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





66 Wellington St. W, Suite 4100 Toronto, Ontario Canada M5K 1B7

Prepared by

HIGHLANDSgeoscience

geologic, resource and sustainability consultants

David S. Smith, MS, MBA, CPG 3803 NE 120th St. Seattle WA 98125

> Effective Date May 29, 2019

Su	nmary	1
1	Introduction	4
2	Reliance on Other Experts	4
3	Property Description and Location Location and Description Nature of Croesus Gold's Interest Mineral Title and Mining Law Permitting and Environmental	4 6 7
4	Accessibility, Climate, Infrastructure Accessibility Climate Infrastructure	7 8
5	History Prior Ownership and Exploration Historical Resources and Reserves Historical Production	9 11
6	Geological Setting and Mineralization Regional Geology Property Geology Mineralization	12 14
7	Deposit Types	23
8	Exploration Pre-Exxon Exploration Exxon Minerals Croesus Gold Exploration Targets and Observations	24 24 25
9	Drilling	27
10	Sample Preparation, Analyses, and Security Kay Copper COmpany and New Jersey Zinc Exxon Minerals Croesus Gold and Silver Spruce	29 29
11	Data Verification	30
12	Mineral Processing and Metallurgical Testing	31
13	Mineral Resource Estimates	31
14	Adjacent Properties	31
15	Other Relevant Data and Information	32
16	Interpretation and Conclusions Conclusions Risks and Uncertainties	33
17	Recommendations	
18	References	37
Ce	rtificate of Qualified Person	39
Ap	pendix 1—List of Project Claims	40

Figures

Figure 1. Project mining claims	5
Figure 1. Project mining claims Figure 2. Project map	6
Figure 3. Aerial view of the project looking north	9
Figure 3. Aerial view of the project looking north Figure 4. Tectonic blocks in central Arizona	13
Figure 5. General map of Precambrian basement rocks of central Arizona	
Figure 6. Map of volcanogenic massive sulfide districts in central Arizona	14
Figure 7. Geologic map of the project area. After Ferguson et al, 2008	16
Figure 8. Generalized geologic map of the eastern portion of the Kay Mine property	
Figure 9. Pervasive S1 foliation axial planar to isoclinal folding on the project.	18
Figure 10. Map of massive sulfide bodies at depth discovered by underground mining and Exxon Minerals drilling	
Figure 11. Cross section view of North zone mineralization Figure 12. Cross-section view of South zone mineralization	20
Figure 13. Three-dimensional view of the digitally modeled Kay Mine mineralization	
Figure 14. Massive sulfide mineralization collected by the author on mine dumps at the No. 1 Shaft	
Figure 15. Preliminary map of VTEM anomalies on the property	26
Figure 16. Exxon Minerals drill-hole location map	28
Figure 17. Adjacent properties	32
Figure 18. Plan map of proposed drill program	
Figure 19. Three-dimensional view of proposed drill plan	36

Tables

Table 1. Average monthly temperature and precipitation, Scottsdale, Arizona	8
Table 2. Summary of Croesus Gold's exploration spending	
Table 3. Drill-hole collar table for Exxon Minerals drilling	
Table 4. Significant intercepts in historical drilling	
Table 5. Analyses of data-verification samples collected on the property by the author	
Table 6. Analyses of recent samples collected on the property by Croesus Gold	
Table 7. Collar table for proposed drill program	
Table 8. Budget for proposed exploration program	

SUMMARY

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 being acquired by Croesus Gold Corporation, which commissioned this report in support of its listing on the Toronto Stock Exchange Venture Exchange.

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). 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, Croesus Gold signed a letter of intent to acquire 100% of the property from Silver Spruce Resources Inc. (TSXV:SSE) for a total of CAD\$150,000 cash and CAD\$250,000 in shares of Croesus Gold. Croesus also agreed to assume a USD\$450,000 mortgage on the patented claims portion of the property.

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, 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. 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 is not compliant with NI 43-101 standards, is conceptual in nature, and has not been verified as a current mineral resources. None of the key assumptions, parameters, and methods used to prepare this historical resource estimate were reported, and no resource categories were used. I have not done sufficient work to classify it as current mineral resources, report it for reference only, and do not infer or assert that it was performed under current NI 43-101 guidelines nor that it is reliable or accurate. Croesus Gold 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 18 stratabound stacked lensoid bodies of massive sulfide. The sulfide bodies occur within a stratigraphic horizon 137-183 m thick (450-600 feet) that strikes northnortheast and dips steeply to the west, lying along a strike length of 350 m and a down-dip extent of 700 m below surface. Individual sulfide bodies are about 20-175 m long and up to 25 m thick, with steeply dipping, generally cigar to tabular shapes that pinch and swell.

Mineralization consists of fine- to medium-grained massive pyrite with variable amounts of pyrrhotite, chalcopyrite, and sphalerite, with local galena, tetrahedrite-tennantite, and arsenopyrite. Gangue minerals include chlorite, quartz, sericite, and dolomite. Reported historic grades of this mineralization are up to 16.6% Cu, and recent assays by Croesus Gold returned 16.35% Cu. 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. This exploration work discovered the 18 massive sulfide bodies currently known on the property. Croesus has performed a geophysical VTEM survey, digitized all historic project data into a modern 3D geological model, conducted geologic reconnaissance in the area, and commissioned a topographic survey of the area surrounding the historical mine workings on the project.

Exploration work on the project has exposed three exploration targets: 1) expansion of the existing mineralized body in the South Zone of mineralization, which is open at depth; 2) areas of "marginal mineralization" below historical cutoff grades of 2.5% Cu, which could provide considerable expansion upside by using lower cutoff grades more appropriate for current economic conditions; and 3) a prominent VTEM anomaly in the western portion of the project. Several vectoring pathfinders emerged from previous exploration: 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.

DRILLING

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).

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, appears to 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\$1.5M exploration program of:

- Drilling 5,000 meters of HQ and NQ core to verify historical drill results and underground channel sample assays and provide new verified drill data on the property.
- Acquiring several adjacent properties.
- 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 being acquired by Croesus Gold Corporation, which commissioned this report in support of its listing on the Toronto Stock Exchange Venture Exchange.

I have made two personal inspections of the property. The first was a two-day visit on October 8-9, 2018, which included examining host-rock exposures and mineralization, viewing past drill-hole locations, and observing terrain, vegetation, and proximity to infrastructure. The second personal inspection was a one-day visit on March 25, 2019, which included traversing the property from the north border to Shaft 1, and collecting four samples of mineralization from the property.

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, 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).

Beginning in 2019, annual payments for the unpatented claims are due on or before August 31 to BLM and Yavapai County totaling approximately USD\$9,425 per year. As of the effective date of this report, annual claim payments are current through August 31, 2019 according to BLM records (LR2000, 2018).

Annual Yavapai County tax for the patented claims in 2018 was USD\$3,703 and is paid through December 31, 2018. Tax is assessed in arrears every six months and the next payment will be due in October, 2019. Yavapai County tax payments for the patented claims are current as of the effective date of this report.

NI 43-101 TECHNICAL REPORT KAY MINE PROPERTY, YAVAPAI COUNTY, ARIZONA



Figure 1. Project mining claims.

NI 43-101 TECHNICAL REPORT KAY MINE PROPERTY, YAVAPAI COUNTY, ARIZONA



Figure 2. Project map.

NATURE OF CROESUS GOLD'S INTEREST

On January 30, 2019, Croesus acquired 100% of the Kay Mine Project from Silver Spruce for a total cash consideration of \$400,000. Croesus also agreed to assume a USD\$450,000 loan between Silver Spruce and a

third-party lender, which matured on June 22, 2018. 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. A new title opinion is underway, commissioned by Croesus Gold Corp. Determination of secure mineral title is solely the responsibility of Croesus Gold Corp.

PERMITTING AND ENVIRONMENTAL

No permitting is necessary for surface exploration work on the property such as geologic mapping, surface sampling, and geophysics. Permitting will be required for the drill program recommended in this report. On the unpatented claims, permitting will be administered by the Bureau of Land Management through Notices of Intent to Operate, which are relatively simple documents to prepare and are routinely approved by BLM. Permitting for drilling on patented mining claims appears to be minimal, consisting of routine permitting through the Arizona Department of Water Resources. Crossing the Agua Fria River or its tributary to the north, Black Canyon Creek, may require consultation with the United States Army Corps of Engineers.

Because of the project's proximity to Black Canyon City, Croesus Gold 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. Four samples that I collected on surface at Shaft 1 contained >1% As. Given the proximity of these mine dumps to the active Aqua Fria River, Croesus Gold 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 38°C (100°F). Winter temperatures generally range from 6-22°C (42-72°F). 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
Courses II C. Climate Data (2010)												

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 Croesus Gold (Figure 1). Silver Spruce took 39 samples on the project (see Section 9, Exploration below) but did no other exploration work.

Croesus Gold Corporation

On September 26, 2018, Croesus Gold Corporation signed a letter of intent to acquire the five patented and 14 unpatented "KM" claims from Silver Spruce Resources. To date, Croesus has performed initial geologic and geophysical exploration on the project and staked 50 additional unpatented mining claims, as described below in Exploration.

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 is not compliant with NI 43-101 standards, is conceptual in nature, and has not been verified as a current mineral resources. None of the key assumptions, parameters, and methods used to prepare this historical resource estimate were reported, and no resource categories were used. I have not done sufficient work to classify it as current mineral resources, report it for reference only, and do not infer or assert that it was performed under current NI 43-101 guidelines nor that it is reliable or accurate. Croesus Gold 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).

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. 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 occurring during three phases of deformation as recorded by Westra (1977). 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 S₁ foliation that strikes north to N30E and dips steeply to the west (Figure 9).

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 disjointed character of the Kay Mine deposits, which are likely the result of isoclinal folding with extreme attenuation and separation of fold limbs. This is an important observation for exploration, and targets should be developed acknowledging that additional VMS bodies are likely to 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 S₁ foliation axial planar to isoclinal folding on the project.

MINERALIZATION

Mineralization

Mineralization on the Kay Mine property consists of 18 stratabound stacked lensoid bodies of massive sulfide. Westra (1977) give the most detailed descriptions of the project's mineralization, and much of this section is summarized from his report.

The massive sulfide bodies occur in two principal closely-spaced zones, called the North Zone and South Zone which in reality are clearly parts of the same mineralizing system (Figure 10). The sulfide bodies occur within a stratigraphic horizon of rhyolitic pyroclastics rocks 137-183 m thick (450-600 feet) that strikes north-northeast and dips steeply to the west. This horizon has been tested by drilling to a depth of 550 m (1,800 feet) in the North Zone and 700 m (2,300 feet) in the South Zone. The North Zone sulfide bodies occur at the contact between hangingwall sericite phyllites and rhyolite lapilli tuffs, and the South zone sulfide bodies are hosted in a tuffaceous siltstone unit. Mineralization in the North Zone appears to narrow with depth and has been closed off by drilling (Exxon drill hole K-9; Westra, 1977). Mineralization in the South Zone is open at depth and provides a good exploration target.

Figure 10 shows the 18 massive sulfide bodies discovered to date within the current subject property through drilling and underground mining, as defined with 1977 cutoff grades. The massive sulfide bodies occur along a strike length of approximately 350 m and a down-dip extent of 700 m below surface. Individual sulfide bodies are about 20-175 m long and up to 25 m thick, with steeply dipping, generally cigar to tabular shapes that pinch and swell. Figures 11 and 12 show cross-section views of the mineralization. Figure 13 is a three-dimensional view of the mineralization and historic mine workings, and historic drilling, looking to the northeast.



Figure 10. Map of massive sulfide bodies at depth discovered by underground mining and Exxon Minerals drilling. Includes what Exxon considered "marginal ore" at 2% Cu eq cutoff. After Westra, 1977.



Figure 11. Cross section view of North zone mineralization. From Westra, 1977.



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



Figure 13. Three-dimensional view of the digitally modeled Kay Mine mineralization. View looking toward the NE.

Massive sulfide mineralization consists of fine- to medium-grained massive pyrite with variable amounts of pyrrhotite, chalcopyrite, and sphalerite, with local galena, tetrahedrite-tennantite, and arsenopyrite (Figure 14; Donnelly et al, 1987). Gangue minerals include chlorite, quartz, sericite, and dolomite. Reported historic grades of this mineralization are up to 16.6% Cu (Westra, 1977), and recent assays by Croesus Gold returned 16.35% Cu (Sample 14; Table 5). 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 describes 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. Croesus' exploration should evaluate this "marginal mineralization;" if it carries sufficient grade, it could provide considerable expansion upside to the project.

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 14. Massive sulfide mineralization collected by the author on mine dumps at the No. 1 Shaft.

Alteration

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 occurs 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).

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 sea-floor 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 stock-work 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), 250-400°C, low salinity (<1-8 wt % NaCl eq), either oxidized or reduced, generally low CO₂, 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

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.

CROESUS GOLD

During 2019, Croesus Gold performed a VTEM geophysical survey, digitized all historical project data, contracted geologic reconnaissance to the west of the patented claims, commissioned a topographic survey by drone, and collected and analyzed 30 due-diligence rock samples, and staked 50 additional mining claims.

The VTEM geophysical survey was performed by Geotech Ltd. of Aurora, Ontario, Canada. The survey was performed by helicopter flying east-west lines at 50 m spacings. The VTEM (vertical time-domain electromagnetic) method measures electrical conductivity of rocks in the subsurface and is ideal for detecting conductive materials such as the sulfide minerals known to exist in the Kay Mine mineralization. The VTEM survey confirmed a strong anomaly near the known Kay Mine historic mineralization and workings (Figure 15). It also detected a new anomaly in the western portion of the project, which shows similar size and strength to the Kay Mine anomaly and underlies an area of gossan outcrops, suggesting potential for additional mineralization in this area. Final processing and interpretation of the VTEM data is pending.

Croesus commissioned digitizing of all the historical data on the project, including drill data, underground workings, and underground samples. This data has been incorporated into a three-dimensional computer model for exploration planning.

Croesus also commissioned a drone survey to map the topography on the eastern portion of the project in the area of the historic mine workings and planned drilling. This has been integrated into the 3-D digital model.

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

Item	CAD\$
VTEM geophysical survey	\$74,925
Geological reconnaissance and sampling	\$29,931
Digitization of historical data	\$24,316
Topography drone survey	\$4,874
Permitting and logistics	\$6,029
Assays	\$2,263
Claim staking	\$40,599
Total	\$182,937

Total expenditures for Croesus Gold's exploration work are CAD\$182,937 as shown in Table 2.

Table 2. Summary of Croesus Gold's exploration spending.



Figure 15. Preliminary map of VTEM anomalies on the property.

EXPLORATION TARGETS AND OBSERVATIONS

Two opportunities are apparent for enlarging the potential size of the mineralized bodies currently known on the Kay Mine property. First, the South Zone of mineralization is open at depth and provides an easy expansion target: Westra (1977), recommended testing this with a hole targeted to the 2100 level, 120 m (400 feet) south of the piercing point of Exxon drill hole K-8, and deeper still to the 3000 level if results warranted.

Second, the outlines of the mineralization are likely to grow by dropping the cutoff grade below the 2.5% Cu equivalent used in historical evaluations. Westra (1977) noted several areas of "marginal mineralization," which may now be more prospective at current metals prices. Croesus' exploration should evaluate this material; if it carries sufficient grade, it could provide considerable expansion upside to the project by using lower cutoff grades more appropriate for current economic conditions.

A third exploration opportunity is the VTEM geophysical anomaly detected in the western portion of the project describe above (Figure 15).

Aside from the expected anomalies in base metals surrounding mineralization on the project, several vectoring pathfinders emerged from previous 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.

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.

9 DRILLING

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. 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) (Table 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 16.

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 10).

Hole ID	East ACS	North ACS	East WGS84	North WGS84	Elev (ft)	Az	Inc	Depth (m)	Depth (ft)	Date	Туре	Location
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
Total								9,565	31,380			

Note: ACS coordinates are feet, Arizona Coordinate System 1983

Table 3. Drill-hole collar table for Exxon Minerals drilling. Holes are plotted on Figure 16.

NI 43-101 TECHNICAL REPORT KAY MINE PROPERTY, YAVAPAI COUNTY, ARIZONA



Figure 16. Exxon Minerals drill-hole location map.

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

Table 4. Significant intercepts in historical drilling as reported by Fellows, 1982. All intercepts are in the immediate vicinity of the historic Kay Mine workings.

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, Croesus Gold 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.

CROESUS GOLD AND SILVER SPRUCE

Recent samples taken by Silver Spruce and Croesus Gold 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. Croesus Gold's samples were processed and analyzed by ALS Minerals in Tucson, Arizona and Reno, Nevada for multi-element analyses (ME-MS41 aqua regia 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 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 Croesus Gold and Silver Spruce. All of the ALS Minerals facilities used for Croesus Gold 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.

11 DATA VERIFICATION

During my most recent 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 5, 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, recent samples by Croesus Gold are also consistent with historically reported metal grades (Table 6).

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 multielement 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 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.

It is my opinion that the data currently available are adequate for the purposes of this technical report. As stated above, before any of the historical project data could be used with confidence it would be necessary to verify the data with new drill samples processed with current best practices for sample preparation, analysis, security, and QAQC.

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 5. Analyses of 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 6. Analyses of recent samples collected on the property by Croesus Gold.

12 MINERAL PROCESSING AND METALLURGICAL TESTING

There has been no modern mineral processing or metallurgical testing work done on the project.

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 17). 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 10 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 Croesus Gold 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.

Although not strictly an adjacent property because it appears to be currently unclaimed, the Greyhound target of Exxon lies about 3 km northwest of and displays similar mineralization to the Kay Mine property. Exxon documents describe the target as a north-striking zone of mineralization 0.15-3 m wide on surface extending 1.1 km along strike that is strongly anomalous in Cu, Au, and Ag (Davidson, 1984). Exxon drilled seven holes in this target, intersecting 40 m (135 feet) of mineralized dacite with the best result being 1.8 m grading 3.83% Cu (drill hole KM-18, 516-522 feet; Chuchla, 1984). I have been unable to verify this information, and it is not necessarily indicative of the mineralization on the Kay Mine property.



Figure 17. Adjacent properties.

15 OTHER RELEVANT DATA AND INFORMATION

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

16 INTERPRETATION AND CONCLUSIONS

CONCLUSIONS

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, being acquired by Croesus Gold Corporation. The project has a long history of exploration and small-scale production, but its mineral assets remain largely undeveloped. Eighteen volcanogenic massive sulfide bodies have been discovered on the project by underground mining and development and drilling of at least 128 drill holes.

The massive sulfide bodies occur in a steeply dipping stratabound area 350 m along strike and 700 m down dip, with individual sulfide bodies up to 25 m thick and 175 m long in elongate cylindrical or tabular shapes. Mineralization consists of fine- to medium-grained pyrite, pyrrhotite, chalcopyrite, sphalerite, and galena. Grades range up to 16.6% Cu in historic sampling and 16.35% Cu in recent samples taken by Croesus Gold.

Two exploration opportunities are apparent for enlarging the potential size of the mineralized bodies currently known on the Kay Mine property: the South Zone of mineralization is open at depth and provides an easy expansion target; and the outlines of the mineralization are likely to grow by dropping the cutoff grade below the 2.5% Cu equivalent used in historical evaluations. A VTEM geophysical anomaly and coincident gossan outcrops in the western portion of the project. 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 1.1-km-long target previously drilled by Exxon. Davidson (1984) expressed exploration potential for 18M tonnes (20M short tons) on and around the current project.

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. Second 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

RECOMMENDED EXPLORATION PROGRAM

I recommend the following exploration program, with a total budget of CAD\$1.5M (Table 8).

- Perform a 5,000-meter HQ-and NQ-size drilling program (see below). The objectives of this drill program are to verify historical drill results and underground channel sample assays and generate modern drill data on the project.
- Acquire or option mineral rights to the eastern portions of the Skiddoo claim and Southeast Extension of Marietta claim (which immediately border the eastern edge of the subject property). Also consider acquiring or leasing mineral rights to the adjoining Skiddoo Fraction, Harriet, April, April No. 1, and April No. 2 claims (Figure 17).
- 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.

Proposed Drill Program

The proposed drill program consists of a total of 12 holes with aggregate depth of 5,200 meters (Table 7, Figures 18, 19). The proposed holes are intended to intersect mineralization previously encountered in historical drill holes and mine workings. 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- and NQ-sized core.

Hole ID	Drill Pad	Collar UTM East WGS 84	Collar UTM North WGS 84	Collar Elev m	Az	Dip	Depth m	Notes
KM-19-A	Pad 1	392685	3769423	635	79	-39	310	
KM-19-B	Pad 1	392685	3769423	635	88	-41	300	
KM-19-C	Pad 1	392685	3769423	635	84	-60	360	
KM-19-D	Pad 1	392685	3769423	635	98	-60	360	
KM-19-E	Pad 2	392685	3769315	644	97	-59	430	
KM-19-F	Pad 2	392685	3769315	644	109	-59	440	
KM-19-G	Pad 2	392685	3769315	644	97	-72	530	Trunk hole
KM-19-I	Pad 2	392685	3769315	644	102	-80	640	Trunk hole
KM-19-K	Pad 3	392524	3769387	648	80	-53	520	Trunk hole
KM-19-L	Pad 3	392524	3769387	648	91	-53	230	Branch hole @ 300 m in K
KM-19-M	Pad 3	392524	3769387	648	80	-60	620	Trunk hole
KM-19-0	Pad 3	392524	3769387	648	81	-64	260	Branch hole @ 380 m in M
						Total	5,000	meters

Table 7. Collar table for proposed drill program.

NI 43-101 TECHNICAL REPORT KAY MINE PROPERTY, YAVAPAI COUNTY, ARIZONA



Figure 18. Plan map of proposed drill program.



Figure 19. Three-dimensional view of proposed drill plan. View to NE.

Exploration Program Budget

The budget for the proposed exploration program is CAD\$1.7M (Table 8). This budget does not include costs for any adjacent claims that may be acquired.

	Qty	Unit		Rate	Total
Drilling (2 rigs, HQ and NQ core)	5000	meters	\$	200	\$ 1,000,000
Drill assays	2900	analyses	\$	50	\$ 145,000
Directional drilling services	1	months	\$	100,000	\$ 100,000
Drill permitting and environmental consultant		lump sum	\$	20,000	\$ 20,000
Drill-site preparation and road construction		lump sum	\$	40,000	\$ 40,000
Field geologist	3	months	\$	10,000	\$ 30,000
Field expense and core cutting		lump sum	\$	25,000	\$ 25,000
Qualified Person (43-101 report & drilling oversight)		lump sum	\$	20,000	\$ 20,000
GIS support		lump sum	\$	20,000	\$ 20,000
Travel & lodging	3	months	\$	10,000	\$ 30,000
Contingency			-	5%	\$ 70,000
Total				CAD	\$ 1,500,000

Table 8. Budget for proposed exploration program.

18 REFERENCES

Anderson, P., 1989a, Proterozoic plate tectonic evolution of Arizona: *in* Geologic Evolution of Arizona: Arizona Geological Society Digest, v. 17, p. 17-55.

Anderson, P., 1989b, Stratigraphic framework, volcanic-plutonic evolution, and vertical deformation of the Proterozoic volcanic belts of central Arizona: *in* Geologic Evolution of Arizona: Arizona Geological Society Digest, v. 17, p. 57-147.

Anderson, P., and Guilbert, J.M., 1979, The Precambrian massive sulfide deposits of Arizona: A distinct metallogenic epoch and province: in Papers of Mineral Deposits of Western North America, Nevada Bureau of Mines and Geology, Report 33, p. 39-48

Chuchla, R.J., 1984, Results and interpretation of KM-18 and recommendations for another drill test; Kay Mine, #3293, AZ: internal memo prepared for Exxon Minerals Company, September 28, 1984, 4 p.

Conklin, Q.E., 1956, Preliminary report on the Kay Copper Project, Black Canyon, Arizona: September 11, 1956, 11 p.

Croesus Gold Corporation, 2018, Letter of Intent Regarding the Proposed Acquisition of Kay Mine Claims, Arizona: Letter agreement with Silver Spruce Resources, September 26, 2018, 6 p.

Darrach, M.E., Karlstrom, K.E., Argenbright, D.N., and Williams, M.L., 1991, Progressive deformation in the Early Proterozoic Shylock shear zone, central Arizona: *in* Proterozoic Geology and Ore Deposits of Arizona, Arizona Geological Society Digest v. 19, p. 97-116.

Davidson, J.W., 1984, Target concept and drilling recommendation, Kay Mine prospect #3293 AZ: internal memo prepared for Exxon Minerals Company, July 19, 1984, 7 p.

DeWitt, E., 1995, Base- and precious-metal concentrations of Early Proterozoic massive sulfide deposits in Arizona - Crustal and thermochemical controls of ore deposition: US Geological Survey Bulletin 2138, 36 p.

Donnelly, M. E., and Hahn, G. A., 1981, A Review of the Precambrian Volcanogenic Massive Sulfide Deposits in Central Arizona and the Relationship to Their Depositional Environment: *in* Dickinson, W. R., and Payne, W. D., Relations of Tectonics to Ore Deposits in the Southern Cordillera: Arizona Geological Society Digest 14, p. 11-21.

Donnelly, M.E., Conway, C.M., and Earhart, R.L., 1987, Records of Massive Sulfide Occurrences in Arizona: U.S. Geological Survey Open-File Report 87-0406, 43 p.

Encyclopedia Britannica, 2018, Koppen climate classification: <u>https://www.britannica.com/science/Koppen-climate-classification#ref284656</u>, accessed October 10, 2018.

Fellows, M.L., 1982, Kay Mine massive sulfide deposit: Internal report prepared for Exxon Minerals Company, November 1982, 29 p.

Ferguson, C.A., Haddad, D.E., Johnson, B.J., Guynn, J.H., Spencer, J.E., and Eddy, D.L., 2008, Geologic Map of the east half of the Black Canyon City 7 1/2' Quadrangle and the west half of the Squaw Creek Mesa 7 1/2' Quadrangle, Maricopa and Yavapai Counties, Arizona: Arizona Geological Survey Digital Geologic Map DGM-64, Version 1.0, and accompanying 27-page report.

Franklin, J.M., Gibson, H.L., Jonasson, I.R., and Galley, A.G., 2005, Volcanogenic massive sulfide deposits: Economic Geology 100th Anniversary Volume, p. 523-650.

Galley, A.G., Hannington, M.D., and Jonasson, I.R., 2007, Volcanogenic massive sulphide deposits, *in* Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 141-161.

Hannington, M.D., de Ronde, C.E.J., and Peterson, S., 2005, Sea-floor tectonics and submarine hydrothermal systems: Economic Geology 100th Anniversary Volume, p. 111-141.

Hoskin-Ryan Consultants Inc., 2016, A.L.T.A. / A.C.S.M. Land Title Survey: Survey map prepared for Cedar Forest Inc., May 10, 2016, 1 p.

Karlstrom, K.E., and Bowring, S.A., 1991, Styles and timing of Early Proterozoic deformation in Arizona: Constraints on tectonic models: *in* Proterozoic Geology and Ore Deposits of Arizona, Arizona Geological Society Digest v. 19, p. 1-10.

Karr, L.J., 2017a, The Kay Mine project, a brief history and production summary, Black Canyon City, Arizona, USA: report prepared for Silver Spruce Resources, March 16, 2017, 7 p.

Keith, S.B., Gest, D.E., DeWitt, E., Toll, N.W., and Everson, B.A., 1983, Metallic mineral districts and production in Arizona: Arizona Bureau of Geology and Mineral Technology, Geological Survey Branch, Bulletin 194, 62 p.

Leighty, R.S., Best, D.M., and Karlstrom, K.E., 1991, Gravity and magnetic evidence for an Early Proterozoic crustal boundary along the southern Shylock fault zone, central Arizona: *in* Proterozoic Geology and Ore Deposits of Arizona, Arizona Geological Society Digest v. 19, p. 135-152.

Lindberg, P.A., 1989, Precambrian ore deposits of Arizona: in Geologic Evolution of Arizona: Arizona Geological Society Digest, v. 17, p. 187-210.

LR2000 (Bureau of Land Management Legacy Rehost System), 2018, Online mining claim status search, <u>https://reports.blm.gov/reports.cfm?ap-plication=LR2000</u>, accessed October 4, 2018.

Mattinen, P.R., 1984, Acquisition proposal, Exxon Kay Mine property, Yavapai County, Arizona: Internal acquisition proposal prepared for Nevcan Exploration Inc., May 28, 1984, 13 p.

Plantmaps, 2018, Interactive United States Köppen climate classification map: <u>https://www.britannica.com/science/Koppen-climate-classifica-tion#ref284656</u>, accessed October 10, 2018.

Reynolds, S.J., Florence, F.P., Welty, J.W., Roddy, M.S., Currier, D.A., Anderson, A.V., and Keith, S.B., 1986, Compilation of radiometric age determinations in Arizona: Arizona Bureau of Geology and Mineral Technology, Geological Survey Branch, Bulletin 197, 264 p.

Silver Spruce Resources Inc., 2017a, Loan agreement: Contract with Felicia Ross documenting USD\$450,000 mortgage, June 19, 2017, 15 p.

Silver Spruce Resources Inc., 2017b, Silver Spruce provides update on Kay Mine project: News release, November 7, 2017, 3 p.

Silver Spruce Resources Inc., 2017c, Silver Spruce receives first assays from Kay Mine VMS samples: News release, December 7, 2017, 3 p.

Silver Spruce Resources Inc., 2018a, Silver Spruce receives second round of assays from Kay Mine development rock sampling, Arizona, USA: News release, March 14, 2018, 4 p.

Silver Spruce Resources Inc., 2018be, Silver Spruce signs letter of intent to transfer Kay Mine: News release by Silver Spruce Resources, September 28, 2018, 1 p.

Snell & Wilmer, 2017, Mineral title opinion, Yavapai County, Arizona: prepared for Silver Spruce Resources Inc., March 18, 2017, 15 p.

U.S. Climate Data, 2018, https://www.usclimatedata.com/climate/arizona/united-states/3172: accessed October 10, 2018.

Westra, G., 1977, Kay Mine Project #3293, Yavapai County, Arizona, A progress report: internal report for Exxon Minerals, November 1977, 41 p.

Yavapai County, 2018, Yavapai County Recorder's Office online search: <u>http://eweb.co.yavapai.az.us/recorder/eagleweb/docSearch.jsp</u>, accessed October 17, 2018.

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 "43-101 Technical Report, Kay Mine Project, Yavapai County, Arizona, USA," effective date May 29, 2019.
- 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, IOCG, porphyry copper, skarn, hydrothermal magnetite, stratiform silver-lead-zinc, Mississippi Valley zinc, VMS, and evaporite lithium.
- 4. My most recent personal inspection of the Kay Mine property was March 25, 2019.
- 5. I am responsible for the entire report "43-101 Technical Report, Kay Mine Project, Yavapai County, Arizona, USA."
- 6. I am independent of Croesus Gold Corporation.
- 7. I have had no prior involvement with the subject property.
- 8. I have read National Instrument 43-101 and the entire report "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 May 29, 2019, Seattle, Washington

David S. Smith, MS, MBA, CPG



Claim Name	Туре	BLM Serial Number	Approxi- mate Area (ha)	#
Buckeye	Patented		Aggregate area of 5 pa- tented claims is 28.7 ha	1
Marietta	Patented			2
Southeast Extension of Marietta (western portio	n) 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-22 KC-23	Unpatented	AMC454232	8.09	37
KC-24	Unpatented	AMC454233	8.09	38
KC-24 KC-25	Unpatented	AMC454234 AMC454235	8.09	39
KC-25	Unpatented	AMC454235 AMC454236	8.09	40
KC-20 KC-27	Unpatented	AMC454230 AMC454237	8.09	40
KC-27 KC-28		AMC454237 AMC454238	8.09	41
KC-28 KC-29	Unpatented			42
KC-29 KC-30	Unpatented	AMC454239 AMC454240	8.09 8.09	43 44
\C-JU	Unpatented	AIMC434240	0.09	- 44
KC-31	Unpatented	AMC454241	8.09	45

APPENDIX 1—LIST OF PROJECT CLAIMS

Claim Name	Туре	BLM Serial Number	Approxi- mate Area (ha)	#
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	