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Ministry of Energy, Mines & Petroleum Resources
Mining & Minerals Division
BC Geological Survey

BC Geological Survey
Assessment Report
37764

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geochemistry and Geology of the Dardanelle Property **TOTAL COST:** $ 12,702.80

AUTHOR(S): Krzysztof Mastalerz, Ph.D., P. Geo. **SIGNATURE(S):** Krzysztof Mastalerz

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): **YEAR OF WORK:** 2018

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5709474

PROPERTY NAME: Dardanelle

CLAIM NAME(S) (on which the work was done): 398666, 517726, 531627, 531629, 531653, 531655, 531663

COMMODITIES SOUGHT: Gold, silver, base metals

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 103I 107

MINING DIVISION: Omineca **NTS/BCGS:** 103I/08 and 103I/09

LATITUDE: 54 ° 29 ' 04 " **LONGITUDE:** 126 ° 13 ' 42 " **(at centre of work)**

OWNER(S):
1) Decade Resources Ltd 2)

MAILING ADDRESS:
Box 211
Stewart, BC, V0T 1W0

OPERATOR(S) [who paid for the work]:
1) Decade Resources Ltd 2)

MAILING ADDRESS:
Box 211
Stewart, BC, V0T 1W0

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Diorite-quartz diorite-granodiorite intrusion, aplite dyke, quartz veins, andesite, volcanogenic rocks, Kleanza Plutonic Suite, Telkwa Group, aplite dyke-quartz vein mineralizations system, approximately 650-850 metres long (along strike), 5-8 m thick, strike WSW-ENE, dip 70-85 deg toward N, chlorite-sericite-calcite (propylitic) alteration, potassic alteration(?), silicification, pyrite, chalcopyrite, sphalerite, galena, covellite

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: AR 18602, AR 24812, AR 27649, AR 28303, AR 14560, AR 15115, AR 17260

Next Page

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock	54		11,917.80
Other petrographic thin sections	5		785.00
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	12,702.80

GEOCHEMISTRY and GEOLOGY

of the

DARDANELLE PROPERTY

Mineral Claims:

398666, 505416, 505417, 505418, 510719, 517515, 517726, 531627, 531629, 531650, 531653, 531655, 531658 and 531663

Statement of exploration: Event # 5709474

Field work completed between July 05 and 14, 2018

Worked on claims: 398666, 517726, 531627, 531629, 531653, 531655 and 531663

Property Located

22 km east of Terrace, British Columbia

Omineca Mining Division

NTS 103I/08 and 103I/09

UTM: 550000E, 6037700N (Zone 9V)

Latitude 54° 29' 04" N, Longitude 128° 13' 42" W

On behalf of DECADE RESOURCES LTD.,

Stewart, BC

Submitted by

Krzysztof Mastalerz, Ph. D., P. Geo.

(with a contribution by A. Walus, M.Sc., P.Geo.)

15 December, 2018

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SUMMARY

The Dardanelle property owned by Decade Resources Ltd. of Stewart, B.C., is located about 20-30 air kilometers east of Terrace, B.C., on the northern slopes of Zymoetz (Copper) River valley (Figs. 1 and 2). The property consists of 14 contiguous mineral claims and reaches approximately 1340 hectares in area. The property includes, within its boundaries, the historic developed prospect – Dardanelle dyke-vein system (MINFILE 103I 107).

The western to central parts of the property are underlain by intrusive rocks of granodiorite to quartz diorite, which belong to the Coast Plutonic Complex and/or Kleanza Plutonic Suite (Fig. 3). These intrusive rocks host the Dardanelle Dyke, which strikes WSW-ENE, dips steeply towards the north and is accompanied by quartz veins along both contacts. These quartz veins are locally enriched in sulphides and carry significant, though rather erratic, concentrations of gold and lesser silver. The intrusive rocks are distinctly sheared and moderately chlorite altered at the contacts with the dyke and/or quartz veins. The granodiorite-diorite intrusive rocks are bound to the east and west by the andesite volcanogenic rocks of the Telkwa/Hazelton Group.

The 2018 exploration program on the Dardanelle property was dedicated to verify lithological variability and geochemistry of the westernmost parts of the property. The geologists gathered geological observations, took structural measurements and collected 54 rock samples. The surface rock sampling was focused on the geochemistry of the rock formations in searching for a potential western extension of the Dardanelle dyke-vein system (Fig. 4). Five samples have been collected for petrographic thin sections (polarizing microscope).

A number of samples returned anomalous concentrations of gold, silver and base metals. However, the concentrations of these metals, found within the sampled populations, were relatively low. The most important sample DAKM-1843 returned 1550 ppb Au, 4.6 ppm Ag and 1900 ppm Cu. It has been collected from the quartz vein, approximately 20-25 cm thick, subparallel to the main Dardanelle dyke-vein system in its footwall rocks. Both, geochemistry and microscope evaluation of the samples from the Dardanelle dyke-vein system revealed elevated amounts of K-feldspar in wallrock intrusive rocks, as well as, within the “aplite” dyke.

It has been recommended that the following exploration program includes geological mapping and systematic rock sampling of the eastern projected extension of the mineralization system, auger testing and sampling, VLF survey and diamond drilling. The latter should be focused on providing evidence required for a rigorous resource calculation within the limits of the best explored part of the mineralization system in the western part of the property. The locations where rock formations displayed elevated precious and base metals, and/or elevated ICP-potassium content, should be revisited and evaluated in more details.

INTRODUCTION

This report has been prepared in order to summarize the results of the 2018 geochemistry rock sampling and testing, as well as the results of geological and structural observations on the Dardanelle property. The property has not been mapped at this stage. However, the crew gathered a number of structural observations and measurements which help in understanding the geological structure and stratigraphy of the area. The report also contains some discussion and comments concerning results of the other historic exploration events in the area.

Location and Access

The mineral claims of the Dardanelle property are located about 25 km east of Terrace, B.C., on the northern slopes of the Zymoetz (Copper) River valley (Fig. 1 and 2). The core of the property and its oldest part surrounds the portal of an old adit (Dardanelle adit), which is located approximately at the UTM coordinates 549,420 E and 6,037,470 N (NAD 83, Zone 9). However, the entire area of the property stretches significantly further eastward and northward, including the 14 contiguous mineral claims located on the NTS map sheets 103I/08 and 103I/09. The claim locations and the property boundaries according to MINFILE data are shown on Figure 2.

The most convenient access to the property is via helicopter from Terrace, BC, with landing locations at the Copper River gravel bar in the western part of the property. There is also a potential helicopter landing spot just next to the portal of the Dardanelle adit but this location would require additional trimming of overgrown bushes. The property can be also accessed by ATV via the high-voltage-power-line service road which runs eastward from the community of Copper River along the lower part of the northern slopes of the Copper River valley (Fig. 2). This road joins the old exploration access trail (good quality gravel/dirt surface) which was in excellent condition until the 2017. However, conditions on both the road and trail are subject to weather factors. The heavy rains of autumn 2017 have resulted in severe worsening of both the road and trail, which include some deep washouts and the collapse of the bridge on the McNeil Creek (just westward of the Dardanelle adit).

Physiography and Vegetation

Physiography of the Dardanelle property is dominated by two elements: the valley of Zymoetz (Copper) River along the southwestern boundary of the property and its moderately steep, northern slopes. Elevations of the Copper River valley bottom reaches about 170-180 m a.s.l. Elevations of the older, western part of the property ranges from about 200 to 600 m a.s.l. The

To accompany report by K. Mastalerz

DECADE RESOURCES LTD.	
DARDANELLE PROPERTY **OMINECA MINING DIVISION**	
LOCATION MAP	
Date: December 2018	Figure 1 Scale as shown

slopes gradually become steeper toward NE and elevations reach about 1500-1600 m a.s.l. at the northeastern corner of the property. The area is drained by several creeks flowing south to southwestwards, right tributaries to the Copper River. Almost the entire area of the property is heavily timbered.

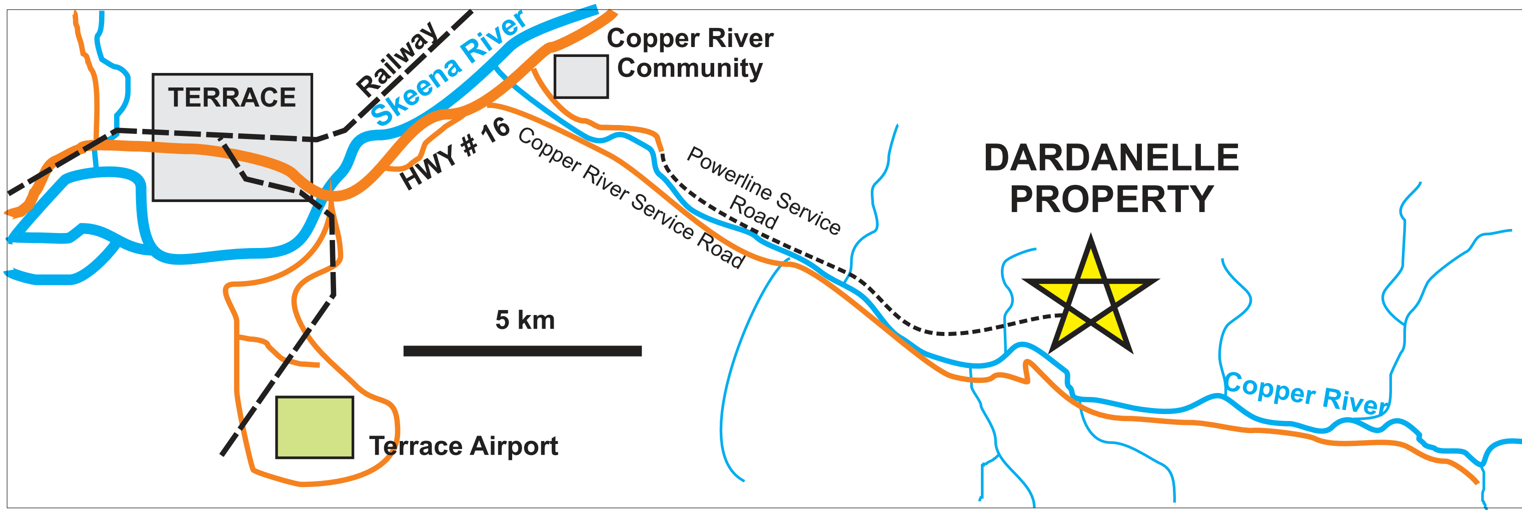
Property and Ownership

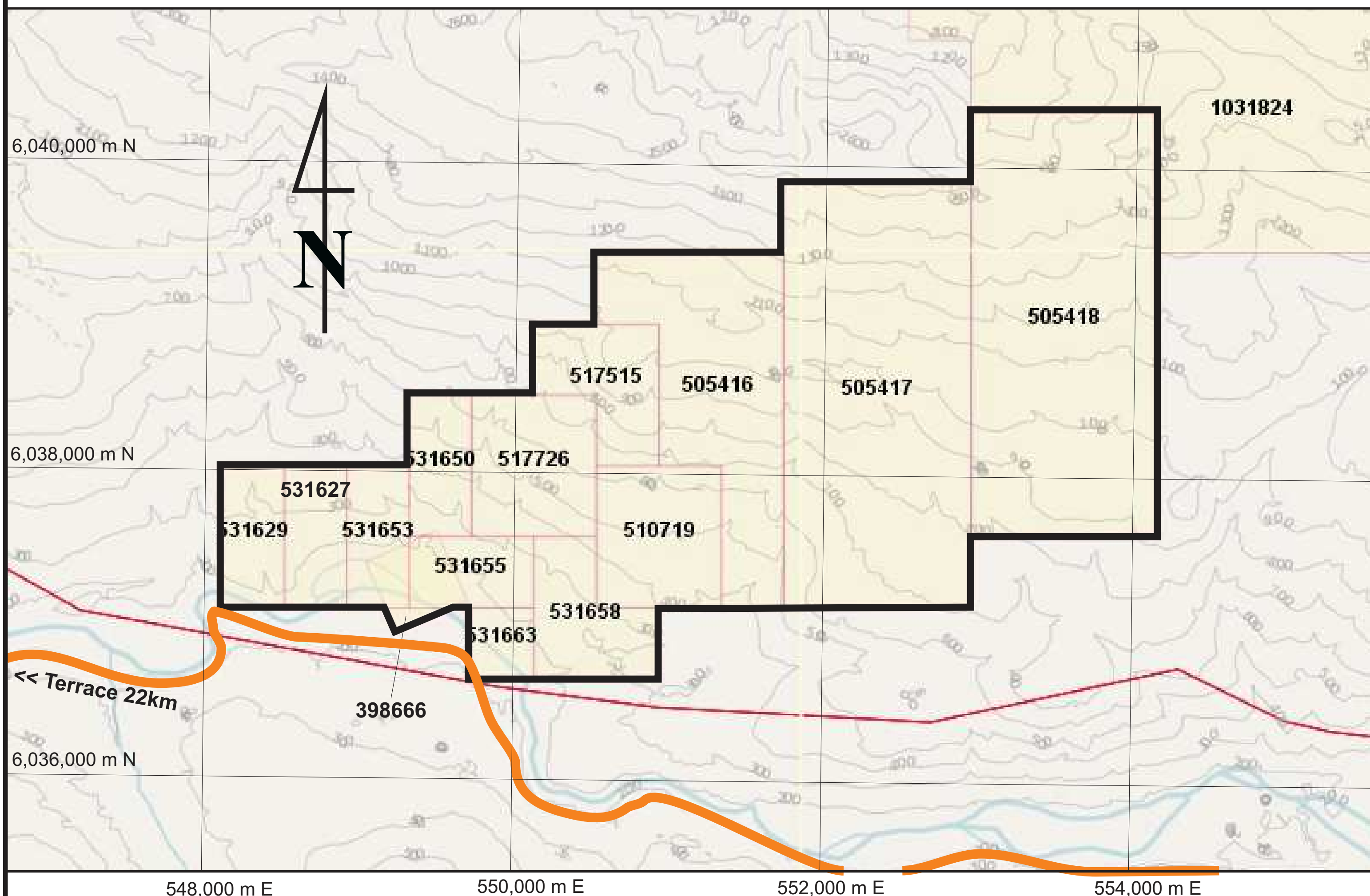
The Dardanelle property covers nominally 1340.27 hectares in 14 contiguous mineral claims (Fig. 2). However, its real area is only approximately 1320 hectares since most part of the claim DAR 8 (398666) overlaps some other claims of the property. Relevant claim information is summarized in Table 1.

Table 1. Mineral Claims of the Dardanelle Property.

Claim Name	Tenure	Area [ha]	Good To	New Good To	Work performed
Dardanelle 1	505416	169.08	2-Dec-18	2-Dec-19	
Dardanelle 2	505417	338.14	2-Dec-18	2-Dec-19	
Dardanelle 3	505418	338.10	2-Dec-18	2-Dec-19	
	517515	56.36	2-Dec-18	2-Dec-19	
	510719	75.16	2-Dec-18	2-Dec-19	
	517726	75.16	2-Dec-18	2-Dec-19	Yes
	531658	56.58	2-Dec-18	2-Dec-19	
	531663	18.79	2-Dec-18	2-Dec-19	Yes
	531629	37.58	31-Aug-19	31-Aug-19	Yes
	531627	37.58	31-Aug-19	31-Aug-19	Yes
DAR 8	398666	25.00	2-Dec-18	2-Dec-19	Yes
	531650	37.58	2-Dec-18	2-Dec-19	Yes
	531655	37.58	2-Dec-18	2-Dec-19	Yes
	531653	37.58	2-Dec-18	2-Dec-19	Yes

All mineral claims of the Dardanelle property are situated in the Omineca Mining Division of the Province of British Columbia and belong to Decade Resources Ltd. in 100%.





To accompany report by K. Mastalerz

LEGEND:

- all-season gravel road (Copper River Service Road)
- high-voltage power line

1 km

DECADE RESOURCES LTD.	
DARDANELLE PROPERTY SKEENA MINING DIVISION	
CLAIM MAP	
NTS 103I/08, 103I/09 Date: December 2018	Figure 2 Scale as shown

Previous Exploration

Knowledge about the general geology of the vicinity of Terrace has gradually been gained thanks to government mapping projects as well as numerous exploration programs. The area near Terrace was mapped geologically with respect to general lithological categories in 1937 by E.D. Kindle (GSC Memoir 212). S. Duffel and J.G. Souther provided an updated version of the geological map for the area in 1964 (GSC Memoir 329). The eastern part of the 103I map sheet has also been mapped on a general scale by Woodsworth et al. (1985). The area of the 103I/09 map sheet, adjoining the Dardanelle property to the north, has been mapped recently by Nelson et al. (2006). The geological map included in this report (Fig. 3) has been adapted from the version publicly available at the website of the BCGS, though it does not mean that the author completely agrees with this version as to its content and interpretations. A quite obvious impression would be that the area still needs a lot of attention as far as geological mapping, structural features and stratigraphy are concerned.

The Dardanelle prospect (Minfile 103I 107) has been briefly described as a 5-7 metre thick steep system of albite dyke and quartz veins along the dyke contacts, the system trending at about 75 degrees and hosted by granodiorite of the Coast Plutonic Complex. The reported mineralization includes pyrite, chalcopyrite, sphalerite, galena, argentite, bornite, covellite, malachite and native gold. The reported assays are highly diversified and include some high grade gold (up to 27.9 g/t) and silver (up to over 20 opt) and some substantial grades of lead, zinc and copper.

The Dardanelle dyke-vein system was discovered in the early 1900's and the original group of claims was recorded under the name of Dardanelle. In 1915, about 100 metres of underground development was completed (Anderson, 1997). The samples from the veins assayed between 0.1 and 0.22 ounces per ton of gold. Afterwards, until 1935, only a limited amount of surface trenching and blasting was conducted on the property. In 1936, the underground work had been extended up to about 1600 feet and was followed by the installation of trucks and an air duct. Some surface trenching was also completed in 1948. A. Burton (2005 a, b) discusses the role of famous Fred Wells in the property development, however he does not quote any specific dates – it appears that 1936-1948 was just that period.

In 1969, Univex Mining Corporation conducted an extensive exploration program which included, surface and underground mapping, soil sampling, trenching and diamond drilling (1000 feet), however "there are no records available for this work" (*op.cit.:* Anderson 1997). Univex returned to the property (named then J.P. Property) in 1988 and completed another program consisting of general clean-up, reparations of the road and underground working, erecting a log bridge over McNeil Creek, surveying, trenching and blasting, geological mapping, as well as soil and underground sampling (Symonds, 1989). The underground workings were completely mapped at that time. In 1996, a limited amount of rock sampling (both underground and surface), prospecting and brief mapping was conducted by R.B. Anderson (1997).

The most recent major exploration event on the Dardanelle prospect was conducted by Trade Winds Ventures, an operator, in 2004-2005 (Burton, 2005a, b). The program included maintenance of the road/access trail system, cut-lines, an extremely extensive soli survey and an extensive trenching program, as well as limited amount of diamond drilling. The results of this program will be discussed in some details further along in this report.

The MINFILE capsule geology quotes that “In August 1983, a report by S. Ramsbottom suggested that the property contains reserves of approximately 181,440 tonnes grading about 7.5 grams per tonne gold and 17.1 grams per tonne silver (George Cross Newsletter Nov.13, 1984)”(op. cit. Minfile 103I 107). However, it appears difficult to provide solid evidence for such a claim.

Deacade Resources Ltd. of Steward, BC, optioned the property and conducted a limited reconnaissance exploration program on the property in 2017 (Mastalerz, 2018). The program included geochemical rock sampling and geological/structural observations which were conducted in the western part of the property. The 2017 exploration program was focused on two main areas of the property: 1) an extensive area of the historic workings of the main mineralization system (Dardanelle dyke-vein system) and 2) its potential/postulated eastern extension.

Most samples collected in the area of the main historic workings (Mastalerz 2018 - Fig. 4) displayed elevated concentrations of precious and base metals. In total, 22 samples returned significantly elevated concentrations of gold, most of them range from 110 to 729 ppb Au, while the best one returned 18.8 g/t Au. Most of these samples also contained significantly elevated concentration of silver (the best – 77.1 ppm Ag). However, the results clearly indicated that the ore grade material (at least a few grams per tonne gold) occur rather rarely and apparently, quite randomly within the sampled population.

Also, many samples collected east of the historic workings show elevated concentrations of gold, silver and some of them also base metals. These samples represented either aplite/dyke, slightly chloritized granodiorite or quartz vein material from float and/or subcrop. The bedrock exposure was found to be very limited in this area. It has been concluded that the sampled area, for about 200 metres beyond the eastern termination of the historic workings, constitutes an extension of the previously known Dardanelle dyke-vein system (Mastalerz, 2018).

Surprisingly, most of the 2017 samples did not contain significant concentrations of any minor elements which may be regarded as indicators of mineralization. Only a few samples contained slightly elevated concentrations of antimony, arsenic and cadmium. The laboratory results clearly indicated that a very poor (not significant?) correlation between concentrations of the individual precious and base metal elements in the sampled population exists. It appears that the exceptionally high concentrations of gold correspond to slightly elevated antimony and, rather loosely, to arsenic (Mastalerz, 2018 - Table 3). The field observations also indicated that there is no evident correlation between the amount of sulphides in the sampled material and concentration of gold or silver (Mastalerz, 2018 - Table 3, Appendix 1).

Some additional details and comments concerning history of exploration on the Dardanelle (J.P.) prospect can be found in: MINFILE #103I 107, Symonds (1989), Anderson (1997) and Burton (2005a, b).

There occurs several other mineral showings east of Terrace, which display character similar to the Dardanelle dyke-vein system. The most important occurrences of the gold-bearing mineralization are predominantly found in various systems of quartz veins which cut various intrusive end-member rocks of the Coast Plutonic Complex. A concise discussion concerning these occurrences can be found in the previous assessment report by the author (Mastalerz, 2018). For details, the reader may reach for the following reports: Dandy (2011), Mortimer (1988) and D.G. Allen (1985). These occurrences are also described in "Capsule Geology" format at BCGS MINFILE: 103I 077, 103I 136, 103I 095 and 103I 099. All of these are minor past producers and are accompanied by several smaller-scale showings of similar character.

There occur a number of other government documented mineral occurrences in close vicinity of the Dardanelle property. However, all of them display a different style of mineralization than the Dardanelle dyke-vein system. Most of them represent copper-dominant sulphide mineralization with common bornite, chalcocite, chalcopyrite and even tetrahedrite, which are hosted by the Mesozoic volcanogenic rocks of the Hazelton/Telkwa Group. The list of these occurrences is shown in Table 2.

Table 2. Minfile occurrences near the Dardanelle property.

Minfile	Names	Status	Commodity	Easting	Northing	Comments
103I 077	Columario	Past Producer	Au, Ag, Cu, Pb	539750	6048100	AR 33170, AR17555
103I 136	Black Bull	Past Producer	Au, Ag, Cu, W, Pb, Zn	537100	6044900	AR 17260
103I 095	Golden Nib	Past Producer	Au, Ag, Cu	536600	6035600	AR 14560

103I 099	Lucky Seven	Past Producer	Au, Ag, Pb, Zn, Cu	537700	6035550	AR 15115
103I 166	Porph	Showing	Cu, Ag	546694	6036426	No data on mineralization
103I 158	Calona	Showing	Cu, Ag	552652	6034945	AR 02394
103I 092	Kelly Creek	Dev Prospect	Cu, Ag, Au	555813	6034210	AR 20743
103I 159	Chicken	Showing	Cu, Ag, Mo, Au	553747	6033722	AR 02394
103I 156	East Side	Showing	Cu, Ag	556087	6033904	AR 02394
103I 157	Goat Bluff	Showing	Cu	556817	6033141	AR 02394
103I 250	Kipulta Cr. S	Showing	Ag, Cu	555683	6040391	AR 32596
103I 248	Keap Cr S	Showing	Ag, Cu, Pb, Zn	551584	6043372	AR 32596
103I 249	Keap Cr. N	Showing	Au, Ag, Cu	550686	6044907	AR 34330
103I 197	Dardanelle	Showing	Limestone	551562	6037375	AR 34330

The last occurrence from Table 2 plots in the southernmost part of the present day Dardanelle property. The corresponding layer of the Permian limestone has been mapped and is shown on the Regional Geology Map by Woodsworth et al. (1985); see also Anderson (1997– fig. 7.1).

Personnel and Operations

During the 2018 prospecting program the field personnel were transported from Terrace by a rental truck and ATV's along the high-voltage power line service road and an old access trail. The summer 2018 conditions on the service road and the old exploration access road (several deep washouts and a collapsed bridge) allow access to property only by ATV's until the washout and the collapsed bridge on the McNeill Creek, and further on foot. Geologists conducted prospecting for mineralization, rock sampling, geological observations and some structural measurements on the western part of the property on July 5th, 9th, 10th and 14th of 2018.

The collected samples were shipped to Activation Laboratories Ltd. for standard ICP analyses, (outstanding concentrations of the precious and base metals have been additionally analyzed by fire assay; Appendices 1 and 2). The most interesting results are displayed in Table 3. Five sample duplicates have been used for preparation of polished open petrographic thin sections and analyzed under the petrographic polarizing microscope (Appendix 3).

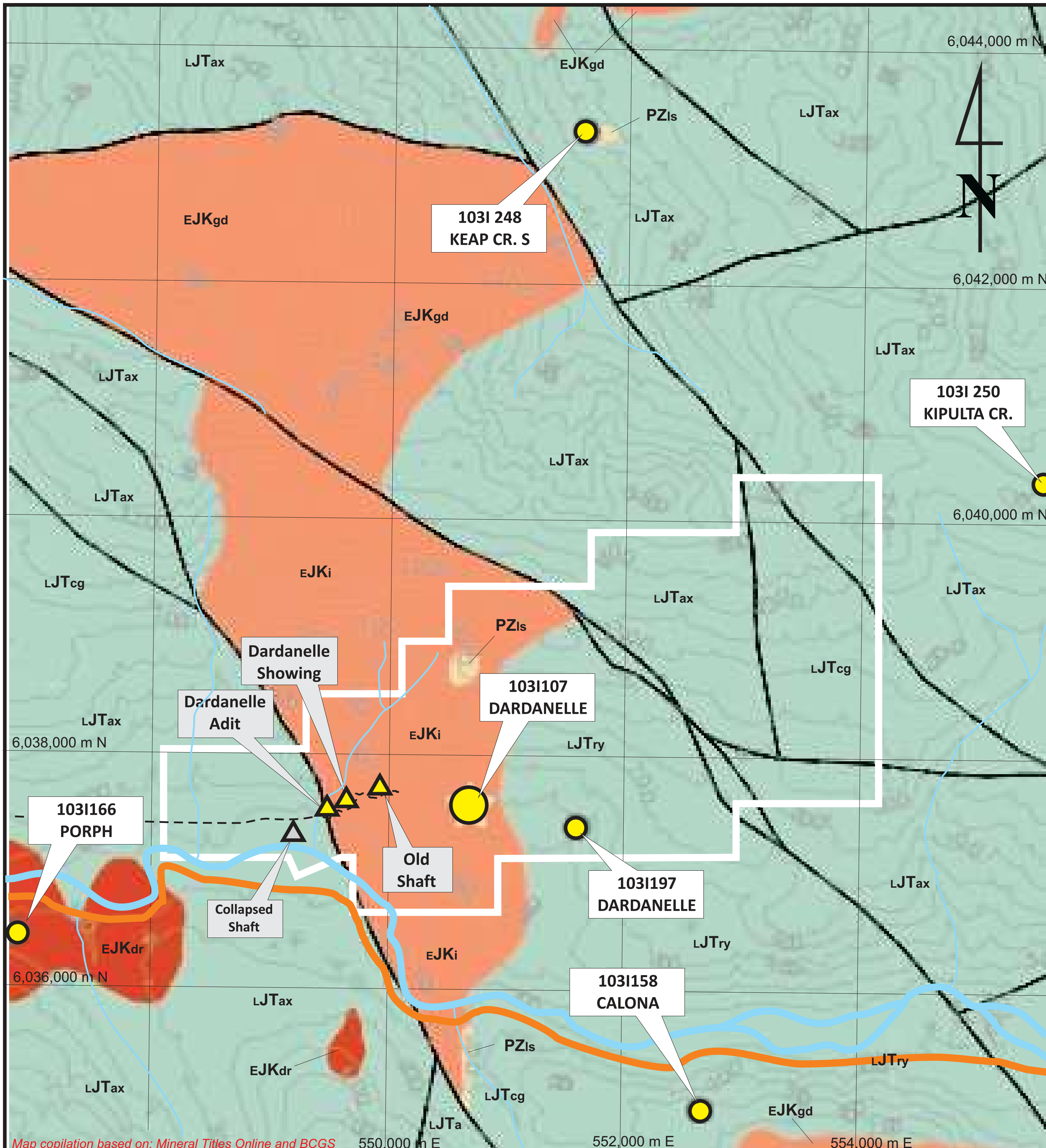
GEOLOGICAL SUMMARY

Regional Geology

The Dardanelle property features the boundary zone between the two prominent tectonic assemblages: the volcanic arc assemblage of the Stikinia Terrane (Triassic-Jurassic) in the east and the intrusive rocks of the Coast Plutonic Complex (Cretaceous-Tertiary?) to the west (MEMPRBC – MapPlace2, Woodsworth et al., 1985). Further north and northeast, the rock formations of both these assemblages are overlapped by the sedimentary succession of the Bowser Lake Group (Late Jurassic and younger), which fills in the Bowser Basin. Towards the east and southeast, some isolated patches of the Eocene Endako Group basaltic rocks appear predominantly along tectonic/fault contacts with the Stikine volcanics.

The contact between the Coast Plutonic Complex and the Stikine Terrane has the character of a wide and complex zone where various elements of the Plutonic Complex have intruded (stocks, dykes of granodiorite, monzodiorite etc.) the host formations of the Stikine Terrane and some older rocks. The contacts are commonly faulted. The Stikine Assemblage in the area near Terrace is comprised predominantly of volcanogenic rocks of the Telkwa Group (Triassic-Upper Jurassic?), which is interpreted as an equivalent of the better-known Hazelton Group, further north (e.g. Alldrick 1993). The Telkwa Group in the area surrounding the Dardanelle property consists predominantly of andesite composition volcanic and moderately diversified volcaniclastic rocks, mainly coarse-grained varieties (Fig. 3). Felsic composition volcanics (dacite, rhyolite) appear far less commonly and in considerably lesser volumes. Coarse volcanogenic conglomerates tend to commonly appear locally near the base of the Telkwa Group along its contacts with older Palezoic sedimentary formations.

It appears that the stratigraphy and the tectonic structural features/deformations of the Telkwa Group have not been explored and recognized satisfactorily in the area, yet. The succession is at least locally folded, and obviously strongly faulted (Woodsworth et al. 1985). Locally some slivers of the older, Triassic Stuhini Group and Mississippian-Permian sedimentary rocks occur. Those slivers are frequently sandwiched between predominant Telkwa volcanogenic rocks and/or occur along their contacts with the intrusives of the Coast Plutonic Complex. The most common elements of such slivers are light grey to white limestone to silty and cherty limestone, sometimes fossiliferous (Foraminifers), which are interpreted to be of Permian age (e.g. Woodsworth et al. 1985). It appears that the base contact of the Telkwa Group may have the character of a distinct unconformity. Packages of slightly metamorphosed metagreywackes and metavolcanics (andesite, basalt and rhyolite composition) of the Zymoetz Group (Mississippian-Permian?) locally accompany such Permian limestone slivers. All these older rocks (older than



LEGEND:

To accompany report by K. Mastalerz

Intrusive rocks:

- EJKgd - Kleanza Plutonic Suite; granodiorite, granite
- EJKdr - Kleanza Plutonic Suite; diorite, gabbro, microdiorite
- EJKi - Kleanza Plutonic Suite, intrusive rocks - undivided
- - fault
- - mineral occurrence (MTO)
- - old access road/trail

Stratified rocks:

- LJTa - Telkwa Gp, predominantly andesite, undivided
- LJTax - Telkwa Gp, andesite volcaniclastics, lapilli tuff to volcanic breccia
- LJTry - Telkwa Gp, predominant felsic rocks, rhyolite
- LJTcg - Telkwa Gp, volcanogenic conglomerates
- PZls - Zymoetz Gp (Permian), limestone

1 km

DECADE RESOURCES LTD.

DARDANELLE PROPERTY
OMINECA MINING DIVISION

GEOLOGY
AND
MINERAL OCCURRENCES

NTS: 103I/08, 103I/09

Date: December 2018

Figure 3

Scale as shown

Jurassic) appear to follow preferentially along relics of thrust faults, and occur, most likely, within the cores of the thrust-fault anticlines. The rock formations of the Telkwa Group are additionally invaded by some older intrusive (or subvolcanic?) rocks of the Early Jurassic(?) Kleanza (predominantly diorite, minor gabbro) and Topley (predominantly granodiorite) Plutonic Suites (Fig. 3).

Local Geology

Geology of the Dardanelle property appears to be very simple but it appears to have never been mapped and investigated adequately with respect to its petrography, stratigraphy and structural geology. A majority of the eastern portion of the Dardanelle property is interpreted to be underlain by volcanogenic rocks of the Telkwa/Hazelton Group (Fig. 3). Similar rocks have been interpreted to underlie the westernmost part of the property, though the overburden is locally very thick and conceals bedrock formations in majority of both areas. The most important bedrock formation on the property consists of intrusive rocks which form its core in its western-central portion and host the Dardanelle (J.P.) mineralization (MINFILE developed prospect 103I 107). Very limited patches of the Permian fossiliferous limestone appear locally along the southern boundary of the property (MINFILE limestone showing 103I 197) and in its northernmost part (Fig. 3).

Field examination of the intrusive rocks from the Dardanelle property indicate that most of them represent slightly altered (chlorite + minor sericite + quartz + calcite) granodiorite, monzogranodiorite and/or quartz diorite varieties. To the knowledge of the author, these rocks have never been examined microscopically. The rock is light grey to moderately pale-greyish-green, most commonly medium to coarse-crystalline. According to MEMPRBC (MapPlace2) these rocks are interpreted as belonging to the Early Jurassic Kleanza Plutonic Suite (Fig. 3). However, their assemblage affinity is obviously not completely clear and some authors assign them to the Coast Plutonic Complex (e.g. Burton, 2005a, b). Further in this report these rocks will be simply called the Dardanelle granodiorite-quartz diorite.

The Dardanelle granodiorite-quartz diorite hosts a 4-5 metres thick, light green, fine grained and silica-rich dyke which strikes at about 070 degrees and dips steeply (70-80°) to the north. The Dardanelle dyke has been previously identified as either rhyolite (Anderson 1997) or aplite (Burton, 2005a, b). It was previously reported to often contain finely disseminated pyrite and less frequently, chalcopyrite. The dyke is accompanied by quartz-sulphide veins along both its contacts. The veins range from a few centimetres to over 2 metres in true width, carrying locally significant mineralization. The most commonly quoted ore minerals include pyrite, chalcopyrite, sphalerite, galena and minor covellite. The veins have been described in several reports, though the degree of their continuity or discontinuity is still to be considered debatable. Contacts of the dyke-vein system with the host granodiorite-quartz diorite appear to be locally faulted. However, the wallrock granodiorite-diorite appears to be commonly sheared and displays an evidently stronger chlorite alteration near its contacts with the dyke, which locally is associated with sericitization, silicification and some calcite veining. The shared zones of the intrusive host rocks locally contain sulphide mineralization with the most common pyrite, chalcopyrite, as well as secondary malachite.

The Dardanelle dyke-vein system carries significant mineralization with strongly elevated gold (up to over one ounce per tonne; native gold reported) and silver (up to 20 opt) locally, as well as appreciable amounts of lead, zinc and copper (*for details see:* MINFILE 103I 107, Symonds 1989, Anderson 1997 and Burton 2005a, b).

It appears that the southwestern contact of the Dardanelle intrusive rocks with the adjoining andesite volcanics of the Telkwa Group runs along the prominent, NW-SE striking fault (Dardanelle fault) which follows McNeil Creek just west of the Dardanelle adit and continues further southeastwards along the bend of the Copper River (Fig. 3; see also MEMPRBC-MapPlace2, Woodsworth et al. 1985 and Anderson 1997 – Fig. 8.1).

Deposit Types

There is no known ore bodies/mineral deposits with strictly defined mineral resources/reserves discovered on the Dardanelle property so far. However, the property hosts a significant mineral occurrence with a status of developed prospect (MINFILE 103I 107). The category and amount of mineral resources as well as reserves has never been defined and reported according to standards and formally assigned to the Dardanelle occurrence. However, the MINFILE capsule geology quotes that: "In August 1983, a report by S. Ramsbottom suggested that the property contains reserves of approximately 181,440 tonnes grading about 7.5 grams per tonne gold and 17.1 grams per tonne silver (George Cross Newsletter Nov.13, 1984)"(Minfile 103I 107, *op. cit.*). From the available documentation it appears that there is no evidence which may support such a claim.

The Au-Ag bearing mineralization on the Dardanelle property is related to and hosted by the "aplite" dyke-quartz vein system, and in limited amount by the granodiorite-quartz diorite wall rocks locally, at their very close contacts.

Mineralization

The dominant part of mineralization known from the Dardanelle prospect is spatially related to the quartz veins which follow both contacts of a 4-5 metres thick Dardanelle dyke. The veins range from few centimetres to over 2 metres in true width and carry irregular pods (locally semi-massive), bands and disseminations of pyrite, chalcopyrite, sphalerite, galena and minor covellite. Pyrite and chalcopyrite has been reported to occur as disseminations within the dyke. These latter minerals, as well as sphalerite, galena and malachite are also host by both zones of intense chloritization and shearing along the contacts of the dyke-vein system with the wallrocks of the granodiorite-quartz diorite intrusives.

The reported grades vary quite widely, though, in most historic cases the gold values are lower than 1g/t and usually oscillate in a range from a few tens to few hundreds of ppb. However, some zones of limited extent (no more than 160 metres along the system strike) have returned from about one to several grams per tonne of gold, several ppm of silver, and strongly elevated (up to a few percent) concentrations of lead, copper and zinc (MINFILE 103I 107, Symonds 1989, Anderson 1997, and Burton 2005 a, b). Probably the highest reported gold concentration came from one of the “specimens of ore material” and reached 122.55 g/t gold (Symonds 1989).

It has been noted that the gold distribution in the system is highly irregular and the higher concentrations of this element are not frequently related to increased accumulations of sulphides (Symonds, 1989). The latter author conducted a limited statistical analysis based on results of the laboratory geochemistry. The results of this analysis indicate that high gold grades show the highest positive correlation with silver and lead yet still, the resulted correlation coefficients were less than 0.5 (Symonds, 1989).

RESULTS OF 2018 EXPLORATION PROGRAM

A total of 54 rock samples have been collected and assayed during the Decade’s 2018 exploration program on the Dardanelle property (Appendices I and II, Fig. 4). A great part of this sample set has been collected in the westernmost part of the property in search for a potential western-southwestern extension of the Dardanelle dyke-vein system. Several other samples came from the areas located northward and southward from the limits of the main historic exploration/mining activities, in search for evidence of parallel mineralization systems (Fig. 4). A few samples have been carefully collected from various end-member lithologies of the Dardanelle main showing to study these rocks under the polarizing microscope.

Geochemistry

The collected rock samples were analyzed by a standard ICP method in Activation Laboratories Ltd., Kamloops, BC. Sample with outstanding concentrations of the precious and base metals have been additionally analyzed by fire assay (Appendices 1 and 2). The most interesting results are displayed in Table 3.

Table 3. Significant results – Lab Geochemistry (ICP Analyses)

Element	Au	Ag	Cu	Pb	Zn	As	Sb	Ca	K
Sample label	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
A18 27	18	< 0.2	17	< 2	84	< 2	2	0.82	0.10
A18 31	111	< 0.2	60	10	56	2	< 2	> 10.0	0.15
A18 32	< 5	< 0.2	9	17	602	< 2	5	> 10.0	0.01
A18 38	< 5	< 0.2	253	2	14	2	2	> 10.0	0.24
A18 39	34	0.4	104	6	52	5	< 2	1.98	0.33
A18 43	447	0.9	37	< 2	3	< 2	< 2	0.04	0.09
DAKM 1812	13	< 0.2	96	< 2	38	< 2	< 2	0.19	0.24
DAKM 1815	< 5	< 0.2	110	28	297	< 2	< 2	> 10.0	0.05
DAKM 1816	33	< 0.2	70	14	211	< 2	< 2	> 10.0	0.05
DAKM 1821	9	0.6	142	3	49	37	< 2	6.2	0.21
DAKM 1829	< 5	0.4	242	< 2	24	2	< 2	> 10.0	0.07
DAKM 1830	< 5	0.4	439	< 2	74	< 2	3	5.3	0.29
DAKM 1831	< 5	1.0	2560	3	87	< 2	4	> 10.0	< 0.01
DAKM 1832	13	1.0	1650	62	86	< 2	< 2	1.38	0.42
DAKM 1833	< 5	0.8	29	202	98	< 2	< 2	0.10	0.26
DAKM 1834A	340	4.0	1690	1.10%	11	15	< 2	0.12	0.23
DAKM 1834B	61	0.4	59	317	43	6	< 2	1.16	0.31
DAKM 1838	< 5	0.3	197	< 2	89	< 2	< 2	0.7	0.28
DAKM 1843	1550	14.6	1900	17	10	< 2	< 2	0.01	0.05
DAKM 1803	12	0.8	139	22	33	< 2	< 2	1.23	0.32
DAKM 1804	< 5	0.6	498	4	36	< 2	< 2	7.25	0.14
DAKM 1805	< 5	< 0.2	179	< 2	65	4	3	3.25	0.06

A brief overview of the table above may give an impression that the results of the 2018 program on the Dardanelle property are not bringing any new significantly important information. The basic statistical parameters of the entire sample population in terms of the most important elements are as follow:

Table 4. Basic statistical parameters of the most important elements of the 2018 sample population.

Element	Minimum	Maximum	Average	Units
Gold	< 5	1550	< 51	ppb
Silver	< 0.2	14.6	< 0.6	ppm
Copper	4	2560	219	ppm
Lead	< 2	1.10%	approx. 220	ppm
Zinc	3	602	76	ppm
Arsenic	< 2	37	-	ppm
Antimony	< 2	4	-	ppm

Some of the highest encountered concentrations of the elements mentioned above, came from a few samples collected from the Dardanelle dyke-vein system (Dardanelle showing, adit and/or historic trench area; Fig. 4). This group includes the following samples:

- DAKM-1832 – footwall diorite at Dardanelle showing; displayed strongly elevated copper, and slightly anomalous gold and silver

- DAKM-1833 – “aplite” at Dardanelle showing; returned slightly anomalous silver and lead;

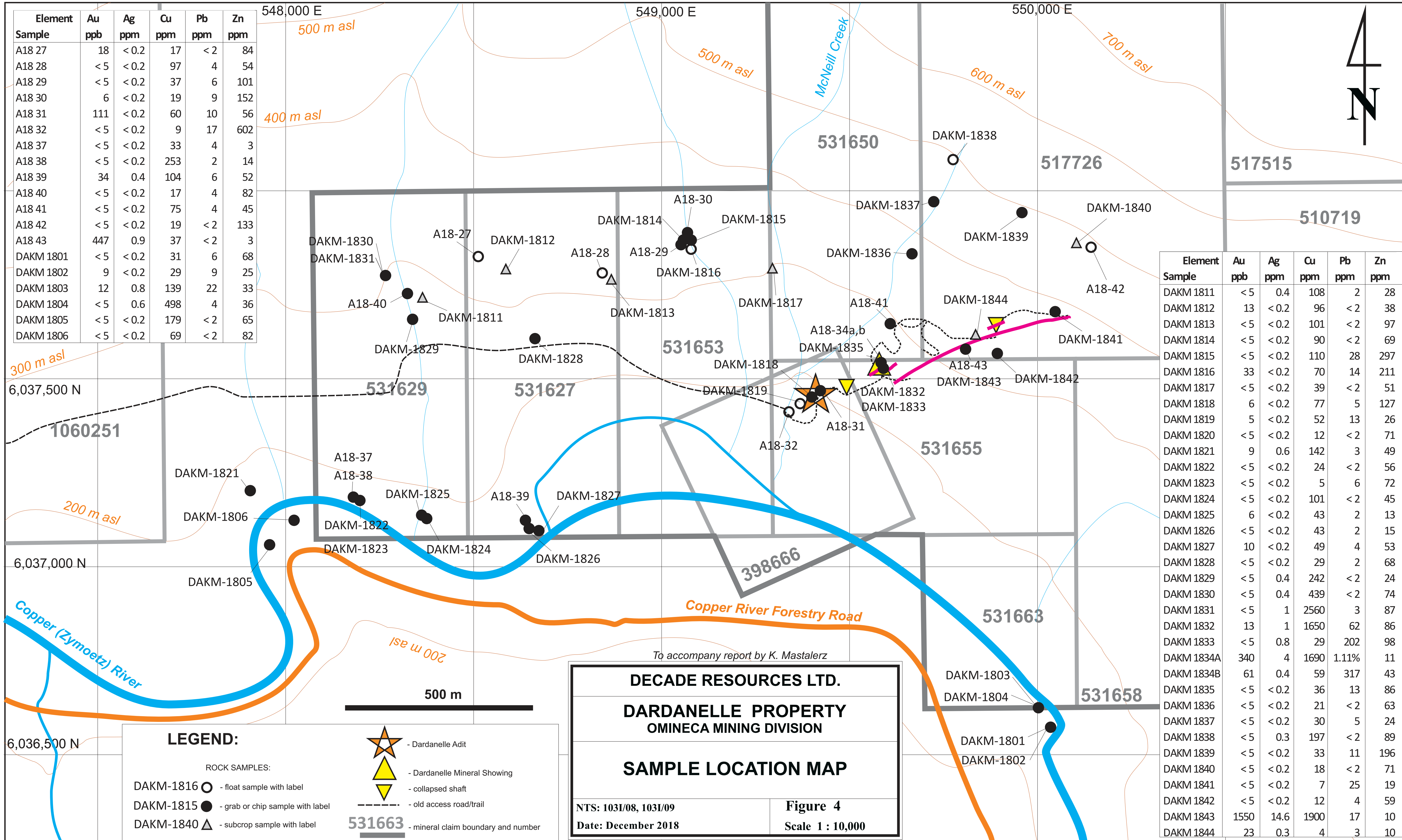
- DAKM-1834A – hangingwall quartz vein at Dardanelle showing with relatively abundant sulphide mineralization; contained 1.1% lead and strongly anomalous gold, silver and copper;

- DAKM-1834B – strongly sheared diorite/aplite at the hangingwall contact of the hangingwall vein (Dardanelle showing); returned slightly anomalous lead, silver and gold

- A18-31 – 1-2 cm quartz-carbonate veins cutting strongly chlorite-sericite altered quartz diorite at Dardanelle adit; returned significantly elevated concentration of gold (with no visible sulphides)

The common ore/mineralization-related elements display strongly asymmetric and strongly positively-skewed distributions (estimated median values are much smaller than the corresponding mean (average) values) within the sampled population.

However, the following results and observations are considered as new significant additions to the knowledge concerning the mineralization of the Dardanelle property:



Element / Sample	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
A18 27	18	< 0.2	17	< 2	84
A18 28	< 5	< 0.2	97	4	54
A18 29	< 5	< 0.2	37	6	101
A18 30	6	< 0.2	19	9	152
A18 31	111	< 0.2	60	10	56
A18 32	< 5	< 0.2	9	17	602
A18 37	< 5	< 0.2	33	4	3
A18 38	< 5	< 0.2	253	2	14
A18 39	34	0.4	104	6	52
A18 40	< 5	< 0.2	17	4	82
A18 41	< 5	< 0.2	75	4	45
A18 42	< 5	< 0.2	19	< 2	133
A18 43	447	0.9	37	< 2	3
DAKM 1801	< 5	< 0.2	31	6	68
DAKM 1802	9	< 0.2	29	9	25
DAKM 1803	12	0.8	139	22	33
DAKM 1804	< 5	0.6	498	4	36
DAKM 1805	< 5	< 0.2	179	< 2	65
DAKM 1806	< 5	< 0.2	69	< 2	82

Element / Sample	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
DAKM 1811	< 5	0.4	108	2	28
DAKM 1812	13	< 0.2	96	< 2	38
DAKM 1813	< 5	< 0.2	101	< 2	97
DAKM 1814	< 5	< 0.2	90	< 2	69
DAKM 1815	< 5	< 0.2	110	28	297
DAKM 1816	33	< 0.2	70	14	211
DAKM 1817	< 5	< 0.2	39	< 2	51
DAKM 1818	6	< 0.2	77	5	127
DAKM 1819	5	< 0.2	52	13	26
DAKM 1820	< 5	< 0.2	12	< 2	71
DAKM 1821	9	0.6	142	3	49
DAKM 1822	< 5	< 0.2	24	< 2	56
DAKM 1823	< 5	< 0.2	5	6	72
DAKM 1824	< 5	< 0.2	101	< 2	45
DAKM 1825	6	< 0.2	43	2	13
DAKM 1826	< 5	< 0.2	43	2	15
DAKM 1827	10	< 0.2	49	4	53
DAKM 1828	< 5	< 0.2	29	2	68
DAKM 1829	< 5	0.4	242	< 2	24
DAKM 1830	< 5	0.4	439	< 2	74
DAKM 1831	< 5	1	2560	3	87
DAKM 1832	13	1	1650	62	86
DAKM 1833	< 5	0.8	29	202	98
DAKM 1834A	340	4	1690	1.11%	11
DAKM 1834B	61	0.4	59	317	43
DAKM 1835	< 5	< 0.2	36	13	86
DAKM 1836	< 5	< 0.2	21	< 2	63
DAKM 1837	< 5	< 0.2	30	5	24
DAKM 1838	< 5	0.3	197	< 2	89
DAKM 1839	< 5	< 0.2	33	11	196
DAKM 1840	< 5	< 0.2	18	< 2	71
DAKM 1841	< 5	< 0.2	7	25	19
DAKM 1842	< 5	< 0.2	12	4	59
DAKM 1843	1550	14.6	1900	17	10
DAKM 1844	23	0.3	4	3	10

To accompany report by K. Mastalerz

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SAMPLE LOCATION MAP

NTS: 103I/08, 103I/09 — **Figure 4**

Date: December 2018 — Scale 1 : 10,000

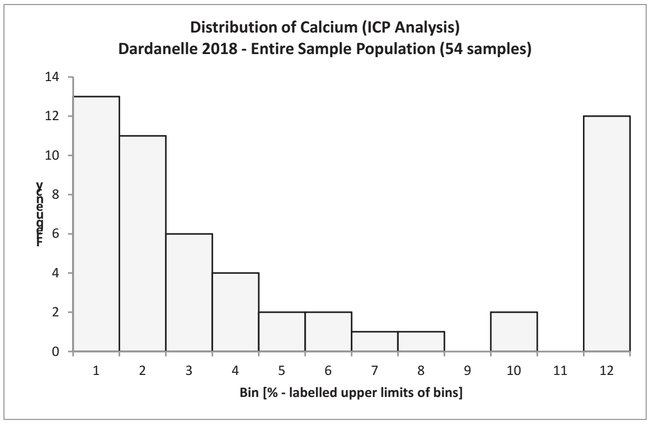
1. Samples DAKM-1843 and A18-43 appear to be the most important from the entire sample population collected in 2018. The samples came from a 20-25 cm wide quartz vein which occurs parallel to the main Dardanelle dyke-vein system approximately 20 (?) metres in its footwall quartz diorite. The extent of this vein along its strike has not been defined since the outcrop of the vein is very limited and the overburden is very thick as judged from the historic trench nearby. The sample DAKM-1843 returned 1550 ppb gold, 14.6 ppm silver and 1900 ppm copper. Sample A18-43 returned 455 ppb gold and slightly elevated concentration of silver (Appendix 1, Fig. 4). The sulphide mineralization of this vein includes a limited amount of pyrite and traces of chalcopyrite.
2. Samples DAKM-1829, -1830 and -1831 were collected from outcrops of the deeply incised creek in the northwestern part of the property (Fig. 4). All samples returned significantly elevated amounts of copper (the highest – 2560 ppm) and slightly elevated silver. The anomaly is host by quartz-calcite veins and veinlets which cut the host andesite/dacite volcanics/metavolcanics and which are locally faulted. The only visible sign of ore mineralization is a limited amount of malachite with no visible sulphides (Appendix 1, Fig. 4).
3. Samples A18-38, -39 and DAKM-1821 have been collected in the south-westernmost part of the property (Fig. 4). The samples returned slightly anomalous amounts of copper, silver and gold. Although the sample locations are at approximate WSW extension of the Dardanelle dyke-vein system the bedrock of this part of the property is different and consists of andesite volcanics/metavolcanics.
4. Samples DAKM-1803, -1804 and -1805 have been collected from outcrops on the southern bank of the Copper River along the southern boundary of the property (Fig. 4). The samples returned elevated concentrations of copper with slightly anomalous silver and gold. Bedrock geology of the area is complex, probably faulted, and includes both, the diorite intrusive and andesite volcanogenic rocks. The visible mineralization consists of subordinate disseminations of pyrite with traces of chalcopyrite.
5. Another group of samples which were collected at locations scattered north- to northwestward and upslope from the main Dardanelle dyke-vein system, have returned slightly elevated concentrations of base and/or precious metals. Some of these samples represent variably altered diorite (DAKM-1812, -1815, -1838 and A18-27). However, most of them have been collected from float or subcrop material (Appendix 1). Two other samples of this group (A18-32 and DAKM-1816) represent quartz-carbonate breccias of strongly chlorite altered rock of undefined lithologic affinity (Table 3).

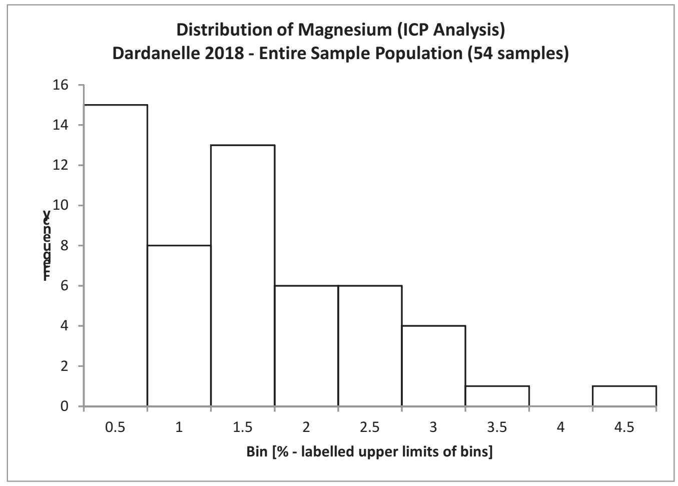
Analysis of the concentrations of some of the **main elements** observed in the sampled populations appears to provide with additional indications concerning the potential aids in further exploration for mineralization on the Dardanelle property. Obviously, results of the ICP-method cannot be regarded as satisfactory for a more rigorous study/analysis since the digestion of these elements by this method is well too far from complete. However, since all the samples have been treated uniformly, a limited comparative study may be quite adequate and useful, especially when other parameters of the sampled population (e.g. lithology and composition) have been controlled (Appendix 1).

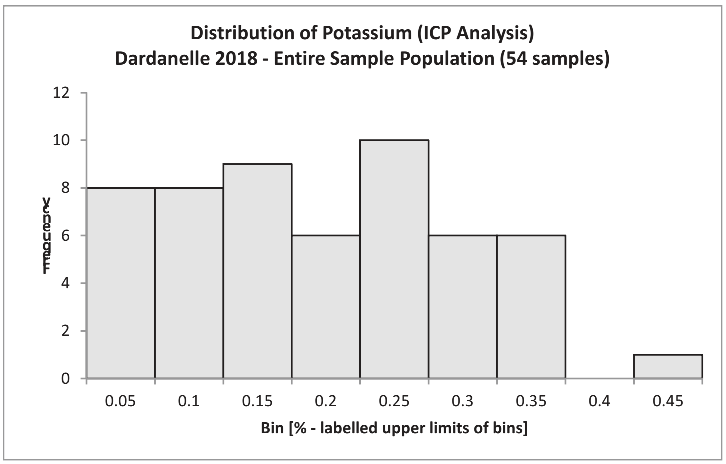
It has been noted that a number of samples collected on the property in 2018 returned very high concentrations of calcium (Appendix 2, Table 3). Calcium displays a distinctly bimodal distribution within the sampled population (Fig. 5). Two predominant lithological varieties of the sampled population (quartz diorite-granodiorite and andesite/dacite volcanogenic rocks) should not contain much more than 3-4% calcium. However, numerous samples taken from the property returned significantly more than 5% calcium, including several samples which show more than 10% (Fig. 5). Some of such cases can be explained by the presence of calcite veins (compare Appendix 1). However, the encountered examples of the elevated calcium (including calcite veining) appear to have resulted from a propylitic alteration which appears to be quite common on the property. Interestingly, the samples closely associated with the Dardanelle dyke-vein mineralization system (some diorite and, especially, “aplite” samples) appear to be calcium-deficient (Table 5, Fig. 5), that may be explained by either selective calcite leaching(?) by mineralized fluids or originally Ca-deprived and K-enriched dyke rocks (“aplite”).

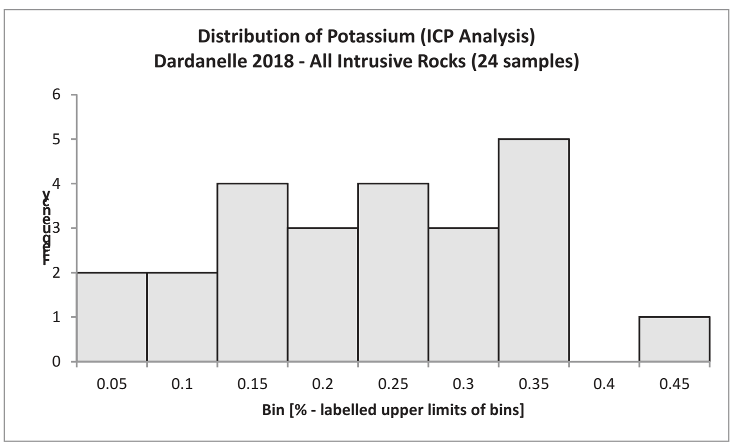
Concentrations of ICP-magnesium in the sampled population also show a wide spread (from 0.01% to 4.43%) and bimodal distribution. However, the contents of magnesium in individual samples appear to be quite random – it would be difficult to find any lithology and/or alteration related relationships excluding an obvious depletion of this element in samples which contained significant amount of quartz vein/pod material. Magnesium does not appear to display any statistically significant relationship to calcium and/or other elements on the property. Also, the Dardanelle dyke-vein system magnesium appears to be much more “immobile” than calcium within the rocks of the Dardanelle property.

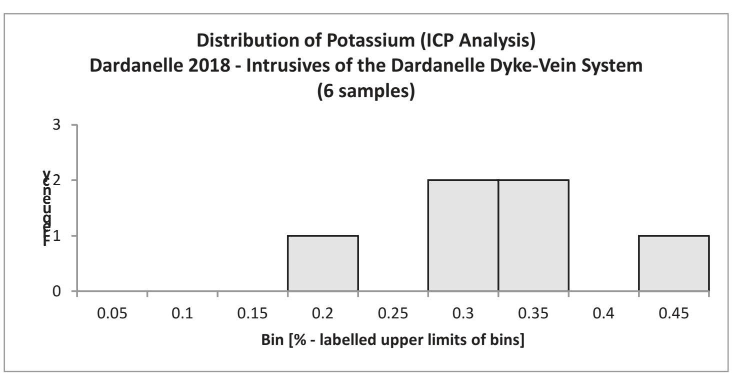
Distribution of potassium in the sampled population is relatively uniform but it shows a weak bimodality (Fig. 5). The average content of potassium in the entire sampled population is approximately 0.18%, which appears as quite a low value for what one may expect from both predominant lithologies sampled. Obviously, the applied ICP-method’s digestion was far from complete. However, the most interesting observation is that potassium appears to be relatively “enriched” in most samples which were collected directly from, or very near the Dardanelle dyke-vein system (Table. 5). Besides, the diorite/quartz diorite samples which displayed elevated concentrations of potassium frequently also show anomalous concentrations of gold, silver and/or copper. The above observation appears to indicate a potential positive relationship between mineralization and potassic(?) alteration on the property.











To accompany report by K. Mastalerz

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DISTRIBUTION OF SELECTED MAIN ELEMENTS IN 2018 SAMPLE POPULATION

Figure 5

Date: December 2018

Table 5. ICP geochemistry – selected elements of the Dardanelle 2018 - intrusive rocks.

Sample	Lithology	Comment	Au	Ag	Cu	Pb	Zn	As	Sb	Ca	K	Mg
			ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%
A18 27	D		18	< 0.2	17	2	84	< 2	2	0.82	0.10	1.58
A18 41	D		< 5	< 0.2	75	4	45	1	< 2	2.02	0.15	1.00
A18 42	D		< 5	< 0.2	19	2	133	1	< 2	0.62	**0.23**	1.48
DAKM 1811	D		< 5	0.4	108	2	28	1	< 2	0.28	0.16	0.26
DAKM 1812	D		13	< 0.2	96	2	38	1	< 2	0.19	**0.24**	1.03
DAKM 1815	D		< 5	< 0.2	110	28	297	1	< 2	>10.0	0.05	2.47
DAKM 1819	D		5	< 0.2	52	13	26	2	< 2	5.91	0.04	0.47
DAKM 1824	D		< 5	< 0.2	101	2	45	3	< 2	2.74	**0.31**	1.02
DAKM 1836	D		< 5	< 0.2	21	2	63	1	< 2	0.79	**0.25**	1.06
DAKM 1837	D		< 5	< 0.2	30	5	24	1	< 2	1.35	0.07	0.46
DAKM 1838	D		< 5	0.3	197	2	89	1	< 2	0.70	**0.28**	1.45
DAKM 1839	D		< 5	< 0.2	33	11	196	1	< 2	1.64	0.11	1.50
DAKM 1840	D		< 5	< 0.2	18	2	71	1	3	1.76	0.12	0.81
DAKM 1842	D		< 5	< 0.2	12	4	59	1	2	1.30	0.16	0.98
DAKM 1801	D		< 5	< 0.2	31	6	68	1	< 2	3.20	**0.34**	1.29
DAKM 1802	D		9	< 0.2	29	9	25	1	3	0.65	0.21	0.26
DAKM 1803	D		12	0.8	139	22	33	1	< 2	1.23	**0.32**	0.55
DAKM 1804	D		< 5	0.6	498	4	36	1	< 2	7.25	0.14	0.79
DAKM 1818	D	DDVS	6	< 0.2	77	5	127	4	< 2	3.02	0.19	1.74
DAKM 1834B	D	DDVS	61	0.4	59	317	43	6	< 2	1.16	**0.31**	0.48
DAKM 1835	D	DDVS	< 5	< 0.2	36	13	86	1	< 2	2.36	**0.34**	0.61
DAKM 1832	D	DDVS	13	1.0	1650	62	86	1	< 2	1.38	**0.42**	1.51
DAKM 1833	A	DDVS	< 5	0.8	29	202	98	1	< 2	0.10	**0.26**	0.02
DAKM 1841	A	DDVS	< 5	< 0.2	7	25	19	1	< 2	0.21	**0.30**	0.02

Abbreviations: D – diorite, quartz diorite, granodiorite; A – "aplite" dyke; DDVS – Dardanelle dyke-vein system

The ICP potassium content in the rock samples from the Dardanelle dyke-vein system is relatively high, averages about 0.30% and shows relatively little variability. The other intrusive rocks which have been sampled during the 2018 program (diorite-granodiorite family) display significantly lower ICP-potassium concentrations (average = 0.18%) and much wider spread (Table 5, Fig. 5). By comparison, the samples of the andesite-dacite volcanogenic rocks (19 samples; compare Appendix 1) display an ICP-potassium average of 0.16%. The corresponding average for the entire 2018 sample population equals approximately 0.18%.

The most important mineralization encountered so far on the property is obviously related to the Dardanelle dyke-vein system. It appears that the rock components of this system display significantly higher ICP-potassium content than other rocks encountered on the property.

However, not all the rocks of the Dardanelle dyke-vein system contain significant mineralization (Tables 3 and 5; compare also Mastalerz 2018, Burton 2005a, b, Symonds 1989). In this context, it is worth noting that several samples (of both, intrusive and volcanogenic rocks) which were collected away from the Dardanelle dyke-vein system display similarly elevated level of ICP-potassium (Table 3 and 5). Some of these samples, especially the ones which simultaneously show slightly anomalous contents of precious and base metals, may be identified with some other potential mineralization systems existing on the property.

Microscope petrography

Five duplicate samples from the Dardanelle dyke-vein system have been selected for brief petrographic microscope evaluation. Two samples represent the Dardanelle dyke rock ("aplite"), one sample came from the proximal footwall quartz diorite and two other samples represent the hangingwall quartz vein and quartz-impregnated wallrock material. Brief petrographic descriptions of these samples by A . Walus are included in Appendix 3.

The footwall "diorite" (sample DAKM-1832) displayed a very strong quartz-sericite-clay alteration. The primary composition is impossible to determine at an advanced stage of alteration. Two samples of the Dardanelle dyke (samples DAKM-1841 and -1833) contained a fine-to-medium crystalline mixture of feldspar and quartz and show evidence of advanced sericitization. The recognizable K-feldspar constitutes only about 3-5% of the rock volume, however, both samples contain abundant quartz-feldspar spherulites with sub-microscope size crystal and which are known usually to contain significant amount of K-feldspar (Appendix 3). The remaining two samples came from the quartz vein and strongly quartz impregnated, unrecognizable rock.

INTERPRETATION AND CONCLUSIONS

The western part of the Dardanelle property has seen several exploration events which allow for relatively good determination of several important elements of the Dardanelle dyke-vein mineralization system (see chapter entitled "Previous exploration" and for further details: Symonds 1989, Anderson 1997 and Burton 2005a, b). However, in spite of numerous pieces of evidence, many aspects of the Dardanelle mineralization system are still not completely clear and need additional work for clarification.

One of the most crucial and still controversial elements of the Dardanelle mineralization system is its extent. The available evidence clearly allows stating that the WSW-ENE elongated belt, limited by the Dardanelle adit in the west and the easternmost tip of the trail system (Fig. 4; see also Symonds 1989, Anderson 1997 and Burton 2005a, b), defines the length of the Dardanelle aplite dyke-quartz vein mineralization system and limits its known strike dimension to about 650 metres.

It has been lately suggested that extent of the Dardanelle dyke-vein system can be extended for about 200 metres eastward; the suggestion is supported by presence of aplite, relatively common quartz vein float and the positive results of the 2017 geochemistry testing (Mastalerz, 2018). However, the much longer eastern continuation of this system as postulated earlier by Burton (2005a, b) is very debatable. The detailed discussion of this problem has been included in the later report by Mastalerz (2018).

The other, extremely important element of the Dardanelle dyke-vein mineralization system is its structural characteristics. It has been reported that the system includes a dyke, two quartz veins along its contacts, achieves about 5-8 metres in thickness and dips steeply 75-80 degrees toward NNW (Symonds 1989, Burton 2005b, Mastalerz 2018). However, the system is obviously discontinuous (Mastalerz 2018). The historic underground mapping of the Dardanelle tunnel by Symonds (1989 – Fig. 9-4B) clearly indicates that the Dardanelle aplite-dyke/quartz vein system is discontinuous in the area of underground workings. The tunnel intersects several segments of the dyke which are separated by longer intervals of "granodiorite" (Symonds' terminology, 1989). The quartz veins encountered in the tunnel usually follow the aplite/granodiorite contacts and display strikes similar to the corresponding segments of the dyke.

Symonds (1989) also mapped a few fault planes/traces showing various attitudes, some of them striking approximately from NW to SE. The documented structural features appear to indicate a series of steep, right-lateral faults which have displaced the detached segments of the original dyke, which forms now an "*en echelon*" pattern (Symonds 1989 – Fig. 9-4). However, one cannot exclude displacements along some other faults/shearing zones, oriented at acute angle or subparallel to the dyke strike, which brought about a similar effect.

Discontinuity of the Dardanelle dyke-vein system can also be clearly concluded from the results of historic trenching and mapping by Burton (2005b – Map 1). This author indicates that two distinct segments of the system: the northern segments exposed at the Dardanelle showing and the southern, much longer and continuous segment are offset by some 40-50 metres (see also Fig. 4). My own observations from 2018 indicate that the potential "new" sampled quartz vein (samples DAKM-1843 and A18-43) is located considerably further southward than the dyke-vein system exposed at the Dardanelle showing (Fig. 4). However, the very poor outcrop conditions do not allow concluding what is the spatial relationship of this "new" vein to the southern segment of the dyke-vein system as mapped by Burton (2005b). The vein appears to have quartz diorite at both contacts. Unfortunately, Burton (2005b) did not provide any detailed trench descriptions and their plans, that would allow for better determination of the structural features related to this segment of the system. Finally, the field evidence appears to indicate that the Dardanelle mineralization system may include more quartz veins apart of the two veins along the dyke contacts (compare Fig. 4). One such additional vein can be clearly observed in the northern collapsed shaft (Fig. 4) – this site was sampled in 2017 (Mastalerz 2018 – samples DAKM-06, -07, A17-55 and -56) and the samples returned significantly elevated amounts of gold, silver and copper (Mastalerz 2018 – Table 3).

Character of mineralization and its grades vary very strongly along the strike of the system. Results of the historic sampling conducted along underground workings provide with one of the best examples of such wide variability (see Symonds, 1989, Fig. 9-4B). Similar conclusion arises from the results of dedicated surface rock sampling of the dyke-vein system presented by Symonds (1989), Anderson (1997), Burton (2005b) and Mastalerz (2018). The majority of the ore grade (more than 1-2 g/t gold) surface samples came from the quartz veins at the contacts between aplite and granodiorite/diorite. The other samples frequently displayed significantly elevated values of precious and base metals, though, well below potential cut-off grade. More extensive discussion of the related aspects of the Dardanelle mineralization is included in Mastalerz (2018).

The results of the 2018 exploration program appear to support all the conclusions above. The discovery of elevated, though usually only weakly, concentrations of the precious and base metals in few new locations, northwestward, southwestward and southward from the main area of the historic exploration/workings, should be regarded as encouraging results of 2018 program. Potential association of these findings with locally significantly elevated ICP-potassium content provide with an additional tool/method for further prospecting for mineralization on the property.

The 2018 rock sampling also indicates that the westernmost part of the property is underlain by a suite of volcanogenic rocks, mostly of andesite composition. Due to very limited outcrop conditions on this part of the property it would be difficult to interpret structural features with certainty. The outcrops are scarce and mostly confined to a few steeply incised creeks. Field observations indicate that these rocks are commonly strongly fractured, locally faulted and, most likely, folded. These rocks have to be regarded as an element of a roof pendant of the granodiorite-diorite intrusion, and are probably preserved in a form of graben-like compartments. Local occurrence of epidote may point to a weak thermal alteration of these rocks. The boundary between these volcanogenic rocks and the intrusive rocks which host the

Dardanelle dyke-vein system is overburden and its character is not clear. Anderson (1997) mapped part of this contact along the western branch of the McNeill Creek (see Fig. 4).

More advanced assessment of the Dardanelle property would require additional fieldwork, more detailed and rigorous analysis of the structural data, geometry of the mineralization system (especially quartz veins), its continuity and assayed grades of the potential commodities. Several of the required elements of additional exploration program have been discussed in details in Mastalerz (2018 – Conclusions). Generally, it is concluded that there is a substantial merit in further exploration of the Dardanelle property and better development of the prospect and additional targets defined by the 2018 program (see chapter "Results of 2018 Exploration Program"). Regretfully, in spite of numerous historic exploration efforts the Dardanelle mineralization system has never been adequately explored, even at its surface. Also, there is no evidence about the character of this system any deeper than the elevation of the historic underground workings (approximately 200 m a.s.l.). The historic Dardanelle prospect itself appears as a very attractive exploration target in the light of the existing evidence and evaluations (see Mastalerz 2018 – chapter "Discussion, Interpretations and Conclusions").

RECOMMENDATIONS AND BUDGET

The 2018 exploration program brought about some new information concerning geochemistry of the mineralization and petrography of a few selected rock types on the Dardanelle property. However, it did not substantially change other requirements for significant development of the property as recommended after the previous exploration program (Mastalerz 2018). Thus, it is recommended that the following exploration program on the property should include the following elements:

1. Geological mapping and structural analysis of selected target areas,
2. Additional rock sampling and lab geochemistry (including a limited number of samples for whole rock analyses),
3. Microscope petrography and staining for K-feldspar
4. Auger testing of subcrop/saprolite sampling(?),
5. VLF survey,
6. Assessment of the underground tunnel conditions
7. Rehabilitation of the log bridge on McNeil Creek
8. Diamond drilling

Surface geological mapping of the Dardanelle property should focus on the following targets:

- Delineation of the potential eastern extension of the Dardanelle dyke-vein mineralization system approximately 500-600 metres beyond the extent of the existing access trails and historic workings. The mapping should be supported by auger testing where possible. Importantly, structural observations and measurements should complement the lithological mapping where bedrock exposed.

- Precise delineation of the outcrop trace of the dyke-quartz veins in the central portion of area of the older historic exploration programs (soil grid lines from 11+00E to 15+00E. Careful structural observations and auger testing would be especially helpful in this task.

- More precise delineation of the western contact of the Dardanelle intrusives with the volcanogenic rocks of the Telkwa/Hazelton Group and determination of its character.

- Limited mapping on a detailed scale should also be conducted in three areas of anomalous geochemistry results (precious and base metals, ICP-potassium) mentioned in this report to the west-northwest, southwest and south of the main historic workings.

Rock sampling is intended as a necessary, supplementary element of geological mapping, which should provide detailed information about the range of potential mineralization and its intensity. It would also assist in proper delineation of postulated strikes of the mineralization zones. It is estimated that approximately 25-30 rock samples (including float and subcrop material) would be required to satisfactorily cover the zone of the postulated eastern extension for about 1 km east of the historic trails. An additional 25-30 rock samples should be collected in the western area (majority of previous exploration projects) predominantly as documentary material to support aplite/quartz vein mapping in this part of the property. Another 10-15 rock samples should be taken in support of the mapping of contacts of the Dardanelle intrusion.

A complementary hand auger testing is proposed here as a relatively inexpensive, fast and relatively reliable way of verification of the bedrock lithology and/or saprolite composition where access to bedrock is difficult due to thicker overburden. The auger testing should be complemented by sampling of the rock material near the bedrock subsurface (saprolite) instead of soil sampling. The sites and/or traverses for the testing have to be carefully selected in course of geological mapping. It is estimated that the auger testing should provide additional 35-40 samples at this stage of the project development.

It is recommended to conduct a dedicated VLF survey to cover areas/surroundings of the known and postulated dyke/vein exposures to verify the VLF results against the existing knowledge. The VLF is a very inexpensive method and well recognized as being very effective in tracking veins, faults and contacts of contrasting lithologies. VLF was reported as an effective method in tracking the Lucky Boy Vein and the other targets which occur in a similar geological setting nearby (Di Spirito, 1985; Mortimer, 1988). The Dardanelle dyke-vein system appears to be a very good VLF target thanks to its quite significant thickness, chlorite-clay alterations along the walls and presence of sulphides. Providing the method proves effective in the core area (Dardanelle dyke-vein system) of the property, it can be extended further eastward where the almost continuous overburden prevents direct bedrock observation while relatively thick forest-type vegetation and steep slopes may become very cost ineffective for other geophysical methods and/or trenching due to necessity of physical modification of ground conditions (line cutting, providing road/trail access for heavy equipment).

Preliminary inspection and careful examination of technical conditions of the underground workings along the first 150-200 metres beyond the portal appears to be necessary for planning of the future drill testing of the western part of the Dardanelle mineralization system at its postulated lower elevations. Future application of the underground drilling appears to provide with an effective and relatively inexpensive alternative verification of character and grade of the mineralization system down its dip, at lower elevations, where surface drill testing may become much more expensive.

It is also recommended to conduct a surface diamond drill testing of the Dardanelle system. It is obvious that the last drill program completed on the property (Burton, 2005b) did not return satisfactory information as compared to its costs. The earlier drill testing episode did not leave any documentation behind (Anderson, 1997). The future drilling program should be dedicated strictly to providing good quality evidence of the character, geometry, attitude, size and grade of the best documented segment of the mineralization system (see chapter: "Discussion, Interpretation and Conclusion" – Mastalerz 2018). The details of the recommended future surface drill program have been discussed by Mastalerz (2018) and will not be repeated here.

The old bridge on the access trail crossing the McNeill Creek has been completely destructed during intense rainfalls and flooding in autumn 2017 and the predominant part of the property became inaccessible even to ATV vehicles. It would be difficult to precisely estimate the cost of the bridge re-erection. Also, the easternmost part of the power-line-survey road which provides potential truck access to the westernmost part of the property that has been recently washed out badly and requires repair. It appears obvious that any drilling program on the property would benefit from the property being truck accessible. An alternate solution is a helicopter-supported drilling program that will certainly require significant cost inflation. It appears prudent to leave the final decision concerning the property access to discretion of the operating company.

The cost of the exploration program discussed above is estimated for approximately 315,184 dollars, and for another 52,200 dollars with additional drilling as indicated above (Table 6).

Table 6. Estimated costs of the proposed Dardanelle field exploration program

Item	**Description**	**Amount**	**Rate**	**Estimated cost**
Geologist	Field mapping, sampling	15 days	600	9,000.00
Field assistant	Rock, auger sampling	15 days	300	4,500.00
VLF survey	VLF			20,000.00
ATV rental	Transportation	35 days	50	1,750.00
Vehicle rental/travel	Travel/transportation	36	90	3,240.00
Helicopter	Transportation to property/freight	15 hours	1500	22,500.00
Diamond drilling	Full coring, fuel and related costs	1000 mb	130	130,000.00
Geologists	Drilling supervision, core logging	14 days	600	8,400.00
Assistant	Core handling, cutting, sampling	14 days	300	4,200.00
Lab geochemistry	Rock and saprolite geochemistry	110 samples	35	3,750.00
Microscope petrography	Prep and descriptions thin sections	10 samples	250	2,500.00
Accommodation	4 double rooms with kitchenettes	35	440	15,400.00
Food (7 people crew)		35	420	14,700.00
Tunnel assessment				3,000.00
Bridge erection and access road repair				35,000.00
Geologist	Maps/cross sections compilation	3 days	500	1,500.00
Report				6,000.00
Drafting				2,000.00
Contingency (10%)		10%		26,600.00
Total				**315,184.00**

Optional program extension				
Additional drilling		250 mb	130	32,500.00
Related costs	Estimated (geologist, helper, accommodation, food, rentals)			15,000.00
Contingency (10%)				4,750.00
Total				**52,250.00**

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CERTIFICATE of PROFESSIONAL QUALIFICATIONS

I, Krzysztof Mastalerz, do hereby certify that:

1. I am a geologist with an office at 2005 Bow Drive, Coquitlam, British Columbia
2. I am a graduate of the University of Wrocław, Poland, (M.Sc. in Geology in 1981, Ph.D. in Natural Sciences, 1990).
3. I am a Professional Geoscientist registered with the APEG of the province of British Columbia as a member, # 31243.
4. I have continually practiced my profession since graduation in 1981 as an academic teacher (University of Wrocław, A. Mickiewicz University of Poznań) through 1997, a research associate for the State Geological Survey of Poland (1993-1995), and independent consulting geologist in Canada, USA and Peru since 1994.
5. This report is based upon field work carried on the Dardanelle property, Omineca Mining Division, northern British Columbia, in July 2018.
6. I have, personally, conducted field work on the Dardanelle property in 2018.
7. Interpretations and conclusions presented in this report are based on my field observations, analytical results and on previously published and archive literature available for the area.

Dated at Coquitlam, BC, this 14th day of December, 2018.

Date: December 14, 2018 "Krzysztof Mastalerz"

Krzysztof Mastalerz, Ph. D., P. Geo.

STATEMENT OF EXPLORATION COSTS

Table 7. Costs of the Dardanelle 2018 Exploration Program.

Item	Name	Date	Units	Cost per Unit	Cost
			[days]	[CAD]	[CAD]
Geo - prospecting	K. Mastalerz	July 5, 9, 10 and 14, 2018	4	650	2600.00
Geo - prospecting	A. Walus	July 5, 9 and 10, 2018	3	650	1950.00
Flight : Vancouver-Terrace	K. Mastalerz	July 02, 2018	1	413.96	413.96
Truck rental	Enterprise	4 days - July, 2018	4	95	380.00
ATV rental		3 days x 2 ATV	6	262.5	1575.00
Food		as above	4	75	300.00
Accommodation		as above	4	123	492.00
Microscope thin section prep.			5	27	135.00
Microscope petrography	A. Walus		5	130	650.00
Sample shipment			1	40	40.00
			[hours]		
Database compilation	K. Mastalerz		6	40	240.00
Report writing	K. Mastalerz		24	73.5	1,764.00
Drafting (report)	K. Mastalerz		14	52.5	735.00
			[ICP]		
Geochemistry ICP	Activation Labs		54	26.21	1415.34
Assay, Pb, Cu, Zn	Activation Labs		1	12.50	12.50
Total					**12,702.80**

Respectfully submitted,

Krzysztof Mastalerz

ASSESSMENT REPORT

GEOCHEMISTRY and GEOLOGY

of the

DARDANELLE PROPERTY

by K. Mastalerz

December 2018

Appendix 1. Rock sample locations and descriptions

Appendix 1. Rock sample locations and descriptions

Dardanelle Property - 2018 Sample Descriptions (to accompany AR by K. Mastalerz)

Sample Label	UTM Coordinates		Sample Type	Description
	Easting	Northing		
DAKM-1801	550004	6036625	Gb	Greenish-grey, strongly fractured diorite, chorite alteration, locally with thin veins/veinlets of white to grey quartz; no visible sulphides
DAKM-1802	550004	6036625	Fl	Quartz vein (20-25 cm thick) in diorite(?); Py 1-2%, tr. Ga
DAKM-1803	550032	6036574	Gb	Greenish-grey diorite, slightly chlorite altered with irregular quartz pods and veins; Py 2-3%, tr. Cpy
DAKM-1804	550032	6036574	Gb	Pale greenish-grey diorite with thin veins of white quartz and carbonate(?); Py 1-3%, tr. Cpy?
DAKM-1805	547962	6037056	Gb	Dark greenish-grey andesite porphyry, fine-grained, feldspar-phyric, slightly fractured and silicified: no visible sulphides
DAKM-1806	548025	6037122	Gb	Dark greenish-grey andesite porphyry, slightly fractured, pyroxene?-feldspar phyric; no visible sulphides
DAKM-1811	548365	6037719	Sc	Dark greenish-grey quartz diorite, weak chlorite alteration - chlorite stringers; no visible sulphides
DAKM-1812	548587	6037795	Sc	Dark greenish-grey diorite, weak-moderate chlorite alteration, rusty limonite stain, few carbonate-quartz veinlets; tr. diss. Py
DAKM-1813	548866	6037766	Gb?Sc	Strongly weathered, greenish andesite porphyry; no visible sulphides
DAKM-1814	549056	6037862	Gb	Dark greenish-grey andesite tuff; tr. diss. Py
DAKM-1815	549070	6037869	Fl	Greenish-grey, weak/moderate chlorite altered diorite with thin quartz-carbonate veinlets; stain of dendritic Mn-Fe oxides
DAKM-1816	549079	6037845	Fl	Quartz-carbonate cemented breccia of brownish-to-greenish andesite volcanic rock; no visible sulphides
DAKM-1817	549294	6037796	Sc	Dark brownish, coarse-grained andesite(?) tuff, crystal-rich; no visible sulphides
DAKM-1818	549400	6037451	Gb	Dardanelle Adit, north side of the entrance (hangingwall):Pale greenish-grey, strongly chlorite altered diorite/quartz diorite; no visible sulphides
DAKM-1819	549368	6037436	Fl	Pale green diorite/quartz diorite, very weakly chlorite altered, with veins of coarse-crystalline, white quartz; no visible sulphides
DAKM-1820	545404	6038059	Gb	Dark grey to maroon, fine-grained andesite tuff to fine-grained andesite porphyry; no visible sulphides
DAKM-1821	547904	6037203	Gb	Greenish-grey andesite lapilli tuff, coarse-grained (subangular fragments), no signs of alteration, some fracturing with locally accompanying quartz-calcite veins/lenses up to 2 cm thick, slightly sheared; 0.5-1% Py
DAKM-1822	548197	6037180	Gb	Greenish, slightly chlorite altered andesite tuff breccia to coarse tuff, fractured, with quartz-carbonate veins; no visible sulphides
DAKM-1823	548197	6037180	Gb	Greenish, slightly chlorite altered andesite tuff breccia to coarse tuff, fractured, with banded quartz-carbonate veins; no visible sulphides
DAKM-1824	548374	6037131	Gb	Greenish-grey diorite/quartz diorite, slightly chlorite altered, few thin quartz-calcite veins associated with a fault zone; no visible sulphides
DAKM-1825	548365	6037135	Gb	Brownish-to-greenish andesite porphyry with thin quartz-carbonate veins; no visible sulphides

Sample Label	UTM Coordinates		Sample Type	Description
	Easting	Northing		
DAKM-1826	548648	6037104	Gb	Greenish andesite porphyry, slight chlorite(?)-serpentinite(?) alteration, strong fracturing, few thin quartz-carbonate veins; no visible sulphides
DAKM-1827	548676	6037096	Gb	Greenish andesite porphyry, slight serpentinization, fracturing, numerous quartz-carbonate; no visible sulphides
DAKM-1828	548664	6037603	Gb	Maroon andesite lapilli tuff to tuff breccia, monomictic; no veins, no visible sulphides
DAKM-1829	548337	6037656	Gb	Maroon, monomictic andesite/dacite, porphiritic texture, few quartz/calcite veins; no visible sulphides
DAKM-1830	548269	6037772	Gb	Fault zone in greenish-maroon, fine-grained andesite, clay-chlorite alteration; no visible sulphides
DAKM-1831	548269	6037772	Fl	Greenish andesite with banded calcite/minor quartz veins; 0.5% malachite
DAKM-1832	549588	6037530	Gb	Dardanelle Showing, south side: footwall diorite/quartz diorite approximately 25 cm southward from the contact with the footwall vein, strong fracturing and chlorite alteration, weak shearing; up to 3% malachite
DAKM-1833	549588	6037530	Gb	Dardanelle Showing, south side: footwall diorite/quartz diorite approximately 70 cm northward from the contact with the footwall vein, strong fracturing and chlorite alteration, distinct shearing
DAKM-1834a	549585	6037540	Gb	Dardanelle Showing, north side: hangingwall vein approx. 15 cm southward from the hangingwall contact; strongly mineralized quartz vein; 2-3% galena, minor pyrite and chalcopyrite
DAKM-1834b	549585	6037540	Gb	Dardanelle Showing, north side: hangingwall vein approx. 20 cm southward from the hangingwall contact; strongly sheared diorite; tr. Py
DAKM-1835	549585	6037541	Gb	Dardanelle Showing, north side: hangingwall quartz diorite approximately 60 cm away from the contact with the hangigngwall vein, slightly sheared, moderate chlorite alteration; no visible sulphides
DAKM-1836	549664	6037833	Gb	Greenish-grey, massive, homogenous diorite/quartz diorite, weak chlorite alteration; tr. diss. Py
DAKM-1837	549724	6037972	Gb	Greenish grey diorite with whitish feldspar, moderately fractured and with aprrox. 10-15 cm thick "aplite" dyke: no visible sulphides
DAKM-1838	549775	6038082	Fl	Greenish-grey diorite, strongly chlorite-clay altered; diss. Py 1-1.5%
DAKM-1839	549957	6037943	Gb	Greenish, very weakly chlorite altered diorite, distinctly sheared (shearing surface subvertical, dips toward SW); no visible sulphides
DAKM-1840	550102	6037862	Sc	Pale greenich-grey, "leached" diorite with some quartz-feldspar enriched zones; Py 1-1.5%
DAKM-1841	550045	6037677	Gb	NE access road/trench: fine graine "aplite" dyke(?) at the contact with chlorite altered, slightly sheared diorite; no visible sulphides
DAKM-1842	549892	6037569	Gb	Pale grey to pinkish, fresh diorite with abyndant pinkish feldspar (K-spar?); no visible sulphides

Sample Label	UTM Coordinates		Sample Type	Description
	Easting	Northing		
DAKM-1843	549804	6037606	Gb	Quartz vein (grey, semi-translucent, coarse crystalline quartz) in quartz diorite, vein dips at 80 degress toward azimuth of 345 degrees; Py 2-5%, tr. Chalcopyrite
DAKM-1844	549834	6037616	Sc	Quarz (vein/veins?) in diorite, quartz is coarse crustalline geyish to semi-translucent; galena + manganese oxides
A18-27	548514	6037823	Fl	Angular boulder of limonitic diorite
A18-28	548842	6037782	Fl	Angular boulder of andesite crystal-tuff with pervasive limonite stain.
A18-29	549060	6037869	Gb	1-2 cm wide quartz vein. Orientation 310/steep N.
A18-30	549069	6037888	Gb	2 cm wide limonitic quartz vein.
A18-31	549421	6037468	Gb	1 cm wide quartz vein with minor pyrite. Sample taken from adit entrance.
A18-32	549338	6037413	Fl	Angular boulder 0.3 m across of chlorite cemented brecciated quartz. No visible sulphides.
A18-37	548185	6037186	Gb	5-10 cm wide carbonate vein. Orientation 350/v.
A18-38	548185	6037186	Gb	2-3 cm wide quartz-epidote vein with trace to minor pyrite, chalcopyrite and malachite. Orientation 110/v. There are several parallel veinlets nearby but no copper mineralization was seen.
A18-39	548643	6037122	Gb	Andesite lapill-tuff cut by minor quartz veining, minor limonite.
A18-40	548324	6037724	Gb	5-10 cm wide calcite vein, no sulphides. Orientation 10 degrees, very steep E dip.
A18-41	549607	6037646	Gb	Strongly altered diorite with quartz stringers.
A18-42	550141	6037851	Fl	Suboutcrop of limonitic diorite.
A18-43	549806	6037607	Gb	Diorite hosted 20 cm wide quartz vein, trace pyrite. Orientation-strike 75 deg. with very steep N dip.

Abbreviations: Bor - bornite, Chalc - chalcocite, Cpy - chalcopyrite, Mal - malachite, Az - azurite, Py - pyrite, Po - pyrrhotite, Cpy - chalcopyrite, Ga - galena, Sph - Sphalerite, alt'n - alteration, LT - lapilli tuff, TBx - tuff breccia

Measured structural features: 300/80S - strike 300, dip - 80 toward south; 300/v - strike 300, dip - vertical

Sample types: Gb - grab, Fl - float, Sc - sample from subcrop

ASSESSMENT REPORT

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DARDANELLE PROPERTY

by K. Mastalerz

December 2018

Appendix 2. Laboratory certificates – rock sample geochemistry

Quality Analysis ... **Actlabs** *Innovative Technologies*

Date Submitted:	23-Jul-18
Invoice No.:	A18-09855
Invoice Date:	10-Aug-18
Your Reference:	2018-07-23 Rock

Decade Resources
426 King Street
Stewart BC V0T 1W0
Canada

ATTN: Ed Kruchkowski

CERTIFICATE OF ANALYSIS

167 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Kamloops Au - Fire Assay AA
Code 1E3-Kamloops Aqua Regia ICP(AQUAGEO)
Code Sieve Report-Kamloops Internal Sieve Report Internal

REPORT **A18-09855**

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Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

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

CERTIFIED BY:

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Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
A18 1	< 5	< 0.2	< 0.5	4	1750	< 1	< 1	4	351	1.71	< 2	< 10	25	0.7	< 2	2.13	10	2	5.24	10	< 1	0.02	12
A18 2	< 5	< 0.2	< 0.5	3	1400	< 1	33	4	147	1.70	3	< 10	236	0.5	2	1.48	29	67	5.71	< 10	< 1	0.02	11
A18 3	< 5	3.6	< 0.5	8470	429	< 1	6	3	7	5.50	15	11	< 10	0.6	< 2	8.55	1	14	3.15	30	< 1	< 0.01	< 10
A18 4	< 5	< 0.2	< 0.5	3	468	< 1	2	3	35	0.39	3	< 10	1000	< 0.5	< 2	0.63	2	6	1.64	< 10	< 1	0.07	< 10
A18 5	< 5	< 0.2	< 0.5	28	986	< 1	< 1	5	83	1.05	< 2	< 10	62	1.1	< 2	0.89	5	2	3.64	< 10	< 1	0.24	19
A18 6	< 5	< 0.2	< 0.5	4	352	< 1	2	3	17	0.44	4	< 10	32	< 0.5	< 2	1.20	< 1	4	1.15	< 10	< 1	0.11	18
A18 7	6	< 0.2	< 0.5	21	522	< 1	5	9	53	1.92	< 2	< 10	78	0.5	< 2	0.93	5	8	2.10	< 10	< 1	0.12	14
A18 8	< 5	< 0.2	< 0.5	2450	1490	< 1	76	3	158	4.89	< 2	< 10	17	< 0.5	< 2	2.60	39	230	7.14	10	4	0.01	< 10
A18 9	< 5	0.2	< 0.5	1000	542	2	13	< 2	28	1.80	3	< 10	10	< 0.5	< 2	1.68	13	17	2.12	< 10	< 1	< 0.01	< 10
A18 10	6	6.3	0.6	> 10000	1160	3	40	11	159	4.81	8	< 10	52	0.6	< 2	2.57	30	20	8.34	10	< 1	0.04	< 10
A18 11	< 5	0.7	< 0.5	547	1240	< 1	2	6	183	0.63	< 2	< 10	64	0.5	< 2	0.22	2	4	2.85	< 10	< 1	0.11	23
A18 12	7	16.2	0.8	5190	1290	< 1	2	6	154	0.32	< 2	< 10	58	0.5	< 2	0.13	2	9	2.90	< 10	< 1	0.09	22
A18 13	5	18.6	2.5	7430	1910	< 1	3	5	341	1.24	< 2	< 10	18	< 0.5	< 2	2.18	13	5	5.80	< 10	< 1	< 0.01	< 10
A18 14	< 5	0.6	< 0.5	259	1090	1	2	3	154	0.58	5	< 10	17	< 0.5	< 2	1.91	7	21	3.93	< 10	< 1	0.02	< 10
A18 15	6	1.3	< 0.5	615	2390	< 1	5	4	406	1.61	< 2	< 10	19	0.6	< 2	1.98	15	9	4.87	< 10	< 1	0.02	< 10
A18 16	< 5	< 0.2	< 0.5	47	2390	< 1	5	5	418	1.59	4	< 10	22	0.6	< 2	0.96	14	12	7.31	< 10	2	0.02	10
A18 17	< 5	82.0	3.8	> 10000	1080	< 1	3	7	85	1.83	< 2	< 10	31	< 0.5	< 2	2.48	5	5	4.98	< 10	< 1	< 0.01	< 10
A18 18	< 5	> 100	0.6	> 10000	1360	< 1	< 1	4	142	0.31	2	< 10	28	< 0.5	< 2	0.20	7	6	3.55	< 10	< 1	< 0.01	13
A18 19	20	21.2	0.6	> 10000	1960	< 1	47	5	168	2.77	< 2	< 10	216	< 0.5	< 2	3.16	19	69	4.39	< 10	< 1	0.03	< 10
A18 20	50	2.7	< 0.5	5560	1190	< 1	34	4	152	3.13	< 2	< 10	18	0.6	< 2	6.75	18	45	5.01	10	< 1	0.09	< 10
A18 21	10	3.3	< 0.5	157	1070	< 1	15	5	50	2.31	3	< 10	< 10	0.9	< 2	> 10.0	10	17	4.72	10	< 1	0.02	< 10
A18 22	< 5	0.5	< 0.5	700	3540	< 1	111	< 2	353	2.44	< 2	< 10	36	0.5	< 2	1.72	29	152	6.69	< 10	< 1	0.08	17
A18 23	< 5	6.0	< 0.5	> 10000	541	< 1	8	6	13	4.89	24	14	< 10	0.5	< 2	8.46	3	16	2.61	30	1	0.01	< 10
A18 24	8	1.4	< 0.5	4790	425	< 1	26	< 2	47	2.59	< 2	< 10	1710	0.5	< 2	2.38	15	33	2.00	< 10	< 1	0.11	< 10
A18 25	5	< 0.2	< 0.5	59	724	< 1	9	< 2	88	2.66	8	< 10	< 10	< 0.5	< 2	5.45	13	21	3.85	< 10	< 1	< 0.01	< 10
A18 26	9	0.2	< 0.5	89	207	5	12	7	48	1.15	4	< 10	32	< 0.5	< 2	0.22	12	11	3.84	< 10	< 1	0.26	< 10
A18 27	18	< 0.2	< 0.5	17	624	< 1	13	< 2	84	3.18	< 2	< 10	70	< 0.5	< 2	0.82	17	11	4.62	< 10	< 1	0.10	< 10
A18 28	< 5	< 0.2	< 0.5	97	604	< 1	10	4	54	5.37	< 2	< 10	75	< 0.5	< 2	3.70	14	9	2.56	10	< 1	0.07	< 10
A18 29	< 5	< 0.2	< 0.5	37	1360	< 1	31	6	101	1.56	< 2	< 10	1140	< 0.5	< 2	> 10.0	27	9	5.14	< 10	< 1	0.23	< 10
A18 30	6	< 0.2	< 0.5	19	1200	< 1	29	9	152	1.97	2	< 10	1180	< 0.5	5	9.83	32	10	5.23	< 10	< 1	0.15	< 10
A18 31	111	< 0.2	1.3	60	2800	< 1	5	10	56	1.39	2	< 10	50	< 0.5	< 2	> 10.0	5	8	2.45	< 10	< 1	0.15	< 10
A18 32	< 5	< 0.2	4.9	9	1980	< 1	37	17	602	1.51	< 2	< 10	683	< 0.5	< 2	> 10.0	20	11	6.97	< 10	2	0.01	< 10
A18 33	< 5	< 0.2	< 0.5	5	561	< 1	13	< 2	45	2.33	12	< 10	< 10	< 0.5	< 2	5.99	8	21	3.23	< 10	< 1	< 0.01	< 10
A18 34	< 5	< 0.2	< 0.5	7	457	< 1	9	3	25	2.50	19	< 10	23	< 0.5	< 2	3.94	7	29	3.31	< 10	< 1	0.06	< 10
A18 35	12	8.7	1.5	6600	859	< 1	14	< 2	58	2.30	< 2	< 10	13	< 0.5	3	> 10.0	14	22	3.08	< 10	< 1	0.05	< 10
A18 36	< 5	0.3	< 0.5	161	1180	< 1	1	5	95	1.03	< 2	< 10	94	< 0.5	< 2	2.19	2	6	1.60	< 10	< 1	0.29	15
A18 37	< 5	< 0.2	< 0.5	33	3030	< 1	1	4	3	0.37	< 2	< 10	1220	< 0.5	< 2	> 10.0	< 1	3	0.59	< 10	< 1	0.20	27
A18 38	< 5	< 0.2	< 0.5	253	516	< 1	6	2	14	1.10	2	< 10	361	< 0.5	< 2	> 10.0	4	9	1.29	< 10	< 1	0.24	< 10
A18 39	34	0.4	< 0.5	104	522	< 1	22	6	52	2.19	5	< 10	74	< 0.5	3	1.98	18	23	3.52	< 10	< 1	0.33	< 10
A18 40	< 5	< 0.2	0.7	17	2520	< 1	11	4	82	1.01	< 2	< 10	158	< 0.5	4	> 10.0	20	4	4.53	< 10	< 1	0.01	< 10
A18 41	< 5	< 0.2	< 0.5	75	530	< 1	10	4	45	1.61	< 2	< 10	40	< 0.5	< 2	2.02	9	15	2.37	< 10	< 1	0.15	< 10
A18 42	< 5	< 0.2	< 0.5	19	1200	< 1	1	< 2	133	1.99	< 2	< 10	147	< 0.5	< 2	0.62	9	6	3.66	< 10	< 1	0.23	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
A18 43	447	0.9	< 0.5	37	95	< 1	2	< 2	3	0.18	< 2	< 10	43	< 0.5	< 2	0.04	< 1	17	0.31	< 10	< 1	0.09	< 10
A18 47	< 5	< 0.2	< 0.5	751	1120	< 1	11	< 2	77	1.71	7	< 10	173	< 0.5	< 2	5.48	19	6	6.06	< 10	< 1	0.20	13
A18 48	< 5	< 0.2	0.6	14	930	< 1	7	9	139	0.38	< 2	< 10	1140	< 0.5	< 2	0.67	13	12	2.74	< 10	< 1	0.16	< 10
A18 49	< 5	< 0.2	< 0.5	5	439	< 1	2	2	86	0.22	< 2	< 10	1180	< 0.5	< 2	0.06	3	8	0.78	< 10	< 1	0.11	< 10
A18 50	< 5	< 0.2	< 0.5	33	990	< 1	11	2	62	1.77	< 2	< 10	223	0.6	< 2	1.50	11	11	3.36	< 10	< 1	0.54	14
A18 51	16	19.3	< 0.5	> 10000	1140	< 1	13	44	314	1.90	2	< 10	408	< 0.5	< 2	0.46	22	11	7.36	10	< 1	0.02	11
A18 52	57	11.1	0.9	> 10000	1300	< 1	17	23	174	1.88	3	< 10	204	0.7	< 2	2.38	24	13	8.53	10	< 1	0.06	15
A18 53	< 5	10.6	< 0.5	> 10000	1190	< 1	1	3	213	1.68	< 2	< 10	108	0.7	< 2	0.57	5	7	3.41	< 10	< 1	0.27	21
A18 54	6	1.9	< 0.5	1660	503	1	2	9	102	0.69	< 2	< 10	104	< 0.5	< 2	0.40	5	16	2.82	< 10	< 1	0.18	16
A18 55	17	27.0	< 0.5	> 10000	584	< 1	12	< 2	83	2.14	< 2	< 10	47	< 0.5	< 2	0.79	13	10	3.48	< 10	< 1	0.26	12
A18 56	87	59.4	< 0.5	> 10000	864	< 1	27	< 2	148	2.73	< 2	< 10	309	< 0.5	< 2	0.22	22	22	4.34	< 10	< 1	0.24	< 10
A18 57	43	> 100	1.0	> 10000	497	1	3	2	63	1.47	< 2	< 10	42	< 0.5	< 2	0.33	8	2	2.59	< 10	< 1	0.36	12
A18 58	73	76.6	< 0.5	> 10000	737	< 1	19	< 2	125	2.30	< 2	< 10	162	< 0.5	< 2	0.82	18	24	3.63	< 10	< 1	0.12	< 10
A18 59	866	> 100	1.7	> 10000	743	< 1	7	4	69	1.26	< 2	< 10	29	< 0.5	< 2	5.98	9	7	2.21	< 10	< 1	0.04	< 10
A18 60	21	> 100	1.2	> 10000	897	< 1	18	32	150	2.46	< 2	< 10	19	< 0.5	< 2	0.82	20	17	4.97	< 10	< 1	0.08	< 10
A18 61	458	18.3	< 0.5	> 10000	303	< 1	12	< 2	30	1.75	3	< 10	20	< 0.5	< 2	1.76	10	19	3.09	< 10	< 1	0.12	< 10
DAKM 1811	< 5	0.4	< 0.5	108	366	< 1	2	2	28	0.62	< 2	< 10	69	< 0.5	< 2	0.28	2	10	1.25	< 10	< 1	0.16	< 10
DAKM 1812	13	< 0.2	< 0.5	96	399	< 1	10	< 2	38	1.95	< 2	< 10	83	< 0.5	< 2	0.19	10	11	2.55	< 10	< 1	0.24	< 10
DAKM 1813	< 5	< 0.2	< 0.5	101	909	< 1	34	< 2	97	4.25	< 2	< 10	103	< 0.5	< 2	2.74	28	39	5.78	10	2	0.13	< 10
DAKM 1814	< 5	< 0.2	< 0.5	90	870	< 1	30	< 2	69	2.60	< 2	< 10	75	< 0.5	2	2.51	22	30	5.01	< 10	< 1	0.28	< 10
DAKM 1815	< 5	< 0.2	3.0	110	2620	< 1	39	28	297	0.85	< 2	< 10	656	< 0.5	< 2	> 10.0	26	4	4.49	< 10	< 1	0.05	< 10
DAKM 1816	33	< 0.2	1.3	70	1660	< 1	20	14	211	1.43	< 2	< 10	768	< 0.5	2	> 10.0	19	7	4.19	< 10	< 1	0.05	< 10
DAKM 1817	< 5	< 0.2	< 0.5	39	612	< 1	13	< 2	51	2.64	< 2	< 10	44	< 0.5	< 2	1.52	12	15	3.09	< 10	< 1	0.07	< 10
DAKM 1818	6	< 0.2	< 0.5	77	932	1	18	5	127	2.37	4	< 10	76	< 0.5	< 2	3.02	15	20	3.23	< 10	< 1	0.19	< 10
DAKM 1819	5	< 0.2	< 0.5	52	891	< 1	3	13	26	0.67	2	< 10	1000	< 0.5	< 2	5.91	4	13	1.46	< 10	< 1	0.04	< 10
DAKM 1820	< 5	< 0.2	< 0.5	12	831	< 1	35	< 2	71	2.89	4	< 10	62	< 0.5	< 2	2.32	26	44	6.45	10	< 1	0.09	< 10
DAKM 1821	9	0.6	< 0.5	142	956	23	20	3	49	1.85	37	< 10	83	< 0.5	< 2	6.20	20	16	4.49	< 10	< 1	0.21	< 10
DAKM 1822	< 5	< 0.2	< 0.5	24	816	< 1	23	< 2	56	1.81	< 2	< 10	317	< 0.5	< 2	4.14	15	30	3.91	< 10	< 1	0.15	< 10
DAKM 1823	< 5	< 0.2	< 0.5	5	1250	< 1	21	6	72	1.03	3	< 10	1010	< 0.5	< 2	9.11	12	12	3.10	< 10	< 1	0.29	< 10
DAKM 1824	< 5	< 0.2	< 0.5	101	530	< 1	15	< 2	45	1.56	3	< 10	71	< 0.5	2	2.74	13	19	2.84	< 10	< 1	0.31	< 10
DAKM 1825	6	< 0.2	< 0.5	43	1130	< 1	5	2	13	0.57	4	< 10	160	< 0.5	< 2	> 10.0	4	9	1.00	< 10	< 1	0.17	< 10
DAKM 1826	< 5	< 0.2	< 0.5	43	1750	< 1	4	2	15	0.66	< 2	< 10	598	< 0.5	< 2	> 10.0	3	7	1.11	< 10	< 1	0.12	< 10
DAKM 1827	10	< 0.2	< 0.5	49	1100	< 1	16	4	53	1.48	7	< 10	53	< 0.5	< 2	4.82	11	29	2.70	< 10	< 1	0.25	< 10
DAKM 1828	< 5	< 0.2	< 0.5	29	794	< 1	14	2	68	3.50	< 2	< 10	121	< 0.5	4	1.63	21	19	6.55	< 10	< 1	0.23	< 10
DAKM 1829	< 5	0.4	< 0.5	242	466	< 1	5	< 2	24	4.22	2	< 10	1130	< 0.5	< 2	> 10.0	8	3	2.70	10	< 1	0.07	< 10
DAKM 1830	< 5	0.4	< 0.5	439	971	< 1	4	< 2	74	2.45	< 2	< 10	114	< 0.5	< 2	5.30	17	1	5.43	< 10	< 1	0.29	< 10
DAKM 1831	< 5	1.0	< 0.5	2560	1640	< 1	19	3	87	1.66	< 2	< 10	606	< 0.5	< 2	> 10.0	23	7	5.14	< 10	< 1	< 0.01	< 10
DAKM 1832	13	1.0	0.8	1650	1040	< 1	22	62	86	2.13	< 2	< 10	107	< 0.5	< 2	1.38	19	16	3.16	< 10	< 1	0.42	< 10
DAKM 1833	< 5	0.8	1.6	29	279	< 1	1	202	98	0.39	< 2	< 10	58	< 0.5	< 2	0.10	< 1	9	0.23	< 10	< 1	0.26	< 10
DAKM 1834A	340	4.0	1.1	1690	174	3	8	> 5000	11	0.41	15	< 10	43	< 0.5	< 2	0.12	15	12	1.37	< 10	< 1	0.23	< 10
DAKM 1834B	61	0.4	< 0.5	59	701	2	8	317	43	0.96	6	< 10	71	< 0.5	< 2	1.16	11	15	1.87	< 10	< 1	0.31	< 10
DAKM 1835	< 5	< 0.2	< 0.5	36	822	< 1	9	13	86	1.31	< 2	< 10	95	< 0.5	< 2	2.36	9	13	1.98	< 10	< 1	0.34	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
DAKM 1836	< 5	< 0.2	< 0.5	21	613	< 1	5	< 2	63	1.88	< 2	< 10	89	< 0.5	< 2	0.79	8	10	2.81	< 10	< 1	0.25	< 10
DAKM 1837	< 5	< 0.2	< 0.5	30	389	< 1	2	5	24	1.45	< 2	< 10	29	< 0.5	< 2	1.35	4	9	1.67	< 10	< 1	0.07	< 10
DAKM 1838	< 5	0.3	< 0.5	197	918	< 1	4	< 2	89	2.18	< 2	< 10	250	< 0.5	< 2	0.70	22	15	3.98	< 10	< 1	0.28	< 10
DAKM 1839	< 5	< 0.2	< 0.5	33	1470	< 1	2	11	196	2.70	< 2	< 10	69	< 0.5	< 2	1.64	11	4	5.61	10	< 1	0.11	14
DAKM 1840	< 5	< 0.2	< 0.5	18	736	< 1	2	< 2	71	2.15	< 2	< 10	159	< 0.5	< 2	1.76	8	10	3.10	< 10	< 1	0.12	< 10
DAKM 1841	< 5	< 0.2	0.6	7	390	< 1	1	25	19	0.44	< 2	< 10	34	< 0.5	< 2	0.21	< 1	5	0.23	< 10	< 1	0.30	10
DAKM 1842	< 5	< 0.2	< 0.5	12	542	< 1	9	4	59	1.68	< 2	< 10	55	< 0.5	< 2	1.30	9	15	2.34	< 10	< 1	0.16	< 10
DAKM 1843	1550	14.6	0.6	1900	54	2	15	17	10	0.12	< 2	< 10	11	< 0.5	5	0.01	24	15	2.45	< 10	< 1	0.05	< 10
DAKM 1844	23	0.3	< 0.5	4	191	1	3	3	10	0.17	4	< 10	45	< 0.5	< 2	0.10	9	20	1.28	< 10	< 1	0.02	< 10
NKKM-01	< 5	3.2	0.7	> 10000	574	6	17	10	135	2.23	15	< 10	23	0.9	< 2	2.24	11	39	5.05	< 10	< 1	0.04	< 10
NKKM-02	< 5	0.5	< 0.5	43	183	2	6	10	38	2.55	146	< 10	12	0.9	< 2	3.85	2	23	1.31	< 10	< 1	0.01	< 10
NKKM-03	5	0.9	< 0.5	162	325	10	5	10	61	2.13	254	< 10	29	0.6	< 2	0.53	15	5	4.26	< 10	< 1	0.43	< 10
NKKM-05	< 5	< 0.2	< 0.5	89	2190	< 1	7	10	105	1.31	< 2	< 10	103	< 0.5	5	> 10.0	21	4	5.67	< 10	< 1	0.22	11
NKKM-06	20	0.2	< 0.5	19	261	15	25	8	16	0.89	6	< 10	32	< 0.5	5	0.42	52	21	3.05	< 10	< 1	0.08	< 10
NKKM-07A	< 5	0.4	0.7	9400	422	3	1	< 2	85	2.15	< 2	< 10	48	0.5	< 2	0.65	3	8	1.78	< 10	< 1	0.90	< 10
NKKM-07B	6	9.0	0.6	> 10000	1270	< 1	1	23	47	1.46	< 2	< 10	94	< 0.5	< 2	0.11	2	6	0.96	< 10	< 1	0.51	< 10
NKKM 1821	< 5	< 0.2	5.5	850	894	< 1	48	559	425	3.81	< 2	< 10	17	< 0.5	< 2	3.99	21	79	4.34	< 10	< 1	0.04	< 10
NKKM 1822	8	0.3	< 0.5	222	715	< 1	50	< 2	61	2.72	< 2	< 10	30	< 0.5	< 2	1.61	18	87	3.03	< 10	< 1	0.14	< 10
NKKM 1823	< 5	1.0	4.3	523	3620	< 1	34	6	162	3.02	10	< 10	41	< 0.5	< 2	> 10.0	26	79	6.52	< 10	2	0.02	< 10
NKKM 1824	< 5	< 0.2	< 0.5	11	563	1	2	< 2	33	1.17	< 2	< 10	189	< 0.5	< 2	0.36	2	7	2.00	< 10	< 1	0.17	12
NKKM 1825	6	0.3	< 0.5	150	1200	< 1	23	< 2	92	6.45	< 2	< 10	178	< 0.5	< 2	3.30	25	45	6.82	10	< 1	0.17	< 10
NKKM 1826	< 5	< 0.2	< 0.5	9	1050	< 1	2	< 2	96	2.19	< 2	< 10	110	< 0.5	< 2	1.20	9	5	3.82	10	< 1	0.26	< 10
NKKM 1827	< 5	0.2	< 0.5	7	1140	1	12	8	72	2.99	24	< 10	11	< 0.5	< 2	9.10	21	25	4.19	< 10	< 1	0.02	< 10
KMT 1851	< 5	0.2	< 0.5	17	1640	< 1	4	3	181	1.31	< 2	< 10	37	0.9	< 2	1.36	19	6	6.82	10	< 1	0.08	13
KMT 1852	9	0.4	< 0.5	123	742	< 1	4	3	52	0.50	< 2	< 10	25	< 0.5	< 2	2.64	6	13	3.83	< 10	< 1	0.05	< 10
KMT 1853	< 5	< 0.2	< 0.5	26	192	3	4	< 2	16	0.08	< 2	< 10	17	< 0.5	< 2	0.54	< 1	46	0.35	< 10	< 1	0.02	< 10
KMT 1854	< 5	38.3	0.5	> 10000	1500	< 1	5	2	181	1.42	< 2	< 10	24	0.5	< 2	1.20	16	8	6.20	10	< 1	0.03	24
KMT 1855	< 5	0.2	< 0.5	31	807	1	2	4	115	0.27	< 2	< 10	63	< 0.5	< 2	0.74	1	18	2.11	< 10	< 1	0.07	20
KMT 1861	16	3.3	< 0.5	2740	1010	6	2	17	122	1.53	9	< 10	37	< 0.5	< 2	0.73	13	7	3.33	< 10	< 1	0.26	11
KMT 1862	< 5	0.2	< 0.5	20	149	< 1	5	< 2	38	3.05	< 2	< 10	26	< 0.5	< 2	2.75	4	18	1.73	< 10	< 1	0.12	< 10
KMT 1863	< 5	< 0.2	< 0.5	4	1530	< 1	1	3	85	1.26	< 2	< 10	42	1.0	< 2	4.15	3	4	1.92	< 10	< 1	0.45	18
KMT 1864	< 5	< 0.2	< 0.5	33	2290	< 1	4	< 2	290	2.64	< 2	< 10	53	< 0.5	< 2	1.36	13	7	4.49	< 10	< 1	0.22	< 10
KMT 1865	8	< 0.2	< 0.5	6	344	< 1	2	4	48	0.43	< 2	< 10	63	< 0.5	< 2	0.08	2	8	1.03	< 10	< 1	0.15	15
KMT 1866	< 5	0.4	< 0.5	35	1300	< 1	11	< 2	70	2.21	2	< 10	30	< 0.5	< 2	> 10.0	17	18	4.00	< 10	< 1	0.04	< 10
KMT 1867	< 5	< 0.2	< 0.5	13	1200	< 1	2	2	87	1.64	3	< 10	95	0.6	< 2	1.51	6	5	4.09	< 10	< 1	0.09	14
KMT 1871	< 5	3.7	< 0.5	1240	1250	< 1	1	3	86	0.49	< 2	< 10	375	< 0.5	< 2	0.88	4	3	0.90	< 10	< 1	0.21	< 10
KMT 1872	< 5	< 0.2	< 0.5	6	426	< 1	< 1	8	30	0.77	3	< 10	137	0.9	< 2	2.22	1	3	0.93	< 10	< 1	0.38	< 10
KMT 1873	< 5	0.4	< 0.5	33	48	< 1	< 1	< 2	7	0.40	< 2	< 10	426	< 0.5	< 2	0.02	< 1	5	0.40	< 10	< 1	0.23	< 10
KMT 1874	< 5	< 0.2	< 0.5	3	319	5	< 1	5	32	0.85	< 2	< 10	133	< 0.5	< 2	0.54	4	4	1.31	< 10	< 1	0.30	< 10
KMT 1875	39	46.8	1.6	9780	905	< 1	< 1	19	146	1.46	< 2	< 10	119	< 0.5	< 2	0.42	8	5	3.88	< 10	< 1	0.26	12
KMT 1876	< 5	< 0.2	< 0.5	73	879	< 1	21	4	74	1.35	5	< 10	136	0.6	2	2.08	16	16	4.39	< 10	< 1	0.56	10
KMT 1877	< 5	< 0.2	< 0.5	22	1170	< 1	48	5	125	0.95	5	< 10	233	< 0.5	< 2	3.95	27	37	4.75	< 10	< 1	0.33	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Cu	Ag	Pb
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.001	3	0.003
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	ICP-OES	ICP-OES	ICP-OES
A18 1	1.83	0.123	0.164	< 0.01	2	19	13	0.47	< 20	< 1	< 2	< 10	133	< 10	20	5			
A18 2	2.38	0.089	0.142	< 0.01	< 2	19	83	0.41	< 20	5	< 2	< 10	175	< 10	9	5			
A18 3	0.06	0.026	0.060	< 0.01	< 2	4	10	0.12	< 20	< 1	< 2	< 10	343	< 10	3	2			
A18 4	0.05	0.041	0.030	0.03	< 2	3	23	0.04	< 20	3	< 2	< 10	8	< 10	6	3			
A18 5	0.63	0.115	0.103	< 0.01	< 2	17	21	0.32	< 20	< 1	< 2	< 10	39	< 10	26	5			
A18 6	0.08	0.066	0.024	< 0.01	< 2	2	17	0.02	< 20	< 1	< 2	< 10	14	< 10	6	2			
A18 7	0.52	0.050	0.051	< 0.01	2	6	66	0.12	< 20	3	< 2	< 10	37	< 10	8	1			
A18 8	5.42	0.044	0.057	0.01	3	21	97	0.31	< 20	4	< 2	< 10	206	< 10	6	6			
A18 9	0.74	0.094	0.068	0.04	< 2	5	201	0.19	< 20	3	< 2	< 10	71	< 10	3	3			
A18 10	2.68	0.053	0.082	0.64	5	8	197	0.21	< 20	7	< 2	< 10	100	< 10	7	7	1.74		
A18 11	0.27	0.118	0.042	< 0.01	< 2	14	7	0.05	< 20	< 1	< 2	< 10	21	< 10	22	9			
A18 12	0.02	0.076	0.052	0.07	< 2	14	13	0.04	< 20	< 1	< 2	< 10	28	< 10	22	6			
A18 13	1.13	0.108	0.134	0.08	2	16	74	0.38	< 20	< 1	< 2	< 10	143	< 10	15	6			
A18 14	0.44	0.122	0.093	< 0.01	< 2	12	21	0.29	< 20	< 1	< 2	< 10	68	< 10	12	9			
A18 15	1.54	0.093	0.122	< 0.01	4	15	58	0.34	< 20	1	< 2	< 10	117	< 10	14	6			
A18 16	1.56	0.097	0.088	< 0.01	2	17	45	0.21	< 20	< 1	< 2	< 10	232	< 10	13	10			
A18 17	0.51	0.094	0.122	0.26	3	11	393	0.37	< 20	2	< 2	< 10	104	< 10	10	11	1.92		
A18 18	0.04	0.072	0.117	0.82	< 2	7	6	0.07	< 20	2	< 2	< 10	53	< 10	12	6	5.02	122	
A18 19	2.16	0.056	0.086	0.22	4	11	163	0.45	< 20	6	< 2	< 10	210	< 10	6	12	1.34		
A18 20	1.43	0.066	0.133	0.03	3	11	64	0.50	< 20	< 1	< 2	< 10	224	< 10	9	5			
A18 21	0.48	0.081	0.158	< 0.01	< 2	7	70	0.33	< 20	< 1	< 2	< 10	201	< 10	7	4			
A18 22	3.41	0.061	0.184	< 0.01	3	12	22	0.56	< 20	6	< 2	< 10	256	< 10	16	10			
A18 23	0.15	0.027	0.090	< 0.01	< 2	5	14	0.17	< 20	< 1	< 2	< 10	753	< 10	4	4	1.41		
A18 24	1.42	0.066	0.065	< 0.01	< 2	6	236	0.29	< 20	3	< 2	< 10	99	< 10	2	9			
A18 25	1.00	0.016	0.060	< 0.01	3	7	191	0.29	< 20	6	< 2	< 10	103	< 10	4	5			
A18 26	0.49	0.054	0.082	1.70	< 2	7	22	0.08	< 20	3	< 2	< 10	50	< 10	4	3			
A18 27	1.58	0.046	0.070	< 0.01	2	9	14	< 0.01	< 20	6	< 2	< 10	120	< 10	6	1			
A18 28	1.10	0.031	0.072	< 0.01	< 2	5	182	0.13	< 20	2	< 2	< 10	66	< 10	3	2			
A18 29	2.50	0.040	0.032	0.06	< 2	5	206	< 0.01	< 20	< 1	< 2	< 10	54	< 10	3	2			
A18 30	2.99	0.043	0.036	0.05	3	7	194	0.02	< 20	< 1	< 2	< 10	82	< 10	3	2			
A18 31	1.14	0.020	0.019	0.01	< 2	4	269	0.06	< 20	< 1	< 2	< 10	24	< 10	12	< 1			
A18 32	4.43	0.028	0.027	0.07	5	4	231	< 0.01	< 20	< 1	< 2	< 10	66	< 10	3	2			
A18 33	0.50	0.023	0.052	< 0.01	< 2	6	107	0.17	< 20	3	< 2	< 10	88	< 10	3	5			
A18 34	0.40	0.057	0.057	< 0.01	< 2	12	214	0.07	< 20	3	< 2	< 10	103	< 10	5	3			
A18 35	1.77	0.023	0.045	0.12	2	5	116	0.05	< 20	2	< 2	< 10	62	< 10	6	2			
A18 36	0.44	0.053	0.054	< 0.01	< 2	2	23	< 0.01	< 20	< 1	< 2	< 10	10	< 10	8	2			
A18 37	0.12	0.035	0.016	0.06	< 2	2	379	< 0.01	< 20	1	< 2	< 10	15	< 10	8	< 1			
A18 38	0.42	0.055	0.021	0.09	2	3	147	0.08	< 20	< 1	< 2	< 10	43	< 10	2	4			
A18 39	1.20	0.029	0.048	0.81	< 2	7	41	< 0.01	< 20	< 1	< 2	< 10	39	< 10	3	1			
A18 40	1.85	0.017	0.004	0.01	< 2	2	183	< 0.01	< 20	< 1	< 2	< 10	84	< 10	5	1			
A18 41	1.00	0.053	0.047	< 0.01	< 2	5	115	0.20	< 20	5	< 2	< 10	62	< 10	5	2			

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Cu	Ag	Pb
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.001	3	0.003
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	ICP-OES	ICP-OES	ICP-OES
A18 42	1.48	0.072	0.052	< 0.01	< 2	14	31	0.14	< 20	< 1	< 2	< 10	63	< 10	10	1			
A18 43	0.06	0.020	0.003	< 0.01	< 2	< 1	3	< 0.01	< 20	< 1	< 2	< 10	5	12	< 1	< 1			
A18 47	1.48	0.116	0.166	< 0.01	2	16	100	0.06	< 20	< 1	3	< 10	159	< 10	17	3			
A18 48	0.17	0.053	0.097	0.03	< 2	11	49	0.02	< 20	< 1	< 2	< 10	101	< 10	8	2			
A18 49	0.02	0.037	0.013	0.04	< 2	3	103	< 0.01	< 20	< 1	< 2	< 10	25	< 10	1	< 1			
A18 50	0.94	0.063	0.055	< 0.01	< 2	9	44	0.05	< 20	< 1	< 2	< 10	56	< 10	11	3			
A18 51	2.01	0.135	0.184	0.16	2	11	13	0.08	< 20	< 1	< 2	< 10	355	< 10	17	5	2.13		
A18 52	1.97	0.096	0.172	0.19	3	22	14	0.46	< 20	< 1	< 2	< 10	637	< 10	16	6	1.14		
A18 53	1.01	0.131	0.099	0.49	2	10	12	0.34	< 20	2	< 2	< 10	100	< 10	11	10	1.62		
A18 54	0.39	0.074	0.087	0.01	< 2	10	6	0.26	< 20	< 1	< 2	< 10	137	< 10	14	10			
A18 55	1.20	0.029	0.071	0.36	< 2	7	25	< 0.01	< 20	< 1	< 2	< 10	90	< 10	4	2	1.40		
A18 56	2.11	0.038	0.077	0.22	< 2	9	12	< 0.01	< 20	< 1	< 2	< 10	92	< 10	3	1	1.89		
A18 57	0.61	0.048	0.130	1.01	< 2	6	8	< 0.01	< 20	< 1	< 2	< 10	60	< 10	6	1	4.41	116	
A18 58	1.57	0.094	0.085	0.27	< 2	10	97	0.10	< 20	< 1	< 2	< 10	97	< 10	5	5	2.44		
A18 59	0.80	0.027	0.074	1.72	< 2	4	115	0.15	< 20	12	< 2	< 10	55	< 10	3	6	13.6	218	
A18 60	1.97	0.059	0.109	0.62	< 2	7	44	0.32	< 20	3	< 2	< 10	97	< 10	5	9	3.42	142	
A18 61	0.70	0.179	0.058	0.40	< 2	4	86	0.23	< 20	2	< 2	< 10	107	< 10	4	3	2.14		
DAKM 1811	0.26	0.110	0.020	< 0.01	< 2	4	21	0.08	< 20	2	< 2	< 10	15	< 10	6	< 1			
DAKM 1812	1.03	0.035	0.055	< 0.01	< 2	5	6	< 0.01	< 20	1	< 2	< 10	81	< 10	4	< 1			
DAKM 1813	3.37	0.159	0.122	< 0.01	3	19	66	0.33	< 20	< 1	< 2	< 10	258	< 10	5	10			
DAKM 1814	2.10	0.116	0.069	< 0.01	< 2	13	41	0.05	< 20	2	< 2	< 10	146	< 10	5	3			
DAKM 1815	2.47	0.029	0.010	0.04	< 2	2	292	< 0.01	< 20	< 1	< 2	< 10	49	< 10	3	1			
DAKM 1816	2.30	0.030	0.008	0.04	< 2	3	216	< 0.01	< 20	< 1	< 2	< 10	62	< 10	3	1			
DAKM 1817	1.36	0.035	0.065	< 0.01	4	8	89	0.18	< 20	1	2	< 10	101	< 10	3	6			
DAKM 1818	1.74	0.048	0.070	0.03	< 2	6	113	0.17	< 20	< 1	< 2	< 10	67	< 10	5	2			
DAKM 1819	0.47	0.034	0.005	0.05	< 2	2	121	< 0.01	< 20	< 1	< 2	< 10	72	< 10	2	< 1			
DAKM 1820	2.59	0.081	0.075	< 0.01	< 2	25	56	0.30	< 20	< 1	< 2	< 10	190	< 10	8	14			
DAKM 1821	0.94	0.048	0.067	0.95	< 2	8	97	0.27	< 20	4	3	< 10	88	< 10	4	8			
DAKM 1822	2.00	0.086	0.063	0.01	3	8	54	0.05	< 20	3	< 2	< 10	90	< 10	5	3			
DAKM 1823	2.18	0.043	0.039	0.06	< 2	5	284	< 0.01	< 20	4	< 2	< 10	47	< 10	5	< 1			
DAKM 1824	1.02	0.046	0.059	0.79	< 2	5	29	< 0.01	< 20	< 1	< 2	< 10	49	< 10	4	1			
DAKM 1825	0.34	0.026	0.017	0.29	< 2	3	74	0.04	< 20	< 1	< 2	< 10	21	< 10	4	2			
DAKM 1826	0.36	0.030	0.009	0.08	< 2	2	181	< 0.01	< 20	< 1	< 2	< 10	32	< 10	4	< 1			
DAKM 1827	1.15	0.033	0.047	0.73	< 2	4	40	< 0.01	< 20	< 1	< 2	< 10	42	< 10	3	< 1			
DAKM 1828	1.75	0.072	0.102	< 0.01	3	17	38	0.06	< 20	< 1	< 2	< 10	164	< 10	7	4			
DAKM 1829	0.72	0.047	0.040	0.04	< 2	4	196	0.11	< 20	2	< 2	< 10	111	< 10	2	2			
DAKM 1830	1.07	0.054	0.087	< 0.01	3	9	67	0.27	< 20	8	< 2	< 10	121	< 10	5	6			
DAKM 1831	2.92	0.027	0.022	0.07	4	5	187	< 0.01	< 20	< 1	< 2	< 10	91	< 10	2	2			
DAKM 1832	1.51	0.039	0.079	< 0.01	< 2	5	44	0.02	< 20	< 1	< 2	< 10	43	< 10	7	1			
DAKM 1833	0.02	0.078	0.006	< 0.01	< 2	< 1	6	< 0.01	< 20	< 1	3	< 10	2	< 10	4	5			
DAKM 1834A	0.07	0.019	0.015	1.11	< 2	1	5	0.05	< 20	< 1	< 2	< 10	11	< 10	3	< 1			1.11
DAKM 1834B	0.48	0.020	0.030	0.68	< 2	2	24	0.04	< 20	7	< 2	< 10	20	< 10	3	< 1			

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Cu	Ag	Pb
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.001	3	0.003
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	ICP-OES	ICP-OES	ICP-OES
DAKM 1835	0.61	0.022	0.051	< 0.01	< 2	3	52	0.07	< 20	< 1	< 2	< 10	26	< 10	4	1			
DAKM 1836	1.06	0.057	0.044	< 0.01	< 2	8	42	0.14	< 20	< 1	< 2	< 10	54	< 10	6	1			
DAKM 1837	0.46	0.085	0.012	< 0.01	< 2	3	97	0.09	< 20	6	< 2	< 10	30	< 10	4	1			
DAKM 1838	1.45	0.057	0.040	0.25	< 2	12	46	0.16	< 20	< 1	< 2	< 10	67	< 10	14	1			
DAKM 1839	1.50	0.120	0.176	< 0.01	< 2	11	63	0.29	< 20	7	< 2	< 10	41	< 10	14	6			
DAKM 1840	0.81	0.085	0.051	0.04	3	10	202	0.17	< 20	7	< 2	< 10	51	< 10	7	1			
DAKM 1841	0.02	0.104	0.006	< 0.01	< 2	< 1	8	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	7			
DAKM 1842	0.98	0.073	0.048	< 0.01	2	5	70	0.18	< 20	< 1	< 2	< 10	64	< 10	4	2			
DAKM 1843	0.05	0.018	0.002	1.89	< 2	< 1	3	< 0.01	< 20	3	< 2	< 10	5	< 10	< 1	< 1			
DAKM 1844	0.12	0.018	0.003	0.19	< 2	< 1	6	< 0.01	< 20	< 1	< 2	< 10	5	< 10	1	< 1			
NKKM-01	1.06	0.062	0.083	2.33	3	8	130	0.20	< 20	2	< 2	< 10	67	< 10	7	8	3.83		
NKKM-02	0.12	0.030	0.034	0.29	< 2	3	62	0.10	< 20	1	< 2	< 10	55	< 10	4	4			
NKKM-03	0.70	0.054	0.097	1.39	3	9	22	< 0.01	< 20	5	< 2	< 10	63	< 10	5	2			
NKKM-05	1.49	0.022	0.061	0.07	3	11	92	< 0.01	< 20	< 1	< 2	< 10	119	< 10	8	1			
NKKM-06	0.37	0.084	0.065	0.83	< 2	7	35	0.11	< 20	4	< 2	< 10	62	< 10	3	3			
NKKM-07A	0.45	0.108	0.030	0.81	2	4	11	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	1			
NKKM-07B	0.16	0.164	0.032	0.06	< 2	3	6	< 0.01	< 20	< 1	< 2	< 10	6	< 10	11	< 1	2.69		
NKKM 1821	2.15	0.072	0.067	0.08	< 2	9	250	0.38	< 20	< 1	< 2	< 10	173	< 10	6	8			
NKKM 1822	1.90	0.025	0.045	< 0.01	< 2	7	187	0.15	< 20	6	< 2	< 10	83	< 10	4	4			
NKKM 1823	4.27	0.022	0.035	0.02	29	13	147	< 0.01	< 20	1	< 2	< 10	109	< 10	6	1			
NKKM 1824	0.63	0.087	0.029	0.07	< 2	5	16	0.02	< 20	2	< 2	< 10	32	< 10	6	< 1			
NKKM 1825	3.27	0.695	0.065	0.03	4	10	161	0.31	< 20	< 1	< 2	< 10	216	< 10	3	4			
NKKM 1826	1.02	0.067	0.084	0.05	< 2	8	53	0.27	< 20	< 1	< 2	< 10	44	< 10	10	8			
NKKM 1827	1.62	0.018	0.056	< 0.01	4	9	171	0.21	< 20	1	< 2	< 10	133	< 10	4	4			
KMT 1851	1.24	0.115	0.138	< 0.01	< 2	20	7	0.48	< 20	< 1	< 2	< 10	236	< 10	19	5			
KMT 1852	0.44	0.081	0.089	< 0.01	< 2	15	15	0.39	< 20	6	< 2	< 10	194	< 10	12	8			
KMT 1853	0.06	0.018	< 0.001	< 0.01	< 2	< 1	5	< 0.01	< 20	< 1	< 2	< 10	3	< 10	< 1	< 1			
KMT 1854	1.50	0.091	0.131	0.25	< 2	22	22	0.53	< 20	6	< 2	< 10	330	< 10	19	8	1.41		
KMT 1855	0.07	0.079	0.033	< 0.01	< 2	5	12	0.04	< 20	< 1	< 2	< 10	38	< 10	10	4			
KMT 1861	0.73	0.064	0.066	0.69	2	4	15	< 0.01	< 20	< 1	< 2	< 10	32	< 10	7	1			
KMT 1862	0.27	0.404	0.071	< 0.01	< 2	3	93	0.27	< 20	3	< 2	< 10	88	< 10	6	5			
KMT 1863	0.41	0.043	0.052	< 0.01	< 2	3	51	< 0.01	< 20	< 1	< 2	< 10	10	< 10	12	2			
KMT 1864	1.17	0.046	0.071	< 0.01	< 2	14	60	0.30	< 20	< 1	< 2	< 10	67	< 10	11	7			
KMT 1865	0.04	0.071	0.023	< 0.01	< 2	3	4	0.04	< 20	1	< 2	< 10	13	< 10	7	2			
KMT 1866	1.29	0.048	0.055	< 0.01	< 2	15	74	0.31	< 20	4	< 2	< 10	125	< 10	8	5			
KMT 1867	1.01	0.099	0.123	< 0.01	3	14	108	0.24	< 20	8	< 2	< 10	30	< 10	18	4			
KMT 1871	0.05	0.100	0.016	0.01	< 2	7	11	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	3			
KMT 1872	1.10	0.050	0.003	< 0.01	< 2	3	57	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	2			
KMT 1873	0.02	0.079	0.004	0.01	< 2	1	12	< 0.01	< 20	< 1	2	< 10	6	< 10	3	3			
KMT 1874	0.30	0.034	0.054	0.40	< 2	3	24	0.21	< 20	4	< 2	< 10	13	< 10	6	7			
KMT 1875	0.84	0.039	0.133	0.15	< 2	10	6	0.08	< 20	< 1	< 2	< 10	107	< 10	12	4			

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Assay) Cert																							
OREAS 217 (Fire Assay) Meas	338																						
OREAS 217 (Fire Assay) Cert	338																						
OREAS 217 (Fire Assay) Meas	328																						
OREAS 217 (Fire Assay) Cert	338																						
OREAS 217 (Fire Assay) Meas	322																						
OREAS 217 (Fire Assay) Cert	338																						
Oreas 621 (Aqua Regia) Meas		64.9	254	3450	509	11	25	> 5000	> 10000	1.73	77			0.6	4	1.74	29	32	3.20	< 10	4	0.37	20
Oreas 621 (Aqua Regia) Cert		68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93	0.333	19.4
Oreas 621 (Aqua Regia) Meas		63.6	250	3370	487	11	25	> 5000	> 10000	1.64	72			0.6	4	1.68	28	34	3.18	< 10	4	0.35	19
Oreas 621 (Aqua Regia) Cert		68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93	0.333	19.4
Oreas 621 (Aqua Regia) Meas		65.8	246	3540	505	11	24	> 5000	> 10000	1.73	76			0.6	< 2	1.32	28	32	3.32	< 10	5	0.36	18
Oreas 621 (Aqua Regia) Cert		68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93	0.333	19.4
A18 14 Orig	< 5																						
A18 14 Dup	< 5																						
A18 15 Orig		1.2	< 0.5	597	2400	< 1	4	4	410	1.62	3	< 10	20	0.6	< 2	2.01	15	9	4.92	< 10	< 1	0.02	< 10
A18 15 Dup		1.3	< 0.5	634	2370	< 1	6	3	402	1.59	< 2	< 10	18	0.6	< 2	1.95	15	10	4.82	< 10	< 1	0.02	< 10
A18 27 Orig	10																						
A18 27 Dup	26																						
A18 29 Orig		< 0.2	< 0.5	37	1370	< 1	33	6	101	1.60	< 2	< 10	1150	< 0.5	< 2	> 10.0	27	9	5.27	< 10	< 1	0.23	< 10
A18 29 Dup		< 0.2	< 0.5	37	1340	< 1	30	7	100	1.51	< 2	< 10	1120	< 0.5	< 2	> 10.0	27	9	5.01	< 10	< 1	0.22	< 10
A18 38 Orig	< 5																						
A18 38 Dup	< 5																						
A18 43 Orig		0.9	< 0.5	35	92	< 1	2	< 2	2	0.18	< 2	< 10	41	< 0.5	< 2	0.04	< 1	17	0.30	< 10	< 1	0.08	< 10
A18 43 Dup		0.9	< 0.5	38	98	< 1	1	< 2	3	0.19	< 2	< 10	45	< 0.5	< 2	0.04	< 1	16	0.32	< 10	< 1	0.09	< 10
A18 52 Orig																							
A18 52 Dup																							
A18 53 Orig	< 5	10.6	< 0.5	> 10000	1190	< 1	1	3	213	1.68	< 2	< 10	108	0.7	< 2	0.57	5	7	3.41	< 10	< 1	0.27	21
A18 53 Split PREP DUP	< 5	9.0	< 0.5	> 10000	1220	< 1	3	5	218	1.66	< 2	< 10	190	0.7	< 2	0.58	5	7	3.51	< 10	< 1	0.25	21
A18 53 Orig	< 5																						
A18 53 Dup	< 5																						
A18 59 Orig		> 100	1.7	> 10000	738	< 1	8	4	69	1.27	< 2	< 10	29	< 0.5	< 2	5.92	8	7	2.23	< 10	< 1	0.04	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
A18 59 Dup		> 100	1.7	> 10000	748	< 1	6	3	70	1.26	< 2	< 10	30	< 0.5	< 2	6.04	9	7	2.20	< 10	< 1	0.04	< 10
DAKM 1814 Orig	< 5																						
DAKM 1814 Dup	< 5																						
DAKM 1824 Orig	< 5																						
DAKM 1824 Dup	< 5																						
DAKM 1831 Orig		1.0	< 0.5	2550	1630	< 1	19	3	86	1.66	< 2	< 10	589	< 0.5	< 2	> 10.0	23	7	5.08	< 10	< 1	< 0.01	< 10
DAKM 1831 Dup		1.0	0.6	2570	1650	< 1	18	3	88	1.67	< 2	< 10	623	< 0.5	< 2	> 10.0	23	7	5.20	< 10	< 1	< 0.01	< 10
DAKM 1835 Orig	< 5																						
DAKM 1835 Dup	< 5																						
DAKM 1844 Orig		0.3	< 0.5	4	188	1	3	3	10	0.17	4	< 10	46	< 0.5	< 2	0.10	9	19	1.27	< 10	< 1	0.02	< 10
DAKM 1844 Dup		0.4	< 0.5	4	194	2	3	3	10	0.18	4	< 10	45	< 0.5	< 2	0.10	9	21	1.29	< 10	< 1	0.02	< 10
NKKM-06 Orig	20																						
NKKM-06 Dup	19																						
NKKM-07B Orig																							
NKKM-07B Dup																							
NKKM 1821 Orig		< 0.2	5.5	836	892	< 1	47	557	425	3.80	< 2	< 10	17	< 0.5	< 2	3.99	21	80	4.32	< 10	1	0.04	< 10
NKKM 1821 Dup		< 0.2	5.5	864	896	< 1	50	561	425	3.82	< 2	< 10	17	< 0.5	< 2	3.98	21	77	4.37	< 10	< 1	0.04	< 10
NKKM 1822 Orig	8	0.3	< 0.5	222	715	< 1	50	< 2	61	2.72	< 2	< 10	30	< 0.5	< 2	1.61	18	87	3.03	< 10	< 1	0.14	< 10
NKKM 1822 Split PREP DUP	7	0.4	< 0.5	236	737	< 1	53	< 2	63	2.87	< 2	< 10	30	< 0.5	< 2	1.67	19	90	3.21	< 10	< 1	0.14	< 10
KMT 1852 Orig		0.6	< 0.5	129	748	< 1	4	2	52	0.50	< 2	< 10	25	< 0.5	< 2	2.64	6	13	3.91	< 10	< 1	0.05	< 10
KMT 1852 Dup		0.3	< 0.5	117	737	< 1	4	4	52	0.49	< 2	< 10	25	< 0.5	< 2	2.64	7	12	3.74	< 10	< 1	0.05	< 10
KMT 1853 Orig	< 5																						
KMT 1853 Dup	< 5																						
KMT 1873 Orig	< 5																						
KMT 1873 Dup	< 5																						
KMT 1874 Orig		0.2	< 0.5	4	323	5	< 1	5	33	0.85	< 2	< 10	134	< 0.5	< 2	0.54	4	4	1.31	< 10	< 1	0.30	< 10
KMT 1874 Dup		< 0.2	< 0.5	3	316	5	< 1	4	32	0.85	< 2	< 10	131	< 0.5	< 2	0.53	4	4	1.30	< 10	< 1	0.29	< 10
KMT 1886 Orig	5																						
KMT 1886 Dup	< 5																						
KMT 1890 Orig		0.9	< 0.5	1670	705	< 1	3	8	130	0.69	< 2	< 10	83	< 0.5	< 2	0.86	5	15	2.54	< 10	< 1	0.13	22
KMT 1890 Dup		0.9	< 0.5	1670	696	1	2	5	126	0.67	< 2	< 10	83	< 0.5	< 2	0.84	5	17	2.50	< 10	< 1	0.13	22
KMT 1896 Orig	17																						
KMT 1896 Dup	12																						
KMT 18101 Orig	15	< 0.2	< 0.5	97	1290	< 1	20	5	210	2.70	3	< 10	40	< 0.5	< 2	2.74	22	23	4.55	< 10	< 1	0.10	< 10
KMT 18101 Split PREP DUP	< 5	< 0.2	< 0.5	86	1250	< 1	18	7	199	2.64	< 2	< 10	39	< 0.5	< 2	2.73	21	22	4.25	< 10	< 1	0.10	< 10
KMT 18103 Orig		77.8	< 0.5	> 10000	871	< 1	16	12	114	2.23	2	< 10	26	0.5	< 2	4.64	15	8	4.84	< 10	< 1	0.44	10
KMT 18103 Dup		75.5	< 0.5	> 10000	852	< 1	16	13	112	2.20	< 2	< 10	22	0.5	< 2	4.54	15	8	4.70	< 10	< 1	0.44	< 10
KMT 18107 Orig	89																						
KMT 18107 Dup	88																						
KMT 18115 Orig		5.0	< 0.5	7130	351	1	5	< 2	24	2.22	11	< 10	< 10	< 0.5	< 2	2.40	7	10	3.34	< 10	< 1	0.07	< 10
KMT 18115 Dup		4.9	< 0.5	6740	348	1	5	< 2	24	2.14	11	< 10	< 10	< 0.5	3	2.45	7	9	3.24	< 10	< 1	0.06	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Cu	Ag	Pb
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.001	3	0.003
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	ICP-OES	ICP-OES	ICP-OES
OREAS 217 (Fire Assay) Meas																			
OREAS 217 (Fire Assay) Cert																			
OREAS 217 (Fire Assay) Meas																			
OREAS 217 (Fire Assay) Cert																			
OREAS 217 (Fire Assay) Meas																			
OREAS 217 (Fire Assay) Cert																			
OREAS 217 (Fire Assay) Meas																			
OREAS 217 (Fire Assay) Cert																			
Oreas 621 (Aqua Regia) Meas	0.45	0.184	0.032	4.88	111	3	14		< 20		< 2	< 10	14	< 10	5	46			
Oreas 621 (Aqua Regia) Cert	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	163	10.9	1.00	6.87	55.0			
Oreas 621 (Aqua Regia) Meas	0.43	0.171	0.032	4.66	102	2	13		< 20		< 2	< 10	13	< 10	5	55			
Oreas 621 (Aqua Regia) Cert	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	163	10.9	1.00	6.87	55.0			
Oreas 621 (Aqua Regia) Meas	0.45	0.174	0.033	4.41	120	2	13		< 20		< 2	< 10	13	< 10	6	59			
Oreas 621 (Aqua Regia) Cert	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	163	10.9	1.00	6.87	55.0			
A18 14 Orig																			
A18 14 Dup																			
A18 15 Orig	1.55	0.095	0.123	< 0.01	4	15	60	0.35	< 20	1	< 2	< 10	118	< 10	14	6			
A18 15 Dup	1.53	0.091	0.121	< 0.01	3	15	56	0.33	< 20	2	< 2	< 10	115	< 10	13	7			
A18 27 Orig																			
A18 27 Dup																			
A18 29 Orig	2.54	0.041	0.033	0.06	< 2	5	210	< 0.01	< 20	< 1	< 2	< 10	55	< 10	3	2			
A18 29 Dup	2.46	0.039	0.032	0.05	< 2	5	203	< 0.01	< 20	< 1	< 2	< 10	53	< 10	3	2			
A18 38 Orig																			
A18 38 Dup																			
A18 43 Orig	0.06	0.019	0.003	< 0.01	< 2	< 1	3	< 0.01	< 20	< 1	< 2	< 10	5	12	< 1	< 1			
A18 43 Dup	0.06	0.022	0.003	< 0.01	< 2	< 1	3	< 0.01	< 20	1	< 2	< 10	5	12	< 1	< 1			
A18 52 Orig																	1.16		
A18 52 Dup																	1.12		
A18 53 Orig	1.01	0.131	0.099	0.49	2	10	12	0.34	< 20	2	< 2	< 10	100	< 10	11	10	1.62		
A18 53 Split PREP DUP	1.03	0.120	0.101	0.40	< 2	10	12	0.34	< 20	3	< 2	< 10	99	< 10	11	12	1.36		

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Cu	Ag	Pb
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.001	3	0.003
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	ICP-OES	ICP-OES	ICP-OES
A18 53 Orig																			
A18 53 Dup																			
A18 59 Orig	0.79	0.027	0.074	1.74	< 2	4	115	0.15	< 20	10	< 2	< 10	54	< 10	3	6			
A18 59 Dup	0.80	0.027	0.074	1.71	< 2	4	114	0.15	< 20	13	< 2	< 10	55	< 10	3	6			
DAKM 1814 Orig																			
DAKM 1814 Dup																			
DAKM 1824 Orig																			
DAKM 1824 Dup																			
DAKM 1831 Orig	2.88	0.026	0.022	0.07	4	5	186	< 0.01	< 20	< 1	< 2	< 10	90	< 10	2	2			
DAKM 1831 Dup	2.97	0.027	0.023	0.07	3	5	189	< 0.01	< 20	< 1	< 2	< 10	92	< 10	2	2			
DAKM 1835 Orig																			
DAKM 1835 Dup																			
DAKM 1844 Orig	0.12	0.019	0.003	0.19	< 2	< 1	6	< 0.01	< 20	< 1	< 2	< 10	5	< 10	1	< 1			
DAKM 1844 Dup	0.13	0.018	0.003	0.19	< 2	< 1	6	< 0.01	< 20	< 1	< 2	< 10	5	< 10	1	< 1			
NKKM-06 Orig																			
NKKM-06 Dup																			
NKKM-07B Orig																	2.71		
NKKM-07B Dup																	2.68		
NKKM 1821 Orig	2.15	0.072	0.067	0.08	< 2	9	249	0.38	< 20	< 1	< 2	< 10	173	< 10	6	8			
NKKM 1821 Dup	2.15	0.073	0.067	0.08	3	9	251	0.39	< 20	3	< 2	< 10	173	< 10	6	8			
NKKM 1822 Orig	1.90	0.025	0.045	< 0.01	< 2	7	187	0.15	< 20	6	< 2	< 10	83	< 10	4	4			
NKKM 1822 Split PREP DUP	1.98	0.025	0.047	< 0.01	3	7	196	0.15	< 20	2	< 2	< 10	85	< 10	5	3			
KMT 1852 Orig	0.45	0.081	0.091	< 0.01	< 2	15	15	0.40	< 20	7	< 2	< 10	196	< 10	12	9			
KMT 1852 Dup	0.44	0.081	0.088	< 0.01	< 2	14	15	0.39	< 20	4	< 2	< 10	192	< 10	12	7			
KMT 1853 Orig																			
KMT 1853 Dup																			
KMT 1873 Orig																			
KMT 1873 Dup																			
KMT 1874 Orig	0.30	0.034	0.054	0.40	< 2	3	24	0.22	< 20	2	< 2	< 10	13	< 10	6	7			
KMT 1874 Dup	0.30	0.035	0.053	0.39	< 2	3	24	0.21	< 20	6	< 2	< 10	12	< 10	6	7			
KMT 1886 Orig																			
KMT 1886 Dup																			
KMT 1890 Orig	0.48	0.106	0.090	0.01	< 2	9	7	0.24	< 20	7	< 2	< 10	105	< 10	19	7			
KMT 1890 Dup	0.47	0.106	0.087	0.01	< 2	9	7	0.24	< 20	< 1	< 2	< 10	103	< 10	19	6			
KMT 1896 Orig																			
KMT 1896 Dup																			
KMT 18101 Orig	2.25	0.076	0.101	< 0.01	< 2	13	101	0.21	< 20	< 1	< 2	< 10	158	< 10	6	7			
KMT 18101 Split PREP DUP	2.11	0.084	0.096	< 0.01	2	13	105	0.21	< 20	6	< 2	< 10	152	< 10	6	6			
KMT 18103 Orig	1.00	0.023	0.108	1.28	< 2	7	43	< 0.01	< 20	< 1	< 2	< 10	50	< 10	6	1			
KMT 18103 Dup	0.98	0.024	0.106	1.29	2	7	42	< 0.01	< 20	< 1	< 2	< 10	49	< 10	6	1			

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
KMT 1821	< 5	< 0.2	< 0.5	29	1440	< 1	4	< 2	64	2.02	< 2	< 10	66	< 0.5	< 2	2.98	6	11	1.94	< 10	< 1	0.20	12
KMT 1822	< 5	< 0.2	< 0.5	38	969	< 1	9	4	84	1.67	3	< 10	49	0.5	< 2	0.88	11	17	3.56	< 10	< 1	0.14	11
KMT 1823	< 5	4.4	< 0.5	2700	482	1	2	< 2	30	1.00	4	< 10	74	< 0.5	< 2	1.32	3	17	1.75	< 10	< 1	0.05	20
KMT 1824	8	< 0.2	< 0.5	9	529	< 1	1	3	20	0.49	< 2	< 10	222	< 0.5	< 2	2.67	1	10	0.93	< 10	< 1	0.09	< 10
KMT 1825	< 5	< 0.2	< 0.5	7	3300	1	< 1	7	89	0.54	3	< 10	1480	< 0.5	< 2	> 10.0	3	9	1.34	< 10	< 1	0.04	< 10
KMT 1826	< 5	< 0.2	< 0.5	51	915	< 1	4	< 2	74	1.89	< 2	< 10	146	0.7	< 2	3.15	15	7	4.03	< 10	< 1	0.71	< 10
KMT 1827	< 5	< 0.2	< 0.5	5	549	2	< 1	9	49	0.50	< 2	< 10	91	< 0.5	< 2	0.27	2	10	1.26	< 10	< 1	0.17	14
KMT 1828	< 5	< 0.2	< 0.5	5	1510	< 1	1	3	90	1.30	< 2	< 10	56	0.6	3	2.13	5	3	3.82	< 10	< 1	0.15	19
KMT 1829	< 5	< 0.2	< 0.5	7	500	< 1	< 1	< 2	44	2.33	6	< 10	34	< 0.5	< 2	2.80	2	3	0.70	< 10	< 1	0.12	< 10
KMT 1830	189	14.2	< 0.5	6930	583	< 1	2	2	168	0.48	< 2	< 10	54	< 0.5	2	0.34	4	10	2.53	< 10	< 1	0.14	27
KMT 1831	591	1.5	< 0.5	663	366	2	2	< 2	33	0.38	< 2	< 10	43	< 0.5	< 2	0.93	2	15	2.48	< 10	< 1	0.19	24
KMT 1832	< 5	< 0.2	< 0.5	37	880	< 1	2	4	66	0.45	< 2	< 10	46	< 0.5	< 2	0.61	7	10	3.22	< 10	< 1	0.09	18
KMT 1833	6	14.1	3.0	4460	1220	< 1	1	2	174	0.96	< 2	< 10	60	< 0.5	< 2	0.55	10	8	3.77	< 10	< 1	0.13	16
KMT 1834	< 5	< 0.2	< 0.5	19	1590	< 1	< 1	4	192	1.31	< 2	< 10	45	0.6	< 2	2.55	9	5	4.45	10	< 1	0.13	13
KMT 1835	< 5	< 0.2	< 0.5	14	2170	< 1	7	5	480	1.77	7	< 10	39	0.7	< 2	3.38	20	10	6.68	10	< 1	0.07	13
KMT 1836	< 5	< 0.2	< 0.5	29	1000	< 1	2	2	134	0.81	3	< 10	35	0.5	< 2	1.76	7	7	3.90	< 10	< 1	0.07	12
KMT 1837	< 5	16.9	0.7	7820	2110	< 1	2	4	347	1.70	< 2	< 10	23	0.7	< 2	1.09	13	3	5.83	10	< 1	0.04	16
KMT 1838	< 5	15.3	< 0.5	6230	1350	< 1	2	5	224	1.23	< 2	< 10	39	0.6	< 2	2.99	7	6	3.81	< 10	< 1	0.11	10
KMT 1839	< 5	< 0.2	< 0.5	32	1450	1	3	4	107	0.53	< 2	< 10	55	< 0.5	2	0.13	6	8	3.02	< 10	< 1	0.08	13
KMT 1840	< 5	< 0.2	< 0.5	60	1270	< 1	5	3	139	1.29	4	< 10	53	< 0.5	< 2	0.53	16	10	4.91	< 10	< 1	0.07	16
KMT 1841	< 5	< 0.2	< 0.5	891	694	< 1	4	2	52	3.71	3	12	42	0.6	< 2	4.53	5	7	2.26	20	< 1	0.22	< 10
KMT 1842	< 5	< 0.2	< 0.5	59	228	< 1	31	< 2	41	6.41	< 2	< 10	34	< 0.5	< 2	4.57	14	20	3.24	10	< 1	0.18	< 10
NK1801	< 5	< 0.2	< 0.5	74	542	< 1	45	< 2	58	2.77	13	< 10	11	< 0.5	< 2	8.97	18	132	4.59	< 10	< 1	0.02	< 10
NK1802	7	4.4	< 0.5	725	229	1	2	5	14	0.51	< 2	< 10	274	< 0.5	< 2	0.12	2	6	0.64	< 10	< 1	0.23	25
NK1803	< 5	< 0.2	< 0.5	8	374	1	5	< 2	31	0.72	< 2	< 10	31	< 0.5	< 2	0.35	3	12	1.22	< 10	< 1	0.09	15
NK1804	< 5	< 0.2	< 0.5	3	452	< 1	5	< 2	28	0.81	< 2	< 10	147	< 0.5	< 2	0.15	3	9	1.53	< 10	< 1	0.22	12
NK1805	< 5	< 0.2	< 0.5	2	75	1	1	< 2	< 2	0.43	< 2	< 10	172	< 0.5	< 2	0.53	< 1	16	0.29	< 10	< 1	0.06	< 10
DAKM 1801	< 5	< 0.2	< 0.5	31	839	2	13	6	68	1.80	< 2	< 10	156	< 0.5	< 2	3.20	12	22	2.64	< 10	< 1	0.34	< 10
DAKM 1802	9	< 0.2	< 0.5	29	214	7	7	9	25	0.66	< 2	< 10	21	< 0.5	< 2	0.65	9	9	2.48	< 10	< 1	0.21	< 10
DAKM 1803	12	0.8	< 0.5	139	318	28	8	22	33	1.02	< 2	< 10	97	< 0.5	< 2	1.23	8	16	2.43	< 10	< 1	0.32	< 10
DAKM 1804	< 5	0.6	< 0.5	498	688	3	9	4	36	1.07	< 2	< 10	78	< 0.5	< 2	7.25	8	12	2.02	< 10	< 1	0.14	< 10
DAKM 1805	< 5	< 0.2	< 0.5	179	817	< 1	40	< 2	65	3.05	4	< 10	22	< 0.5	< 2	3.25	23	62	4.87	10	< 1	0.06	< 10
DAKM 1806	< 5	< 0.2	< 0.5	69	862	< 1	37	< 2	82	2.71	9	< 10	42	0.5	< 2	1.77	23	60	5.24	< 10	< 1	0.20	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Cu
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.001
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	ICP-OES
KMT 1820	1.01	0.139	0.047	< 0.01	2	8	44	0.23	< 20	3	< 2	< 10	67	< 10	3	13	
KMT 1821	0.42	0.068	0.065	0.06	< 2	9	112	0.07	< 20	1	< 2	< 10	47	< 10	9	5	
KMT 1822	1.10	0.103	0.077	< 0.01	< 2	12	118	0.24	< 20	2	< 2	< 10	79	< 10	10	13	
KMT 1823	0.30	0.130	0.056	0.02	< 2	9	182	0.26	< 20	5	< 2	< 10	55	< 10	16	15	
KMT 1824	0.06	0.046	0.021	0.01	< 2	3	50	0.03	< 20	< 1	< 2	< 10	5	< 10	10	2	
KMT 1825	0.11	0.043	0.016	0.05	< 2	5	175	0.01	< 20	< 1	< 2	< 10	16	< 10	18	< 1	
KMT 1826	0.46	0.035	0.055	< 0.01	< 2	10	43	0.04	< 20	< 1	< 2	< 10	66	< 10	11	3	
KMT 1827	0.13	0.111	0.037	< 0.01	< 2	7	5	0.14	< 20	< 1	< 2	< 10	16	< 10	13	11	
KMT 1828	0.29	0.064	0.123	< 0.01	2	12	36	0.06	< 20	1	< 2	< 10	29	< 10	16	2	
KMT 1829	0.20	0.045	0.016	< 0.01	< 2	3	117	0.08	< 20	< 1	< 2	< 10	15	< 10	4	3	
KMT 1830	0.03	0.147	0.104	0.14	3	10	16	0.05	< 20	< 1	< 2	< 10	17	< 10	28	4	
KMT 1831	0.25	0.128	0.095	< 0.01	2	7	23	0.04	< 20	< 1	< 2	< 10	19	< 10	22	3	
KMT 1832	0.18	0.130	0.097	< 0.01	< 2	11	28	0.09	< 20	< 1	< 2	< 10	22	< 10	15	5	
KMT 1833	0.35	0.120	0.227	0.02	< 2	11	10	0.06	< 20	< 1	< 2	< 10	84	< 10	21	3	
KMT 1834	1.10	0.110	0.172	< 0.01	< 2	18	22	0.44	< 20	2	< 2	< 10	114	< 10	19	5	
KMT 1835	1.99	0.102	0.165	< 0.01	3	21	40	0.54	< 20	3	< 2	< 10	275	< 10	19	7	
KMT 1836	0.67	0.138	0.165	< 0.01	2	16	49	0.46	< 20	2	< 2	< 10	52	< 10	18	5	
KMT 1837	1.71	0.094	0.192	0.22	2	20	28	0.55	< 20	5	< 2	< 10	109	< 10	21	7	
KMT 1838	0.97	0.091	0.146	0.24	3	14	37	0.45	< 20	2	< 2	< 10	163	< 10	14	8	
KMT 1839	0.04	0.137	0.076	< 0.01	3	14	9	0.06	< 20	2	< 2	< 10	44	< 10	16	3	
KMT 1840	1.16	0.136	0.140	< 0.01	3	18	15	0.28	< 20	< 1	< 2	< 10	103	< 10	21	5	
KMT 1841	0.48	0.079	0.058	< 0.01	< 2	5	118	0.17	< 20	< 1	< 2	< 10	109	< 10	6	5	
KMT 1842	0.20	0.027	0.028	< 0.01	3	8	108	0.10	< 20	1	< 2	< 10	144	< 10	3	2	
NK1801	2.99	0.040	0.069	0.29	< 2	18	101	0.30	< 20	5	< 2	< 10	128	< 10	7	8	
NK1802	0.13	0.086	0.011	0.03	< 2	3	14	< 0.01	30	< 1	< 2	10	6	< 10	12	9	
NK1803	0.37	0.092	0.038	0.01	< 2	5	35	0.14	< 20	1	< 2	< 10	13	< 10	11	1	
NK1804	0.33	0.095	0.044	< 0.01	< 2	5	14	0.03	< 20	< 1	< 2	< 10	24	< 10	8	< 1	
NK1805	0.02	0.031	0.002	< 0.01	< 2	< 1	14	< 0.01	< 20	< 1	3	< 10	6	< 10	< 1	< 1	
DAKM 1801	1.29	0.034	0.057	0.43	< 2	5	85	0.07	< 20	< 1	< 2	< 10	60	< 10	5	1	
DAKM 1802	0.26	0.039	0.031	2.14	3	3	28	< 0.01	< 20	5	< 2	< 10	24	< 10	1	< 1	
DAKM 1803	0.55	0.030	0.042	0.80	< 2	3	33	0.09	< 20	4	< 2	< 10	37	< 10	3	1	
DAKM 1804	0.79	0.019	0.009	0.18	< 2	2	80	0.02	< 20	< 1	< 2	< 10	26	< 10	3	< 1	
DAKM 1805	2.23	0.098	0.100	< 0.01	3	15	98	0.39	< 20	< 1	< 2	< 10	168	< 10	5	10	
DAKM 1806	2.57	0.077	0.104	< 0.01	4	15	54	0.42	< 20	< 1	< 2	< 10	183	< 10	5	7	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
132425 Dup		< 0.2	< 0.5	8	1180	< 1	9	< 2	43	3.73	8	< 10	100	0.6	< 2	1.85	19	14	7.48	< 10	1	0.41	< 10
132431 Orig	18																						
132431 Dup	22																						
132438 Orig		< 0.2	< 0.5	11	993	< 1	6	13	72	4.54	4	< 10	30	< 0.5	< 2	0.98	36	4	9.94	10	1	1.67	< 10
132438 Dup		< 0.2	0.6	11	980	< 1	6	12	71	4.49	8	< 10	29	< 0.5	< 2	0.96	36	4	9.80	10	< 1	1.62	< 10
132444 Orig	6																						
132444 Dup	< 5																						
HER 2 Orig																							
HER 2 Dup																							
HER 8 Orig		0.7	< 0.5	318	56	15	4	10	3	0.25	28	< 10	< 10	< 0.5	12	< 0.01	552	1	18.3	< 10	< 1	< 0.01	< 10
HER 8 Dup		0.8	< 0.5	341	58	15	4	7	3	0.26	27	< 10	< 10	< 0.5	12	< 0.01	572	2	19.1	< 10	< 1	< 0.01	< 10
HERS 10 Orig	68																						
HERS 10 Dup	58																						
KMT 1801 Orig	< 5	< 0.2	< 0.5	4	3860	< 1	< 1	4	32	1.13	< 2	< 10	802	< 0.5	< 2	8.62	< 1	2	1.07	< 10	< 1	0.36	18
KMT 1801 Split PREP DUP	< 5	< 0.2	< 0.5	4	4020	< 1	< 1	5	32	1.02	< 2	< 10	781	< 0.5	< 2	8.85	1	4	1.09	< 10	< 1	0.33	19
KMT 1801 Split PREP DUP		< 0.2	< 0.5	4	4020	< 1	< 1	5	32	1.02	< 2	< 10	781	< 0.5	< 2	8.85	1	4	1.09	< 10	< 1	0.33	19
KMT 1812 Orig	< 5																						
KMT 1812 Dup	< 5																						
KMT 1815 Orig		9.3	< 0.5	7370	1180	1	2	7	110	2.97	< 2	< 10	45	0.8	< 2	4.97	11	8	4.18	10	< 1	0.25	< 10
KMT 1815 Dup		9.4	< 0.5	7540	1170	1	3	7	113	2.96	< 2	< 10	45	0.8	6	5.00	12	7	4.20	10	< 1	0.25	< 10
KMT 1818 Orig	< 5	1.2	< 0.5	4350	623	2	19	2	37	4.22	< 2	< 10	79	1.0	7	5.10	8	28	1.90	20	< 1	0.06	< 10
KMT 1818 Dup	< 5	1.2	< 0.5	4420	613	2	21	6	35	4.18	5	< 10	79	1.0	8	5.06	8	27	1.89	20	< 1	0.06	< 10
KMT 1820 Orig	< 5																						
KMT 1820 Dup	8																						
KMT 1829 Orig		< 0.2	< 0.5	7	503	< 1	< 1	< 2	44	2.32	9	< 10	34	< 0.5	< 2	2.83	2	3	0.69	< 10	< 1	0.12	< 10
KMT 1829 Dup		< 0.2	< 0.5	7	497	< 1	< 1	< 2	43	2.35	2	< 10	34	< 0.5	< 2	2.76	2	3	0.70	< 10	< 1	0.12	< 10
NK1801 Orig		< 0.2	< 0.5	75	545	< 1	46	< 2	58	2.82	14	< 10	11	< 0.5	< 2	9.05	19	133	4.63	< 10	< 1	0.02	< 10
NK1801 Dup		< 0.2	< 0.5	74	539	< 1	45	< 2	57	2.72	12	< 10	10	< 0.5	< 2	8.90	17	131	4.54	< 10	< 1	0.02	< 10
NK1805 Orig	< 5																						
NK1805 Dup	< 5																						
DAKM 1804 Orig	< 5	0.6	< 0.5	498	688	3	9	4	36	1.07	< 2	< 10	78	< 0.5	< 2	7.25	8	12	2.02	< 10	< 1	0.14	< 10
DAKM 1804 Split PREP DUP	< 5	0.7	< 0.5	530	709	3	9	6	37	1.10	< 2	< 10	82	< 0.5	< 2	7.43	8	11	2.11	< 10	< 1	0.13	< 10
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Cu
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.001
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	ICP-OES
132417 Orig	2.07	0.027	0.202	0.02	4	10	253	0.24	< 20	< 1	< 2	< 10	106	< 10	7	6	
132417 Split	2.14	0.028	0.208	0.03	6	10	252	0.24	< 20	< 1	< 2	< 10	107	< 10	7	6	
132418 Orig																	
132418 Dup																	
132425 Orig	2.64	0.030	0.107	0.96	3	12	214	0.30	< 20	< 1	< 2	< 10	112	< 10	5	4	
132425 Dup	2.64	0.030	0.106	0.97	5	12	212	0.29	< 20	< 1	< 2	< 10	111	< 10	5	4	
132431 Orig																	
132431 Dup																	
132438 Orig	2.48	0.123	0.101	1.73	3	16	70	0.30	< 20	4	2	< 10	208	< 10	5	3	
132438 Dup	2.43	0.119	0.099	1.68	6	16	69	0.31	< 20	< 1	< 2	< 10	201	< 10	5	3	
132444 Orig																	
132444 Dup																	
HER 2 Orig																	1.94
HER 2 Dup																	1.98
HER 8 Orig	0.11	0.013	0.003	> 20.0	6	< 1	< 1	< 0.01	< 20	< 1	6	< 10	14	< 10	< 1	4	
HER 8 Dup	0.11	0.013	0.004	> 20.0	6	< 1	< 1	< 0.01	< 20	< 1	3	< 10	13	< 10	< 1	4	
HERS 10 Orig																	
HERS 10 Dup																	
KMT 1801 Orig	0.16	0.055	0.028	0.03	< 2	4	131	0.02	< 20	< 1	< 2	< 10	12	< 10	14	2	
KMT 1801 Split PREP DUP	0.15	0.050	0.029	0.03	2	4	133	0.02	< 20	< 1	< 2	< 10	13	< 10	15	2	
KMT 1801 Split PREP DUP	0.15	0.050	0.029	0.03	2	4	133	0.02	< 20	< 1	< 2	< 10	13	< 10	15	2	
KMT 1812 Orig																	
KMT 1812 Dup																	
KMT 1815 Orig	0.94	0.039	0.132	0.27	4	11	134	0.41	< 20	1	< 2	< 10	176	< 10	8	8	
KMT 1815 Dup	0.93	0.038	0.133	0.27	3	11	131	0.40	< 20	4	< 2	< 10	174	< 10	8	9	
KMT 1818 Orig	1.06	0.031	0.060	< 0.01	< 2	6	355	0.24	< 20	< 1	< 2	< 10	130	< 10	4	11	
KMT 1818 Dup	1.04	0.031	0.060	< 0.01	< 2	6	354	0.24	< 20	3	< 2	< 10	131	< 10	4	13	
KMT 1820 Orig																	
KMT 1820 Dup																	
KMT 1829 Orig	0.20	0.045	0.016	< 0.01	< 2	3	117	0.07	< 20	4	< 2	< 10	15	< 10	4	2	
KMT 1829 Dup	0.20	0.044	0.016	< 0.01	< 2	4	116	0.08	< 20	< 1	< 2	< 10	15	< 10	5	3	
NK1801 Orig	3.00	0.041	0.070	0.30	< 2	18	103	0.30	< 20	8	< 2	< 10	130	< 10	7	8	
NK1801 Dup	2.98	0.039	0.069	0.28	3	18	100	0.30	< 20	2	< 2	< 10	127	< 10	6	8	
NK1805 Orig																	
NK1805 Dup																	
DAKM 1804 Orig	0.79	0.019	0.009	0.18	< 2	2	80	0.02	< 20	< 1	< 2	< 10	26	< 10	3	< 1	
DAKM 1804 Split PREP DUP	0.81	0.022	0.009	0.19	< 2	2	84	0.02	< 20	< 1	< 2	< 10	26	< 10	3	< 1	
Method Blank																	
Method Blank																	

ASSESSMENT REPORT

GEOCHEMISTRY and GEOLOGY

of the

DARDANELLE PROPERTY

by K. Mastalerz

December 2018

Appendix 3. Microscope petrographic descriptions

PETROGRAPHIC REPORT
DARDANELLE PROPERTY

Report for: October 01, 2018
Decade Resources
Stewart, BC

Report by:
Alojzy A. Walus, P. Geo
Surrey, BC

SUMMARY AND CONCLUSIONS

This report is based on microscopic examination of 5 thin sections derived from samples collected during the 2018 rock sampling program on Dardanelle property. All samples were stained with sodium cobaltinitrite for easy K-feldspar identification.

Sample DAKM-1832 was identified as sericite-chlorite-quartz replaced rock. The primary rock was not possible to identify as only remnants of original plagioclase crystals were preserved. Sample DAKM-33 is a rhyodacite or latite and sample DAKM-41 is a latite. Both samples contain spherulites which indicate the original rocks was partly composed of glassy material. Sample DAKM-1834A was determined as a quartz vein with pyrite and pyrrhotite. Duplicate of sample DAKM-1834A represents a quartz vein partly replaced by sericite, chlorite and carbonate.

Respectfully Submitted
Alojzy Walus

MICROSCOPIC DESCRIPTIONS

Sample DAKM-1832, Sericite-chlorite-quartz replaced rock

<u>Mineral Composition:</u>

Plagioclase	7-10%
Sericite	55-60%
Quartz (secondary)	15-20%
Chlorite	7-10%
Opaque	2-3%

The primary rock is represented by scattered plagioclase crystals ranging in size from 0.3 to 2.0 mm. They are moderately to very strongly replaced by sericite and lesser clay minerals. Due to very strong alteration the primary rock is not possible to determine. The original rock was to large degree replaced by coarse grained quartz with separate grains reaching 2.0 mm in size. Small amount of quartz may be primary. Sericite, chlorite and opaque minerals formed in the next alteration event to large degree replacing the previously formed minerals.

Sample DAKM-1833, Rhyodacite or latite

<u>Mineral Composition:</u>

Plagioclase phenocrysts	2-3%
K-feldspar phenocrysts	1-2%
Quartz phenocrysts	2-3%
Groundmass	80-85%
Sericite/muscovite	10-15%
Opaque	<1%

The rock consists of plagioclase, K-feldspar, and quartz phenocrysts 0.3 to 1.0 mm in size. Feldspars are moderately to strongly sericitizied. Groundmass is comprised of quartz, K-feldspar and plagioclase. However, determination of the exact composition of the groundmass is not possible. Staining with sodium cobaltinitrite indicate the sample has only 3-5% K-feldspar. However, the groundmass has 40-45% of well-formed spherulites. Since K-feldspar is the main constituent of spherulites its content in the sample could be much higher. The presence of spherulites indicate that original groundmass was partly composed of glass.

Sample DAKM-1834A, Quartz vein with pyrite and pyrrhotite

Mineral Composition:

Quartz	85-90%
Sericite	5-10%
Chlorite	<1%
Pyrite	1-2%
Pyrrhotite	1-2%

The sample is dominated by mosaic of anhedral quartz grains ranging in size from 0.1 to 2.0 mm. Sericite and minor chlorite form irregular, discontinuous veins. Pyrite and pyrrhotite mostly form anhedral grains within quartz grains, in places they occur with sericite.

Sample DAKM-1834A (duplicate), Quartz vein partly replaced by sericite, chlorite and carbonate.

Mineral Composition:

Quartz	65-70%
Sericite	15-20%
Chlorite	10-15%
Carbonate	3-5%
Opaque	1-2%

The primary rock was a quartz vein or replacement composed of mosaic of coarse quartz grains up to 2.0 mm in size. The primary rock was to large degree replaced by mineral assemblage comprised of sericite, chlorite, carbonate and opaque.

Sample DAKM-1841, Latite

Mineral Composition:

K-feldspar phenocrysts	3-5%
Plagioclase phenocrysts	3-5%
Quartz phenocrysts	2 grains
K-feldspar (groundmass)	45-50%
Plagioclase & quartz (groundmass)	35-40%
Sericite	3-5%

The rock contains 6 to 10 % of combined K-feldspar and plagioclase phenocrysts ranging in size from 0.3 to 1.5 mm. They are moderately to strongly sericitizied. Subhedral quartz phenocrysts are 1.5 mm across. Phenocrysts are set in a groundmass dominated by K-feldspar with lesser plagioclase and quartz. It is not possible to determine the exact composition of the groundmass. The groundmass contains crude spherulites 0.3 to 0.5 mm in diameter composed of acicular radiating crystals of K-feldspar. The presence of spherulites indicate that original groundmass was partly composed of glass. In many places a myrmekite-like texture can be seen in the groundmass. The nature of this texture is not clear.