030
B731711		60.4	410	0.3	15.4	0.001	<0.01	<0.05	6.0	0.2	0.2	3.6	<0.01	0.02	0.3	0.185
B731712		40.1	330	<0.2	1.1	<0.001	<0.01	<0.05	4.1	0.5	<0.2	3.9	<0.01	0.02	0.2	0.072
B731713		36.8	330	0.5	5.1	0.005	0.29	<0.05	6.3	0.6	0.2	24.9	<0.01	0.05	<0.2	0.132
B731714		111.0	160	<0.2	1.7	<0.001	0.03	<0.05	2.3	0.3	<0.2	23.7	<0.01	0.02	<0.2	0.067
B731715		10.2	710	1.1	3.4	<0.001	0.09	<0.05	0.9	0.4	<0.2	13.2	<0.01	0.04	3.6	0.015
B731716		10.3	660	5.2	2.8	<0.001	0.01	<0.05	1.2	<0.2	0.2	16.9	<0.01	0.01	2.3	0.029
B731717		42.9	620	1.5	0.7	0.001	0.07	<0.05	5.7	0.5	0.2	13.3	<0.01	0.01	0.2	0.224
B731718		40.6	310	0.2	8.6	<0.001	<0.01	<0.05	3.8	<0.2	0.2	4.1	<0.01	0.01	<0.2	0.097
B731719		61.1	360	<0.2	2.2	<0.001	<0.01	<0.05	4.9	0.2	0.2	10.8	<0.01	0.01	<0.2	0.269
B731720		41.5	600	<0.2	6.2	0.001	0.05	<0.05	5.9	0.3	0.2	16.1	<0.01	0.01	0.3	0.186
B731721		4.4	40	<0.2	2.4	<0.001	0.11	<0.05	5.6	0.2	0.2	9.8	<0.01	0.02	<0.2	0.047
B731722		57.7	540	1.0	15.8	0.001	2.29	<0.05	18.2	1.6	0.9	26.4	<0.01	0.25	0.6	0.356
B731723		52.6	590	1.5	21.6	<0.001	<0.01	<0.05	3.1	<0.2	0.3	33.2	<0.01	<0.01	1.5	0.152
B731724		5.5	50	71.1	1.6	<0.001	0.58	0.13	0.7	1.7	<0.2	5.9	<0.01	0.06	0.3	0.007
B731725		34.9	300	1.4	22.8	0.001	0.11	<0.05	2.6	0.3	0.7	51.8	0.01	0.02	3.1	0.142
B731726		19.2	650	7.1	33.0	<0.001	0.04	<0.05	1.5	<0.2	<0.2	46.9	<0.01	0.01	1.4	0.108
B731727		45.4	540	1.8	28.1	<0.001	0.11	<0.05	1.7	0.2	<0.2	28.8	<0.01	0.01	1.6	0.108
B731728		49.7	540	0.5	23.3	<0.001	<0.01	<0.05	3.0	0.2	0.2	44.8	<0.01	<0.01	1.4	0.177
B731729		76.2	330	0.2	0.5	0.001	0.03	<0.05	3.5	0.4	<0.2	11.9	<0.01	0.01	<0.2	0.138
B731730		221	980	1.3	27.6	<0.001	0.13	0.06	19.3	0.2	0.4	157.0	<0.01	0.01	2.9	0.094
B731731		55.3	450	0.7	26.4	<0.001	<0.01	<0.05	3.1	0.2	0.2	49.7	<0.01	<0.01	1.2	0.152
B731732		65.1	710	0.7	4.0	<0.001	<0.01	<0.05	3.8	<0.2	<0.2	41.8	<0.01	0.01	1.8	<0.005
B731733		106.0	390	3.5	2.0	0.006	6.87	<0.05	2.4	12.9	<0.2	3.9	<0.01	1.52	1.0	0.006
B731734		32.6	390	<0.2	0.6	<0.001	0.05	<0.05	5.5	<0.2	0.2	5.8	<0.01	0.03	0.3	0.229
B731735		59.7	360	5.6	3.8	<0.001	0.70	0.32	3.4	0.5	0.6	22.6	0.01	0.10	1.1	0.233
B731736		42.3	640	0.2	3.5	0.001	0.03	<0.05	7.6	0.3	0.2	10.2	<0.01	0.03	0.4	0.210
B731737		94.7	460	<0.2	4.3	<0.001	<0.01	<0.05	29.1	0.2	0.3	10.6	<0.01	0.01	0.6	0.083
B731738		96.0	160	0.6	9.5	<0.001	0.02	<0.05	15.9	0.3	0.2	8.8	<0.01	0.03	0.2	0.111

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www.alsglobal.com/geochemistry

To: NORTHERN DOMINION METALS CORPORATION
1430-800 WEST PENDER STREET
VANCOUVER BC V6C 2V6

Finalized Date: 23-JUN-2021
Account: NDMCDEZG

Project: Manitou

CERTIFICATE OF ANALYSIS TB21144106

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	Au-ICP21	Au-GRA21
	Analyte	Tl	U	V	W	Y	Zn	Zr	Au	Au
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.05	1	0.05	0.05	2	0.5	0.001	0.05
B731541		<0.02	<0.05	112	0.42	8.11	43	1.3	0.124	
B731542		0.14	0.06	246	8.24	5.84	101	0.7	0.041	
B731701		<0.02	<0.05	24	0.08	1.42	23	0.6	<0.001	
B731702		<0.02	<0.05	126	0.12	1.97	65	<0.5	0.011	
B731703		0.11	0.11	116	1.54	10.15	44	12.6	0.067	
B731704		0.06	0.08	189	0.14	5.80	148	2.6	<0.001	
B731705		<0.02	<0.05	14	0.07	0.82	5	<0.5	<0.001	
B731706		0.02	0.06	89	0.67	5.94	15	3.7	0.157	
B731707		<0.02	<0.05	22	0.06	1.72	23	<0.5	0.005	
B731708		<0.02	<0.05	31	0.08	1.59	39	<0.5	<0.001	
B731709		<0.02	0.10	74	0.17	8.18	35	1.7	<0.001	
B731710		0.03	0.49	1	0.08	13.60	42	47.1	<0.001	
B731711		0.05	0.05	69	0.15	5.24	42	1.3	0.001	
B731712		<0.02	<0.05	69	0.07	2.53	71	0.5	<0.001	
B731713		<0.02	<0.05	68	0.23	4.07	21	1.3	0.006	
B731714		<0.02	<0.05	26	0.08	1.72	23	0.8	0.006	
B731715		<0.02	0.30	5	0.07	3.06	23	17.0	<0.001	
B731716		<0.02	0.25	12	0.08	2.40	69	14.3	<0.001	
B731717		<0.02	<0.05	85	0.09	6.63	72	1.0	<0.001	
B731718		0.04	<0.05	133	0.09	2.27	91	<0.5	<0.001	
B731719		<0.02	<0.05	81	0.07	5.40	57	1.3	<0.001	
B731720		0.04	<0.05	88	0.11	7.79	52	1.5	0.001	
B731721		<0.02	<0.05	34	0.53	2.02	28	0.5	0.004	
B731722		0.08	0.05	249	5.11	10.65	223	4.1	0.332	
B731723		0.10	0.17	44	0.08	3.42	66	10.4	0.001	
B731724		0.12	0.05	4	0.10	2.79	512	6.3	>10.0	24.6
B731725		0.10	0.37	34	0.34	12.30	67	35.8	0.019	
B731726		0.18	0.17	15	0.11	4.50	49	8.4	0.018	
B731727		0.20	0.23	19	0.29	3.96	101	14.2	0.039	
B731728		0.08	0.14	49	0.22	3.51	60	5.9	0.010	
B731729		<0.02	<0.05	62	0.08	3.18	47	0.9	0.004	
B731730		0.12	0.29	172	0.09	7.47	83	10.3	<0.001	
B731731		0.08	0.13	43	<0.05	2.47	80	3.3	0.002	
B731732		0.02	0.10	32	<0.05	4.81	76	6.6	<0.001	
B731733		<0.02	0.16	21	0.70	3.48	263	9.5	0.236	
B731734		<0.02	<0.05	51	0.12	6.09	29	1.5	<0.001	
B731735		0.02	0.14	28	0.09	3.69	65	6.4	0.006	
B731736		<0.02	0.06	80	0.16	6.19	57	0.8	<0.001	
B731737		0.02	0.07	253	0.07	8.36	108	<0.5	0.003	
B731738		0.03	<0.05	142	0.06	3.80	74	0.8	<0.001	

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VANCOUVER BC V6C 2V6

Finalized Date: 23-JUN-2021
Account: NDMCDEZG

Project: Manitou

CERTIFICATE OF ANALYSIS TB21144106

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1	ME-MS41 Cs ppm 0.05
B731739		0.81	0.32	2.08	44.1	0.21	<10	70	0.05	0.62	0.14	0.02	4.64	11.1	54	1.63
B731740		1.24	0.07	0.13	1.7	0.02	<10	10	<0.05	0.04	0.04	0.02	1.31	5.2	22	0.09
B731741		1.59	0.12	0.37	0.6	<0.02	<10	30	<0.05	0.03	1.10	0.63	4.71	7.1	35	0.29

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Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
	LOD	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01	0.05
B731739		59.9	10.70	8.03	0.16	0.15	0.01	0.033	0.57	2.2	10.5	1.68	612	0.34	0.02	0.48
B731740		17.9	1.26	0.46	<0.05	0.02	<0.01	<0.005	0.02	0.6	0.9	0.09	99	0.29	<0.01	0.08
B731741		121.5	1.20	1.79	<0.05	0.07	<0.01	0.023	0.08	2.1	2.2	0.27	228	0.99	0.01	0.11

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	Analyte	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2	0.005
B731739		12.7	160	1.5	18.4	<0.001	0.95	0.06	12.2	2.9	0.6	8.7	0.01	0.28	0.5	0.443
B731740		9.5	10	<0.2	0.8	<0.001	0.49	<0.05	0.9	0.4	<0.2	0.7	<0.01	0.08	<0.2	0.024
B731741		7.3	150	0.3	3.1	0.001	0.24	<0.05	2.4	0.6	0.2	12.5	<0.01	0.08	0.3	0.027

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Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	Au-ICP21	Au-GRA21
	Analyte	Tl	U	V	W	Y	Zn	Zr	Au	Au
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.05	1	0.05	0.05	2	0.5	0.001	0.05
B731739		0.11	0.07	138	0.70	2.76	51	4.1	0.241	
B731740		<0.02	<0.05	8	0.44	0.72	8	0.5	0.014	
B731741		0.02	0.05	20	0.09	1.94	135	2.7	0.009	

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CERTIFICATE OF ANALYSIS TB21144106

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
ME-MS41

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Thunder Bay located at 645 Norah Crescent, Thunder Bay, ON, Canada

CRU-31	CRU-QC	LOG-21	PUL-31
PUL-QC	SPL-21	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-GRA21	Au-ICP21	ME-MS41