NI 43-101 Technical Report
Kay Mine Project
Yavapai County
Arizona, USA

Prepared for

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INTRODUCTION

The Kay Mine Project is a polymetallic property bearing copper, lead, zinc, silver, and gold, located near Black Canyon City, Yavapai County, in central Arizona, USA. The project is owned 100% by Arizona Metals Corporation.

LOCATION AND DESCRIPTION

The Kay Mine property is located immediately adjacent to the town of Black Canyon City, approximately 69 km (43 miles) north of the city of Phoenix, in central Arizona, USA. The property consists of 64 unpatented mining claims covering approximately 509.6 ha (1,259 acres) and five patented mining claims covering approximately 28.7 ha (70.84 acres). The total area of the property is approximately 538.3 ha (1,330 acres).

HISTORY

The Kay Mine was discovered sometime before 1900 and mined on a small scale until 1918, after which it was worked by the Kay Copper Company in 1922, which extended shafts and underground workings and discovered the ore bodies above the 600 Level but apparently produced no ore. The project was acquired by Exxon Minerals Company in 1972, which invested about $1.5M in exploration on the project, drilling 23 core/rotary exploration holes totaling 8,094 m (26,554 ft). Rayrock Mines and American Copper and Nickel Company operated a joint venture on the project in the late 1980s and early 1990s. In 2017, Silver Spruce Resources Inc. acquired the five patented mining claims and staked the 14 unpatented mining claims; these 19 claims comprise the current property. On September 26, 2018, Arizona Metals signed a letter of intent to acquire 100% of the property from Silver Spruce Resources Inc. (TSXV:SSE) for a total of CAD$400,000 cash. Arizona Metals also agreed to assume a USD$450,000 mortgage on the patented claims portion of the property, which has since been paid off.

A number of historical estimates of resources and reserves have been made over the years on the project, the most recent being total "proven and probable ore" of 5.8M tonnes (6.4M short tons) grading 2.2% Cu, 3.03% Zn, 54.9 g/t Ag, and 2.8 g/t Au (1.6 opt Ag and 0.082 opt Au) above the 3000 Level, using a cutoff grade of 2% Cu equivalent.

This historical resource estimate includes material in what Exxon termed the South Zone, the uppermost portions of which may lie off the current project claims. Georeferencing of historic figures and the current property boundary indicates that 17 of the 18 historically identified massive sulfide bodies and all but the uppermost portion of the South Zone is included within the subject property. It is likely that the current project retains virtually all of the historical resource estimate; detailed georeferencing of historical figures, re-examination of historical records, validation of historical data through modern drilling, and a current resource calculation will be needed to determine any current mineral resource on the project.

The historical resource estimate described above has not been verified as a current mineral resource. None of the key assumptions, parameters, and methods used to prepare this historical resource estimate were reported, and no resource categories were used. A Qualified Person has not done sufficient work to classify it as a current mineral resource. Arizona Metals does not represent that this historical resource estimate is a current mineral resource and does not rely on it as a current mineral resources.

The total documented production from the Kay Mine is approximately 3,016 tonnes (3,325 short tons).

GEOLOGICAL SETTING AND MINERALIZATION

The Kay Mine project is located in basement rocks of Proterozoic age (1.8-1.6 Ga) consisting dominantly of metamorphosed bimodal volcanic and sedimentary rocks and large granitoid intrusive complexes. The Kay Mine is one 70 Early Proterozoic volcanogenic massive sulfide deposits in the region that produced 50.2M tonnes (55.3 short tons) of ore with an average grade of 3.6% Cu containing 3.99B pounds Cu.

The Kay Mine project lies in a NNE-trending belt of greenschist-metamorphosed volcanic, volcaniclastic, and sedimentary rocks of the Townsend Butte facies of the Black Canyon Creek Group of the Yavapai Supergroup aged 1800-1740 Ma. The immediate host rocks to mineralization comprise a highly variable sequence dominated by gritty sericite phyllite (a fine-grained meta-rhyolite with <1 mm quartz phenocrysts); coarse-grained meta-rhyolite tuffs with quartz clasts; and highly silicic meta-rhyolites. The host rocks on the project are intensely deformed, characterized by steeply dipping bedding, foliation, lineations, and folds occurring during three phases of deformation, including isoclinal S_1 folds with pervasive axial planar foliation.

Mineralization on the Kay Mine property consists of stratabound lensoid bodies of massive sulfide in a folded horizon that strikes generally north and dips an average of 70° west. Massive sulfide occurs along a strike length of approximately 350 m and a down-dip extent of over 700 m below surface. Drilled widths vary between <1 m and 90 m, with approximate true width of mineralization estimated to be 65-97% of reported core width, averaging 80%. Thinner portions are interpreted as fold limbs, and wider portions as thickened fold hinges, forming steeply dipping, generally cigar to tabular shapes that pinch and swell. Mineralization in the main Kay deposit is open in all directions.

Mineralization consists of fine- to medium-grained massive, semi-massive, and stringer-like aggregates of pyrite, arsenopyrite, chalcopyrite, sphalerite, galena, and tetrahedrite-tennantite, with rare boulangerite, tellurobismuthite, and hessite. Gangue minerals include chlorite, quartz, sericite, and dolomite.

Reported historic grades of mineralization are up to 16.6% Cu (Westra, 1977). Surface assays by Arizona Metals returned 16.4% Cu (Sample 14; Table 5), and Arizona Metals' drill samples have assayed up to 16.6% Cu, 16.7 g/t Au, and 27.9% Zn. Ratios of Zn/Cu increase as one moves outward from the center of the massive sulfide bodies (Westra, 1977), and Zn/Cu ratios are therefore an important exploration vector. Zones of lower-grade yet potentially important disseminated and stringer mineralization are present, generally within the footwall of mineralization. The age of mineralization at Kay appears to be 1780-1760 Ma.

Hydrothermal alteration in the footwall of mineralization occurs as widespread layers of black, Mg-rich chlorite; as silicification accompanied by minor pyrite and crosscutting dolomite-chalcopyrite veins; and as chlorite and dolomite alteration. Footwall alteration shows strongly anomalous Cu. Hangingwall alteration above the sulfide horizons consists of silver-gray sericite phyllites and a massive coarsely crystalline dolomite layer. Hangingwall alteration does not show anomalous base metals.

DEPOSIT TYPES

The Kay Mine property hosts volcanogenic massive sulfide deposits, defined as "strata-bound accumulations of sulfide minerals that precipitated at or near the sea floor in spatial, temporal, and genetic association with contemporaneous volcanism." They typically occur as lenses of polymetallic massive sulfide that form in submarine volcanic environments ranging in age from 3.4 Ga to currently forming seafloor deposits. VMS deposits are characterized by tabular to bulbous orebodies of Cu, Zn, and Pb sulfide minerals formed by direct exhalation of metal-bearing fluids onto the seafloor, or by replacement of or infiltration into permeable shallow sub-seafloor sediments or volcaniclastic rocks, both forms of mineralization being syngenetic with their enclosing strata.

EXPLORATION

Exploration work on the project included drilling, sampling, and underground development by the Kay Copper Company and New Jersey Zinc (four shafts, 11 levels of workings, ≥103 drill holes, hundreds of samples). Exxon Minerals conducted geologic mapping; relogging drill core and cuttings; petrography; assaying previously untested drill core; stream sediment sampling; geophysical surveys; soil sampling; and compiling underground geology and assay data. Rayrock Mines and American Copper and Nickel Company performed geophysics, mapping, sampling, and drilling.

This exploration work discovered numerous massive sulfide bodies on the property. Arizona Metals has performed geologic reconnaissance and soil and rock sampling; staked 50 additional mining claims; digitized all historic project data into a modern 3D geological model; commissioned a topographic drone survey of the majority of the project; completed geophysical VTEM, borehole EM, and gravity surveys; commissioned a desktop metallurgical review; performed petrographic studies; and interpreted mapping, structure, and alteration.

Exploration work on the project has identified several important pathfinder vectors: 1) Zn/Cu ratios decrease as one moves inward toward the center of the massive sulfide bodies; 2) Mg in chlorite increases toward mineralization; 3) Hg in soil increases toward mineralization; and 4) footwall alteration shows strongly anomalous Cu in the 60-90 meters below the mineralized horizon, but hangingwall alteration does not show anomalous base metals; 5) Ishikawa and CCPI alteration indexes increase toward mineralization.

Exploration work on the project has exposed eight exploration targets:

1. Immediate expansion of the Kay massive sulfide deposit, which is open in all directions.
2. The West/MX-1 target, a high-priority drill target comprising coincident VTEM, gravity, soil, rock, and alteration anomalies in an area with historic adits and one mine shaft.
3. The Central/MX-2 target, a high-priority drill target with coincident VTEM, gravity, historic IP chargeability, soil, rock, and alteration anomalies with historic adits.
4. The Rayrock target, a high-priority drill target along the northern extension of the Kay mineralized horizon, where a Rayrock drill hole intersected mineralization in an area of anomalous soil samples, gravity anomalies, and a major historic mine shaft.
5. Two VTEM targets in the western portion of the project that deserve field evaluation.
6. Two gravity targets in the eastern portion of the project that deserve field evaluation.

DRILLING

Historical drilling on the Kay Mine project was done by at least three companies and totals at least 128 holes. In the late 1910s and early 1920s, the Kay Copper Company drilled 89 or more holes as shown on mine level maps. In the early 1950s New Jersey Zinc explored the property and drilled at least 14 underground drill holes. The bulk of the documented drilling on the project was done by Exxon Minerals Company between 1972 and 1984. Exxon drilled 28 core/rotary exploration holes totaling 9,565 m (31,380 ft). Eighteen of these holes were in the immediate vicinity of the Kay Mine and totaled 7,525 m (23,793 ft). The best of Exxon's drill results was 3.91% Cu over a true width of 10.3 m (K-8, 2218.2-2270.8 ft).

Drilling by Arizona Metals up to the effective date of this report totals 20,866 meters in 38 HQ-size core holes, and is currently underway. Drill results have confirmed grades and locations of historic mineralization, refined the folding and structural model, indicated alteration trends, and outlined a massive sulfide deposit approximately 350 m long and over 700 m deep. The deposit is open in all directions.

MINERAL PROCESSING AND METALLURGICAL TESTING

There has been no modern mineral processing or metallurgical testing work done on the project. A desktop review of mineralization and expected metallurgical recoveries (SRK, 2020d) summarized that industry-standard differential flotation would likely be effective in creating separate copper and zinc concentrates, and identified no fatal flaws in the anticipated mineral processing and metallurgical extraction.

ADJACENT PROPERTIES

The historical record of the project includes some information from claims that are no longer part of the current subject property, and which are now adjacent properties. In particular, the Southeast Extension of Marietta claim contains the No. 4 Shaft, a principal mine production shaft. No modern exploration data from these adjacent properties appears to exist. The upper portion of the South Zone historical resource estimate discussed above in Section 6, History, may underlie the Southeast Extension of Marietta patented claim, an adjacent property to the subject property. Detailed georeferencing of historical figures, re-examination of historical records, modern drilling, and a current resource calculation will be needed to determine any current mineral resource on the subject property.

CONCLUSIONS AND RECOMMENDATIONS

It is my opinion that the Kay Mine property is worthy of additional exploration. I recommend a CAD$27M exploration program of:

- 75,000 meters of HQ-size core drilling program to comprehensively explore the mineralization on the property, including at the main Kay Mine area and other targets on the project.
- Additional geologic mapping and sampling on the project.
- Additional geochemical and geophysical work exploration targets in order to prepare them for drilling.
- Metallurgical test work on the Kay sulfide mineralization.
- Expanded permitting work to expand the scope of drill operations beyond the 5 acres permitted under BLM Notices of Intent to Explore.
- Consulting with a local environmental consultant to evaluate whether any environmental risk exists from the historic mine dumps on the project.

1 INTRODUCTION

The Kay Mine Project is a polymetallic property bearing copper, lead, zinc, silver, and gold, located near Black Canyon City, Yavapai County, in central Arizona, USA. The project is owned 100% by Arizona Metals Corporation, which commissioned this report to update technical work on the project since the most recent technical report of May 29, 2019.

My most recent personal inspection was during May 25-28, 2021, during which I observed and managed drilling operations, reviewed core logging facilities and procedures, and viewed mineralization, alteration, and host rocks in drill core. I am not independent of the company: I serve as Vice President of Exploration for Arizona Metals, am a company shareholder, and hold stock options in the company.

Sources of information and data used in preparing this report are listed in the Reference section, and include published and unpublished reports, maps, data, drill logs, assay reports, press releases, publicly available mining claims status and land ownership information, and legal documents.

2 RELIANCE ON OTHER EXPERTS

In preparing this report, I relied on sources of legal information prepared by other experts who were not Qualified Persons, relating to mineral title and property ownership. These include Snell & Wilmer, 2017 (mineral title, Section 4, Property Description and Location); Croesus Gold Corp. (previous name of Arizona Metals Corp), 2018 (nature of the issuer's interest, Section 4, Property Description and Location); Silver Spruce, 2017a (mortgage on the property, Section 4, Property Description and Location); and online title transfer filings (Yavapai County, 2018). I am not qualified to and have not verified this mineral title and legal information.

3 PROPERTY DESCRIPTION AND LOCATION

LOCATION AND DESCRIPTION

The Kay Mine property is located immediately adjacent to the town of Black Canyon City, approximately 69 km (43 miles) north of the city of Phoenix, in central Arizona, USA (Figures 1 and 2). The property is located in Sections 4 through 9, Township 8 North, Range 2 East (Gila and Salt River meridian), in the Tip Top mining district in Yavapai County, Arizona. The UTM coordinates of Shaft 1 on the eastern portion of the property are 392910E, 3769540N (WGS84 datum, Zone 12S). The property falls on the Black Canyon City 7.5-minute topographic map published by the United States Geological Survey.

The Kay Mine property consists of 64 unpatented mining claims covering approximately 509.6 ha (1,259 acres) and five patented mining claims covering approximately 28.7 ha (70.84 acres; Hoskin-Ryan, 2016) (Figure 1, Appendix 1). The total area of the property is approximately 538.3 ha (1,330 acres).

Annual payments for the unpatented claims are due on or before August 31 to BLM and Yavapai County totaling approximately USD$10,600 per year. As of the effective date of this report, annual claim payments are current through August 31, 2021 according to BLM records (MLRS, 2021).

Annual Yavapai County tax for the patented claims in 2020 was USD$3,819 and is fully paid; 2021 tax has not been assessed but is likely to be a similar amount. Yavapai County tax payments for the patented claims are current as of the effective date of this report.

On June 4 2021, Arizona Metals closed the purchase of 100% of six parcels of private land totaling 107 acres, located 900 m northeast of the project (Figure 2). The purchase price was US$2,250,000 and is fully paid. Property tax in 2020 for this land was USD$7,039, which has been fully paid; 2021 property tax has not been assessed but is likely to be a similar amount. This property includes two wells and an agricultural overlay, which is being transferred to Arizona Metals. It is anticipated that the property will house core logging and storage facilities, and company staff.

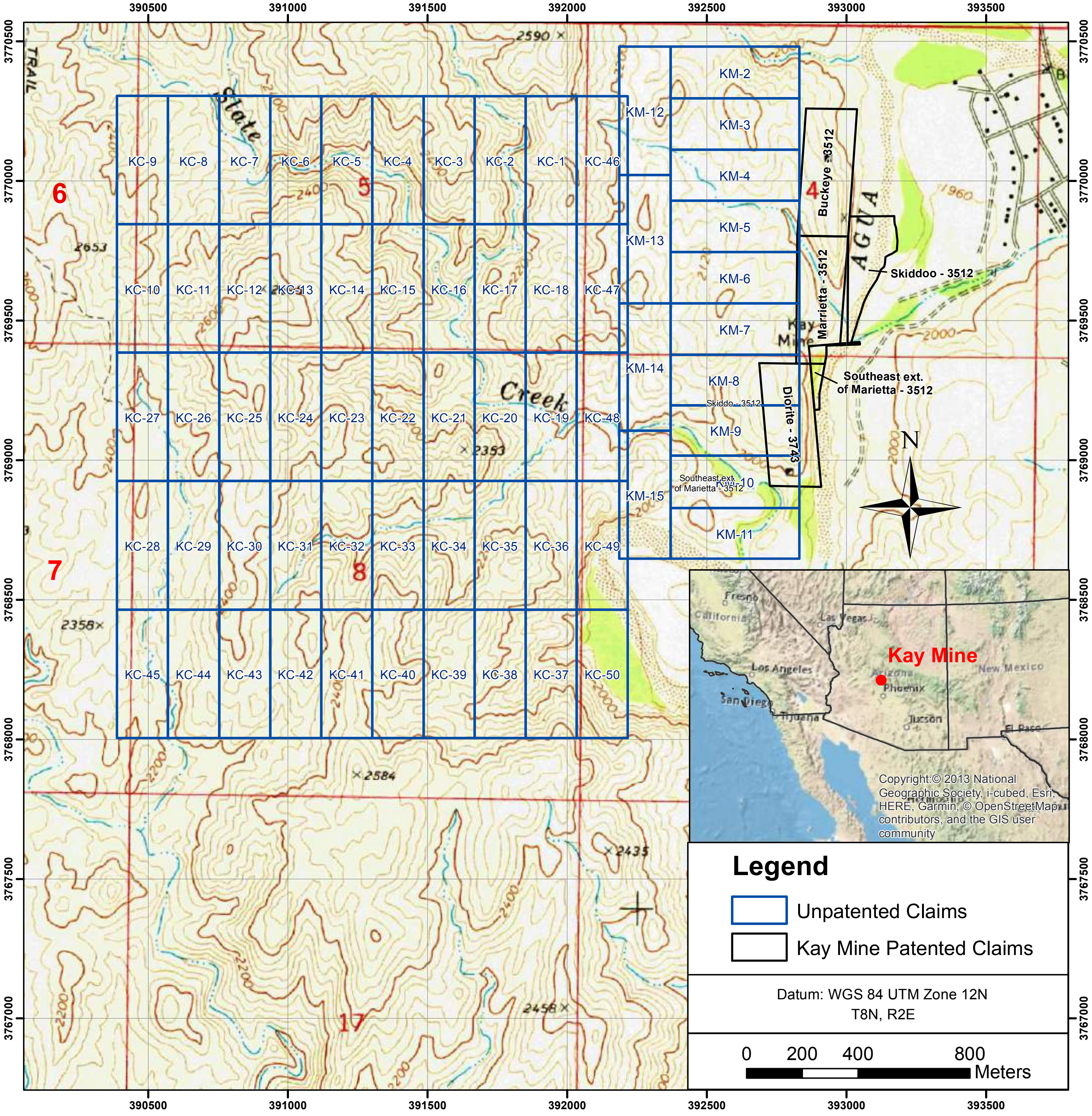

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Figure 1. Project mining claims.

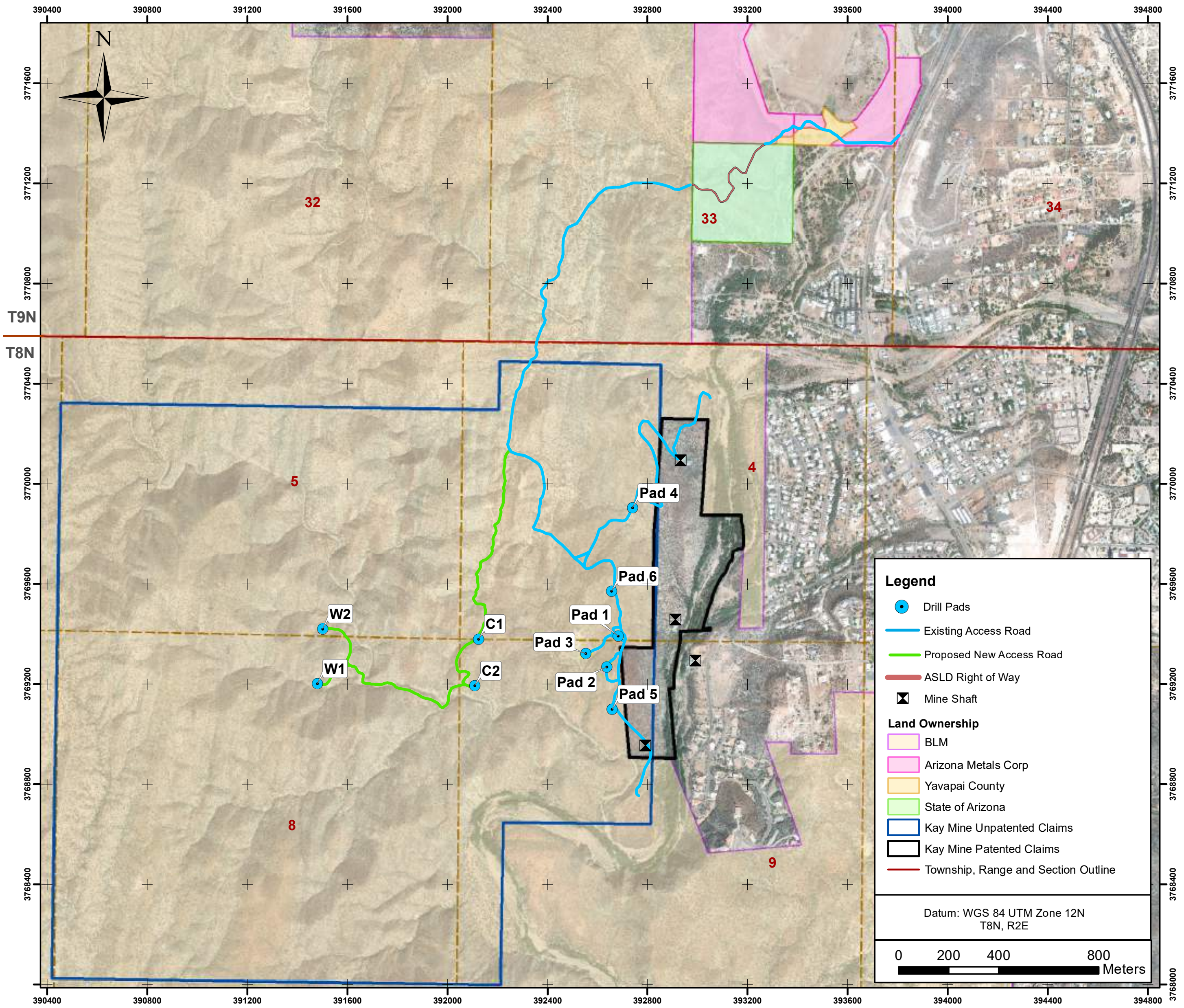

Figure 2. Project map.

NATURE OF ARIZONA METALS' INTEREST

On January 30, 2019, Arizona Metals Corp. (under its previous name Croesus Gold Corp.) acquired 100% of the Kay Mine Project from Silver Spruce for a total cash consideration of $400,000. Arizona Metals also agreed to assume a USD$450,000 loan between Silver Spruce and a third-party lender, which matured on June 22, 2018; the company repaid this loan in full on March 12, 2109. The author is not aware of any other underlying agreements or royalties on the Kay Mine Project.

MINERAL TITLE AND MINING LAW

Mineral rights for economic minerals and metals on public lands in the United States are governed by the General Mining Act of 1872. This law allows for unpatented mining claims to be staked on public lands that are open to mineral entry and have not been designated for other specific uses. Unpatented mining claims confer mineral rights to the owner, while surface rights remain under the administration of the appropriate government agencies. Patented mining claims confer both mineral rights and surface rights to the owner, and are private property. In the Kay Mine project area, mineral rights and permitting are administered by the Department of Interior, Bureau of Land Management (BLM), under the Federal Land Policy and Management Act of 1976.

According to Bureau of Land Management records, a recent legal title opinions (Snell & Winter, 2017), and Yavapai County tax documents, mineral title appears to be valid for both the patented and unpatented mining claims on the property. Determination of secure mineral title is solely the responsibility of Arizona Metals Corp.

PERMITTING AND ENVIRONMENTAL

No permitting is necessary for surface exploration work on the property such as geologic mapping, surface sampling, and geophysics. Six drill sites and their access roads covering 2.4 acres on unpatented mining claims are currently permitted through Notices of Intent to Operate(NOI) that were submitted to and approved by the Bureau of Land Management (BLM). NOIs for four additional drill sites are currently being prepared for submittal.

Permitting for drilling on patented mining claims appears to be minimal, consisting of routine permitting through the Arizona Department of Water Resources.

Arizona Metals holds a 10-year right-of-way from the Arizona State Land Department to cross a portion of land owned by the State of Arizona along the access route to the mining claims (Figure 2).

Because of the project's proximity to Black Canyon City, Arizona Metals should take extra care with community consultation during permitting and operation of drill programs, and may consider the services of a community relations specialist.

I am not aware of, and the project history to which I have access does not mention, any significant environmental liabilities. Small historical mine dumps exist on the property at the No. 1, No. 2, and No. 3 Shafts and these are likely to contain sulfide minerals, particularly pyrite, which have the potential for producing acidic surface waters as they oxidize. The mineralization on the project contains significant arsenic, above 10% As in some recent Arizona Metals drill samples. Given the proximity of these mine dumps to the active Aqua Fria River, Arizona Metals should consult with a local environmental consultant to evaluate whether any environmental risk exists from these historic mine dumps.

To the extent known, there are no other significant factors and risks that may affect access, title, or the right or ability to perform the recommended exploration program on the property.

4 ACCESSIBILITY, CLIMATE, INFRASTRUCTURE

ACCESSIBILITY

The project lies in an area of moderate topography (Figure 3), reaching elevations of 683 m (2,240 feet) with relief of approximately 100 m (320 feet) from the streambed of the Agua Fria River to the summits of hills on the project. The terrain is accommodating to exploration activities, as evidenced by previous mine shafts and access roads. Vegetation is generally sparse, consisting of many varieties of cactus and low brush, although the Agua Fria River channel is bordered by thicker underbrush and numerous trees.

Access to the project is excellent by road on Interstate Highway 17, then by paved city streets in Black Canyon City to the banks of the Agua Fria River. Historic gravel drill and mine roads give access to several of the historic mine shafts on the project. Vehicle access onto the project may require crossing the Agua Fria River, or its northern tributary Black Rock Creek, both small streams that typically have year-round flow highest in the winter months (January – March) and lowest in the spring and summer (May – July), with occasional storm-related high and turbulent flow.

The project is immediately adjacent to population in the town of Black Canyon City, population about 5,600, which offers basic services such as fuel, food, and housing. Many private homes have views of the property, so care should be taken before and during exploration and mining operations to consult with and accommodate nearby residents.

Surface rights for mining on the unpatented claims are held by the United States government and are governed by the Federal Land Policy and Management Act of 1976 and General Mining Act of 1872 as described above, and administered by the federal Bureau of Land Management. Surface rights for mining on the patented claims reside with the patented claim owners as private land.

CLIMATE

The climate of the project area is hot semi-arid (Koppen climate zone BSh; Encyclopedia Britannica, 2018; Plantmaps, 2018), typified by very hot summers and mild winters. The area receives little precipitation, averaging about 254 mm (10 inches) per year, as heavy periodic rain storms, generally in the winter months, and as late summer thunderstorms. Summers are very hot, often consisting of consecutive days over 38ºC (100ºF). Winter temperatures generally range from 6-22ºC (42-72ºF). Access and work can generally continue year-round. Average temperature and precipitation for Scottsdale, Arizona, located approximately 80 km southeast of the project, are shown in Table 2 below.

The operating season is 12 months per year, with potential fire restrictions during summer months that may limit advance exploration activities and drilling. It is expected that if the project advances to development and mining operation, sufficient fire mitigation can be put in place to allow year-round operations.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average high temperature (°C)	19	21	24	28	33	38	40	39	37	31	23	18
Average low temperature (°C)	6	8	10	14	19	24	27	39	23	17	9	6
Average precipitation (mm)	32	31	31	11	5	2	26	30	23	20	22	29

Source: U.S. Climate Data (2018).

Table 1. Average monthly temperature and precipitation, Scottsdale, Arizona.

INFRASTRUCTURE

Infrastructure on the project is outstanding, with ready access to power and water in adjacent Black Canyon City, and excellent road access along Interstate Highway 17 and paved city streets. Arizona has a long and rich mining history, and skilled miners and mining professionals reside throughout the state and are available for employment. Potential locations for tailings, waste disposal, and processing plants are numerous, particularly out of sight of town on the western portion of the project.

Figure 3. Aerial view of the project looking north.

5 HISTORY

PRIOR OWNERSHIP AND EXPLORATION

Mineralization at the Kay Mine was first discovered before 1900, and activity has continued intermittently since then. The summary of the project history below is derived from Conklin, 1956; Fellows, 1982; Karr, 2017a; and Mattinen, 1984.

Initial Discovery and Early Works

The Kay Mine was discovered sometime before 1900 and mined on a small scale from the inclined No. 1 shaft, producing approximately 635 tonnes (700 short tons) of ore prior to 1916 or 1918.

Kay Copper Company

Between 1918 and the late 1920s, the project was owned by an "eastern mining interest" that became the Kay Copper Company in 1922. During this period, the owners deepened the No. 1 Shaft to 457 m (1,500 ft), sunk the No. 4 shaft to 366 m (1,200 ft), installed the No. 3 Shaft, and developed several thousand feet of underground workings on 11 levels, discovering the ore bodies above the 600 Level but apparently producing no ore. Judging by mine maps, the company drilled at least 89 underground drill holes (according to mine plan maps); assay data are plotted on mine plan maps, but no drill logs nor assay certificates are available. The Kay Copper Company failed in the late 1920s and the project was dormant until 1949, apparently from a combination of low metals prices and litigation.

Various Mid-Century Operators

In the late 1940s the project was acquired by an unnamed owner for back taxes, and in 1949 leased to Black Canyon Copper Corporation, which opened the underground workings to the 500 Level and shipped about 907 tonnes (1,000 short tons) of ore.

In 1949 or 1950, Black Canyon Copper sub-leased the project to Shattuck-Denn Mining Company and New Jersey Zinc Company until 1952. These companies dewatered and rehabilitated the No. 4 Shaft at least to the 1000 Level, and performed surface and underground exploration, including resampling and underground diamond drilling of at least 14 holes (according to mine plan maps). They shipped an uncertain amount of ore, reported to be 1,425 tonnes (1,571 short tons) by Fellows (1982).

In 1955-1956, the project was leased to Republic Metals Company, which shipped 414 tonnes (456 short tons) of ore from above the 350 Level. A cave-in destroyed pumping operations, and the mine was allowed to flood. Following this, the project saw several unsuccessful attempts to revive operations until 1972.

Exxon Minerals

The project was acquired by Exxon Minerals Company in 1972, which invested about $1.5M in exploration on the project. This work included geologic mapping; “mine mapping” (suggesting that Exxon re-opened the underground workings); relogging drill core and cuttings; petrographic studies; assaying 610 m (2,000 ft) of unassayed drill core; stream sediment and soil geochemistry surveys; reviewing historical assay data and incorporating into mine maps and cross sections; and geophysical surveys (Westra, 1977). Exxon drilled 23 core/rotary exploration holes totaling 8,094 m (26,554 ft), 14 of which were in the immediate vicinity of the Kay Mine and which total 6,807 m (22,333 ft). Fellows (1982) also mentions “10 shallow air-track claim validation drill holes on various parts of the property,” but gives no specific locations. Exxon’s last reported work on its project was 1984.

Post-Exxon Multiple Owners

The five patented claims changed hands a number of times between 1990 and 2015 (Snell & Wilmer, 2017; Yavapai County, 2018), apparently without exploration work. In 1990 Exxon sold the five patented claims to Rayrock Mines, which in turn sold them to American Copper and Nickel Company in 1995. Ownership was then conveyed to Shangri-La Development in 2000, to five private individuals in 2002, and to Jodon Development in 2003. In 2015, Cedar Forest Inc. acquired the five patented claims through foreclosure on Jodon Development. Cedar Forest did not appear to do any exploration work on the project.

Silver Spruce Resources

In March, 2017, Silver Spruce Resources Inc. acquired the five patented mining claims from Cedar Forest and then staked 14 unpatented “KM” mining claims in April, 2017. Together, these 19 claims comprise the property purchased by Arizona Metals (Figure 1). Silver Spruce took 39 samples on the project (see Section 9, Exploration below) but did no other exploration work.

Arizona Metals Corporation

On September 26, 2018, Croesus Gold Corporation (previous name of Arizona Metals) signed a letter of intent to acquire the five patented and 14 unpatented “KM” claims from Silver Spruce Resources. To date, Arizona Metals has performed geologic, geochemical, and geophysical exploration and drilling on the project and staked 50 additional unpatented mining claims, as described below.

HISTORICAL RESOURCES AND RESERVES

A number of historical estimates of resources and reserves have been made over the years on the project, as summarized by Westra (1977). The most recent historical resource estimate was by Fellows (1982, based on data provided in Westra, 1977), who stated total estimated tonnage of 5.8M tonnes (6.4M short tons) at an estimated grade of 2.2% Cu, 3.03% Zn, 54.9 g/t Ag, and 2.8 g/t Au (1.6 opt Ag and 0.082 opt Au) above the 3000 Level, using a cutoff grade of 2% Cu equivalent.

Note that this historical resource estimate includes material in what Exxon termed the South Zone, part of which lies off the current project claims. Georeferencing of historic figures and the current property boundary indicates that 17 of the 18 massive sulfide bodies and all but the uppermost portion of the South Zone is included within the subject property (Figures 10 and 12). Given that most of the outcropping mineralization lies on the current project claims, the dip of the mineralization is toward the current project claims, and a large part of the known mineralization is at depth in this dip direction, it is likely that the current project retains much of the historical resource estimate. Detailed georeferencing of historical figures, re-examination of historical records, validation of historical data through modern drilling, and a current resource calculation will be needed to determine any current mineral resource on the project.

The historical resource estimate described above has not been verified as a current mineral resource. None of the key assumptions, parameters, and methods used to prepare this historical resource estimate were reported, and no resource categories were used. A Qualified Person has not done sufficient work to classify it as a current mineral resource. Arizona Metals does not represent that this historical resource estimate is a current mineral resource and does not rely on it as a current mineral resources.

HISTORICAL PRODUCTION

The historical production record of the mine is scattered and almost certainly incomplete. Keith et al (1983) reported that the Kay Mine produced 2,600 short tons of ore containing 296,000 pounds Cu, 13,000 pounds Pb, 2,700 ounces Ag, and 150 ounces Au. The following production was reported in the more detailed project-specific reports currently available.

- 635 tonnes (700 short tons) grading 9.1% Cu, 36.3 g/t Ag, and 2.5 g/t Au (1.06 opt Ag and 0.072 opt Au) mined prior to 1916 (Fellows, 1982; Donnely et al, 1987).
- 907 tonnes (1,000 short tons), no grade reported, shipped in 1949 by Black Canyon Copper Corp. (Mattinen 1984).
- 1,410 tonnes (1,554 short tons) with a weighted average grade of 5.62% Cu shipped between 1950 and 1953 by New Jersey Zinc/Shattuck-Denn Mining Company, Drake Mining Corp., and Republic Metals Company (Conklin, 1956). This is likely the 1,425 tonnes (1,571 short tons) reported by Fellows (1982) grading 5.67% Cu, 33.6 g/t Ag, and 2.0 g/t Au (0.98 opt Ag and 0.059 opt Au), and includes the 414 tonnes (456 short tons) grading 4.64% Cu, 17.1 g/t Ag, and 1.4 g/t Au (0.5 opt Ag and 0.04 opt Au) reported by Mattinen (1984b) as shipped by Republic Metals Company in 1955-1956.
- 64 tonnes (70 tons) grading 5.7% Cu selected from surface dumps and shipped by a private owner in 1966 (Silver Spruce, 2017b).

The total documented production from the Kay Mine is thus approximately 3,016 tonnes (3,325 short tons).

6 GEOLOGICAL SETTING AND MINERALIZATION

REGIONAL GEOLOGY

The Kay Mine project is located in Precambrian metamorphic rocks in central Arizona. Central Arizona is characterized by basement rocks of Proterozoic age (1.8-1.6 Ga) with great stratigraphic complexity and pervasive yet variable deformation and metamorphism. The Proterozoic basement is well exposed in a broad 500-km-long NW-trending belt that transects the state from southeast to northwest known as the central volcanic belt. The Proterozoic basement is directly overlain in places by Tertiary volcanic and sedimentary rocks and by Quaternary surface deposits and has been intruded by widespread Laramide-age granitoids, many of which produced the large porphyry copper systems that have made Arizona famous for copper production. The Proterozoic basement rocks are the result of largely compressional tectonics active between 2.0 and 1.62 Ga, with several periods of subduction, accretion of numerous island arcs onto the ancestral Wyoming craton, and attendant volcanism, plutonism, deformation, and metamorphism (Anderson, 1989a).

The Proterozoic basement in the region is divided into three major blocks: Mojave on the west, Yavapai in the center (where the Kay Mine project is located) and Mazatzal to the east. The Yavapai block is further subdivided into several smaller blocks bordered by major shear zones, and the Kay Mine project is located in the Ash Creek block (Figure 4).

Proterozoic rocks in the project region consist dominantly of metamorphosed bimodal volcanic and sedimentary rocks and large granitoid intrusive complexes. Host rocks in the project area consist of the Townsend Butte facies within the Black Canyon Creek Group of the Yavapai Supergroup (Anderson, 1989b). This facies comprises a complex bimodal volcanic assemblage with related tuffaceous sediments, including felsic sediments and volcaniclastics interbedded with submarine basaltic-andesitic flows and dacite flows and tuffs. Anderson (1989a) interprets them as having been formed in an intraoceanic island arc at 1800-1740 Ma. Pre- to syntectonic intrusive complexes crop out in the project region, including the large Cherry Creek batholith to the northeast (1740-1720 Ma, Ferguson et al, 2008) and the Crazy Basin monzogranite west of the project (1695 Ma, Reynolds et al, 1986; or 1700 Ma, Darrach et al, 1991). The belt of Proterozoic rocks in which the Kay Mine project lies is referred to as the Black Canyon Belt by Anderson (1989b; Figure 5).

All Proterozoic rocks in the area have been metamorphosed to greenschist to lower amphibolite grade between 1740-1720 Ma and 1699 Ma (Ferguson et al, 2008), likely during the Yavapai orogeny at 1700-1690 Ma (Karlstrom and Bowring, 1991), with peak metamorphism occurring at about 1700 Ma (Darrach et al, 1991). The resulting rocks in the Kay Mine area are now dominantly quartz-sericite-chlorite schists with smaller amounts of greenstone, calc-silicate schist, Fe-rich chert, and fine-grained quartzite (Ferguson et al, 2008).

These rocks show a pervasive NE to NNE foliation that dips steeply to the west and parallels the dominant fabrics and lithological breaks in the region. Two major fault zones occur in the project region: the N-trending Proterozoic-age Shylock shear zone west of the project interpreted to be a major crustal boundary in Proterozoic time (Darrach et al, 1991; Leighty et al, 1991), and which now marks the western boundary of the Ash Creek tectonic block; and a younger N-trending left-lateral strike-slip fault zone with 3-5 km of offset that cuts Tertiary strata about 16 km east of the project (Ferguson et al, 2008).

The Kay Mine is one of numerous Early Proterozoic volcanogenic massive sulfide deposits in the region (Figure 6; DeWitt, 1995; Donnelly et al, 1981). DeWitt (1995) reports that 70 such deposits are known in Arizona that produced 50.2M tonnes (55.3 short tons) of ore with an average grade of 3.6% Cu containing 3.99B pounds Cu. The largest of these were the Verde and Big Bug districts northeast of the Kay Mine. VMS deposits near Kay include New River, Bronco Creek, and Gray's Gulch to the southeast; and Mayer, Agua Fria, Big Bug, and Verde to the north (Lindberg, 1989). The characteristics, geologic settings, ages, and enclosing host rocks are sufficiently similar among these deposits that they form a distinct metallogenic province and epoch in central Arizona (Anderson and Guilbert, 1979).

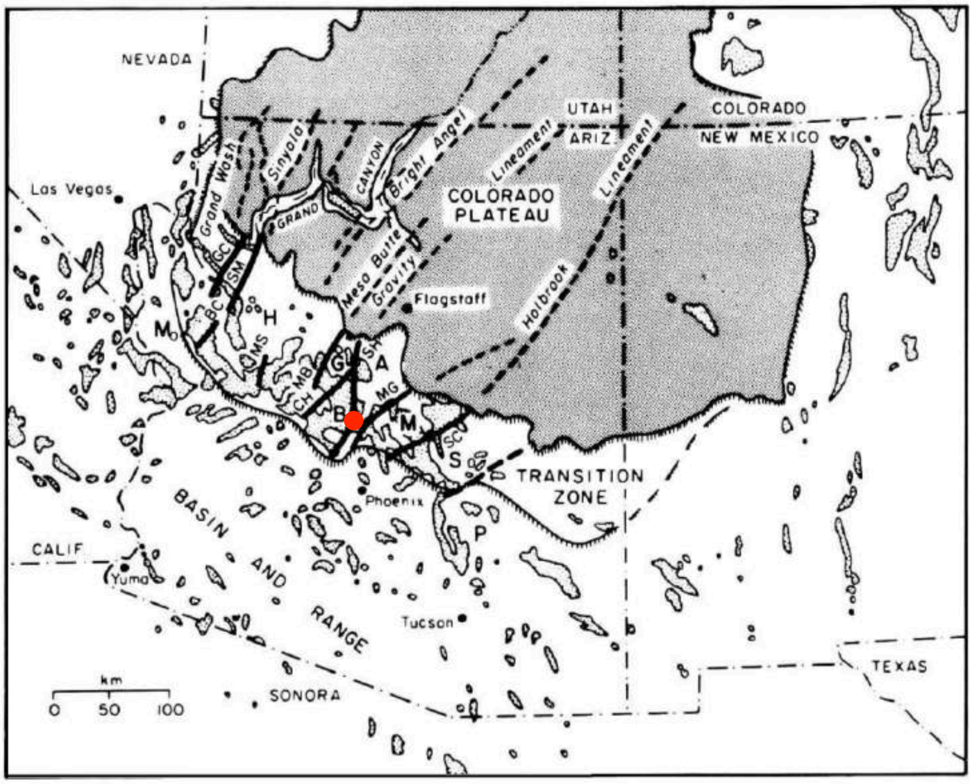

Figure 4. Tectonic blocks in central Arizona. Kay Mine property (red dot) is located in the Ash Creek block (A). From Darrach et al (1991).

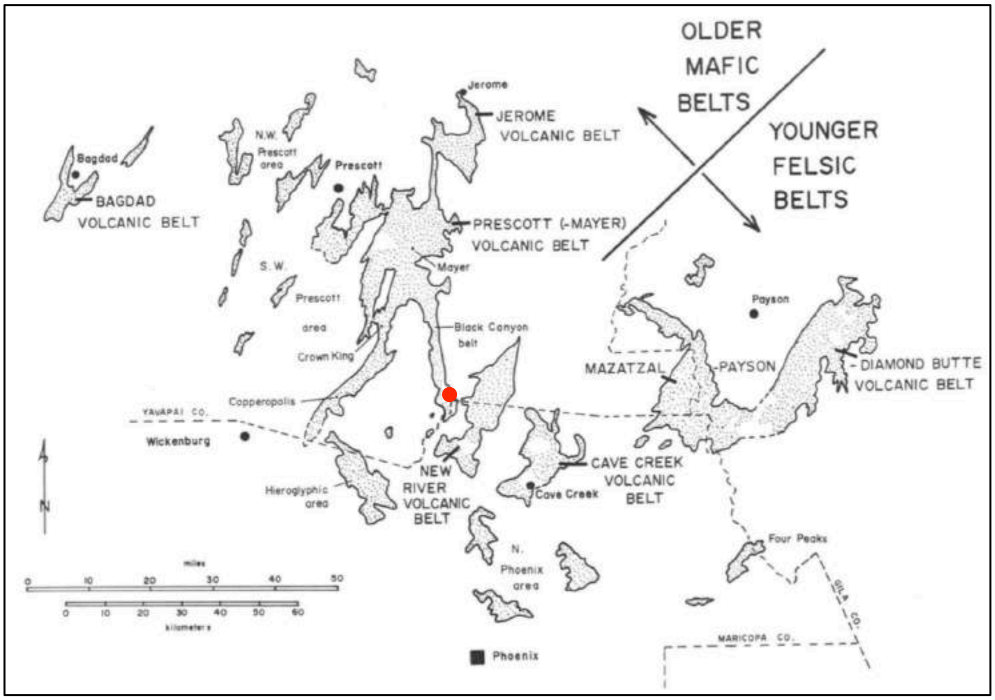

Figure 5. General map of Precambrian basement rocks of central Arizona, with the Kay Mine project (red dot) located in the Black Canyon Belt. From Anderson, 1989b.

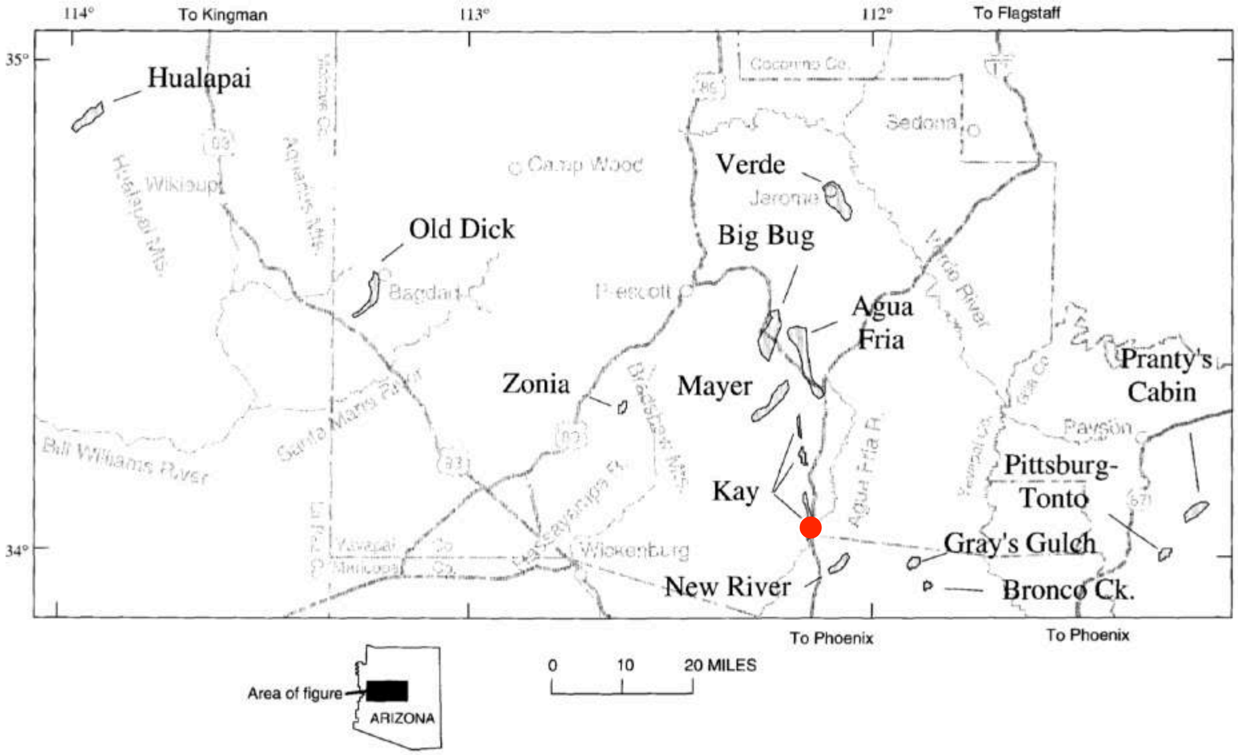

Figure 6. Map of volcanogenic massive sulfide districts in central Arizona.
Kay Mine property shown as red dot. From DeWitt, 1995.

PROPERTY GEOLOGY

The Kay Mine project lies in a NNE-trending belt of schists and phyllites comprising metamorphosed felsic volcanics and metasediments with minor chert and iron formation (Figure 7). In the property area, this belt of schists is bordered on the east by alluvium in the Agua Fria River drainage and Tertiary sediments and volcanics; and bordered on the west by the Proterozoic Crazy Basin monzogranite. The Shylock shear zone, a regional structural features, runs to the west of the property. The property's host rocks and structure are described below.

Host Rocks

Host rocks on the project consist of greenschist-metamorphosed volcanic, volcaniclastic, and sedimentary rocks of Proterozoic age. These rocks fall within the Townsend Butte facies of the Black Canyon Creek Group of the Yavapai Supergroup aged 1800-1740 Ma (Anderson, 1989b). Westra (1977) gives the best detailed description of the project's host rocks, which is summarized here. Westra used relict textures to subdivide rock types, but notes that identifying individual lithologies is difficult because of the degree of metamorphism, folding, and rapid lateral facies changes.

The immediate host rocks to mineralization were grouped together as the Kay Felsic Pile by Westra (1977) and crop out in the vicinity of the No. 1 and No. 4 Shafts (Figure 8). This comprises a highly variable sequence dominated by gritty sericite phyllite (a fine-grained meta-rhyolite with <1 mm quartz phenocrysts); coarse-grained meta-rhyolite tuffs with quartz clasts; and highly silicic meta-rhyolites. Also present in this rock package are meta-rhyolite coarse crystal and lapilli tuffs; and siltstone and tuffaceous siltstone (now sericite phyllite). These rocks are sericite-altered, limonite-stained, and contain several percent pyrite (Fellows, 1982). Graded bedding suggests that stratigraphic tops are to the west (Westra, 1977). SRK (2020a) interpreted this felsic host rock as a metamorphosed rhyolite dome or cryptodome hosting the Kay mineralization.

The Kay Felsic Pile is in sharp contact to the west with Westra's Basic Volcanic Sequence. This consists of fine- to medium-grained blocky pale to dark green meta-andesite and meta-basalt flows 15-30 m thick interbedded with thin fine-grained carbonate-rich chlorite phyllites and chert horizons. Pillow-like features suggest stratigraphic tops to the west. SRK (2020a) interpreted these mafic rocks as metamorphosed basalt flows and mafic tuff deposits.

SRK (2020a) interpreted the felsic-mafic schist contact as prospective for VMS mineralization, with a focus on massive rhyolite and zones of metamorphosed hydrothermal alteration as being most prospective, as they show evidence of volcanic centers and/or hydrothermal feeder zones.

To the west of the basic volcanics crop out a series of fine-grained phyllites after carbonaceous siltstones, sandstones, and arkoses. These sediments are rich in carbonates and include chert beds and lenses, dolomite horizons, quartz-bearing meta-andesite, and chlorite-rich meta-tuff layers. Westra (1977) also mapped sequences of intermediate to mafic meta-volcanics comprising various interbedded dacitic tuffs, rhyodacite, rhyolite, and andesite. Post-metamorphic granophyre, lamprophyre dikes, and Tertiary sediments are also present in the project area.

Structure

Structure in the project area is complex. The host rocks on the project are intensely deformed, characterized by steeply dipping bedding, foliation, lineations, and folds resulting from three phases of deformation as recorded by Westra (1977) and SRK (2020a, 2020b, 2020c). The first phase of deformation was the most intense, and formed isoclinal folds with attenuated and sometimes separated fold limbs and a pervasive axial-planar S_1 foliation that strikes at an average 195° azimuth and dips 80° to the west (Figure 9). S_1 fold axes have an average trend of 229° azimuth and plunge of 85° (Antoine Caté/SRK, personal communication, 2020). SRK reported that S_1 folding repeated the felsic and mafic schists as the cores of folds, and noted that sulfide lenses are likely to be affected by these steeply plunging tight folds, with thinned or boudined fold limbs and thickened fold hinges, and possible repetition of sulfide lenses through folding. Geologic modeling of the mineralization using drill data and historical underground mapping shows the nature of S_1 folding (Figure 10).

The second phase of deformation on the project is shown as a N40W axial planar cleavage formed by minor kink folds of 2.5-5 cm amplitude whose fold axes plunge steeply to the northwest and southeast within S_1 foliation. The third phase of deformation formed a shallowly dipping S_3 open cleavage (Westra, 1977).

Westra (1977) reported minor post-metamorphic and post-mineral faults that strike generally northwest with difficult to measure but apparently minor offsets.

Anderson (1989b) noted that in zones of strong to extreme strain in this region, primary features can be distorted into cigar shapes. This is reflected in the folded character of the Kay Mine deposits, which are likely the result of isoclinal folding with attenuation of fold limbs. This is an important observation for exploration, and targets should be developed acknowledging that additional VMS bodies may be tubes or prolates rather than tabular bodies.

In spite of the isoclinal folding on the property, Westra (1977) suggests that the stratigraphic sequence overall shows younging to the west: graded bedding and pillow-like features suggest top to the west, and black chlorite interpreted to be hydrothermal alteration in the footwall of massive sulfide horizons occurs only to the east of the sulfide bodies.

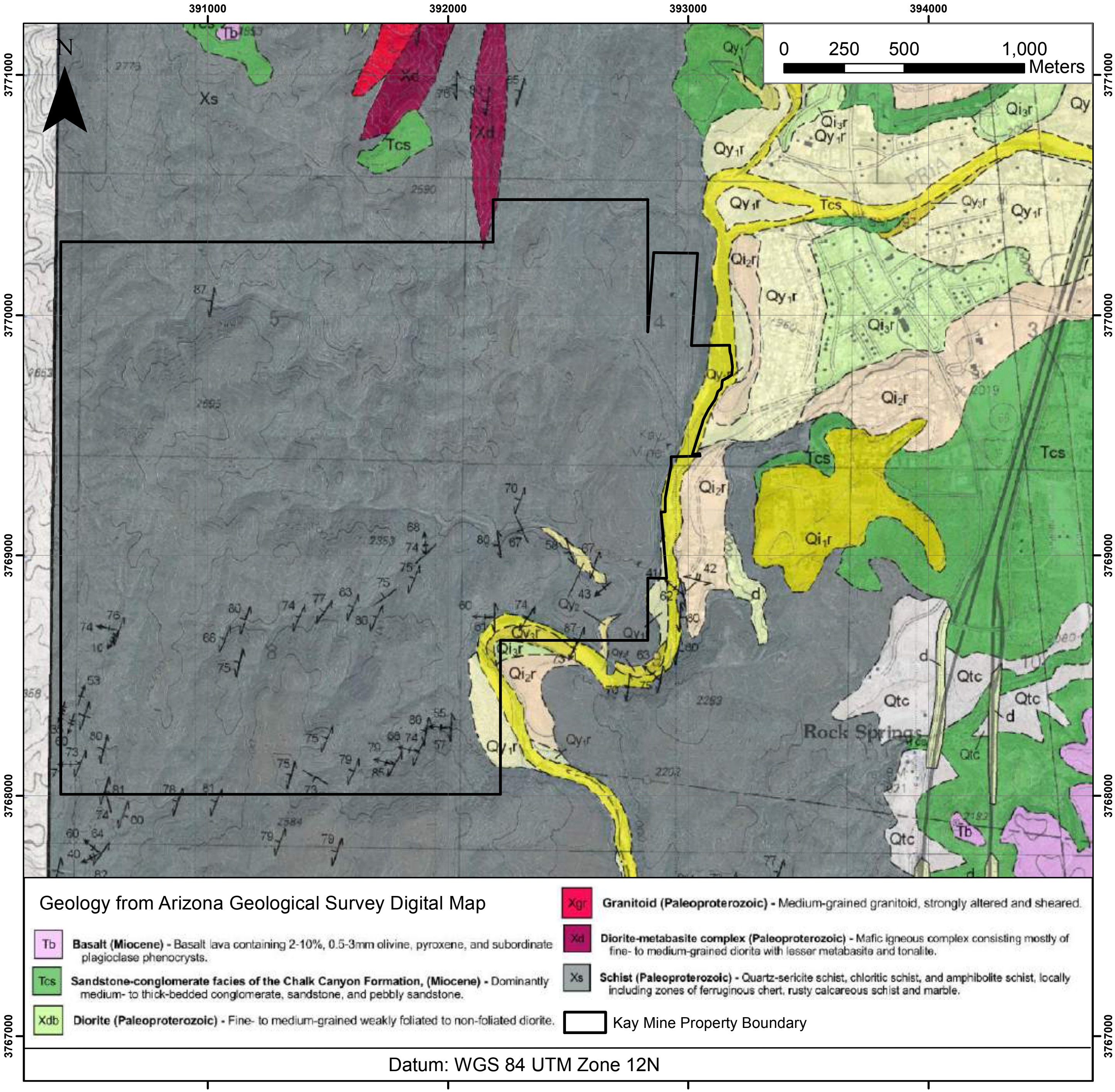

Figure 7. Geologic map of the project area. After Ferguson et al, 2008.

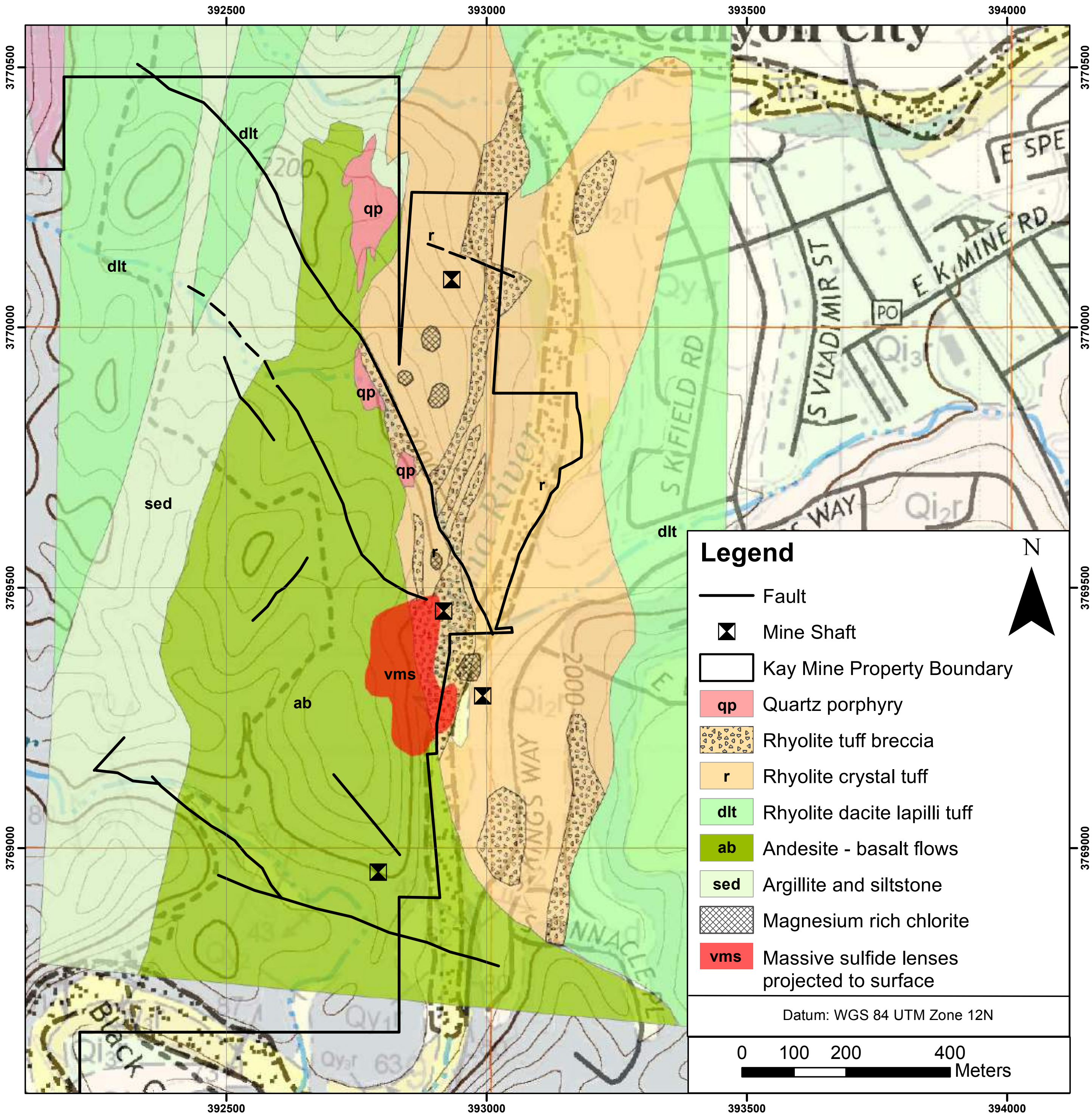

Figure 8. Generalized geologic map of the eastern portion of the Kay Mine property. After Fellows (1982).

Figure 9. Pervasive S_1 foliation axial planar to isoclinal folding on the project.

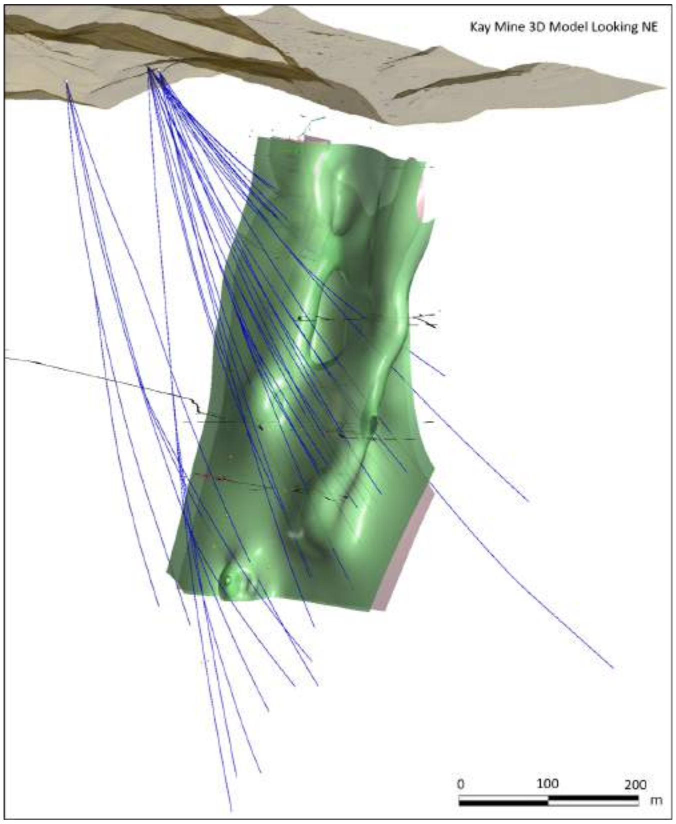

Figure 10. S_1 folding as interpreted from drilling and historic underground mapping. Oblique view to the NE of the Kay Mine area.

MINERALIZATION

Mineralization on the property occurs principally near the historic Kay Mine workings. In this area, it consists of stratabound lensoid bodies of massive sulfide in a folded horizon that strikes generally north and dips an average of 70° west (Figure 11). Massive sulfide occurs along a strike length of approximately 350 m and a down-dip extent of over 700 m below surface, as defined by Arizona Metals drilling combined with historical drilling and underground mapping. Drilled widths vary between <1 m and 90 m, with approximate true width of mineralization estimated to be 65-97% of reported core width, averaging 80%. Thinner portions are interpreted as fold limbs, and wider portions as thickened fold hinges, forming steeply dipping, generally cigar to tabular shapes that pinch and swell.

Figure 11 is a three-dimensional view of the mineralization intersected by Arizona Metals' drilling, showing historic mine workings and Arizona Metals drilling, looking to the northeast. The sulfide mineralization occurs within a stratigraphic horizon of rhyolitic pyroclastics rocks 137-183 m thick. Mineralization is open at depth and along strike, which provide a good expansion targets for mineralization.

Exxon previously identified 18 massive sulfide bodies through drilling and underground mining, which they grouped into two principal closely-spaced zones, called the North Zone and South Zone (Figure 12). Recent drilling by Arizona Metals suggests greater continuity than proposed by Exxon, and it is now clear that what appeared to Exxon as separate sulfide bodies and separate North and South zones are more likely part of the same mineral system, as shown in Figure 11.

Mineralization also occurs in two additional areas to the west of the historic Kay Mine workings (see Exploration, below). The Central area is a north-south trending 150x500-m area of coincident geophysical and geochemical anomalies. The West anomaly is similar, a north-south zone 150x450 m in extent where several geophysical and geochemical anomalies coalesce. Mineralization in both areas occurs as gossanous outcrops accompanied by sericite and chlorite alteration.

Reported historic grades of mineralization are up to 16.6% Cu (Westra, 1977). Surface assays by Arizona Metals returned 16.4% Cu (Sample 14; Table 5), and drill samples have assayed up to 16.6% Cu (drill hole KM-20-14, 427.0-427.6 m), 16.7 g/t Au (drill hole KM-20-10C, 525.6-526.4 m), and 27.9% Zn (drill hole KM-21-21A, 446.4-447.4 m). Ratios of Zn/Cu increase as one moves outward from the center of the massive sulfide bodies (Westra, 1977), and Zn/Cu ratios are therefore an important exploration vector.

Westra (1977) also described zones of disseminated mineralization, including 1) a zone of disseminated pyrite and high-grade sulfide pods between the North and South zones, and 2) a zone of "stringer" mineralization in the South Zone comprising crosscutting dolomite-chalcopyrite veins. Westra (1977) also mentions that portions of massive chlorite horizons may contain sufficient chalcopyrite to be economic. Arizona Metals' drilling has confirmed areas of stringer mineralization, dolomite alteration, and chalcopyrite-bearing chlorite alteration.

The age of mineralization at Kay is between 1790 and 1740 Ma, the age of the enclosing strata (Lindberg, 1989), and likely within the tighter range of 1780-1760 Ma proposed for the majority of Proterozoic VMS deposits by Anderson and Guilbert (1979).

Prominent beds of iron formation and thin andesite flows at the top of the Townsend Butte facies demarcate the upper limit of felsic volcanism (Anderson, 1989a)—and therefore the upper limit of prospective VMS stratigraphy.

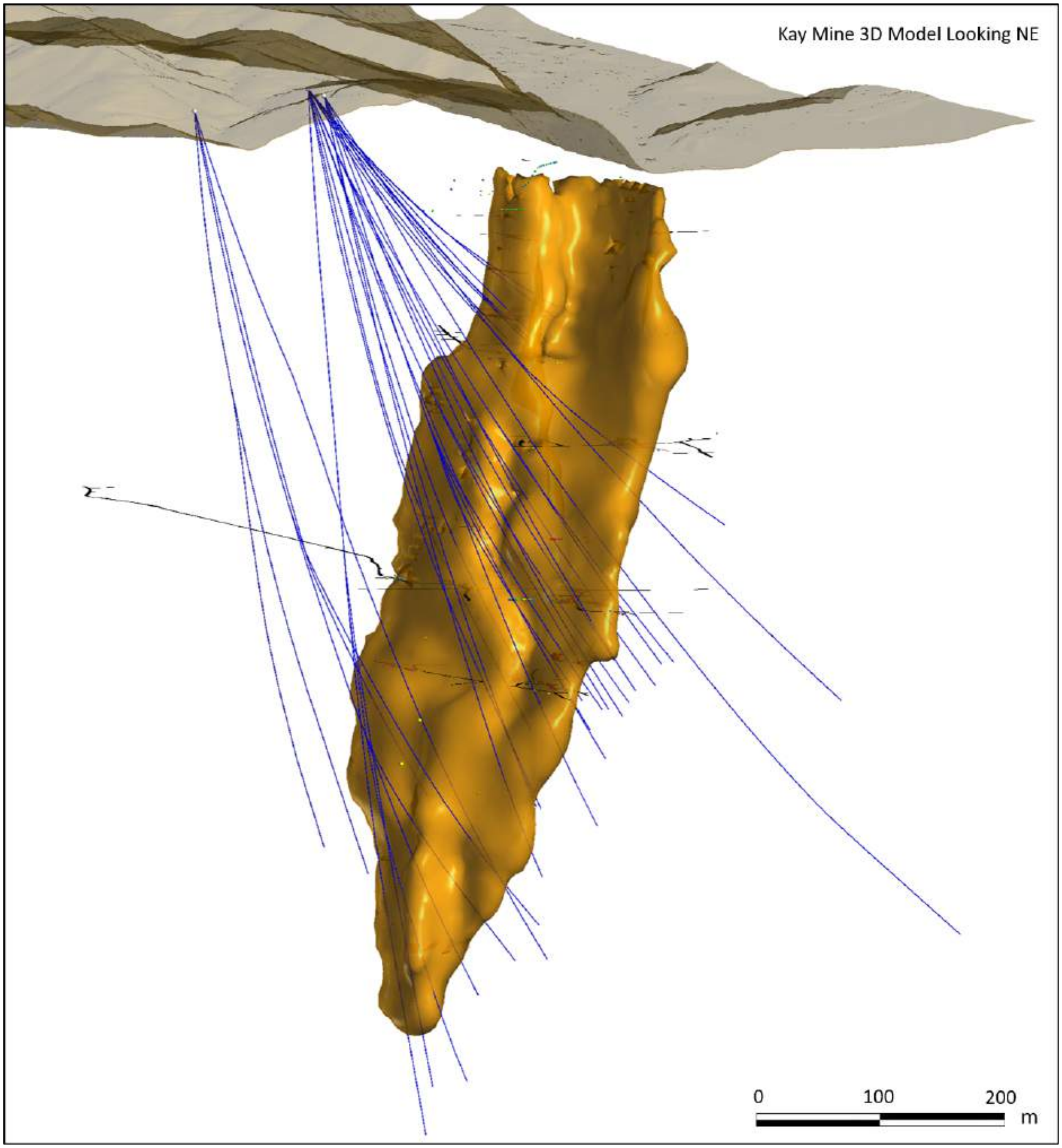

Figure 11. Three-dimensional view of the digitally modeled Kay Mine mineralization, with Arizona Metals drill holes. Oblique view looking toward the NE.

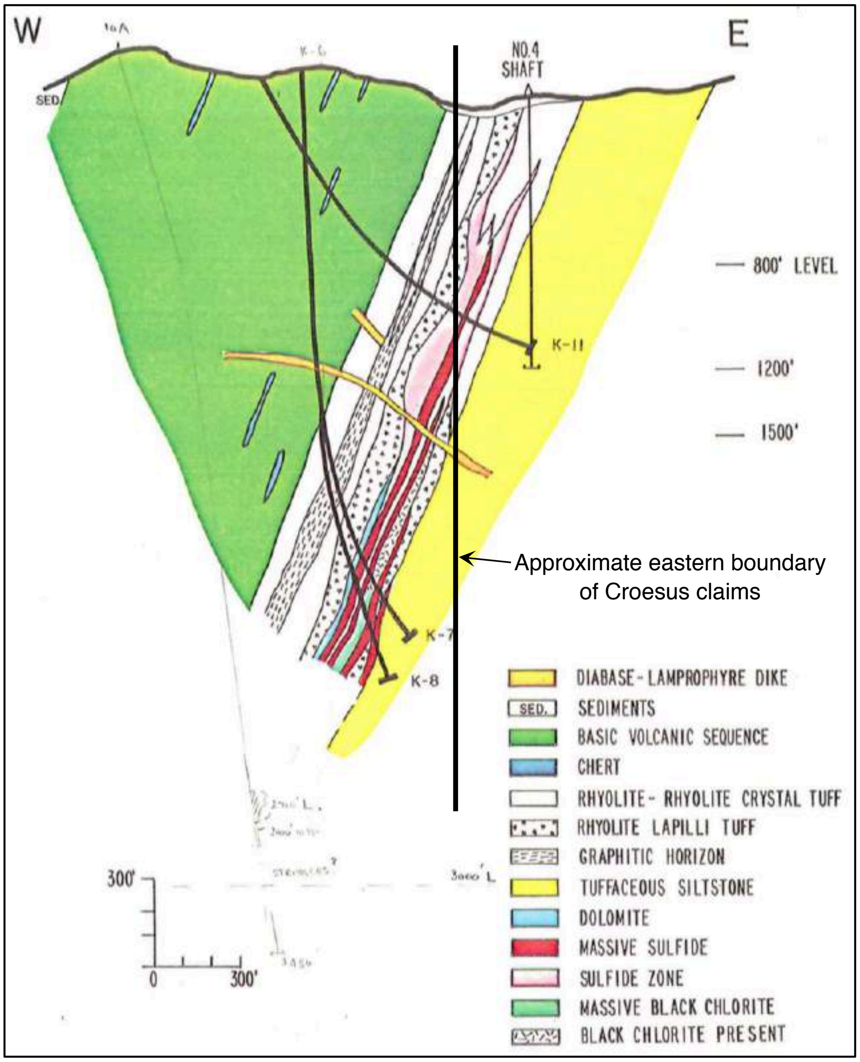

Figure 12. Historic cross-section view of mineralization. Note that the claim boundary is approximate and should be surveyed in the field. From Westra, 1977.

Kay sulfide mineralization consists of massive, semi-massive, and stringer-like aggregates of pyrite, arsenopyrite, chalcopyrite, sphalerite, and galena (Figures 13, 14). Petrographic studies reveal varying proportions of intergrown pyrite, arsenopyrite, chalcopyrite, sphalerite, tetrahedrite-tennantite, and galena (Figure 15). Rare-rare boulangerite ($Pb_5Sb_4S_{11}$) is intergrown with galena, and tellurobismuthite (Bi_2Te_3) and hessite (Ag_2Te) occur in chalcopyrite (Kjarsgaard, 2020). Gangue minerals include chlorite, quartz, sericite, and dolomite; Kjarsgaard (2020) observed two generations of carbonate, one older inclusion-rich, and a younger, clear more euhedral variety, typically associated with mineralization.

Hannington (2020) provided interpretation of the petrographic studies, as follows. "The studied samples are representative of the massive sulfides, stringer mineralization, and altered felsic and mafic volcanic rocks in the Kay Mine The results confirm the strong similarity of the Kay Mine mineralization to other bimodal mafic-felsic-hosted VMS deposits in the Jerome-Prescott area and in other Proterozoic VMS belts (e.g., Flin Flon-Snow Lake, Skellefte). The sulfide assemblage is mineralogically simple and typical of polymetallic ores in this type of deposit. Textures observed in thin section show that the mineralization and host rocks are strongly deformed, with locally intensive shearing and a strong penetrative fabric but no significant metamorphic recrystallization or annealing of the sulfide minerals. The result is a fine granoblastic texture that should be amenable to conventional mineral processing.

Details of the sulfide- (and non-sulfide) assemblages confirm low-temperature origin for the pyritic Zn-rich mineralization, indicated by low-Fe sphalerite and Mg-rich chlorite, and higher- temperatures associated with the chlorite stringer mineralization and Cu-rich sulfides. Possible meta-exhalite was identified in thin section, namely quartz-carbonate-graphite schist and the hematitic tuff that may serve as marker units. The abundant carbonate gangue and pervasive alteration of the felsic volcaniclastic host rocks suggest a subseafloor replacement origin for much of the mineralization.

Pyrite is the dominant sulfide mineral (30% modal abundance, on average), followed by sphalerite (10-15%), chalcopyrite (10-15%), and arsenopyrite (7%), with minor galena, tetrahedrite, and tennantite (all <1%). Chalcopyrite is mainly interstitial to pyrite but locally more massive. It also occurs as disseminations in the chloritic stringers and with sphalerite and galena in polymetallic samples. Sphalerite is mainly intergrown with pyrite in polymetallic assemblages that also contain minor amounts of tennantite, tetrahedrite, galena, and chalcopyrite. The sphalerite is notably Fe-poor, evidenced by its translucence and pale red color in transmitted light.

Arsenopyrite is present in all but two of the mineralized samples. It is most abundant in the Zn- rich mineralization from the South Zone (13% modal abundance) where it is intergrown with pyrite and sphalerite. Fine crystals of arsenopyrite occur individually and in aggregates in the pyrite-sphalerite assemblage. At the scale observed, the arsenopyrite is mostly inclusion free. Arsenopyrite is less common in the Cu-rich massive sulfide and stringer mineralization (<5% modal abundance on average).

Galena, tetrahedrite and tennantite are mainly in the Zn-rich samples, in polymetallic aggregates intergrown with sphalerite and pyrite. Tetrahedrite also occurs with chalcopyrite (11-1860). Tellurobismuthite, altaite, and hessite were found in the Cu-rich samples as inclusions in pyrite and chalcopyrite. Though rare, these are typical accessory minerals in VMS deposits.

The mineralized samples all have a fine-grained, granoblastic texture typical of low grade metamorphic recrystallization of VMS ores. The typical grain sizes of the sulfide minerals are between 25 and 250 microns. The sulfides exhibit complex intergrowths and intense fracturing of individual grains (esp. pyrite), but they do not show extensive annealing or porphyroblastic growth that are common at higher grades of metamorphism (e.g., as in Snow Lake). Pyrite and arsenopyrite are the main brittle phases; all other sulfide minerals show limited deformation or remobilization. Interstitial carbonate, with lesser chlorite and muscovite, are present throughout the mineralized samples.

From the distribution of the samples, strong metal zonation can be inferred in the two main zones, with chloritic stringer mineralization at the base, through Cu-rich massive sulfide, to overlying or adjacent Zn-rich zones. Lower-temperature mineralization is generally in stratigraphically higher or outer zones, and pyrite-carbonate may have cap the lenses, although carbonate is also present in the stringer zones. The inferred zonation is consistent with broad sheet-like lenses similar to the nearby Iron King deposit.

No free gold or electrum were observed in the thin sections. The gold grades are at the limit for easy detection of free gold by reflected light microscopy, so this is not surprising. However, the samples should be inspected more closely by SEM to confirm the siting of the gold. At least one sample showed hessite and altaite locked in pyrite where native gold or electrum also would be expected to occur. Four other samples are identified in the recommendations for additional work.

Silver is most likely present in tetrahedrite and possibly in galena or tennantite; one sample contained the Ag-telluride hessite. Silver is also possibly in solid solution in chalcopyrite, as at Kidd Creek, but this also needs to be tested. One sample (B300190) with 2.2 wt.% Pb and 1000 ppm Sb contains 350 ppm Ag (ALS file TU20080760), consistent with the presence of Ag-bearing tetrahedrite (freibergite). IMK also identified the Pb-Sb sulfosalt boulangerite in sample 15-1668 (B300573) which contains up to 192 ppm Ag in the drill core assays. SEM or microprobe analyses of the Ag-bearing minerals would provide the information needed for a full mineral balance.”

Multi-element analyses of drilled mineralization show a deposit dominant in Cu, Au, and Zn, with minor Pb and Ag. Elevated trace elements include As, Cd, Co, and Sb. Statistical correlations between major metals of interest and trace elements are as follows (listed in decreasing order).

- Cu—Co, Bi
- Au—As, Cd, Zn, Ag
- Zn—Cd, Pb, Au, As

Figure 13. Massive sulfide mineralization collected by the author on mine dump at the No. 1 Shaft.

Figure 14. Massive chalcopyrite in drill core. From a 1.2-m sample grading 9.8% Cu, 6.1 g/t Au (drill hole KM-21-26, 581.6-582.8 m).

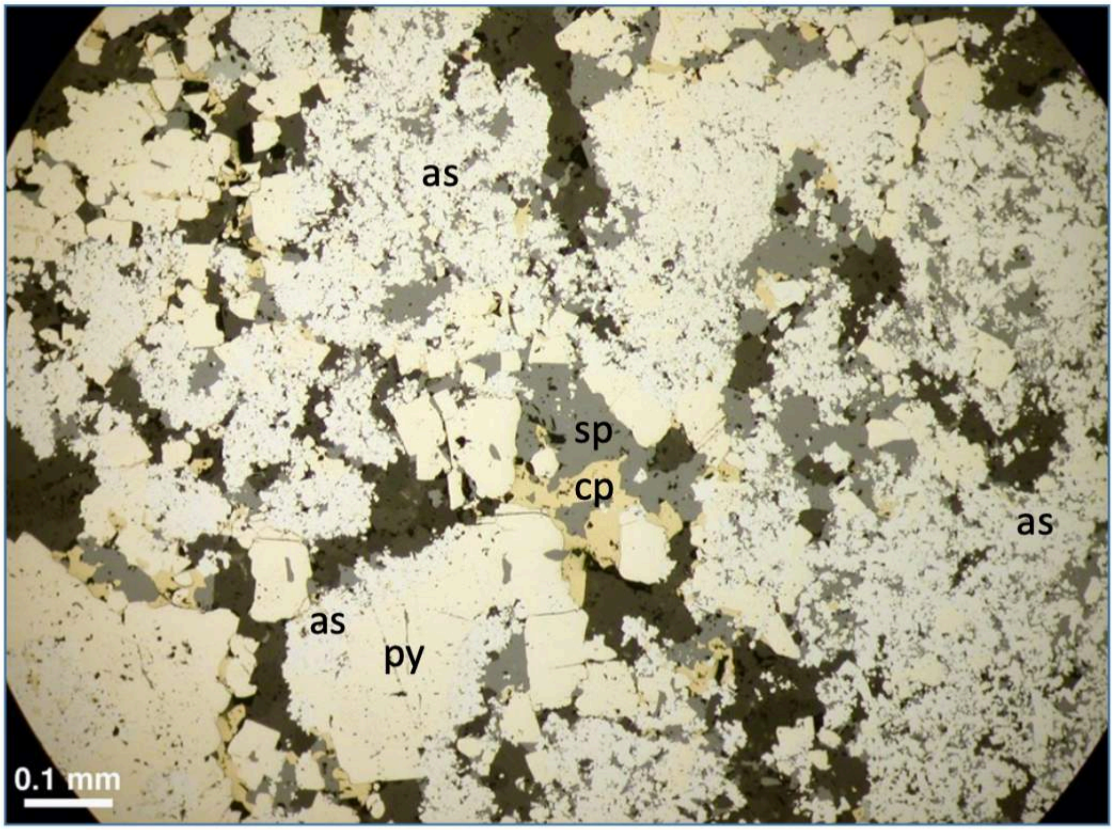

Figure 15. Photomicrograph of mineralization showing intergrown pyrite, chalcopyrite, sphalerite, and arsenopyrite. Reflected light, drill hole KM-20-11, 1823 ft, 555.65 m.

ALTERATION

Historical descriptions of hydrothermal alteration on the Kay Mine property are limited, but consistent with that typical of volcanogenic massive sulfide deposits elsewhere. Chlorite, dolomite, and quartz alteration occur in the footwall to massive sulfide bodies on the property. This footwall alteration occurs in three forms. First, widespread layers of black, Mg-rich chlorite occur in the footwall to mineralization in both the North and South zones; Westra (1977) mentions these zones below the North Zone 1000 level and the South Zone "second" massive sulfide layer, presumably the 1200 level. Outcropping zones of this black chlorite mineralization are also shown on the summary project geology map of Fellows (1982; Figure 8). Second, silicification is present in rhyolite lapilli tuffs in the North Zone accompanied by minor pyrite and crosscutting dolomite-chalcopyrite veins; and in the footwall of the North Zone 1500 level as quartz-pyrite veins (Westra, 1977). Third, chlorite and dolomite alteration are present within "stringer ore" described by Westra (1977) in the South Zone of mineralization. The increase in Mg in chlorite toward mineralization provides an excellent exploration vector. Footwall alteration shows strongly anomalous levels of Cu in the 60-90 meters below the mineralized horizon. Hangingwall alteration above the sulfide horizons consists of a 30-45 m thick section of silver-gray sericite phyllites immediately above sulfides in the North Zone, which is likely sericite alteration. Westra (1977) also mentions a massive coarsely crystalline dolomite layer overlying sulfides in the South Zone. Hangingwall alteration does not show anomalous levels of base metals (Westra, 1977).

Alteration studies by SRK (2020b) indicate that two alteration indexes increase toward mineralization. The Ishikawa Index is a measure of K and Mg added to a rock by alteration, and the chlorite-carbonate-pyrite index (CCPI), measures the addition of Mg and Fe by alteration. Mapping of these indexes helped define the folding model of the deposit.

Petrography interpreted by Hannington (2020) revealed abundant proximal carbonate and chlorite alteration, with more widespread sericite alteration. "Carbonate is the dominant alteration in unmineralized volcanic rocks (~30% modal abundance, on average), compared to 20% quartz, 20% muscovite, and 20% chlorite. Some banded carbonate may represent seafloor precipitation (i.e., exhalite), but most is in the matrix of the felsic volcaniclastics, consistent with subseafloor replacement. It is less abundant in the footwall quartz-sericite and quartz-chlorite schist, where it occurs as unreplaced clots. Muscovite is present throughout the mineralized samples and altered felsic volcanic units. Mg- rich chlorite is mostly restricted to the mineralization. The low Fe content of chlorite in the Zn- rich samples is consistent with the interpreted low temperature of formation of this assemblage. Chlorite appears more Fe-rich in the stringer mineralization, but this needs to be confirmed by microprobe or SEM analysis."

7 DEPOSIT TYPES

The Kay Mine property hosts volcanogenic massive sulfide deposits, defined as "strata-bound accumulations of sulfide minerals that precipitated at or near the sea floor in spatial, temporal, and genetic association with contemporaneous volcanism" by Franklin et al (2005). They typically occur as lenses of polymetallic massive sulfide that form in submarine volcanic environments ranging in age from 3.4 Ga to currently forming seafloor deposits (Galley et al, 2007). VMS deposits show wide variation in mineralogy, alteration, form, and stratigraphy, and can be classified according to volcano-stratigraphic and tectonic settings, base metal content, or gold content, each of which has characteristic features.

As an overall class, VMS deposits are characterized by tabular to bulbous orebodies of Cu, Zn, and Pb sulfide minerals formed by direct exhalation of metal-bearing fluids onto the seafloor, or by replacement of or infiltration into permeable shallow sub-seafloor sediments or volcaniclastic rocks, both forms of mineralization being syngenetic with their enclosing strata. Deposits are often zoned, with the most common progression from Cu-rich cores outward to Zn and distal Fe. VMS deposits are typically underlain by stringer or stockwork mineralization bearing Cu, Zn, Pb, and Fe sulfides.

Footwall stringer-stockwork zones are generally accompanied by intense hydrothermal alteration typified by chlorite-quartz with varying amounts of sericite and carbonates, accompanied by lesser chalcopyrite, pyrite, pyrrhotite, and sphalerite. Similar, although weaker, alteration may occur above orebodies. Variations in the Fe/Mg composition of alteration chlorite can be used in vectoring toward ore, although either cation may increase toward mineralization in different systems. VMS deposits tend to be surrounded by large volumes of volcanic, volcaniclastic, and sedimentary host rocks that have been hydrothermally altered to chlorite-albite-epidote-quartz-carbonate, which can be difficult to distinguish from regional greenschist-grade metamorphism.

VMS deposits form in collisional tectonic settings during periods of extension and rifting, accompanied by and a product of extension-related bimodal magmatism. This magmatism gives rise to mantle-derived mafic and crustal-derived volcanic rocks that typically accompany VMS deposits; serves as a heat source for driving fluid circulation and metal leaching; and may be a source of metals in the deposits. Most metals appear to have been leached from volcanic and sedimentary rocks underlying the ore horizons. Stable isotopes show that fluid sources are dominantly seawater with varying small amounts of magmatic and mantle fluids (Hannington et al, 2005). Ore fluids vary considerably; they are typified by mid-ocean-ridge fluids that are moderately acidic (pH 3-5), 250-400ºC, low salinity (<1-8 wt % NaCl eq), either oxidized or reduced, generally low CO_2, and Si- and Fe-rich (Hannington et al, 2005). Metal-bearing fluids are focused by synvolcanic extensional faults and fractures into permeable rocks or onto the seafloor, where they precipitate ore minerals as temperature, pH, and sulfur activity change as the result of cooling, fluid mixing, or boiling. Trace elements may include As, Ba, Bi, Cd, Co, Eu, Ga, Ge, Hg, In, Mo, Mn, Ni, P, Sb, Se, Te, and Tl.

The predominance of felsic volcanic and sedimentary rocks suggests that the Kay Mine mineralization is the siliciclastic-felsic type of Franklin et al (2005).

8 EXPLORATION

PRE-EXXON EXPLORATION

The only data that exists from the early, pre-Exxon exploration efforts on the property are mine plan maps and cross sections produced by the Kay Copper Company and New Jersey Zinc. These include the locations of underground workings and underground drill holes, and assay results from mine channel samples (including many sample widths) and drill assays. Mine plan maps indicate several hundred underground samples and at least 103 drill holes (89 by Kay Copper Company and 14 by New Jersey Zinc) with many plotted assay results. This is abundant data that, if verified with modern drilling and properly digitized into a 3D geologic model, could be integrated into a new resource estimate for the project.

EXXON MINERALS EXPLORATION

Exxon Minerals explored the property between 1972 and the mid-1980s reportedly spending over USD$1M. There are several gaps in the available reports, so the procedures, parameters, methods, quality, and other details of the exploration work are not completely available. Exxon's work is summarized here from available reports. Exploration work and results during 1977-1982 included the following.

- Mapping the area around the Kay Mine at a scale of 1"=200', resulting in a detailed understanding of the host rocks, structure, and geologic setting of the mineralization.
- Relogging drill core and cuttings.
- Examining 143 thin sections from surface and drill core.
- Splitting and assaying for Cu, Pb, and Zn 610 m (2000 feet) of drill core from holes K-9, K-10A, and K-12; assays indicate that Zn/Cu ratios increase with distance from mineralization.
- A stream sediment sampling program, showing small base-metal anomalies immediately around the No. 1 Shaft.
- Geophysical surveys including complex resistivity (CR), CSAMT, Turam, and several generations of induced polarization (IP). Results are not discussed in detail other than Westra's (1977) description of complex resistivity anomalies defining the Kay mineralized horizon over a strike length of 460-610 m (1500-2000 feet), which was possibly open to the south of the No. 4 Shaft.
- A soil sampling survey that included the Kay Mine area, resulting in a mild Hg anomaly over the mine area. Fellows (1982) states that soil grid geochemistry was "instrumental" in finding the Greyhound mineralized zone to the northwest of the Kay Mine.
- Reviewing underground geology and assay data and including them on mine level plans and cross sections.

RAYROCK MINES EXPLORATION

In the late 1980s Rayrock Mines Inc. optioned the property from Exxon Minerals and formed a joint venture with American Copper and Nickel Company (ACNC; Poulter, 2019). Rayrock conducted data review, induced polarization (IP) and electromagnetic (EM) geophysical surveys, geologic mapping, and rock sampling. Most of the data are not available. A draft map shows IP chargeability anomalies coincident with Arizona Metals' Central/MX-2 anomaly. Rayrock conducted two drill campaigns: in 1991, consisting of six reverse-circulation holes; and in 1993 comprising five core holes. Hole depths are known only for K91-3 (244 m) and K93-1 (280 m).

ARIZONA METALS EXPLORATION

Since 2019, Arizona Metals has performed the following exploration work:

- Geologic reconnaissance to the west of the patented claims.
- Staked 50 additional mining claims.
- Collected and analyzed 30 due-diligence rock samples.
- Digitized all historical project data and conducted 3-dimensional modeling.
- Topographic survey by drone aircraft.
- VTEM geophysical survey followed by reprocessing and interpretation.
- Borehole electromagnetic (BHEM) geophysical survey in selected Arizona Metals drill holes.
- Geophysical gravity survey.
- Soil and rock sampling.
- Geologic mapping, structural interpretation, and alteration studies.
- Petrographic studies.

Geologic Reconnaissance and Claim Staking

The company conducted initial geologic prospecting of the area west of the historic Kay Mine, identifying the gossan outcrops near the VTEM anomaly (see below). Thirty rock samples were collected and analyzed, as described in Data Verification, below. Based on prospecting results, Arizona Metals staked 50 additional new mining claims.

Data Digitizing and Drone Topography Survey

Arizona Metals commissioned digitizing of all the historical data on the project, including historic drill data, underground workings, and underground samples. This data was incorporated into a three-dimensional computer model for exploration planning. Arizona Metals also commissioned a drone survey to map the topography on the project, which has been integrated into the 3-D digital model.

VTEM Geophysical Survey

During March 2019, Geotech Ltd. of Aurora, Ontario, flew a helicopter airborne VTEM (versatile time domain electromagnetic) survey of the central portion of the property totaling 107 line-km at 50-m spaced lines (Geotech, 2019a). The survey detected three anomalies: over the existing Kay mineralization, a Central anomaly approximately 600 m to the east of the Kay mineralization, and a Western anomaly 1.6 km east of Kay.

Following the VTEM survey, Geotech performed Maxwell plate modeling and interpretation (Geotech, 2019b). Maxwell plate modeling is a processing method that refines the VTEM anomalies by generating a series of rectangular plates to represent the possible causative geologic bodies. Geotech's data was reviewed by consulting geophysicist Tom Weis (Weis, 2020a), who cautioned the use of Maxwell plate modeling alone, stating that the method can be useful but may be misleading, especially when "virtual" plates are used to influence the interpretation as Geotech did on the West anomaly. Weis recommended further more detailed processing. This was subsequently performed by Computational Geosciences of Vancouver, B.C., who provided digital models directly to Weis, who interpreted them and prepared four reports (Weis, 2020b, 2021a, 2021b, 2021c). Arizona Metals has imported the digital models into its 3D model and will use them for drill targeting.

The largest and most well defined VTEM anomaly outside the historic Kay Mine mineralization is the West anomaly, labeled MX-1 in Geotech's and Weis' reports. In his interpretation report, Weis (2021b) delineated this as a steeply dipping, north-trending, south-plunging zone of high conductivity approximately 150 m wide east-west by 450 m long north-south (Figure 16), and extending to approximately 500 m depth. Data shows evidence for multiple stacked conductor lenses within the anomaly. Weis defined eight drill targets in this anomaly, and recommended drilling of all high-conductivity features in the area.

The Central VTEM anomaly, also called MX-2, is a single north-south striking conductivity high anomaly of weak to moderate strength dipping steeply to the west (Weis, 2021c; Figure 16). The anomaly is approximately 150 m wide east-west, 500 m long, and extends to approximately 350 m depth. Weis outlined two priority targets recommended for drilling.

The Kay anomaly (labeled MX-3) is coincident with the mineralization in the historic Kay Mine as identified by underground workings, previous drilling, and Arizona Metals' drilling. This is a large and strong anomaly (Figure 16) and serves as an orientation anomaly because of the presence of known mineralization. Additional details of this anomaly are discussed below.

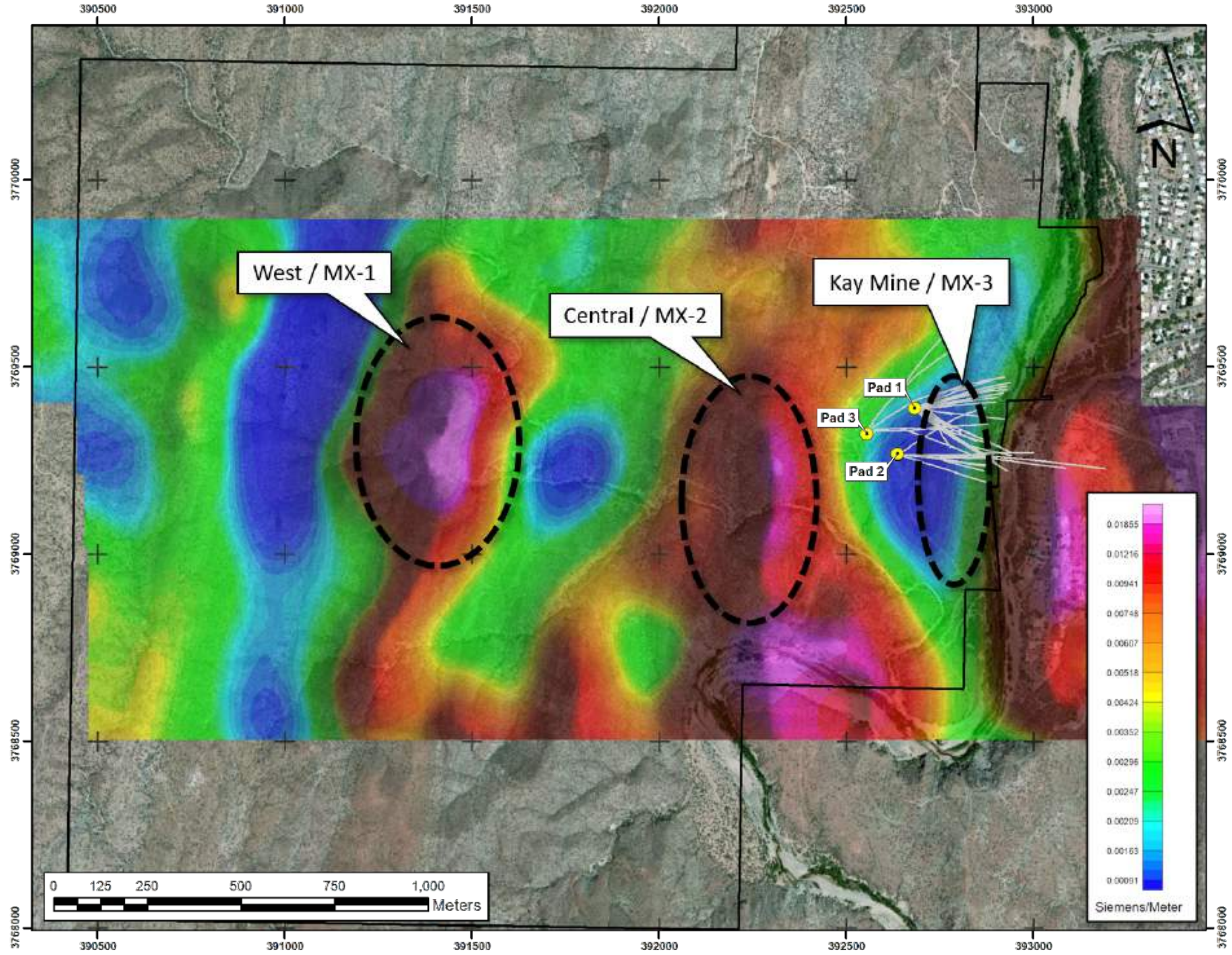

Figure 16. VTEM anomalies. MX-3 is subtle, and was further delineated with a borehole EM survey. The large anomaly to the east of MX-3 is attributed to power lines.

Borehole EM Geophysical Survey

In August, 2020, Arizona Metals commissioned a borehole electromagnetic (BHEM) survey, which measured electric conductivity downhole in portions of seven selected Arizona Metals' drill holes. The survey was designed by geophysicist Tom Weis and performed by Zonge International (Zonge, 2020), which laid out three surface transmitter loops: two at approximately 400x400 m in extent, and one at about 100x100 m extend. Data was recorded at 10-meter intervals downhole over a total length of 1,415 m of drill hole. Data processing was performed by Computational Geosciences of Vancouver, B.C., who integrated the BHEM data with the VTEM data and ran several models with combinations of the two data sets. Computational

Geosciences provided digital models directly to Tom Weis, who interpreted them and prepared a report (Weis, 2021b). Weis eliminated the eastern portions of the Kay VTEM anomaly, which overwhelmed the conductive response in the area of drilling, and is believed to be caused by powerlines running along a city street.

Weis outlined 20 drill targets within six conductive zones of interest, some of which were combination BHEM-gravity anomalies (see below). Two of these targets were tested by Arizona Metals drill holes. First, a combined BHEM-gravity anomaly (see discussion of gravity below and Figure 17) north of the area of current drilling was tested by KM-21-22 and KM-21-22A. Although no massive sulfide was intersected, the mineralized horizon was detected in KM-21-22, consisting of thin 0.3-1.2 m seams of pyrite, chalcopyrite, arsenopyrite, and probable tetrahedrite-tennantite grading up to 1.7% Cu and 2.9 g/t Au. Second, a deep anomaly to the east of the drilled area was tested by KM-21-17; this hole intersected no mineralization in the area of the anomaly. Arizona Metals has imported the BHEM digital models into its 3D model and will continue to use them to support drill targeting.

Gravity Geophysical Survey

The company commissioned a geophysical gravity survey on the project that was completed in January and February, 2021. The survey was designed by geophysicist Tom Weis and conducted by Magee Geophysical Services (Magee, 2021). The survey was conducted at 1,410 stations spaced at 25 to 50 meters along east-west lines spaced at 100 m. Data processing, interpretation, and reporting was done by Tom Weis (2021d), who integrated the gravity with VTEM and BHEM anomalies to look for correlations.

Weis delineated 23 drill targets, 11 of which were combined gravity-EM and 12 of which were standalone gravity targets. At the Kay area of historical and current drilling (MX-3), Weis outlined five drill targets where EM and gravity were coincident (Figure 17), two of which have been tested by drilling (see above). At the West anomaly (MX-1), Weis noted three targets where VTEM and gravity agree very well (Figure 18), and these have been targeted for drilling. At the Central anomaly (MX-3) two gravity features are coincident with VTEM conductivity highs and have been targeted for drilling (Figure 19). Weis also noted three gravity-only features of interest in the northern part of the survey area that he recommended for field checking and ground EM surveys (Figure 20).

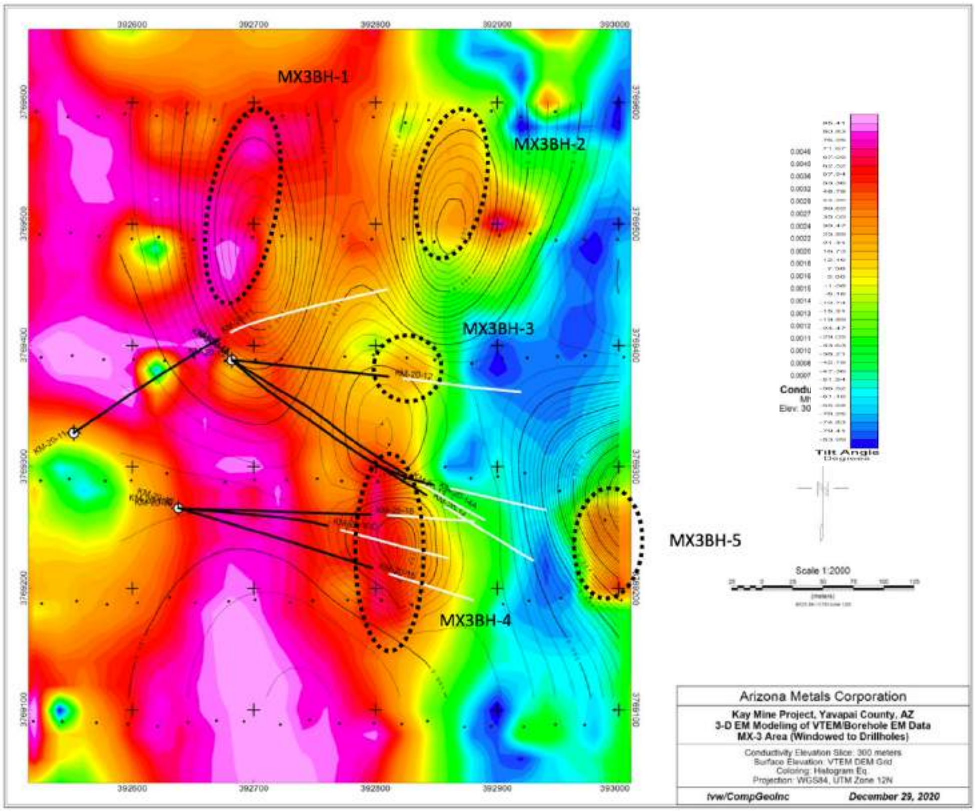

Figure 17. Combination BHEM-gravity anomalies (dashed ellipses) in the area of Kay drilling (MX-3) at 250 m elevation, about 400 m depth, from Weis, 2020b. Colors represent gravity, and black contour lines show conductivity (BHEM). Selected drill holes are shown in black (above elevation slice) and white (below elevation slice).

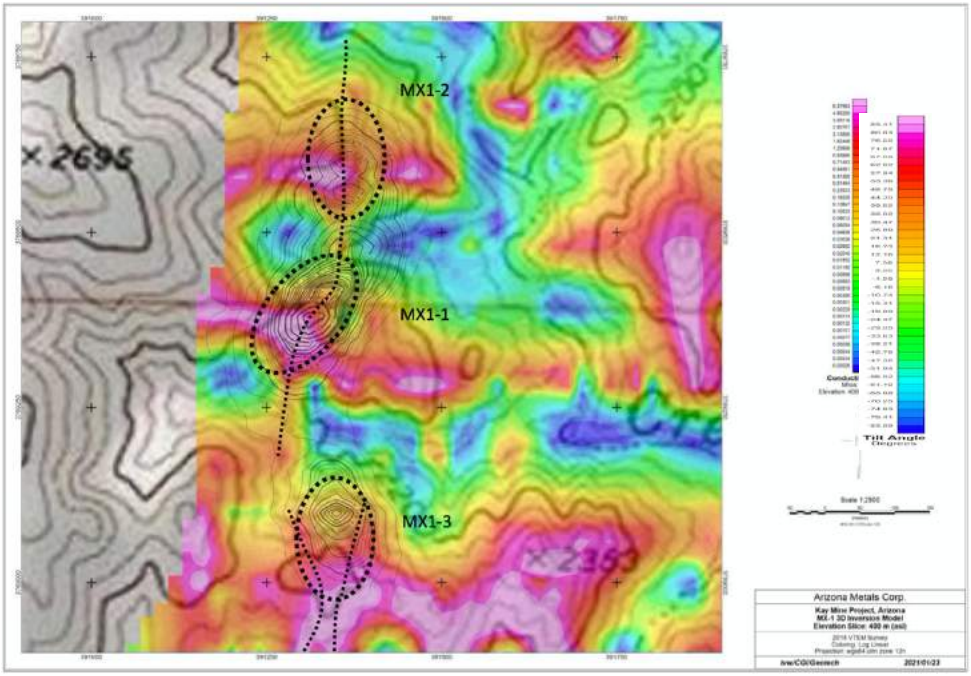

Figure 18. Combination VTEM-gravity anomalies (dashed ellipses) on the West anomaly (MX-1) at 400 m elevation, about 300 m depth from Weis, 2021b. Colors represent gravity, and black contour lines show conductivity (VTEM).

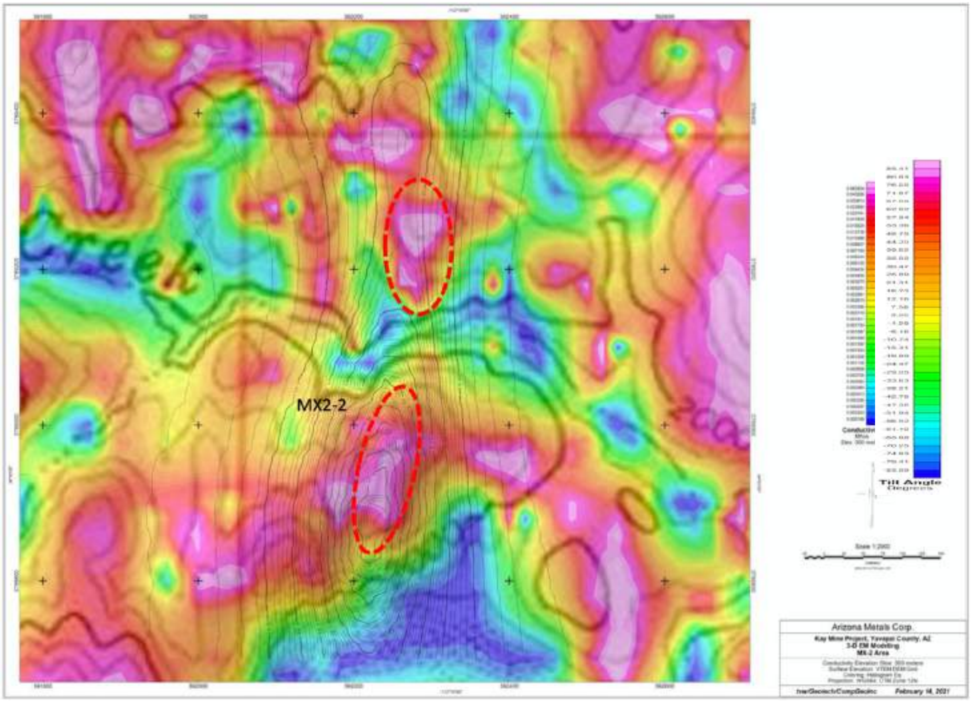

Figure 19. Combination VTEM-gravity anomalies (dashed ellipses) on the Central anomaly (MX-2) at 300 m elevation, about 350 m depth, from Weis, 2021c. Colors represent gravity, and black contour lines show conductivity (VTEM).

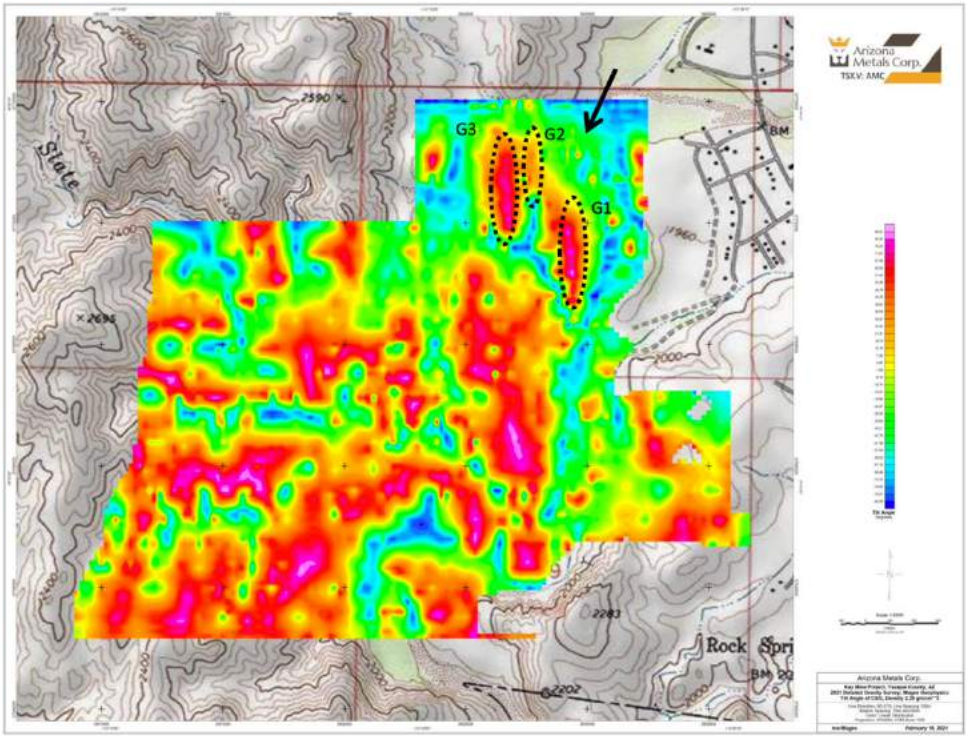

Figure 20. Standalone gravity targets (dashed ellipses) recommended for field checking and ground EM surveys, from Weis, 2021d.

Rock Sampling

In April 2019 and April 2020, Arizona Metals geologists Ray Harris and David Lajack collected 41 rock samples over the Central and West geophysical anomalies. Samples were submitted to ALS Minerals for Au and multi-element analysis (Au-AA23 and ME-ICP41, 7 samples; and Au-AA23 and ME-ICP61a, 34 samples).

Rock geochemistry results from the West VTEM target returned rock geochemical anomalies in As, Zn, Cu, Pb, Mo (in order of decreasing strength). The Central VTEM anomaly showed anomalous values in As, Zn, and Cu above the VTEM anomaly and coincident with the soil anomalies (see below). These are among the elements shown to be anomalous in soils, and these rock anomalies are coincident with the soil geochemistry anomalies. They also overlie the central portions of the VTEM anomalies. Thus, on both the West and Central targets, rock geochemistry provides an additional coincident layer of confirmation that these areas may overlie massive sulfide mineralization at depth.

Soil Sampling

During June 15-20, 2020, consulting company Ethos Geological collected 287 soil samples for analysis from three grid areas on the project (Figure 21). The three grids covered: 1) the extension of the known Kay mineralization north of Shaft 1, in order to determine the soil geochemical signature of known mineralization; 2) the Central VTEM geophysics anomaly; and 3) the West VTEM geophysics anomaly. The intent of the soil sampling was to generate geochemical data to support drill targeting into the VTEM geophysical anomalies in the Central and West areas (see below).

Soil samples were collected from the C soil horizon at depths of approximately 30-90 cm below surface. Samples were analyzed at ALS Minerals Labs by aqua regia methods for a suite of 51 elements. Field duplicate samples were analyzed by Ethos Geological for inverse difference hydrogen (IDH).

Soil Geochemistry Results

Soil geochemistry analyses from the Kay (eastern) grid returned anomalies in the following elements (in order of decreasing anomaly strength): As, Pb, Zn, Ag, Bi, Te, Cu, Mo, Hg, Cd. This fits well with statistical correlations in the soil data, which show groupings of Cu-Hg-Zn-Cd-Te-Bi, and Au-Ag-Pb-Cd-As-Hg. Geochemical factor analysis done by Ethos Geological (Ethos, 2020a) confirms most of these elements as related to mineralization: Factor 2 consists of Cd, Zn, Ag, As, Hg, Cu, Au. On the Kay grid, the anomalies in individual elements and in geochemical Factor 2 all form north-trending linear anomalies that stretch between Shaft 1 on the south and Shaft 3 on the north (Figure 21). This is a known trend of mineralization, which was intersected historically at Shaft 1, the defunct Shaft 2, Shaft 3, and drill hole K93-1 drilled by Rayrock Mines in 1993, located about 250 m SW of Shaft 3. These soil geochemical anomalies tightly overlie this trend of mineralization, and appear to be the surface geochemical signature of the Kay mineralization.

On the Central soil grid, anomalies are present in As, Zn, and Mo, and in geochemical Factor 2 (Figure 21). The Zn and Mo anomalies are subtle, but aligned N-S along the eastern edge of the modeled VTEM geophysical anomaly. The As and Factor 2 anomalies line up with Zn-Mo, but also extend to the NW by about 180 m, overlying the northern portion of the modeled VTEM anomaly. Although subtle, soil geochemistry results on the Central grid validate the Central VTEM anomaly.

On the West grid, soil results more strongly confirm the presence of mineralization (Figure 21). Although the Factor 2 anomaly overall is slightly lower in magnitude than on the Central grid, more elements are anomalous in this area: Ag, Mo, As, Pb, Zn, Cd, Hg. In particular, Ag, Mo, and As are strongly anomalous over the eastern edge of the VTEM anomaly.

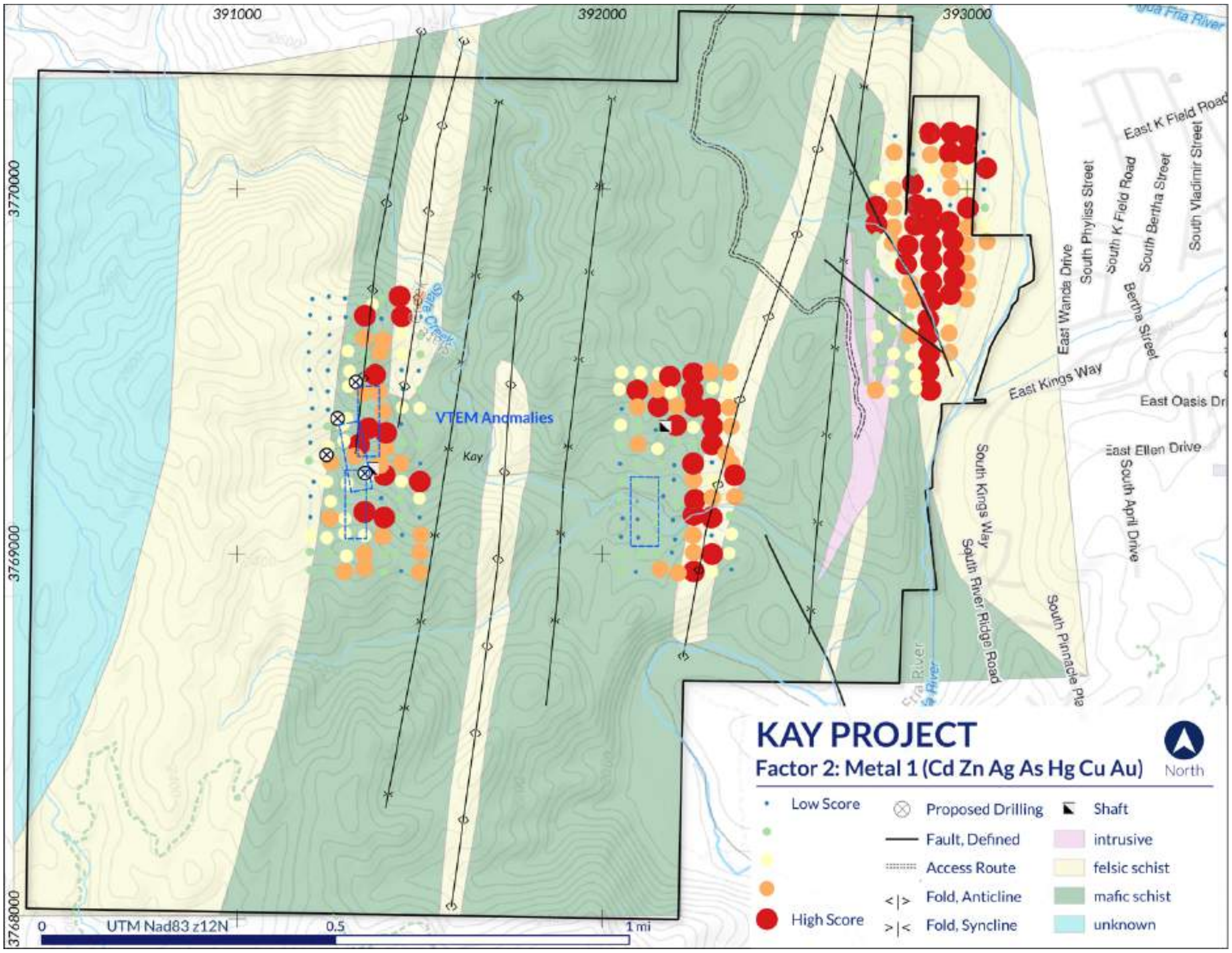

Figure 21. Geochemical Factor 2 soil results.

Soil IDH Results

Inverse-difference hydrogen (IDH) analysis measures the amount of H^+ and other changes in the soil that result from the decomposition of oxidizing sulfide minerals. Sulfide-bearing mineralization at depth creates zones of lower soil pH at the surface, caused by the release of H^+ ions from oxidizing pyrite (Smee, 1997, 1998). These H^+ ions appear to have a sufficiently high diffusion coefficient to cross appreciable thicknesses of unmineralized cover in short geological time spans (Govett, 1976; Smee, 1998). Within the low-pH zones, carbonates and other pH-sensitive elements become unstable and dissolve in pore waters. These waters move to the margins of the low-pH zones, where the dissolved elements are deposited in carbonate-stable conditions, creating haloes of elevated soil buffering capacity. Both the low-pH zones and the surrounding higher-buffering halo zones can be detected by simple pH measurements of soil samples. This is done by taking two pH readings of a water-soil slurry, one without and one with dilute HCl or acetic acid. After converting the pH values to H^+ concentrations, the inverse of the acidified minus non-acidified H^+ values is calculated. This is IDH, or inverse difference hydrogen, which is a direct measure of the reactivity or acid buffering capacity of the soil. IDH is ideal for detecting the presence of sulfide mineralization at depth, below solid bedrock and/or transported cover. The method has been used to detect sulfide mineralization in many locations, including Oyu Tolgoi, Mongolia (Smee, 2003); the Marigold Mine, Nevada (Smee, 1998); and the Canadian Shield (Hamilton et al, 2004). The contrast and patterns are more important in IDH interpretation than the absolute values, and anomalies generally appear as low IDH zones surrounded by moderate to higher IDH values. Although quantitative, soil IDH analyses are not recommended for use alone, and are intended as a supporting layer of geochemical information in addition to more rigorously quantitative methods such as geophysics and laboratory geochemical analyses.

Soil IDH analyses on the Kay property were done by independent consulting company Ethos Geological. Soil IDH results on the three grids (Figure 22) agree well with the soil and rock geochemical results and support the VTEM interpretation of sulfide-bearing zones at depth on the West and Central targets. On the Kay grid, a broad zone of low IDH values is present on the eastern majority of the grid, bordered by high IDH on the western edge. The broad eastern low-IDH area is difficult to interpret since it is open to the east, north, and south and would require a larger grid to close off. The high-IDH portion on the western edge, however, contains a low-IDH anomaly that is offset to the west from the linear soil anomalies on this grid, as expected from stratabound sulfides at depth in the west-dipping stratigraphy. This IDH anomaly is small, but is confirmation of an IDH response above known mineralization.

IDH response on the Central grid is more broadly elevated, but shows two distinct IDH anomalies. These overlie the western portion of the VTEM anomaly and are offset to the west of the soil geochemical anomalies. This fits with the interpretation of the VTEM modeling dipping to the west, and fits the known west stratigraphic dip in this area.

On the West grid, two fairly clear soil IDH anomalies are present directly over and on the western edges of the VTEM anomaly and soil geochemical anomalies. This suggests a steeply west-dipping or near-vertical sulfide body, which is geophysicist Tom Weis' interpretation and geologist Ray Harris' observation in the field.

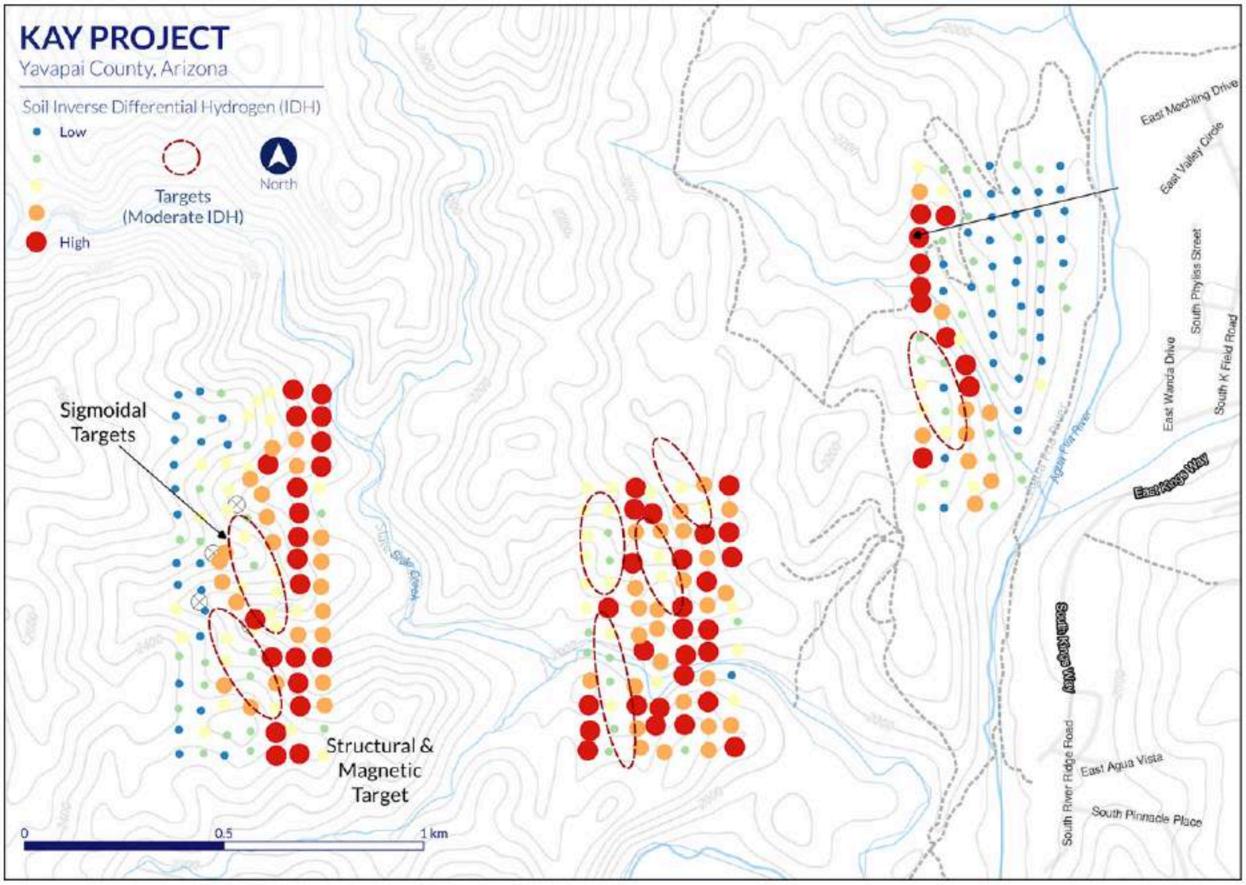

Figure 22. Soil IDH results.

Geologic Mapping

The company contracted geologist Antoine Caté of SRK Consulting (Canada) to perform initial geologic mapping, followed by structural interpretation and alteration studies. Initial geologic mapping confirmed the intense nature of S_1 folding and provided clarity on the nature of the pre-metamorphic host-rock protolith (SRK, 2020a). The report summarized, "Ductile deformation resulted in the repetition of the felsic schist and mafic schist on the property as the cores of anticline and syncline folds, respectively. The folded contact between the felsic and mafic schists and the felsic schist are interpreted as prospective for VMS mineralization. Massive rhyolite and zones of metamorphosed hydrothermal alteration are considered the most prospective zones within the felsic schist as they represent evidence of the proximity of volcanic and/or hydrothermal feeder zones. These prospective lithologies are interpreted to potentially extend beyond the current exploration property to the east, north and south. For these reasons, exploration for VMS mineralization should be extended regionally. Finally, the ductile deformation has strongly affected the geometry of geological features on the property. Sulphide lenses are likely to be affected by steep-plunging tight folds, with the lenses being thinned and boudinaged in fold limbs and thickened in fold hinges. This geometry is leading to a high down-dip continuity and to a lower lateral north-south continuity of the mineralization. Repetition of the sulphide lenses through folding is possible and drilling should not stop immediately after intersecting a sulphide lens, but rather should continue until the alteration halo of the deposit is exited." Additional structural interpretation and alteration studies are discussed below in Drilling.

Petrographic Studies

Twenty-nine polished thin sections were prepared and examined by consulting petrographer Ingrid Kjarsgaard (Kjarsgaard, 2021), and further interpreted by Arizona Metals technical advisor Mark Hannington (Hannington, 2021). Thin sections were spread throughout the deposit to cover a variety of depths, locations, mineralization styles, alteration assemblages, and host-rock types. Results are discussed in Mineralization, above.

EXPLORATION TARGETS AND OBSERVATIONS

As a result of the exploration work discussed above, numerous exploration targets are apparent on the project as discussed below and shown on Figure 23. Several vectoring pathfinders have emerged from exploration: 1) Zn/Cu ratios decrease as one moves inward toward the center of the massive sulfide bodies (Westra, 1977); 2) Mg in chlorite increases toward mineralization; 3) Hg in soil increases toward mineralization; and 4) footwall alteration shows strongly anomalous Cu in the 60-90 meters below the mineralized horizon, but hangingwall alteration does not show anomalous base metals; and 5) pathfinder elements show strong correlations with Cu (Co, Bi), Au (As, Cd, Zn, Ag), and Zn (Cd, Pb, Au, As).

Kay Expansion

Immediate expansions of the known mineralization in the Kay deposit are apparent in all directions and should be drilled. First, SRK (2020c) proposed as drill targets the up-dip and down-dip extensions of the South zone, now recognized as an anticline fold hinge, above KM-21-14A and below KM-20-09 (Figure 25, 26). Since this recommendation was made, numerous holes have been drilled in these areas with good results, such as up-dip hole KM-20-18A (32.5 m @ 3.5 g/t Aueq), and down-dip hole KM-21-25 (78.6 m @ 7.0 g/t Au).[1] Second, the North zone, now recognized as another anticline fold hinge, was recommended for expansion up- and down-dip. SRK also recommended expansion drilling between the North and South fold hinges, and to the north and south of the drilled area, along the strike of the mineralized horizon. The deposit remains open above, below, north, and south of Arizona Metal's drilling, and should be aggressively drilled.

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[1] Approximate true width of mineralization is estimated to be 65-97% of reported core width, averaging 80%.

West/MX-1 Target

The West/MX-1 target is a site of coincident geophysical, geochemical, and geologic anomalies (Figure 23). The target is oriented roughly north-south over 300x750 m in extent, and 500 m deep according to geophysics. The area shows a strong VTEM conductivity high suggesting an extremely conductive body, coincident with a weak gravity high indicating higher density; Weis (2021d) interprets these results as possible massive sulfides, and recommends this as a high-priority drill target based on geophysics alone. Overlying the geophysical anomalies lie soil geochemical anomalies in As, Pb, Zn, Ag, Bi, Te, Cu, Mo, Hg, and Cd; soil Factor 2 (Cd, Zn, Ag, As, Hg, Cu, Au); and two soil IDH anomalies. Coincident rock anomalies in As, Zn, Cu, Pb, and Mo occur in felsic and mafic schist. Outcrops in the area show iron-oxide staining and sericite alteration in near proximity to strong chlorite alteration. Several historic adits and one shallow mine shaft indicate historic prospecting activity in this area. Exxon drilled one hole into this target, a 30°-dipping hole to the WNW to 180 m depth; however, it appears to have missed the heart of the target as it only penetrated a vertical distance of about 90 below surface. West-MX-1 is a high-priority drill target, and permitting is underway for two drill pads, W1 and W2.

Central/MX-2 Target

Similar to the West/MX-1 target, this exploration target is focused on coincident geophysical, geochemical, and geologic anomalies (Figure 23). This north-south target covers 200x650 m and its VTEM conductivity anomaly extends 350-400 vertically. According to Weis (2021c, 2021d), the VTEM conductivity in this area is weak to moderate, but in the range of that produced by the Kay Mine mineralization, and is coincident with a gravity high, indicating the potential for massive sulfide mineralization. Weis (2021c) notes a WNW lineament on the southern end of the VTEM anomaly suggesting a fault of unknown offset. Rayrock Mines performed a small induced-polarization survey in this area, and its chargeability high anomalies fit very well with the VTEM and gravity anomalies. Soil geochemical anomalies overly the geophysical anomalies, showing elevated As, Zn, and Mo; elevated soil Factor 2; and two soil IDH anomalies. Rock anomalies in the same area show elevated As, Zn, and Cu in iron-stained schist with sericite and chlorite alteration in a felsic volcanoclastic host rock. Exxon drilled one shallow hole into this target, KV-2, which did not test the bulk of the target. This is another high-priority drill target, and drill pads C1 and C2 are now in permitting.

Rayrock Target

The mineralized VMS horizon encountered in the main Kay mineralization stretches north into an area of altered rhyolite dome host rocks, where it was intersected in historic mine Shaft 3 and Rayrock drill hole K93-1, which returned two intervals of mineralization (1.4 m @ 3.6% Cu, 0.63 g/t Au, and 0.8 m @ 1.8% Cu, 0.47 g/t Au; Figure 23). Soil samples show anomalies in numerous trace elements in this area, particularly soil Factor 2, along with a mild IDH anomaly. Weis (2021d) note three gravity anomalies in this area. Drill pads 4 and 6 are permitted to drill test this area, which is recommended.

VTEM 1 Target

This is a mild conductivity high noted in the review of VTEM data by Weis (2020a) as a possible fault offset of the West/MX-1 target conductor and noted by SRK (2020c) as occurring at the same stratigraphic horizon. This should be field checked and more thoroughly evaluated if it looks promising.

VTEM 2 Target

The VTEM response between the West/MX-1 and Central/MX-2 targets shows a mild conductivity high, in felsic schist. SRK (2020c) recommended field checking.

Gravity 1 Target

Weis (2021d) noted two standalone gravity anomalies in felsic schist near a large syncline fold hinge as mapped by SRK.

Gravity 2 Target

Two standalone gravity anomalies occur near a mild VTEM conductivity anomaly that may be the offset southern end of the Central/MX-2 anomaly, located near the historic mine Shaft 2 in a zone of felsic schist.

Regional Potential

Exploration potential also exists for additional VMS targets in the surrounding region, including the Greyhound prospect about 3 km to the northeast of the property, a 1-km-long target previously drilled by Exxon. Davidson (1984) expressed exploration potential for 18M tonnes (20M short tons) on and around the current project.

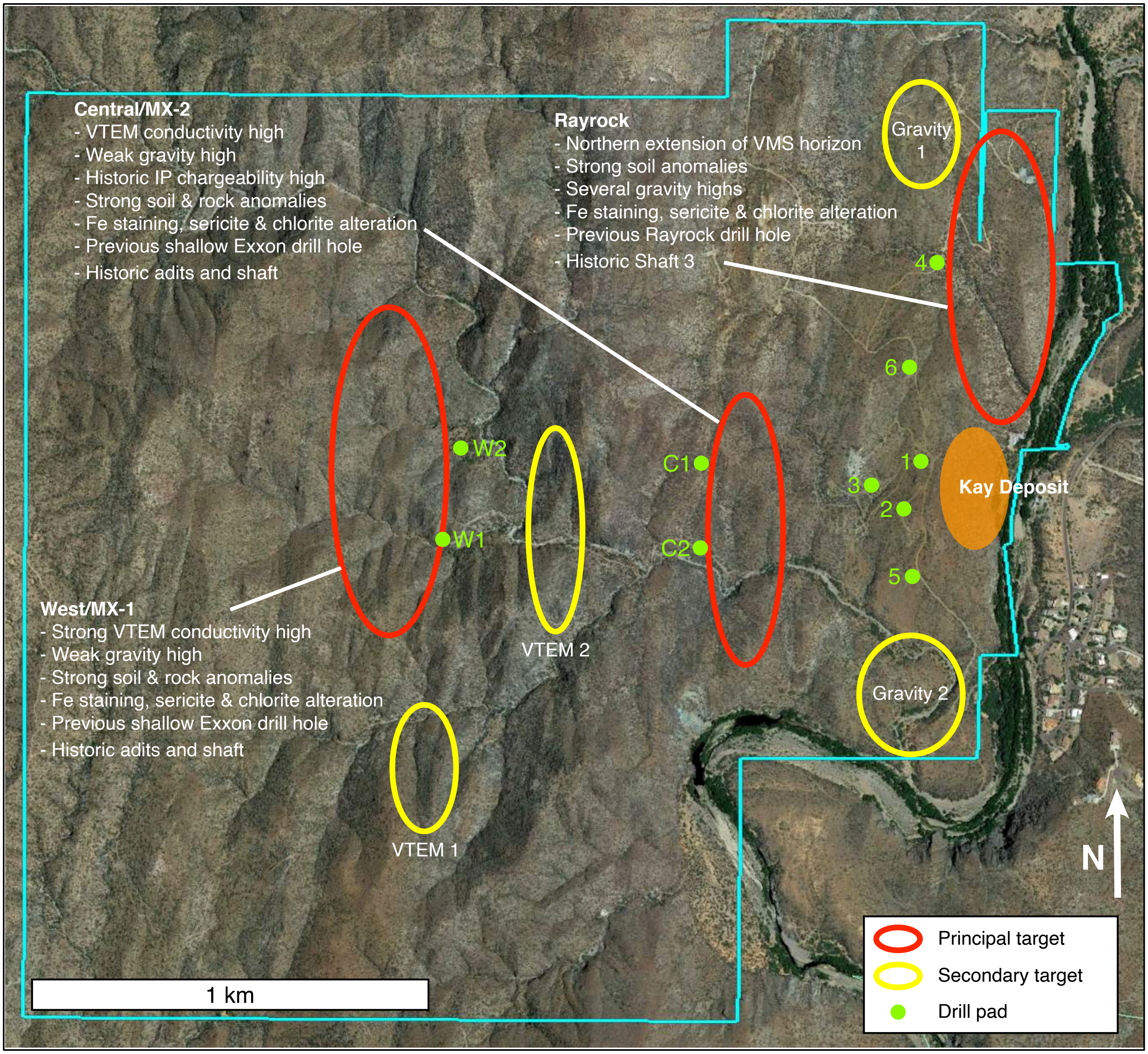

Figure 23. Exploration targets on the project.

9 DRILLING

HISTORICAL DRILLING

Historical drilling on the Kay Mine project was done by at least three companies and totals at least 139 holes. In the late 1910s and early 1920s, the Kay Copper Company drilled 89 or more holes as shown on mine level maps. In the early 1950s New Jersey Zinc explored the property and drilled at least 14 underground drill holes. Some data for the Kay Copper Company and New Jersey Zinc assays are available on mine plan maps, but no drill logs exist.

The bulk of the documented drilling on the project was done by Exxon Minerals Company between 1972 and 1984. Exxon drilled a confirmed 28 core/rotary exploration holes totaling 9,565 m (31,380 ft) (Tables 2 & 3). Eighteen of these holes were in the immediate vicinity of the Kay Mine and totaled 7,525 m (23,793 ft); the remainder were in other parts of the property and separate targets. Fellows (1982) also mentions "10 shallow air-track claim validation drill holes on various parts of the property," which are plotted on a drill-hole map as holes KA-1 through KA-10, but no location coordinates, logs, nor assays are available. Table 4 lists the details of the known Exxon drill holes, and drill-hole locations are shown on Figure 24.

Exxon sampled in variable interval lengths depending on geology, ranging from 0.3-3 m (1-10 ft). Core recovery is noted in drill logs; it is variable, but appears to be good overall and shows mineralized zones to be very competent rock with consistent 98% recoveries. Other parameters of drilling are unknown. Exxon's drilling extended the size of the mineralized massive sulfide bodies previously discovered and mined from underground workings and outlined the mineralized bodies discussed in Mineralization, above (Figure 11).

In 1991 and 1993, Rayrock Mines conducted two drill programs totaling 11 holes: six reverse-circulation holes in 1991; and five core holes in 1993. Hole depths are known only for K91-3 (244 m) and K93-1 (280 m). Data for most Rayrock holes is not available, but one drill cross section (Rayrock, 1992) includes assay data for hole K93-1, which returned two intervals: 1.4 m grading 3.6% Cu, 0.63 g/t Au; and 0.8 m @ 1.8% Cu, 0.47 g/t Au (Table 2).

Company	Hole ID	From (ft)	To (ft)	Interval (ft)	True Thickness (ft)	True Thickness (m)	Cu %	Pb %	Zn %	Ag g/t	Au g/t
Exxon	K-6	2,013.0	2,020.0	7.0	4.9	1.49	1.14	0.05	0.22	12	0.29
Exxon	K-6	2,220.0	2,230.0	10.0	7.7	2.35	0.79	0.03	0.32	5	0.07
Exxon	K-6	2,244.0	2,259.0	15.0	11.5	3.51	3.06	0.05	0.06	12	0.00
Exxon	K-6	2,305.6	2,329.6	24.0	18.4	5.61	1.82	0.01	0.03	8	0.04
Exxon	K-6	2,371.6	2,381.6	10.0	7.1	2.16	2.11	0.06	0.25	9	0.34
Exxon	K-7	2,129.2	2,161.7	32.5	18.2	5.55	2.82	0.05	2.53	86	2.25
Exxon	K-7	2,200.0	2,223.6	23.6	16.7	5.09	1.04	0.71	4.80	38	0.93
Exxon	K-7	2,244.8	2,289.5	44.7	25.6	7.80	0.63	0.27	2.32	24	0.72
Exxon	K-7	2,335.6	2,365.8	30.2	17.2	5.24	0.13	0.29	2.19	21	1.45
Exxon	K-8	2,218.2	2,270.8	52.6	33.8	10.30	3.91	0.11	1.34	25	1.72
Exxon	K-8	2,298.5	2,434.0	135.5	95.8	29.20	0.21	0.41	2.67	35	0.82
Exxon	K-8	2,490.0	2,500.0	10.0	6.4	1.95	0.11	0.67	7.04	34	2.55
Exxon	K-9	2,165.5	2,174.0	8.5	4.9	1.49	1.28	0.07	0.28	7	0.08
Exxon	K-10A	2,890.0	2,896.7	6.7	3.6	1.10	5.03	0.04	0.09	15	0.33
Exxon	K-10A	2,916.4	2,925.0	8.6	5.5	1.68	0.53	0.03	0.38	12	1.14
Exxon	K-10A	2,948.5	2,955.0	6.5	3.6	1.10	2.00	0.01	0.22	6	0.26
Exxon	K-12	928.4	945.0	16.6	16.2	4.94	1.95	0.04	0.14	15	0.34
Exxon	K-12	968.0	978.3	10.3	9.5	2.90	0.34	0.20	1.17	24	0.42
Rayrock	K93-1	458.5	463.0	4.5	1.4	--	3.63	0.02	0.08	8.3	0.63
Rayrock	K93-1	491.0	493.5	2.5	0.8	--	1.80	0.01	0.02	4.3	0.47

Table 2. Significant intercepts in historical drilling as reported by Fellows, 1982; and Rayrock, 1992.

Hole ID	East ACS	North ACS	East WGS84	North WGS84	Elev (ft)	Az	Inc	Depth (m)	Depth (ft)	Date	Type	Location
Exxon												
K-1	424,460	1,114,320	392,325	3,769,759	2,100	105	-45	155	510	1972	Core	Kay Mine vicinity
K-2	421,665	1,112,500	391,467	3,769,200	2,100	285	-30	180	590	1972	Core	West of Kay Mine
K-3	426,649	1,113,463	392,988	3,769,479	1,925	285	-45	202	663	1972	Core	Kay Mine vicinity
K-4	426,649	1,113,463	392,988	3,769,479	1,925	285	-35	121	398	1973	Core	Kay Mine vicinity
K-5	426,709	1,113,704	393,007	3,769,553	1,925	285	-45	137	450	1973	Core	Kay Mine vicinity
K-6	425,758	1,113,164	392,716	3,769,391	2,084	89	-90	753	2,469	1973	Rotary/Core	Kay Mine vicinity
K-7	425,758	1,113,164	392,716	3,769,391	2,084	124	-90	772	2,532	1973	Rotary/Core	Kay Mine vicinity
K-8	425,758	1,113,164	392,716	3,769,391	2,084	140	-90	792	2,598	1974	Rotary/Core	Kay Mine vicinity
K-9	425,758	1,113,164	392,716	3,769,391	2,084	61	-90	823	2,700	1974	Rotary/Core	Kay Mine vicinity
K-10	425,080	1,112,450	392,507	3,769,175	2,000	152	-90	255	838	1974	Rotary	Kay Mine vicinity
K-10A	425,325	1,113,287	392,584	3,769,429	2,086	108	-90	1,045	3,430	1975	Core	Kay Mine vicinity
K-11	425,648	1,113,265	392,682	3,769,422	2,083	107	-67	507	1,663	1974	Core	Kay Mine vicinity
K-12	425,684	1,113,477	392,694	3,769,486	2,109	106	-62	446	1,464	1974	Core	Kay Mine vicinity
K-13	425,090	1,113,085	392,512	3,769,369	2,120	103	-90	413	1,355	1976	Rotary/Core	Kay Mine vicinity
K-14	426,797	1,112,083	393,004	3,769,071	1,954	283	-56	248	813	1978	Core	Kay Mine vicinity
K-15	425,670	1,106,328	392,670	3,767,308	1,940	114	-59	187	614	1978	Core	South of Kay Mine
K-16	426,586	1,112,101	392,962	3,769,070	1,921	102	-60	293	960	1983	Core	Kay Mine vicinity
K-17	425,720	1,116,570	393,040	3,770,283	2,000	121	-75	130	427	1983	Core	Kay Mine vicinity
K-18	--	--	--	--	--	NW	-53	183	600	1984	Core	Greyhound prospect
K-19	--	--	391,453	3,771,565	2,430	289	-65	219	720	1984	Core	Greyhound prospect
K-20	--	--	--	--	--	95	-75	385	1,263	1985	Rotary/Core?	Greyhound prospect
K-21	--	--	--	--	--	100	-65	554	1,816	1986	Core	Greyhound prospect
KV-1	423,890	1,111,020	392,141	3,768,742	1,900	105	-45	62	204	--	Core	Kay Mine vicinity
KV-2	424,065	1,112,010	392,181	3,769,089	1,960	105	-45	97	319	--	Core	Kay Mine vicinity
KV-3	422,490	1,112,440	391,717	3,769,194	2,050	--	-45	34	111	--	Core	West of Kay Mine
EGH-1	420,820	1,122,560	391,237	3,772,268	2,640	109	-55	273	895	1979	Core	Greyhound prospect
EGH-2	421,070	1,121,430	391,310	3,771,923	2,590	100	-55	153	502	1980	Core	Greyhound prospect
EGH-3	421,000	1,124,080	391,453	3,772,690	2,390	89	-60	145	476	1981	Core	Greyhound prospect
Rayrock												
K91-1	--	--	392,258	3,770,266	2,159	~110	~-65	--	--	1991	RC	W & N of Kay Mine
K91-2	--	--	392,208	3,770,113	2,149	~105	--	--	--	1991	RC	W & N of Kay Mine
K91-3	--	--	392,178	3,769,922	2,201	~110	--	244	800	1991	RC	W & N of Kay Mine
K91-4	--	--	392,454	3,769,983	2,070	~105	--	--	--	1991	RC	W & N of Kay Mine
K91-5	--	--	392,804	3,770,153	2,133	~120	--	--	--	1991	RC	W & N of Kay Mine
K91-6	--	--	392,805	3,770,323	2,129	~320	--	--	--	1991	RC	W & N of Kay Mine
K93-1	--	--	392,745	3,769,914	2,018	~105	~-65	280	919	1993	Core	W & N of Kay Mine
K93-2	--	--	392,808	3,770,265	2,139	~100	--	--	--	1993	Core	W & N of Kay Mine
K93-3	--	--	392,532	3,770,570	2,041	~105	--	--	--	1993	Core	W & N of Kay Mine
K93-4	--	--	392,371	3,770,501	2,090	~100	--	--	--	1993	Core	W & N of Kay Mine
K93-5	--	--	392,404	3,770,739	2,077	~110	--	--	--	1993	Core	W & N of Kay Mine
Total								10,089	33,099			

Note: ACS coordinates are feet, Arizona Coordinate System 1983

Table 3. Drill-hole collar table for historical drilling. Rayrock hole locations are approximate, and most depths are not known.

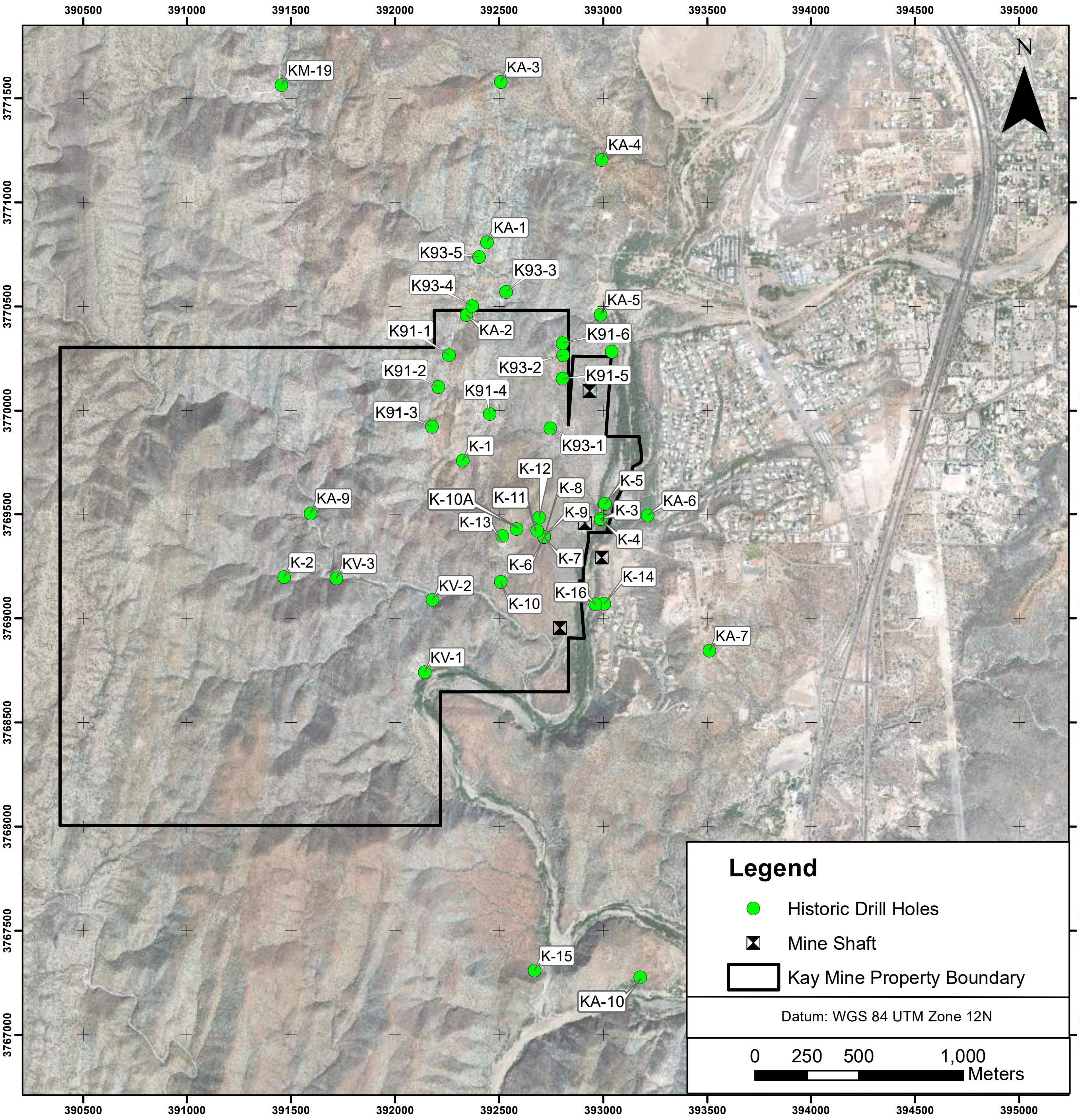

Figure 24. Historical drill-hole location map.

ARIZONA METALS DRILLING

As of the effective date of this report, Arizona Metals Corp. has drilled 20,866 meters in 38 HQ-size core holes on the Kay project (Table 4), and is currently advancing its Phase 2 drilling at the Kay Mine area on the project. Drilling to date has been done from three pads (Figure 2); an additional three pads have been permitted and a further four pads are in the process of being permitted. Drilling is being done by conventional core methods, with HQ-size core. Directional drilling is also being used where necessary to improve drill-hole accuracy and to reduce drilled distance by wedging off branch holes at depth to additional targets. Recovery is very good, averaging approximately 90% overall and approximately 92% in mineralized intervals. The company has analyzed 1,125 core samples ranging in length from 0.1-2.9 m and averaging 1.1 m. Core handling and sampling procedures are described below in Sample Preparation, Analysis, and Security.

Drill results have confirmed grades and locations of historic mineralization, and outlined a massive sulfide deposit approximately 350 m long and over 700 m deep (Figure 25). Drilled widths vary between <1 m and 90 m, with approximate true width of mineralization estimated to be 65-97% of reported core width, averaging 80%. Thinner portions are interpreted as fold limbs, and wider portions as thickened fold hinges. Notable drill results are listed in Table 5 and shown on Figure 25. The deposit is open in all directions.

SRK (2020b, 2020c), used drill data from Phase 1 drilling (holes KM-20-01 to KM-20-17) to investigate metal zoning, alteration zoning, and fold geometry. The studies concluded the following.

- There is no clear overall metal zoning in the deposit, suggesting that primary metal zonation has been disrupted by deformation. Repetition of Cu-rich (higher temperature) and Zn-rich (lower temperature) mineralization suggests tightly folded VMS lenses stacked by fold repetition.
- Hyperspectral and geochemical analyses indicate that hydrothermal alteration consists of proximal chlorite-sulfide and sulfide alteration hosting mineralization underlain by chlorite-dominant alteration, both being surrounded by larger areas of more distal sericite alteration.
- Alteration mapping using the Ishikawa and chlorite-carbonate-pyrite alteration indexes combined with folding patterns from historical maps indicated a series of steeply dipping folds that appear to be parasitic folds on the scale of tens of meters along the limb of a larger, kilometer-scale isoclinal fold (Figure 11).
- The study noted that this series of folds forms a mineralized corridor striking NNW.
- Potential exists for discovery of mineralization within the mineralized corridor in areas between known sulfide lenses and in thickened fold hinges. SRK (2020c) proposed eight drill targets within the Kay mineralization (Figure 26), several of which have now been successfully drilled (Figure 25).

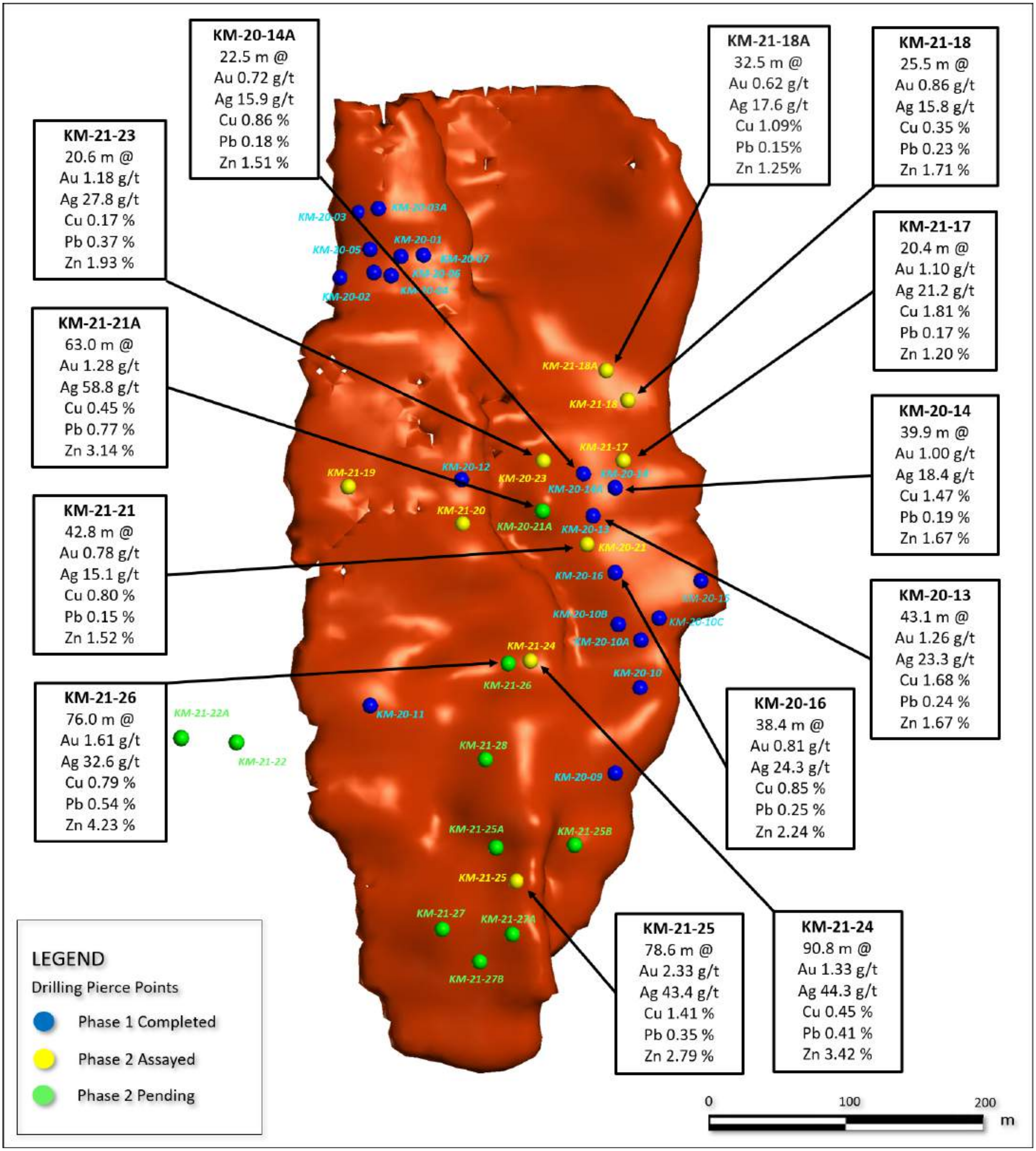

Figure 25. Oblique view of significant Arizona Metals drill intercepts. View to the east.

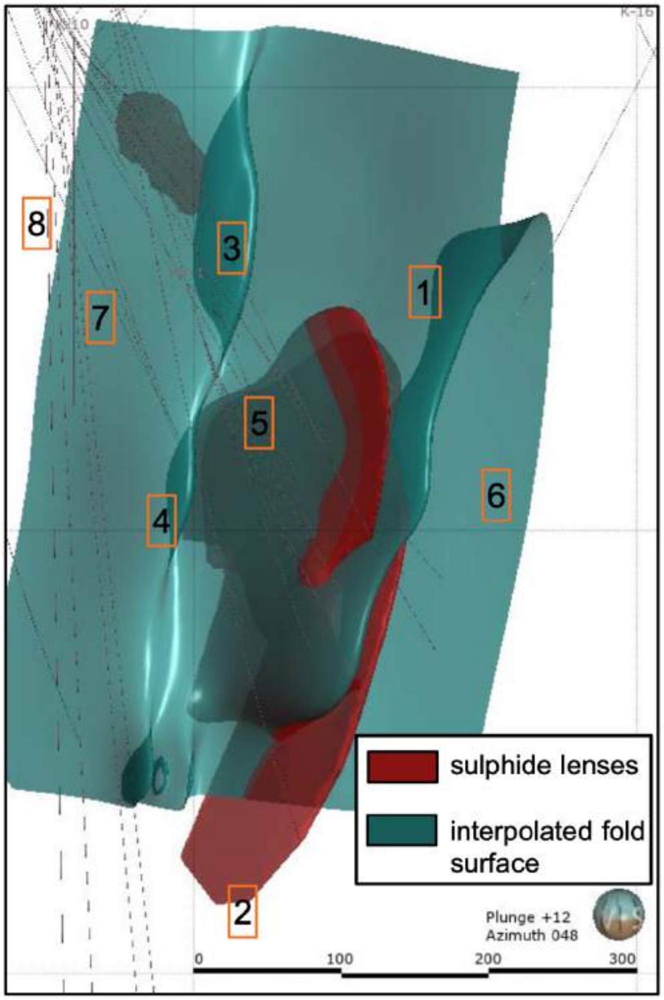

Figure 26. Drill targets recommended by SKR (2020c) within the Kay mineralization.

Hole ID	Phase	Collar East WGS84	Collar North WGS84	Collar Elev m	Collar Az	Collar Dip	Depth, m	Date Started	Date Completed
KM-20-01	1	392684	3769388	643	78	-48	335	Jan 04 2020	Jan 10 2020
KM-20-02	1	392684	3769388	643	75	-50	304	Jan 10 2020	Jan 16 2020
KM-20-03	1	392684	3769388	643	72	-43.3	366	Jan 16 2020	Jan 24 2020
KM-20-03A	1	392684	3769388	643	72	-43.3	321	Jan 26 2020	Feb 03 2020
KM-20-04	1	392684	3769388	643	65.1	-47.5	354	Feb 03 2020	Feb 13 2020
KM-20-05	1	392684	3769388	643	73.3	-47.2	349	Feb 14 2020	Feb 19 2020
KM-20-06	1	392684	3769388	643	81.3	-48.3	317	Feb 20 2020	Feb 25 2020
KM-20-07	1	392684	3769388	643	85.6	-47.6	308	Feb 25 2020	Mar 01 2020
KM-20-08	1	392638	3769266	653	91.1	-77.1	36	Mar 01 2020	Mar 02 2020
KM-20-09	1	392638	3769266	653	92.1	-77	671	Mar 03 2020	Mar 24 2020
KM-20-10	1	392638	3769266	653	96.3	-72.2	645	May 22 2020	Jun 08 2020
KM-20-10A	1	392638	3769266	653	96.3	-72.2	600	Jun 09 2020	Jun 18 2020
KM-20-10B	1	392638	3769266	653	96.3	-72.2	555	Jun 19 2020	Jul 01 2020
KM-20-10C	1	392638	3769266	653	96.3	-72.2	560	Jul 01 2020	Jul 09 2020
KM-20-11	1	392552	3769328	638	57.3	-67.5	653	May 28 2020	Jun 15 2020
KM-20-12	1	392684	3769388	643	95.7	-70.8	583	Jun 16 2020	Jun 25 2020
KM-20-13	1	392684	3769388	643	124	-66.5	524	Jun 26 2020	Jul 09 2020
KM-20-14	1	392684	3769388	643	133.6	-66	550	Jul 10 2020	Jul 23 2020
KM-20-14A	1	392684	3769388	643	133.6	-66	549	Jul 24 2020	Aug 04 2020
KM-20-15	1	392638	3769266	653	106.7	-66.8	572	Jul 09 2020	Jul 22 2020
KM-20-16	1	392638	3769266	653	91.5	-68.9	581	Jul 23 2020	Aug 03 2020
KM-21-17	2	392638	3769266	653	90.5	-59.5	892	Jan 06 2021	Jan 29 2021
KM-21-18	2	392638	3769266	653	89.8	-55	518	Jan 30 2021	Feb 07 2021
KM-21-18A	2	392638	3769266	653	89.8	-55	472	Feb 08 2021	Feb 19 2021
KM-21-19	2	392684	3769388	643	59.3	-69.5	482	Feb 08 2021	Feb 19 2021
KM-21-20	2	392638	3769266	653	53.7	-67.3	553	Feb 20 2021	Mar 02 2021
KM-21-21	2	392684	3769388	643	126	-70	561	Feb 20 2021	Mar 04 2021
KM-21-21A	2	392684	3769388	643	126	-70	556	Mar 05 2021	Mar 14 2021
KM-21-22	2	392552	3769328	638	33	-63	725	Mar 05 2021	Mar 17 2021
KM-21-22A	2	392552	3769328	638	33	-63	694	Mar 18 2021	Mar 29 2021
KM-21-23	2	392684	3769388	643	114.2	-66.3	528	Mar 15 2021	Mar 24 2021
KM-21-24	2	392684	3769388	643	119	-75.1	623	Mar 24 2021	Apr 04 2021
KM-21-25	2	392552	3769328	638	80	-77.4	775	Mar 27 2021	Apr 14 2021
KM-21-25A	2	392552	3769328	638	80	-77.4	746	Apr 14 2021	Apr 29 2021
KM-21-25B	2	392552	3769328	638	80	-77.4	738	Apr 30 2021	May 11 2021
KM-21-26	2	392684	3769388	643	118.2	-79.3	616	Apr 04 2021	Apr 15 2021
KM-21-27	2	392684	3769388	643	90.4	-86.7	859	Apr 16 2021	May 07 2021
KM-21-27A	2	392684	3769388	643	90.4	-86.7	817	May 10 2021	May 24 2021
							20,886	total	

Table 4. Collar table for Arizona Metals drilling.

				Analyzed Grade					
Hole ID	**From m**	**To m**	**Length m**	**Au g/t**	**Ag g/t**	**Cu %**	**Pb %**	**Zn %**	**Vertical Depth Below Surface m**
KM-20-01	275.8	281.5	**5.6**	0.48	11.6	0.57	0.18	1.20	156
including	275.8	276.5	0.6	1.22	32.0	0.50	0.73	5.04	
including	279.8	281.5	1.6	0.98	22.6	1.21	0.23	1.49	
KM-20-02	297.8	300.8	**3.0**	0.20	1.4	0.77	0.01	0.04	172
KM-20-03	256.3	259.1	**2.7**	1.01	69.6	3.40	0.09	0.65	120
including	256.3	257.3	0.9	1.79	56.0	7.42	0.17	1.11	
KM-20-03	292.2	292.6	**0.5**	0.19	2.0	2.43	0.04	0.15	152
KM-20-03	295.4	295.8	**0.5**	0.80	6.0	1.35	0.06	0.91	154
KM-20-03A	252.4	256.9	**4.6**	2.55	35.6	3.70	0.03	0.27	122
including	252.4	253.1	0.8	6.34	164.0	9.74	0.11	0.40	
KM-20-05	266.6	269.0	**2.4**	1.94	43.3	6.47	0.14	0.57	150
including	266.6	267.8	1.2	2.21	50.0	10.60	0.26	1.05	
KM-20-06	267.9	281.5	**13.5**	0.85	45.6	1.02	0.30	1.23	158
including	267.9	268.4	0.5	2.20	31.0	1.54	0.81	6.10	
including	276.6	281.5	4.9	0.87	92.1	1.86	0.42	1.96	
including	280.0	281.0	1.1	1.03	340.0	3.22	0.04	0.64	
KM-20-09	588.1	588.4	**0.3**	1.74	15.0	0.91	0.40	1.86	
KM-20-09	613.4	614.1	**0.7**	1.81	10.0	0.90	0.08	1.04	
KM-20-09	614.6	614.9	**0.3**	0.36	19.0	2.64	0.10	0.98	
KM-20-09	632.8	638.9	**6.1**	4.18	41.7	0.12	0.82	8.02	575
including	633.6	637.9	4.4	5.46	33.1	0.15	0.50	9.06	
including	636.9	637.9	1.1	9.77	68.0	0.17	0.78	14.65	
KM-20-10	563.6	568.5	**4.9**	2.16	24.9	2.39	0.31	3.27	490
including	563.6	566.6	3.0	2.42	28.2	3.66	0.32	3.16	
including	567.2	568.5	1.2	2.52	28.4	0.33	0.43	5.10	
KM-20-10	574.2	574.9	**0.6**	4.33	113.0	0.12	0.16	11.30	498
KM-20-10	577.7	579.3	**1.6**	0.70	45.9	0.03	0.68	4.38	500
KM-20-10	582.3	583.1	**0.8**	0.42	51.0	0.03	1.07	2.90	502
KM-20-10A	521.2	522.5	**1.3**	1.27	51.1	2.13	0.91	7.46	437
KM-20-10A	527.9	538.6	**10.7**	1.66	27.2	1.32	0.30	2.58	442
including	527.9	529.4	1.5	0.92	30.2	6.69	0.07	1.62	
including	532.2	535.3	3.1	1.75	34.3	0.72	0.42	2.99	
including	537.2	538.6	1.4	7.29	79.2	0.16	0.60	9.06	
KM-20-10B	503.0	530.7	**27.6**	0.97	21.3	0.87	0.32	1.76	423
including	503.0	509.6	6.6	1.55	29.8	1.78	0.37	2.55	
including	513.9	518.3	4.4	1.89	47.4	1.08	0.68	4.05	
including	527.2	530.7	3.5	2.32	52.9	1.91	0.99	3.93	
KM-20-10C	523.9	530.7	**6.8**	3.32	102.0	0.58	1.15	5.84	422
including	523.9	528.2	4.3	4.89	125.2	0.88	1.45	7.61	
including	525.6	526.4	0.8	16.65	214.0	0.52	2.76	21.40	
KM-20-11	554.1	556.9	**2.7**	2.83	70.0	4.14	0.28	3.56	490
KM-20-12	371.9	376.7	**4.9**	0.37	12.4	3.99	0.07	0.62	318
including	371.9	373.7	1.9	0.67	28.0	8.49	0.16	1.53	
KM-20-12	379.5	405.4	**25.9**	0.08	2.3	0.73	0.01	0.08	326
KM-20-13	443.6	486.8	**43.1**	1.26	23.3	1.68	0.24	1.67	341
including	444.4	459.6	15.2	1.80	38.5	3.42	0.39	2.36	
including	444.4	447.1	2.7	3.74	55.0	1.02	1.88	10.64	
including	451.4	455.8	4.4	1.18	65.3	8.41	0.02	0.16	
KM-20-14	421.7	461.6	**39.9**	1.00	18.4	1.47	0.19	1.67	314
including	426.3	429.8	3.5	1.28	30.0	9.56	0.07	0.95	
including	457.2	460.7	3.5	2.58	26.3	0.36	0.38	8.33	
KM-20-14A	404.6	409.0	**4.4**	1.48	79.2	1.67	0.41	2.50	303
including	404.6	406.4	1.7	2.46	173.6	4.08	0.53	5.02	
KM-20-14A	421.0	443.5	**22.5**	0.72	15.9	0.86	0.18	1.51	312
including	421.0	421.8	0.8	2.91	45.0	9.81	0.19	1.69	
including	421.0	425.0	4.1	1.14	21.4	3.23	0.14	1.30	
KM-20-15	506.8	510.1	**3.3**	0.33	192.0	0.05	1.75	3.73	402
KM-20-16	480.4	518.8	**38.4**	0.81	24.3	0.85	0.25	2.24	385
including	480.4	492.9	12.5	1.98	48.5	1.63	0.50	4.23	
including	480.4	483.4	3.0	4.74	77.9	2.40	0.91	7.49	
including	489.8	492.9	3.0	2.59	100.7	3.61	0.92	6.90	
KM-21-17	429.5	449.9	**20.4**	1.10	21.2	1.81	0.17	1.20	300
including	429.5	434.0	4.6	1.73	29.1	4.61	0.24	1.91	
including	432.7	434.0	1.4	6.81	40.0	0.52	1.10	8.29	
KM-21-17	504.4	505.4	0.9	4.73	9.0	1.19	0.00	0.05	356
KM-21-18	404.3	429.8	**25.5**	0.86	15.8	0.35	0.23	1.71	255
including	408.6	410.6	2.0	2.22	64.4	0.50	0.82	7.25	
including	424.9	427.3	2.4	2.59	18.0	1.60	0.52	3.16	
KM-21-18A	391.4	423.8	**32.5**	0.62	17.6	1.09	0.15	1.25	233
including	393.3	395.8	2.4	2.83	40.9	9.57	0.28	2.72	
KM-21-19	377.8	378.3	**0.5**	5.59	128.0	3.39	0.63	6.83	337
KM-21-20	442.7	443.6	**0.9**	0.52	18.5	2.56	0.14	3.52	362
KM-21-20	456.0	458.1	**2.1**	0.35	6.0	1.49	0.04	0.14	370
KM-21-21	452.6	495.5	**42.8**	0.78	15.1	0.80	0.15	1.52	362
including	488.7	493.5	4.8	2.50	27.6	0.26	0.54	6.13	
KM-21-21A	422.0	431.4	**9.4**	0.57	8.6	1.17	0.36	2.25	362
KM-21-21A	439.1	502.1	**63.0**	1.28	58.8	0.45	0.77	3.14	366
including	465.0	481.9	16.9	2.45	80.9	0.52	0.99	4.05	
KM-21-23	394.4	401.4	**7.0**	0.93	13.5	0.36	1.17	1.94	313
KM-21-23	438.6	459.2	**20.6**	1.18	27.8	0.17	0.37	1.93	336
KM-21-24	501.2	592.1	**90.8**	1.33	44.3	0.45	0.41	3.42	470
including	501.2	521.7	20.4	1.70	113.1	1.34	0.66	6.35	
including	520.9	521.7	0.8	16.50	574.0	1.75	1.22	9.55	
including	575.9	592.1	16.2	2.50	44.4	0.16	0.79	6.00	
including	588.7	590.4	1.7	9.98	18.2	0.47	0.13	23.70	
KM-21-25	662.6	741.3	**78.6**	2.33	43.4	1.41	0.35	2.79	638
including	663.2	672.7	9.4	1.84	92.3	8.06	0.15	1.31	
including	693.0	703.9	11.0	6.28	99.7	0.68	1.17	10.40	

Table 5. Significant intercepts in Arizona Metals drilling. True width of mineralization is estimated to be 65-97% of reported core width, averaging 80%.

10 SAMPLE PREPARATION, ANALYSES, AND SECURITY

KAY COPPER COMPANY AND NEW JERSEY ZINC

Historical underground sampling shown on Kay Copper Company mine maps was done between 1918 and the late 1920s. Similar work is shown on maps by New Jersey Zinc from the early 1950s. Locations and assay results are known for many of these samples, but information related to sample preparation, analysis, security, quality control, sample splitting and reduction methods before shipment to labs, and security measures are unknown. I cannot verify proper sample preparation, analysis, and security for these samples, and before any of this data could be used with confidence it would be necessary to verify these results with new drill samples and/or underground samples processed with current best practices for sample preparation, analysis, security, and QAQC.

EXXON MINERALS

Historical drill samples for which data still exist were taken between 1972 and 1984 by Exxon Minerals Company. Locations and assay results are known for these samples, but information related to sample preparation, analysis, security, quality control, sample splitting and reduction methods before shipment to labs, and security measures are unknown. At the time of the analyses, Arizona Metals had no relationship with the laboratories known to have been used for historical samples.

Assay certificates from Skyline Labs of Tucson, Arizona; Jacobs Assay Office of Tucson, Arizona; and Southwestern Assayers & Chemists of Tucson, Arizona show that these labs conducted Au assays and analyses of various other elements for the earlier drill holes, through hole K-18. For these drill holes, the majority of Cu analyses are listed on what appear to be Exxon diamond drill assay logs or Exxon "analytical reports"; it is not clear in what lab these analyses were conducted. Drill holes K-19 and K-21 have assay certificates from Skyline Labs of Tucson, Arizona, reporting Cu, Pb, Zn, Ag, and Au; these holes lie off the current subject property.

Because Exxon Minerals was at the time a reputable and reliable company, and a division of a major oil company, it can be assumed that sampling and analytical procedures were done to industry norms at the time and the results generally reliable, and I have no reason to suspect that results are other than recorded. However, I cannot verify proper sample preparation, analysis, and security for the historical Exxon samples, and before any of this data could be used with confidence it would be necessary to verify these results with new drill samples processed with current best practices for sample preparation, analysis, security, and QAQC.

SILVER SPRUCE

Recent samples taken by Silver Spruce received no sample preparation before shipment. Assay certificates are available for samples from both companies. Silver Spruce's samples were processed and analyzed by ALS Minerals in Vancouver B.C., for multi-element analyses (ME-MS61 4-acid digestion, IPC-MS analysis), Au fire assay (Au-AA23 30-g fire assay with AA finish; Au-GRA21 30-g fire assay with gravimetric finish), and ore-grade analyses for Cu, Pb, Zn, and Ag as necessary. ALS's available internal QAQC certificates for these analyses indicate acceptable results.

ALS Minerals is a widely used commercial minerals industry laboratory independent of Arizona Metals and Silver Spruce. All of the ALS Minerals facilities used for Arizona Metals and Silver Spruce analyses are accredited by the Standards Council of Canada and are ISO 17025-2005 certified. I am of the opinion that sample preparation, security, and analysis for these samples are adequate for the purposes of this report.

ARIZONA METALS

All of Arizona Metals' drill sample assay results have been monitored through a quality assurance/quality control (QA/QC) protocol which includes the insertion of blind standard reference materials and blanks at regular intervals. Core is transported by the drill contractor from the drill rigs to a staging area on the property, from which contract personnel deliver it to the logging warehouse in Phoenix, Arizona, where it is logged, measured, and photographed by a company geologist. Core cutting takes place at the company's core-saw facility in Black Canyon City, Arizona, where it is diamond sawed in half. Cut core is then transported back to the logging warehouse where samples are collected by the company's geologist, then securely transported by company personnel to ALS Minerals' (ALS) sample preparation facility in Tucson, Arizona. Once logging and sampling are complete, core from upper unmineralized portions of drill holes are discarded, after retaining "skeleton" samples of representative rock types. The remaining core is stored in the logging warehouse in Phoenix. Other than logging, cutting, and placing in bags, no other sample preparation is performed prior to delivery to ALS Minerals. At ALS, samples were crushed and split, and pulverized pulps were sent to ALS's labs in Vancouver, Canada, for analysis. Gold content was determined by fire assay of a 30-gram charge with ICP finish (ALS method Au-AA23). Silver and 32 other elements were analyzed by ICP methods with four-acid digestion (ALS method ME-ICP61a). Over-limit samples for Au, Ag, Cu, and Zn were determined by ore-grade analyses Au-GRA21, Ag-OG62, Cu-OG62, and Zn-OG62, respectively.

Rock and soil samples were collected by company geologists or field crews and submitted to ALS Minerals' Tucson, Arizona, laboratory under chain of custody and with no on-site preparation. ALS's available internal QAQC certificates for these analyses indicate acceptable results.

ALS Minerals is independent of Arizona Metals Corp. and its Vancouver facility is ISO 17025 accredited. ALS also performed its own internal QA/QC procedures to assure the accuracy and integrity of results. Parameters for ALS's internal and Arizona Metals' external blind quality control samples were acceptable for the samples analyzed. Arizona Metals is not aware of any drilling, sampling, recovery, or other factors that could materially affect the accuracy or reliability of the data referred to herein. I am of the opinion that sample preparation, security, and analysis for Arizona Metals' drill, rock, and soil samples are adequate for the purposes of this report.

11 DATA VERIFICATION

During my first personal inspection of the subject property I collected four samples from the dumps at Shaft No. 1. Assays of these samples are presented in Table 6, and confirm the presence of multiple percent grades of Cu, Zn, and Pb; and multi-gram-per-tonne grades in Ag and Au consistent with grades reported in historic data and reports. In addition, 2018 due-diligence samples by Arizona Metals are also consistent with historically reported metal grades (Table 7).

The samples I collected were delivered under chain of custody to ALS Minerals in Reno, Nevada, where they were prepared for analysis. Samples were analyzed at ALS Minerals' Reno and Vancouver, B.C. labs for multi-element analyses (ME-MS61 4-acid digestion, IPC-MS analysis), Au fire assay (Au-AA23 30-g fire assay with AA finish), and ore-grade analyses for Cu, Pb, Zn, and Au as necessary. ALS's available internal QAQC data for these analyses indicate acceptable results.

Additional verification measures for the historical drill data included confirming drill-hole collars against scans of original drill logs and the historical collar table in Fellows (1982); cross-referencing mapped drill-hole locations among different generations of maps; and cross-checking drill assay data against assay reports and summary tables. No historical drill core is available for re-sampling. Several of Arizona Metals' drill holes have intersected historic mine workings within meters of predicted locations, validating the accuracy of the company's 3D geologic model and location of historic mineralization.

Arizona Metals' data has been verified by direct management by the author, who serves as Vice President of Exploration for the company. Data verification measures include design of exploration programs;

management of field personnel and contractors; determination of analytical parameters; liaison with laboratory; downloading of laboratory data; collation of laboratory data with field data; and cross checking of databases. It is my opinion that the data currently available are adequate for the purposes of this technical report.

Sample ID	UTM E WGS84	UTM N WGS84	Cu %	Pb %	Zn %	Au g/t	Ag g/t
KM-1	392910	3769437	10.40	1.18	10.20	5.75	68.8
KM-2	392910	3769437	7.38	0.36	2.35	2.09	33.9
KM-3	392910	3769437	1.14	0.05	0.05	24.9	43.3
KM-4	392910	3769437	1.29	0.03	0.14	7.24	12.15

Table 6. Analyses of 2019 data-verification samples collected on the property by the author.

Sample ID	Cu %	Pb %	Zn %	Au g/t	Ag g/t
1	0.95	0.12	3.59	1.16	24.80
2	0.36	1.17	10.00	4.86	66.30
3	0.05	0.01	0.23	0.02	0.44
4	1.79	0.08	0.19	0.28	12.95
5	0.71	0.06	0.80	0.35	8.66
6	0.13	0.26	2.67	0.53	7.87
7	0.04	0.00	0.04	<0.005	0.11
8	2.91	0.04	0.30	0.43	9.41
9	0.07	0.00	0.06	0.03	0.39
10	0.29	0.64	1.75	0.91	55.40
11	1.72	0.04	1.08	0.21	7.57
12	0.40	0.03	0.20	0.08	12.65
13	0.24	0.11	8.42	4.50	8.28
14	16.35	0.25	1.11	2.97	69.30
15	0.14	0.01	0.05	0.05	0.64
16	5.19	0.01	0.61	0.61	13.30
17	3.41	0.01	0.25	0.17	6.80
18	0.63	0.01	0.15	0.03	1.69
19	5.07	0.16	5.86	1.19	17.85
20	6.32	0.24	0.52	3.29	125.00
21	1.36	0.02	0.36	0.59	6.45
22	0.46	0.00	0.18	0.04	2.12
23	0.20	0.32	5.36	2.06	14.55
24	0.19	0.91	8.23	5.56	48.40

Table 7. Analyses of due-diligence samples collected on the property by Arizona Metals.

12 MINERAL PROCESSING AND METALLURGICAL TESTING

There has been no modern mineral processing or metallurgical testing work done on the project. Arizona Metals commissioned a desktop review of mineralization and expected metallurgical recoveries (SRK, 2020d). The report summarized, "The mineralised zones are well below the surface with low to no oxide copper or zinc minerals anticipated. As a result, flotation will be employed to concentrate copper and zinc metals. As is the case with active producing VMS mines, it is likely that separate copper and zinc concentrates can be achieved by means of differential flotation. The Kay Mine has similar metallurgical characteristics and similar grades as Hudbay's 777 and Lalor Mines, and Glencore's Kidd Creek Mine. These operations employ differential flotation to produce separate saleable copper and zinc concentrates, with most of the gold and silver reporting to the copper concentrates. The recoveries for both copper and zinc metals range between 85% and 90%. The recoveries for both gold and silver are around 60%. The beneficiation methodology, reagents and technologies that are likely to be employed are industry standard and well understood. In the information reviewed, SRK encountered no fatal flaws in the anticipated mineral processing and metallurgical extraction at the Kay Mine project."

In his review of petrographic studies, Hannington (2020) provided comments on potential mineral processing. "Although mineralogically simple, the sulfides from the Kay Mine are finer-grained than ores from Lalor, LaRonde and Kidd Creek, which could impact the metallurgy. Fine grinding could improve recoveries and mitigate arsenopyrite reporting to the Cu or Zn concentrates, but this needs to be tested. Although individual crystals of arsenopyrite are small, they mostly occur in coarse aggregates up to 100 microns in size that would be liberated by conventional grinding (to 75 microns) and then could be rejected. Rejection rates would likely improve with finer grinding. The highest gold grades are in the Zn-rich mineralization. It seems likely that at least some of the Au in these samples will be locked in pyrite. More detailed inspection of the gold-rich samples is needed to determine the potential for gold recovery, although historical recoveries in the district have been on the order of 70%. Tetrahedrite is likely the main host for Ag and should report at high levels to the Cu concentrate. The abundance of carbonate in mineralized samples (up to 65% modal abundance), might positively impact metallurgical performance, including the hardness of the material and the acid neutralizing potential of the waste rock and tails."

13 MINERAL RESOURCE ESTIMATES

There are no current mineral resource estimates performed to National Instrument 43-101 standards. Historical resource estimates are discussed in Section 6, History.

14 ADJACENT PROPERTIES

The historical record of the project includes some information from claims that are no longer part of the current subject property, and which are now adjacent properties. These include the eastern portions of the Skiddoo claim and Southeast Extension of Marietta claim (which immediately border the eastern edge of the subject property) and the adjoining Skiddoo Fraction, Harriet, April, April No. 1, and April No. 2 claims (Figure 27). In particular, the Southeast Extension of Marietta claim contains the No. 4 Shaft, a principal mine production shaft installed by the Kay Copper Company in the late 1910s or early 1920s.

I have no modern exploration data from these adjacent properties, and it appears that none has been done since Exxon's ownership up to 1990. Information on these adjacent properties is contained in historical reports written by Exxon Minerals (Westra, 1977; Fellows, 1982) and in mine maps produced by the Kay Copper Company. The upper portion of the South Zone historical resource estimate discussed above in Section 6, History, as reported by Fellows (1982) appears to underlie the Southeast Extension of Marietta patented claim, an adjacent property to the subject property (Figures 8 and 12). Detailed georeferencing of historical figures, re-examination of historical records, modern drilling, and a current resource calculation will be needed to determine any current mineral resource on the subject property. I recommend that Arizona Metals acquire or option mineral rights from as many of these adjacent properties as possible, putting the highest priority on the Southeast Extension of Marietta patented claim.

15 OTHER RELEVANT DATA AND INFORMATION

I am aware of no other relevant data and information on the Kay Mine project.

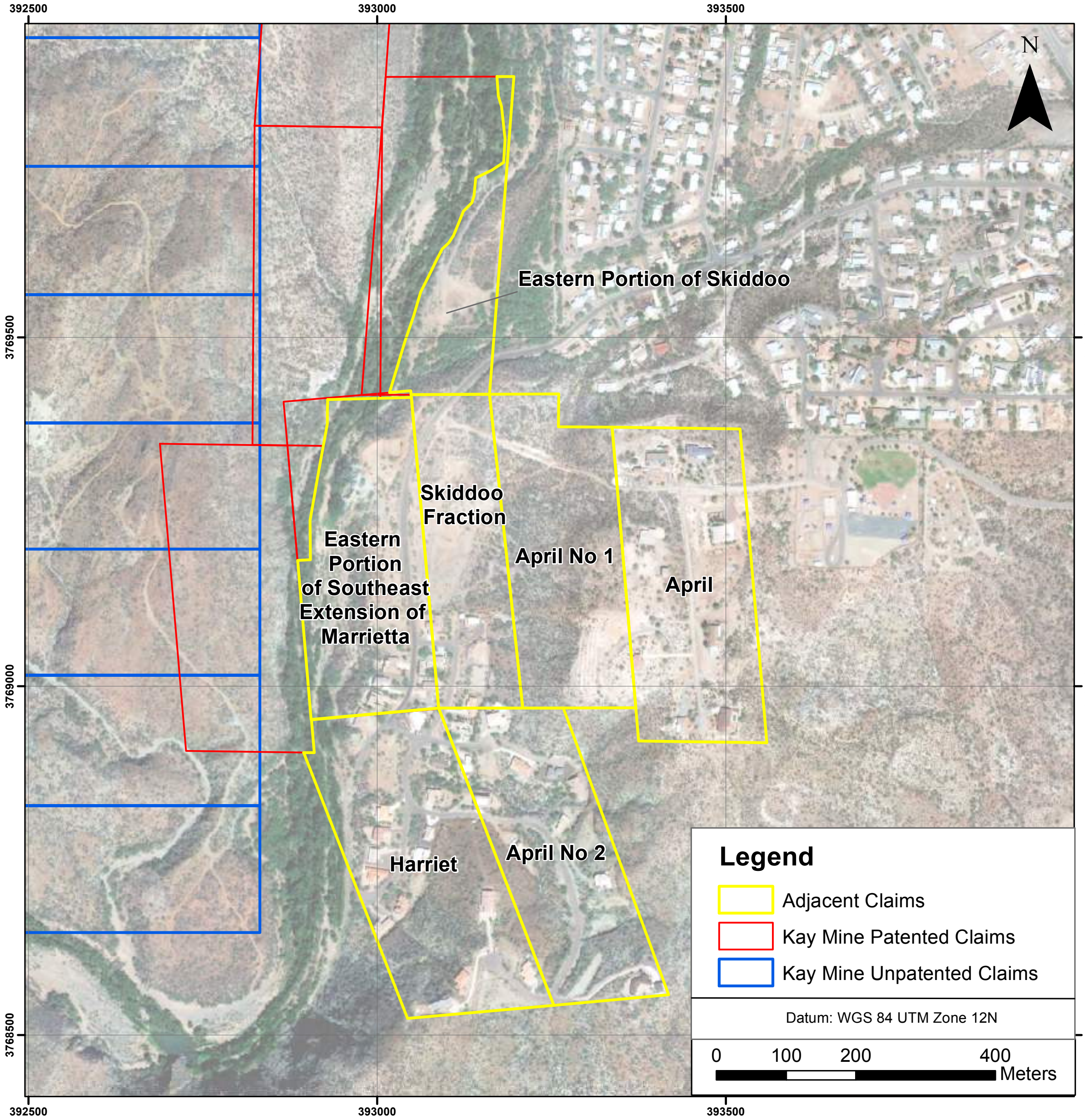

Figure 27. Adjacent properties.

16 INTERPRETATION AND CONCLUSIONS

CONCLUSIONS

The Kay Mine Project is a polymetallic property bearing copper, gold, zinc, lead, and silver, located near Black Canyon City, Yavapai County, in central Arizona, USA, owned 100% by Arizona Metals corporation. The project has a long history of exploration and small-scale production. Data compilation, core drilling, and exploration by Arizona Metals has confirmed a sizeable volcanogenic massive sulfide deposit with good expansion potential.

The massive sulfide mineralization consists of stratabound lensoid bodies of massive sulfide in a folded horizon that strikes generally north and dips steeply west, occurring along a strike length of approximately 350 m and a down-dip extent of over 700 m below surface. Mineralization in the main Kay deposit is open in all directions and should be aggressively drilled.

Mineralization consists of fine- to medium-grained massive, semi-massive, and stringer-like aggregates of pyrite, arsenopyrite, chalcopyrite, sphalerite, galena, and tetrahedrite-tennantite. Gangue minerals include chlorite, quartz, sericite, and dolomite. Reported historic grades of mineralization are up to 16.6% Cu. Surface assays by Arizona Metals returned 16.4% Cu; and Arizona Metals' drill samples have assayed up to 16.6% Cu, 16.7 g/t Au, and 27.9% Zn.

Three primary exploration targets outside the main area of Kay Mine mineralization are composed of coincident geophysical, geochemical, geologic anomalies with evidence of historic prospecting and past drilling. These three targets are drill-ready and should be drill tested. Another four geophysical targets on the property deserve field evaluations.

It is my opinion that the Kay Mine property is worthy of additional exploration.

RISKS AND UNCERTAINTIES

Aside from the usual risks and uncertainties that accompany minerals exploration projects, there are three minor sources of risk and uncertainty on the Kay Mine project.

First is the proximity to Black Canyon City. This may require additional permitting efforts to mitigate noise, traffic, dust, and visual effects of exploration drilling and any eventual mining operations, and may generate public opposition. The proximity to Black Canyon City is mitigated by several factors. In general, Arizona is a favorable jurisdiction for mining, rated #2 globally by the Fraser Institute for overall mining investment attractiveness (Yunis and Aliakbari, 2020). Although the project is at an early stage for a detailed assessment of all permitting requirements, it is envisioned that Kay would be an underground mine with a small surface footprint likely to face less opposition than an open-pit operation might. The majority of the project is separated from unincorporated Black Canyon City by topography, mostly west of a sizeable ridge that limits visibility and access from the town. Ample space exists to site surface facilities that would support an underground mine largely out of sight of the town. The only road access to the claims is on a gated road controlled by Arizona Metals and the BLM.

Permitting would be governed by Arizona State agencies and the U.S. federal Bureau of Land Management. The project's mining claims are patented mining claims (private land) or BLM unpatented mining claims, which have a well-regulated permitting process. Many underground mines in Arizona are in operation or construction on similar types of claims under BLM permitting jurisdiction. Importantly, permitting would not be governed by the U.S. Forest Service nor Indigenous (Tribal) peoples, which have caused permitting issues for other Arizona mining operations. To date, regulators have indicated a clear path to mine permitting. The company has had numerous conversations with the Bureau of Land Management, Army Corps of Engineers, Yavapai County Supervisor, Arizona State Land Department, and Arizona Department of Water Resources, all indicating that an underground mine can be permitted and built in this area, provided that all requisite permitting standards are met.

Arizona Metals has also commissioned and completed independent biological and archeological studies at the Kay Mine, to show that there are no endangered plants or animals, or cultural artifacts in the vicinity of the company's drill operations. These reports were approved by the Bureau of Land Management before approving the project's drill permits.

Arizona Metals has received significant political support for the project. The company has been in contact with local, County, and State political representatives since the beginning of drilling in January, 2020, with resulting letters of support from state Congressmen, Co-Chair of the Arizona State Legislature Mining Caucus, and the President of the Arizona State Senate for both drilling operations and future construction of a mine. The company has not experienced local opposition, and occasional contacts with local residents have been largely positive

Based on the favorability of Arizona for mining, envisioned underground operations, terrain separation from town, type of mining claims, permitting jurisdiction, biological and archeological studies, and political support, the Kay Mine project appears to have equal or less permitting risk than other comparable Arizona mining projects.

The second minor risk is the proximity to the Aqua Fria River; this may require additional mitigation measures during exploration and mine design to protect the quality of surface and ground waters. Third, there is a small risk that owners of the patented claims to the east of the property could assert their extralateral mineral rights to mineralization that crops out on their claims and dips to the west under the Kay Mine property. This applies particularly to the Southeast Extension of Marietta claim, where the No. 4 Shaft is located. However, according to the 2017 legal title opinion (Snell & Wilmer, 2017), these owners successfully asserting their extralateral rights is unlikely because of the lensoid nature and minimal outcrop of the known mineralization, rights transferred in past ownership changes, and segmentation of the patented claims. Snell & Wilmer recommend "compiling sufficient geological information to successfully address any assertion of extralateral rights originating outside the subject property." This risk is easily mitigated by acquiring at least one of these adjacent properties.

To the extent known, there are no other significant factors and risks, other than noted in this technical report, that may affect access, title, or the right or ability to perform the proposed drill program or other work on the property.

17 RECOMMENDATIONS

I recommend the following exploration program.

- Perform a 75,000-meter HQ-size core drilling program (see below). The objectives of this drill program are to comprehensively explore the mineralization on the property, including at the main Kay Mine area, and other targets on the project.
- Conduct additional geologic mapping and sampling on the project, in particular focused on the location and folding of the felsic/mafic schist contact, and on field checking the VTEM 1 and 2, Gravity 1 and 2, and Rayrock targets.
- If the targets above prove promising, conduct additional geochemical and geophysical work on them in order to prepare them for drilling.
- Commission metallurgical test work on the Kay sulfide mineralization.
- Undertake permitting work to expand the scope of drill operations beyond the 5 acres permitted under BLM Notices of Intent to Explore.
- Consult with a local environmental consultant to evaluate whether any environmental risk exists from the historic mine dumps at the No. 1, No. 2, and No. 3 Shafts.

The proposed drill program consists of approximately 150 holes to an average depth of 500 meters, with aggregate length of 75,000 meters. Drill holes should be targeted to expand mineralization in the principal Kay deposit, and to test other targets on the project as outlined in Exploration, above. Drill holes should be drilled from the ten drill pads shown on Figure 2, with azimuth and dip determined by detailed 3D modeling. I recommend the number of holes and total meters in each area as shown in Table 8. Directional drilling will be used to reduce the total drilling required and to more effectively intersect the planned targets. Core drilling is recommended, with HQ-sized core.

Target	Holes	Avg. Depth, m	Total, m
Kay deposit	80	500	40,000
West/MX-1	25	500	12,500
Central/MX-2	25	500	12,500
Additional targets	20	500	10,000
Total	150		75,000

Table 8. Proposed drill program

The budget for the proposed exploration program is CAD$27M (Table 9).

	Qty	Unit	Rate	Total
HQ core drilling (all-in cost)	75,000	meters	$ 350	$ 26,250,000
Geologic mapping		lump sum	$ 100,000	$ 100,000
Geochemical and geophysical work on additional targets		lump sum	$ 250,000	$ 250,000
Metallurgical test work		lump sum	$ 250,000	$ 250,000
Permitting		lump sum	$ 100,000	$ 100,000
Environmental		lump sum	$ 50,000	$ 50,000
Total			**CAD**	**$ 27,000,000**

Table 9. Budget for proposed exploration program.

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CERTIFICATE OF QUALIFIED PERSON

I, David S. Smith, MS, MBA, CPG, do hereby certify that:

1. I am a consulting exploration geologist with Highlands Geoscience LLC, located at 3803 NE 120th St., Seattle, Washington, 98125, USA.
2. This certificate applies to "NI 43-101 Technical Report, Kay Mine Project, Yavapai County, Arizona, USA," effective date May 21, 2021.
3. I am a Qualified Person as defined by and for the purposes of National Instrument 43-101 by virtue of my education, experience, and certification as Certified Professional Geologist No. 11405 with the American Institute of Professional Geologists. I have B.Sc. and M.Sc. degrees in geology with M.Sc. studies and published research on gold deposits, and I have 35 years of experience in minerals exploration. My experience includes project management, drilling program design and management, exploration program design and management, drilling supervision, permitting management, project evaluation and acquisition, 43-101 and JORC reports, advanced geologic studies and interpretation, management of resource estimates and economic studies. My deposit-type experience includes orogenic gold, intrusion-related gold, epithermal gold, VMS, IOCG, porphyry copper, skarn, hydrothermal magnetite, stratiform silver-lead-zinc, Mississippi Valley zinc, and evaporite lithium.
4. My most recent personal inspection of the Kay Mine property was May 25-28, 2021.
5. I am responsible for the entire report "NI 43-101 Technical Report, Kay Mine Project, Yavapai County, Arizona, USA."
6. I am not independent of Arizona Metals Corporation: I serve as Vice-President of Exploration, I am a shareholder of the company, and I hold stock options in the company.
7. I have been involved with the property since 2018, including numerous personal inspections, authoring a previous NI 43-101 Technical Report in 2019, and managing exploration and drilling since 2019.
8. I have read National Instrument 43-101 and the entire report "NI 43-101 Technical Report, Kay Mine Project, Yavapai County, Arizona, USA," which has been prepared in compliance with NI 43-101.
9. As of the effective date of the report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated June 23, 2021, Seattle, Washington

David S. Smith, MS, MBA, CPG

11405
DAVID S. SMITH

APPENDIX 1—LIST OF PROJECT CLAIMS

Claim Name	Type	BLM Serial #	Approximate Area (ha)	#
Buckeye	Patented		Aggregate area of 5 patented claims is 28.7 ha	1
Marietta	Patented			2
Southeast Extension of Marietta (western portion)	Patented			3
Skiddoo (western portion)	Patented			4
Diorite	Patented			5
KM-2	Unpatented	AMC443132	8.09	1
KM-3	Unpatented	AMC443133	8.09	2
KM-4	Unpatented	AMC443134	8.09	3
KM-5	Unpatented	AMC443135	8.09	4
KM-6	Unpatented	AMC443136	8.09	5
KM-7	Unpatented	AMC443137	8.09	6
KM-8	Unpatented	AMC443138	6.25	7
KM-9	Unpatented	AMC443139	6.12	8
KM-10	Unpatented	AMC443140	7.42	9
KM-11	Unpatented	AMC443141	8.09	10
KM-12	Unpatented	AMC443142	8.09	11
KM-13	Unpatented	AMC443143	8.09	12
KM-14	Unpatented	AMC443144	8.09	13
KM-15	Unpatented	AMC443145	8.09	14
KC-1	Unpatented	AMC454211	8.09	15
KC-2	Unpatented	AMC454212	8.09	16
KC-3	Unpatented	AMC454213	8.09	17
KC-4	Unpatented	AMC454214	8.09	18
KC-5	Unpatented	AMC454215	8.09	19
KC-6	Unpatented	AMC454216	8.09	20
KC-7	Unpatented	AMC454217	8.09	21
KC-8	Unpatented	AMC454218	8.09	22
KC-9	Unpatented	AMC454219	8.09	23
KC-10	Unpatented	AMC454220	8.09	24
KC-11	Unpatented	AMC454221	8.09	25
KC-12	Unpatented	AMC454222	8.09	26
KC-13	Unpatented	AMC454223	8.09	27
KC-14	Unpatented	AMC454224	8.09	28
KC-15	Unpatented	AMC454225	8.09	29
KC-16	Unpatented	AMC454226	8.09	30
KC-17	Unpatented	AMC454227	8.09	31
KC-18	Unpatented	AMC454228	8.09	32
KC-19	Unpatented	AMC454229	8.09	33
KC-20	Unpatented	AMC454230	8.09	34
KC-21	Unpatented	AMC454231	8.09	35
KC-22	Unpatented	AMC454232	8.09	36
KC-23	Unpatented	AMC454233	8.09	37
KC-24	Unpatented	AMC454234	8.09	38
KC-25	Unpatented	AMC454235	8.09	39
KC-26	Unpatented	AMC454236	8.09	40
KC-27	Unpatented	AMC454237	8.09	41
KC-28	Unpatented	AMC454238	8.09	42
KC-29	Unpatented	AMC454239	8.09	43
KC-30	Unpatented	AMC454240	8.09	44
KC-31	Unpatented	AMC454241	8.09	45
KC-32	Unpatented	AMC454242	8.09	46
KC-33	Unpatented	AMC454243	8.09	47
KC-34	Unpatented	AMC454244	8.09	48
KC-35	Unpatented	AMC454245	8.09	49
KC-36	Unpatented	AMC454246	8.09	50
KC-37	Unpatented	AMC454247	8.09	51
KC-38	Unpatented	AMC454248	8.09	52
KC-39	Unpatented	AMC454249	8.09	53
KC-40	Unpatented	AMC454250	8.09	54
KC-41	Unpatented	AMC454251	8.09	55
KC-42	Unpatented	AMC454252	8.09	56
KC-43	Unpatented	AMC454253	8.09	57
KC-44	Unpatented	AMC454254	8.09	58
KC-45	Unpatented	AMC454255	8.09	59
KC-46	Unpatented	AMC454256	7.00	60
KC-47	Unpatented	AMC454257	7.03	61
KC-48	Unpatented	AMC454258	7.03	62
KC-49	Unpatented	AMC454259	7.58	63
KC-50	Unpatented	AMC454260	8.09	64
Total hectares			538.26	
Total acres			1330.09	