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Sandfire Resources America Achieves Major Milestones with Completion of Black Butte Copper Project Feasibility Study and Updated Mineral Resource for Lowry Deposit

Feasibility Study underpinned by Maiden Mineral Reserve for the Johnny Lee Deposit of 8.8Mt at 2.6% Cu for 226,100t of copper, underpinning an 8-year life for a state-of-the-art project that either meets or exceeds the stringent Mine Operating Permit conditions

White Sulphur Springs, Montana – October 27, 2020 – Sandfire Resources America Inc. ("Sandfire America" or the "Company") is pleased to announce its maiden Mineral Reserve and the results of the Feasibility Study (the "**Feasibility Study**") for the Johnny Lee deposit at its Black Butte Copper Project in White Sulphur Springs, Montana, USA, pursuant to National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("**NI 43-101**").

The Feasibility Study relates solely to Mineral Reserves located on the Johnny Lee copper deposit, the cornerstone deposit at the Black Butte Copper Project (the "**Johnny Lee Deposit" or the "Project"**).

The Company is also pleased to announce an updated Mineral Resource for the Lowry copper deposit (the "**Lowry Deposit**"), which is located approximately 3km south-east of the Johnny Lee Deposit, pursuant to NI 43-101.

All dollars in this announcement are US dollars unless otherwise stated.

Feasibility Study Highlights:

- Maiden Mineral Reserve of **8.8 million tonnes at 2.6% copper for 226,100 tonnes of contained copper** defined for the Johnny Lee Upper and Lower Copper Zones.
- The Project has been designed to **meet or exceed all of the standards and obligations** required under the Project's stringent Mine Operating Permit conditions.
- The Johnny Lee Deposit underpins an **8-year mine life** and is designed to be mined at **1.2 million tonnes of ore per annum.**
- Forecast production totaling 805,000 dry metric tonnes of copper concentrate containing **189,500 tonnes of copper metal** over the life of the mine.
- Average annual production of **~23,000 tonnes of copper metal** at a **C1 cash cost of US$1.51/lb**.
- The Project is forecast to generate **$1.3 billion in gross sales** and **$518 million in pre-tax net cashflow** during mine operations, based on a copper price of US$3.20/lb.
- The Project has a **pre-tax $NPV_{5\%}$ of $124.9 million** (IRR=17%) and a post-tax $NPV_{5\%}$ of $77.6 million (IRR=13%).
- Average **annual post-tax cashflows of $77.8 million per annum** for the first five years of operations.
- Construction capital cost of **$274.7 million**.

- Updated **Inferred Mineral Resource of 8.3 million tonnes at 2.4% copper for 199,500 tonnes of contained copper** completed for the Lowry Deposit, 3km south-east of Johnny Lee:
    - The updated Mineral Resource is based on updated geological modeling, resource estimation, classification, and mineralogy/recovery assumptions.
    - The Lowry Deposit is not covered by the current environmental permits and will need to undergo a further permitting and approvals process.

Commenting on the Feasibility Study completion and key outcomes, Sandfire America CEO and Project Director Rob Scargill stated: *"The positive outcomes of the Feasibility Study show that we can deliver a robust underground mining project at Black Butte that meets the world's highest environmental standards while at the same time creating jobs, opportunities and significant direct and indirect benefits for the State of Montana.*

"This is one of the highest-grade copper deposits in the world and one of the very few fully-permitted and development-ready copper assets globally. The Feasibility Study delineates a clear pathway to unlocking its value for our shareholders in a manner that is consistent with world-best practice in ESG and community engagement.

"The Project will employ 240 full-time, highly paid employees along with 20-30 full-time contractors as well as providing significant economic benefits for all stakeholders in the local community and Montana at large. We have already commenced pre-construction earthworks on the site employing over 30 Montanans through local contractors, in addition to our own dedicated team.

"We are excited about the opportunity to move this high-quality project forward and position it to meet what is increasingly emerging as a new era of demand for copper driven by its growing use as a key input to renewable and clean energy applications, including the electrification of transportation globally.

"Meanwhile, the updated Mineral Resource for the Lowry Deposit demonstrates the significant exploration potential at the Black Butte Copper Project. The deposit is located just 1.8km from the underground access portal for the Johnny Lee Deposit and is a high priority for our next round of exploration."

Black Butte Copper Project Overview

The Black Butte Copper Project consists of 3,223 hectares of fee simple lands under mineral lease by the Company and 525 unpatented mining claims on U.S. Forest Service Lands (USFS), leased by the Company, totaling 4,037 hectares. The Black Butte Copper Project is located in south-central Montana in Meagher County, 27 km north of White Sulphur Springs.

The Johnny Lee copper deposit was discovered by a joint venture between Cominco American Inc. and Utah International in 1985. The Johnny Lee copper deposit is comprised of two zones of mineralization: an upper copper zone ("**UCZ**") situated at depths of 40m – 210m below surface and an underlying lower copper zone ("**LCZ**") at depths of 340m – 520m below surface.

A mine operating plan ("**MOP**") application for the extraction of mineralized rock from both zones of the Johnny Lee Deposit was submitted to the Montana Department of Environmental Quality ("**MT DEQ**") in December 2015 and, following revisions, was deemed to be complete and compliant. A draft MOP permit was issued by the MT DEQ on September 18, 2017 and the Environmental Impact Statement (**"EIS"**) process started soon thereafter and was completed on March 13, 2020. The MOP proposes underground mining of the Johnny Lee Deposit using a drift and fill mining method and production of a copper concentrate by milling and froth flotation. Mill tailings will be used for underground paste-fill support and the surplus deposited in a double-lined cemented tailings storage facility.

A legal challenge to the issuing of the Mine Operating Permit has been filed in the 14th Judicial Court of Montana. The same parties have also objected to the Company's leasing of mitigation water rights

that have preliminary approval from the Montana Department of Natural Resources and Conservation (MT DNRC). The water rights have to be finalized prior to start of production.

To date, the legal challenge has not resulted in any interference with development activities and construction continues. While the Company does not believe that either of these challenges have any merit, they do have the potential to delay the development timeline.

The Lowry Deposit, a similar style copper deposit to the Johnny Lee Deposit, is located approximately 3km to the south-east of the Johnny Lee Deposit.

For further details about the Project, please go to the Sandfire Resources America Inc. website at www.sandfireamerica.com.

Johnny Lee Deposit - Mineral Reserve

The Mineral Reserve was prepared in accordance with Canadian Institute of Mining and Metallurgy and Petroleum ("**CIM**") Definition Standards and will be supported by a technical report (the "**Technical Report**") pursuant to NI 43-101, to be published and filed on the Company's website and SEDAR profile within 45 days.

A net smelter return ("**NSR**") was calculated for each block in a block model based on metallurgical recovery, grade, and payability factors. Mine design shapes were created to reach a cut-off value of $70/t which was used for guidance to create detailed designs. All mining blocks then had dilution and recovery applied to them and were tested for economic viability. The mining stope and level designs with dilution and mining recovery factors applied determined the Mineral Reserve shown in Table 1.

Table 1 – Mineral Reserve Johnny Lee Deposit

Class	Diluted Tonnes	Cu Grade	Contained Cu Metal (t)
Proven	1,998,000	3.0%	60,700
Probable	6,804,000	2.4%	165,400
Total	**8,802,000**	**2.6%**	**226,100**

Notes:

1. *The qualified person, as such term is defined, for the Mineral Reserve is Brad Evans MAusIMM CP(Mining).*
2. *Effective date: October 19, 2020. All Mineral Reserves have been estimated in accordance with CIM definitions, as required under NI 43-101.*
3. *Mineral reserves were estimated using a $3.10 /lb copper price and a NSR cut-off value of $70/t.*
4. *Tonnages are rounded to the nearest 1,000 t, metal grades are rounded to one decimal place. All units are metric.*
5. *Rounding as required by reporting guidelines may result in summation differences.*
6. *Average metallurgical recovery is 84%*

The Mineral Reserves identified in Table 1 comply with CIM definitions and standards for a NI 43-101 Technical Report. Detailed information on mining, processing, metallurgical, and other relevant factors demonstrate, at the time of the Technical Report, that economic extraction is justified. The Feasibility Study did not identify any mining, metallurgical, infrastructure or other relevant factors that may materially affect the estimates of the Mineral Reserves or potential production. Table 2 below shows the Mineral Reserves broken out by zone.

Table 2 – Mineral Reserves for the Johnny Lee Deposit by Zone

Zone	Class	Diluted Tonnes	Cu Grade	Contained Cu Metal (Tonnes)
UCZ	Proven	1,159,000	2.2%	25,900
	Probable	5,693,000	2.1%	116,900
	Total	6,852,000	2.1%	142,800
LCZ	Proven	839,000	4.1%	34,800
	Probable	1,111,000	4.4%	48,500
	Total	1,950,000	4.3%	83,300
Grand Total	Total	8,802,000	2.6%	226,100

Economic Analysis

The Feasibility Study economic analysis is based on the Johnny Lee Deposit Mineral Reserves. The Feasibility Study does NOT include the Lowry Deposit.

The copper price assumption adopted for the base case is $3.20/lb from the start of production.

The Project's pre-tax NPV at a 5% discount rate is estimated to be US$124.9M with an IRR of 17%. Cash Costs (C1) are estimated to be $1.51/lb of copper. The life-of-mine all-in sustaining cost is estimated to be $1.63/lb of copper. Payback of start-up capital is achieved approximately 3 years from commissioning.

Table 3 – Economic Sensitivity Analysis for the Johnny Lee Deposit

Black Butte Copper Project - FS Case Pre-Tax NPV Sensitivity Impacts					
Sensitivity Variables	Confidence Ranges		$ Millions , Pre-Tax		NPV @ 5%
	Worst	Best	Worst	Best	Point
Cu Selling Price	-10%	10%	$30	$216	$125
Cu Grade	-10%	10%	$33	$214	$125
Cu Recovery	-10%	10%	$33	$214	$125
Concentrate Shipping Costs - Land	10%	-10%	$116	$130	$125
Opex - Mining	10%	-10%	$108	$138	$125
Opex - Process	10%	-10%	$107	$140	$125
Capital - Mining	10%	-10%	$113	$133	$125
Capital - Process & Admin	10%	-10%	$105	$142	$125

Johnny Lee Mineral Reserve Estimation Methodology and Parameters

Mining Methods

The Black Butte Copper Project Johnny Lee deposit contains two zones – the UCZ and the LCZ. Both of these zones are characterized as being high-grade, laying at low angles and with relatively narrow widths. All deposits have anomalous silver and cobalt mineralization; however copper is the only economic product considered in the Feasibility Study.

Geotechnical data was gathered from logging of the diamond drill core performed by Sandfire America geologists as well as part of previous work by MDEng (MDEng, 2015). Specific

geotechnical holes were drilled along the projected main decline and one of the ventilation raises and logged by Mining Plus. Mining Plus in collaboration with Sandfire America geologists undertook a quality assurance and quality control (QA/QC) audit of the data gathered. Acoustic Televiewer and oriented core data were used to determine structural information. In addition to the data logging, multiple rock property tests were performed on different rock types.

The Johnny Lee Deposit will be accessed by a single main ramp driven from surface. The ramp dimensions will be 5m wide by 5m high and excavated with a flat back to maximize the stability of the flat dipping joint sets that are prevalent throughout the Project. The ramp will be excavated at a maximum gradient of -15% from the surface and pass to the east of the UCZ and then spiraling down to the LCZ. Ventilation and secondary egress will be through 3 main ventilation raises.

All material handling will be by trackless underground equipment with 51-tonne haul trucks hauling ore directly from stope areas to either a surface ore pad or the surface crusher.

The mining method will be a combination of drift and fill and cut and fill depending on the height of the orebody. All openings will be completely backfilled with Paste Backfill to allow for the complete extraction of the orebody. In the UCZ where the orebody is wider a Primary-Secondary-Tertiary method, where the tertiary stopes are extracted through an unsupported slash retreat.

Mineral Processing and Metallurgical Test Work

Previous metallurgical test work programs undertaken by the Company indicated that production of a copper concentrate from the LCZ by froth flotation recovered 93.3% to 96.6% of the copper resulting in a concentrate grading 27.0% to 30.8% copper. Tests on UCZ composites during the same test programs showed a wide range of copper recoveries (61.9% to 91.2%) at concentrate grades of 18.5% to 24.5% copper. Mineralogical investigation of UCZ metallurgical composites indicated that copper sulphide liberation was the primary metric that defined metallurgical performance.

Systematic mineralogical investigation of UCZ drill intercepts was undertaken to define the vertical and lateral variability in copper sulphide liberation throughout the entire UCZ. This study also allowed the geometry of the supergene alteration zone (at the intersection of Fault 1 and the brittle-ductile shear zone) to be resolved. The supergene altered zone comprises 2.2% of the total volume of the UCZ.

Based on the mineralogy derived geometallurgical model, 19 PQ diameter (85 mm) diamond drillholes were targeted to intersect the complete range of UCZ copper liberation types. From these drillholes, 21 metallurgical composites were developed, including two composites from the supergene alteration zone.

Comprehensive batch rougher and cleaner flotation tests were completed on all 21 UCZ metallurgical composites to determine the optimum primary grind size, reagent suite, rougher regrind size and flowsheet configuration for UCZ ore. Tests undertaken with site water showed no significant differences to those completed with laboratory tap water. Two rounds of locked-cycle tests were conducted, using a representative subset (seven to eight composites) of the UCZ composites using slightly different regrind sizes and different grinding media. Based on the test work the optimized flowsheet for the UCZ was developed:

Primary grind to 35 µm P80;

Lime addition to rougher flotation circuit to maintain pH = 9.5;

Rougher flotation using aero 3477, mono-sodium phosphate and dextrin;

Regrind of rougher concentrate to 10 µm P80;

Lime addition during regrind to maintain cleaner flotation circuit pH = 9.5;

Additional mono-sodium phosphate and dextrin added during regrind;

Three stage cleaner flotation circuit with cleaner scavenger;

Additional aero 3477 added to cleaner flotation circuit; and

Polyfroth w31 added to cleaner flotation circuit.

The locked-cycle tests on non-supergene altered composites, using the optimized flowsheet recovered 70.6% to 90.1% of the copper into a concentrate assaying 16.9% to 27.1% copper. Locked-cycle testing of a supergene altered UCZ composite recovered 69.8% of the copper into a concentrate assaying 14.1% copper. A blend of the six non-supergene altered composites was used to create an UCZ global composite. Locked-cycle testing of this composite recovered 81.6% copper into a concentrate assaying 24.4% copper.

Given the amount of variability in non-supergene altered UCZ composites, the relationship between copper recovery and categorized proportional geometallurgical core logging, comprehensive geochemistry and systematic mineralogy was evaluated in detail. Of these, mineragraphy-defined copper sulphide liberation metrics showed the best correlation with recovery. The regression-based formula below defines the relationship between variability batch test cleaner copper recovery (from the 19, non-supergene altered composites) with five mineralogy derived metrics:

Variability test Cu cleaner recovery = 94.144 + (0.10615*(A+B)) + (-0.28667*(C+D)) + (-0.26708*E)

A =% Chalcopyrite interlocked with marcasite/siegenite;

B =% Chalcopyrite interlocked with gangue;

C =% Chalcopyrite in ternary grains;

D =% Chalcopyrite in quaternary grains;

E =% pyrite.

There is a robust linear correlation between the variability test cleaner copper recoveries and the cleaner recoveries from the six locked-cycle tests on non-supergene altered UCZ composites using the optimized UCZ flowsheet. This linear correlation is defined by:

Locked-cycle test Cu cleaner recovery = (0.6619 * variability test Cu cleaner recovery) + 31.231

The formulae above were used to convert the mineragraphy metrics from 113, non-supergene altered UCZ mineralogy composites spaced throughout the UCZ (both laterally and vertically) into expected copper recoveries. Inverse distance weighted squared ("**ID2**") interpolation of these copper recovery metrics has been used to create a copper recovery model for the UCZ that has been integrated with the Mineral Resource model. Based on the process outlined above, estimated copper recoveries for the UCZ range from 68.2% to 87.9%.

The supergene altered zone has been assigned a copper recovery estimate of 69.8% based on the locked-cycle test of the supergene altered composite.

A batch, single-stage cleaner flotation test on a LCZ composite, using the UCZ flowsheet, recovered 92.3% copper to a concentrate assaying 26.1% copper. Locked-cycle testing was undertaken using a blend of the UCZ global composite (76%) and the LCZ composite (24%). Copper in the feed was 93.2% recovered into a concentrate grading 21.5% copper. The metallurgical balance indicated that there were no negative synergies between blending the two feed sources. Based on previous and recent test work, a global 93% copper recovery has been assigned to the LCZ.

Analyses of the copper concentrates from locked-cycle testing of UCZ composites has reported potentially deleterious levels of arsenic. There is no correlation between the arsenic concentration of the feed composites and that in the concentrates as only certain arsenic bearing minerals (primarily tennantite) preferentially deport to the concentrate. There is a strong linear correlation between the tennantite percentage of the feed, estimated using systematic mineragraphy, and the arsenic levels in copper concentrates from locked-cycle tests. This correlation is defined by the formula:

Locked-cycle test cleaner concentrate as grade (ppm) = (8048.4 * tennantite%) + 3202.6

This formula has been used to convert the tennantite concentrations for the systematic mineralogy composites into expected arsenic concentrations in copper concentrate. ID2 interpolation has been used to create an arsenic in concentrate block model which has been integrated with the copper

recovery and Mineral Resource models. Based on the tennantite concentrations, arsenic in UCZ concentrates is expected to range from 3,202 to 14,876 ppm.

Based on analyses of the concentrate produced during locked-cycle testing of a master LCZ composite a global arsenic in concentrate value (230 ppm) has been assigned to LCZ ore.

Recovery Methods

Metallurgical test work indicates that the copper in the UCZ and LCZ can be recovered to a concentrate by crushing, grinding, and froth flotation processes. The UCZ ore requires a fine primary grind (38 µm P80) and a very fine regrind (10 µm P80) of the rougher concentrate to achieve optimized recoveries. The LCZ ore does not require such fine grinds to achieve optimized recoveries. However, as it will be blended with UCZ ore in small volumes, the blended ore will be treated using the process as optimized for UCZ ore. Metallurgical test work has demonstrated that there are no reductions in copper recovery to concentrate from UCZ or LCZ ore by blending and processing the blend using the flowsheet optimized for UCZ ore.

Infrastructure

The layout and surface footprint of all aboveground infrastructure for the Project has been designed as part of the MOP application submitted to the MT DEQ. The ground infrastructure in the MOP includes: access roads, site roads, mine portal, ventilation raises, processing plant, reclamation stockpiles, temporary waste rock storage, cemented tailings facility, process water pond, contact water pond, storage water pond, non-contact water reservoir, sub-surface infiltration gallery, power lines, pipelines, workshops, store, offices and parking.

Capital and Operating Costs

Capital Cost Estimates

The Project capital cost estimate has been developed for the Feasibility Study is based upon an Engineer, Procure and Construction Management ("**EPCM**") approach for the construction and commissioning of the Project facilities. This includes mine, plant and infrastructure, the process plant and infrastructure, general mine infrastructure and roads.

A capital cost of $274.7 million, including contingency, has been developed for the Project and includes all costs before the commencement of production. The capital costs have been estimated to a ±15% accuracy. The breakdown of the Project Capital is given in Table 4.

Table 4 – Project Capital cost breakdown

Area	Capital Cost $M
Mining	$65.1
Site Infrastructure	$91.4
Mineral Processing & WTP	$72.7
Project In-directs (EPCM & Owner Costs)	$20.5
Contingencies (mine, process, infrastructure & in-directs)	$25.0
Total Project	**$274.7**

Mining Operating Costs

Operating costs have been developed using the parameters specified in the process design criteria. Annual operating costs and costs per tonne mined has been developed. The mining operating cost estimate has been developed on the basis of ore to the ROM pad at the same rate as the processing plant name plate of 1.2 million tonnes per annum. The operating cost estimate is $27.8 million per annum or $22.82 per tonne of ore supplied to the ROM.

Process Plant Operating Costs

Operating costs have been developed using the parameters specified in the process design criteria. Annual operating costs and costs per tonne milled has been developed. Operating costs for the treatment plant have been estimated to an accuracy of ±15%. The costs are presented in United State dollars (USD$) and are based on prices obtained during the second quarter of 2019 (2Q19) and exclude the VAT cost components.

The processing operating cost (excluding freight) estimate has been developed on the basis of a process plant feed tonnage of 1.2 million tonnes per annum. The processing operating cost (excluding freight) estimate is $29.43 million per annum or $25.52 per tonne milled.

Risks Affecting Potential Development

Environmental

The Company conducted exploration under Exploration License #00710 issued by the MT DEQ. Regulations include the bonding of exploration disturbances to ensure reclamation is completed. The Company currently has an obligated bond of $137,365 for completion of the reclamation of the 2018/2019 Phase 2 and earlier drill programs. These obligations will be released when the reclamation is completed by the Company and inspected and approved by the MT DEQ. In addition, there are approximately 37 monitoring wells/test wells, and one water well, and 15 piezometers currently in place that will ultimately need to be removed during closure and reclamation.

Potential short- and long-term impacts caused by mining activities were evaluated from several perspectives: impacts to the environment during operation and closure, issues or impacts that could materially affect the mine's ability to extract the Mineral Reserves, and socio-economic impacts.

Potential impacts to the environment were addressed in detail in the Environmental Impact Statement (MT DEQ, 2019 and 2020).

In addition to the approved MOP there are 27 other permits or plans that need to be approved by Federal, Montana State, or Meagher County authorities. These permits and plans cover: water quality, water rights, water supply, wetlands and streambed preservation, aquatics monitoring, dam safety, sewerage disposal, air quality, invasive vegetation, tribal communications, cultural resources, community impact, mining infrastructure, mining operations and emergency response. Work has been initiated on all but four of these permits/plans (which are largely administrative). To date, five permits/plans have been approved, nine applications have been submitted and nine applications are in the process of being compiled.

Legal

The MOP was designed to meet the requirements of the Montana Metal Mine Reclamation Act and the rules and regulations governing the act. Additional permits, including a Montana Pollutant Discharge Elimination System ("**MPDES**"), were obtained through the MT DEQ.

Compliance with the applicable legal requirements is demonstrated by the MT DEQ's approval of the following: MOP, Air Quality Permit, MPDES and construction storm water permit. A draft Environmental Impact Statement was published by the MT DEQ on March 11, 2019, as required under the Montana Environmental Policy Act, and finalized on March 13, 2020. Subsequently, the MT DEQ issued a Record of Decision for the mine on April 9, 2020, identifying MT DEQ's decision, the reasons for the decision and special conditions surrounding the decision and its implementation.

As previously reported, a legal challenge against the Project regarding the mine operation permit continues with a potential hearing expected in late October in front of Judge Spaulding of the 14th Judicial Court. To date, the legal challenge has not resulted in any interference with development activities and construction continues.

Leasing of mitigation water rights has preliminary approval from the Montana Department of Natural Resources and Conservation (MT DNRC). However, there are objections which will slow down the process. The water rights have to be finalized to start production. While we do not believe that either

of these challenges have any merit, they do have the potential to delay the project development timeline.

For additional information, please refer to the document entitled "*Management Discussion and Analysis for the year ended June 30, 2020*", which the Company filed on the Company's SEDAR profile at www.sedar.com on August 25, 2020.

Lowry Deposit – Mineral Resources

The updated Mineral Resource statement for the Lowry Deposit is summarized in Table 3. The Mineral Resource statement is supported by recent updates to the geological modeling, resource estimation, and mineralogy with recovery assumptions in addition to historic drilling, analyses, and studies. The Lowry Deposit contains no Mineral Reserves, and therefore is not included in the Feasibility Study. The Lowry Deposit has a much lower density of drilling than the Johnny Lee Deposit. Mineralization is hosted in two distinct zones of > 1.2% Cu mineralization. These zones are termed the Lowry middle copper zone ("LMCZ"), and the Lowry lower copper zone ("LLCZ").

A total of 51 drillholes have been used for the 2020 Lowry Deposit Mineral Resource. Drillhole intersection spacing in the LMCZ ranges from 40 – 100 m. The LMCZ is hosted by a succession of massive sulphide and pyritic shale with interbedded conglomerate, carbonaceous shale and shale.

Ten mineralogical composites from the LMCZ have been investigated (McArthur, 2019). Using the regression-based relationship derived for the Johnny Lee Deposit UCZ, an average Cu recovery of 86% is estimated for the Lowry Deposit in both the LMCZ and the LLCZ.

The >1.2% Cu zones are surrounded by >0.25% Cu mineralization referred to as Halo mineralization. The Halo mineralization is largely confined to the host unit but does transgress the hanging wall and footwall contacts in places.

Many of the drillholes that intersected the LMCZ were stopped-short of the LLCZ, consequently drillhole spacing in the LLCZ is larger than that of the LMCZ, ranging from 60 – 200m.

Mineral Resource classification was assigned to the Lowry Deposit block model by the QP based upon: geological knowledge, continuity of Cu grade within mineralized zones, thickness of the mineralized zones, confidence in the underlying data (logging, assay, and physical testing), spatial continuity as determined through variography for Cu, recovery data, kriging quality variables (kriging efficiency, average distance to samples, and estimation run pass), and drill sample spacing on a domain basis. Blocks within the LMCZ and LLCZ have been categorized as Inferred classification consistent with NI 43-101 and the CIM Definition Standards. Mineralized material in the LUCZ and the halo mineralization was not deemed acceptable for classification at this time but represents mineralization potential with future studies. A combination of wireframe volumes and scripting of specific blocks was used to apply the appropriate block classification of Mineral Resource categories.

Summary Mineral Resources have been estimated and reported using an economic cut-off grade (CoG) applied to copper as estimated in the resource block model. This Mineral Resource statement is supported by drilling, analyses, geological modelling, and extensive metallurgical studies to provide updated recoveries.

Table 5 – Lowry Deposit Mineral Resource effective October 15, 2020 – SRK Consulting (U.S.), Inc.

Category	Quantity (Mt)	Cu (%)	Total Metal (kt)
LMCZ			
Inferred	5.7	2.5	144.5
LLCZ			
Inferred	2.6	2.1	55.0
Combined LMCZ + LLCZ			
Inferred	8.3	2.4	199.5

Source: SRK, 2020

- The effective date for this Mineral Resource is October 15, 2020. All significant figures are rounded to reflect the relative accuracy of the estimates. Copper assay values were capped where appropriate;
- Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. Inferred Mineral Resources have a high degree of uncertainty as to their economic and technical feasibility. It cannot be assumed that all or any part of an Inferred Mineral Resources can be upgraded to Measured or Indicated Mineral Resources;
- Metallurgical recovery of copper has been assigned to the Lowry Deposit using the mean recovery of 86% Cu based on mineralogical and regression-based analyses;
- To demonstrate reasonable prospects for eventual economic extraction of Mineral Resources, a cut-off grade of 1.20% copper based on metal recoverability assumptions, long-term copper price assumptions of $3.20/lb, mining costs, processing costs, G&A costs totaling $71/t;
- There are no known legal, political, environmental, or other risks that could materially affect the potential development of the Mineral Resources other than those outlined in the Management Discussion and Analysis of the June 2020 Company Quarterly Report and identified above. All Mineral Resources are located within land currently under control or lease to Sandfire Resources America Inc.

Table 6 shows the tabulated grade-tonnage curve data to assess the sensitivity of Mineral Resources to changes in CoG.

Table 6 - Tabulated Grade-Tonnage Data by Cut-off Grade

Cut-off	cu_pct	Tonnage	Increment	Increment	Inc Grade	Inc Tonnage
0.25	2.29	9,020,421	0.25	0.50	0.41	2,807
0.50	2.30	9,017,614	0.50	0.75	0.67	59,156
0.75	2.31	8,958,458	0.75	1.00	0.90	249,515
1.00	2.35	8,708,943	1.00	1.25	1.15	604,577
1.25	2.44	8,104,366	1.25	1.50	1.37	837,993
1.50	2.56	7,266,373	1.50	1.75	1.63	827,930
1.75	2.68	6,438,443	1.75	2.00	1.88	1,079,210
2.00	2.84	5,359,232	2.00	2.25	2.12	1,380,083
2.25	3.09	3,979,150	2.25	2.50	2.36	865,160
2.50	3.29	3,113,990	2.50	2.75	2.62	816,074
2.75	3.53	2,297,915	2.75	3.00	2.87	505,766
3.00	3.71	1,792,150	3.00	3.25	3.12	526,143
3.25	3.96	1,266,006	3.25	3.50	3.37	349,693
3.50	4.18	916,314	3.50	3.75	3.62	250,177
3.75	4.39	666,137	3.75	4.00	3.86	210,985
4.00	4.63	455,152	4.00	>4.00	4.63	455,152

Comparison to Previous Mineral Resource Estimates

The previous Mineral Resource for the Lowry Deposit was completed in 2013 (effective date July 12, 2013) as part of the Company's Preliminary Economic Assessment (the "**PEA**"). Continued flotation testing since the release of the PEA report has shown unfavorable results for polymetallic products other than Cu given the current economic assumptions. Therefore, for the 2020 Mineral Resources at the Lowry Deposit, Co, Ag, and Au have been excluded.

The 2020 updated classification for Lowry Deposit Mineral Resources is aligned with the 2019 Johnny Lee Deposit classification. This has resulted in a change from the 2013 Lowry Deposit Mineral Resources which reported a combination of indicated and inferred Mineral Resources at the time. Updated 3D wireframing of the major mineralized zones, spatial continuity analyses, and a review of estimation criteria has resulted in the updating of Lowry Deposit resources to be entirely classified as inferred Mineral Resources.

The total quantity of Mineral Resources has increased in 2020 from the 2013 statement. This is due to inclusion of the LLCZ, which was not part of the 2013 resource estimate, as well as updated mineralized 3D wireframes and the estimation of Specific Gravity ("SG") values compared to assignment of mean SG data in 2013.

The average Cu grade has decreased in the 2020 Mineral Resources compared to the 2013 statement. This is due to changes in the composite size from 1.0 m in 2013 to 1.5 m in 2020, use of ordinary kriging ("**OK**") estimation method in 2020 compared to Inverse Distance Weighting ("IDW") to the third power, improved search neighborhood incorporating multiple samples and search ellipsoid aligned with the dominant directions of mineralization, reduced CoG of 1.2% Cu from 1.6% Cu in 2013, and modified domains constraining estimation to zones of approximately greater than 1.2% Cu.

Lowry Resource Estimation Methodology and Parameters

Mineral Resource estimation was performed for the Lowry Deposit by SRK Consulting (U.S.) Inc. ("**SRK**") using Maptek™ Vulcan™ software. The focus of estimation was on Cu as the key economic variable of interest. SRK performed an extensive review of all historic geological and drilling data on the Lowry Deposit including QA/QC and general data verification. Estimation of Cu and SG was performed using a combination of OK and IDW to the power of two based on a multi-pass method within modeled domains. Domains were modeled using a combination of lithostratigraphic data and grade shelling.

In areas of limited data that did not meet the minimum criteria for estimation in the final pass, a scripted value was assigned to the block variable by domain. The scripted value assigned is the variable mean from capped composites by domain. A limited number of blocks in the Lowry block model met this criterion and were located primarily in the LUCZ domains and are excluded from Mineral Resource calculations.

SG was estimated in the block model using a two-pass method of IDW2 with varying search neighborhoods by domain. As with quality variables, blocks not estimated in the last pass were scripted a mean value based on composite data. As there is less SG data compared to quality analytical variables, a greater number of blocks were scripted with the domain mean.

Each mineralized domain has a unique search neighborhood based on the Cu variogram, mineralization thickness, and data spacing within the domain. For most domains, the directionality of the search ellipsoid was varied by block based on the average orientation of the domain's modeled wireframe.

The primary mineralized domains of LMCZ and LLCZ show that the majority of blocks were populated in the first pass with all remaining blocks estimated in the second pass. In the LUCZ, due to limited data, the percentage of blocks estimated in the first few passes show that portions of the domain exhibit limited confidence in estimated quality while large portions are low confidence and thus populated in either a large search pass or with scripted mean values. As a result, the LUCZ does

not contain Mineral Resources at this time but represents mineralized potential for targeted future work programs at the Lowry Deposit.

Lowry Deposit Copper Recovery Estimation

Mineralogical test work at the Lowry Deposit was used for a regression-based analysis derived from similar mineralization style observed at the Johnny Lee Deposit. The resultant outcome shows an 86% recovery of Cu assumption. For the purposes of determining Mineral Resources, the average of 86% recovery was applied in the determination of total contained Cu.

Lowry Deposit Determination of Cut-off Grade for Resource

To demonstrate reasonable prospects of eventual economic extraction of Mineral Resources at the Lowry Deposit, a cut-off grade was applied that accounts for assumed metallurgical recovery of Cu, operational costs, and long-term market-driven Cu pricing. Metallurgical recovery was assigned at 86% Cu recovery based on mineralogical test work and regression analysis based on mineralogical similarities with work done at the nearby Johnny Lee Deposit. Operational costs were assumed consistent with work completed at Johnny Lee Deposit with a US$71/tonne assumed cost. Cu price assumptions are based on US$3.20/lb derived from a mean of multiple market-based long-term pricing forecasts. Using these assumptions, a cut-off grade of 1.2% Cu was applied to the Lowry Deposit.

It is the opinion of the QP that the estimation for Cu and SG in the Lowry block model is appropriate given the data spacing, geological model, and data variability per domain. Some domains contain limited data, therefore were estimated using a simplified neighborhood and estimation method such as IDW2. In domains that are better informed with drilling data, OK was used when an acceptable variogram was calculated.

Qualified Persons

The technical information contained in this news release related to the Johnny Lee Deposit has been reviewed and approved by Erik Ronald, M. Eng., P.Geo, RM-SME, Principal Resource Geology Consultant, SRK, Brad Evans, MAusIMM, CP(Mining), and Deepak Malhotra Ph.D. RM-SME, Resource Development Inc. Messrs. Ronald, Evans and Malhotra are qualified persons, as such term is defined in NI 43-101 for Mineral Resources, Mineral Reserves and metallurgical processing respectively. Messrs. Ronald and Malhotra are independent of the Company. For additional detailed information on the key assumptions, parameters and methods used to estimate the Mineral Reserves, along with other information about the Johnny Lee Deposit, please refer to the Technical Report to be filed.

The technical information contained in this news release related to the Lowry Deposit has been reviewed and approved by Messrs. Ronald and Malhotra. The Mineral Resource block model and estimation for the Lowry Deposit was reviewed and accepted by Messrs. Ronald and Malhotra acting as qualified persons for Mineral Resources. The final Mineral Resource classification and calculations were performed by Mr. Ronald using Maptek's Vulcan™ software. Domaining of copper mineralization was performed by Sandfire America staff using Leapfrog Geo™ software and reviewed by the qualified persons.

The qualified persons referred to above have verified the data disclosed in this news release, including sampling, analytical, and test data underlying the information or opinions contained in this news release.

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Additional information on Sandfire Resources America Inc. can be viewed on SEDAR under the Company's profile at www.sedar.com or on Sandfire Resources America Inc.'s website at www.sandfireamerica.com

Cautionary Note Regarding Forward-Looking Statements: Certain disclosures in this document constitute "forward looking information" within the meaning of Canadian securities legislation, including statements regarding the Mineral Resource and Mineral Reserve estimates, the proposed mining plans and recovery methods, estimates of capital, operating costs and sustaining, estimates of other costs and payments, the estimated amount of future production, both produced and metal recovered, cash flow, internal rate of return (IRR), pre and post-net present value, mine life, payback, gross sales, estimated recoveries, the number of persons to be employed by the Project and economic returns and benefits from an operating mine, the Feasibility Study and the expected timing of filing thereof, and expected outcomes.

Forward-looking statements include statements that are predictive in nature, are reliant on future events or conditions, or include words such as "expects", "potential", "anticipates", "plans", "believes", "considers", "significant", "intends", "targets", "estimates", "seeks", attempts", "assumes", and other similar expressions.

In making these forward-looking statements, the Company has applied certain factors and assumptions that the Company believes are reasonable, including those assumptions previously set out in this news release and the following assumptions: that the Company will receive required regulatory approvals, the Company's successful advancement of the Black Butte Copper Project, the expected positive results from the Project based on the estimates and findings contained in the Feasibility Study, that the Company will continue to be able to access sufficient funding to execute its plans, that the Company is able to procure equipment and supplies in sufficient quantities and on a timely basis, that the Company's exploration and development activities on the Black Butte Copper Project will not be affected by actions of environmental activists or other special interest groups, that the results of exploration and development activities will be consistent with management's expectations, the assumptions underlying internal rates of return and net present value are valid, that capital costs and sustaining costs will be as estimated, that the assumptions underlying Mineral Resource and Mineral Reserve estimates are valid, that no unforeseen accident, fire, ground instability, flooding, labor disruption, equipment failure, metallurgical, environmental or other events that could delay or increase the cost of development will occur, that the current price and demand for copper and other metals will be sustained or will improve; that general business and economic conditions will not change in a materially adverse manner; and the continuity of economic and political conditions and operations of the Company.

However, the forward-looking statements in this document are subject to numerous risks, uncertainties and other factors, including factors relating to the Company's operation as a mineral exploration and development company and the Black Butte Copper Project, that may cause future results to differ materially from those expressed or implied in such forward-looking statements, including those risks previously set out in this news release and the following risks: the risk that any of the assumptions on which the forward looking information is based prove to be incorrect or invalid, the risk of unexpected variations in Mineral Resources and Mineral Reserves, grade or recovery rates, the possibility of cost overruns or unanticipated costs and expenses, uncertainties relating to the availability and costs of financing needed in the future, that actual costs of restoration activities are greater than expected and that changes in Project parameters as plans continue to be refined result in increased costs, results of exploration and development activities will not be consistent with management's expectations, uncertainties involved in the interpretation of drilling results and geological tests; delays in obtaining or inability to obtain required government or other regulatory approvals or financing, failure of plant, equipment or processes to operate as anticipated, the risk of accidents, labor disputes, inclement or hazardous weather conditions, unusual or unexpected geological conditions, ground control problems, earthquakes, flooding; interference with the Company's exploration or development activities by environmental activists or other special interest groups; inability to procure equipment and supplies in sufficient quantities and on a timely basis; the risk that estimated costs will be higher than anticipated and the risk that the proposed mine plan and recoveries will not be achieved, the risks disclosed in the Company's most recently filed Management Discussion and Analysis and the Company's other continuous disclosure filings

filed under the Company's profile at www.sedar.com and all of the other risks generally associated with the development and operation of mining facilities.

There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. Readers are cautioned not to place undue reliance on forward-looking statements. The Company does not intend, and expressly disclaims any intention or obligation to, update or revise any forward-looking statements whether as a result of new information, future events or otherwise, except as required by law.

*CAUTIONARY NOTE TO US READERS. As a Canadian reporting issuer, the Company is subject to rules, policies and regulations issued by Canadian regulatory authorities and is required to provide detailed information regarding its properties including mineralization, drilling, sampling and analysis, security of samples and Mineral Resource and Mineral Reserve estimates. In addition, as a Canadian reporting issuer, the Company is required to describe Mineral Resources associated with its properties utilizing Canadian Institute of Mining, Metallurgy and Petroleum ("**CIM**") definitions of "indicated" or "inferred", which categories of resources are recognized by Canadian regulations but are not recognized by the United States Securities and Exchange Commission ("**SEC**").*

The SEC allows mining companies, in their filings with the SEC to disclose only those mineral deposits they can economically and legally extract or produce. Accordingly, information contained in this News Release regarding our mineral deposits may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations of the Commission thereunder.

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.