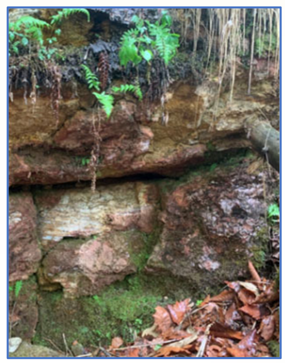
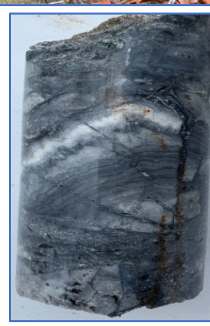
KATO GOLD PROJECT

Japan

NI 43-101 TECHNICAL REPORT





Prepared for:

BeMetals

Report effective date:

13 July, 2021

Prepared by:

Mr Tom Garagan, P.Geo.

Mr Luke Viljoen, Pr Nat. Sci.

CERTIFICATE OF QUALIFIED PERSON

I, Tom Garagan, P.Geo, am employed as a Director with BeMetals Corp., with an address at Suite 3123 – 595 Burrard Street, Three Bentall Centre, Vancouver, BC, Canada V7X 1J1.

This certificate applies to the technical report titled “Kato Gold Project, Japan, NI 43-101 Technical Report” that has an effective date of 13 July, 2021 (the “technical report”).

I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, and of the Association of Professional Engineers, Geologists and Geophysicists of Alberta. I graduated from the University of Ottawa with a Bachelor of Science (Honours) degree in Geological Sciences in 1980.

I have practiced my profession for 40 years. In this time I have been directly involved in generating and managing exploration activities, and in the collection, supervision and review of geological, mineralization, exploration and drilling data; geological models; sampling, sample preparation, assaying and other resource-estimation related analyses; assessment of quality assurance-quality control data and databases; and supervision of mineral resource estimates.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101) for those sections of the technical report that I am responsible for preparing.

I visited the Kato Project from 2–6 July 2015.

I am responsible for Sections 1.1, 1.2, 1.4 to 1.8, 1.9.2, 1.9.3, 1.10 to 1.12; Section 2; Section 3; Section 4; Section 6; Section 7; Section 8; Section 9; Section 10; Section 11; Sections 12.2 to 12.5; Section 13; Section 14; Section 15; Section 16; Section 17; Section 18; Section 19; Section 20; Section 21; Section 22; Section 23; Section 24; Section 25, Section 26 and Section 27 of the technical report.

I am not independent of BeMetals as independence is described by Section 1.5 of NI 43–101.

I have been involved with the Kato Project since 2015 during which time I supervised exploration programs conducted by Kazan Resources K.K., a wholly-owned BeMetals subsidiary.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: 3 August, 2021

(Signed) "Tom Garagan"
Tom Garagan, P.Geo.

CERTIFICATE OF QUALIFIED PERSON

Mr Luke Viljoen
18 Bermuda Crescent,
West Beach, Cape Town 7441
South Africa,

I, Luke Viljoen, Pr. Sci. Nat., am employed as an independent consulting geologist.

This certificate applies to the technical report titled “Kato Gold Project, Japan, NI 43-101 Technical Report” that has an effective date of 13 July, 2021 (the “technical report”).

I am a Professional Natural Scientist of the South African Council for Natural Scientific Professions, Pr. Sci. Nat (009809). I graduated from the University of Cape Town with a Bachelor of Science (Honours) degree in Geological Sciences in 2013.

I have practiced my profession for six years since graduation. I have been directly involved in managing greenfields and brownfields exploration projects in Botswana, Gabon, Japan, Namibia, South Africa, and Zambia, with a focus on base metals and gold. I have been involved in initial site inspections, and in the collection, collation, interpretation and verification of geological, geochemical and geophysical data including geological mapping, geochemical sampling, drill collar positioning, geological logging, drill sampling, sample preparation, and data quality control and quality assurance.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101) for those sections of the technical report that I am responsible for preparing.

I visited the Kato Project between 27–31 January, 2021.

I am responsible for Sections 1.1, 1.2, 1.3, 1.9.1, 1.11; Section 2; Section 5; Sections 12.1, 12.4; Sections 25.1, 25.7, 25.9; and Section 27 of the technical report.

I am independent of BeMetals Corp. as independence is described by Section 1.5 of NI 43–101.

I have had no previous involvement with the Kato Gold Project.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: 3 August, 2021

“Signed”

Luke Viljoen, Pr. Sci. Nat.

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1.1 Introduction

Mr Tom Garagan, P.Geo., and Mr. Luke Viljoen, Pr. Sci. Nat., prepared an NI 43-101 Technical Report (the Report) on the Kato Gold Project (the Project) for BeMetals Corp. (BeMetals). The Project is located in central Hokkaido, Japan.

1.2 Terms of Reference

This Report provides information on the exploration-stage Project, to support disclosures in the BeMetals news release dated 28 July, 2021, entitled "BeMetals Completes Technical Report for the Kato Gold Project in Japan and Identifies Four High Priority Targets for Drilling".

The Report uses Canadian English. Units used in the report are metric units unless otherwise noted. Monetary units are in United States dollars (US$) unless otherwise stated.

1.3 Project Setting

1.3.1 Location

The Kato Project is situated in a rural setting near the centre of Hokkaido, directly northwest of the town of Kamishihoro (population 4,900), 40 km north of the city of Obihiro (population 169,000) and 160 km east of the prefectural capital, Sapporo (population 1,950,000). The Project borders the rugged and mountainous Daisetsuzan national park.

1.3.2 Accessibility

The Kato Project area is serviced by the regional airport of Obihiro, with several daily flights to the national capital, Tokyo. The nearest international airport is in Chitose city, 180 km to the west.

The principal road links to Kamishioro town are national Route 241 and 273. Route 241 links Kamishihoro with the city of Obihiro on good quality tar (hard-surface) roads that are suitable for heavy vehicles year-round. The Project extends approximately 9 km into the surrounding hills from Kamishihoro town, with the existing road network permitting access to much of the Project area. Roads within the Kato Project area consist of a mix of tar, wide gravel, and extensive narrow forestry roads.

The closest rail link to the Kato property is in Obihiro, with freight and passenger routes to the bulk carrier ports of Kushiro and Tomakomai, located approximately 120 km to the east, and 200 km to the west, respectively.

1.3.3 Climate

Hokkaido has a humid continental climate with four distinct seasons. Summers are typically warm and humid with cold winters commonly reaching below -10°C. Snow typically falls from November–March and begins to melt in April. Due to the snow, the summer exploration season is typically limited to April–October.

Compared to the rest of Japan, Hokkaido has no distinct rainy season ("tsuyu") and is significantly less affected by annual typhoons.

Exploration activities are curtailed by winter conditions. Mining activities could be conducted year-round.

1.3.4 Local Infrastructure

The town of Kamishihoro contains all necessary resources for exploration including several clinics, accommodation, labour, mechanics, welders, and stores. Heavy machinery such as earth-moving vehicles and cranes can be rented. The town has a constant supply of electricity and fuel.

Grid electricity is available in a portion of the Project area. Water sources include piped water in the low-lying farmlands, and perennial rivers and streams throughout the hills.

Kazan Resources has established a core shed and accommodation in the Kato Project area, located 20 minutes from the town of Kamishioro.

1.3.5 Physiography

The physiography of the Kato Project area consists of both shallowly inclined farmlands bordering the town of Kamishihoro (approximately 300–400 masl), and moderate mountains farther to the west (reaching 600 masl).

Two main perennial rivers, Seta and Naitai, crosscut the Project, and flow southeast into the Otofuke River.

The Project is well vegetated, consisting predominantly of a mix of natural and planted coniferous trees (Sakhalin spruce and Sakhalin fir) and broad-leaved Japanese birch. Secondary low-lying thin bamboo called "sasa" is prevalent and can make ground exploration difficult in the summer months.

1.3.6 Seismicity

The Hokkaido region is seismically active. There is potential for seismic events to disrupt exploration programs, either by damaging road access or interrupting the provision of services and goods.

1.4 Mineral Tenure, Surface and Water Rights, Royalties and Agreements

1.4.1 Mineral Tenure

The Kato Project consists of six claims, covering a total area of 1,956.4 ha.

1.4.2 Surface Rights

The Kato Project is at an early exploration stage, and BeMetals currently has no surface rights interest.

Surface rights to PR 27-241, the concession where drilling has taken place, are held by two owners:

- Kyosei Rentum K.K, a medium-size Japanese corporation;
- Mr. Azumai, a local farmer.

Access and drilling permission were obtained under a contractual agreement with both land owners. Under the agreements, a flat fee is paid for each drilling pad.

It is expected that drilling permission for future drill programs will be based on similar agreements and compensation payments.

1.4.3 Water Rights

Permission to access local water sources is obtained from the town of Kamishihoro for a fee. The Seta River provided the water used for drill programs to date.

It is expected that these sources can be used for future exploration and drill programs.

1.4.4 Royalties

There are no royalties associated with the exploration work that has been, and is planned to be, conducted.

A mining tax is levied each municipality on holders of mining rights that are in production, as follows:

- For mines earning >2 M Japanese yen per month: 1% of the sales price of the extracted minerals;
- For mines earning ≤2 M Japanese yen per month: 0.7% of the sales price of the extracted minerals.

1.4.5 Agreements

No Project agreements are in place with any third party.

Kazan Resources has agreements in place for the rental of equipment, warehousing space, and staff accommodation. It also has commercial agreements for the supply of food, diesel fuel, gas, and kerosene.

1.5 Geology and Mineralization

The mineralization identified to date in the Kato Project area is considered to be an example of a low-sulphidation epithermal system. The classic example of this mineralization type in Japan is the Hishikari mine, on the island of Kyushu. Global examples of this type of mineralization include Lihir (Papua New Guinea), Kupol and Julietta (Russia), Waihi (New Zealand) and Masbate (Philippines).

Volcanism and lacustrine sedimentation related to the collision of the Eurasian and North American plates began in the eastern Hokkaido region during the Miocene and continued until Quaternary time. Subaerial volcanism was co-eval with the formation of the north–south-trending Monbetsu–Kamishihoro graben and uplift of the Hidaka Mountains to the west. The graben is host to as many as 57 epithermal gold–silver deposits. The gold deposits and the enclosing volcanic rocks generally decrease in age from about 14.3 Ma in the north of the graben to 0.3 Ma in the south.

The geology is characterized by the late Miocene Horokapiribetsugawa Formation, the Pliocene Ashoro Formation, and Quaternary alluvial fan and talus deposits. The Miocene and Pliocene lithologies dip slightly to the southeast. Andesite lavas of the Moiwayama formation, associated with dacitic units, crop out in the north and west of the Kato Project. The southwestern area is dominated by the Quaternary fan and talus deposits.

The Kato prospect (historically referred to as the Seta River prospect) is an example of a remarkably well-preserved low sulphidation epithermal gold occurrence. Outcropping clay-altered and weakly-mineralized lake-bed sediments are evidence of a high-temperature steam-heated zone above a hydrothermal plumbing system.

Faults associated with two prominent northwest-trending structures, F1 and F2, provided pathways for hot spring activity to breach the surface, forming siliceous sinter deposits and explosion breccias.

Strong argillic alteration affected andesite and tuffaceous rocks along the faults while silicification dominates within the sedimentary horizons to the east. The clay alteration is associated with a low sulphidation epithermal quartz vein and stockwork zone which lies immediately east of the fault zone and runs parallel to it.

Mineralization is primarily hosted within tuff breccia, andesite lavas and occasionally in the Horokapiribetsugawa Formation mudstone/siltstone sequence.

The main vein zone is defined as the quartz–adularia vein zone (QAV). An adjacent zone on the east side of the QAV consists of a narrow quartz vein stockwork and hydrothermal breccias (STV). The QAV zone lies in between the F1 and F2 faults and has been defined by drilling for about 170 m of strike length. The STZ zone lies adjacent to, and to the east of, the F2 fault and can be traced for about 600 m.

The QAV zone hosts white or bluish-gray crustiform quartz veins. The majority of gold mineralization, and in particular the higher gold grades, is associated within the white crustiform quartz veins. Quartz breccia is characteristic. Adularia is common, and most abundant in the higher-grade gold zones.

The STZ zone comprises anastomosing chalcedonic quartz stockwork and veins, hydrothermal breccia, and vein breccias with zones of locally abundant pyrite and marcasite.

Several outcrops of hydrothermal breccia are present above the main mineralized zone, and form a northwest–southeast-striking zone of brecciation and silicification. Black sulphide-rich breccias are spatially associated with hydrothermal breccia zones, and cross-cut the white crustiform quartz veins.

Anomalous gold and silver grades are associated with crosscutting and brecciated white crustiform quartz veins, and with well-developed ginguro bands (gray/black colloform bands of quartz colored by sulphides). Sulphide mineralization is typically fine-grained, and consists of electrum, argentite (Ag_2S), pyrargyrite (Ag_3SbS_3), miargyrite ($AgSbS_2$), polybasite ($(Ag,Cu)_6(Sb,As)_2S_7)(Ag_9CuS_4)$, Ag-tetrahedrite ($Cu_6(Cu_4(Fe,Zn)_2)Sb_4S_{13}$), stephanite ($Ag_5SbS_4$), pyrite, chalcopyrite and sphalerite.

Gangue minerals within the veins include quartz, adularia, calcite and various clays. Open space filling alteration minerals include smectite, a chlorite–smectite mixed layer, clay, kaolinite, and alunite.

1.6 History

The Kato Project covers a well-known mining locality named Seta River. Prior to the 1940s, numerous small pits and small-scale quarries were excavated in the Seta River area for cinnabar and native mercury. Kaolinite and zeolite were also mined.

Prior to BeMetals' Project interest, work was conducted by the Hokkaido Development Bureau and the Geological Survey of Hokkaido, but principally by the Metals and Mining Agency of Japan (MMAJ), in the period 1991–1999. Work programs included rock chip sampling (616 rock chip and 306 soil samples), GEOGAS and radon gas geochemistry survey, three ground induced polarization (IP) resistivity geophysical surveys (105.5 line-km), clay-alteration studies, fluid inclusion studies, potassium–argon age dating, and core drilling (63 core holes; 22,988.30 m). This identified gold mineralization associated with a northwest-trending fault zone that runs parallel to the Seta River. One Master of Science thesis was completed on the Kato area, but has not been translated.

In 1999, the Japanese Government decided to scale back their financial investment in-country and focus instead on developing offshore resources. No additional work was conducted by the MMAJ in the Kato area.

In 2016, staff from B2Gold Corporation (B2Gold) visited the Project area. At the time, B2Gold held an interest in Kronk Resources and Kazan Resources. From 2017 to date of Project acquisition by BeMetals, all exploration activities conducted by Kazan Resources were directed by B2Gold personnel. Mr. Garagan, who is Senior Vice President Exploration with B2Gold, and a director of BeMetals, supervised those exploration and drill programs. Kronk Resources was acquired by BeMetals April 2021, following a definitive agreement that was entered into in February 2021. For the purposes of the exploration, drilling, sampling, and data verification discussions in the remainder of this Report, the work completed by Kazan Resources under supervision of B2Gold staff or work conducted by BeMetals, is referred to collectively as Kazan Resources programs.

Kazan Resources commissioned translations of a portion of the MMAJ reports, compiled MMAJ exploration and drill data, performed reconnaissance exploration and rock chip sampling (78 samples), conducted an initial drone-mounted magnetic survey (2 km^2), a follow-up drone-mounted magnetic and light detection and ranging (LiDAR) survey covering 21.6 km^2, selected targets for drill testing, and completed 10 core holes (2,084.30 m).

1.7 Drilling

Drilling was conducted by the MMAJ and Kazan Resources. Total drilling includes 63 core holes (22,988.30 m) completed by MMAJ in the 1990s and 10 core holes (2,084.30 m) drilled by Kazan Resources.

1.7.1 MMAJ

The MMAJ drilling was conducted over a period of nine years, beginning in 1991. Several drilling companies were contracted for the drilling including Nittetsu, Hokusei, Suncoh, Kitaya, Ueyama, Major, Nisako, Koken Kogyo, Dowa Koei, and Nikko Exploration Co. The make and model of the drills is not known.

The core sizes are not listed in the Japanese reports, but some rare photos of the core suggest HQ (63.5 mm core diameter), NQ (47.6 mm), and BQ (36.4 mm) were used. None of the MMAJ core has been located, aside from a single box from drill hole 11MAHSE-6 that is kept in a local museum.

The MMAJ drill logs available at the Japan Oil, Gas and Metals National Corporation (JOGMEC) office in Tokyo that were viewed by BeMetals personnel show that the drill geologists logged on paper using depth in metres, a graphic log, rock type, visual description of interval, qualitative alteration column for clay and silicification, comments, and description of mineralization with results for gold and silver.

There is no information regarding core recovery for the MMAJ drill holes.

There is no information regarding the methodology used by MMAJ to locate drill hole collars. The collar locations published in the reports available at the JOGMEC library in Tokyo appear to be very good based on field verification by BeMetals staff.

The downhole survey technique used in the MMAJ drilling is not listed.

Cross sections and diagrams shown in the MMAJ reports suggest to the QP that the QAV zone is dipping 60–90º to the southwest largely based on three drill holes, 5MAHB-2, 7MAHB-1, and 7MAHB-4 that appear to define a northwest-trending zone of quartz veining over a horizontal distance of about 170 m.

1.7.2 Kazan Resources

Kazan Resources contracted Energold Canada to import one of their man-portable drills in October, 2018. The 2018 program goal was to verify the presence of higher-grade quartz–adularia mineralization in the Kato main zone. Drilling was initiated using HQ (63.5 mm) core with HW (76.2 mm diameter) casing. HQ was used to depths of over 150 m if no difficult ground conditions were encountered. Core size was reduced to NTW (thin-walled NQ; 57 mm) for most of the deeper drilling. The campaign was terminated with the onset of winter.

The drilling campaign resumed in April, 2019 and a total of 1,707.3 m were drilled in eight core holes. Several attempts were made to intersect the higher-grade quartz adularia zone but issues with ground conditions, and the realization that the drill lacked sufficient power to deal with the ground conditions, changed the focus of the drilling campaign to the secondary targets located further to the southeast along the strike of the mineralization.

In 2020, owing to COVID-19 travel restrictions, Kazan Resources hired a Japanese drilling company, Akita Shisui to drill two holes at Kato. Akita Shisui used a Nippon Longyear 55 electric drill with a Murata survey tool for deviation measurements. Drill hole KT20-010 was programed to 350 m depth but also encountered very difficult drilling conditions causing the drill hole to be abandoned at 232 m depth. The other proposed drill hole was cancelled.

At the core shed, core recoveries were measured and compared with the recoveries reported by the drillers. When there was significant core loss, it was common practice at BeMetals to insert a wooden block indicating the amount of missing core. Magnetic susceptibility measurements were taken, and the core was photographed both wet and dry.

Prior to logging, sampling intervals were identified based on the presence or lack of visual mineralization. When no mineralization was evident, intervals were defined by rock type, alteration, or any other obvious defining characteristic and no samples were taken. In mineralized rock, samples were defined by veining intensity, sulphide content, gangue, or other characteristics that would distinguish the sample from adjacent lithologies, such as a sharp vein contact with host rock.

Logging was done on paper. Characteristics that were recorded include, drill hole, coordinates in WGS 84, azimuth, inclination, total depth, sample number, sample length, recovery, weathering, lithology, alteration, quartz structure, percent quartz, texture, presence of adularia or manganese, Fe-oxides, structures (type, depth, and angle to core axis) and any comments the logging geologist wished to make.

The logs were entered into a digital database using Excel. The complete database includes the geological logs, recovery, magnetic susceptibility, collar information, downhole surveys, assays, and a composite summary.

Poor core recoveries were returned in kaolinite and kaolinite–smectite clay zones and in zones that displayed fractured strongly-silicified volcanic rocks, quartz veins, and stockwork veining.

Kazan Resources used a hand-held global positioning system (GPS) instrument to locate the B Kazan Resources drill collars. Energold used a Reflex EZ-Track multi-shot survey instrument to measure downhole deviation during the BeMetals drill programs. Surveys were taken every 25 m going down the drill hole, unless there was a risk of getting the instrument stuck. The single drill hole completed by Akita Shisui was down-hole surveyed using a Murata single-shot camera tool.

The style of mineralization at Kato varies from sharp vein contacts in altered wall rock to stockwork and silicification with occasionally strong marcasite and pyrite, and hydrothermal breccia.

Kazan Resources staff and the QP could not confirm the dip of the vein system or vein true widths, despite numerous attempts, owing to difficult drilling in bad ground conditions. The main mineralized zone has only been completely crossed by three widely-spaced holes so the orientation and true thickness of the mineralized zone is currently not known.

1.8 Sampling and Analysis

1.8.1 MMAJ

No information is available as to sampling methodologies used by MMAJ. No information is available as to the laboratories used by MMAJ or any accreditations that the laboratories may have held. Nor is there any information as to sample preparation procedures. The majority of the MMAJ analyses were for gold and silver only, although a few intervals were analyzed for arsenic, mercury and antimony. There is no indication of any over-limit assays being performed.

There is no information regarding quality assurance and quality control (QA/QC) procedures for the MMAJ drill holes. Most of the assay results from the Japanese reports are typed lists although, in a few rare cases, copies of the original results from Chemex Laboratories are included.

There is no information regarding chain of custody for the MMAJ drill hole samples.

1.8.2 Kazan Resources

Rock chip samples were collected as either grab or chip samples.

Once the core was logged and sample intervals marked, the core was cut in half. If vein orientations or banding were evident in the core, care was taken to cut the intervals at 90º to the vein trace, that is, along the vein axis dividing the vein in equal representative parts. Core that was poorly indurated such as fragile clay-altered zones, was taped so that it could be cut without falling apart.

No density data are known to have been collected in the Project area.

All BeMetals analyses were completed by ALS in Vancouver, BC, Canada (ALS Vancouver). ALS Vancouver is accredited by the Standards Council of Canada (SCC) for specific tests listed in the Scopes of Accreditation to ISO/IEC 17025, the General Requirements for the Competence of Testing and Calibration Laboratories and the PALCAN Handbook (CAN-P-1570). ALS Vancouver is independent of BeMetals.

All samples were dried if necessary, crushed to 70% passing 6 mm, crushed to 70% passing 2 mm, split to 250 g and pulverized to 85% passing 75 µm.

Both surface and core samples taken by BeMetals were analyzed using the ALS Vancouver Au-AA24 fire assay fusion with atomic absorption spectroscopy (AAS) finish for gold. Over limits of 10 g/t Au were re-assayed using fire assay with gravimetric finish. For other elements, the ME-ICP61m package was used, which consists of 0.75 g sample digestion with inductively-coupled plasma atomic emission spectroscopy (ICP-AES) finish for a 33-element suite.

QA/QC samples include blanks, laboratory duplicates, field duplicates or standard reference materials (standards). Insertion frequencies are considered to be adequate at one standard, one blank and one duplicate (alternating preparation and field duplicates) every 35 samples. No QA/QC failures were recorded related to the Kato drilling. Evaluation of standard results does not reveal any significant analytical bias. The QA/QC data from the Kato indicates acceptable levels of precision and accuracy.

The chain-of-custody procedure for the Kazan Resources programs was to have samples delivered in tamper-resistant pallets, and to have a chain-of-custody form to record transport and receipt of samples by the laboratory.

1.9 Data Verification

1.9.1 2021 Site Visit

A site visit was conducted by Mr. Luke Viljoen from 27–31 January, 2021. He inspected the Project area, reviewed local infrastructure, geological characteristics, verified grab sample locations, inspected drill core and drilling sites, reviewed geological data collection and sample preparation procedures, discussed historical activities on the properties with Kazan Resources representatives, and collected a number of verification samples of outcrop and drill core from the Kato area.

1.9.2 2015 Site Visit

A site visit was conducted by Mr. Tom Garagan from 2–6 July 2015, during which visit Mr Garagan visited the Kato locality and inspected local infrastructure and geological characteristics in support of a decision to acquire the property.

1.9.3 Data Verification

Verification performed on the Kazan Resources drilling included checks of original paper log data against digitally-uploaded data, and review of QA/QC data. Data are acceptable for early-stage exploration vectoring.

1.10 Risks and Opportunities

The Project is an early-stage exploration property and BeMetals has not been able to confirm the strike length, dip of the vein system or vein true widths to date. The Kato prospect remains an attractive exploration target, and warrants additional drilling and exploration to test the mineralization located by the MMAJ.

There is a risk that the planned drill program may not successfully test the Kato mineralization, due to the known difficult drilling conditions. However the risk is being mitigated by selection of larger drilling equipment and a revised drill hole design that will include a mud cleaning system.

1.11 Interpretation and Conclusions

BeMetals is exploring epithermal-style gold mineralization in the Kato area, which, while drill-tested, has not been sufficiently explored using modern exploration methods, including geophysics.

The 1990s MMAJ drilling identified a zone of higher-grade gold mineralization over approximately 170 m of strike with an additional kilometre of potentially-favorable geology largely untested by drilling to the southeast. The gold-bearing zone is hosted in QAV and breccia, and occurs at depths that range from around 50–225 m below surface (Figure 1-1). A fault likely offsets the zone to the southeast, and little drilling has been done to follow the target zone along strike in that direction. Three MMAJ drill holes (5MAHB-2, 7MAHB-1, and 7MAHB-4) intercepted the mineralization; however, the true thickness of these intercepts could not be determined from the relatively limited amount of drilling.

During Kazan Resources drill programs, as a combined result of challenging drilling conditions related largely to extensive alteration zones developed around the gold-bearing veins, and the lack of suitable core drilling equipment available to BeMetals in Hokkaido, none of the holes drilled penetrated the full extent of the 170 m-long higher-grade vein zone. Two Kazan Resources drill holes (KT19-02A and KT20-010) were sited to test the zone, and intersected wide intervals of lower-grade gold mineralization, but had to be abandoned before the depths where the higher-grade gold material was predicted to be located had been reached.

The QPs consider the Project to be of sufficient quality to warrant additional exploration expenditure, and have designed a set of recommendations to delineate additional mineralization and drill test prospects identified from the MMAJ and BeMetals exploration programs to date.

Figure 1-1: Priority Drill Target

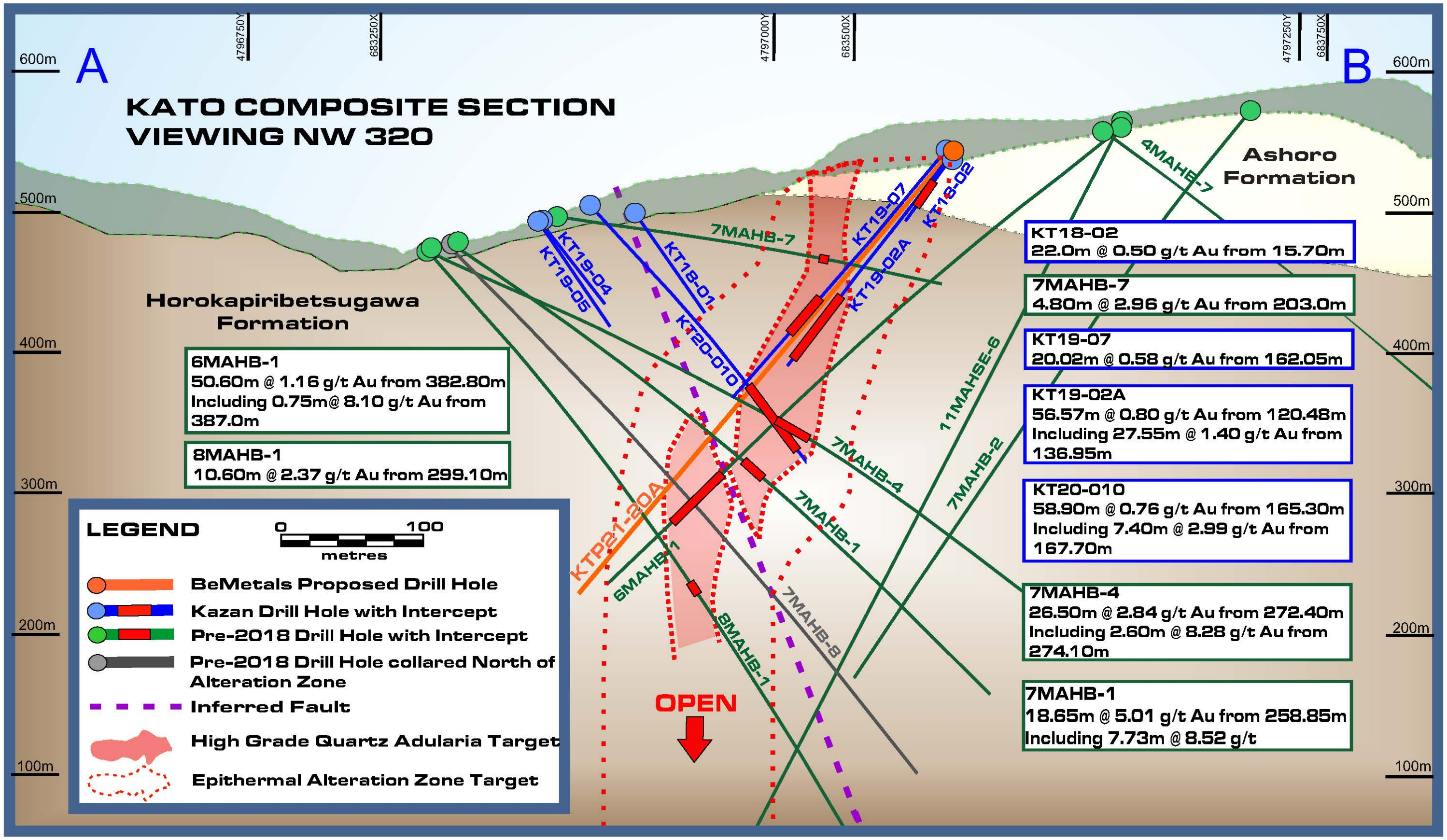


Figure prepared by BeMetals, 2021. Note that Table 10-3 summarizes all of the MMAJ drill intercepts, and Table 10-4 provides the results of the BeMetals drilling.

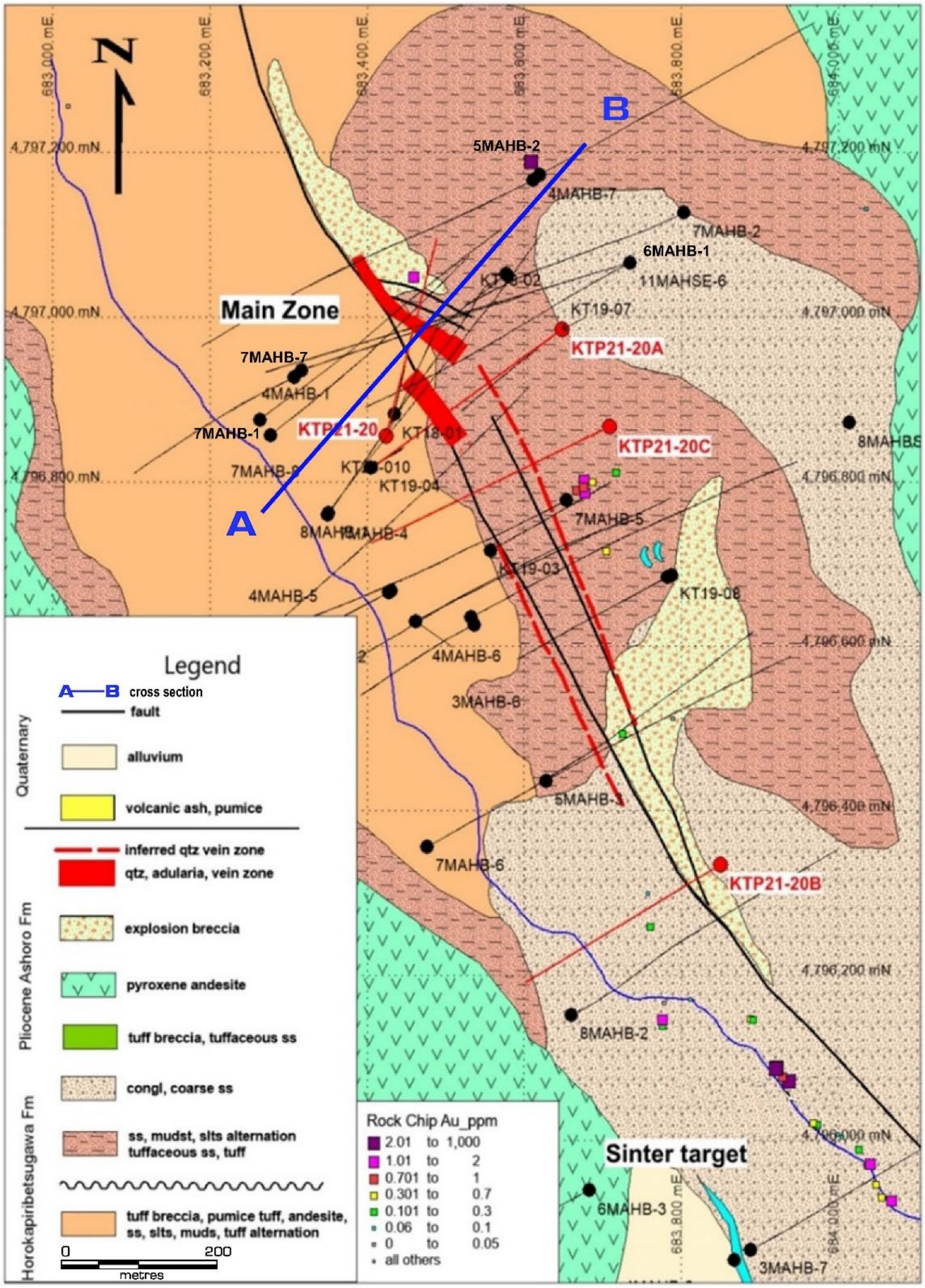
1.12 Recommendations

BeMetals is currently organizing another drilling campaign using a more powerful drill and adding PQ (85 mm core diameter) core capabilities. This will allow for two phases of reduction from PQ to HQ and HQ to NQ and provide much more torque to deal with the clay issues.

The priority drill target remains to intersect the QAV zone that hosts higher gold grades, and verify the grades reported in the MMAJ reports. The drilling plan will also seek to step out to the southeast along strike in a poorly drill-tested extension of the QAV and hydrothermal breccia zones. In addition, BeMetals plans to drill-test the sinter target. The locations of the proposed drill holes are shown in Figure 1-2.

The program assumes four core holes will be drilled for 1,500 m of drilling, at a total program cost of about US$1.1 million.

Figure 1-2: Proposed Drill Collar Location Plan



Note: Figure prepared by BeMetals, 2021. Planned drill hole locations are shown in red.

2.0 INTRODUCTION

2.1 Introduction

Mr Tom Garagan, P.Geo., and Mr. Luke Viljoen, Pr. Sci. Nat., prepared an NI 43-101 Technical Report (the Report) on the Kato Gold Project (the Project) for BeMetals Corp. (BeMetals). The Project is located in central Hokkaido, Japan (Figure 2-1).

The Kato Project includes an area around the Seta River that was formerly mined for kaolinite, zeolite, and cinnabar.

2.2 Terms of Reference

This Report provides information on the exploration-stage Project, to support disclosures in the BeMetals news release dated 28 July, 2021, entitled “BeMetals Completes Technical Report for the Kato Gold Project in Japan and Identifies Four High Priority Targets for Drilling”.

The Report uses Canadian English. Units used in the report are metric units unless otherwise noted. Monetary units are in United States dollars (US$) unless otherwise stated.

2.3 Qualified Persons

The following serve as the qualified persons for this Technical Report as defined in National Instrument 43-101, Standards of Disclosure for Mineral Projects, and in compliance with Form 43-101F1:

- Mr Tom Garagan, P.Geo., Director, BeMetals;
- Mr. Luke Viljoen, Pr. Sci. Nat., Consulting Geologist.

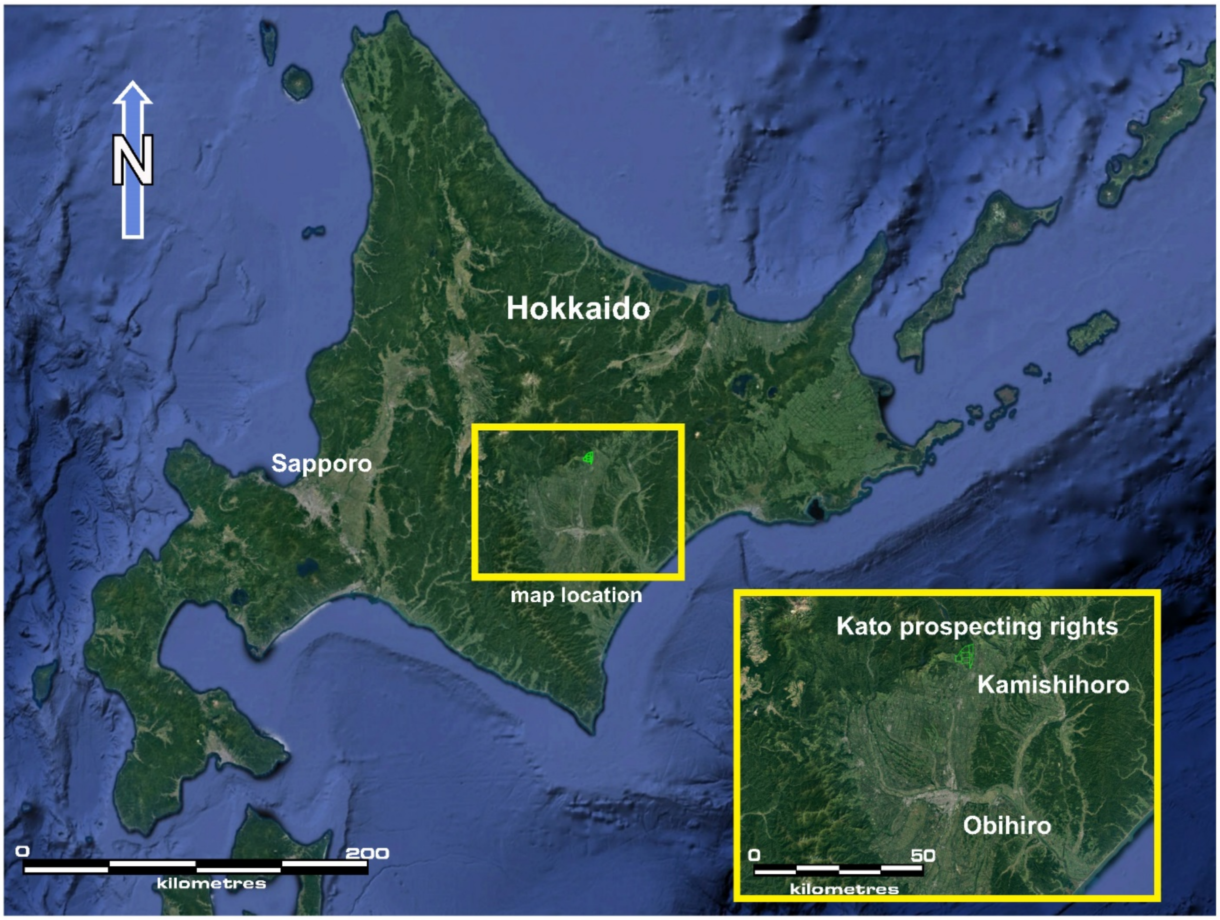
2.4 Site Visits and Scope of Personal Inspection

Mr. Luke Viljoen visited the Kato Project from 27–31 January, 2021. During that visit, Mr. Viljoen visited each of the property areas. He inspected each property area, reviewed local infrastructure, geological characteristics, verified grab sample locations, inspected drill core and drilling sites, reviewed geological data collection and sample preparation procedures, discussed historical activities on the properties with BeMetals representatives, and collected a number of verification samples of outcrop and drill core from the Kato area.

2.5 Effective Dates

The overall Report effective date is taken to be the date of compilation of the exploration information and data verification of the BeMetals data and is 13 July, 2021.

Figure 2-1: Location Plan



Note: Figure prepared by BeMetals, 2021.

2.6 Information Sources and References

Reports and documents listed in Section 3 and Section 27 of this Report were used to support preparation of the Report. Additional information was provided by BeMetals personnel as requested. Supplemental information was also provided to the QPs by third-party consultants retained by BeMetals in their areas of expertise.

Information pertaining to surface rights, royalties, environmental, permitting and social considerations were sourced from BeMetals experts in those fields as required.

2.7 Previous Technical Reports

BeMetals has not previously filed a technical report on the Project. The QPs are also not aware of any technical report previously filed by any party on the Project.

3.0 RELIANCE ON OTHER EXPERTS

The QPs have not independently reviewed ownership of the Project area and any underlying property agreements or mineral tenure. The QPs have relied upon, and disclaim responsibility for, information derived from BeMetals and legal experts retained by BeMetals for this information through the following document:

- Hayabusa Asuka, 2021: Title Report: report prepared for BeMetals Corp and the Toronto Stock Exchange, dated 10 April, 2021, 17 p.

This information is used in Section 4 of the Report.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Introduction

The Kato Project is situated in a rural setting near the centre of Hokkaido directly northwest of the town of Kamishihoro (population 4,900), 40 km north of the city of Obihiro (population 169,000) and 160 km east of the prefectural capital, Sapporo (population 1,950,000). The Project borders the rugged and mountainous Daisetsuzan national park.

The geographic centre of the Kato Project is located at 684000 mE, 4795000 mN UTM zone 54 T (universal trans-Mercator projection).

4.2 Property and Title in Japan

Information in the following subsections is abstracted from Takahashi (2021). The QPs have not independently reviewed this information.

4.2.1 Mineral Title

Mineral title is governed by Act No. 289 of 1950 (the Mining Act), as amended in 2012. The governmental department with administrative oversight of the Mining Act is the Ministry of Economy, Trade, and Industry (METI).

The Mining Act distinguishes between minerals generally and those that are determined by METI to be especially important to the Japanese economy, and classified as “specified minerals”. The majority of minerals classified as “specified minerals” are when those minerals are in an oceanic setting, occurring on or under the seabed.

The Mining Act provides for three types of rights, “mining rights” (kogyo-ken), “mining lease rights” (soko-ken) and “exploration” (tansa). Mining is conducted either under a “prospecting right” (shikutsu-ken) or “digging right” (saikutsu-ken). Prospecting rights generally allow for trial mining or bulk sampling. Digging rights allow commercial-scale extraction.

Prospecting Right

Prospecting rights are granted for a two-year period, and can be extended for two additional two-year periods. Renewal is subject to timely payment of taxes, and applicable work programs being conducted.

Holders must commence exploration within six months of the right being granted; typically, this is expected to be the start of a drill program. There are no minimum work obligations or expenditures that must be met. Annual work reports are required to be submitted to METI.

Digging Right

There is no procedure under the Mining Act to automatically convert a prospecting right into a digging right. A prospecting right holder must submit a separate application to METI to obtain a digging right. The application must document the location, strike, dip, thickness and other relevant information regarding the status of the mineral deposit identified during the prospecting period.

Once granted, a digging right does not expire. However, if the digging right holder ceases mining (digging) activity for longer than a year, the digging right may be revoked at METI's discretion.

Holders must commence mining within six months of the right being granted. The Mining Act does not explicitly set out any minimum work obligations or expenditures that must be met in order to satisfy the requirement to have commenced digging. METI may grant, at its discretion, a postponement to the six month rule.

4.2.2 Surface Rights

Mining rights are separate from surface rights. Surface rights have to be obtained from the surface rights holder/registered owner. METI is required to notify surface rights holders when a mining right application is lodged.

Various forms of title can be obtained for mining projects, such as ownership rights (syoyu-ken), superficies rights (chijo-ken) and leasehold rights (chinshayu-ken).

4.2.3 Royalties

Two types of Japanese tax apply to mining activities:

- A mining lot tax, with the payment levied proportionate to the size of the area for which the digging right has been granted;
- A mineral product tax, imposed proportionate to the amount of minerals produced.

4.3 Project Ownership

Kazan Resources K.K, (Kazan Resources) a company incorporated under the laws of Japan, owns the prospecting rights to the Project. Kazan Resources is a 100%-owned subsidiary of the Ontario corporation Kronk Resources Inc. (Kronk Resources)

On 17 February, 2021, BeMetals signed an Amalgamation Agreement to acquire Kronk Resources Inc. and its subsidiary Kazan Resources. As a result of the transaction and the Amalgamation Agreement, Kronk Resources is now a wholly-owned subsidiary of BeMetals Corp.

Under the terms of the Amalgamation Agreement, BeMetals agreed to acquire all the issued and outstanding common shares of Kronk Resources on the basis of 0.5169 shares of BeMetals per share of Kronk Resources held (Primary Exchange Ratio). In connection with the Amalgamation Agreement, certain individuals entered into a separate share purchase agreement with BeMetals to receive a lower exchange of 0.2585 shares of BeMetals per share of Kronk Resources held (the Secondary Exchange Ratio, and together with the Primary Exchange Ratio, the Exchange Ratios). The Primary Exchange Ratio represents a total consideration of approximately $0.20 per share of Kronk Resources. and the Secondary Exchange Ratio represents a total consideration of $0.10 per share of Kronk Resources. The Exchange Ratios are based upon BeMetals' volume weighted average price in Canada of $0.3869 per share for the 20-day period ending January 26, 2021.

In accordance with the transaction, BeMetals issued a total of 32,629,956 common shares to shareholders of Kronk Resources.

4.4 Mineral Tenure

The Kato Project consists of six claims (prospecting rights), covering a total area of 1,960 ha. Prospecting rights were granted to Kazan Resources K.K according to the Articles outlined in the Japanese Mining Law. Claims are summarized in Table 4-1 and shown in Figure 4-1. The areas where Kazan Resources has conducted work are shown on Figure 4-2. All claims were granted for gold, silver, copper, lead and zinc.

A yearly mining lot tax of 200 yen per ha must be paid in May of each year. At Kato, the yearly lot tax is 391,978 yen. At the Report effective date, all required payments had been made.

In addition, BeMetals must verify that work on each individual prospecting right is progressing and submit proof of such work to the regulators. An example is provided in Figure 4-3, which was submitted to show the magnetic survey location points for a 2021 geophysical program within prospecting right 3698.

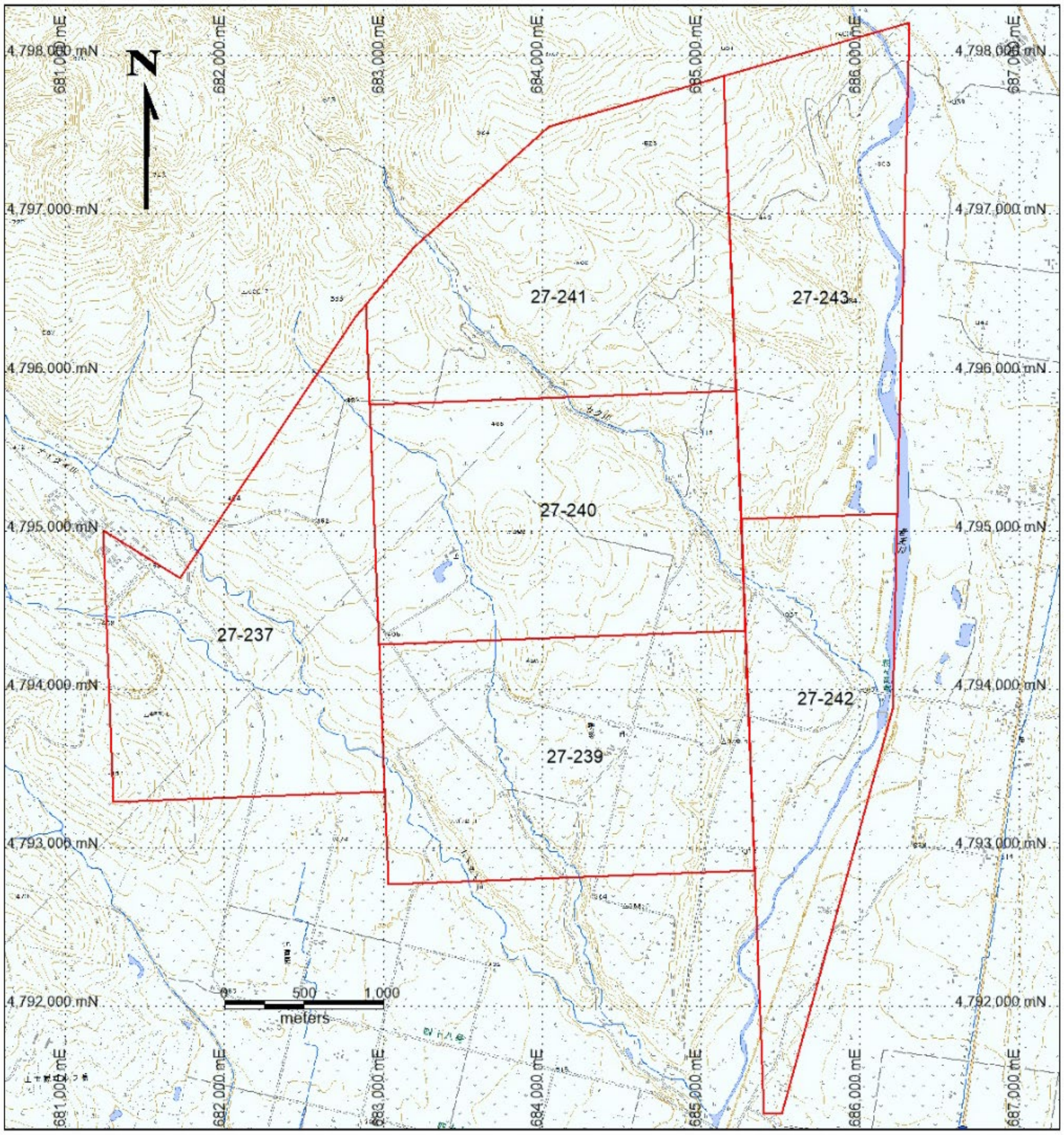
Mining rights may not be transferred without Japanese government approval. The same approval requirements for the granting of the rights, including the financial and technical capability of the transferee, apply to the transferee.

A mining rights holder is required to register the extinction of a mining right due to relinquishment. Once registered, the right extinction becomes effective.

Table 4-1: Claims List, Kato

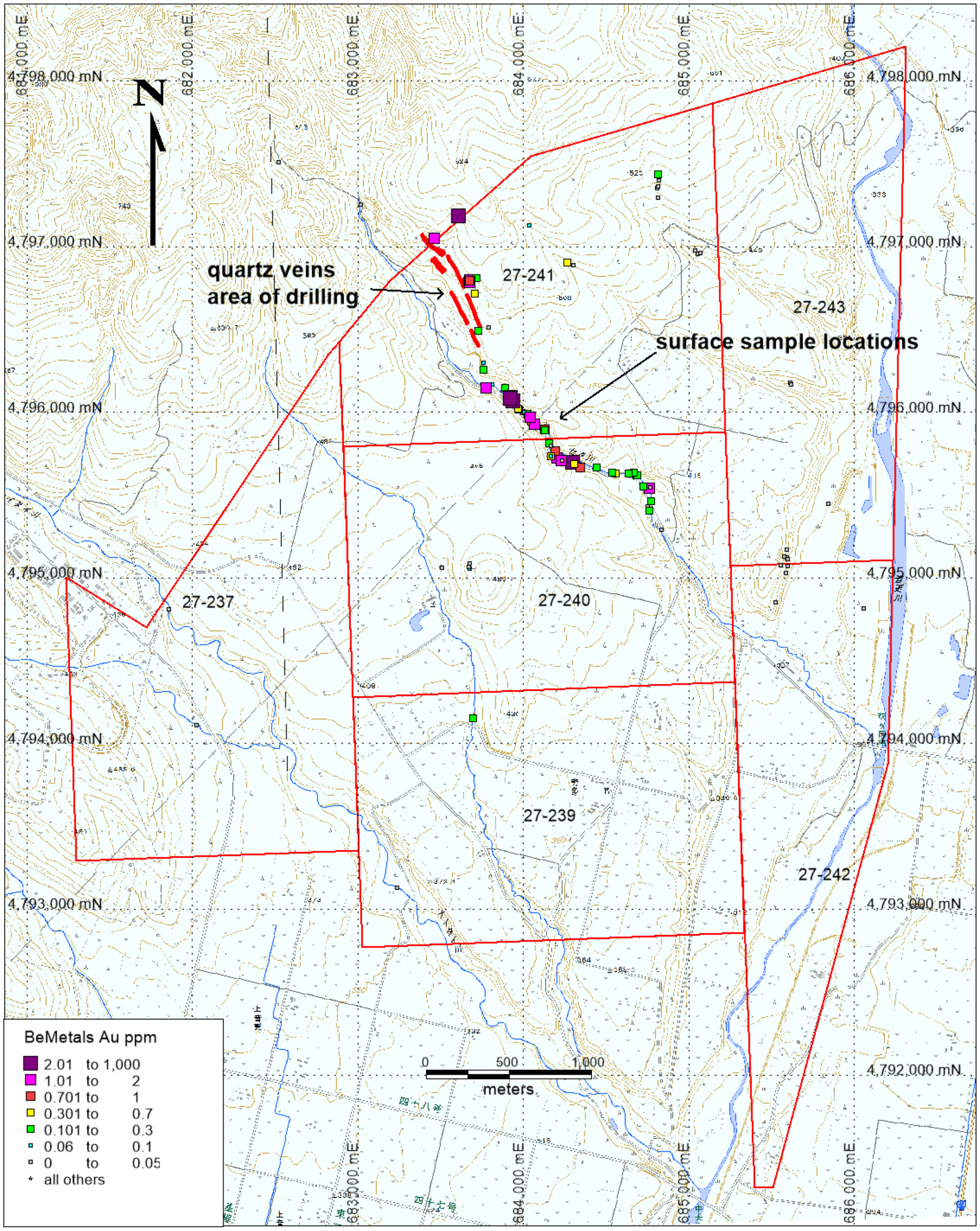
METI Reference Number	Registration Number	Area (ha)	Date Granted	Date Renewed	Next Renewal Date	Expiry Date	Holder
27-237	3695	349	2017-12-20	2019-12-20	2021-12-20	2023-12-20	Kazan
27-239	3697	348.9	2017-12-20	2019-12-20	2021-12-20	2023-12-20	Kazan
27-240	3698	349.1	2017-12-20	2019-12-20	2021-12-20	2023-12-20	Kazan
27-241	3699	348.9	2017-12-20	2019-12-20	2021-12-20	2023-12-20	Kazan
27-242	3700	244	2017-12-20	2019-12-20	2021-12-20	2023-12-20	Kazan
27-243	3701	316.5	2017-12-20	2019-12-20	2021-12-20	2023-12-20	Kazan
		1,956.4					

Figure 4-1: Mineral Tenure Location Plan, Kato



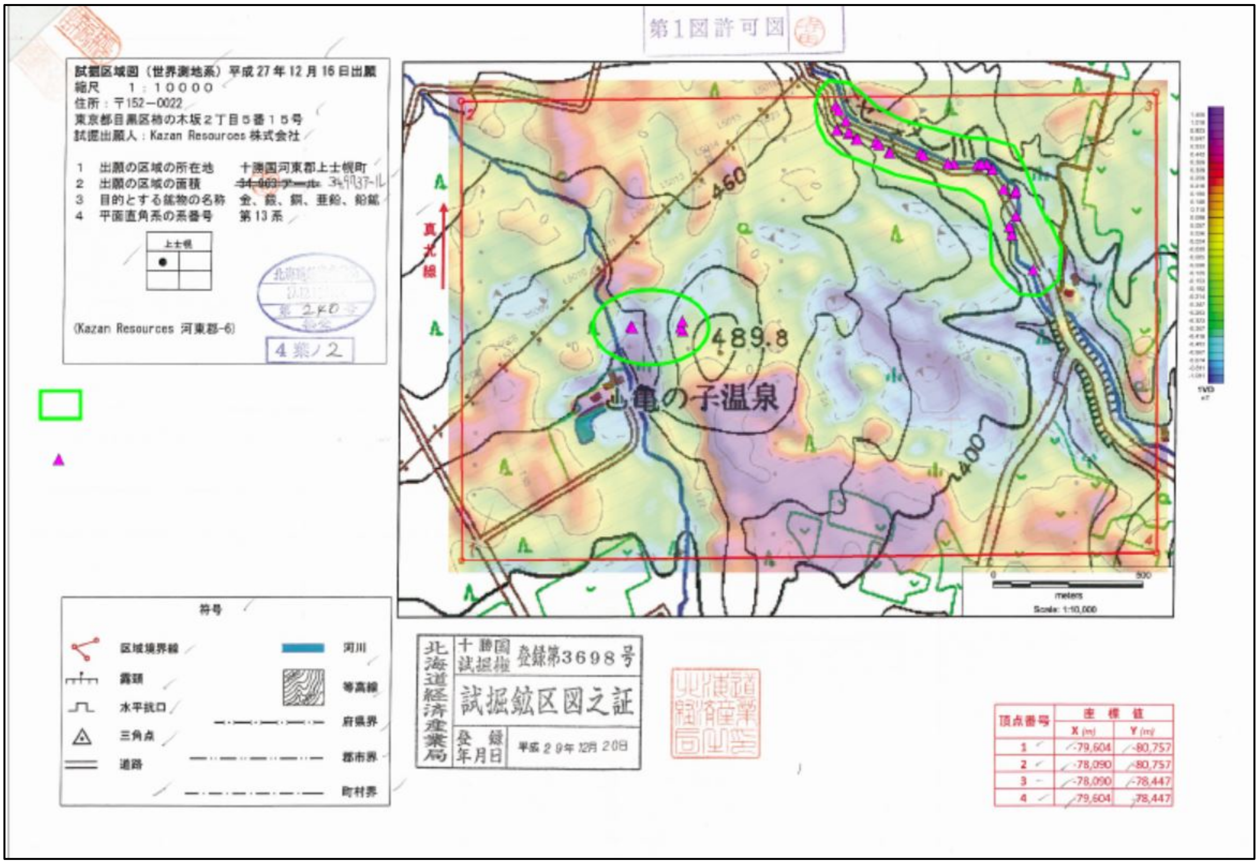
Note: Figure prepared by BeMetals, 2021.

Figure 4-2: Mineral Tenure Location Plan, Kato, in Relation to BeMetals Exploration



Note: Figure prepared by BeMetals, 2021.

Figure 4-3: Example of Proof of Work Conducted on Prospecting Right



Note: Figure provided by BeMetals, 2021.

4.5 Surface Rights

The Kato Project is at an early exploration stage, and BeMetals currently has no surface rights interest.

Surface rights to PR 27-241, the concession where drilling occurred, are held by two owners:

- Kyosei Rentum K.K, a medium-sized Japanese corporation;
- Mr. Azumai, a local farmer.

Access and drilling permission were obtained under a contractual agreement with both land owners. Under the agreements, a flat fee is paid for each drilling pad.

It is expected that drilling permission for future drill programs will be based on similar agreements and compensation payments.

4.6 Water Rights

Permission to access local water sources is obtained from the town of Kamishihoro for a fee. The Seta River has provided the water used for drill programs to date.

It is expected that these sources can be used for future exploration and drill programs.

4.7 Agreements

No Project agreements are in place with any third party.

Kazan Resources has agreements in place for the rental of equipment, warehousing space, and staff accommodation. It also has commercial agreements for the supply of food, diesel fuel, gas, and kerosene.

4.8 Royalties and Encumbrances

There are no royalties to third parties associated with the exploration work that has been, or is planned to be conducted.

A mining tax is levied by each municipality on holders of mining rights that are in production, as follows:

- For mines earning >2 M Japanese yen per month: 1% of the sales price of the extracted minerals;
- For mines earning ≤2 M Japanese yen per month: 0.7% of the sales price of the extracted minerals.

4.9 Permitting Considerations

River water used for drilling operations requires a water permit from the township. A detailed application of location, equipment and quantities being used must be submitted. The application process takes about three weeks and is granted once a water usage fee is paid.

Aerial geophysical surveying by drone requires government aviation office approval. The survey area is a township where flying hot air balloons is popular and cattle farming is widespread. Local agreement for the flight plan and schedule was obtained.

4.10 Environmental Considerations

In operational areas where fuel or oil is used or stored, spill containment drip pans are used to prevent leaks onto the ground. Any leaks contained by the pans are removed using oil-absorbent pads and disposed as special flammable waste. The equipment and drip pans are covered in order to prevent rainwater from collecting in the pans.

Drilling fluids and groundwater returned to the surface as part of the drilling process are contained in a tank or lined sump pending re-use or lawfully disposed. On completion of drilling in the prospecting area, all equipment is removed and any damage to the prospecting area is repaired.

Earthworks affected on the prospecting area are recontoured in such a manner that soil erosion will be minimised as best as practicable. Surface disturbances are reshaped to be consistent with the pre-existing landform and suitably prepared for the establishment of vegetation. Landowner inspection and approval is obtained for all remediated drill sites. All drill sites from the 2019 drilling campaign have been remediated.

Kazan Resources has no obligations for any rehabilitation of historical workings on the site.

Kazan Resources voluntarily conducted quarterly water monitoring of the Seta River from initiation of the 2018 drilling program. Monitoring sites were selected in the river above, inside, and below the drilling area (Figure 4-4). Results from October 2018 are summarized in Table 4-2, and form the baseline for the subsequent sampling. Results from tests conducted after October 2018 showed acceptable results within the item limits for all survey dates (Table 4-3).

4.11 Social License Considerations

There are no native title or other statutory surface use rights have any impact on exploration activities.

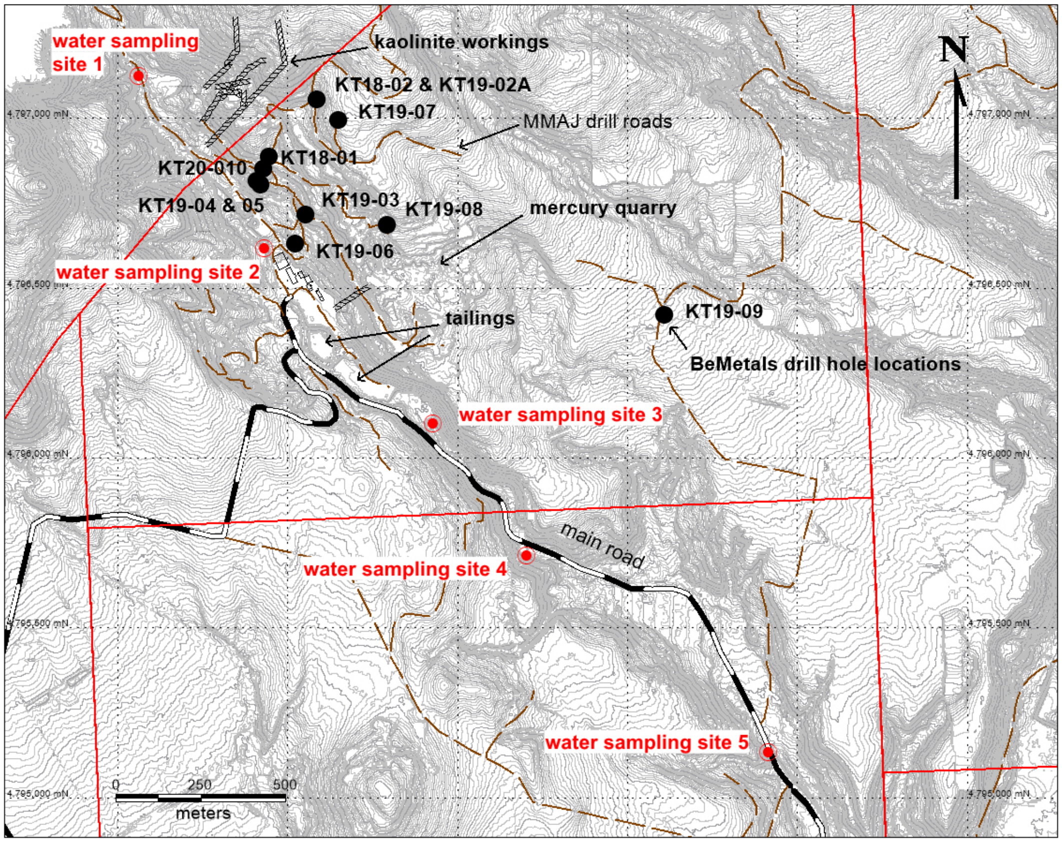
Although the Japanese mining law does empower the government to reject an application in areas found to disrupt the protection of cultural properties, parks or hot spring resources or that impair the interests of agriculture, forestry and other industries and be extremely adverse to public welfare, none of these factors apply to the Kamishihoro prospecting rights.

The town and community have been supportive of BeMetals' exploration activities to date.

4.12 Comment on Property Description and Location

To the extent known to the QP, there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Project that have not been discussed in this Report.

Figure 4-4: Seta River Water Sampling Points



Note: Figure provided by BeMetals, 2021. On this figure, the numbers in red circles are the water sampling points. The black circles are the drill collar locations.

Table 4-2: Water Monitoring Point Results, October 2018

Parameter	Unit	Sample Point 1	Sample Point 2	Sample Point 3	Sample Point 4	Sample Point 5	Accepted Limit or Minimum
pH		7.3	7.3	7.3	7.4	7.4	6.5–8.5
Biochemical oxygen demand	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	1
Suspended solids	mg/L	5	2	2	3	2	25
Dissolved oxygen	mg/L	11.2	11.1	10.9	11.1	11.2	7.5
Coliform bacteria	MPN/100 mL	79	79	79	330	700	50
Zinc	mg/L	0.002	0.001	0.002	0.002	0.001	0.03
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.003
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.01
Hexavalent chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	0.05
Arsenic	mg/L	0.002	0.001	0.001	0.001	0.005	0.01
Mercury	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0005
Selenium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.01

Table 4-3: Test Results, 2018–2020

Test Program Sample Date	Sample Point 1	Sample Point 2	Sample Point 3	Sample Point 4	Sample Point 5
2018_6	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
2019_2	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
2019_5	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
2019_8	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
2019_11	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
2020_2	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
2020_5	Acceptable	Not tested	Acceptable	Acceptable	Acceptable
2020_10	Acceptable	Not tested	Acceptable	Acceptable	Acceptable

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Accessibility

The Kato Project area is serviced by the regional airport of Obihiro, with several daily flights to the national capital, Tokyo. The nearest international airport is in the city of Chitose, 180 km to the west.

The principal road links to the town of Kamishioro are national Route 241 and 273. Route 241 links the town of Kamishihoro with the city of Obihiro, and consists of a good quality tar (hard-surface) road that is suitable for heavy vehicles year-round.

The Kato Project area extends approximately 9 km into the surrounding hills from the town of Kamishihoro, with the existing road network permitting access to much of the Project area. Roads within the Kato Project consist of a mix of tar, wide-gravel, and extensive narrow forestry roads.

Tar and wide-gravel roads are accessible year-round providing access to existing farmland and to a zeolite mining office located near the northwestern Kato Project boundary. From the centre of the town of Kamishihoro, it takes approximately 30 minutes to drive to the offices of the zeolite mining operation in the Seta River area. Forestry roads are maintained and easily accessible in the summer months (May–October), with the potential for access in winter with snow plowing.

The closest rail link to the Kato Project is in the city of Obihiro, with freight and passenger routes to the bulk-carrier ports of Kushiro and Tomakomai, located approximately 120 km to the east, and 200 km to the west, respectively.

5.2 Climate

Hokkaido has a humid continental climate with four distinct seasons. Summers are typically warm and humid with cold winters commonly reaching below -10°C. Snow typically falls from November–March and begins to melt in April. Due to the snow, the summer exploration season is typically limited to April–October.

Compared to the rest of Japan, Hokkaido has no distinct rainy season ("tsuyu") and is significantly less affected by annual typhoons.

According to the Japan Meteorological Agency, between 1989–2020, the town of Kamishihoro had an average daily temperature of 6°C. Summer highs reach 32°C with winter lows of -20 °C. The average annual rainfall is 990 mm with snowfall totalling an average of 360 cm. Wind speeds average 1.6 m/sec, blowing predominantly in a south to southwesterly direction in summer and north to northeasterly in winter.

Exploration activities are curtailed by winter conditions. Mining activities would be able to be conducted year-round.

5.3 Local Resources and Infrastructure

The town of Kamishihoro contains all necessary resources for exploration including several clinics, accommodation, labour, mechanics, welders, and stores. Heavy machinery such as earth-moving vehicles and cranes can be rented. The town has a constant supply of electricity and fuel.

Grid electricity is also present in parts of the Kato property, connecting most farms and the zeolite mine.

Water sources include piped water in the low-lying farmlands, and perennial rivers and streams throughout the hills. Water supply is not expected to be a concern for exploration activities.

Cellular network is present throughout much of the Kato Project area, but can be patchy and sporadic in places, especially in the valleys.

Kazan Resources has established a core shed and accommodation in the Kato Project area, located 20 minutes from the town of Kamishioro.

5.4 Physiography

The physiography of the Kato Project area consists of both shallowly inclined farmlands bordering the town of Kamishihoro (approximately 300–400 masl), and moderate mountains farther to the west (reaching 600 masl). Two main perennial rivers, Seta and Naitai, crosscut the property and flow south east into the Otofuke River. The Otofuke River straddles the eastern property boundary and flows south of the Kato Project area.

The Project area is well vegetated, consisting predominantly of a mix of natural and planted coniferous trees (Sakhalin spruce and Sakhalin fir) and broad-leaved Japanese birch. Trees are typically well spaced with the potential for additional access creation limited tree cutting necessary. An example of the topography showing the vegetation is provided in Figure 5-1.

Figure 5-1: Local Topography

Note: Photograph taken by Luke Viljoen, 2021. Vegetation and forestry access road shown.

Secondary low-lying thin bamboo called "sasa" is prevalent in the summer months and can make ground exploration difficult (Figure 5-2).

5.5 Seismicity

The Hokkaido region is seismically active. There is potential for seismic events to disrupt exploration programs, either by damaging road access or interrupting the provision of services and goods.

5.6 Comment on Accessibility, Climate, Local Resources, Infrastructure and Physiography

The existing local infrastructure, availability of labour, methods whereby goods could be transported to the Project area well understood by BeMetals, and can support exploration-stage activities.

Exploration can be curtailed by snow in the winter months so exploration activities are concentrated in the period April–October.

There is sufficient area within the mineral concessions for construction of mining infrastructure.

As the Project is at an early stage of exploration, no surface rights have been acquired. Permission to explore or drill is negotiated with the local landowners as necessary.

Figure 5-2: Sasa

Note: Photograph taken by Kazan Resources, 2016. Human figure for scale.

6.0 HISTORY

6.1 Exploration History

The Kato Project covers a well-known prospect that the Japanese named Seta River, which has been renamed by BeMetals to Kato. Prior to World War II, numerous small pits and small-scale quarries were excavated in the Seta River area for cinnabar and native mercury. Kaolinite and zeolite were also mined.

During a 1991 survey for zeolite (mordenite) deposits by the Hokkaido Development Bureau, outcropping quartz veins with anomalous gold mineralization were identified. The veins were recognized as part of a shallow paleo-hydrothermal system.

In the same year, the Geological Survey of Hokkaido drilled an 80 m vertical hole in an area previously mined for zeolite, kaolinite, and mercury. Recognizing that the clays and mercury are known to be associated with epithermal gold deposits, hole GSH-91-1 was collared in strongly altered volcanic rocks along a northwest-trending fault zone that runs parallel to the Seta River. The drill hole intersected a quartz vein a few centimetres wide with elevated gold values. The results were sufficiently encouraging to generate a full fledged exploration effort later that year.

The Metals and Mining Agency of Japan (MMAJ) subsequently reviewed the gold potential of the Seta River area. From 1991–1992, MMAJ completed rock chip sampling (558 samples), a Geogas and radon gas geochemistry survey (620 samples), an induced polarization (IP) geophysical survey (38.4 line-km), fluid inclusion studies, potassium–argon dating, and two core drill holes. The drill holes were sited about 870 m apart, and along the strike of the Seta River. Both drill holes returned highly anomalous gold values over numerous narrow intervals. Six core holes (2,505.7 m) were completed in 1992.

The 1993 MMAJ campaign comprised fluid inclusion studies, clay-alteration studies, an IP survey (24 line-km), and three core holes (1,801.4 m). Drill hole 5MAHB-2, completed in 1993, intersected a wide zone of quartz adularia veins and breccias, with anomalous gold grades.

Rock chip sampling (26 samples) and core drilling (six holes; 3,104.6 m) were completed in 1994. The 1995 work program consisted of fluid inclusion studies, an IP survey (19.4 line-km), and eight core holes (4,179 m).

Between 1993 and 1995 most of the exploration was focused along the Seta River corridor and defined a mineralized zone about 1.3 km long. Some of the more closely-spaced drilling was centred around drill hole 5MAHB-2, loosely outlining a higher-grade gold segment at the northwest end of the corridor. The higher-grade vein zone is approximately 170 m in length with three drill holes intersecting the vein zone between 300 and 400 mRL.

From 1995–1999, work consisted of core drilling, with 38 holes (10,396.6 m) completed.

Based on the pattern of the drilling after 1995, it appears that the MMAJ drilling campaign transitioned into a search for additional veins or anomalous areas in the surrounding area. In 1996, MMAJ drilled 16 shallow vertical holes around the entire mineralized corridor looking for the anomalous pathfinder elements arsenic, mercury and antimony with associated gold and silver. Three deep angled holes were drilled east of the Seta River and along the southeasterly-trending Naitai River. Although a few of the shallow vertical drill holes returned significant anomalous pathfinder and gold values, no additional drilling was done in those areas.

In 1997, two drill holes (9MAHSE-1, 2) were collared about a kilometre apart at another mercury occurrence, Kamenoko Hill, located about 2 km to the south–southwest of the Seta River area. Drill hole 9MAHSE-1 intersected a mineralized structure beneath the old mercury workings at a depth of 67 m, with associated elevated gold and silver values.

During the last two years of the MMAJ exploration effort at Kato, only four holes were drilled. Only one of these was collared within the mineralization at Kato. Drill hole 11MAHSE-6 was drilled to cut beneath the main higher-grade quartz–adularia vein zone at a vertical depth of about 0 mRL. Only weak gold and silver mineralization was encountered.

In 1999, the Japanese Government decided to scale back their financial investment in-country and focus instead on developing offshore resources. No additional work was conducted by the MMAJ in the Kato area.

In 2016, staff from B2Gold Corporation (B2Gold) visited the Project area. At the time, B2Gold held an interest in Kazan Resources. B2Gold was able to locate many of the drill pads from the MMAJ drilling campaign. Samples were taken from surface outcrops of the banded veins in the Seta River bed, the steam-heated zone in the mercury quarry area, and explosion breccia outcrops, as well as reconnoitering areas to the north of the Seta River area where vein boulders of high-level chalcedonic quartz are exposed in a parallel creek bed.

In 2017, B2Gold compiled a database of the MMAJ work, and selected targets for drill testing. Kazan Resources completed 10 core holes in the period 2018–2020, for 2,084.3 m.

From 2017 to date of Project acquisition by BeMetals, all exploration activities conducted by Kazan Resources were directed by B2Gold personnel. Mr. Garagan, who is Senior Vice President Exploration with B2Gold, and a director of BeMetals, supervised those exploration and drill programs.

Kazan Resources, as a subsidiary of Kronk Resources, was acquired by BeMetals in April 2021, following a definitive agreement that was entered into in February 2021 (see discussion in Section 4.3). For the purposes of the exploration, drilling, sampling, and data verification discussions in the remainder of this Report, the work completed by Kazan Resources under supervision of B2Gold staff or work conducted by BeMetals, is referred to collectively as Kazan Resources programs.

The exploration programs completed by MMAJ and Kazan Resources are summarized in Table 6-1.

6.2 Production

There is no recorded gold production from the Project area.

About 52.5 t of mercury is estimated to have been produced from the Seta River area cinnabar pits and quarries in the 1930s.

Kaolinite was mined from underground workings that lie along the contacts with the gold bearing quartz veins at Kato. Production recorded between 1955–1969 was 55,790 tons.

Zeolite was mined from two pits located to the northwest of the gold-mineralized zone at Kato, and zeolite is currently being processed from a stockpile at a small facility near the pits. The mining company, Kyosei Rentemu, communicated to Kazan Resources personnel that mining of zeolite has ceased and the stockpile will be processed, after which, if no more mineralization that can support processing activities is located, the mine will shut down. Production figures from 1984–1990 indicate that about 35,390 tons of zeolite were extracted.

Table 6-1: Exploration History

Year	Operator	Program
1991	MMAJ	Rock chip sampling: 371 samples X-ray fusion, 77 samples Geological mapping Drilling: 3MAHB; 2 drill holes, 1,001 m. GEOGAS: 306 samples Mercury: 225 samples IP resistivity survey: 14.4 line km
1992		Geological and alteration mapping K–Ar dating: 4 samples Whole rock analysis Rock chip multi element assays: 187 samples GEOGAS: 314 samples Drilling: 4MAHB; 6 drill holes, 2,505.7 m IP-resistivity survey: 38.4 line km Fluid inclusion studies
1993		Rock chip sampling: 26 samples Clay alteration studies IP-resistivity survey: 24 line km Fluid inclusion study Drilling: 5MAHB; 3 drill holes, 1,801.4 m
1994		Rock chip sampling; number of samples not known Drilling: 6MAHB; six drill holes, 3,104.6 m
1995		Rock chip sampling: 32 samples IP-resistivity: 18.8 line km Fluid inclusion studies Drilling: 7MAHB; 8 drill holes, 4,179 m
1996		Drilling: 8MAHB, 8MAHBS; 21 drill holes, 3,977.3 m
1997		Drilling: 9MAHB, 9MAHSE; 13 drill holes, 3,358.3 m

Year	Operator	Program
1998		Drilling: 10MAHSE; 2 drill holes, 1,114.4 m
1999		Drilling: 11MAHSE, 2 drill holes, 1,946.6 m
2016	Kazan Resources	78 rock chip samples
2017		Compiled historical data into a database
2018		Drone magnetometer survey, 42 line km 2 core holes (144.4 m)
2019		Drone magnetometer survey; 419.74 line km of flight lines and 47.64 line km of tie lines for a total of 467.38 line km. 7 core holes (1,707.3 m)
2020		One core hole (232.6 m).

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

Volcanism and lacustrine sedimentation related to the collision of the Eurasian and North American plates began in the eastern Hokkaido region during the Miocene and continued until Quaternary time (Yajima, et al., 1997). Subaerial volcanism was co-eval with the formation of the north–south-trending Monbetsu–Kamishihoro graben and uplift of the Hidaka Mountains to the west. The graben is host to as many as 57 epithermal gold–silver deposits. The gold deposits and the enclosing volcanic rocks generally decrease in age from about 14.3 Ma in the north of the graben to 0.3 Ma in the south at Kato. A simplified regional geology plan is provided as Figure 7-1.

7.2 Project Geology

Figure 7-2 is a stratigraphic column for region in which the Kato Project is located.

The geology is characterized by the late Miocene Horokapiribetsugawa Formation, the Pliocene Ashoro Formation, and Quaternary fan and talus deposits (Table 7-1). The Miocene and Pliocene lithologies dip slightly to the southeast. Andesite lavas of the Moiwayama formation, associated with dacitic units, crop out in the north and west of the Kato Project. The southwestern area is dominated by the Quaternary alluvial fan and talus deposits.

7.3 Deposit Description

The Kato prospect is an example of a remarkably well-preserved low sulphidation epithermal gold occurrence. Outcropping clay-altered and weakly-mineralized lake-bed sediments are evidence of a high-temperature steam-heated zone above a hydrothermal plumbing system.

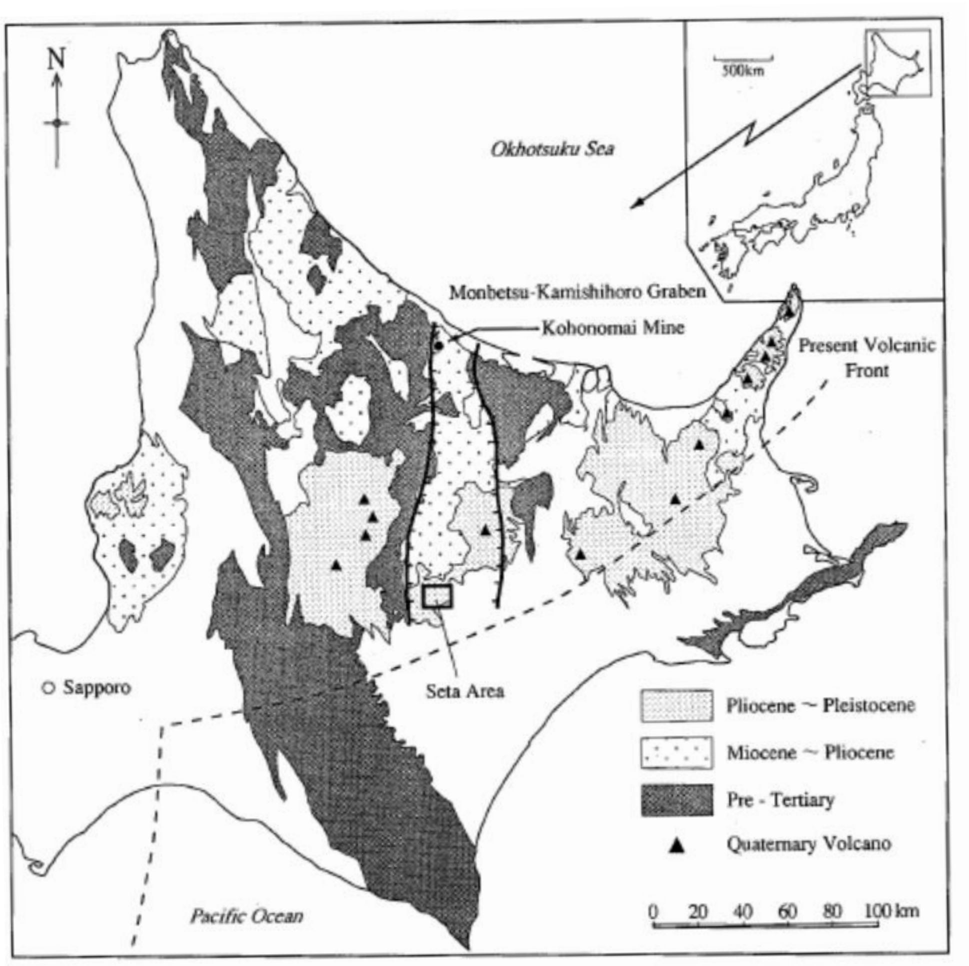
7.3.1 Geology

Mineralization is primarily hosted within tuff breccia, andesite lavas and occasionally in the Horokapiribetsugawa Formation mudstone/siltstone sequence. Figure 7-3 is a schematic cross-section showing the geology in relation to mineralization-hosting veining.

Features of the epithermal system observed in the Seta River area are summarized as follows.

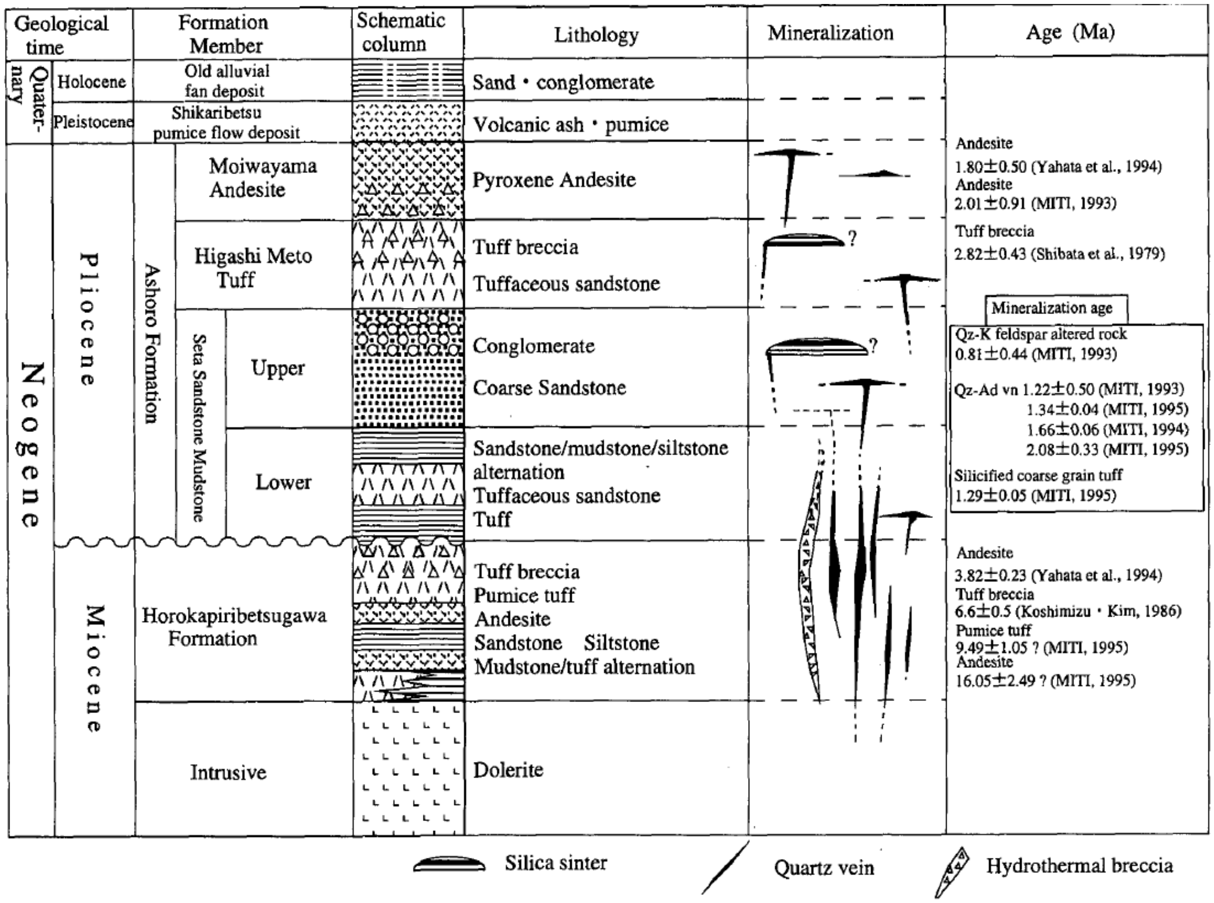
Acid-leached zones were identified in a number of areas. The most prominent zone consists of leached fine sandstone and mudstone of the Ashoro Formation that display porous textures.

Figure 7-1: Simplified Geology Plan, Eastern Hokkaido



Note: Figure from Yajima, et al., (1997). Note Seta Area as highlighted is the Kato Project area that hosts the Kato prospect.

Figure 7-2: Stratigraphic Column

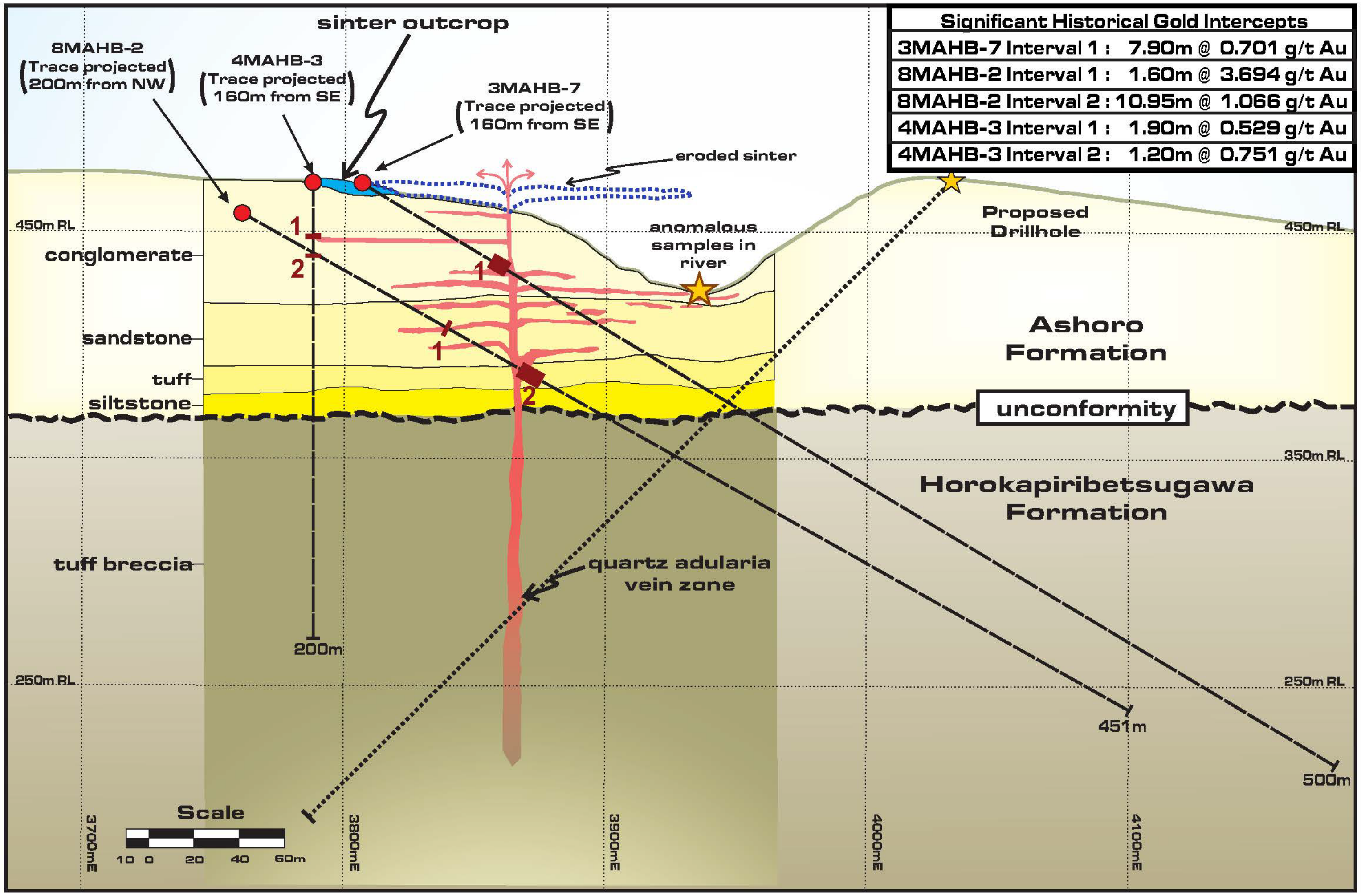


Note: Figure from Yajima et al., (1997).

Table 7-1: Lithologies

Unit	Age	Description	Note
Gravels	Quaternary	Andesitic pebbles in a sandy matrix.	
Shikaribetsu pumice fall	Quaternary	Yellow–brown unconsolidated pumice and ash unit.	
Moiwayama Andesite	Pliocene	Black, compact augite-hypersthene andesites.	
Ashoro Formation	Pliocene	Seta lacustrine sandstone/mudstone sequence: the lower member of the sequence comprises alternating sandstone and tuffaceous sandstone, mudstone, siltstone, and intermediate tuff. The upper member is principally sandstone and conglomerate. Higashi Meto tuff: tuff breccia and tuffaceous sandstone; commonly silicified and contains disseminated pyrite.	Dips southwest.
Horokapiribetsugawa Formation	Miocene	Tuff breccia, pumice tuff, andesite, and lake sediments overlying an intrusive dolerite.	The upper portion of the Horokapiribetsugawa hosts most of the mineralization at Kato. The dolerite does not crop out in the area but has been intersected in drilling. Units dip to the north–northeast.

Figure 7-3: Schematic Cross-Section



Note: Figure prepared by BeMetals, 2021. Section 10 of this Report includes a full list of drill hole intercepts.

Silicification zones are present along the Seta, Osoushinai, and Nakanosawa Rivers, at Kamenoko Hill and in the old mercury quarry area.

Acidic alteration at surface was identified at three different locations within the area. One acidic alteration zone was identified above the main mineralized zone, a second was mapped downstream of the Seta River, and another was found approximately 1 km east of the main mineralized zone.

Several outcropping silica sinters were identified to the east and southeast of the main mineralized zone. The sinters are approximately 2 m thick. Sinter deposits have laminated, elongate and almond-shaped cavities, and comb-like textures that are perpendicular to laminae, which were originally associated with filamentous bacteria.

The mercury workings form an approximately 1 km-long linear north–south trend above the mineralized zone, and are preferentially associated with silicification in acid-leached zones. Red cinnabar "paint" is abundant in the old quarry. Cinnabar forms a coating on near-vertical fractures, and in drill core was found in association with shallow quartz veins.

Horizontal quartz veins are common in the southern portion of the mineralized area, and are preferentially hosted in sedimentary units, occurring along bedding planes. The veins range from a few centimetres to 10 cm thick.

7.3.2 Structure

Two prominent northwest-trending fault structures that are nearly parallel to the Seta River show down-to-the-west movement.

For the westernmost fault (F1), as much as 250 m of displacement occurred prior to the deposition of the Ashoro Formation (Yahata and Oshiro, 1997). The western fault strikes N30W and dips at 75º to the west.

The easternmost fault (F2) strikes N10W and dips at 55º to the west. The F2 fault shows minor displacement of a few tens of metres.

Other faults with a more westerly trend were mapped in the underground kaolinite workings, which suggests that the F1 and F2 faults are truncated in the northern portion of the mineralized area (Yahata et al., 1994). These faults provided pathways for hot spring activity to breach the surface forming siliceous sinter deposits and explosion breccias.

7.3.3 Alteration

Strong argillic alteration affected andesite and tuffaceous rocks along the faults while silicification dominates within the sedimentary horizons to the east.

Extensive X-ray diffraction (XRD) clay studies done by MMAJ from 250 drill core samples defined five clay alteration zones at Kato, consisting of:

- Zeolite;
- Smectite;
- Smectite–chlorite;
- Kaolinite–smectite;
- Kaolinite.

Clay alteration is associated with a low sulphidation epithermal quartz vein and stockwork zone which lies immediately east of the fault zone and runs parallel to it. Figure 7-4 is a plan showing the alteration zones in relation to the fault zone. Figure 7-5 and Figure 7-6 are cross-sections through the alteration.

The main vein zone was defined by MMAJ workers as the quartz–adularia vein zone (QAV). An adjacent zone on the east side of the QAV consists of a narrow quartz vein stockwork and hydrothermal breccias (STV).

Alteration enclosing the QAV and STV consists of kaolinite and silicification. The kaolinite zone is funnel-shaped toward the surface, tapering downward. Alteration and mineralization appear to be truncated by a zeolite zone to the north. The smectite zone is widespread surrounds the higher-temperature assemblages.

7.3.4 Dimensions

The Seta River drainage strikes northwest, parallel to the F1 and F2 faults. The QAV zone lies in between the F1 and F2 faults and has been defined by drilling for about 170 m of strike length. The STZ zone lies adjacent and to the east of the F2 fault and can be traced for 600 m. Both zones may be displaced by another unmapped fault at 683530E, 4796950N that drops the QAV zone down to the west.

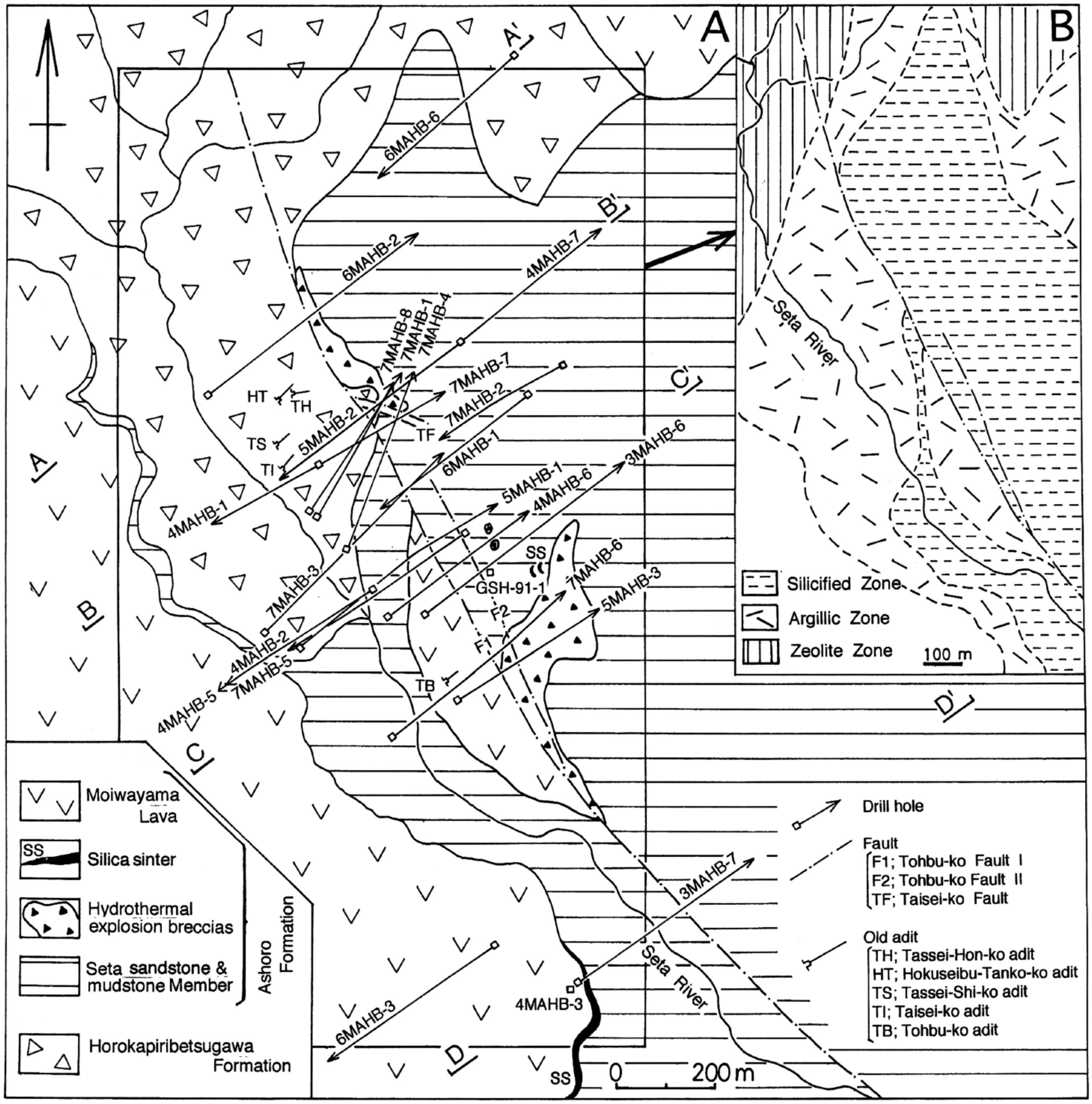
7.3.5 Veins and Breccias

QAV Zone

The QAV zone hosts white or bluish–gray crustiform quartz veins. The veins may be colloform banded and often show evidence of boiling with lattice textures of quartz after calcite. The majority of gold mineralization, and in particular the higher gold grades, is associated within the white crustiform quartz veins.

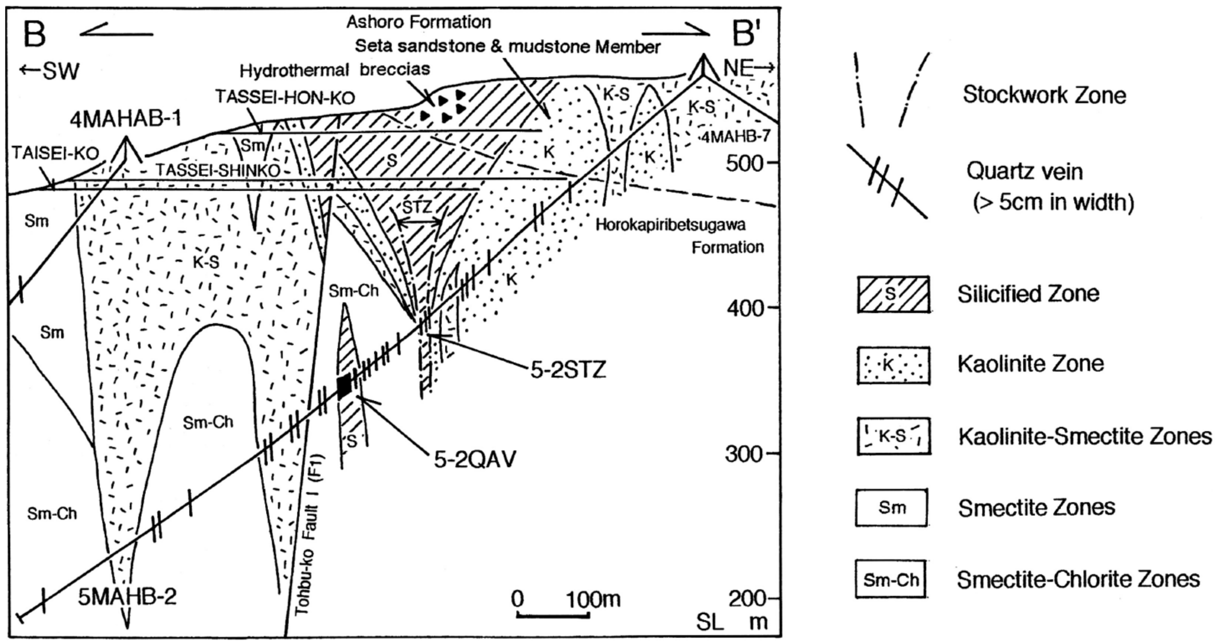
Quartz breccia is also characteristic. Clasts are dominated mainly by white quartz vein fragments and some silicified wall rock fragments. The brecciated zones form a continuum with the original non-brecciated quartz veins.

Figure 7-4: Geological Map, Seta River Prospect



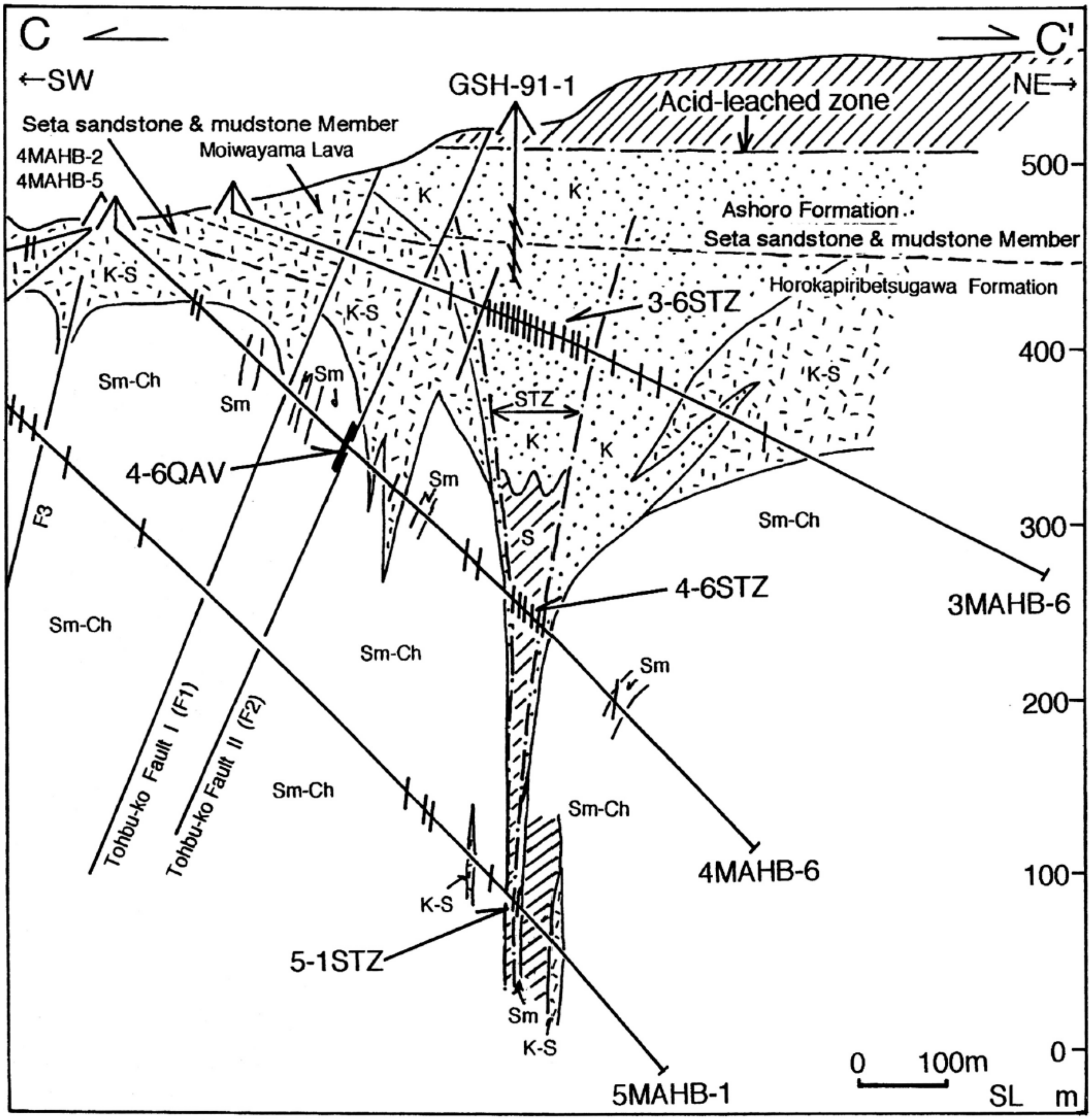
Note: Figure from Yahata and Matsueda, (1999). Cross-section B–B' is included as Figure 7-5. Cross-section C–C' is included as Figure 7-6.

Figure 7-5: Example Cross-Section Showing Alteration and Faulting



Note: Figure from Yahata and Matsueda, (1999). Section looks northwest. The location of cross-section B–B' is shown on Figure 7-4. The labels Taisei-ko, Tassei-hon-ko, and Tassei-shinko refer to adits in the kaolinite mine area.

Figure 7-6: Example Cross-Section Showing Alteration and Faulting



Note: Figure from Yahata and Matsueda, (1999). Section looks northwest. The location of cross-section C–C' is shown on Figure 7-4. The legend key provided for Figure 7-5 applies to this figure.

Adularia is common, and most abundant in the higher-grade gold zones.

Only one drill hole completed in 2020 by Kazan Resources cut a portion of the QAV zone. Unfortunately, recoveries were poor, and, as shown in Figure 7-7, the quartz textures are not clearly observable in the Kazan Resources core.

STZ Zone

The STZ zone comprises anastomosing chalcedonic quartz stockwork and veins, hydrothermal breccia, and vein breccias with zones of locally abundant pyrite and marcasite. The quartz veins are white, and often vuggy with lattice textures. Colloform banding with dark gray chalcedony and occasionally adularia is commonly observed.

An example intercept through the STZ Zone, from Kazan Resources drilling, is shown in Figure 7-8.

Hydrothermal Breccia

Several outcrops of hydrothermal breccia are present above the main mineralized zone, forming a northwest–southeast-striking zone of brecciation and silicification. The breccia can be either matrix- or clast-supported, depending on location. In the vicinity of the old mercury quarries, the breccia is monomictic and matrix supported. Clasts consist of 10–50 cm, roughly elongate, angular, silicified mudstone, supported by an intensely acid leached matrix of residual quartz + kaolinite. A steeply-dipping structure separates the mudstone unit and the hydrothermal breccia in this location.

An example of a hydrothermal explosion breccia outcrop is shown in Figure 7-9.

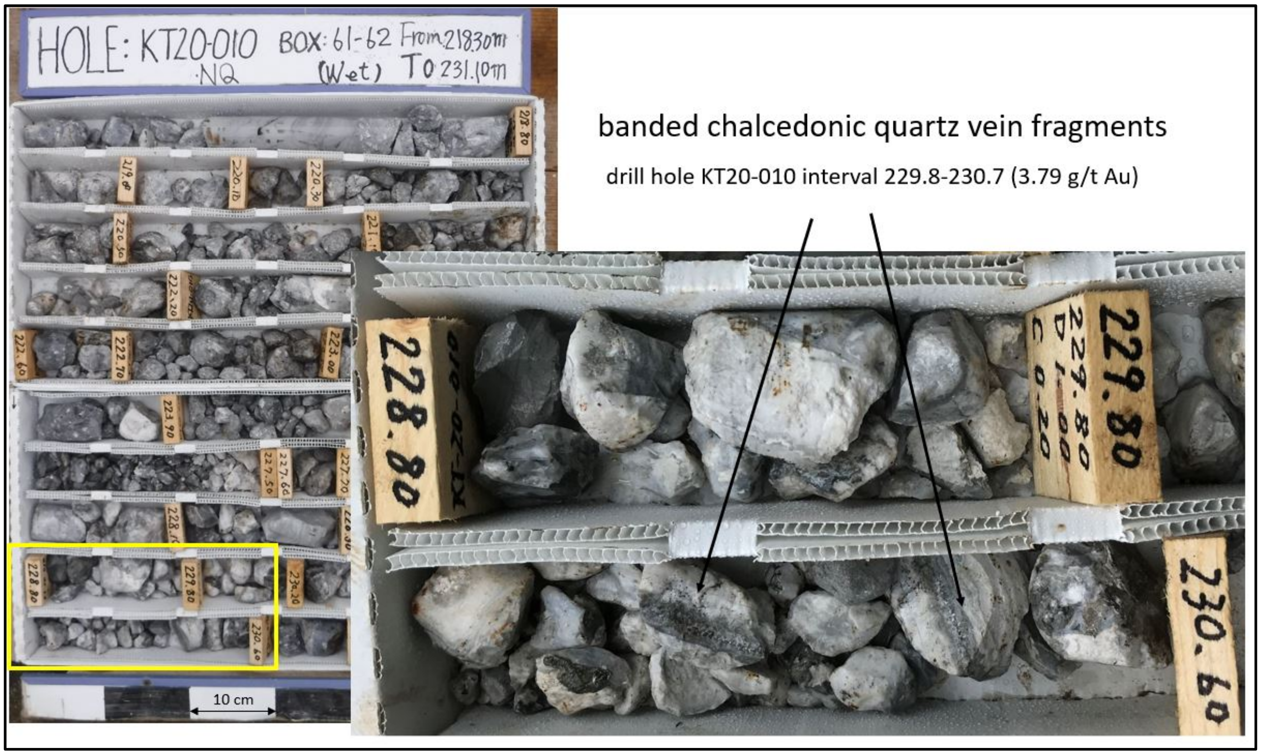
Black Breccia

Black, sulphide-rich breccias are spatially associated with hydrothermal breccia zones. They are as much as 10 m wide in drill core, but are typically 2–3 m wide. The breccias are characterized by variable pyrite and marcasite content.

The black sulphide-rich breccias cross-cut the white crustiform quartz veins. Where the breccia hosts quartz vein fragments, gold grades can be considerably elevated; however, generally the breccias return low gold grades.

An example of a black breccia intercept in drill core is provided in Figure 7-10.

Figure 7-7: Probable QAV Zone Intercept, Kazan Resources Drill Hole KT20-010



Note: photograph by Kazan Resources, 2020. Section 10 of this Report has a list of drill hole intercepts.

Figure 7-8: STZ Zone Intercept, Kazan Resources Drill Hole KT19-02A

Note: photograph by Kazan Resources, 2019. Section 10 of this Report has a list of drill hole intercepts.

Figure 7-9: Hydrothermal Explosion Breccia Outcrop

Note: Photograph by Kazan Resources, 2016. Pencil indicates relative scale.

Figure 7-10: Black Breccia

Note: photograph by Kazan Resources, 2019. Section 10 of this Report has a list of drill hole intercepts.

7.3.6 Mineralization

Anomalous gold and silver grades are associated with crosscutting and brecciated white crustiform quartz veins, and with well-developed ginguro bands (gray/black colloform bands of quartz colored by sulphides).

The sulphide mineralization is typically fine-grained, consisting of electrum, argentite (Ag_2S), pyrargyrite (Ag_3SbS_3), miargyrite ($AgSbS_2$), polybasite ($(Ag,Cu)_6(Sb,As)_2S_7)(Ag_9CuS_4)$, Ag-tetrahedrite ($Cu_6(Cu_4(Fe,Zn)_2)Sb_4S_{13}$), stephanite ($Ag_5SbS_4$), pyrite, chalcopyrite and sphalerite.

Gangue minerals within the veins include quartz, adularia, calcite and various clays.

Open space filling alteration minerals include smectite, a chlorite–smectite mixed layer, kaolinite and alunite.

7.4 Comments on Geological Setting and Mineralization

The Project is at an early exploration stage. There is sufficient information available to support the interpretation that the Project area is prospective for epithermal gold mineralization.

The geological understanding of the settings, lithologies, and structural and alteration controls on mineralization is sufficient to support design of exploration programs and drill vectoring.

8.0 DEPOSIT TYPES

8.1 Deposit Model

The mineralization identified to date in the Kato Project area is considered to be an example of a low-sulphidation epithermal system.

The description for the low-sulphidation epithermal model is synthesized from Pantaleyev (1996), Hedenquist et al., (2000), Corbett (2002, 2013), and Sillitoe (2015).

A schematic showing the setting for a low-sulphidation epithermal system is included as Figure 8-1, as interpreted for the Project area by Sillitoe (2015).

8.1.1 Geological Setting

Low-sulphidation epithermal deposits are formed by high-level hydrothermal systems from depths of ~1 km to surficial hot-spring settings (Figure 8-2). Shallow deposits develop from surface to about 300 m depth. Deeper deposits develop from 300–800 m, rarely extending to as much as 1 km depth.

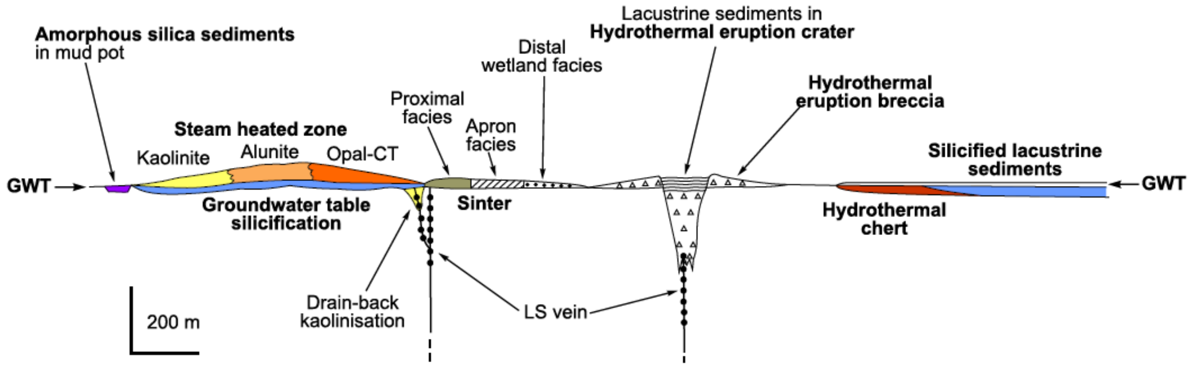
Deposition is related to regional-scale fracture systems related to grabens, (resurgent) calderas, flow-dome complexes, pyroclastic deposits, and rarely, maar diatremes. Extensional structures in volcanic fields (normal faults, fault splays, ladder veins and cymoid loops, etc.) are common; locally graben or caldera-fill clastic rocks are present. High-level (subvolcanic) stocks and/or dikes and pebble breccia diatremes occur in some areas. Locally resurgent or domal structures are related to underlying intrusive bodies.

Most types of volcanic rocks can host the deposit type; however, calcalkaline andesitic compositions predominate. Clastic and epiclastic sediments can be associated with mineralization that develops in intra-volcanic basins and structural depressions.

8.1.2 Mineralization

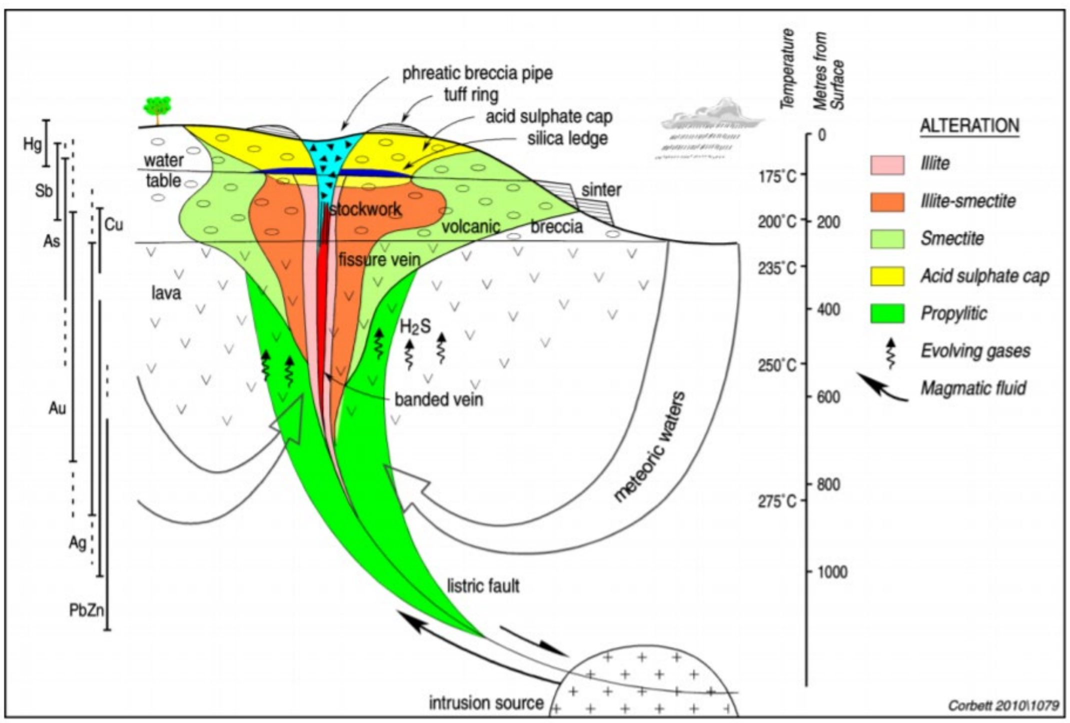
Ore zones are frequently localized in structures, but may also occur in permeable lithologies. Upward-flaring ore zones centred on structurally-controlled hydrothermal conduits are typical. Large (> 1 m wide and hundreds of metres in strike length) to small veins and stockworks are common with lesser disseminations and replacements. Vein systems can be laterally extensive, but ore shoots have relatively restricted vertical extents. High-grade ores are commonly found in dilational zones in faults at flexures, splays and in cymoid loops.

Figure 8-1: Low Sulphidation Epithermal Gold Deposit Model Schematic



Note: Figure from Sillitoe (2015). Opal-CT = microcrystalline opal, GWT = groundwater table; LS = low sulphidation.

Figure 8-2: Schematic, Depth of Formation, Epithermal Deposit Model



Note: Figure from Corbett (2019).

Textures typical of low-sulphidation deposits include open-space filling, symmetrical and other layering, crustification, comb structure, colloform banding and multiple brecciation.

Deposits typically exhibit pronounced zonation along strike and vertically. Deposits are commonly zoned vertically over 250–350 m from a base metal-poor, gold–silver-rich top to a relatively silver-rich base metal zone and an underlying base metal-rich zone grading at depth into a sparse base metal, pyritic zone. From surface to depth, metal zones can contain gold–silver–arsenic–antimony–mercury, gold–silver–lead–zinc–copper, or silver–lead–zinc. In alkalic host rocks, tellurides, vanadium-mica (roscoelite), and fluorite may be abundant, with lesser molybdenite.

Pyrite, electrum, gold, silver, argentite; chalcopyrite, sphalerite, galena, tetrahedrite, silver sulphosalt and/or selenide minerals are the main mineral species. Quartz, amethyst, chalcedony, quartz pseudomorphs after calcite, calcite; adularia, sericite, barite, fluorite, calcium–magnesium–manganese–iron carbonate minerals such as rhodochrosite, hematite, and chlorite are the most common gangue minerals.

8.1.3 Alteration

Silicification is extensive in ores as multiple generations of quartz and chalcedony are commonly accompanied by adularia and calcite. Pervasive silicification in vein envelopes are typically flanked by sericite–illite–kaolinite assemblages. Intermediate argillic alteration (kaolinite–illite–montmorillonite (smectite)) forms adjacent to some veins; advanced argillic alteration (kaolinite–alunite) forms along the tops of mineralized zones. Propylitic alteration dominates peripherally and at depth.

8.1.4 Global Examples

Examples of tonnages and grades in global examples of low-sulphidation deposits to represent the type of target that BeMetals is exploring for at Kato is provided in Table 8-1. These examples are sourced from public domain information as indicated. The QPs caution that Kato is a grassroots prospect, insufficient exploration has been conducted to allow for a Mineral Resource to be estimated, and there is no assurance that tonnages and grades similar to those shown would be estimated at Kato.

The Hishikari deposit in Kyushu is the largest mined example of a low-sulphidation epithermal deposit in Japan. The following description of the Hishikari deposit is sourced from PorterGeo, (1999). The deposit is composed of more than 125 veins (generally 1–3 m thick, to a maximum of 8 m), which strike at between 30 and 70°, distributed within an altered and mineralised corridor with a width of 500–1,000 m and strike interval of ~3 km, and dip at from 70°NW to 70°SE. The individual veins are 300–400 m long, composed of crustiform banded quartz–adularia with subordinate smectite. The top of the vein system is generally >100 m below the surface.

Table 8-1: Global Examples, Low-Sulphidation Epithermal Deposits

Deposit	Measured		Indicated		Inferred		Reference
	Tonnage (Mt)	Grade (g/t Au)	Tonnage (Mt)	Grade (g/t Au)	Tonnage (Mt)	Grade (g/t Au)	
Lihir *	81	1.9	250	2.3	67	2.3	Gleeson et al., 2020
Waihi +	—	—	6.0	5.21	2.5	4.73	Oceana Gold, 2021
Masbate *	—	—	136.4	0.81	31.6	0.79	B2Gold Corp, 2020
Kupol #	—	—	6.4	20.33	4.09	12.45	Crowl et al., 2005
Julietta #	—	—	0.22	19.63	0.18	18.47	Bema, 2006
Deposit	**Measured**		**Indicated**		**Inferred**		**Reference**
	Tonnage (Mst)	**Grade (oz/st Au)**	**Tonnage (Mst)**	**Grade (oz/st Au)**	**Tonnage (Mst)**	**Grade (oz/st Au)**	
Grassy Mountain *	18.2	0.02	12.7	0.05	1	0.04	Raponi et al., 2020

Note: * = reported using 2014 CIM Definition Standards; # = reported using 2005 CIM Definition Standards; + reported using 2012 JORC Code. All estimates other than Grassy Mountain used metric tonnes and gram per tonne units. The Grassy Mountain estimate was reported using US Customary units of short tons and ounces per short ton. References noted are provided in Section 27.

The Hishikari deposit, especially the Honko–Sanjin zone, is characterized by high gold contents in almost all veins. Sumitomo Metal Mining, the current operator at Hishikari notes that most veins have average grades of about 20 g/t Au.

8.2 Model Considerations for the Kato Area

Low sulphidation epithermal gold deposits are typically characterized by the presence of sinter. Sinter forms along the margins of basins such as with Kato, or in river valleys, (e.g., Grassy Mountain, Oregon). Hot hydrothermal fluids mixing with cooler groundwater in this environment will produce steam heated alteration of the enclosing strata and massive, barren silicification (Sillitoe, 2015). Hydrothermal eruption breccia may also be present. Typical zoning of alteration products from volcanic host rocks by ascending hydrothermal fluids will produce smectite at higher levels grading downward into mixed layer clays and finally illite dominant at the deepest levels.

The mineralized shoots of classic low sulphidation epithermal gold systems tend to have limited vertical extent making identification of alteration and vein textures critical in the design of exploration programs. Quartz textures in the near surface above bonanza zones tend to be composed of weakly mineralized, low temperature chalcedony grading downward into more crystalline varieties at deeper levels with increasing grade.

Adularia may be present in banding or masses along with textural evidence of boiling such as lamellar quartz after calcite.

8.3 Comments on Deposit Types

The QP is of the opinion that exploration programs that use a low-sulphidation epithermal model for vectoring are appropriate for the Project area.

9.0 EXPLORATION

9.1 Introduction

MMAJ and Kazan Resources completed work on the Kato Project. Work conducted by BeMetals since the announcement of acquisition of Kronk Resources and Kazan Resources comprised data verification, and is discussed in Section 12.

9.2 Grids and Surveys

Drill hole co-ordinates for the MMAJ drill holes are reported in Tokyo Datum and JDG2000 which replaced the Tokyo Datum projection.

The projection used by Kazan Resources for Kato is WGS84 and zone 54T.

9.3 Geological Mapping

The first base map grid with a 50 x 100 m spacing was used by MMAJ in 1991 and covered an area 1,700 m wide (east–west), and 800 m long (north–south). This base was used for soil and rock chip sampling, geological mapping, and an IP-resistivity survey. The scale used is not available.

In 2019, Kazan Resources conducted geological mapping confined along a section of the Seta River at a 1:1,000 scale.

9.4 Geochemistry

MMAJ collected 616 rock chip and 306 soil samples in the period 1991–1994. MMAJ hand-contoured the gold, silver, arsenic and mercury values from the soil samples to outline anomalous areas (Figure 9-1). These anomalies were used as a guide when designing the MMAJ drill targets.

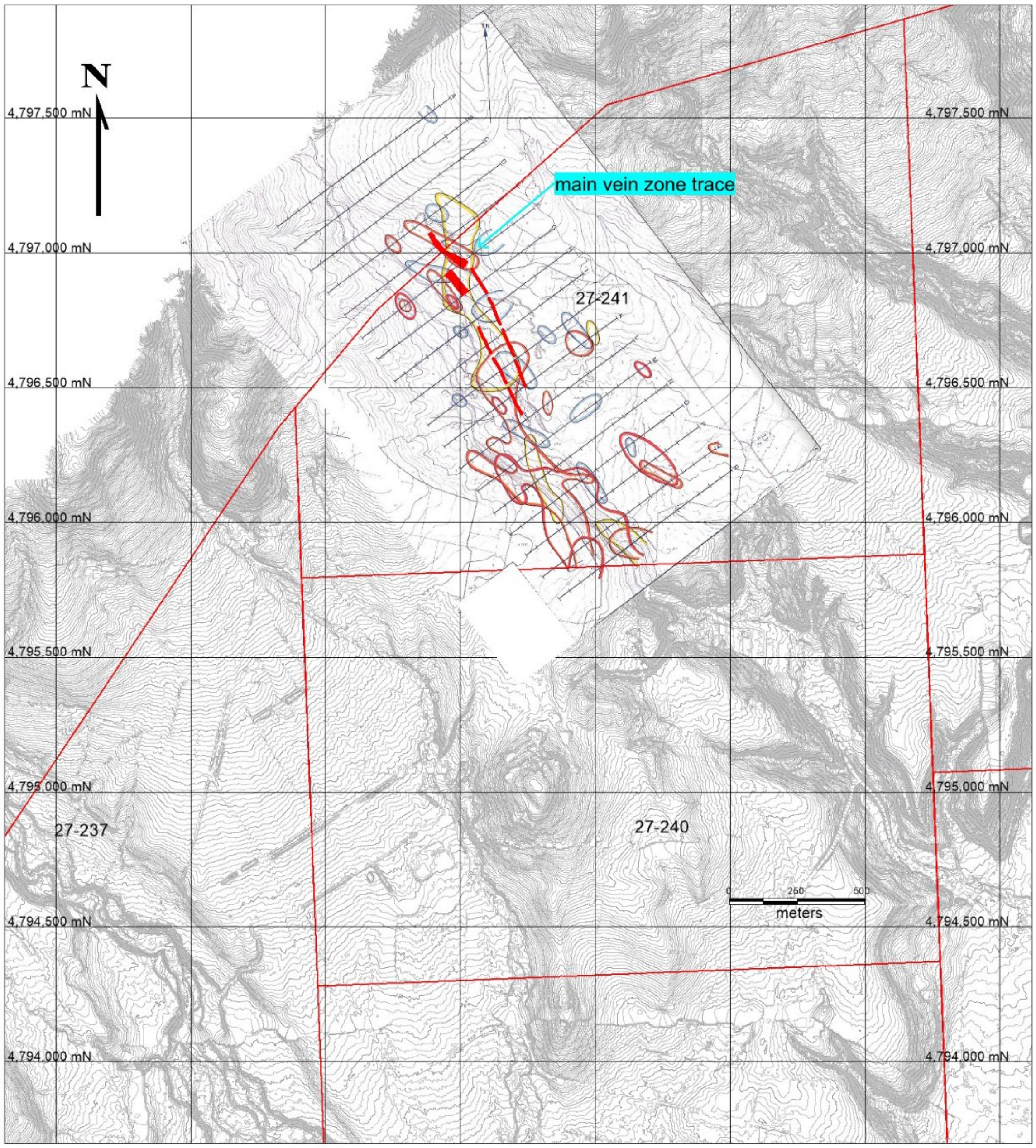
Kazan Resources collected 78 rock chip samples from selected surface outcrops and float during the 2016 reconnaissance visit (Figure 9-2). The sample locations were used to refine drill targets (see Section 10) and areas with exploration potential (see Section 9.7).

9.5 Geophysics

MMAJ completed three IP campaigns, covering approximately 105.5 line-km. Readings were taken every 50 m along 100 m-spaced lines. There is no information available as to the type of instrument used. The survey company was Sumiko Consultants.

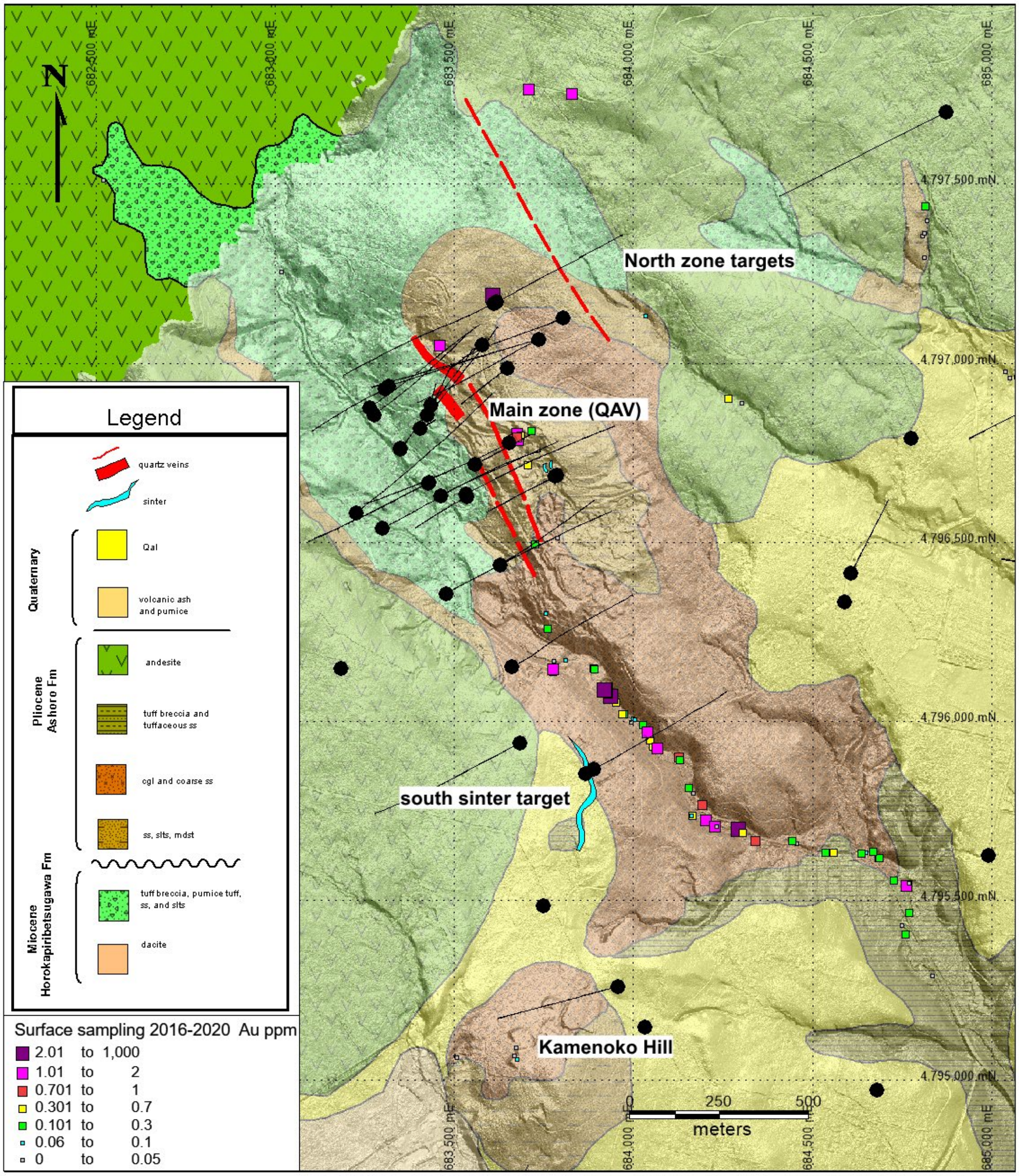
The IP survey clearly shows the resistivity high associated with the strong clay alteration enclosing the QAV and STZ zones (refer to description in Section 7.3.5) at Seta River.

Figure 9-1: MMAJ Geochemical Anomaly Map



Note: Figure prepared by BeMetals, 2021, after MMAJ, 1994. Red solid outlines are the boundaries of the BeMetals concessions. Red dashed outlines are the strike of the main vein.

Figure 9-2: Kazan Resources Rock Chip Geochemical Sampling Results



Note: Figure prepared by BeMetals, 2021, adapted from Yajima, et al., (1997).

The resistivity high tracks along the trace of the faults that run parallel to the Seta River. Figure 9-3 is an example of the contoured resistivity program results.

Tierra Technica were contracted by Kazan Resources in 2018 to conduct a small drone-mounted magnetic survey along the Seta River, tracing the trend of the known mineralization at Kato. The survey was about 2 km in length, oriented southeast to northwest, and was approximately 1 km wide. A total of 40 flight lines were completed on 50 m spacings. The flight lines were flown at orientations of 0400º and 2200º. The drone-mounted magnetometer was a GEM GSMP-35U instrument.

Pioneer Aerial Surveys Ltd, based in Saskatchewan, Canada, was contracted to process the data. Pioneer noted that the area was not entirely covered with the drone flight, and one line in the south was missing. They also observed that no tie lines were flown, which could result in possible leveling errors. In addition, a number of lines were considered to be too noisy for good quality control. Despite these issues, Pioneer was able to produce images for review. The resulting image of the first vertical derivative shows a pronounced northwesterly trend of magnetic highs and lows that correspond to known faults and mineralization trends (Figure 9-4).

A second drone-mounted magnetic survey was conducted by Pioneer in 2019. The second survey covered an area much larger at 21.6 km^2 and included a light detection and ranging (LiDAR) capability. Pioneer used a Gem Systems Canada GEM GSMP-35U magnetometer equipped with a laser altimeter, and a ground-based stationary GSM 19 Overhauser magnetometer as the base station for diurnal corrections.

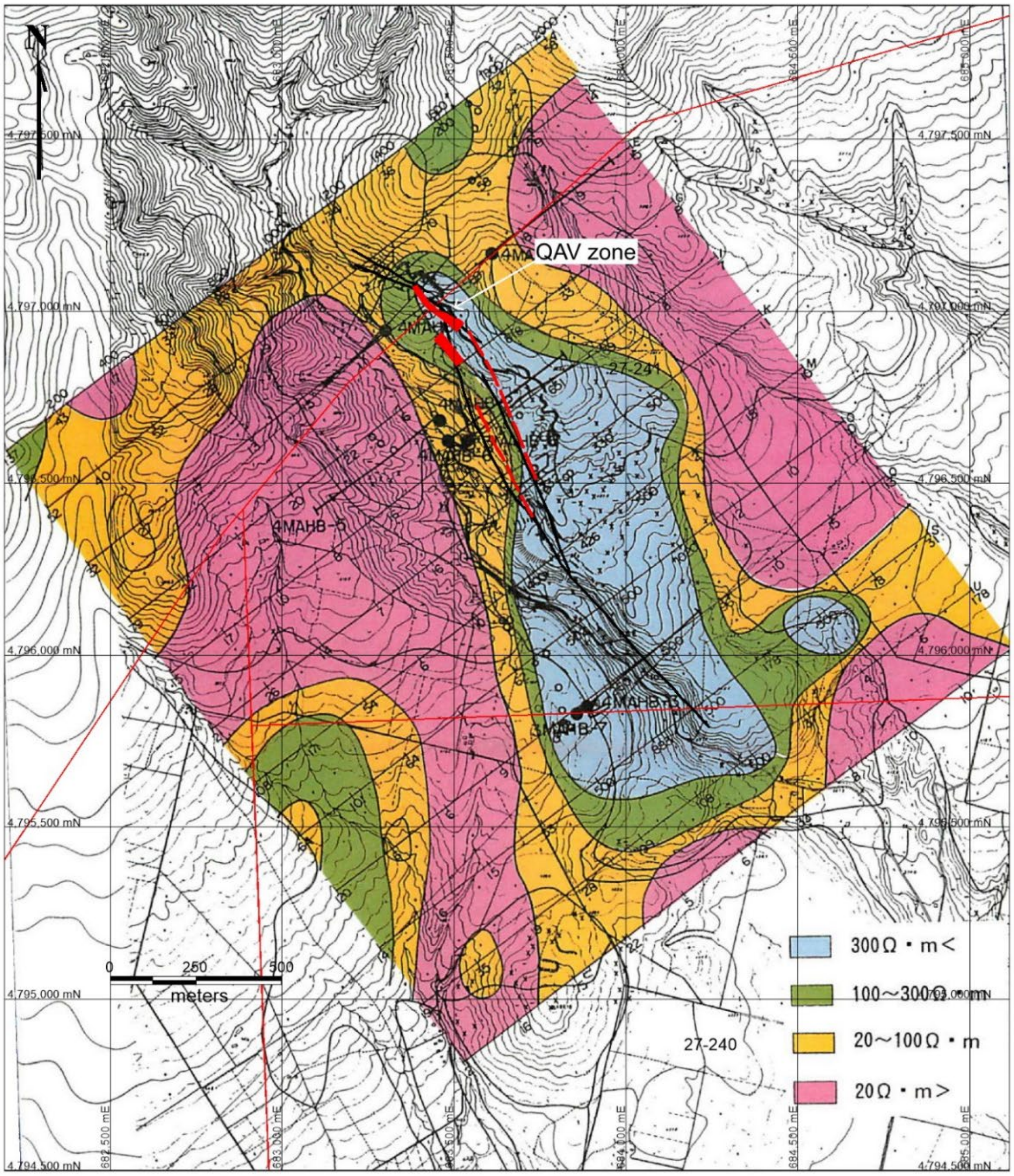
The Pioneer survey line spacing was 50 m flown at an azimuth of 065º with 500 m tie-lines. In all, there were 419.74 line km of flight lines and 47.64 line km of tie lines for a total of 467.38 line km of survey.

The Pioneer survey detected strong magnetic lows associated with the mineralization along the Seta River (Figure 9-5) and, significantly, a pronounced linear magnetic low 2 km long in a parallel drainage, the Osoushinai River, to the northeast. The extreme northwestern end of the anomaly was drilled by MMAJ in 1992 and drill hole 4MAHB-7 intersected a zone of narrow quartz veins with elevated gold values.

In 2019, Kazan Resources drilled across the anomaly at the southeastern end, but intersected lakebed sediments, indicating that the drill hole was too high in the section to intersect the underlying volcanic rocks known to host the Kato mineralization.

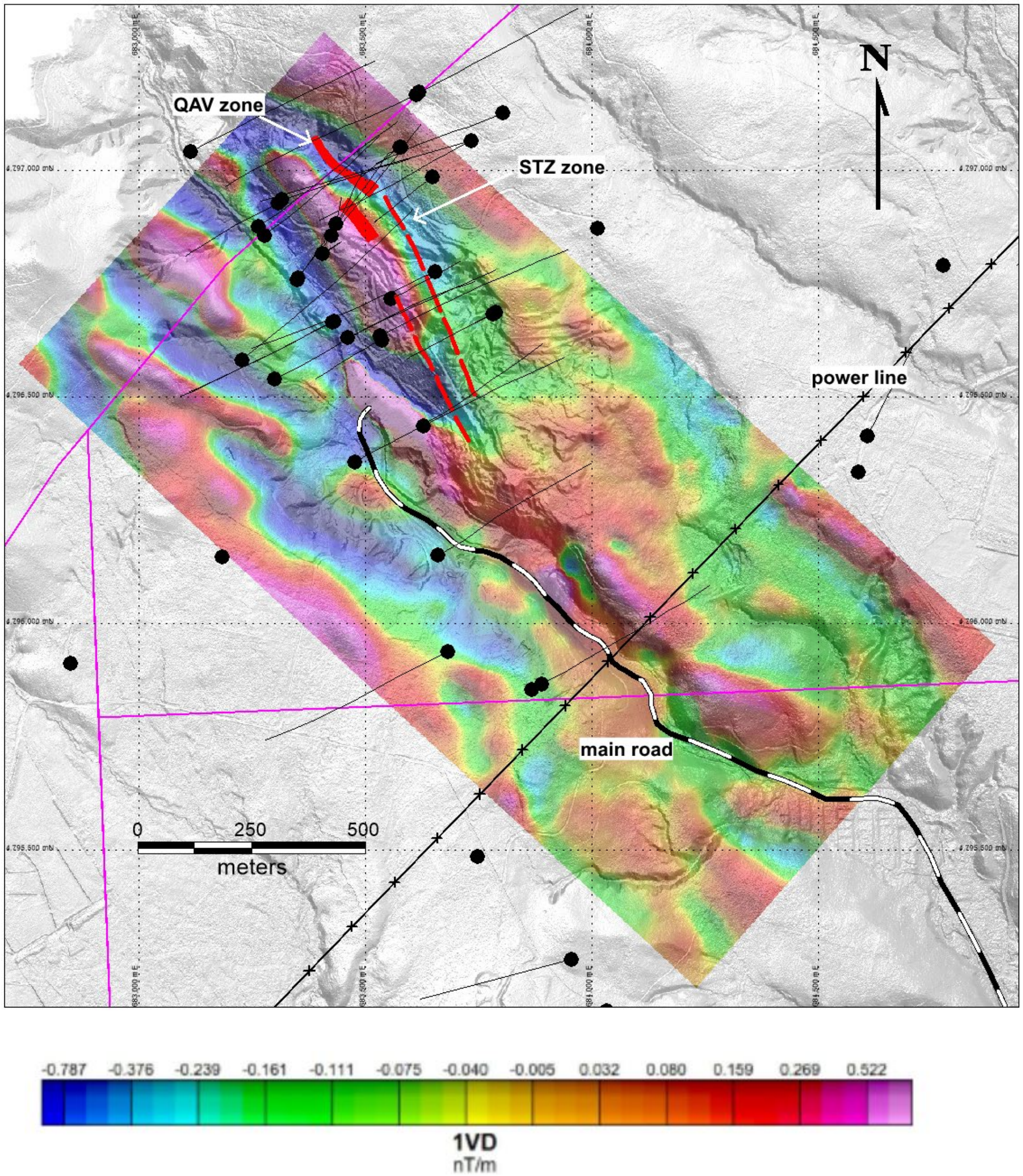
A parallel drainage farther to the northeast shows a smaller but distinct anomaly along the Nakanosawa River, in the area where large boulders of chalcedonic quartz with anomalous gold values were sampled in 2016.

Figure 9-3: Resistivity Map



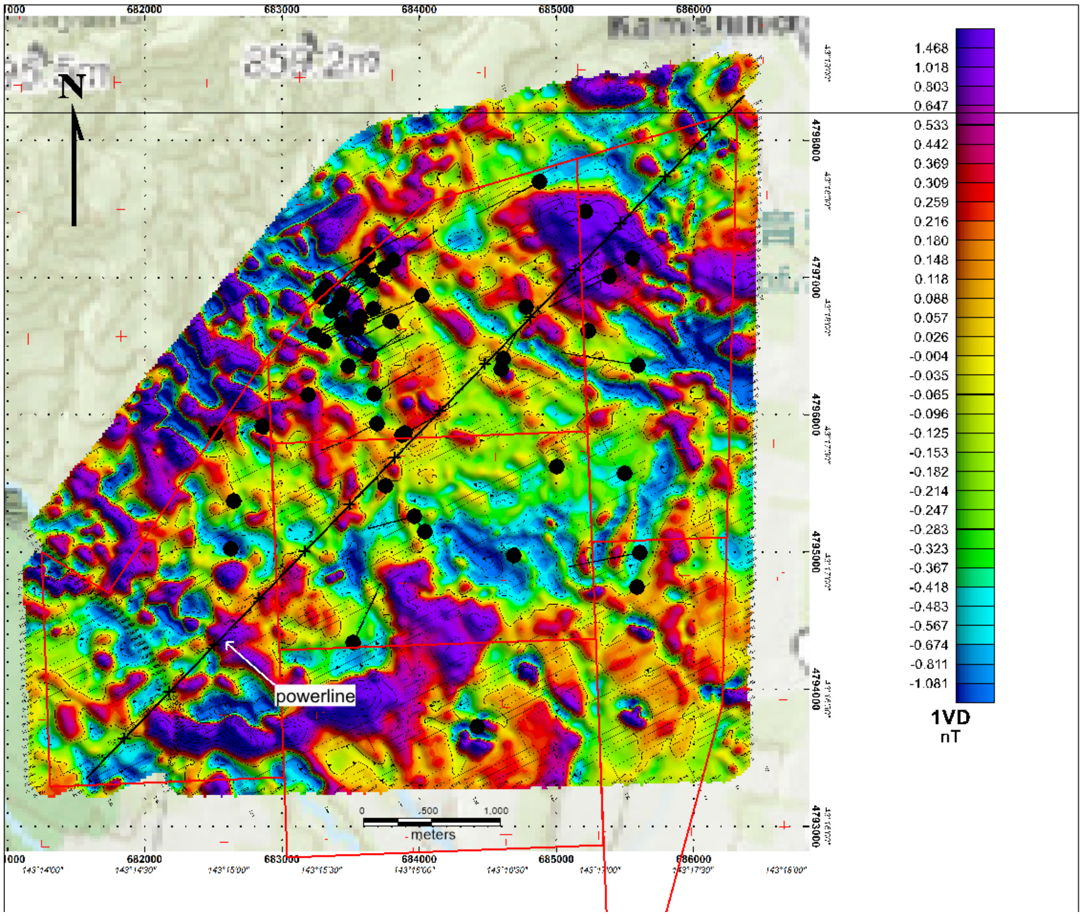
Note: Figure prepared by BeMetals, 2021, after MMAJ, 1991. Red outlines are the boundaries of the BeMetals concessions.

Figure 9-4: First Vertical Derivative, 2018 Done-Mounted Magnetometer Survey



Note: Figure prepared by BeMetals, 2021, after Tierra Technica, 2018. Purple lines on figure are the BeMetals concessions. Black circles are drill collars.

Figure 9-5: First Vertical Derivative, 2019 Done-Mounted Magnetometer Survey



Note: Figure prepared by BeMetals, 2021, after Pioneer, 2019. Red lines on figure are the BeMetals concessions. Black circles are drill collars.

9.6 Petrology, Mineralogy, and Research Studies

9.6.1 Dating

In 1994 and 1995, MMAJ submitted several samples for whole rock analyses and K–Ar dating.

The samples consisted of clay from drill hole 3MAHB-7, weakly-altered andesite, silicified tuff, and adularia from drill hole 4MAHB-6.

- The resulting K–Ar dates are:
- Clay: 0.76 ± 0.56 Ma;

- Weakly-altered andesite: 2.01± 1.26 Ma;
- Silicified tuff: 1.30 ± 0.07 Ma;
- Adularia: 1.22 ± 0.69 Ma.

The results suggest that the strong clay alteration occurred after the main mineralizing event, probably as a result of meteoric water mixing with H_2S-bearing steam producing sulphuric acid. The age of mineralization is quite young at about 1.22 ± 0.69 Ma.

9.6.2 Fluid Inclusions

Fluid inclusion studies were completed by MMAJ in 1992, 1993, and 1995. The studies included some surface samples, but came principally from drill core from drill holes 4MAHB-1,2,5 and 7 and 5MAHB-1,2, and 3, 6MAHB-1, and 7MAHB-1-8.

The data show two populations clustering around 150° C and 265° C which are consistent with a low temperature epithermal environment of formation. The data suggest that over 90% of the higher-grade veins occur between 300 and 450 masl (about 100–250 m below the current surface).

9.6.3 Stable Isotope Study

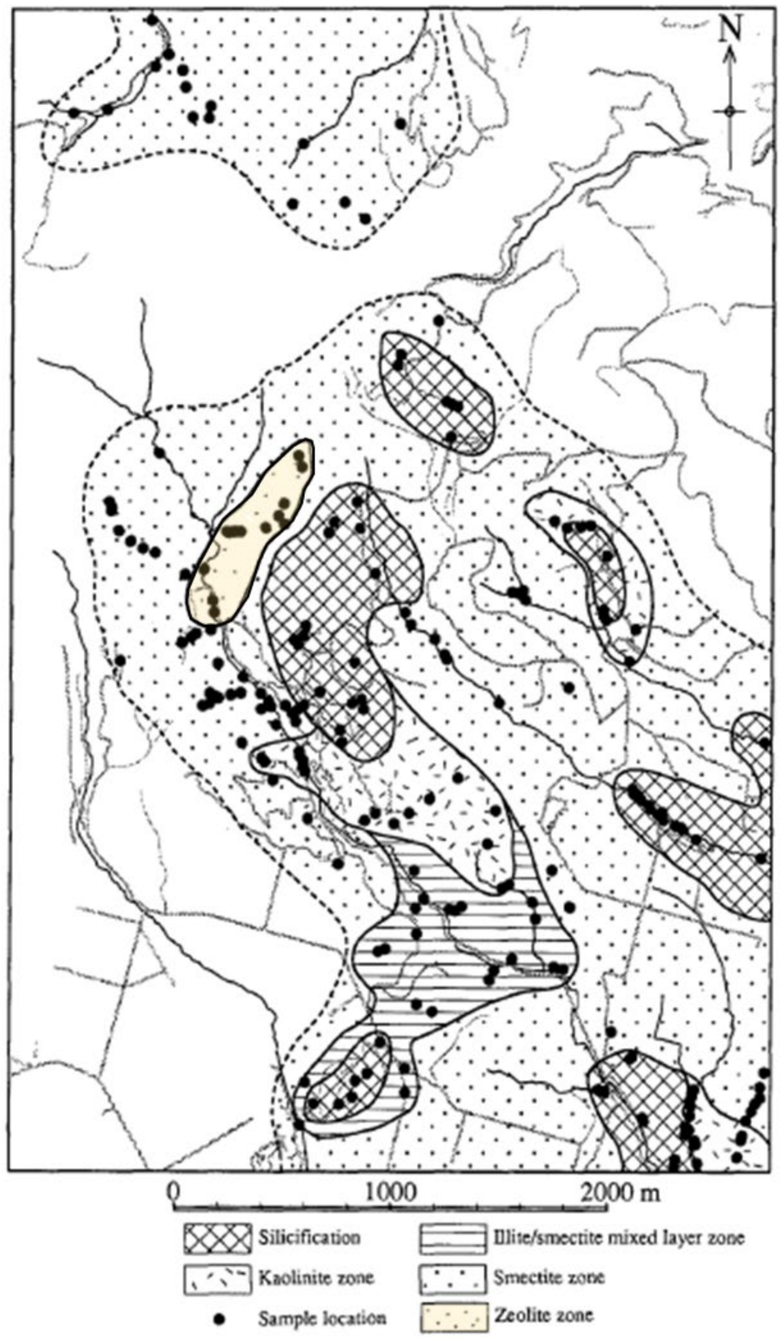
The database contains 20 sulphur isotope values and four oxygen isotope values. The source of these data is not known. Sulphur isotope determinations were performed on alunite and pyrite. Oxygen isotope determinations were performed on hydrothermal quartz.

9.6.4 Alteration Zoning

An alteration zoning study indicated that surface alteration in the Seta River area is characterized by development of clay with the strongest alteration immediately adjacent to the main mineralized zone. The alteration is subdivided into five zones: zeolite, smectite, smectite/illite mixed layer, kaolinite, and silicification (Figure 9-6).

The zeolite zone truncates the mineralization at the northwestern end of the main zone and consists of mordenite and clinoptilolite (both zeolite minerals). The smectite zone surrounds the higher-temperature illite/smectite alteration assemblages while kaolinite and silicification formed around the steam-heated, acid-leached zones above the main mineralization.

Figure 9-6: Alteration Zoning



Note: Figure from Yajima, et al (1997).

9.6.5 Thesis

One Master of Science thesis was completed on the Kato prospect:

- Tatsuhiko, Kataoka, 1996: A Study on the Characteristic Features and the Formation Condition of Epithermal Gold Mineralization at the Seta Area, Kamishihoro-cho, Hokkaido.

The thesis has not been translated to English.

9.7 Exploration Potential

In addition to completing drill testing to confirm and expand the area identified as the priority target based on MMAJ and Kazan drilling (Figure 9-7), there are three additional areas that show excellent exploration potential.

These are (refer to locations shown in Figure 9-2):

- The sinter occurrence located along the Seta River southeast of the Kato main zone (refer to Figure 7-3);
- The extension of the vein mapped by MMAJ to the north of the Kato main zone;
- The Kamenoko Hill mercury occurrence to the south of the Kato main zone.

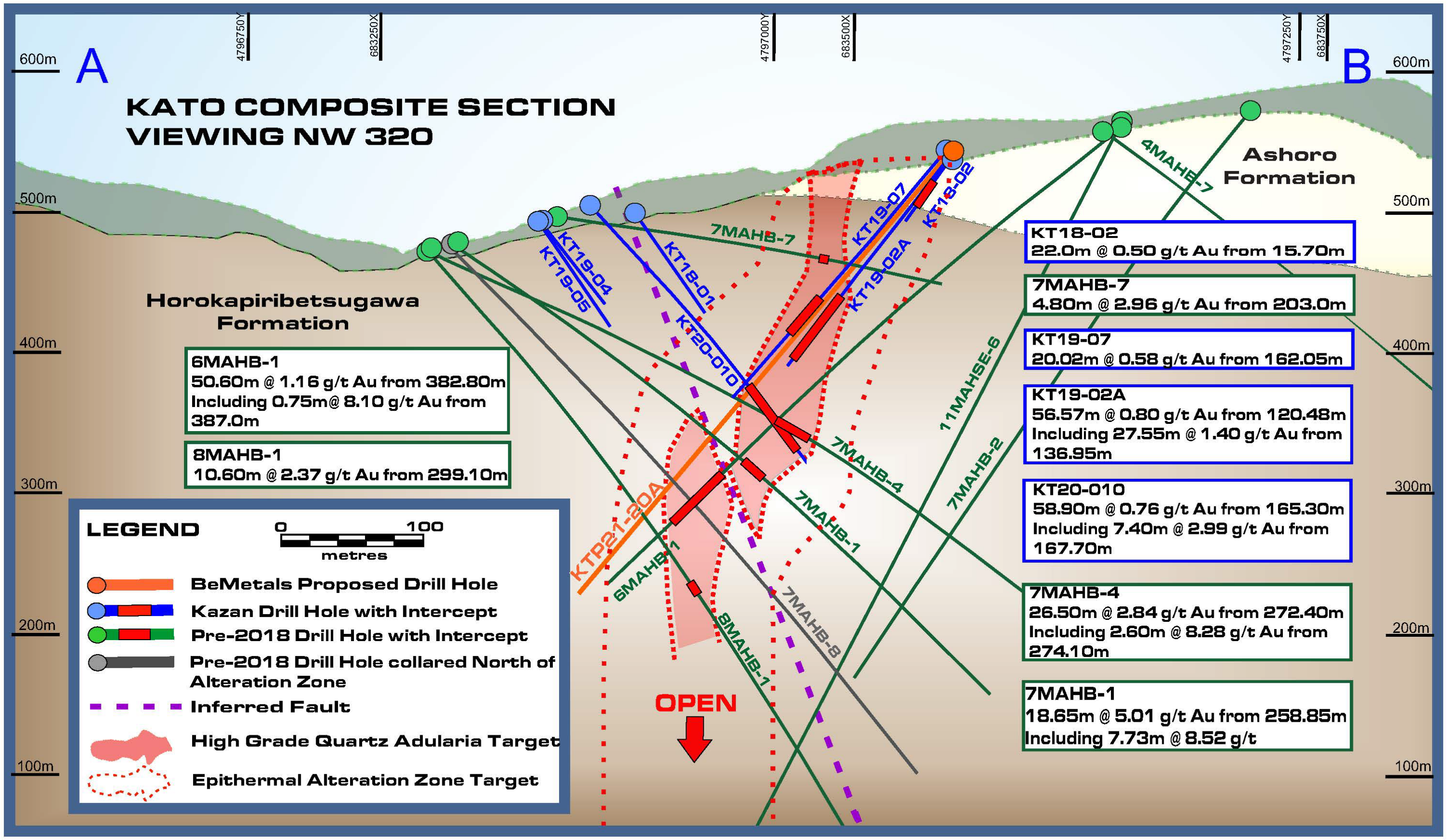
These locations are shown on.

9.8 Comments on Exploration

Exploration activities have established that the Kato Project area is prospective for gold mineralization in an epithermal setting.

In addition to the Kato main zone, three areas in particular warrant additional exploration, consisting of a sinter occurrence, potential quartz vein extensions, and a mercury occurrence.

Figure 9-7: Priority Target



Note: Figure prepared by BeMetals, 2021. Drill intercepts shown were included in Table 10-3 and Table 10-4.

10.0 DRILLING

10.1 Introduction

Drilling was conducted by the MMAJ, and by Kazan Resources. Within the limits of the current area of prospecting rights drilling consists of 63 core holes (22,988.30 m) completed by MMAJ in the 1990s and 10 core holes (2,084.30 m), drilled by Kazan Resources.

MMAJ drilling is summarized in Table 10-1. The Kazan Resources drill programs are provided in Table 10-2. MMAJ drill collars are shown in Figure 10-1, and the Kazan Resources drill collar locations are included in Figure 10-2.

A list of the hole locations and drill intercepts is provided for the MMAJ programs in Table 10-3. A similar table is provided for the Kazan Resources campaigns in Table 10-4.

10.2 Drill Methods

10.2.1 MMAJ

The MMAJ drilling was conducted over a period of nine years, beginning in 1991. Several drilling companies were contracted for the drilling including Nittetsu, Hokusei, Suncoh, Kitaya, Ueyama, Major, Nisako, Koken Kogyo, Dowa Koei, and Nikko Exploration Co. Although the exact maker and model of the drills is not known, Kazan Resources contracted a Japanese drilling company in 2020 who operated a NL-55 electric drill which is made by a successor of Nippon Longyear 1983, which is very likely similar, if not identical to those used by MMAJ. These drills are not ideal for minerals exploration in difficult terrain and require as much as 14 days to set up.

The core sizes are not listed in the Japanese reports, but some rare photos of the core suggest HQ (63.5 mm core diameter), NQ (47.6 mm), and BQ (36.4 mm) were used. None of the core from the MMAJ drilling has been located to date, aside from a single box from drill hole 11MAHSE-6 that is kept in a local museum.

10.2.2 Kazan Resources

Kazan Resources contracted Energold Canada to import one their man-portable drills in October, 2018. The drill is an "in-house" manufactured Ranger Series 4 from Energold Peru (Figure 10-3). The drill can be set up in less than one day and uses as many as four Kubota diesel engines that can be moved individually with the mast, hydraulic panel, and instrument panel.

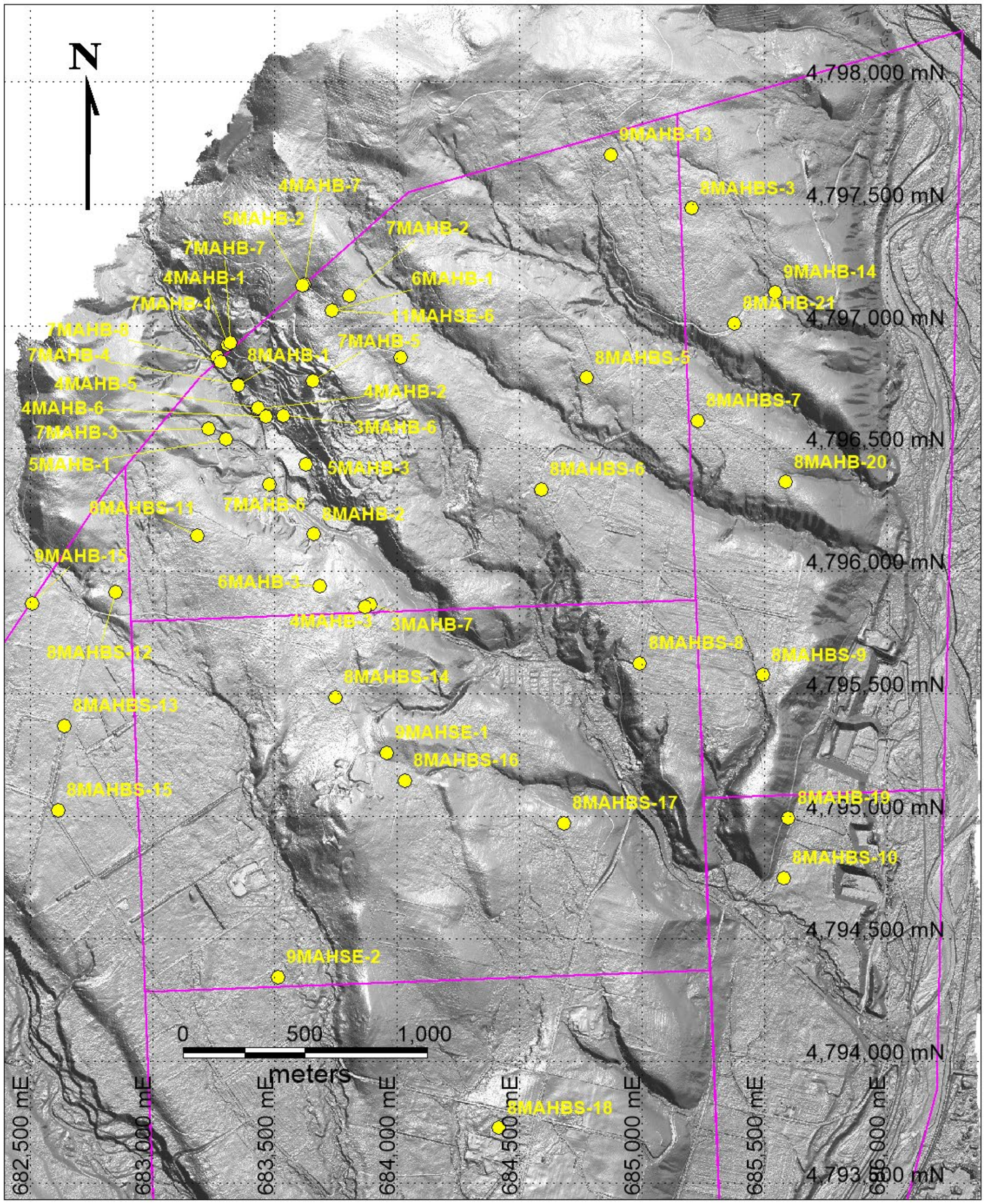
Table 10-1: MMAJ Drill Summary Table

Year Drilled	Number of Drill Holes	Drilled Metres (m)	Drilling Company
1991	2	1,001	Hokusei, Suncoh
1992	6	2,505.70	Nittetsu, Kitaya, Suncoh, Ueyama, Major
1993	3	1,801.40	Nittetsu, Suncoh, Hokusei
1994	6	3,104.60	Nittetsu, Ueyama, Hokusei, Suncoh, Nisako
1995	8	4,179	Koken Kogyo, Nittetsu, Suncoh, Dowa, Koei, Major
1996	21	3,977.30	Nittetsu, Oeyama, Koken Kogyo, Nikko, Hokusei
1997	13	3,358.30	Hokusei
1998	2	1,114.40	Dowa Koei
1999	2	1,946.60	Dowa Koei
	63	***22,988.30***	

Table 10-2: Kazan Resources Drill Summary Table

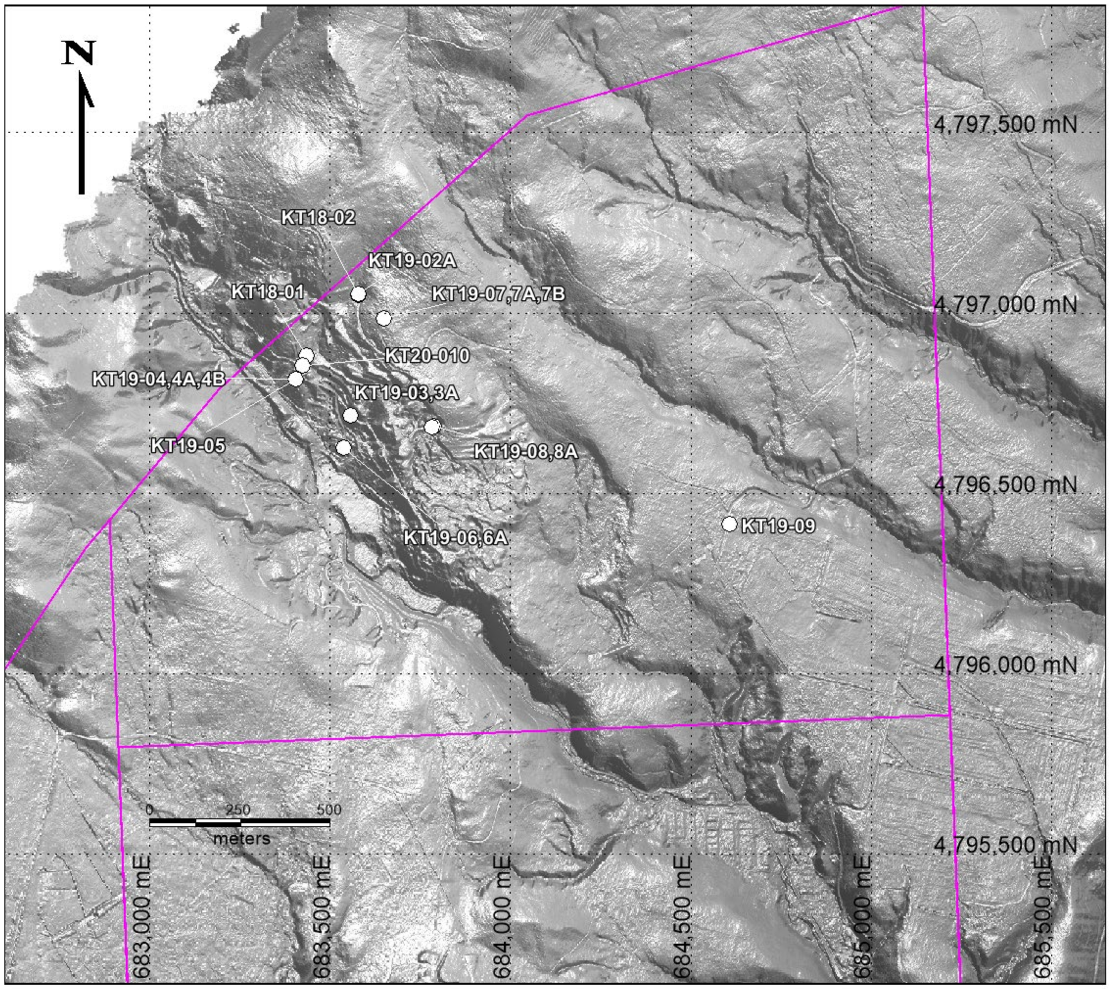
Year Drilled	Number of Drill Holes	Drilled Metres (m)	Core Size	Drilling Company and Drill Type
2018	2	144.4	HQ/NTW	Energold, Canada; Energold Ranger Series 4
2019	7	1707.3	HQ/NTW	Energold, UK; Energold Ranger Series 4
2020	1	232.6	HQ/NQ	Akita Shusui; Nippon Longyear 55
	10	***2,084.3***		

Figure 10-1: MMAJ Drill Collar Location Plan



Note: Figure prepared by BeMetals, 2021. Magenta lines = BeMetals concession outlines.

Figure 10-2: Kazan Resources Drill Collar Location Plan



Note: Figure prepared by BeMetals, 2021. Magenta lines = BeMetals concession outlines.

Table 10-3: MMAJ Drill Intercepts Table

Hole ID	Northing	Easting	Elevation (m)	Azimuth (º)	Dip (º)	Total Depth (m)	Includes	Intercept From (m)	Intercept To (m)	Drilled Interval (m)	Gold Grade (g/t Au)	Silver Grade (g/t Ag)
11MAHSE-6	683734.6	4797066	565	254	60	966.1		147.6	147.9	0.3	3.5	5.99
11MAHSE-6	683734.6	4797066	565	254	60	966.1		341.8	342.8	1	6.15	5.54
3MAHB-6	683532.6	4796635	470.54	63	20	501		153.95	165.9	11.95	0.42	2.95
3MAHB-6	683532.6	4796635	470.54	63	20	501	Incl.	153.96	157.20	3.24	1.05	5.06
3MAHB-6	683532.6	4796635	470.54	63	20	501		204.00	208.10	4.10	0.19	7.15
3MAHB-6	683532.6	4796635	470.54	63	20	501		211.50	211.60	0.10	5.58	6.72
3MAHB-7	683888.2	4795867	470.46	63	30	500		64.50	72.40	7.90	0.70	8.82
4MAHB-2	683427.9	4796666	462.91	243	20	400		98.05	100.65	2.60	0.06	1.74
4MAHB-2	683427.9	4796666	462.91	243	20	400		126.25	127.25	1.00	0.66	4.91
4MAHB-2	683427.9	4796666	462.91	243	20	400		147.55	148.20	0.65	1.68	6.65
4MAHB-3	683867.5	4795855	470.77	0	90	200		22.10	24.00	1.90	0.53	11.54
4MAHB-3	683867.5	4795855	470.77	0	90	200		31.05	32.25	1.20	0.75	21.67
4MAHB-5	683430.2	4796667	463.9	243	42	500.78		116.80	119.30	2.50	13.11	55.02
4MAHB-5	683430.2	4796667	463.9	243	42	500.78		217.60	218.90	1.30	1.67	13.01
4MAHB-6	683461.7	4796631	461.09	63	43	501		127.00	127.80	0.80	1.60	12.25
4MAHB-6	683461.7	4796631	461.09	63	43	501		175.50	184.00	8.50	3.42	20.40
4MAHB-6	683461.7	4796631	461.09	63	43	501		300.60	316.80	16.20	0.51	36.87
4MAHB-6	683461.7	4796631	461.09	63	43	501		320.90	323.80	2.90	0.77	22.68
4MAHB-6	683461.7	4796631	461.09	63	43	501		333.00	334.40	1.40	0.61	1.97
5MAHB-1	683299.9	4796540	472.38	63	43	700.2		44.20	44.60	0.40	7.96	67.80
5MAHB-1	683299.9	4796540	472.38	63	43	700.2		118.40	118.60	0.20	4.86	57.60
5MAHB-1	683299.9	4796540	472.38	63	43	700.2		580.00	593.60	13.60	0.21	0.66
5MAHB-2	683611.4	4797167	557.75	243	38	600.1		252.90	266.10	13.20	0.52	30.54

Hole ID	Northing	Easting	Elevation (m)	Azimuth (º)	Dip (º)	Total Depth (m)	Includes	Intercept From (m)	Intercept To (m)	Drilled Interval (m)	Gold Grade (g/t Au)	Silver Grade (g/t Ag)
5MAHB-2	683611.4	4797167	557.75	243	38	600.1	Incl.	258.30	266.10	7.80	0.60	41.13
5MAHB-2	683611.4	4797167	557.75	243	38	600.1		314.80	332.30	17.50	8.15	114.77
5MAHB-2	683611.4	4797167	557.75	243	38	600.1		508.70	510.10	1.40	1.25	2.53
5MAHB-3	683627.2	4796437	454.32	63	45	501.1		146.80	146.90	0.10	0.79	0.70
6MAHB-1	683734.6	4797066	560.76	243	37	500.1		140.50	142.80	2.30	0.85	6.86
6MAHB-1	683734.6	4797066	560.76	243	37	500.1		169.00	169.10	0.10	6.33	8.79
6MAHB-1	683734.6	4797066	560.76	243	37	500.1		382.80	433.40	50.60	1.16	25.02
6MAHB-1	683734.6	4797066	560.76	243	37	500.1	Incl.	392.20	433.40	41.20	1.07	14.91
6MAHB-3	683682.6	4795939	476.19	243	25	501.5		277.00	283.50	6.50	0.52	11.94
7MAHB-1	683263.4	4796876	476.87	55	33	500.9		243.85	244.10	0.25	7.68	62.40
7MAHB-1	683263.4	4796876	476.87	55	33	500.9		258.85	277.50	18.65	5.01	64.08
7MAHB-1	683263.4	4796876	476.87	55	33	500.9	Incl.	262.77	270.50	7.73	8.52	112.81
7MAHB-1	683263.4	4796876	476.87	55	33	500.9		311.25	318.50	7.25	0.34	7.08
7MAHB-1	683263.4	4796876	476.87	55	33	500.9		322.45	323.70	1.25	1.70	2.62
7MAHB-3	683227.3	4796583	482.99	52	39	670.7		54.40	55.60	1.20	3.12	19.38
7MAHB-3	683227.3	4796583	482.99	52	39	670.7		202.63	203.15	0.52	2.70	10.57
7MAHB-3	683227.3	4796583	482.99	52	39	670.7		206.70	208.15	1.45	2.17	44.40
7MAHB-3	683227.3	4796583	482.99	52	39	670.7		270.45	270.85	0.40	1.35	3.55
7MAHB-3	683227.3	4796583	482.99	52	39	670.7		467.15	467.30	0.15	0.04	0.10
7MAHB-4	683350.6	4796762	469.95	38	25	501.5		187.40	190.10	2.70	1.52	23.90
7MAHB-4	683350.6	4796762	469.95	38	25	501.5		266.65	269.30	2.65	3.71	42.64
7MAHB-4	683350.6	4796762	469.95	38	25	501.5		272.40	298.90	26.50	2.84	28.93
7MAHB-4	683350.6	4796762	469.95	38	25	501.5		306.80	312.80	6.00	0.47	4.45
7MAHB-4	683350.6	4796762	469.95	38	25	501.5		348.30	352.60	4.30	0.97	5.63

Hole ID	Northing	Easting	Elevation (m)	Azimuth (º)	Dip (º)	Total Depth (m)	Includes	Intercept From (m)	Intercept To (m)	Drilled Interval (m)	Gold Grade (g/t Au)	Silver Grade (g/t Ag)
7MAHB-5	683653.3	4796777	518.75	243	39	600		275.28	275.75	0.47	60.62	162.95
7MAHB-5	683653.3	4796777	518.75	243	39	600		290.75	291.19	0.44	4.69	15.06
7MAHB-5	683653.3	4796777	518.75	243	39	600		383.10	383.35	0.25	2.22	15.50
7MAHB-6	683476.3	4796357	452.86	63	36	600.4		90.30	93.75	3.45	1.94	28.97
7MAHB-6	683476.3	4796357	452.86	63	36	600.4		161.55	163.40	1.85	0.73	3.75
7MAHB-6	683476.3	4796357	452.86	63	36	600.4		178.90	182.70	3.80	0.62	4.32
7MAHB-6	683476.3	4796357	452.86	63	36	600.4		263.20	265.80	2.60	2.46	76.99
7MAHB-6	683476.3	4796357	452.86	63	36	600.4		290.90	291.00	0.10	41.40	17.80
7MAHB-6	683476.3	4796357	452.86	63	36	600.4		345.20	377.30	32.10	0.64	24.01
7MAHB-6	683476.3	4796357	452.86	63	36	600.4		211.50	211.60	0.10	5.58	6.72
7MAHB-7	683316.2	4796935	496.65	72	10	300		64.50	72.40	7.90	0.70	8.82
7MAHB-8	683277.2	4796857	476.24	53	45	502.5		130.10	131.40	1.30	0.72	10.80
7MAHB-8	683277.2	4796857	476.24	53	45	502.5		265.51	266.05	0.54	0.32	62.63
7MAHB-8	683277.2	4796857	476.24	53	45	502.5		357.02	357.38	0.36	6.64	15.00
7MAHB-8	683277.2	4796857	476.24	53	45	502.5		418.35	419.65	1.30	3.08	18.83
8MAHB-1	683349.5	4796760	469.95	38	50	600.2		250.00	250.10	0.10	4.86	6.04
8MAHB-1	683349.5	4796760	469.95	38	50	600.2		299.10	309.70	10.60	2.37	5.94
8MAHB-2	683659.3	4796153	458.32	65	30	451		103.50	105.10	1.60	3.69	7.05
8MAHB-2	683659.3	4796153	458.32	65	30	451		141.40	152.35	10.95	1.07	11.94

Note: Drill hole 7MAHB-2 did not reach target and was not sampled.

Table 10-4: Kazan Resources Drill Intercepts Table

Hole ID	Northing	Easting	Elevation (m)	Azimuth (º)	Dip (º)	Depth (m)	Includes	Intercept From (m)	Intercept To (m)	Drilled Width (m)	Gold Grade (g/t Au)	Silver Grade (g/t Ag)
KT18-02	683578.4	4797051	535.717	245	-52	51.15		15.70	37.70	22.00	0.50	8.49
KT19-02A	683576.8	4797052	535.481	245	-52	183		120.48	177.05	56.57	0.80	15.13
KT19-02A	683576.8	4797052	535.481	245	-52	183	Incl.	136.95	164.50	27.55	1.40	19.35
KT19-02A	683576.8	4797052	535.481	245	-52	183	Incl.	150.50	164.50	14.00	2.10	29.82
KT19-03	683557	4796717	492.38	63	-45	256.3		68.45	77.77	9.32	0.24	3.25
KT19-03	683557	4796717	492.38	63	-45	256.3		128.60	176.16	47.56	0.30	11.24
KT19-03	683557	4796717	492.38	63	-45	256.3	Incl.	128.60	138.17	9.57	0.64	7.66
KT19-03	683557	4796717	492.38	63	-45	256.3	Incl.	168.87	176.16	7.29	0.22	17.85
KT19-06A	683535.8	4796626	469.887	243	-45	235.2		104.30	137.10	32.80	0.10	1.57
KT19-06A	683535.8	4796626	469.887	243	-45	235.2	Incl.	121.50	122.20	0.70	1.12	3.20
KT19-06A	683535.8	4796626	469.887	243	-45	235.2	Incl.	136.30	137.10	0.80	0.47	12.10
KT19-06A	683535.8	4796626	469.887	243	-45	235.2		159.60	159.95	0.35	2.18	8.50
KT19-06A	683535.8	4796626	469.887	243	-45	235.2		172.90	173.25	0.35	1.21	14.50
KT19-06A	683535.8	4796626	469.887	243	-45	235.2		179.55	179.85	0.30	0.75	34.70
KT19-06A	683535.8	4796626	469.887	243	-45	235.2		193.40	193.95	0.55	1.17	23.60
KT19-06A	683535.8	4796626	469.887	243	-45	235.2		229.10	229.85	0.75	1.08	2.20
KT19-07	683647.9	4796986	552.09	235	-50	243.6		148.57	182.07	33.50	0.46	12.11
KT19-07	683647.9	4796986	552.09	235	-50	243.6	Incl.	162.05	182.07	20.02	0.58	11.76
KT19-07	683647.9	4796986	552.09	235	-50	243.6	Incl.	165.30	169.37	4.07	1.05	10.56
KT20-010	683424	4796856	497	30	-45	232.6		165.30	224.20	58.90	0.76	17.28
KT20-010	683424	4796856	497	30	-45	232.6	Incl.	167.70	175.10	7.40	2.99	44.12
KT20-010	683424	4796856	497	30	-45	232.6		229.80	232.60	2.80	3.10	14.86

Notes: Drill holes KT18-01, KT18-2, KT19-02A, KT19-04, KT19-05, KT19-07, KT19-08 did not reach target. Drill hole KT19-07 ended in mineralization.

The goal of the 2018 program was to verify the presence of higher-grade quartz–adularia mineralization in the Kato main zone. Drilling was initiated using HQ core with HW (76.2 mm diameter) casing. HQ was used to depths of over 150 m if difficult ground conditions were not encountered. Core size was reduced to NTW (thin-walled NQ; 57 mm) for most of the deeper drilling.

Three holes were attempted in 2018 but challenging ground conditions and mechanical issues prevented completion of the holes to target depths. The campaign was terminated with the onset of winter.

Drilling resumed in April, 2019 and a total of 1,707.3 m were drilled in eight core holes. Several attempts were made to intersect the higher-grade quartz–adularia zone, but similar issues with the ground conditions, and the realization that the drill lacked sufficient power to deal with the ground conditions, changed the focus of the drilling campaign to the secondary targets located further to the southeast along the strike of the mineralization. Drill holes KT19-03, KT19-06, KT19-08, and KT19-09 were successfully completed to planned depth.

Kazan Resources hired a Japanese drilling company, Akita Shisui, to drill two holes at Kato in 2020. Akita Shisui used a Nippon Longyear 55 electric drill with a Murata survey tool for deviation measurements. Drill hole KT20-010 was planned for 350 m depth but encountered very difficult drilling conditions that forced the drill hole to be abandoned at 232 m depth. The second proposed drill hole was cancelled.

10.3 Logging Procedures

10.3.1 MMAJ

MMAJ drill logs available at the Japan Oil, Gas and Metals National Corporation (JOGMEC) office in Tokyo reviewed by Kazan Resources personnel show that the geologists logged on paper using depth in metres, a graphic log, rock type, visual description of interval, qualitative alteration column for clay and silicification, comments, and description of mineralization with results for gold and silver.

10.3.2 Kazan Resources

Core was transported from the drill site to the logging facility by truck each day by Kazan Resources personnel, often more than once if drilling was progressing well.

Once the core arrived at the core shed, it was cleaned and measured. The core was checked for any obvious errors in placement within the boxes. Core recovery was measured and compared with the recovery reported by the drillers. When there was significant core loss, Kazan Resources inserted a wooden block indicating the amount of missing core (Figure 10-4).

Figure 10-3: Ranger Series 4 Drill Rig, Drilling KT19-02A

Note: Photograph by B2Gold, 2019.

Figure 10-4: Kazan Resources Core Trays Showing Markers Used to Indicate Missing Core

Note: Photograph by B2Gold, 2019.

Following recovery measurements, magnetic susceptibility of each core run was measured. Core was then photographed wet and dry.

The geological logging process began by defining intervals for sampling. Sample intervals were based on the presence or lack of visual mineralization. When no mineralization was evident, intervals were defined by rock type, alteration, or any other obvious defining characteristic and no samples were taken. In mineralized rock, samples were defined by vein intensity, sulphide content, gangue, or other characteristics that would distinguish the sample from adjacent lithologies, such as a sharp vein contact with host rock. The minimum sample length was 25 cm; the maximum sample length was 2.98 m and the average sample length was 1.07 m.

Logging was done on paper. Data that were recorded include, drill hole name, collar coordinates (WGS 84 datum), azimuth, inclination, total depth, sample number, sample length, recovery, weathering, lithology, alteration, quartz structure, percent quartz, texture, presence of adularia or manganese, Fe-oxides, structures (type, depth, and angle to core axis) and any comments the logging geologist wished to make.

The logs were entered into a digital database using a logging form in Excel. The complete database includes the geological logs, recovery, magnetic susceptibility, collar information, downhole surveys, assays, and a composite summary.

10.4 Recovery

10.4.1 MMAJ

There is no information available regarding core recovery for the MMAJ drill holes.

10.4.2 Kazan Resources

Average recovery at Kato was about 91%; however, some units, particularly the QAV zone, exhibited recoveries of 80–90% with locally very poor recoveries. Drilling conditions were particularly challenging along the main mineralized zone because of clay alteration and intense silicification of the host sedimentary and volcanic rocks.

10.5 Collar Surveys

10.5.1 MMAJ

There is no information regarding the methodology used by MMAJ to locate drill hole collars. The collar locations in the reports available at the JOGMEC library in Tokyo appear to be acceptable, based on field verification by Kazan Resources staff. The drill roads and platforms were still visible at the Report effective date, and both were used by Kazan Resources for the 2018–2020 Kazan Resources drill campaigns.

10.5.2 Kazan Resources

Kazan Resources used a hand-held global positioning system (GPS) instrument to locate the drill collars.

10.6 Downhole Surveys

10.6.1 MMAJ

The downhole survey instruments and procedures used in the MMAJ drill programs are not recorded.

10.6.2 Kazan Resources

Energold used a Reflex EZ-Track multi-shot survey instrument to measure downhole deviation during the Kazan Resources drill programs. Surveys were taken every 25 m down the hole, unless there was a risk of getting the instrument stuck.

In 2020, Akita Shisui used a Murata single-shot camera tool to survey drill hole KT20-010.

10.7 Sample Length/True Thickness

Cross sections and diagrams shown in the MMAJ reports suggest that the QAV zone is dipping 60º to the southwest largely based on three drill holes, 5MAHB-2, 7MAHB-1, and 7MAHB-4 that appear to define a northwest-trending zone of quartz veining over a horizontal distance of about 170 m. This zone is interpretative and unverified by MMAJ.

Kazan Resources could not confirm the dip of the vein system or vein true widths, despite numerous attempts, owing to difficult drilling in bad ground conditions.

As a result, the true thickness of the mineralization is not known.

10.8 Comments on Drilling

Drilling was completed by MMAJ and Kazan Resources. Those drill programs identified an area of anomalous gold in veins adjacent to the Seta River.

Difficult drilling conditions greatly compromised the ability to properly evaluate the potential of the QAV zone at Kato and resulted in zones of very poor core recovery and numerous lost holes. These zones are associated with kaolinite and kaolinite–smectite clays that caused the drill hole to collapse easily. They are also associated with strongly-silicified volcanic rocks, quartz veins, and stockwork veining that tend to be broken and that plugged the drill bit, caused rapid wear on equipment, and produced rounded core fragments. Future drill programs will need to be designed with these zones in mind. At this time, plans include larger, more powerful drills using larger rods initially to better control the bad ground and mud engineering to better control clays and broken zones.

Over the course of three drilling campaigns, attempts by Kazan Resources to intersect and traverse across the QAV zone described in the MMAJ reports at Kato have been unsuccessful. In each campaign, one of the most important objectives was to verify the presence of the reported higher-grade veins; however, due to the difficult ground conditions, this objective was not achieved. A secondary objective was to verify the orientation of the higher-grade veins. That too, has not been accomplished. Kazan Resources did, however, intersect significant mineralisation with interesting grades that are worthy of follow-up exploration in addition to continuing exploration of the QAV zone.

Drill data collected to date indicate that gold and silver occur at potentially economic grades and those data support additional exploration and drilling and are useful to aid targeting of the additional drilling.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Sampling Methods

No information is available as to sampling methodologies used by MMAJ.

There are a few pages in some of the MMAJ reports that appear to be copies of Chemex laboratory results. Kazan Resources has not researched the possibility that there may be laboratory certificates on file at JOGMEC.

Kazan Resources made an inquiry as to the whereabouts of any of the drill core and was told that it had been discarded.

11.1.1 Geochemical Samples

Rock chip samples were collected by Kazan Resources staff from float and outcrop. Depending on the dimensions of the sample subject, such as a vein, the length/width or area of float material could be highly variable. The sample was collected and placed within fabric or plastic bags and labelled. Paper tags with the sample number corresponding to sample book descriptions were placed in the bag with the sample.

The sample media itself was photographed with the sample tags for visual support (Figure 11-1).

The bags were zip-tied and returned to temporary storage in the Kazan Resources warehouse until shipment to the laboratory.

11.1.2 Core

Once the core was logged and sample intervals marked, the core was cut in half using a Husqvarna MS 360 14 inch wet diamond saw. Samples from well indurated complete core were placed on the machine and cut in half. If vein orientations or banding were evident in the core, care was taken to cut the intervals at 90º to the vein trace, that is, along the vein axis dividing the vein in equal representative parts.

Core that was poorly indurated such as fragile clay-altered zones, was taped so that it could be cut without falling apart.

Once the core was cut in half, the sample was broken into pieces depending on how well indurated the rock was. The sample was placed in plastic bags with two of three sample tags (one for the reject and a second for the pulps). The third tag was stapled to the core box to mark the sample interval. The sample was placed inside a second plastic bag marked with the sample number on the outside for extra security and tied tightly with a zip-tie.

Figure 11-1: Example Rock Chip/Float Sample

Note: Photograph by B2Gold, 2016.

The samples were packed in large rice bags that held about 10 samples. The rice bags were marked with the sample numbers, tied with zip-ties, and spray-painted to thwart tampering. The bags of samples were loaded into large heavy cardboard pallet-base shipping boxes, secured with plastic strapping, and shipped directly via airfreight to ALS Vancouver.

Figure 11-2 shows examples of the sample packing from initial sample bagging to the pallet-base shipping boxes.

11.2 Density Determinations

No density data are known to have been collected.

11.3 Analytical and Test Laboratories

11.3.1 MMAJ

No reliable information is available as to the laboratories used by MMAJ or any accreditations that the laboratories may have held.

There are a few pages in some of the MMAJ reports that appear to be copies of Chemex laboratory results. It has not been determined if all of the results reported by MMAJ are from Chemex, however, as the vast majority of assays are simply typed lists with no mention of the analytical laboratory name.

11.3.2 Kazan Resources

All analyses were completed by ALS in Vancouver, BC, Canada (ALS Vancouver). No check assays were sent to any other laboratory. ALS Vancouver is accredited by the Standards Council of Canada (SCC) for specific tests listed in the Scopes of Accreditation to ISO/IEC 17025, the General Requirements for the Competence of Testing and Calibration Laboratories and the PALCAN Handbook (CAN-P-1570). ALS Vancouver is independent of BeMetals.

11.4 Sample Preparation and Analysis

11.4.1 MMAJ

No information is available for MMAJ sample preparation procedures.

The majority of the MMAJ analyses were for gold and silver only, although a few intervals were analyzed for arsenic, mercury and antimony. There are numerous assay values reported by MMAJ exceeding 10 g/t Au but there is no indication as to whether or not these assays are gravimetric results from overlimit assays. Typical industry practice requires that fire assays with atomic absorption finishes returning gold values >10 g/t are re-assayed using gravimetric finishes.

Figure 11-2: Example, Sample Shipping

Note: Photograph by B2Gold, 2018.

11.4.2 Kazan Resources

Samples were dried, if wet, in drying ovens at ALS Vancouver. Coarse crushing (CRU-31) reduced the sample size to >70% passing 6 mm followed by fine crushing to 70% passing 2 mm. The samples were then split using a riffle splitter (SPL-21). A 250 gram split was pulverized to 85% passing 75 µm.

Both surface and core samples taken were analyzed using the ALS Vancouver Au-AA24 fire assay fusion with a 50 g charge and atomic absorption spectroscopy (AAS) finish procedure for gold. Over-limits of 10 g/t Au were re-assayed using gravimetric procedures. For other elements, the ME-ICP61m procedure was used, which consists of 0.75 g aliquot, four-acid digestion, and an inductively-coupled plasma atomic emission spectroscopy (ICP-AES) finish that reported a 33-element suite (Table 11-1).

Mercury was analysed using the Hg-MS-42 method which is a low-temperature aqua regia digestion with ICP-MS finish, because of mercury's low volatilization temperature. This method has an analytical range of 0.005–100 ppm Hg.

11.5 Quality Assurance and Quality Control

11.5.1 MMAJ

There is no information regarding quality assurance and quality control (QA/QC) procedures for the MMAJ drill holes.

11.5.2 Kazan Resources

Protocols call for a QA/QC insertion every 10–15 samples. QA/QC samples include blanks, laboratory duplicates, field duplicates or standard reference materials (standards).

The blank used during sampling at Kato was taken from a fresh dacite that crops out to the northwest of the Kato Project area. The material has proved to be geochemically barren with respect to gold and silver, and the pathfinder elements arsenic, mercury and antimony.

Laboratory duplicates are empty bags with a sample tag that indicates that the sample will be a re-assay of the previous sample. Field duplicates are quarter-core from the same interval as a normal sample.

Standards were sourced from CDN Resource Laboratories in BC, Canada. The standards are CDN-GS-P6A (0.738 g/t Au + 0.056 g/t Au; 81 g/t Ag + 7) CDN-CM-41 (1.60 g/t Au + 0.15 g/t Au; 8 g/t Ag + 1 g/t Ag; 1.71% Cu + 0.05%) and CDN-GS-5T (4.76 g/t Au + 0.21 g/t Au; 126 g/t Ag + 10 g/t Ag).

QA/QC data are reviewed on a continuous basis as data arrive from the assay laboratory. The QA/QC validation rules include:

- A standard analysis more than three standard deviations from the expected value constitutes a failure (3SDHIGH or 3SDLOW);
- A standard analysis between two and three standard deviations from the expected value generates a warning (WARNHIGH or WARNLOW);
- Two sequential standards more than two standard deviations from the expected value on the same side of the expected value constitute a bias failure (BIASHIGH, BIASLOW).

Table 11-1: ME-ICP61m Suite and Detection Limits

Element	Ranges (from–to)	Unit	Element	Ranges (from–to)	Unit
Ag	0.5–100	ppm	Na	0.01–10	%
Al	0.01–50	%	Ni	1–10,000	ppm
As	5–10,000	ppm	P	10–10,000	ppm
Ba	10–10,000	ppm	Pb	2–10,000	ppm
Be	0.5–1,000	ppm	S	0.01–10	%
Bi	2–10,000	ppm	Sb	5–10,000	ppm
Ca	0.01–50	%	Sc	1–10,000	ppm
Cd	0.5–1,000	ppm	Sr	1–10,000	ppm
Co	1–10,000	ppm	Th	20–10,000	ppm
Cr	1–10,000	ppm	Ti	0.01–10	%
Cu	1–10,000	ppm	Tl	10–10,000	ppm
Fe	0.01–50	%	U	10–10,000	ppm
Ga	10–10,000	ppm	V	1–10,000	ppm
K	0.01–10	%	W	10–10,000	ppm
La	10–10,000	ppm	Zn	2–10,000	ppm
Mg	0.01–50	%			
Mn	5–100,000	ppm			
Mo	1–10,000	ppm			

Table 11-2: Standard Z-score Evaluation

Standard Grade Range Bin	Standard	Average Z
0.10–1.00	11	-0.53
1.00–2.00	11	0.57
>4.00	9	0.38
All	31	0.12

The published standard deviation of standards is often very small (as a percentage of the expected value). BeMetals employs limits based on the published standard deviation or 3.33% of the expected value whichever is greater. This practice is based on the verbal advice of Dr. Barry W. Smee, P.Geo (Smee and Associates Consulting Ltd).

Blank analyses generate warnings at five times the method detection limit and failures when they exceed 10 times the method detection limit.

Failures are evaluated in context of the surrounding samples and standards to determine if the failure is the result of a standard or blank misidentification or if the failure is the result of a laboratory mix up of samples or sample numbers. Sample weights, assays, and Z-scores (deviation of the analysis from the expected value in terms of number of standard deviations; see Table 11-2) are all used to aid this type of evaluation.

If it is not possible to determine, with reasonable certainty, that the failure is the result of a standard substitution error or a sample mix-up, either in the submittal or at the laboratory, re-analyses of all or part of the batch may be requested.

In cases where the failure is within a sequence of low grade/insignificant results, the project manager may elect to accept the original certificate, regardless of the failure, on the basis that it will not significantly affect any resource estimate.

QA/QC data are reviewed on a continuous basis as data is imported into the database. A database manager monitors the database and QA/QC. The database includes a table of failures where all standard and blanks analyses are tracked.

Examination of the QA/QC sample data from the Kato drilling indicates satisfactory performance of field sampling protocols and assay laboratories, providing acceptable levels of precision and accuracy.

Insertion frequencies are considered to be adequate at one standard, one blank and one duplicate (alternating preparation and field dups) every 35 samples. No QA/QC failures were recorded related to the Kato drilling. Evaluation of standard analytical results does not reveal any significant analytical bias.

11.6 Databases

All field data are initially captured on paper. Data are subsequently entered into a series of Excel templates with extensive pick-lists and validation rules. The drill geologist checks the digital file against the paper original. The original paper forms are filed by drill hole and are stored at in the Kazan Resources warehouse facility in the town of Kamishihoro, Hokkaido.

Data are imported into and stored in a custom Access database developed specifically for the Project, but conforming to the general database structure. The database includes QA/QC reporting utilities to facilitate tracking standard and blank performance, duplicate precision, and analytical bias. QA/QC data are reviewed on a continuous basis as data are imported into the database.

Assay data are imported as text upon receipt from the laboratory, retaining the original laboratory codes. The text is translated to numeric values within the database. Assay results are not associated with samples until the results have been QA/QC-vetted. Assay results for blanks and standards are compared with expected results via queries in the database. After QA/QC, validation assays are assigned a Passing (1) or Failing (3) priority. Failed assays are excluded from database exports.

Export subsets are generated by macros within the database. These files are created and published to an online file transfer portal after any significant change within the database.

The database is managed by a database manager. The database is backed up locally to external drives and to an online file transfer portal.

11.7 Sample Security

There is no information regarding chain-of-custody for the MMAJ drill holes.

The chain-of-custody procedure for the Kazan Resources programs was to have samples delivered in tamper-resistant pallets, and to have a chain-of-custody form to record transport and receipt of samples by the laboratory.

11.8 Sample Storage

An example of palletized core from the Kazan Resources drill campaigns, as stored in the Kazan Resources warehouse, is provided as Figure 11-3. The core is secured with nylon strapping to prevent the boxes from sliding or falling.

11.9 Comments on Sample Preparation, Analyses and Security

The Project is at an early exploration stage. The nature, extent, and results of the sample preparation, security, and analytical procedures, and the quality control procedures employed, and quality assurance actions taken by Kazan Resources provide adequate confidence in the drill hole data collection and processing for exploration vectoring purposes.

Figure 11-3: Core Storage, Kazan Resources

Note: Photograph courtesy BeMetals, 2021.

12.0 DATA VERIFICATION

12.1 2021 Site Visit

A site visit was conducted by Mr. Luke Viljoen from 27–31 January, 2021. The scope of the visit was discussed in Section 2.4.

12.1.1 Drill Collar Inspection

The QP inspected several drill sites in January 2021 when there was extensive snow cover and cross-checked drill coordinates for selected Kazan Resources drill holes with a hand-held Garmin global positioning system (GPS) 64S instrument. The drill collar locations of drill hole KT19-06 (including twinned KT19-06A), and drill hole KT19-04 (including twinned KT19-04A, KT19-04B) were visually confirmed and photographed. The collar for drill hole KT19-06 is shown in Figure 12-1.

Drill sites KT20-010, KT19-02A, and KT19-07 (including twinned KT19-07A, KT19-07B) were not collared, but were nonetheless checked by GPS and determined to have been plausible drill locations.

12.1.2 Core Storage

Drill core from the Kazan Resources campaigns is stored on the Kato property in a large steel shed (Figure 12-2). Core boxes consist of plastic corrugated core boxes with covers. The boxes are clearly labelled on the top and sides and include the hole number, from and to depths, and box number. Core boxes are neatly stacked per hole and secured with rope. The shed contains separate and organised areas for logging, photographing, core cutting, sampling, and core storage.

12.1.3 Core Review

Inspection of selected core boxes showed that the core was cut systematically in half with a diamond saw. Masking tape was often used prior to cutting if the core was fractured or weak. Core blocks and sample numbers were clearly labelled, with sample numbers written on both wooden blocks and tickets stapled to the core box.

Figure 12-3 shows a row of core boxes laid out on the logging tables.

Figure 12-1: Drill Collar KT19-06

Note: Photograph taken by Luke Viljoen, 2021. Garmin instrument for scale beside drill collar.

Figure 12-2: Core Storage Facility, Kato Property

Note: Photograph taken by Luke Viljoen, 2021.

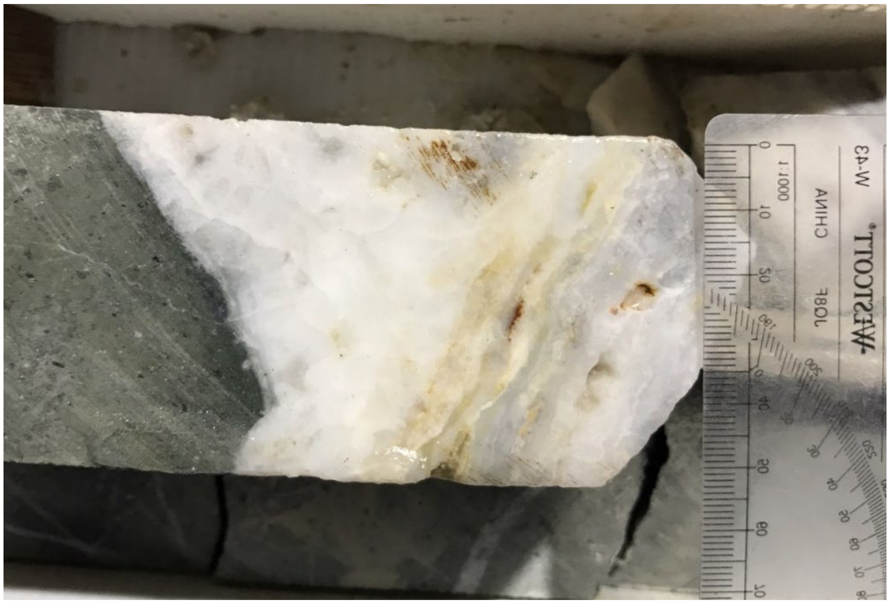
Figure 12-3: Example Drill Core Boxes, Kazan Resources Drill Campaign

Note: Photograph taken by Luke Viljoen, 2021.

Downhole logging, sample intervals, and mineralisation were visually confirmed across intervals from three drill holes: KT19-02A (147.25–183 m), KT19-06A (153.35–162.90 m), and KT20-010 (165.30–232.60 m). Figure 12-4 is a core intercept showing a quartz–calcite vein with subtle banding and fine-grained sulphides and/or sulphosalts. Figure 12-5 is an example of a quartz breccia with associated fine colloform quartz banding and disseminated sulphides.

Core recovery in the inspected drill holes was visually overall good to excellent and matched the database records.

Figure 12-4: Example Core Interval Showing Quartz–Calcite Veining



Note: Photograph taken by Luke Viljoen, 2021. Drill hole KT19-006a at 159.90 m. Quartz–calcite vein with subtle banding and fine-grained sulphides and/or sulphosalts.

Figure 12-5: Example Core Interval Showing Quartz Breccia

Note: Photograph taken by Luke Viljoen, 2021. Hole KT19-02a including QP sample 158.60–158.80 m. Quartz breccia characterized by white to cream chalcedony and light grey translucent quartz with millimetre-scale colloform banding and finely-disseminated dark sulphides.

12.1.4 Witness Samples

Selected grab sample locations were ground-truthed and two verification samples were collected. Due to the extensive snow cover, verification samples were taken only where there was sufficient access and exposure. Two samples of quartered HQ drill core with visible sulphides were taken for check verification of the presence of mineralization. Samples were submitted to ALS Vancouver, and subject to the same sample preparation protocols and analytical methods as described in Section 11.4.2.

Table 12-1 summarizes the locations of the witness samples collected, Table 12-2 provides the sample descriptions, and Table 12-3 summarizes the assay results.

The results in Table 12-3 confirm that there is gold and silver mineralization associated with outcrops in the Seta River. The two drill core samples, collected from Kazan Resources drilling in 2019 and 2020, and sent for analytical verification, support that gold and silver mineralization was intersected in those selected core intervals.

12.2 2015 Site Visit

A site visit was conducted by Mr. Tom Garagan from 2–6 July 2015, during which visit Mr Garagan visited the Kato locality and inspected local infrastructure and geological characteristics in support of a decision by Kazan Resources to acquire the property.

12.3 Kazan Resources Verification

Kazan Resources obtained copies of readily-available information on the Kato prospect held in the JOGMEC library. Kazan Resources reviewed drill holes in the field, locating old drill roads and pads. Drilling by Kazan Resources indicates lithologies that are consistent with logging records from the JOGMEC archive.

Verification performed on the Kazan Resources drilling included checks of original paper log data against digitally-uploaded data, and review of QA/QC data. Data are acceptable for early-stage exploration vectoring.

12.4 Data Verification

Several high-level checks of the data in the database were performed.

12.4.1 Collar Locations

Collar locations were plotted to ensure that all x-y-z locations were within the Project boundaries. No drill collars were located outside the Project area.

12.4.2 Downhole Surveys

Downhole surveys were checked for a number of issues.

Table 12-1: Witness Sample Locations

Property	Kazan Resources Original ID	QP ID	Type	Subtype	Easting	Northing	Elevation
Kato		LD-001	Drill	Core			
Kato		LD-002	Drill	Core			
Kato	314904	LV-003	Grab	Float	684343	4795663	411.7106
Kato	314828	LV-004	Grab	Outcrop	684208.1	4795718	396.39

Table 12-2: Witness Sample Descriptions

QP ID	Description
LD-001	Verification sample of drill core KT20-010, 169.50–169.85 m. Crumbly, clayey fractured zone, minor quartz vein clasts
LD-002	Verification sample of drill core KT19-02A, 158.60–158.80 m. Quartz breccia, white to cream chalcedony and light grey translucent quartz with mm colloform banding and finely disseminated dark sulphides. Possible silver sulphosalts
LV-003	Verification sample of 314904. Quartz vein float in river next to coarse grained silicified sandstone outcrop. Vein is chalcedonic, grey to white, subtle banding, very fine-grained disseminated sulphides with iron oxides.
LV-004	Verification sample proximal to 314828. Massive textured chalcedonic quartz vein, light grey, subtle banding. Within river. Trace finely-disseminated sulphides, often patchy, possible ginguro.

Table 12-3: Witness Sample Analytical Results

QP ID	Au (ppm)	Au (ppm)	Ag (ppm)	Al (%)	As (ppm)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (%)	Cd (ppm)
LD-001	1.635		41.2	4.21	141	360	1.1	2	0.46	<0.5
LD-002	>10.0	10.45	79.3	2.26	46	60	0.5	2	0.07	<0.5
LV-003	0.011		0.5	0.39	5	200	1.2	<2	0.05	<0.5
LV-004	<0.005		<0.5	0.18	14	40	<0.5	<2	0.04	<0.5
QP ID	**Co (ppm)**	**Cr (ppm)**	**Cu (ppm)**	**Fe (%)**	**Ga (ppm)**	**K (%)**	**La (ppm)**	**Mg (%)**	**Mn (ppm)**	**Mo (ppm)**
LD-001	5	9	16	2.22	10	3.43	10	0.69	273	1
LD-002	<1	30	5	0.5	10	0.09	<10	0.01	35	3
LV-003	<1	54	2	0.48	<10	0.06	<10	0.01	87	4
LV-004	<1	63	1	0.44	30	0.03	<10	0.01	61	4
QP ID	**Na (%)**	**Ni (ppm)**	**P (ppm)**	**Pb (ppm)**	**S (%)**	**Sb (ppm)**	**Sc (ppm)**	**Sr (ppm)**	**Th (ppm)**	**Ti (%)**
LD-001	0.04	3	610	2	2.39	24	11	64	<20	0.21
LD-002	0.01	<1	130	<2	0.06	40	1	41	<20	0.02
LV-003	0.01	1	10	2	0.01	56	1	25	<20	0.06
LV-004	0.01	1	10	<2	0.01	29	<1	7	<20	<0.01
QP ID	**Tl (ppm)**	**U (ppm)**	**V (ppm)**	**W (ppm)**	**Zn (ppm)**					
LD-001	<10	<10	38	<10	49					
LD-002	<10	<10	20	<10	2					
LV-003	<10	<10	4	<10	3					
LV-004	<10	<10	2	<10	2					

Surveys were checked for excess deviation using a proprietary computer program. No excess deviations were discovered.

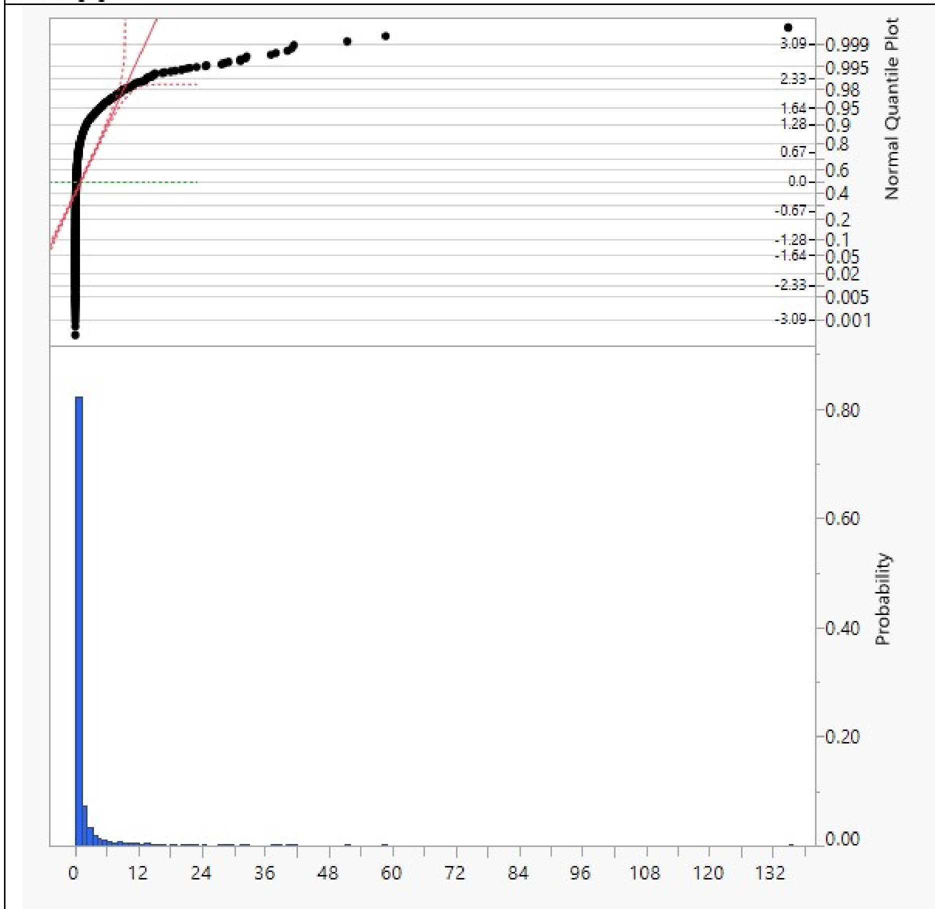
Depth versus azimuth and inclination plots were prepared and reviewed to check for excess deviation. No suspect hole traces were noted.

For the Kazan Resources drilling, the total magnetic field was used as a QC check for azimuth data quality. The mean and standard deviation of the data (excluding outliers) was estimated and results outside three standard deviations was checked. Three surveys showed total magnetic field data outside the limit and were checked. None showed unusual azimuth deviations;

Histograms were prepared for gold (Figure 12-6) and silver (Figure 12-7) to evaluate the distributions of those metals. The distributions were found to be lognormal with a few very high-grade results. No significant issues were observed.

Figure 12-6: Gold Histogram and Summary Statistics

Au_ppm



Summary Statistics

Mean	1.07
Std Dev	3.968
Std Err Mean	0.068
Upper 95% Mean	1.21
Lower 95% Mean	0.941
N	3360
Variance	15.74
CV	369.84
N Missing	3183
N Zero	0
Median	0.2
5% Trimmed Mean	0.52

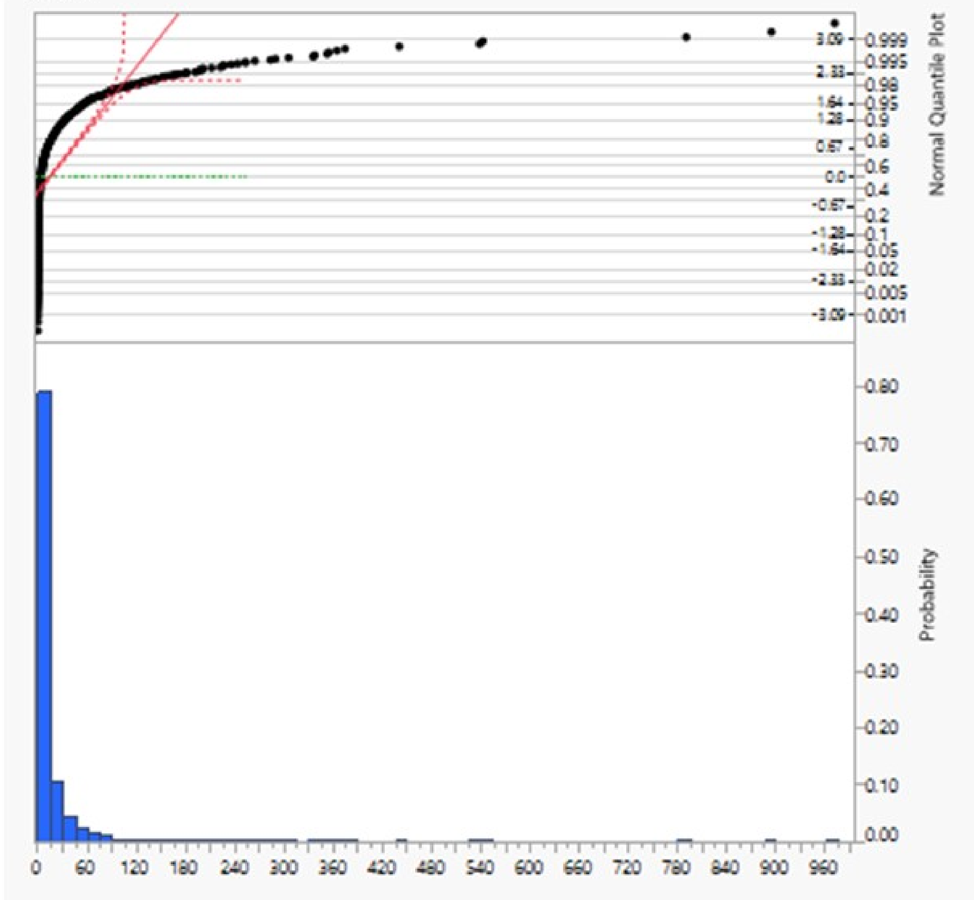
Quantiles

100.0%	maximum	135
99.5%		24.7
97.5%		8.3
90.0%		2.2
75.0%	quartile	0.64
50.0%	median	0.20
25.0%	quartile	0.07
10.0%		0.02
2.5%		0.005
0.5%		0.005
0.0%	minimum	0.005

Note: Figure prepared by MTS, 2021

Figure 12-7: Silver Histogram and Summary Statistics

Ag_ppm



Summary Statistics

Mean	14.71
Std Dev	43.06
Std Err Mean	0.74
Upper 95% Mean	16.16
Lower 95% Mean	13.25
N	3360
Variance	1853.99
CV	292.81
N Missing	3183
N Zero	0
Median	3.65
5% Trimmed Mean	8.47

Quantiles

100.0%	maximum	972
99.5%		255.9035
97.5%		92.7775
90.0%		33.58
75.0%	quartile	12.2
50.0%	median	3.645
25.0%	quartile	1.2
10.0%		0.35
2.5%		0.25
0.5%		0.01
0.0%	minimum	0.01

Note: Figure prepared by MTS, 2021.

The number of occurrences of each lithology code in the database (Table 12-4). Two codes occur only once (CGL and RELL), which are most likely conglomerate and fill. CGL should be combined with CONG and RELL should be combined with CUBR (overburden). SS appears twice in the database and looks to be sandstone. It should be combined with SAND. Spot checks indicate that the lithology codes match the descriptions of the rocks in the logs.

Cross sections were prepared across the QAV (e.g. Figure 12-8) to demonstrate that Au and Ag anomalies occurred in that area. As seen in Figure 12-8, there is a prominent zone of anomalous gold values generally trending northwest–southeast, but drilling is too sparse to confidently correlate individual veins or zones.

12.5 Comments on Data Verification

Mr. Viljoen personally verified data including locations of selected drill holes and conducted witness sampling. In the QP’s opinion, the available data are suitable for early-stage exploration vectoring.

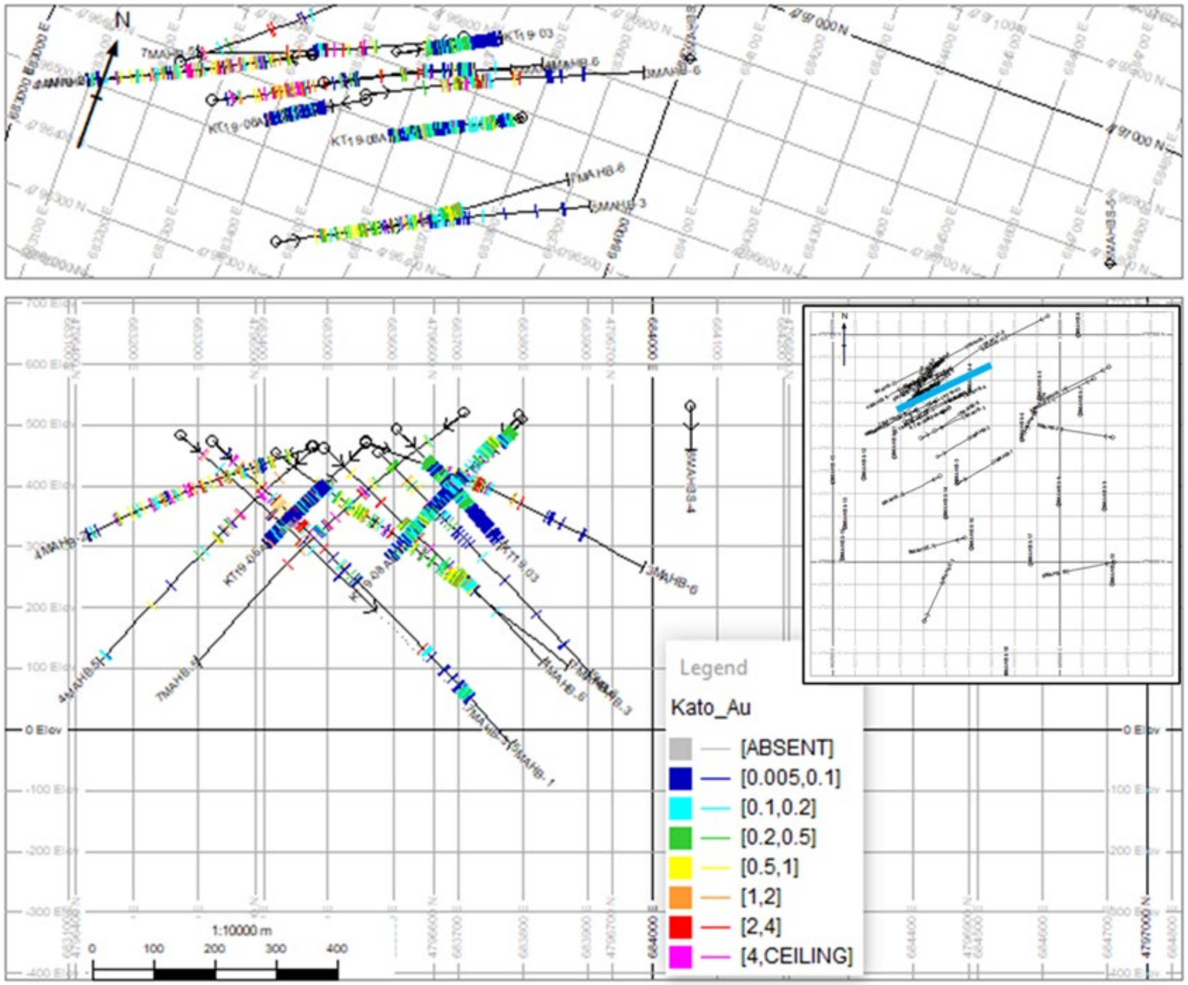
Mr Garagan visited the Project area during an inspection to determine if Kazan Resources should acquire the Project.

Several high-level checks of the data in the database were conducted under Mr. Garagan’s supervision and these concluded that the data are reasonable and that those data are consistent with the type and extent of exploration work completed to date.

Table 12-4: Lithology Codes in Database

Lithology Code	Number of Occurrences
ALIS	12
ANAG	56
ANBF	194
ANBV	196
ANBX	561
ANEP	10
ANFL	1226
ANLP	14
ANLT	32
ANPO	283
ANTB	556
BHBH	316
BHBH2	29
BHRC	178
CGL	1
CONG	249
CUBR	10
MUDS	198
NCOR	24
ND	72
QZBH	40
QZST	256
QZVN	447
RELL	1
SAND	351
SEBX	26
SILT	246
SINT	8
SS	2
TCBH	90
ZNFL	104
Total	***5,788***

Figure 12-8: Section Across the QAV



Note: Figure prepared by MTS, 2021; blue line in inset shows approximate section location; Au in g/t.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

This section is not relevant to this Report.

14.0 MINERAL RESOURCE ESTIMATES

This section is not relevant to this Report.

15.0 MINERAL RESERVE ESTIMATES

This section is not relevant to this Report.

16.0 MINING METHODS

This section is not relevant to this Report.

17.0 RECOVERY METHODS

This section is not relevant to this Report.

18.0 PROJECT INFRASTRUCTURE

This section is not relevant to this Report.

19.0 MARKET STUDIES AND CONTRACTS

This section is not relevant to this Report.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

This section is not relevant to this Report.

21.0 CAPITAL AND OPERATING COSTS

This section is not relevant to this Report.

22.0 ECONOMIC ANALYSIS

This section is not relevant to this Report.

23.0 ADJACENT PROPERTIES

This section is not relevant to this Report.

24.0 OTHER RELEVANT DATA AND INFORMATION

This section is not relevant to this Report.

25.0 INTERPRETATION AND CONCLUSIONS

25.1 Introduction

The QPs note the following interpretations and conclusions in their respective areas of expertise, based on the review of data available for this Report.

25.2 Mineral Tenure, Surface and Water Rights, Royalties and Agreements

Information obtained from BeMetals experts supports that the mineral tenure held is valid.

The Project is at an early exploration stage, and no surface rights have been obtained. Surface access is negotiated with owners as needed.

Water for drill programs was obtained from the Seta River.

To the extent known to the QP, there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Project that have not been discussed in this Report.

25.3 Geology and Mineralization

The mineralization at the Kato prospect is considered to be an example of a low-sulphidation epithermal system.

There is sufficient information available to support the interpretation that the Project area is prospective for epithermal gold mineralization.

The geological understanding of the settings, lithologies, and structural and alteration controls on mineralization is sufficient to support design of exploration programs and drill vectoring.

25.4 Exploration

The exploration programs completed to date are appropriate for the deposit type and style of mineralization.

Exploration activities have established that the Kato Project area is prospective for gold mineralization in a low-sulphidation epithermal setting.

In addition to the Kato main zone, three areas in particular warrant additional exploration:

- The sinter occurrence located along the Seta River southeast of the Kato main zone;
- The extension of the vein mapped by MMAJ to the north of the Kato main zone;
- The Kamenoko Hill mercury occurrence to the south of the Kato main zone.

25.5 Drilling

Drilling was completed by MMAJ and Kazan Resources. These drill programs confirmed an area of anomalous gold adjacent the Seta River identified by exploration geochemistry.

Drill data collected to date are suitable to support additional drill vectoring.

The primary drill method has been core drilling.

Drilling conditions along the main mineralized zone are challenging, and have resulted in zones of poor recovery and numerous lost holes. These zones are associated with kaolinite and kaolinite–smectite clays that caused the drill hole to collapse easily, resulting in lost circulation unless casing was used simultaneously during drilling. They are also associated with strongly-silicified volcanic rocks, quartz veins, and stockwork veining that plugged the drill bit, caused rapid wear on equipment, and produced rounded core fragments. Future drill programs will need to be designed with these zones in mind.

The difficult drilling conditions have greatly compromised the ability for Kazan Resources to properly evaluate the potential of the QAV zone at Kato. Kazan Resources could not confirm the strike length, dip of the vein system or vein true widths, despite numerous attempts, owing to bad ground conditions. Five holes were abandoned due to the ground conditions. Two of the drill holes may have reached the quartz vein zone but did not cross through it.

Kazan Resources plans to obtain a more powerful drill that will allow use of larger rods, which should improve penetration. The services of a qualified mud engineer could potentially improve drilling as well.

25.6 Sampling and Analysis

Sampling methods are acceptable and can be used for exploration targeting,

Sample preparation, analysis and security were generally performed in accordance with industry standards for exploration properties.

The collected sample data adequately reflect deposit dimensions and the epithermal deposit style. True width of the deposit(s) has yet to be confirmed.

Sampling is representative of the gold grades in the deposit, reflecting areas of higher and lower grades.

The nature, extent, and results of the sample preparation, security, and analytical procedures, and the quality control procedures employed, and quality assurance actions taken by Kazan Resources provide adequate confidence in the drill hole data collection and processing for exploration vectoring purposes.

25.7 Data Verification

The data verification programs concluded that the data collected from the Project adequately support the geological interpretations and constitute a database of sufficient quality to support the use of the data in exploration targeting and drill vectoring.

25.8 Risks and Opportunities

The Project is an early-stage exploration property and BeMetals has not been able to confirm the strike length, dip of the vein system or vein true widths to date. The Kato prospect remains an attractive exploration target, and warrants additional drilling and exploration to test the mineralization located by the MMAJ.

There is a risk that the planned drill program may not successfully test the Kato mineralization, due to the known difficult drilling conditions. However the risk is being mitigated by selection of larger drilling equipment and a revised drill hole design that will include a mud cleaning system.

25.9 Conclusions

BeMetals is exploring epithermal-style gold mineralization in the Kato area, which, while drill-tested, has not been sufficiently explored using modern exploration methods, including geophysics.

The 1990s MMAJ drilling identified a zone of anomalous gold mineralization over approximately 170 m of strike with an additional kilometre of potentially-favorable geology largely untested by drilling to the southeast.

The gold-bearing zone is hosted in QAV and breccia, and occurs at depths that range from around 50–225 m below surface. A fault likely offsets the zone to the southeast, and little drilling has been done to follow the target zone along strike in that direction. Three MMAJ drill holes (5MAHB-2, 7MAHB-1, and 7MAHB-4; refer to Table 10-3) intercepted the mineralization; however, the true thickness of these intercepts was not determined from the relatively limited amount of drilling.

During Kazan Resources drill programs, as a result of challenging drilling conditions related largely to extensive alteration zones developed around the gold-bearing veins, and the lack of suitable core drilling equipment available to BeMetals in Hokkaido, none of the holes drilled penetrated the full extent of the vein zone delineated by MMAJ. Two Kazan Resources drill holes (KT19-02A, KT20-010; refer to Table 10-4) sited to test the zone intersected wide intervals of lower-grade gold mineralization, but had to be abandoned before the intervals expected to host the higher-grade material had been reached.

The QPs consider the Project to be of sufficient quality to warrant additional exploration expenditure, and have designed a set of recommendations to delineate additional mineralization and drill test prospects identified from the MMAJ and Kazan Resources exploration programs to date.

26.0 RECOMMENDATIONS

26.1 Introduction

Attempts by Kazan Resources to intersect and completely drill across the QAV zone described in the MMAJ reports at Kato over the course of three drilling campaigns have largely been unsuccessful. In each campaign, one of the most important objectives was to confirm the presence of the reported higher-grade veins.

BeMetals is currently organizing another drilling campaign using a more powerful drill and adding PQ (85 mm core diameter) core capabilities. This will allow for two phases of reduction from PQ to HQ and HQ to NQ and provide much more torque to deal with the clay issues.

In addition, Energold, the selected drilling company, will provide a mud cleaning unit that will remove the clay and sediment from the drill fluids derived from the strong alteration zone that surrounds the QAV drill target. Removing the clay and sand from the drill fluids simultaneously while drilling is expected to reduce torque and the need for frequent reaming and possible hole collapse.

The priority drill target remains to intersect the higher-grade QAV zone and verify the grades reported in the MMAJ reports.

The drilling plan will also seek to step out to the southeast along strike in a poorly-drill-tested extension of the QAV and hydrothermal breccia zones. In addition, BeMetals plans to drill-test the sinter target.

26.2 Drill Targets

The rationale for the selection of the three drill targets follows.

26.2.1 Planned Drill Hole KTP21-20

Proposed drill hole KTP21-20 is designed to test the QAV zone (the priority target) from the same drill site as previously drilled hole KT20-010, but at a slightly more northerly azimuth. The intention, as in several other previous attempts, is to intersect the northwest-trending mineralized structure illustrated in the MMAJ reports, which was intersected in drill holes 7MAHB-1 and 5MAHB-2. The target zone is shown in plan view in Figure 26-1 and was shown in section view in Figure 9-7.

Figure 26-1: Plan View, Planned Target KTP21-20

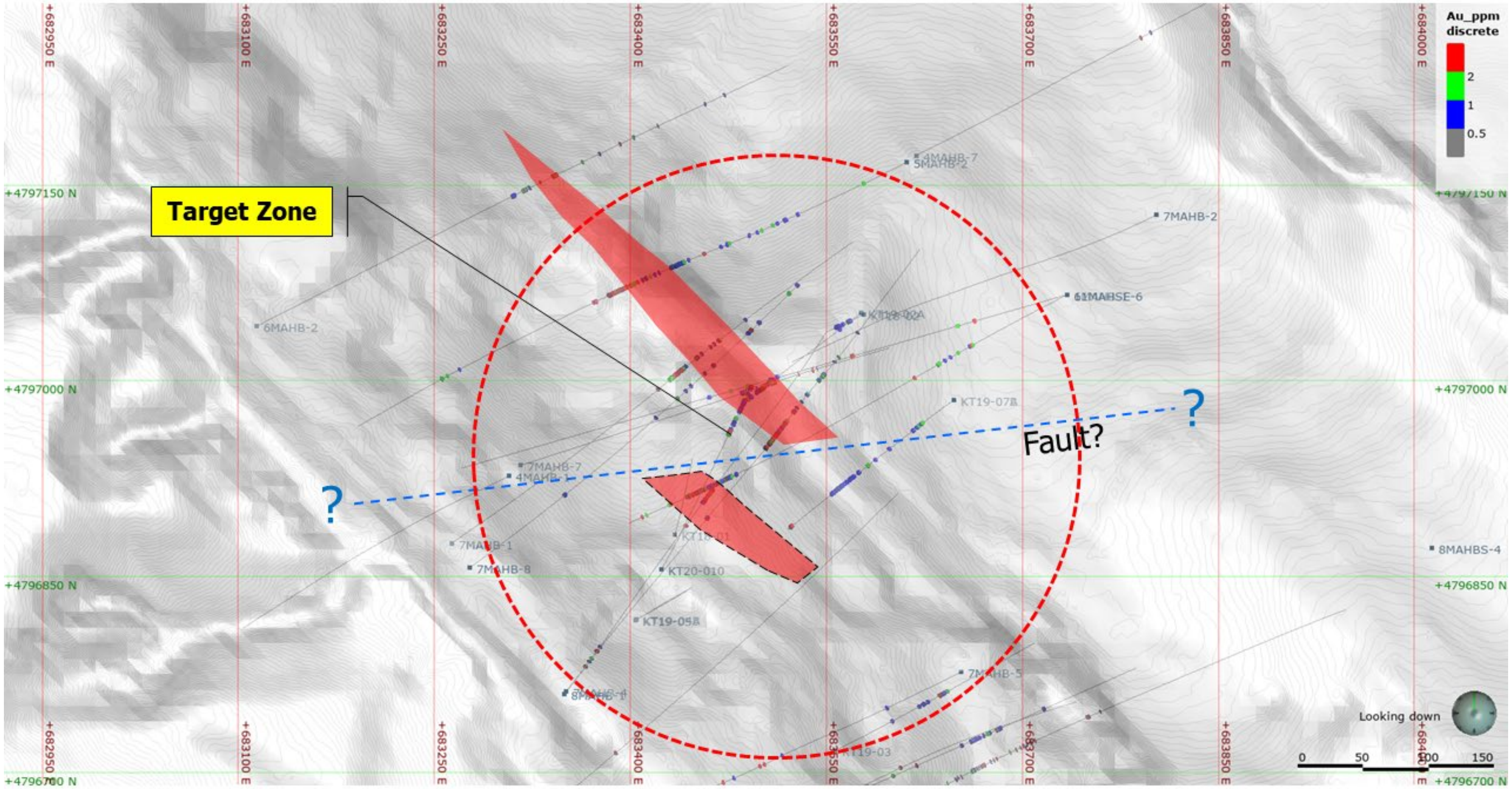


Figure prepared by BeMetals, 2021.

26.2.2 Planned Drill Holes KTP21-20A and KTP21-20C

Proposed drill hole KTP21-20A will test the postulated offset of the QAV zone approximately 110 m southeast of drill hole KTP21-20. Planned drill hole KTP21-20C will test the same zone another 100 m further southeast along strike.

26.2.3 Planned Drill Hole KTP20B

Proposed drill hole KTP21-20B will test the sinter target about 550 m further southeast along strike. The sinter target was drilled by MMAJ in 1991 (3MAHB-7) and 1992 (4MAHB-3). The drill hole was collared on the sinter horizon 430 m southeast of the proposed drill hole location for KTP21-20 and inclined at 30º to the northeast. The drill hole cut highly anomalous mineralization in the sediments of the Ashoro Formation from about 32–127 m depth (core depth); see results in Table 10-3. Much of the mineralization was noted as near horizontal veins along bedding planes suggesting contemporaneous gold-bearing silica deposition during sedimentation. These same structures are exposed along the Seta River and were sampled by Kazan Resources geologists at an elevation of about 53 m below the 3MAHB-7 drill collar. Rock chip samples from the narrow veins in the creek were also gold-anomalous. Most of the QAV high grade zone to the NW lies stratigraphically below the Ashoro Formation sediments in tuffs and andesite of the Horokapiribetsugawa Formation.

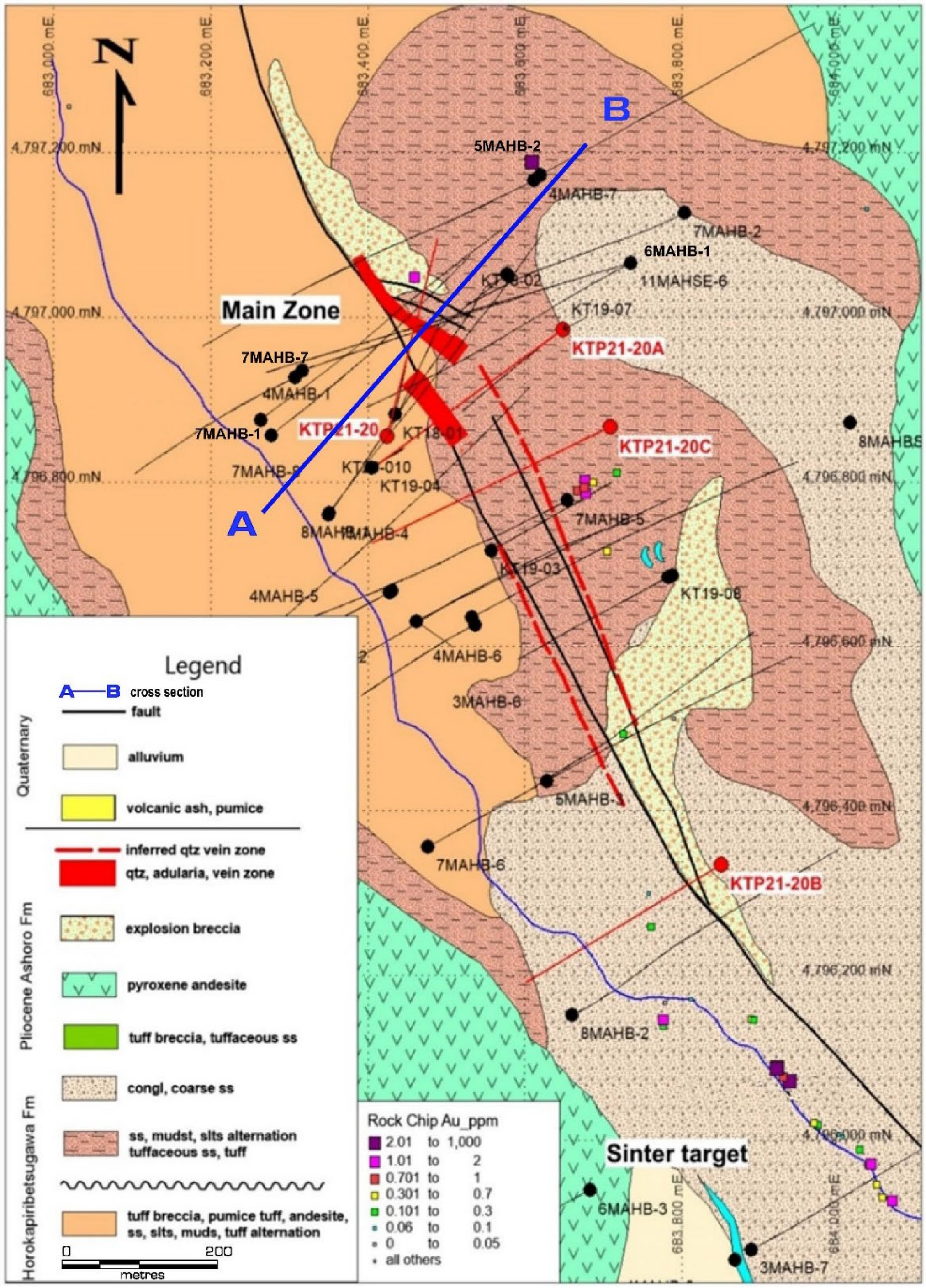
MMAJ drill hole 4MAHB-3 was also collared at the sinter horizon and drilled vertically to a depth of 200 m. Anomalous gold mineralization was intersected in sedimentary units between 22–83 m depth (core depth); refer to Table 10-3. MMAJ drill hole 8MAHB-2 located 360 m along strike to the northwest of 4MAHB-3 intersected highly anomalous gold values from 15–188 m depth, hosted in narrow flat-lying veins in the Ashoro Formation sediments (Table 10-3).

The drill plan for KTP21-20B is to target the northwest-trending zone of mineralization below the Ashoro/Horokapiribetsugawa Formation unconformity in the favorable tuffs and andesite flow stratigraphies. The hole is planned to be drilled from the north side of the Seta River in order to reach the appropriate depth in the target zone.

26.3 Recommendations Costs

Four core holes (1,500 m) are planned for the Kato area. The proposed drill hole collar locations are shown on Figure 26-3. The program budget is summarized in Table 26-1.

Figure 26-2: Proposed Drill Collar Location Plan



Note: Figure prepared by BeMetals, 2021. Planned drill hole locations are shown in red.

Table 26-1: Drill Program Budget Estimate

Item	**Budget Estimate (US$ x 1,000)**
Direct drilling costs	498
Laboratory analysis, waste disposal, environmental, drill supplies	178
Logistics support, land leases, vehicle and heavy equipment, taxes	242
Staff, room and board, technical support, geology	173
Total	***1,091***

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