# Technical Report on the Joe Mann Project, Northwest Québec, Canada Report for NI 43-101

Doré Copper Mining Corp.

SLR Project No: 233.03410.R0000 September 10, 2021



#### Technical Report on the Joe Mann Project, Northwest Québec, Canada

#### SLR Project No: 233.03410.R0000

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Effective Date – July 21, 2021 Signature Date - September 10, 2021

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## **1.0 SUMMARY**

### **1.1 Executive Summary**

SLR Consulting (Canada) Ltd (SLR) was retained by Doré Copper Mining Corp. (DCM) to prepare an independent Technical Report on the Joe Mann Project (the Project, the Property, or Joe Mann), located in Northwest Québec, Canada. The purpose of this Technical Report is to support the disclosure of a Mineral Resource estimate for the Project. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). SLR visited the Property on June 16, 2021.

DCM is a Québec-based copper-gold exploration company formed in December 2019 and is a reporting issuer in Alberta, British Columbia, Saskatchewan, and Ontario. The common shares of DCM trade on the TSX Venture Exchange (TSX-V) and the OTC Markets Group (OTCQX-DRCMF). In addition to the Property, DCM has a portfolio of exploration properties and former operating mines, primarily in the Chibougamau area of Québec.

DCM, through its wholly owned subsidiary CBAY Minerals Inc. (CBAY), entered into an option agreement with Ressources Jessie Inc. (Ressources Jessie) in January 2020 to acquire a 100% interest in the Project. DCM also owns several claims adjacent and near the optioned land.

The Joe Mann deposit is located 60 km south of Chibougamau and was previously intermittently mined by underground methods from 1956 to 2007. The former Joe Mann Mine was flooded in 2008. The Property is located approximately 60 km southwest of DCM's wholly owned, currently not operational, Copper Rand Mill, which has a capacity of 2,700 tonnes per day (tpd). In late 2020, DCM completed a drilling campaign totalling 8,343 m to primarily evaluate the continuity of the Main Zone below the underground workings at depth, as well as the down-dip extension of the West Zones of the Joe Mann deposit.

A summary of the Mineral Resources, effective July 21, 2021, for the Project is presented in Table 1-1. Inferred Mineral Resources at the Property are estimated to total 608,000 tonnes (t) at a gold grade of 6.78 g/t Au, copper grade of 0.24% Cu and containing 133,000 ounces (oz) Au and 3,281,000 pounds (lb) Cu. The Mineral Resources conform to Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM (2014) definitions).

Catagoriu	Tonnage	Grade		Contained Metal	
Category	(000 t)	(g/t Au)	(% Cu)	(000 oz Au)	(000 lb Cu)
Inferred	608	6.78	0.24	133	3,281

# Table 1-1:Summary of Mineral Resources – July 21, 2021Doré Copper Mining Corp. – Joe Mann Project

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.

2. Mineral Resources are estimated at a cut-off grade of 2.60 g/t Au.

3. Mineral Resources are estimated using a long term gold price of US\$1,800/oz Au, metallurgical gold recovery of 83%, and an exchange rate of US\$0.75/C\$1.00.

4. A minimum mining width of 1.2 m was used. A small number of lower grade blocks within Main 01 have been included for continuity.

5. Bulk density is 2.84 t/m<sup>3</sup>.

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- 6. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- 7. Numbers may not add due to rounding.

The Qualified Person (QP) is not aware of any environmental, permitting, legal, title, taxation, socioeconomic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

#### 1.1.1 Conclusions

SLR offers the following conclusions:

#### **1.1.1.1 Geology and Mineral Resources**

- Good potential exists to increase the Joe Mann Mineral Resource base, and additional exploration and technical studies are warranted.
- There is good understanding of the geology and nature of gold mineralization at the Property. The Project is a greenstone-hosted quartz carbonate vein deposit, which consists of three principal mineralized zones with similar morphologies, structural controls, and mineralization styles.
- The sample collection, preparation, analytical, and security procedures, as well as the quality assurance/quality control (QA/QC) program as designed and implemented by DCM is adequate, and the assay results within the database are suitable for use in Mineral Resource estimation.
- The QA/QC program indicates very good precision, negligible sample contamination, and a low bias at the primary laboratory. Field duplicate results, however, are inconclusive as the sample results do not address the grade range of interest. The LeachWELL results from the check assay program identify differences between the two assay techniques.
- Inferred Mineral Resources are estimated to total 608,000 t at a gold grade of 6.78 g/t Au, copper grade of 0.24% Cu and containing 133,000 oz Au and 3,281,000 lb Cu.

#### **1.1.1.2 Mineral Processing**

- DCM has not initiated any metallurgical testing at Joe Mann.
- The DCM's wholly owned Copper Rand Mill is currently not operational. Gold metallurgical recoveries from 2005 to 2007, when the Copper Rand Mill was operating, were reported to be consistently between 82.71% and 84.87%.
- The recovery of gold and silver by gravity compared to the metals recovered by flotation in the chalcopyrite concentrate ranged between 39.8% and 45.9%.
- Moisture levels in the concentrate varied between 8% and 12%, depending on the type of filter used during production.
- During the period from 2005 to 2007 in which the ore was treated at the Copper Rand Mill, there were no processing factors or deleterious elements that had a negative effect on the extraction or the concentrate.



#### 1.1.2 Recommendations

SLR offers the following recommendations:

#### 1.1.2.1 Geology and Mineral Resources

 There is potential to increase the Mineral Resource base at Joe Mann, and additional exploration and technical studies are warranted. SLR has reviewed and concurs with DCM's proposed work, exploration programs, and budgets. Joe Mann is part of DCM's planned hub and spoke strategy to restart its Copper Rand Mill with Joe Mann and other deposits in the region providing ore. DCM plans to include Joe Mann Mineral Resources within a preliminary economic assessment (PEA) alongside other DCM assets. Estimated expenses directly related to Joe Mann are included in the Table 1-2, as are details of the recommended Phase I program.

	•	
ltem	Cost (C\$)	
Head Office Expenses & Property Holding Costs	1,600,000	
Project Management & Staff Cost	80,000	
Travel Expenses	20,000	
Permitting & Environmental Studies	250,000	
PEA Social/Consultation	100,000 25,000	
Subtotal	2,075,000	
Contingency (10%)	207,500	
Total	2,282,500	

Table 1-2:Proposed Budget – Phase IDoré Copper Mining Corp. – Joe Mann Project

Future work pertaining to Phase II will be incorporated into a Feasibility Study (FS) and is planned to commence in Q2 2022. A Phase II exploration program will include an underground diamond drilling program at 50 m spacing over a strike length of 1,000 m and a depth of 250 m for a total of 100 holes after dewatering and drill bay rehabilitation is completed. Permitting, environmental, and technical studies will be completed to support a FS. As with the PEA, the FS will pertain to a hub and spoke operation where other mines will likely commence operation prior to Joe Mann and the FS and other non direct costs are the portion represented by Joe Mann activities. The estimate of the contingent Phase II program is presented in Table 1-3.

# Table 1-3:Proposed Budget – Phase IIDoré Copper Mining Corp. – Joe Mann Project

ltem	Cost (C\$)	
Head Office Expenses and Property Holding Costs	1,900,000	
Project Management and Staff Cost	200,000	



ltem	Cost (C\$)
Travel Expenses	30,000
Dewatering	5,500,000
UG Drill Bay Rehab	1,000,000
Diamond Drilling (20,000 m)	2,400,000
Assaying	100,000
Mineral Resource Estimate Update	75,000
Metallurgical Studies	20,000
Permitting/Environmental Studies	200,000
FS	300,000
Social/Consultation	80,000
Subtotal	11,805,000
Contingency (10%)	1,180,500
Total	12,985,500

2. Review the QA/QC protocol to include certified reference material (CRM) that is representative of the cut-off grade and the average grade of the Main and West Zones.

- 3. Include pulp and coarse duplicate samples in future programs, to help understand the field duplicate sample results.
- 4. Send approximately 5% of the pulps assayed at the primary laboratory to an accredited second laboratory.
- 5. Increase the proportion of duplicate sample pairs with grades above the cut-off grade.
- 6. Investigate and resolve the discrepancies observed in fire assay results versus LeachWELL results for all grade ranges at the SGS laboratory in Val-d'Or, Québec (SGS).
- 7. Work with the primary laboratory (SGS) to determine if field duplicate and check assay results from Joe Mann can be improved with procedural modifications.
- 8. Prepare quarterly and yearly QA/QC reports which evaluate longer term trends and contextualize results from the individual properties.
- 9. Verify historic drill hole assay values outside the mineralized wireframes.
- 10. Migrate from a Microsoft Excel database to an industry standard database management system.
- 11. Investigate the observed grade trend and plunges at Joe Mann following additional exploration drilling.
- 12. Continue surface exploration work including follow-up geophysical surveys.



#### 1.1.2.2 Mineral Processing

- 1. Should the existing Copper Rand Mill be used for processing mineralization from Joe Mann, consider assessing the overall plant throughput, infrastructure requirements, and process modifications to achieve the expected gold recoveries.
- 2. Conduct a metallurgical test work program to better understand metallurgical performance and to confirm the metallurgical response and gold recoveries observed in historical operations.

#### 1.1.2.3 Permitting

1. Initiate a plan to dewater the former Joe Mann Mine by completing the required studies prior to applying for an attestation of exemption permit.

## **1.2** Technical Summary

#### **1.2.1** Property Description and Location

The Property is located approximately 60 km south of the town of Chibougamau in Fancamp, La Dauversière, Gamache, and Rohault Townships. The Project is centred on the former Joe Mann Mine with UTM and 83 Zone 18 coordinates – 540,000 mE and 5,481,800 mN.

#### 1.2.2 Land Tenure

Land tenure totals 2,781 hectares (ha) within four groups of non-contiguous mineral titles including 75 claims, two mining concessions, and one mining lease. CBAY, owns 22 of these claims (767 ha) and the remaining mineral titles (2,014 ha) are under an option agreement between DCM and Ressources Jessie covering the former Joe Mann Mine area (Joe Mann Option Property). All mineral titles are in good standing.

#### **1.2.3** Existing Infrastructure

Most of the infrastructure on the former Joe Mann Mine site (closed in 2007) has been kept in place and is in good condition. The key current infrastructure includes:

- Two old shafts (Headframe #1 has been removed and Headframe #2 with hoist in place)
- Office building
- Core logging facility
- Outdoor core storage area
- Garage
- Gatehouse and gate
- Connection to the provincial hydroelectric grid
- Water (non-potable)

#### 1.2.4 History

Chibougamau Explorer Ltd., which became Anacon Mines in 1954, began exploration on the Property in 1951, with the commencement of mining activities occurring in 1956. Anacon Mines operated the former Joe Mann Mine until 1960 at which point it was abandoned for a period of 13 years. Chibex Mines Ltd.

(Chibex) acquired the former Joe Mann Mine in 1970, commencing a ramp and dewatering in 1973-74 and production in 1975, ultimately ceasing activities in 1976 due to financial difficulties and recovery issues. In 1980, Meston Lake Resources Inc. (Meston Lake) acquired the former Joe Mann Mine property from Chibex. Société de Développement de la Baie James (SDBJ) became a partner in the former Joe Mann Mine project in 1981. In 1983, Campbell Resources acquired a minority position in Meston Lake and became the operator of the former Joe Mann Mine project. In 1987, SDBJ withdrew, and Campbell Resources became the sole owner of the former Joe Mann Mine, after acquiring all the shares of Meston Lake. Campbell Resources continued to hold the former Joe Mann Mine property until 2007, processing Joe Mann ore at Campbell Resources' Merrill Mill until 2004 and then at Copper Rand Mill from 2005 to 2007

In 2007, Gold Bullion Development Corp. (Gold Bullion), now Granada Gold Mine Inc., optioned the former Joe Mann Mine property from Campbell Resources and commenced underground exploration. Gold Bullion allowed the former Joe Mann Mine to flood during August 2008. In December 2008, Campbell Resources filed for bankruptcy protection and in January 2009 obtained creditor protection under the Companies' Creditors Arrangement (CCAA). Gold Bullion did not pursue its offer to purchase the former Joe Mann Mine property.

Ressources Jessie, a private company, acquired the former Joe Mann Mine in July 2012 from the insolvency trustee. Ressources Jessie has only conducted surface exploration work on the Property.

#### 1.2.5 Geology and Mineralization

The Property is situated in the northeastern part of the Abitibi Subprovince, which is one of the largest and best preserved Archean age greenstone belts in the world and hosts numerous gold and base metal deposits. On a large scale, the stratigraphy of the Abitibi Greenstone Belt (AGB) is regarded as laterally continuous mafic and felsic volcanic units unconformably overlain by successor basins. The AGB is renowned for its numerous gold deposits, which are predominantly observed in the southern zone along major faults, such as the Cadillac-Larder Lake and the Destor-Porcupine-Manneville fault zones (Daigneault et al., 2002; Bateman et al., 2008). Most gold deposits are orogenic, formed during the syntectonic period, such as the Lamaque-Sigma deposit (Taner and Trudel, 1991).

The Property is in the Chapais-Chibougamau region, which is in the northeastern part of the AGB of the Superior Province. It is hosted in the middle of the Obatogamau Formation, which is a thick (three kilometres to four kilometres) volcanic unit, composed of mafic to intermediate lava flows and comagmatic gabbro sills. The Obatogamau Formation is recognized over 150 km in the E-W direction. In the western portion of the region, the Obatogamau Formation is intruded by the Opawica River anorthosite complex.

At the mine-scale, the geology is dominated by basalt flows and gabbro sills (Dion and Guha, 1994). Of a more secondary nature, many horizons of volcaniclastic mafic to felsic sediments are observed at the point of contact with the lava flows. The Joe Mann deposit is a structurally controlled deposit hosted by the Opawica-Guercheville deformation zone. This major E-W trending deformation corridor is approximately two kilometres wide and extends for over 200 km (Tait, 1992a; Pilote, 1998; Leclerc et al., 2012).

The primary mineralized zones mined at the former Joe Mann Mine include the Main, South, and West Zones. These three subvertical E-W (N275°/85°) ductile-brittle shear zones are sub-parallel to stratigraphy and to one another, with up to 140 m to 170 m of separation between them. These shear zones are hosted within a stratigraphic package composed of Fe-Mg carbonate and sericite altered gabbro sills,



sheared basalts, and intermediate to felsic tuffs intruded by various felsic intrusions. The Joe Mann gold mineralization is hosted by decimetre scale quartz-carbonate veins (Dion and Guha 1988). The veins are mineralized with pyrite, pyrrhotite, and chalcopyrite disposed in lens and veinlets parallel to schistosity, and occasionally visible gold.

There are some other minor, mineralized structures e.g., North and South South Zones with limited vertical and horizontal extensions. The North Zone is subparallel to, and approximately 37 m north of, the Main Zone. The North Zone is discontinuous with veins averaging approximately 30 cm. The South South Zone is approximately 300 m south of the Main Zone. The Far West Zone is located approximately 900 m west along strike from the westernmost p of the Main Zone, with a vertical depth of 460 m and strike length of 300 m. The stratigraphy of the Far West Zone is oriented east-west (N285°) with tops or polarity towards the southeast. Far West Zone mineralization is associated with quartz veins hosted within massive to schistosed basalt, gabbro and/or aphanitic rhyolite. The Far West Zone mineralization consists of chalcopyrite, magnetite, pyrite, pyrrhotite, and visible gold.

#### **1.2.6 Exploration Status**

In late 2020, DCM completed 8,343 m of drilling on the Property. The results confirmed the high grade downdip extension of the West Zone and the continuity of the Main Zone below the underground workings of the former Joe Mann Mine. Additionally, the results highlighted the high grade potential of the Far West Zone. SLR understands that DCM is evaluating the potential for dewatering the former Joe Mann Mine which would permit a more efficient drilling of the Main and West Zone extensions at depth.

DCM plans on continuing to evaluate the exploration potential of its large land package and undertake underground drill programs aimed at expanding Mineral Resources at the Project.

#### **1.2.7** Mineral Resources

Mineral Resource estimates for the Project were prepared by SLR using available drill hole data as of July 21, 2021. Mineral Resource estimates are based on 461 assays from 52 drill holes (17,622 m) completed from 2004 to 2021.

Mineralization domains representing vein structures and clusters within structural groups were defined in Leapfrog Geo software, while sub-block model estimates were completed within Leapfrog, using full-length capped composites and a multi-pass inverse distance cubed (ID<sup>3</sup>) interpolation approach. Blocks were classified considering local drill hole spacing. Class groups were based on the single criteria to reflect geological understanding.

Wireframe and block model validation procedures including wireframe to block volume confirmation, statistical comparisons with composite and nearest neighbour (NN) estimates, swath plots, and visual reviews in 3D, longitudinal, cross section, and plan views were completed for the Joe Mann deposit.

A minimum thickness of 1.2 m was applied to the mineralized domains. The mined-out areas from the historic underground workings have been excluded. A reporting boundary was used for the Main01 domain to eliminate a small number of lower grade blocks within the zone that had been included for continuity.

#### **1.2.8** Mineral Processing

DCM has not initiated any metallurgical testing at Joe Mann. From 2005 to 2007, Joe Mann ore was transported by truck to the Copper Rand Mill, now wholly owned by DCM, for processing. Previously ore

was processed at Campbell Resources' Merrill Mill, which closed in 2004 and has since been dismantled. Prior to processing at the Merrill Mill, ore was processed on site.

The Copper Rand Mill is connected to the Québec energy grid and has a power supply of 25 MW at 25 kV. Water used for the process would have been recycled from the tailings management facility. The Copper Rand Mill site has a substation, core shack, laboratory (not functional), warehouse, and office complex.

The processing plant building occupies a surface area of 2,830 m<sup>2</sup> and consists of crushing, fine ore storage, grinding, gravity recovery of particulate gold, flotation of a copper concentrate, thickening, and filtration. The concentrator has an installed milling capacity of approximately 2,700 tpd. Tailings were pumped two kilometres at a level elevation to the Copper Rand tailings management facility. The Copper Rand Mill last operated in December 2008.

The concentrator consisted of a standard crushing circuit where a jaw crusher, two cone crushers (standard and short head), and two double deck vibrating screens utilized in a closed screening / crushing circuit. The ore passing the screens was stored in three separate silos before grinding. The grinding circuit consisted of an open circuit rod mill and two additional ball mill grinding circuits. Precious metals, gold and silver, were recovered by gravimetry using Knelson concentrators as part of the grinding circuit and by flotation of sulphides. No cyanidation was applied at the Copper Rand Mill.

Gold recovered from the gravity circuits was melted and poured into doré bars on site and was shipped to the Royal Canadian Mint for refining. The flotation circuit used a standard technology to produce a copper-gold concentrate.

Metallurgical recoveries for the Joe Mann ore for the period, 2005 to 2007, averaged 83% and copper recoveries averaged 95%.

## 2.0 INTRODUCTION

SLR Consulting (Canada) Ltd (SLR) was retained by Doré Copper Mining Corp. (DCM) to prepare an independent Technical Report on the Joe Mann Project (the Project, the Property, or Joe Mann), located in Northwest Québec, Canada. The purpose of this Technical Report is to support the disclosure of a Mineral Resource estimate for the Project. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

DCM is a Québec-based copper-gold exploration company formed in December 2019 and is a reporting issuer in Alberta, British Columbia, Saskatchewan, and Ontario. The common shares of DCM trade on the TSX Venture Exchange (TSX-V) and the OTC Markets Group (OTCQX-DRCMF). In addition to the Property, DCM has a portfolio of exploration properties and former operating mines, primarily in the Chibougamau area of Québec.

DCM, through its wholly owned subsidiary CBAY Minerals Inc. (CBAY), entered into an option agreement with Ressources Jessie Inc. (Ressources Jessie) in January 2020 to acquire a 100% interest in the Project. DCM also owns several claims adjacent and near the optioned land.

The Joe Mann deposit is located 60 km south of Chibougamau and was previously intermittently mined by underground methods from 1956 to 2007. The former Joe Mann Mine was flooded in 2008. The Property is located approximately 60 km southwest of DCM's wholly owned, currently not operational, Copper Rand Mill, which has a capacity of 2,700 tonnes per day (tpd). In late 2020, DCM completed a drilling campaign totalling 8,343 m to primarily evaluate the continuity of the Main Zone below the underground workings at depth, as well as the down-dip extension of the West Zones of the Joe Mann deposit.

## 2.1 Sources of Information

A site visit was carried out by Valerie Wilson, M.Sc., P.Geo., SLR Principal Geologist, and Marie-Christine Gosselin, P.Geo., SLR Geologist on June 16, 2021. While at Joe Mann, SLR visited the surface infrastructure and the core logging facility.

This Technical Report was prepared by Valerie Wilson, M.Sc., P.Geo., and Marie-Christine Gosselin, P.Geo., both of whom are independent Qualified Persons (QPs). Ms. Wilson is responsible for Sections 1 to 9, 13, 14, 17, and 23 to 27. Ms. Gosselin is responsible for Sections 10, 11, and 12.

Discussions were held with the following DCM personnel:

- Mr. Ernest Mast, ing, President & CEO
- Mr. Jean Tanguay, P.Geo., General Manager
- Mr. Andrey Rinta, P.Geo., Exploration Manager
- Mrs. Laurie Gaborit, Vice President Investor Relations
- Mrs. Ludivine Mathieu, ing, Geological Engineer
- Mr. Youssouf Ahmadou, GIT, Exploration Geologist

The documentation reviewed, and other sources of information, are listed at the end of this Technical Report in Section 27 References.

## 2.2 List of Abbreviations

Units of measurement used in this Technical Report conform to the metric system. All currency in this Technical Report is Canadian dollars (C\$) unless otherwise noted.

μ	micron	kVA	kilovolt-amperes
μg	microgram	kW	kilowatt
a	annum	kWh	kilowatt-hour
А	ampere	L	litre
bbl	barrels	lb	pound
Btu	British thermal units	L/s	litres per second
°C	degree Celsius	m	metre
C\$	Canadian dollars	М	mega (million); molar
cal	calorie	m <sup>2</sup>	square metre
cfm	cubic feet per minute	m <sup>3</sup>	cubic metre
cm	centimetre	MASL	metres above sea level
cm <sup>2</sup>	square centimetre	m³/h	cubic metres per hour
d	day	mi	mile
dia	diameter	min	minute
dmt	dry metric tonne	μm	micrometre
dwt	dead-weight ton	mm	millimetre
°F	degree Fahrenheit	mph	miles per hour
ft	foot	MVA	megavolt-amperes
ft <sup>2</sup>	square foot	MW	megawatt
ft <sup>3</sup>	cubic foot	MWh	megawatt-hour
ft/s	foot per second	oz	Troy ounce (31.1035g)
g	gram	oz/st, opt	ounce per short ton
G	giga (billion)	ppb	part per billion
Gal	Imperial gallon	ppm	part per million
g/L	gram per litre	psia	pound per square inch absolute
Gpm	Imperial gallons per minute	psig	pound per square inch gauge
g/t	gram per tonne	RL	relative elevation
gr/ft <sup>3</sup>	grain per cubic foot	S	second
gr/m³	grain per cubic metre	st	short ton
ha	hectare	stpa	short ton per year
hp	horsepower	stpd	short ton per day
hr	hour	t	metric tonne
Hz	hertz	tpa	metric tonne per year
in.	inch	tpd	metric tonne per day
in²	square inch	US\$	United States dollar
J	joule	USg	United States gallon
k	kilo (thousand)	USgpm	US gallon per minute
kcal	kilocalorie	V	volt
kg	kilogram	W	watt
km	kilometre	wmt	wet metric tonne
km <sup>2</sup>	square kilometre	wt%	weight percent
km/h	kilometre per hour	yd <sup>3</sup>	cubic yard
kPa	kilopascal	yr	year



## **3.0 RELIANCE ON OTHER EXPERTS**

This Technical report has been prepared by SLR for DCM. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to SLR at the time of preparation of this Technical Report.
- Assumptions, conditions, and qualifications as set forth in this Technical Report.

For the purpose of this Technical Report, SLR has relied on ownership information provided by DCM. SLR has not researched property title or mineral rights for the Project and expresses no opinion as to the ownership status of the property.

SLR has relied on DCM for guidance on applicable taxes, royalties, and other government levies or interests applicable to revenue or income from the Property.

Except for the purposes legislated under provincial securities laws, any use of this Technical Report by any third party is at that party's sole risk.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

### 4.1 Location

The Joe Mann Property is located approximately 60 km south of the town of Chibougamau in Fancamp, La Dauversière, Gamache et Rohault Townships (Figure 4-1). The Project is centered on the former Joe Mann Mine at UTM Zone 18 NAD83 -540,000 mE and 5,481,800 mN.

## 4.2 **Property Tenure**

Indexed land tenure maps for the Property are presented in Figure 4-2 and summarized in Table 4-1. For complete land tenure information reference Section 30.1 of the Technical Report.

Land tenure totals 2,781 ha within four groups of non-contiguous mineral titles including 75 claims, two mining concessions, and one mining lease (Table 4-1). CBAY owns 22 of these claims (767 ha) and the remaining mineral titles (2,014 ha) are under an option agreement (see Section 4.3), between DCM and Ressources Jessie, covering the former Joe Mann Mine area (Joe Mann Option Property). All mineral titles are in good standing.

The status of the mining titles has been verified using "GESTIM", the Québec government mining titles management, easily available on the Ministère de l'Énergie et des Ressources naturelles (MERN) website: https://gestim.mines.gouv.qc.ca.

Claim Owner / Type	Count	Area (ha)	Expiry Date Range (DD-MMM-YY)
100% CBAY			
Exploration Claim (CDC)	22	767	24-Oct-21 to 21-Mar-22
Subtotal CBAY Minerals	22	767	24-Oct-21 to 21-Mar-22
Joe Mann Option Property: CBAY/ Ressources Jessie			
Mining Lease (BM)	1	15	26-Sep-21
CDC	53	1,933	13-Feb-22 to 4-Apr-22
Mining Concession (CM)	2	66	n/a
Subtotal Option – CBAY/Ressources Jessie	56	2,014	26-Sep-21 to 4-Apr-22
Total	78	2,781	26-Sep-21 to 4-Apr-22

# Table 4-1:Summary of Land TenureDoré Copper Mining Corp. – Joe Mann Project

<u>SLR</u>









### 4.3 **Project Ownership**

On January 2, 2020, DCM entered into an option agreement with the registered owners, Ressources Jessie and Legault Metals Inc. (Legault), to acquire a 100% interest in 55 mineral titles including the majority of the former Joe Mann Mine (the Joe Mann Option Property). During the earn-in period, DCM will be the operator of the Joe Mann Option Property.

In the event that DCM successfully achieves commercial production on the Joe Mann Option Property, DCM shall make an additional payment consisting of \$1,000,000 in cash, payable to Ressources Jessie, and \$1,500,000 in DCM shares issuable to Legault. In addition, DCM will grant Ressources Jessie a 2% net smelter return (NSR) royalty on the Joe Mann Option Property. DCM will hold the option to buy back 1% of the NSR royalty for \$2,000,000, with the further option to buy back an additional 0.5% for \$4,000,000.

### 4.4 Royalties

The Property is subject to NSR royalties ranging from 0% to 2% (Table 4-2 and Figure 4-3).

# Table 4-2:Royalties and AgreementsDoré Copper Mining Corp. – Joe Mann Project

Party	Date	NSR Value	Details
Multi-Ressources Boreal <sup>1</sup>	April 12, 2018	1%	DCM has the right at any time to buy back 0.5% of the NSR royalty for a payment of \$125,000. Mining claims: 2485652-57, 2485644-49
David Malouf <sup>1</sup>	August 30, 2019	2%	No buy back option. Advanced royalty payments of \$30,000 per year starting on August 30, 2021. These payments shall be a credit against the royalty payable under the purchase agreement. Mining claims: 2362090-93 (16 ha)
Ressources Jessie <sup>2</sup>	January 2, 2020	2%	DCM has the right at any time to buy back 0.5% of the NSR royalty for a payment of \$125,000.
			420, 425; and BM 799

Notes:

1. Owned by CBAY Minerals Inc. (100%).

2. Joe Mann Option Property.





### 4.5 Québec Mineral Tenure

In Québec, the Mining Act (Loi sur les mines) regulates the management of mineral resources and the granting of exploration rights for mineral substances during the exploration phase. The Mining Act also governs the granting of rights pertaining to the use of these substances during the mining phase. The Mining Act establishes the rights and obligations of the holders of mining rights to ensure maximum development of Québec's mineral resources.

#### 4.5.1 Mineral Claims

In Québec, mineral claims have pre-established positions and a legal survey is not required. A map designated claim is valid for two years and can be renewed indefinitely, subject to the completion of necessary expenditure requirements. The map designated mineral claims are approximately 54 ha but may be smaller where other rights supersede the claim. Each claim gives the holder the exclusive right to explore for mineral substances, except sand, gravel, clay, and other unconsolidated deposits, on the land subject to the claim. The claim also guarantees the holder's right to obtain an extraction right upon the discovery of a mineral deposit. Ownership of the mining rights confers the right to acquire the surface rights.

#### 4.5.2 Mining Lease and Mining Concessions

The following information is summarized from LégisQuébec (2021)

In Québec, any person who already holds a claim or a mining concession limited to specific mineral substances as described under Section 5 of the Mining Act can obtain a mining lease (bail minier) if they can demonstrate that the deposit is mineable.

The initial term of a mining lease is 20 years, and it can be renewed every 10 years while mining continues. The above terms and conditions apply to three periods of lease renewal for a total period of 50 years. Thereafter, MERN can prolong the lease under conditions that it determines.

The holder of a mining lease is required to:

- Pay an annual rent.
- Submit a mine site rehabilitation plan before starting mining work.
- Begin mining work during the four years following the date on which the lease is issued.
- Remit information on mining activities.

The lessee of a mining lease or the concession holder has surface access and usage rights, except when the land is used as a cemetery. On public lands, access and usage rights are limited to mining purposes only. If the land covered by the lease or concession was granted or alienated by the State, the lessee or concession holder must obtain the owner's permission to access the land and carry out work. The lessee or concession holder may acquire these rights through amicable agreement or, if necessary, by expropriation. On land leased by the State, the lessee of a mining lease or the holder of a mining concession must obtain the consent of the lessee of the land surface or pay them compensation. In the event of a disagreement, a court can determine this compensation.

The lessee or concession holder may also use adjacent land for their mining activities, however, they must do so in compliance with other laws, in particular those relating to public lands, forests and the environment.



On lands of the domain of the State, the lessee or concession holder may purchase or rent land to set up mine tailings or any other facility required for mining purposes. They may also obtain a right of way to install transport routes or tracks, pipelines, and water conduits.

A lessee who wishes to set up a mill on land that is covered by their lease or lies outside its boundaries must first have the location approved by the MERN. However, the location can be subject to an environmental impact assessment or review in accordance with the Environment Quality Act in which case the site must be approved by the Government.

The lessee or concession holder may cut wood on the land of their lease or concession, provided that this wood is only used for the purposes of erecting buildings or carrying out mining-related activities. To do this, they must obtain a forest management permit from the Ministère des Forêts, de la Faune et des Parcs (MFFP). The terms and conditions for issuing the permit vary according to the amount of wood to be cut.

Prior to the start of each year, the lessee must pay an annual rent, the amount of which depends on the use of the land surface covered by the lease:

- \$23.60/ha for private land.
- \$49.25/ha for lands in the public domain.
- \$0.0105/m<sup>2</sup> for land used for mine tailings.

The amount of the rent per hectare is stipulated in the Regulation Respecting the Sale, Lease and Granting of Immovable Rights on Lands in the Public Domain, passed by Order in Council 231-89 of February 22, 1989.

The holder of a mining concession whose letters patent were issued after July 1, 1911, must carry out exploration or mining work each year worth at least \$35/ha. In addition, the holder must submit a report detailing this work before February 1 of each year. The work may be completed on adjacent mining concessions belonging to the same concession holder. It is acceptable to the MERN that all work be performed on only one of the concessions if the total surface area of adjacent mining concessions does not exceed 2,000 ha. If a concession holder fails to carry out the required work before February 1 of each year, the holder must pay a sum equivalent to the minimum amount of the required work, namely \$35/ha.

CBAY and Ressources Jessie do not own any lease to mine surface mineral rights.

## 4.6 Permitting

Drilling activities requiring clearing trees for road access to the drill site or to build drill pads necessitate a tree clearing permit. The permit for tree cutting is issued by the MFFP. This permit can generally be obtained within a month. The water used in drilling can be sourced from a lake or river without a specific water use permit. The drilling operation ensures that the used water is recycled, with any excess water that is returned to a body of water having acceptable sediment levels. The municipality and First Nation community of Oujé-Bougoumou are given notice of any upcoming drilling programs. DCM will apply for all required permits prior to conducting the proposed work on the Property.

DCM is initiating plans to dewater the former Joe Mann Mine and is completing the required studies prior to applying for an attestation of exemption (demande d'attestation de non-assujettissement) to the Environmental and Social Impact Evaluating Committee (Comité d'évaluation des repercussions sur l'environnement et le milieu social) (COMEV) of the Ministère de l'Environnement et de la Lutte conte les changements climatiques (MELCC).



## 4.7 Environmental Liabilities

SLR is not aware of any environmental liabilities on the Property. DCM has all required permits to conduct the proposed work on the Property. SLR is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the Property.

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

### 5.1 Accessibility

The Project is accessed by paved and gravel roads, approximately 60 km south of Chibougamau, Québec. From provincial highway Route 167, access is via a 19 km well maintained gravel road. The town of Chibougamau is serviced by regular scheduled flights from Montréal, Québec.

## 5.2 Climate

The regional climate is characterized by short mild summers and long cold winters, with mean temperatures ranging from -19°C in January to 16°C in July. Mean annual precipitation ranges from 39 mm in February to 130 mm in September (Canadian Climate Normals 1981-2010). Snow is typically present from late October to early May. Exploration and mining activities may be carried out year-round.

### **5.3 Local Resources**

Chibougamau is the largest town in Nord-du-Québec, central Québec, with a population of 7,504 people (2016 Canadian Census) and is the closest municipality to the Project. As a historical mining town, Chibougamau offers a workforce with experience in the mining industry and construction.

Electric power from the Québec power grid is readily available for the Project via a 25 kV line. Telephone and mobile communication infrastructure are readily available regionally. Near the Property boundary, internet is available via Xplornet Communications Inc., a Canadian rural internet service provider and mobile network operator.

Water is readily available on site from various sources including local lakes and creeks in the Project area.

### 5.4 Infrastructure

Most of the infrastructure from the former Joe Mann Mine site has been maintained in place and is in good condition. The key current infrastructure includes:

- Two old shafts (Headframe #1 has been removed and Headframe #2 with hoist in place).
- Office building.
- Core logging facility.
- Outdoor core storage area.
- Garage.
- Gatehouse and gate.
- Connection to the provincial hydroelectric grid.
- Water (non-potable).

## 5.5 Physiography

The average elevation of the Property is approximately 400 MASL, with the vertical relief being low and generally not exceeding 15 m. Most of the Property is covered with overburden which consists of a thick



layer (up to 40 m) of fluvio-glacial till, with several outcrop areas present. Lakes and rivers account for approximately 10% of the Project area and a swampy area covers approximately 5% of the Property.

The vegetation on the Property is predominantly conifers (balsam, tamarack, spruce, pine, and fir) with minor leafy trees (birch, aspen, and poplar) as well as muskeg areas (bogs or wetlands common to all boreal forest regions). Due to extensive logging in the Project area in the last decades, only small stands of original forest remain around the lakes. The land is not used for agriculture. Wildlife includes black bears, wolves, foxes, lynxes, moose, beavers, rabbits, and various migratory birds.

## 6.0 HISTORY

## 6.1 **Prior Ownership**

Chibougamau Explorer Ltd., which became Anacon Mines in 1954, began exploration on the Property in 1951, with the commencement of mining activities occurring in 1956. Anacon Mines operated the former Joe Mann Mine until 1960 at which point it was abandoned for a period of 13 years. Chibex Mines Ltd. (Chibex) acquired the former Joe Mann Mine in 1970, commencing a ramp and dewatering in 1973-74 and production in 1975, ultimately ceasing activities in 1976 due to financial difficulties and recovery issues. In 1980, Meston Lake Resources Inc. (Meston Lake) acquired the former Joe Mann Mine property from Chibex. Société de Développement de la Baie James (SDBJ) became a partner in the former Joe Mann Mine project in 1981. In 1983, Campbell Resources acquired a minority position in Meston Lake and became the operator of the former Joe Mann Mine project. In 1987, SDBJ withdrew, and Campbell Resources became the sole owner of the former Joe Mann Mine, after acquiring all the shares of Meston Lake. Campbell Resources continued to hold the former Joe Mann Mine property until 2007, processing Joe Mann ore at Campbell Resources' Merrill Mill until 2004 and then at Copper Rand Mill from 2005 to 2007

In 2007, Gold Bullion Development Corp. (Gold Bullion), now Granada Gold Mine Inc., optioned the former Joe Mann Mine property from Campbell Resources and commenced underground exploration. Gold Bullion allowed the former Joe Mann Mine to flood during August 2008. In December 2008, Campbell Resources filed for bankruptcy protection and in January 2009 obtained creditor protection under the Companies' Creditors Arrangement (CCAA). Gold Bullion did not pursue its offer to purchase the former Joe Mann Mine property.

Ressources Jessie, a private company, acquired the former Joe Mann Mine in July 2012 from the insolvency trustee. Ressources Jessie has only conducted surface exploration work on the Property.

## 6.2 **Exploration and Development History**

In 1950, gold bearing mineralized showings were discovered on the Project by a prospector. The exploration conducted by Chibougamau Explorer Ltd. (and later Anacon Mines) led to the construction of a 137 m deep shaft in 1952, which was further deepened to 381 m in 1954.

The former Joe Mann Mine operated underground during three different periods from 1956 to 2007.

From 1956 to 1960, 685,864 short tons (st) grading 0.222 oz/st was extracted and milled on site to produce 135,048 oz Au (recovered grade of 0.197 oz/st Au). Shaft No. 1 was deepened to 561 m in 1959. Low gold prices and the decrease in recovered grade caused the shutdown of mining operations in 1959. The mill was dismantled after a fire destroyed the facilities in 1961.

From 1973 to 1974, after a few years of exploration work, an exploration ramp was sunk 1.5 km west of the former Joe Mann Mine. The dewatering of the shaft and reconstruction of the mine infrastructure were completed, including a 750 short ton per day (stpd) mill. From 1974 to 1975, 173,143 st grading 0.154 oz/st Au were processed at the mill. A low recovery grade at the mill (approximately 80%) in combination with the prevailing gold prices resulted in mine closure.

In early 1985, the former Joe Mann Mine was dewatered, and underground drilling proved approximately 800,000 st of ore. Commercial production commenced in April 1987. During 1989, a new production shaft (Shaft No. 2) was sunk to a depth of 625 m. During 1992, Shaft No. 2 was deepened to a depth of

816 m, opening four new levels over a lateral distance of 900 m. During 1997 and 1998, this shaft was deepened to a depth of 1,145 m, and six new levels were mined afterwards.

In 1999, operations were significantly affected by ground control problems and excessive dilution. Development and mining operations were temporarily suspended during re-evaluation of the economic viability of the mine and the development of a new mining plan.

Mining operations resumed in April 2000, under a new mine plan using the cut and fill mining method. While this method achieved improved ground conditions, it resulted in lower than expected productivity and higher operating costs, with Campbell Resources reporting gold production of 5,000 oz Au at a cash cost of US\$330/oz Au for the month of October 2007. Given the low gold price environment at the time and the operating difficulties, Campbell Resources temporarily suspended operations in November 2000.

Following a review of the development plan, mining resumed in April 2002 between the 716 m and 1,036 m levels, using mainly the longhole mining method. Exploration activity was gradually scaled down in 2004. Ore from the former Joe Mann Mine was transported by truck (approximately 60 km) to Campbell Resources' Copper Rand Mill, now wholly owned by DCM, for processing. Prior to January 2005, ore was transported and processed at Campbell Resources' Merrill Mill.

Production ceased in September 2007 due to several reasons including, depletion of reserves, financial difficulties, and Campbell Resources' decision to focus on other development projects. The former Joe Mann Mine was placed on care and maintenance in September 2007.

In September 2007, Gold Bullion optioned the Property and completed three diamond drill holes from the 945 m level of the former Joe Mann Mine. The first hole (EE-189B) intercepted the Main Zone at 170 m underneath the lowest level (1,052 m) and returned 26.66 g/t Au and 0.40% Cu over 1.88 m and 14.72 g/t Au over 1.2 m. Hole EE-188 also intersected the Main Zone with 30.3 g/t Au and 1.3% Cu over 3.02 m, and in the South Zone, and 9.23 g/t Au over 0.91 m. Hole EE-190 did not reach the Main Zone. Lacking the financial resources to further continue this exploration program, Gold Bullion dropped the option, and the former Joe Mann Mine was allowed to flood during the summer of 2008.

In July 2012, Ressources Jessie acquired the Property but conducted only surface exploration work.

### 6.3 Historical Resource Estimates

Campbell Resources reported Mineral Reserves and Resources for the former Joe Mann Mine as of December 31, 2006 (Table 6-1) (Campbell Resources, 2007). The estimate is relevant as it indicates the mineralization on the property and was prepared by Campbell Resources' internal QP. The key assumptions are in the footnotes below the table.

A qualified person has not done sufficient work to classify the historical estimate as current Mineral Resources and Mineral Reserves and DCM is not treating this historical estimate as current Mineral Resources or Mineral Reserves.

DCM has carried out diamond drilling in 2020-2021. The historical estimate has been superseded by the current Mineral Resource estimate in Section 14 of this report.

# Table 6-1: Summary of Historic Mineral Resources and Mineral Reserves - January 1, 2007 Doré Copper Mining Corp. – Joe Mann Project

		Mineral Reserves					Mineral Resources					
Level Vein (ft)	Level	Pro	Proven		Probable		Measured		Indicated		Inferred	
	(ft)	Tonnage (st)	Grade (oz/st Au)	Tonnage (st)	Grade (oz/st Au)	Tonnage (st)	Grade (oz/st Au)	Tonnage (st)	Grade (oz/st Au)	Tonnage (st)	Grade (oz/st Au)	
Main	Below 2350	14,000	0.181	3,000	0.130	6,000	0.292	46,000	0.305	82,000	0.259	
South	Below 2350	3,000	0.129	3,000	0.255	3,000	0.156	9,000	0.188	-	-	
West	Below 2350	9,000	0.242	1,000	0.429	-	-	57,000	0.222	74,000	0.208	
Éponte Inférieure (EI)	Below 2350	2,000	0.215	-	-	-	-	29,000	0.182	-	-	
North		4,000	0.230	-	-	-	-	-	-	10,000	0.209	
Total		32,000	0.201	6,000	0.211	9,000	0.240	142,000	0.239	165,000	0.233	
	Total Proven and Probable Reserves							39,000	0.203			
Total Measured and Indicated Resources						151,000	0.239					
Total Inferred Resources							165,000	0.233				

Notes:

- 1. These estimates were verified internally by Ghislain Deschênes, Chief Geologist for Campbell Resources, a QP under NI 43-101.
- 2. Price assumption of US\$575/oz Au and exchange rate of US\$0.893/C\$1.00.
- 3. All high grades were cut to 2.0 oz/st Au except the South Vein where grades were cut to 5.0 oz/st Au.
- 4. Dilution of six feet minimum horizontal width.
- 5. Mill recovery of 84.6% for gold.
- 6. A tonnage factor of 11 ft<sup>3</sup>/st was assigned to all rock types.
- 7. Method used: polygon on orthogonal projection. Cut-off grade of 0.200 oz/st Au.
- 8. Numbers may not add due to rounding.

## 6.4 Past Production

The cumulative production from the former Joe Mann Mine (1957 to 2007) totaled 4,754,377 t grading 8.26 g/t Au and approximately 0.3% Cu (Faure, 2012).

For the nine months of operation in 2007 (prior to closure), the total production was 67,292 st of ore for a metal production of 10,092 oz Au (0.181 oz/st Au), 281,361 lb Cu (0.22% Cu) and 6,196 oz Ag (0.154 oz/st Ag). The recovery rate was 82.71% for gold, 94.16% for copper, and 59.82% for silver.

The production summary from the former Joe Mann Mine for the last four years of operation is presented in Table 6-2. After 2004, there were limited exploration and development activities.

	Units	2007 (Jan. to Sep.)	2006	2005	2004
Tons Milled	st	67,292	80,639	139,064	185,490
Gold Grade	oz/st Au	0.181	0.207	0.254	0.230
Copper Grade	% Cu	0.22	0.29	0.34	0.23
Gold Produced	oz Au	10,092	14,146	29,434	39,175
Copper Produced	000 lb Cu	281	440	897	801
Cash Operating Costs <sup>1</sup>	US\$/oz Au	NA	818	427	411

# Table 6-2:Production Summary from 2004 to 2007Doré Copper Mining Corp. – Joe Mann Project

Source: Campbell Resources, 2008

Notes:

1. Operating costs include all on-site mining, processing, and administrative costs, net of copper and silver by-product credits.

## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

## 7.1 Regional Geology

The Property is situated in the northeastern part of the Abitibi Subprovince, which is one of the largest and best preserved greenstone belts in the world and is hosting numerous gold and base metal deposits (Card, 1990). The Abitibi Subprovince had a considerable mineral wealth production valued as of 2005 at \$120 billion (Thurston and al., 2008).

The Abitibi Greenstone Belt (AGB) has an Archean age bedrock comprising large volume of mafic to felsic volcanic rocks overlayed and/or interbedded with sedimentary rocks, which are cored by massive felsic to intermediate batholiths and plutons with various compositions (Figure 7-1). On a large scale, the stratigraphy is regarded as laterally continuous mafic and felsic volcanic units unconformably overlain by successor basins (Figure 7-2). The AGB's early volcano-plutonic construction has been dated from ca. 2,750 Ma to 2,690 Ma (Corfu, 1993, Ayer et al., 2002).

Most of the volcanic rocks, deep water sedimentary rocks, massive subvolcanic intrusive complexes as well as felsic to intermediate plutons, formed during the magmatic activity referred as the synvolcanic period (Dimroth et al., 1982; Mueller and Donaldson, 1992; Sage et al., 1996; Chown et al., 2002; Laurent et al., 2014). This period was followed by the syn- and -post-tectonic periods, characterized by erosion, sedimentation, deformation, and alkaline magmatism (Mueller and Donaldson, 1992; Chown et al., 2002; Moyen et al., 2003; Beakhouse et al., 2011; Laurent et al., 2014).

The AGB is divided into northern and southern volcanic zones based on stratigraphic and structural criteria (Ludden et al., 1986; Chown et al., 1992). These zones correspond to two contrasting zones in terms of ultramafic to mafic magmatic. Indeed, both zones are made of thick mafic volcanic successions, whereas komatiites are most abundant in the southern zone (Dimroth et al., 1982; Daigneault et al., 2004) and uncommon in the northern zone (e.g., Chibougamau area).

The southern part of the AGB was originally estimated to represent a composite stratigraphic thickness of 45 km or more (Ayres and Thurston, 1985). It is characterized by internal heterogeneity and is cut by major structures such as the Cadillac-Larder Lake and Destor-Porcupine Manneville fault zones.

The norther part of the AGB represents an initially complete terrane with various stages of volcanosedimentary evolution, which underwent volcanic construction and basin development, as well as several phases of deformation and plutonism (Chown et al., 1992).

The AGB is renowned for its numerous gold deposits, which are mostly observed in the southern zone along major faults, such as the Cadillac-Larder Lake and the Destor-Porcupine Manneville fault zones (Daigneault et al., 2002; Bateman et al., 2008). Most gold deposits are orogenic, formed during the syntectonic period, such as the Lamaque-Sigma deposit (Taner and Trudel, 1991).

The AGB also hosts many volcanogenic massive sulphides (VMS) deposits, which can be gold-rich, such as the Lemoine deposit in the Chibougamau area (Mercier-Langevin et al. 2014). These VMS form clusters around paleo-heat sources (i.e., sub-volcanic intrusive complexes), such as the Flavrian Pluton in the southern part of the AGB and the Bell River Intrusive Suite (Matagami mining camp) in the northern zone (Hannington et al., 2003; Ross et al. 2014). Thus, and contrarily to orogenic gold deposits, VMS systems are abundant in both the southern and northern parts of the AGB.



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### 7.2 Local Geology

The Chapais-Chibougamau region is located in the northeastern part of the AGB of the Superior Province (Figure 7-1).

The supracrustal rocks of the Chapais-Chibougamau area were deformed (large-scale folds and faults) and metamorphosed (greenschist to amphibolite facies) during the Kenoran orogeny (Daigneault et al., 1990)<sup>1</sup>.

The stratigraphy of the Chapais-Chibougamau area is dominated by two bimodal (mafic-felsic) volcanic cycles forming the Archean Roy Group, a three kilometre to four kilometre thick basalt to basaltic andesite assemblage, on which overlain unconformably volcaniclastic and sedimentary rocks of the Opemisca Group (Figure 7-3; Daigneault et al., 1990; Leclerc et al., 2011; Leclerc et al., 2017). The Vents Formation and the Chrissie Formation, both constituted of mafic lava flows, are defined as the basement of the Roy Group (Leclerc et al., 2017).

The first volcanic cycle of the Roy Group is constituted of the undated Obatogamau Formation, a pile of massive to pillowed tholeiitic andesite-basalt to basalt with interbedded gabbroic sills (Midra, 1989; Boucher et al., 2021). It is topped by the 2,730 Ma to 2,726 Ma, mafic to felsic lava flows and volcanoclastic units of the Waconichi Formation (Mortensen, 1993; Legault, 2003; David et al., 2012) defined as the main VMS bearing unit of the Chapais-Chibougamau area.

The second volcanic cycle (2,720 Ma to 2,717 Ma; Leclerc and al., 2011) is made, from the base to the top, of the Bruneau Formation constituted of tholeiitic basalt and andesite, the Blondeau Formation dominated by calc-alkaline volcanic-sedimentary sequences, and the Bordeleau Formation that consist of mainly sedimentary rocks (Lefebvre, 1991).

The Chapais-Chibougamau area recorded major intrusive activities of various natures, genetically linked to the volcanism and tectonism periods of the geological history of the region. The three important intrusive bodies of the region are: (1) the Doré Lake Complex, a synvolcanic, folded, stratiform, mafic to ultramafic intrusion with a tholeiitic to calc-alkaline magmatic affinity (Allard, 1976; Daigneault and al., 1990; Ahmadou and al., 2019); (2) the Chibougamau Pluton, a felsic to intermediate polyphase and brecciated intrusion, both hosted by the first volcanic cycle; and (3) the differentiated mafic to ultramafic sills of the Cumming Complex that has taken place in the second volcanic cycle.

According to Daigneault and al. (1990), the geological units of the Chapais-Chibougamau area have recorded three main brittle to ductile Archean deformation events (D1–D3), followed by a fourth event (D4) which dates from the Proterozoic. Phase D1 corresponds to an early large regional folding whose footprints appear only locally. Phase D2 represents the major deformation event, which created a series of synclines and east-west orientation anticlines. Phase D2 is characterized by the development of an east-west oriented schistosity fabrics, called "main schistosity Sp", which is well developed in volcanic and sedimentary rocks. The D3 deformation event resulted in the formation of NE faults and NE-SW oriented

<sup>&</sup>lt;sup>1</sup> The prefix 'meta' is omitted in this report.



dextral detachments. Finally, the last deformation phase D4 corresponds to small asymmetric folds in Z-style, oriented NE-SW, and which are associated with crenulation cleavages.

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## 7.3 Property Geology

The Property is located in the middle of the Obatogamau Formation (Figure 7-4), which is a thick (three kilometre to four kilometre) volcanic unit, composed of mafic to intermediate lava flows and co-magmatic gabbro sills, which may contain centimetric-long feldspar megacrysts (Midra 1989; Boucher et al. 2021). The Obatogamau Formation is recognized over 150 km in the E-Wt direction and has been considered either as a lava plain or as a cluster of low relief shield volcanoes (Cimon, 1977; Allard and Gobeil, 1984; Mueller et al., 1989; Daigneault and Allard, 1990; Charbonneau et al., 1991).

The Obatogamau Formation is bounded at the base by the Vents and the Chrissie Formations, and at the top by the Caopatina Formation, a one kilometre to two kilometres thick sedimentary sequence derived from the erosion of volcanic rocks. The sediments include sandstones, conglomerates and argillites locally interbedded with ash tuffs and basalt flows, which indicate coeval volcanic activity.

In the western portion of the region, the Obatogamau Formation is intruded by the Opawica River anorthosite complex. This stratiform intrusion is the product of fractional crystallisation from tholeiitic magma. Its morphological and chemical characteristics suggests an affinity to the Obatogamau Formation basalts. The granitoid intrusions of the region are divided into two groups, synvolcanic plutons, which generally core regional anticlines, and syn-tectonic plutons. The synvolcanic intrusions are generally polyphased and were emplaced prior to regional deformation. They are related to the volcanic sequences and one of them is the Eau Jaune Complex (Kieffer et al. 2020), which probably represents the magmatic chamber which fed the felsic centre of the Vents Member. Regional deformation controlled the emplacement of the syntectonic intrusions. They are generally elongated parallel to regional foliation and were intruded along the margins of syn-volcanic plutons. Two felsic intrusions, La Dauversière and Verneuil, are found respectively to the northeast and northwest of the Property.

From a structural point of view, the Property is located on the south flank of the overfold La Dauversière anticlinal. The regional schistosity (S2) is considered to be E-W, with a subvertical dip. In addition, many intense and decametric NE to NNE Proterozoic and/or Grenvillian fault structures affect the lithologies. The E-W trending Guercheville deformation corridor is the main structure that cuts the Property and represents an important metallotect as most of gold occurrences are located along this major structure.

The metamorphism in the region is defined as upper greenschist facies to locally lower amphibolite facies near pluton contacts, and it affects all the geological units except diabase Proterozoic dikes.

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At the mine-scale, the geology is dominated by basalt flows and gabbro sills (Figure 7-4) (Dion and Guha 1994). Of a more secondary nature, many horizons of volcaniclastic mafic to felsic sediments are observed at the point of contact with lava flows. These horizons are layered, fine grained and often silicified and qualified as acid or felsic tuffs. They are also often sheared in areas with the propensity to develop faults. Finally, many metric to decametric felsic dykes crosscut these units. Their contact with the host rock is generally sheared and contains sulphides (pyrite and pyrrhotite).

The mine stratigraphy consists of, from base to top and north to south, a gabbro sill, followed by deformed and altered basalt lava flows overlain by a thin rhyolite horizon which is capped by a basalt unit. This sequence is typical of the upper part of the Obatogamau Formation. Strata are oriented E-W and dip subvertical and are metamorphosed to the upper greenschist facies (Dion and Guha, 1994).

### 7.4 Mineralization

#### 7.4.1 Joe Mann Mine

Part of this section has been reproduced and extracted from the following MERN reports:

- DV 98-04: Geology and Metallogeny of the Chapais-Chibougamau Mining District, Pierre Pilote, (1998) P109-114.
- MB 88-29: Etude métallogénique de la bande Caopatina-Quévillon: Gîtologie de la mine Joe Mann-Région de Chibougamau, Dion and Guha (1988).

The Joe Mann deposit is a structurally controlled deposit hosted by the Opawica-Guercheville deformation zone. This major E-W trending deformation corridor is approximately two kilometres wide and extends for over 200 km (Tait, 1992a; Pilote 1998; Leclerc et al. 2012). The structure cuts the mafic volcanic rocks of the Obatogamau Formation in the north part of the Caopatina Segment.

The primary mineralized zones that were mined at the former Joe Mann Mine include the Main, South and West Zones (Figure 7-5). These three subvertical E-W (N275°/85°) ductile-brittle shear zones are sub-parallel to stratigraphy and to one another, with up to 140-170 m of separation between them (Figure 7-4). These shear zones are hosted within a stratigraphic package composed of a Fe-Mg carbonate and sericite altered gabbro sills, sheared basalts, and intermediate to felsic tuffs intruded by various felsic intrusions.

The gold mineralization at the former Joe Mann Mine is hosted by decimetre scale quartz-carbonate veins (Dion and Guha 1988). The veins are mineralized with pyrite, pyrrhotite, and chalcopyrite disposed in lens and veinlets parallel to schistosity, and occasionally visible gold. The veins are dominated by vitreous white quartz, with minor plagioclase and iron carbonate. They are intensely brecciated and often boudinaged and folded. Furthermore, these veins are characterized by their laminated or banded structure, consisting of alternating ribbons of quartz and mineralized wall rock. The majority of the vein sulphide mineralization is contained in these wall-rock fragments.

The veins are associated with two types of felsic dykes: (1) weakly-deformed, quartz-feldspar porphyry dykes, and (2) highly deformed, aphyric dykes. These dykes are often in direct contact with the veins and are sub-parallel to them. Zircons extracted from an aphyric dyke yield a U-Pb age of 2,717 Ma +5/-2 Ma (Dion et Guha, 1994), identical within error to the La Dauversière Pluton, a synvolcanic intrusion located a few kilometres north of the former Joe Mann Mine. No zircon suitable to radiometric datation was identified in the porphyric dykes but it is assumed that their emplacement is synchronous (2,690 Ma to

2,699 Ma; Dion et al. 1995) to the syntectonic Lac Meston intrusion located west of the former Joe Mann Mine.

These relationships and the fact that the Lac Meston intrusion is cut by auriferous quartz-tourmaline veins suggest that the Joe Mann gold mineralization is posterior to the emplacement of syntectonic porphyric dykes.

The shear zones are characterized by a high schistosity, strongly carbonatized rocks, and subvertical to vertical stretching lineation. The dominant schistosity direction is parallel to the envelope of the shears at approximately N095°, but the steep dip to the south of the schistosity (80° to 85°) is at an angle with the walls of the shear zone envelopes, which dip to the north. This structural relationship indicates that an inverse vertical movement, i.e., a thrusting from north to south, took place. Steeply-plunging (80° to 85°) mineral or stretching lineations also argue in favour of a vertical movement with a small lateral component. This stretching lineation is particularly well-defined in the South Zone (Figures 7-4 and 7-5). The elongation of the mineralized lens in the Main Zone visible on the longitudinal section (Figure 7-5) is parallel to this lineation.

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#### 7.4.2 Main Zone

The Main Zone is hosted in a gabbro sill and is located north of the Shaft No. 2. It has an E-W strike length of over 900 m with an 80° dip to the north. The thickness of the Main Zone varies from 8 m to 20 m. The gold bearing quartz-carbonate veins, which average approximately 25 cm in width and can reach up to 45 cm in width, are generally sub-parallel to the shear and occupy the central zone of this structure. They have a banded to laminated texture to locally brecciated. The mineralization consists in chalcopyrite, bornite, chalcocite, native copper, sphalerite, galena, pyrite, pyrrhotite, arsenopyrite, magnetite, ilmenite, tenorite, and visible gold. The proximal alteration zone is two metres to three metres wide and presents a biotite-chlorite-sericite and sulfides minerals.

Most of the gold production from Joe Mann was extracted from the Main Zone, which has been mined to the lowest level of 1,050 m. Two historical holes were drilled in 2008 after the mine had ceased operations and have intersected 3.02 m of 30.3 g/t Au and 1.30% Cu (hole EE-188) and 1.88 m of 26.66 g/t Au and 0.40% Cu (hole EE-189B). These two high grade historical intercepts, situated 150 m apart and located approximately 170 m beneath the lowest workings (1,050 m), confirmed the continuity of the Main Zone. The deeper extensions of the Main Zone below the previous mining level were demonstrated by DCM's 2020 drilling program (refer to Section 10.0) with hole JM-20-02A intersecting the Main Zone approximately 120 m up-dip from the two historical intercepts mentioned previously. The shear zone returned two intercepts of 1.3 m of 6.32 g/t Au and 0.52% Cu, including 0.45 m of 17.7 g/t Au and 1.23% Cu, and 5.95 m of 2.29 g/t Au, including 1.7 m of 5.64 g/t Au.

#### 7.4.3 South Zone

The South Zone is located approximately 107 m south of the Main Zone between the No. 1 shaft and the No. 2 production shaft. It occurs in a five metre to six metre shear zone which cuts a "rhyolite" (actually of dacitic composition) unit below the 320 m level of the former Joe Mann Mine. The South Zone has a strike length of approximately 900 m in an E-W direction and a north subvertical dip and appears to weaken below the 829 m level.

The most highly deformed zone exhibits an intense sericite-sulphide hydrothermal alteration. This alteration corresponds to Si, K, S, Cu, As, and Au enrichment, and Mg, Ca, Na, and  $CO_2$  depletion. The quartz-ankerite veins, of irregular form, are laminated to banded and locally intensely folded and boudinaged. They are of centimetric to decimetric sizes and are hosted by 1.5 m to two metre wide shear zones.

The mineralization is characterized by the presence of pyrite, pyrrhotite, chalcopyrite, arsenopyrite, ilmenite, and visible gold. The South Zone is the only locality where arsenopyrite occurs in abundance.

#### 7.4.4 West Zone

The West Zone was discovered west of Shaft No. 2 during a surface exploration drill program in 1994. It occurs within the same E-W shear structure that hosts the main deposit (Main Zone). The West Zone was mined from 2004 to 2007 to a depth of 890 m and has over 100 historic intercepts drilled from underground.

In 2020, DCM drilled four holes which confirmed the extension of the West Zone at a depth of 270 m to 400 m below the mined area (refer to Section 10.0). The West Zone remains open down plunge.



#### 7.4.5 North and South South Zones

There are some other minor mineralized structures, e.g., North and South South Zones with limited vertical and horizontal extensions.

The North Zone is subparallel to the Main Zone and located approximately 37 m north of this zone. It has a strike length of approximately 457 m and was present from 610 m to 910 m depth. The North Zone was partially mined with the Main Zone and is described as being discontinuous with veins averaging approximately 30 cm.

The South South Zone is approximately 300 m south of the Main Zone. The structure is exposed at surface and historically 14 holes were drilled over a strike length of approximately one kilometer. In 2020, DCM completed three holes totaling 402 m on the west side of Lake Norhart to follow up on an historical intercept of 0.8 m at 32.0 g/t Au at a downhole depth of 18 m (H-349). The results indicated weak gold mineralization near-surface and did not replicate the high grade gold intercept.

#### 7.4.6 Far West Zone

The Far West Zone is located approximately 900 m west along strike from the westernmost part of the Main Zone of the former Joe Mann Mine. Historically, the Far West zone was accessed by the Uddlen ramp (1973–74) to the west and an exploration drift at a depth of 137 m. The Far West Zone has a strike length of approximately 300 m and has been tested up to a vertical depth of 460 m. The Far West Zone has not been mined.

The mine stratigraphic sequence extends west towards the Uddlen mineralized zone (a one metre quartz vein over a length of 110 m) which was well recognized by the exploration drilling that was completed by Société québécoise d'exploration minière (SOQUEM) in 1988. The stratigraphy is oriented E-W (N285°) with tops or polarity towards the SE. A mesocratic to melanocratic gabbro of up to 300 m thick is in contact with a basalt unit which is sheared. A rhyolite unit is overlain by basalts. All these units are intruded by E-W aphyric felsic dykes which are locally porphyritic with quartz-plagioclase phenocryst as observed at the former Joe Mann Mine.

The mineralization is associated with quartz veins hosted within massive to schistosed basalt, gabbro and/or aphanitic rhyolite. The gabbro unit is at times schistosed and locally silicified and some amphibole phenocrysts are observed. Some plagioclase porphyry dykes and tuffs of intermediate to felsic composition are also observed. Similar to what is exhibited at the former Joe Mann Mine, the mineralization is disseminated and locally semi-massive, closely associated with the quartz plagioclase phenocrysts. The mineralization consists of chalcopyrite, magnetite, pyrite, pyrrhotite, and visible gold. The veins that cut the gabbro can carry up to 50% pyrite. When the veins cut the basalts, they carry 2% to 5% pyrrhotite and 1% to 2% chalcopyrite. The host rocks also contain small amounts of disseminated sulphides.

The Far West Zone was drilled in the late 1980s (approximately 4,900 m, H- series) and early 2000s (over 14,000 m). Very high grade historical gold intercepts included: 3.81 m of 20.8 g/t Au (H-214), 3.26 m of 107.0 g/t Au (H-118), and 3.53 m of 39.2 g/t Au (H-258).

In 2020, DCM completed four drill holes totaling 1,230 m which confirmed the nuggety nature of the Far West Zone with three holes intersecting gold mineralization (refer to Section 10.0).



#### 7.4.7 Other Mineralized Zones

Several other mineralized occurrences and showings are present on the Property (Figure7-4). These are briefly described below.

#### 7.4.7.1 Rohault

The Rohault Zone is located north of the former Joe Mann Mine at the Property limit and its western extension is approximately 300 m north of the mine infrastructures (Figure 7-4). This N275°/85° trending structure has been traced for over two kilometres by drilling.

The mineralization is associated with quartz-carbonate veins and veinlets which are locally truncated by mafic lavas and intrusions. Lavas are mainly massive to locally schistosed. Basalts contain some disseminated pyrite with locally important chloritization and silicification. The intrusions consist of leucocratic gabbro strongly sheared and often carbonated. Some felsic dykes are also observed in this area.

The mineralization consists of mainly pyrite-chalcopyrite with local pyrrhotite, sphalerite, and some specks of free gold. The quantity of sulphides varies from 1% to 40% (disseminated to semi-massive) in mineralized veins and in fine dissemination within mafic lavas. The main occurrence consists of 15% pyrite and 5% chalcopyrite.

Significant intersections from the historical drilling include: 108.71 g/t Au, 16.85 g/t Ag, and 1.4% Cu over 0.6 m at 44.95 m depth (H-560), 6.32 g/t Au and 0.37% Cu over 3.6 m (including 34.5 g/t Au and 0.99% Cu over 0.6 m) at 79.2 m depth (H-518); 3,672 ppb Au over 0.3 m at 33.3 m (H-483), and 1.55 g/t Au, 5.3 g/t Ag and 0.29% Cu over 0.4 m at 352.6 m depth (1086-96-01) (references: GM 56367, GM 52778, and GM 54746).

#### 7.4.7.2 Lac Némenjiche-Nord

The Lac Némenjiche-Nord showing was discovered in 1989 with drill hole H-384 which returned 2.54 g/t Au over 1.52 m (reference: GM 49692). It is located approximately 3.5 km SE of the former Joe Mann Mine (Figure 7-4). This mineralized occurrence consists of exhalative levels of semi-massive to massive sulphides (up to 20% pyrrhotite and 10% pyrite) within sedimentary units which are very sheared and fractured with 5% to 10% carbonate veinlets. These horizons of sediments are interbedded with sheared and altered basalts probably corresponding to biotite-garnet schists. Host rocks are predominantly basalts and amphibolitized gabbro with some thin sequences of felsic volcanic rocks from the Obatogamau Formation.

#### 7.4.7.3 Lac Némenjiche

Th Lac Némenjiche mineral occurrence is located approximately three kilometres south of the former Joe Mann Mine and two kilometres west of the Lac Némenjiche-Nord showing (Figure 7-4). It corresponds to mineralization intersected in several drill holes: H-399 intersected 13.54 g/t Au and 3.43 g/t Ag over 0.91 m and 2.56 g/t Au over 1.5 m,H-396 intersected 1.71 g/t Au over 1.5 mm and H-406 intersected 1.54 g/t Au and 3.42 g/t Ag over 0.73 m (reference: GM 50048). The mineralization consists of lenses of semi-massive to massive sulphides (pyrrhotite, pyrite and chalcopyrite). The host rock consists of biotite-garnet schist at the contact with mafic volcanic rocks within an east-west shear zone. The alterations observed near the mineralized zones consist of chloritization, carbonatization, and silicification.



#### 7.4.7.4 West Meston Lake

The West Meston Lake mineralized zone is located approximately seven kilometres SW of the former Joe Mann Mine and one kilometre east of the Flomic showing. It was discovered in drill hole H-436 which intersected 4.04 g/t Au over 1.37 m (reference: GM 50974). Another hole (H-440) intersected 2.74 g/t Au over 0.80 m (reference: GM 50974). The gold mineralization occurs with pyrite in a porphyritic quartz-feldspar dyke. The structural control is not clear, however, the mineralization is associated with fractures. The host rock of the porphyritic dyke is a fractured and intensely carbonated andesite.

#### 7.4.7.5 Flomic

The Flomic gold occurrence (Figure 7-4) was discovered by Flomic Chibougamau Mines Ltd in the early 1950s following a 17 hole drilling program (F-1 to F-17) where drill hole F-12 intersected 5.93 g/t Au over 1.22 m (samples no. 296 and 298) (reference: GM 01283B). A 25 cm quartz vein containing chalcopyrite and pyrite had been observed at the end of the hole.

The host rock is a leuco to melanocratic gabbro which is truncated by a pegmatitic gabbro. There are also interdigitated massive and pillowed basalts which are locally very deformed. Several diorite dykes and quartz-feldspar phenocryst dykes run across the basalts.

SOQUEM completed four drill holes in the early 1990s on both sides of the previous drilling to verify the extension of the gold mineralization. The most significant values included 1,403 ppm Cu over 0.3 m (H-487), 514 ppb Au and 500 ppm Cu over 0.5 m (H-444), and 222 ppm Cu over 1.52 m (H-449) (reference: GM 50974). The mineralization mostly consists of disseminated pyrite-magnetite-chalcopyrite in quartz-carbonate veins. Following SOQUEM's drilling, no further drilling has been conducted near the Flomic showing.

#### 7.4.7.6 Rivière Némenjiche

The Rivière Némenjiche occurrence was discovered in 1987 by drilling (reference: GM-45786). The mineralization appears tabular in shape and consists predominantly of sphalerite in quartz-calcite veins. Its dimensions are not known. The host rocks of the mineralization are mafic volcanics, diorite, and a gabbro sill. Alterations associated to the emplacement of the mineralization are dominantly chlorite-calcite and sericite and are widespread within mafic volcanics with strong local alterations in sericite and iron carbonate.

# 8.0 **DEPOSIT TYPES**

The Chapais-Chibougamau mining camp in the northeastern AGB (Figure 8-1) has produced 85.7 million tonnes (Mt) of ore from 1953 to 2008, including 1.57 Mt Cu, 176.1 t Au, 108.8 t Ag, and 72,066 t Zn and is thus the second largest mining district in the Québec portion of the AGB. (Leclerc and al., 2012)

Mineral deposits of the Chapais-Chibougamau region (Figure 8-1) comprise the following:

- Synmagmatic Fe-Ti-V and Ni-Cu-platinum group element (PGE) mineralization in mafic-ultramafic layered complexes and sills.
- Volcanogenic massive sulfide deposits (VMS).
- Early polymetallic (Au-Ag- Cu-Zn-Pb) mineralization.
- Shear zone-hosted ("orogenic" using the classification of Groves et al., 1998) Cu-Au and Au veins (Guha and al., 1988; Pilote and Guha, 2006).





# 8.1 Mineral Deposits in the Caopatina-Guercheville Area

The presence of the former Joe Mann Mine and the abundance of important gold occurrences and mineralized zones indicate high mineral potential for the Caopatina-Guercheville segment of the Obatogamau Formation. Further west of the Caopatina-Guercheville segment, the AGB also contains the Lac Shortt and Lac Bachelor gold deposits in addition to the Coniagas Zn-Pb-Ag base metal deposit.

**SLR** 

#### 8.1.1 Gold Mineralization

Based on DCM compilation work, gold occurrences have been grouped into four categories based on the host lithology and structural setting, with one of these been further divided into two subgroups based on the type of mineralization:

- Gold mineralization related to E-W trending, parallel stratification, shear zones in mafic volcanic rocks and associated mafic intrusions:
  - Quartz-sulphide vein type gold mineralization (e.g., Joe Mann, Figure 8-1).
  - Disseminated pyrite type mineralization (e.g., Philibert, Figure 8-1).
- Gold mineralization related to NE and NW trending shear zones that cross-cut mafic volcanic rocks and associated mafic intrusions.
- Gold mineralization hosted by intermediate to felsic intrusions.
- Gold mineralization hosted by felsic volcanic rocks, graphitic sediments and/or "iron formations".

#### 8.1.2 Base Metal Mineralization

Base metal mineralization is not large or significant and the information available is sparse and of poor quality. Nevertheless, it is possible to subdivide these showings into four main categories:

- Cu-Zn-Au-Ag volcanogenic massive sulphide type mineralization related to mafic-felsic volcanic centres.
- Zn-Cu-Au-Ag shear zone hosted mineralization in mafic flows, sediments and graphitic tuffs.
- Cu-Au-Ag-Mo vein hosted mineralization related to E-W or NE trending shear zones in mafic volcanic rocks and related intrusions.
- Cu-Ni PGE magmatic type mineralization in mafic volcanic rocks and related intrusions.

### 8.2 Joe Mann Deposit

The Joe Mann deposit is categorized as a greenstone-hosted quartz-carbonate vein deposit, a sub-type of lode-gold deposits. Greenstone-hosted quartz-carbonate vein deposits correspond to structurally controlled, deformed to folded deposits hosted in metamorphosed terranes (Dubé and Gosselin, 2007; Gaboury, 2019). They can coexist regionally with iron formation-hosted vein and disseminated deposits as well as with turbiditic-hosted quartz-carbonate vein deposits.

Greenstone-hosted quartz-carbonate vein deposits consist of simple to complex networks of gold bearing, laminated quartz-carbonate fault-fill veins in moderately to steeply dipping, compressional brittle-ductile shear zones and faults with locally associated shallow-dipping extensional veins and hydrothermal breccias. They are hosted by greenschist and formed at intermediate depth in the crust (five kilometre to 10 km) (Figure 8-2). They are distributed along deformed greenstone terranes of all ages, but are more abundant and significant, in terms of total gold content, in Archean terranes (Robert and al., 1990).

<u>SLR</u>



Joe Mann Project Northwest Québec, Canada Schematic Illustration of the Various Types of Gold Deposits Shown at Their Inferred Crustal Levels of Formation

Source: Dubé and al., 2001, modified from Poulsen and al., 2000

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September 2021

# 9.0 EXPLORATION

DCM has not conducted any exploration work other than drilling on the Property. The previous operator, Ressources Jessie, carried out two small geophysical surveys on its property (part of the Joe Mann Option Property) in 2017. Gold Bullion only carried out a small underground drilling campaign at the former Joe Mann Mine in 2008 (Refer to Section 10.0).

## 9.1 Geophysical Surveys (2017)

In October and December 2017, Abitibi Geophysics was mandated by Ressources Jessie to complete two small geophysical surveys to characterize the metal potential on its Joe Mann property (now part of Joe Mann Option Property).

#### 9.1.1 OreVision Induced Polarization/Resistivity Survey

The OreVision Time Domain Induced Polarization (IP) and Resistivity survey covered nine lines ranging in length from 860 m to 1,390 m at a 150 m line interval. The survey identified several interesting targets. Abitibi Geophysics' recommendations included additional survey lines to fully delineate the extent of target trends, prospecting/trenching on near-surface targets, and a drilling program to test the chargeable targets.

#### 9.1.2 AeroVision Magnetic Survey

An AeroVision magnetic survey was carried out in the same area as the OreVision IP/Resistivity survey. The survey area covered 48 lines (one kilometre in length) spaced at 50 m and oriented N0°. Five tie lines completed the survey grid.

Several magnetic anomalies of moderate to strong amplitudes were identified from this detailed magnetic survey.

# **10.0 DRILLING**

DCM drilled a total of 8,343 m testing the Main Zone and West Zone below the underground workings, the Far West Zone, and the South South Zone (Figure 10-1). The West Zone is 100% owned by DCM starting at 842 m below surface (dipping into the Property boundary) and the other areas are part of the option agreement with Ressources Jessie. The results from the surface drilling program are summarized in Table 10-1.

The results from the 2020 drilling program were incorporated where appropriate in the 2021 Mineral Resource Estimate.

**Summary of 2020 Drilling Program Results** 

Doré Copper Mining Corp. – Joe Mann Project									
	_	From	То	Width	Grade				
Hole ID	Zone	(m)	(m)	(m)	(g/t Au)	(% Cu)			
JM-20-02A	Main (unidentified)	1,213.3	1,213.7	0.40	33.2	0.03			
	Main	1,258.35	1,259.65	1.3	6.32	0.52			
	including	1,258.35	1,258.8	0.45	17.7	1.23			
	Main	1,276.5	1,282.45	5.95	2.29	0.04			
	including	1,276.5	1,278.2	1.7	5.64	0.02			
JM-20-03	South South	18.0	24.0	6.0	0.62	0.01			
JM-20-04	South South	NSI							
JM-20-05	South South	16.6	21.0	4.4	0.80	0.02			
	South	129.0	130.8	1.8	1.92	0.04			
JM-20-06	West (unidentified)	906.0	907.0	1.0	4.63	0.03			
JM-20-06W1	West (unidentified)	940.8	941.5	0.7	4.34	0.15			
	West (unidentified)	862.7	866.7	4.0	3.60	0.01			
JM-20-06W2	West	1,241.6	1,242.95	1.35	3.29	0.04			
JM-20-06W3	West	1,174.4	1,178.4	4.0	10.34	0.27			
	West	1,188.7	1,189.2	0.5	13.70	0.42			
JM-20-07	Main	1,357.9	1,360.4	2.5	1.87	0.02			
JM-20-08	Far West	NSI							
JM-20-09	Far West	171.5	179.9	1.9	0.60	0.49			

Previous drilling activities are discussed in Section 6.0 of this Technical Report.

Table 10-1:

Doré Copper Mining Corp. | Joe Mann Project, SLR Project No: 233.03410.R0000 NI 43-101 Technical Report - September 10, 2021 10-1



Hole ID	7	From	То	Width	Grade		
	Zone	(m)	(m)	(m)	(g/t Au)	(% Cu)	
	Far West	188.55	189.0	0.45	5.97	0.20	
JM-20-10	Far West	204.5	213.0	8.5	3.92	0.08	
	including	206.5	209.5	3.0	10.0	0.08	
	incl.	208.8	209.5	0.7	35.2	0.11	
	Far West	235.5	236.0	0.5	9.20	0.13	
JM-20-11	Far West	120.4	120.8	0.4	8.45	0.04	
	Far West	263.6	264.2	0.6	5.79	0.19	
	Far West	305.5	305.9	0.4	40.8	0.60	

Note:

1. NSI indicate no significant intercepts.

2. True widths are estimated to be 57% to 68% for West Zone and 75% for Main Zone.

3. No true width could be determined for the Far West Zone or the South South zone.



#### 10-3

## 10.1 2020 Drilling Program Results

#### 10.1.1 Main Zone

The Main Zone was drilled on surface with seven holes totaling 1,746.8 m. Only two drill holes reached target due to severe deviation and depth of drilling. Wedges and directional drilling contractors (Aziwell) were employed to help control the deviation and guide the hole to target. All drill holes were drilled in NQ diameter except hole JM-20-07 which started in HQ and necked down to NQ at 400 m downhole.

Two holes intersected the Main Zone and tested the continuity of the gold mineralization identified with two high grade historical intercepts 150 m apart and located approximately 170 m beneath the lowest mining level (1,050 m) of the former Joe Mann Mine. These two prior holes were drilled in 2008 after the former Joe Mann Mine had ceased operations and intersected 3.02 m of 30.3 g/t Au and 1.30% Cu (hole EE-188) and 1.88 m of 26.66 g/t Au and 0.40% Cu (hole EE-189B). DCM collared the holes on land part of the JV between Ressources Jessie (65%) and SOQUEM (35%) and drilled south towards the Main Zone.

Hole JM-20-02A intersected the Main Zone shear zone approximately 120 m up-dip from the two historical intercepts mentioned above. The shear zone returned two intercepts of 1.3 m of 6.32 g/t Au and 0.52% Cu, including 0.45 m of 17.7 g/t Au and 1.23% Cu, and 5.95 m of 2.29 g/t Au, including 1.7 m of 5.64 g/t Au. In addition, JM-20-02A intersected 0.4 m of 33.2 g/t Au in an unidentified zone above the Main Zone. The second hole (JM-20-07) intersected the Main Zone at approximately 100 m below hole EE-189B with an intercept of 2.5 m of 1.87 g/t Au within a wider, weakly mineralized shear zone of 20 m.

The Main Zone intercepts are characterized by zones of quartz-carbonate veining which are thin (up to 20 cm in size) but quite dense and averaged a few centimetres. Sulphides (mostly pyrite) are present in trace amounts up to 2%.

The Main Zone is sub-vertical in locations that were historically mined and the only other zone with a northern dip is the West Zone. The change in dip of the Main Zone could explain the lack of a focused gold bearing quartz vein as was present in the historic upper portions and the presence of disseminated veinlets. These jogs and changes in dip direction occur in other deposits in the Chibougamau region, such as Cedar Bay where the main sub-vertical structures behave in a step like manner with the dip changes associated with lower to no grade zones before the structure opens up again.

#### 10.1.2 West Zone

On the West Zone, DCM drilled four holes from surface totaling 2,944.1 m, one near-vertical hole (JM-20-06) and three wedges from that hole (with two using directional drilling) (JM-20-06W1, JM-20-06W2 and JM-20-06W3) to test the extension of the West Zone at a depth of 270 m to 400 m below the mined area. Three of the four holes reached the target structure, and one hole was stopped short (JM-20-06W1). All four intersected mineralized shear zones.

Hole JM-20-06W3 intersected 4.0 m of 10.34 g/t Au and 0.27% Cu and at a further 11 m downhole intersected 0.5 m of 13.70 g/t Au and 0.42% Cu. These two intercepts are located 100 m down plunge from the historical intercepts of 5.0 m of 10.3 g/t Au (hole EW78\_D), 3.2 m of 16.1 g/t Au (hole EW79\_D), and 3.3 m of 10.4 g/t Au (hole EW57\_D). It is interpreted that both JM-20-06 and JM-20-06W1 intercepted the structure to the west of the ore plunge structure and therefore did not carry high grade gold mineralization. Hole JM-20-06W2 intersected the well-defined West Zone structure a further 100 m down dip from hole JM-20-06W3, but with weaker gold mineralization (1.35 m of 3.29 g/t Au).



The West Zone intercepts were characterized by zones of quartz carbonate veining and elevated blebby to net texture sulphides (mostly pyrite with small amounts of pyrrhotite and chalcopyrite). The intercepts down dip of the historic drilling pierced in the expected locations and the mineralization was of similar composition to the historic mineralization.

#### 10.1.3 Far West Zone

DCM completed four holes totaling 1,230 m at the Far West Zone which is located approximately 900 m west along strike from the westernmost part of the Main Zone. SLR notes that the Far West Zone is not included in the Mineral Resource estimate.

Historically, the Far West Zone was accessed by the Uddlen ramp to the west and an exploration drift at a depth of 137 m. The Far West Zone is interpreted to be the horse tailing of the Joe Mann structure at the west end and is characterized by very heterogeneous gold distribution that is nuggety in nature, and historically has returned some shallow, very high grade gold intercepts.

The surface drilling confirmed the nuggety nature of the Far West Zone with three holes intersecting gold mineralization. The best intercepts returned 8.5 m of 3.92 g/t Au (including 3.0 m of 10.0 g/t Au, which included 0.7 m of 35.2 g/t Au), and 0.5 m of 9.2 g/t Au in hole JM-20-10. Other highlights included: 0.4 m of 8.45 g/t Au, 0.6 m of 5.79 g/t Au, and 0.4 m of 40.8 g/t Au and 0.60% Cu in hole JM-20-11 and 0.45 m of 5.97 g/t Au in hole JM-20-09.

#### 10.1.4 South South Zone

DCM completed three exploration surface holes totaling 402 m on the South South Zone, located approximately 300 m south of the Main Zone, to follow up on a historical intercept of 0.8 m grading 32.0 g/t Au at a downhole depth of 18 m (hole H349). The results indicated weak gold mineralization near-surface and did not replicate the high grade gold intercept. The South South Zone is not included in the Mineral Resource estimate.

# 11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

SLR

# **11.1 Sampling Method and Approach**

### 11.1.1 Gold Analysis

Drill core is delivered every morning to the core shack by the drilling contractor (Miikan Drilling Ltd.) and arranged on tables by the geological technicians after which it is logged by geologists. The core recovery is normally above 90% in the host rock and dyke but occasionally drop to 50% in fault zones. The main ore hosting shear is usually above 75%. Mineralized drill core, veins, and shoulder samples are identified and marked on the drill core by the geologists. Sample lengths range from 0.4 m to one metre, commonly being one metre, and respect geological contacts. Sample tags are placed at the beginning of each sample interval and the tag numbers are recorded within a Microsoft (MS) Excel database.

Diamond drill core is split in two using a Pothier diamond saw following a reference line as defined by the geologists. If sampling is necessary, one half is collected, bagged with one sample tag, and submitted for sample preparation and analysis. The remaining half core is placed back in the core tray and the other portion of the sample tag is stapled to the box. It is then stored on site in well-mapped core storage facilities. Unsampled intervals are stacked on wood pallets and their location is mapped for reference. Sampled core is bagged in rice bag or can be double bagged for H core size. The geologists mark the batch and sample numbers on the rice bag and review the core shipment prior to being transported to the SGS Laboratory in Val-d'Or (SGS) by Transcol courier. Transcol stacks the rice bags on pallets for their delivery to SGS for preparation. Samples are prepared at SGS before being sent to SGS's Burnaby Laboratory for fire assay and multi-element analysis as well as LeachWELL analysis for the ore zones. SGS uses the services of FedEx to transport samples between its two locations.

#### 11.1.2 Density Analysis

At Joe Mann, a homemade water immersion device is used to calculate density as part of the description work. No specific gravity on pulp samples using pycnometer has been completed for Joe Mann material.

# **11.2** Sample Preparation and Analysis

#### 11.2.1 SGS

Primary assays from the Joe Mann deposit are prepared and analyzed at SGS during 2020 and 2021.

SGS is independent of DCM, and its facilities are accredited to the recognized quality standard of International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) 17025: 2005 for all relevant procedures. The following analysis is undertaken at the SGS Val-d'Or and Burnaby facilities:

- Sample Preparation: Val-d'Or facility, PRP94. Samples are dried at 105°C, crushed to 75% less than two millimetres, riffle split to one kilogram, pulverized split to greater than 85% passing 75 μm.
- **Gold Analysis:** Burnaby facility, GE\_FAA50V5. A 50 g fire assay standard fusion method with AAS finish. The lower detection limit is 0.005 g/t Au, and the upper detection limit is 10 g/t Au.

- **Gold Analysis:** Burnaby facility, GO\_FAG30V. Gold analyses returned from GE\_FAA50V5 with a gold value above 10 g/t Au are re-assayed using a 30 g fire assay standard fusion method with a gravimetric finish. The upper limit of detection is 100 g/t Au.
- **Gold Analysis:** Burnaby facility, GE\_LWE69M. A 1,000 g Accelerated cyanide leach, AAS finish gold analysis with a lower detection limit of 0.01 g/t Au and upper detection limit of 1,000 g/t Au.

In the QP's opinion, the sample preparation and analytical procedures are acceptable for the purposes of Mineral Resource estimation.

## **11.3** Sample Security and Database Management

Samples are handled by DCM and transported by Transcol personnel or contractors. Drill core is stored at the Copper Rand core storage facility, the grounds of which are supervised. The Copper Rand storage facilities are completely covered, being inside a hangar. A core storage map is maintained by DCM. Sample pulps and rejects are stored in a closed hangar on site.

Drill hole logging and sample data are maintained in an MS Excel database, with regular back ups. SLR recommends migrating to an industry standard database management system.

In the QP's opinion, the sample security procedures are acceptable for the purposes of Mineral Resource estimation.

# **11.4 Quality Assurance and Quality Control**

Quality assurance (QA) consists of evidence that the assay data has been prepared to a degree of precision and accuracy within generally accepted limits for the sampling and analytical method(s) to support its use in a Mineral Resource estimate. Quality control (QC) consists of procedures used to ensure that an adequate level of quality is maintained in the process of collecting, preparing, and assaying the exploration drilling samples. In general, QA/QC programs are designed to prevent or detect contamination and allow assaying (analytical), precision (repeatability), and accuracy to be quantified. In addition, a QA/QC program can disclose the overall sampling-assaying variability of the sampling method itself.

In the QP's opinion, the QA/QC program as designed and implemented by DCM is adequate and the assay results within the database are suitable for use in a Mineral Resource estimate.

#### 11.4.1 QA/QC Protocols

The following QA/QC protocols were implemented by DCM. The QA/QC program is managed by the DCM geology team, and QA/QC samples are blind to the SGS laboratory. Each sample batch of 20 to 300 samples is submitted to the SGS laboratory every week and includes one certified reference material (CRM) for every 50 samples. Blank samples and field duplicates (quarter split) are inserted at a rate of one per 50 samples and are placed either preceding or following a mineralized interval. CRM samples are mostly inserted at random but are sometimes added if a mineralized zone is present in the batch. All QA/QC sample insertions maintain consecutive numerical order. Coarse blank material samples are approximately 300 g to 500 g of ornamental quartz-calcite rock from the local hardware store. Pulp reject samples are not systematically selected for re-analysis. Following receipt of results from SGS, DCM geologists review, and sample batches identified as anomalous are repeated by SGS at the request of DCM. QA/QC reports are produced punctually upon receiving new results. The QP recommends the preparation of a quarterly and yearly QA/QC report to track possible issues that might arise over time.



In 2021, DCM undertook a comparison between fire assay and LeachWELL results. This was primarily conducted to verify if the half-core preparation for fire assays was exacerbating the nugget effect, usually accentuated in orogenic gold deposits by its nature and its gold distribution heterogeneity. Samples of 1,000 g in weight were used for LeachWELL assays and compared with fire assays results. Additionally, LeachWELL samples were taken to cover mineralized shoulder sampling gaps in the previous fire assay sampling.

A summary of annual QA/QC submittals from 2020 to 2021 is presented in Table 11-1.

Comula Tuno	:	2020	2021		
Sample Type	Count	Insertion Rate	Count	Insertion Rate	
Regular Samples	2,337	-	345	-	
Blanks	59	2.5%	7	2%	
CRMs	51	2%	16	4.5%	
Field Duplicates	49	2%	7	2%	
Duplicates (SGS Lab- LeachWELL)	-	-	643	24%	
CRM (SGS Lab- LeachWELL)	-	-	20	3%	
Blanks (SGS Assay Lab- LeachWELL)	-	-	26	4%	

# Table 11-1:Summary of QA/QC Submittals from 2020 to 2021Doré Copper Mining Corp. – Joe Mann Project

Notes:

- 1. Annual summaries are from January 1 to December 31 of the given year with the exception of 2021 which ends June 18.
- 2. Insertion rates of LeachWELL duplicates sent to SGS are calculated based on the submission of LeachWELL samples on the total of regular samples from 2020 to 2021.
- 3. Insertion rates of CRM and blank samples sent to the check assay laboratory (SGS) are calculated based on the total of duplicate LeachWELL sample submission to SGS.

#### 11.4.2 Certified Reference Materials

Results of the regular submission of CRMs (standards) are used to identify issues with specific sample batches, and biases associated with the SGS laboratory. DCM has sourced CRMs principally from two different international laboratories, OREAS and CDN Resource Laboratories Ltd. Results of the CRMs were plotted in control charts, and failure rates, defined as a gold value reporting more than three standard deviations (SD) from the expected value, and warning rates, defined as gold values reporting more than three SD from the expected values, were reviewed by onsite geologists.

A total of six different CRMs were inserted at Joe Mann by DCM during 2020 and 2021, totaling 67 individual samples, with an insertion rate of 2% for 2020 and approximately 4% for 2021. The QP reviewed all the Certificates of Analysis of these CRMs and found them to vary in grade from 0.488 g/t Au to 14.22 g/t Au.

The QP selected two CRMs, representing the cut-off grade and a low grade CRM with a high sample population for additional review. The technique used to assay the CRM material, expected values, and SD of each CRM are listed in Table 11-2. The QP prepared control charts and analyzed temporal and grade trends, reviewed the data for low and high biases, and the failure rate of each CRM.

Standard	Grade (g/t Au)	1 SD	Assay Technique	Source	Date in Use Range	Number	Grade Represented
OREAS 239	3.55	0.086	Pb, FA	OREAS	2020-2021	24	Closest to Cut-off grade
OREAS 257b	14.22	0.373	Pb, FA	OREAS	2020-2021	12	High grade
OREAS 501c	0.221	0.007	Pb, FA	OREAS	2020	3	Low Grade
OREAS 502c	0.488	0.015	Pb, FA	OREAS	2020-2021	10	Low Grade
OREAS 503d	0.666	0.015	Pb, FA	OREAS	2020-2021	14	Low Grade
CDN-CM-18	5.28	0.175	Pb, FA	CDN Resource Laboratories Ltd.	2020	4	High grade

# Table 11-2:Expected Values and Ranges of Gold CRMDoré Copper Mining Corp. – Joe Mann Project

Notes:

- 1. FA=fire assay.
- 2. SD=standard deviation.

Results from Joe Mann CRM OREAS 239 samples, presented in Figure 11-1, indicate very good and consistent laboratory precision, and a slightly high bias in the early 2020 samples. The result of OREAS 239 is the only value which approximates the gold cut-off grade at the Joe Mann deposit. It is also the CRM that was most frequently used between 2020 to 2021 by DCM. Only two out of the 24 CRMs were outside two SD, and there was only one failure, which has been removed for better visualization in Figure 11-1.



#### Figure 11-1: Control Chart of CRM OREAS 239: 2020 to 2021

Results from Joe Mann OREAS 503d samples, which is only representative of the very low grade at Joe Mann deposit, are presented in Figure 11-2 and indicate mostly good laboratory accuracy and precision at SGS. No failure or bias were observed over the period the CRM has been in use and four out of fourteen samples were outside two SD.



#### Figure 11-2: Control Chart of CRM OREAS 503d: 2020

SLR recommends limiting the number of inserted CRMs at Joe Mann to three, and to have those CRMs represent values as close as possible to the cut-off grade (2.6 g/t Au), the average grade of the Main Zone (approximately 10 g/t Au), and the average grade of the West Zones (approximately 5 g/t Au). SLR also recommends eliminating most of the very low grade CRMs, which do not reflect the economic gold grades present at Joe Mann.

#### 11.4.3 Blank Material

The regular submission of blank material is used to assess contamination during sample preparation and to identify sample numbering errors. Blank material was coarse, weighting approximately 300 g to 500 g and obtained from a local hardware store. Blank material was inserted at an approximate rate of 2%. SLR prepared charts of sterile assay results against an error limit of ten times the lower detection limit of the assay technique, or 0.05 g/t Au. Results indicate a negligible amount of sample contamination associated with samples from the Property, with a failure rate of 1.5%.

#### 11.4.4 Field, Coarse Reject and Pulp Duplicates

Duplicate samples help to monitor preparation, assay precision, and grade variability as a function of sample homogeneity and laboratory error. QA/QC protocols at the Property stipulate the inclusion of field duplicates, pulp and coarse duplicate sample monitoring are not included. Field duplicates test the natural variability of the original core sample, as well as all levels of error including core splitting, sample size reduction in the preparation laboratory, sub-sampling of the pulverized sample, and analytical error.

SLR analyzed a complete database of field duplicate data compiled by DCM using basic statistics, scatter, and quantile-quantile plots. A total of 85 sample pairs were included in the analysis. The correlation coefficient of the Joe Mann field duplicate dataset is high, with a value of 0.981. A scatter plot of the field duplicate sample pairs is presented in Figure 11-3. The small and low grade dataset limits the conclusion that can be made from the different plots. SLR recommends that DCM increase the proportion of duplicate sample pairs with grades above the cut-off grade, 2 g/t Au.

Coarse and pulp duplicates provide a measure of the sample homogeneity at different stages of the preparation process (crushing and pulverizing) while field duplicates assess the unpredictability of the core, as well as all levels of sampling, preparation, and analysis. Coarse and pulp duplicates are not currently included in the QA/QC programs at the Project. The QP recommends including pulp and coarse duplicate samples in future drill programs to help understand the field duplicate sample results.



3 pairs not showing

Figure 11-3: Scatter Plot of Field Duplicate Samples

#### 11.4.5 LeachWELL Check Assays

Submitting assays to be evaluated with a different method helps to monitor bias at the laboratory. Assays are first sent to SGS to be analysed using the fire assay method and some samples are re-submitted afterwards to verify their grade using a LeachWELL method. The QP prepared an analysis which included a comparison of the original fire assay and LeachWELL duplicates assay results. DCM has also submitted to LeachWELL analysis CRMs and blank material to evaluate their performance. DCM implemented the LeachWELL check assay in 2021 and resubmitted 24% of its 2020 to 2021 fire assays to SGS.

The low pool of samples for each CRM limited the possible interpretation of accuracy and precision that could normally be obtained from a check assay dataset. Furthermore, SGS could not process the samples due to an insufficient sample size. None of the blank samples sent to LeachWELL failed.

The original fire assay value and its LeachWELL duplicate value are plotted in Figure 11-4 as a scatter plot and in Figure 11-5 as a quantile-quantile plot. A total of 639 sample pairs were included in the check assay analysis.



Consistent with internal duplicate sample results, Joe Mann sample pairs exhibit a high number of poorly correlating sample pairs. An investigation in duplicate sampling practices is required to determine if improvement of results is possible. The Joe Mann sample pairs mostly follow an x-y linear trend, 2 g/t Au in Figure 11-4 but exhibit a lower precision with a high number of poorly correlating sample pairs above 2 g/t Au. Joe Mann has a large pool of sample pairs below 6 g/t Au samples with a slight low bias that can be observed in both Figure 11-4 and Figure 11-5. While the presence of a low bias is observable in both Figure 11-5, the high number of outliers and small sample set at Joe Man prevent firm conclusions from being made. The QP recommends working with SGS to address the low bias of LeachWELL gold values and discrepancies between LeachWELL and fire assays gold values at all grade ranges.



Figure 11-4: Scatter Plot of SGS Original and LeachWELL Field Duplicate Assay Values





#### 11.4.6 Check Assays

The QP notes that DCM QA/QC protocols should include check assays on pulps at a second laboratory using the same analytical procedure. SLR recommends sending approximately 5% of the pulps assayed at the primary laboratory to an accredited second laboratory.

# **11.5 Conclusions**

The QP offers the following conclusions regarding QA/QC data and reports collected for the Property from 2020 to 2021:

- The QA/QC program as designed and implemented by DCM is adequate and the assay results within the database are acceptable for the purposes of Mineral Resource estimation.
- The results of the CRM program indicate very good precision and negligible bias at the SGS laboratory.
- The results of the blank sampling program indicate negligible sample contamination and few samples numbering errors.
- The results of the field duplicate program at Joe Mann are inconclusive as the sample results do not address the grade range of interest.
- The LeachWELL results from the check assay program identify differences between the two assay techniques.



• DCM QA/QC protocols should include check assays on pulps at a second laboratory using the same analytical procedure.

### **11.6 Recommendations**

The QP offers the following recommendations regarding QA/QC data collection on the Property:

- Prepare quarterly and annual QA/QC reports across the Projects which evaluate longer term trends and contextualize results from the individual properties.
- Review the QA/QC protocol to include CRM material that is representative of the cut-off grade, the average grade of the Main and West zones.
- Increase the proportion of duplicate sample pairs with grades above the cut-off grade.
- Include pulp and coarse duplicate samples in future programs, to help understand the field duplicate sample results.
- Investigate and resolve the discrepancies observed in fire assay results versus LeachWELL results for all grade ranges at the SGS laboratory.
- Work with the primary laboratory (SGS) to determine if field duplicate and check assay results from Joe Mann can be improved with procedural modifications.
- Send approximately 5% of the pulps assayed at the primary laboratory to an accredited second laboratory.
- Migrate from a MS Excel database to an industry standard database management system.

# **12.0 DATA VERIFICATION**

## **12.1 SLR Site Verification Procedures**

SLR QPs, Valerie Wilson, M.Sc., P.Geo., SLR Principal Geologist, and Marie-Christine Gosselin, P.Geo., SLR Geologist, visited the Property on June 16, 2021. While on site, the QP held discussions with site personnel, visited Joe Mann infrastructure, the current core shack, and the historic tailings. The QP also reviewed previously selected core intercepts and compared them against recorded lithology logging and assay results. In addition, the QP reviewed data collection and QA/QC procedures.

The QP regards the geological and mineralization interpretations used to support Mineral Resource estimation consistent with the drill core, and the DCM geologists to have a good understanding of the geology and mineralization.

## **12.2** SLR Audit of the Drill Hole Database

The QP reviewed the drill hole databases for Joe Mann in Leapfrog software and conducted a standard review of import errors and visual checks.

The QP requested a spatially and temporally representative set of assay certificates for the Joe Mann deposit, sourced directly from the ALS laboratory where possible, or scanned paper records in the case of historic results. The QP performed assay certificate verification exercises comparing both historic and DCM recent drilling certificates to the assays in the drill hole databases for the Project. A total of three recent DCM drill holes (of four) and 10 historic drill (of 44) holes from the Project were reviewed with attention to assay values, interval recording, and, in the case of historic results, value conversion (imperial to metric). A summary of the certificate matching results is presented in Table 12-1. While the QP noted some gold assay errors over 11.71 m in drill hole EW30\_D just outside West01 in the mined-out area, no other significant or impactful errors were identified for information being used in the Mineral Resource estimate. The QP has verified all historic assays that are inside the mineralized wireframes and recommends verifying all historic drill hole assay values outside the mineralized wireframes. No discrepancies were found in sample naming or interval recording.

Overall, the QP is of the opinion that the results of DCM's database workflows and controls comply with industry standards and are adequate for the purposes of Mineral Resource estimation.

Drill Hole ID	Sample Number	Assay Result in Certificate (g/t Au)	Assay Result in Database (g/t Au)	Δg/t Au
		DCM		
JM-20-07	93386	2.56	2.56	0
JM-20-06W2	435341	2.44	2.44	0
JM-20-06W3	95057	33.7	33.7	0

# Table 12-1:Summary of DCM and Historic Assay Certificate VerificationDoré Copper Mining Corp. – Joe Mann Project

Drill Hole ID	Sample Number	Assay result in Certificate (oz/st Au)	Assay Conversion to g/t Au	Assay Result in Database (g/t Au)	∆g/t Au
		His	toric		
EW1_D	50500	0.115	3.94	3.94	0
EW22_D	51564	0.657	22.53	22.53	0
EW30_D	51831	2.75	94.29	18.86	75.43
EW79_D	53374	1.038	35.59	35.59	0
EW44_D	52426	0.733	25.13	26.50	1.37
EW77_D	53271	1.107	37.95	37.95	0
EW46_D	52456	1.18	40.46	40.46	0
EW23_D	51580	0.856	29.35	29.35	0
EE-188	6059	2.28	78.17	78.16	0.01
EE-189B	6295	1.512	51.84	51.83	0.01

# **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

## 13.1 Introduction

DCM has not initiated any metallurgical testing at Joe Mann.

From January 2005 to September 2007, Joe Mann ore was transported approximately 60 km by truck to the Copper Rand Mill, now wholly owned by DCM, for processing. Previously ore was processed at Campbell Resources' Merrill Mill, which closed in 2004 and has since been dismantled.

The information in the subsequent subsections provides the historical recovery rates for gold, copper, and silver during the period, 2005 to 2007, when Joe Mann ore was treated at the Copper Rand Mill. Information regarding the mineralized zones extracted from the Joe Mann deposit during this period is unknown.

Table 13-1 presents a summary of Joe Mann ore processed at the Copper Rand Mill for the period, 2005 to 2007.

		Fee	d	Total Recovery			
Year	Short Tons	Cu (%)	Au (oz/st)	Ag (oz/st)	Cu (%)	Au (%)	Ag (%)
2005	139,064	0.34	0.25	0.23	94.56	83.36	67.77
2006	80,639	0.28	0.207	0.169	95.75	84.87	68.35
2007	67,292	0.22	0.181	0.154	94.16	82.71	59.82

# Table 13-1:Summary of Joe Mann Ore Processed at the Copper Rand MillDoré Copper Mining Corp. – Joe Mann Project

#### 13.2 History

The Copper Rand Mill was constructed in 1959, updated and expanded in the 1970s and 1980s, and then again in the early 2000s. The Copper Rand Mill is connected to the Québec energy grid and has a power supply of 25 MW at 25 kV. Water used for the process would have been recycled from the tailings management facility. The Copper Rand Mill site has a substation, core shack, laboratory (not functional), warehouse, and office complex.

The processing plant building occupies a surface area of 2,830 m<sup>2</sup> and consists of crushing, fine ore storage, grinding, gravity recovery of particulate gold, flotation of a copper concentrate, thickening, and filtration. The concentrator has an installed milling capacity of approximately 2,700 tpd. Tailings were pumped two kilometres at a level elevation to the Copper Rand tailings management facility. The Copper Rand Mill last operated in December 2008.

The concentrator consisted of a standard crushing circuit where a jaw crusher, two cone crushers (standard and short head), and two double deck vibrating screens utilized in a closed screening / crushing circuit. The ore passing the screens was stored in three separate silos before grinding. The grinding circuit consisted of an open circuit rod mill and two additional ball mill grinding circuits. Precious metals, gold and silver, were recovered by gravimetry using Knelson concentrators as part of the grinding circuit and by flotation of sulphides. No cyanidation was applied at the Copper Rand Mill.



Gold recovered from the gravity circuits was melted and poured into doré bars on site and was shipped to the Royal Canadian Mint for refining. The flotation circuit used a standard technology to produce a copper-gold concentrate.

Metallurgical recoveries for the Joe Mann ore for the period, 2005 to 2007, based on internal monthly reports and annual filings from Campbell Resources are presented in Table 13-1.

The quality of the chalcopyrite concentrates produced for the same production period, 2005 to 2007, for the purpose of NSR calculation is presented in Table 13-2.

Year	Output		Concentrate Grade	
	(st)	Cu (%)	Au (oz/st)	Ag (oz/st)
2005	2,767	16.22	5.56	7.21
2006	1,435	15.32	4.52	5.81
2007	852	16.51	5.60	6.49

# Table 13-2:Quality of the Flotation Chalcopyrite Concentrates ProducedDoré Copper Mining Corp. – Joe Mann Deposit

SLR notes that DCM was unable to provide the data regarding the moisture levels in the concentrate. Based on the information received from Minopro Cree Inc., the moisture in the concentrate varied between 8% and 12%, depending on the type of filter used during production (Lapointe and Paquet, 2021). A horizontal filter press was used the majority of the time, which created a moisture of 8%, and a disc filter was also used infrequently. The disc filter did not have the same drying capacity, which resulted in a moisture of 10% to 12%.

The recovery of gold and silver by gravity compared to the metals recovered by flotation in the chalcopyrite concentrate is presented in Table 13-3.

	I	Total Recovery			Concentrate Recovery			Gravity Recovery		
Year	Cu (%)	Au (%)	Ag (%)	Cu (%)	Au (%)	Ag (%)	Cu (%)	Au (%)	Ag (%)	
2005	94.6	83.4	67.8	94.6	43.6	62.0	0.0	39.8	5.7	
2006	95.8	84.9	68.4	95.8	38.9	61.3	0.0	45.9	7.2	
2007	94.2	82.7	59.8	94.2	39.2	53.4	0.0	43.6	6.4	

# Table 13-3:Recovery Distribution (Gravity and Flotation)Doré Copper Mining Corp. – Joe Mann Project

From 2005 to 2007, there were no processing factors or deleterious elements that had a negative effect on the extraction or the concentrate.

Should the existing Copper Rand Mill be used for processing mineralization from Joe Mann, SLR recommends assessing the overall plant throughput, infrastructure requirements, and process modifications to achieve the expected gold recoveries. Furthermore, SLR recommends conducting a metallurgical test work program to better understand metallurgical performance and to confirm the metallurgical response and gold recoveries observed in historical testing.

# **14.0 MINERAL RESOURCE ESTIMATE**

### 14.1 Summary

Mineral Resource estimates for the Joe Mann deposit were prepared by SLR using available drill hole data as of June 18, 2021. Mineral Resource estimates are based on the following drill hole information:

- DCM drilling: 26 assays from four surface drill holes with a total depth of 5,312 m, completed between 2020 and 2021.
- Historic drilling: 435 assays from 48 underground drill holes with a total depth of 12,311 m completed between 1951 and 2019.

The Joe Mann Mineral Resource estimate is based on three veins in two zones (West and Main) directly below existing mine infrastructure, within which capped, full length composites have been estimated into sub-blocked models using a two-pass inverse distance cubed (ID<sup>3</sup>) interpolation approach. Vein orientations were confirmed through observed vein angles in drill core with consideration to overlying mined-out stope orientations. A minimum thickness of 1.2 m was applied to all veins. Inferred Mineral Resources represent areas with drill hole spacing up to 100 m and above a gold cut-off grade of 2.6 g/t Au. Within Main 01, a small amount of lower grade material was included to preserve continuity.

Mineral Resource domains and block modelling work was performed using Leapfrog Geo and Edge software. In addition to standard historical data and database validation techniques, wireframe and block model validation procedures including wireframe to block volume confirmation, statistical comparisons with composite and nearest neighbour (NN) estimates, swath plots; and visual reviews in 3D, longitudinal, cross section, and plan views were completed for the Joe Mann deposit.

The 2021 Mineral Resource estimate as of July 21, 2021, for the Project is presented in Table 14-1 and is prepared in accordance with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM (2014) definitions ) for Mineral Resource classification.

The QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

	Tonnage	Gra	ade	Contained Metal		
Category	(000 t)	(g/t Au)	(% Cu)	(000 oz Au)	(000 lb Cu)	
Inferred	608	6.78	0.24	133	3,281	

Table 14-1:Summary of Mineral Resources – July 21, 2021Doré Copper Mining Corp. – Joe Mann Project

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.

2. Mineral Resources are estimated at a cut-off grade of 2.60 g/t Au.

3. Mineral Resources are estimated using a long term gold price of US\$1,800/oz Au, metallurgical gold recovery of 83%, and an exchange rate of US\$0.75/C\$1.00.

4. A minimum mining width of 1.2 m was used. A small number of lower grade blocks within Main 01 have been included for continuity.

5. Bulk density is 2.84 t/m<sup>3</sup>.

6. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
7. Numbers may not add due to rounding.

### 14.2 Mineral Resource Cut-Off Grades

Metal prices used for Mineral Reserves are based on consensus, long term forecasts from banks, financial institutions, and other sources. For Mineral Resources, metal prices used are slightly higher than those used for Mineral Reserves.

A cut-off grade of 2.6 g/t Au was developed for Joe Mann deposit and reflects assumed mining costs of sub-level stoping (steeply dipping domains) in addition to processing costs and gold price. The full operating cost, including mining, processing, and general and administration (G&A) have been included in the calculations. Capital costs, including sustaining capital have been excluded. Table 14-2 lists the parameters used to calculate the cut-off grades.

ltem	Unit	Sub-Level Stoping
Mining Rate	wet tpd	400
Processing Rate	wet tpd	400
Gold Metallurgical Recovery	%	83
Gold Price	US\$/oz	1,800
Exchange Rate (CAD to USD)	C\$:US\$	0.75
Mining cost	C\$/t milled	110
ROM Ore Transport (no crushing)	C\$/t milled	15
Processing Cost	C\$/t milled	25
G&A	C\$/t milled	20
Total	C\$/t milled	170
Break-Even Cut-Off Grade	g/t Au	2.6

# Table 14-2:Mineral Resource Cut-Off Grade InputsDoré Copper Mining Corp. – Joe Mann Project

#### **14.3** Resource Database

The drilling database is maintained in MS Excel, with drill hole location information in NAD83 projection, UTM Zone 18. While the drill hole database is in metric units, historical drilling was in imperial units, however, this has since been converted to metric units by Jessie Resources and DCM onsite geologists during 2019 and 2020.

The database for the Joe Mann Mineral Resource estimate consists of diamond drilling spaced 20 m to 100 m apart and including 461 domain intersecting gold and copper assays from 52 drill holes with a total length of 17,622 m and a total assay length of 222 m completed from 1951 to 2021. SLR notes that LeachWELL assays results were used for a small number of samples when fire assays were not available. Drilling was conducted from surface and from underground infrastructure. The data was imported into Seequent's Leapfrog Geo version 2021.2 for statistical analysis, wireframe building, block modelling, and resource estimation.



### 14.4 Geological Interpretation

The Joe Mann Mineral Resource estimate is based on interpretations of vein structures modelled using Seequent's Leapfrog Geo software in a total of three domains within the Main and West areas. The Main area includes one sub-vertical vein, Main01, while the West area includes two domains, West01 and West02. Wireframe domains were built using an approximate gold cut-off grade of 2.0 g/t Au and a 1.2 m minimum thickness, and domain extensions were defined at a limit of closer to 50% of the local drill hole spacing, or 50% of the distance to an excluded drill hole. Vein orientations at Joe Mann mimic overlying or adjacent mined-out areas in both orientation and form. Final domains are presented in Figure 14-1.





#### 14.5 Resource Assays

#### 14.5.1 Treatment of High Grade Assays

#### 14.5.1.1 Capping Levels

Table 14-3 summarizes the Joe Mann capped gold assay statistics. A capping strategy was developed by SLR by reviewing raw assays using basic statistics, histograms, log probability plots, and decile analysis to determine a gold cap for each domain independently.

# Table 14-3:Gold and Copper Assay Statistics and Capping LevelsDoré Copper Mining Corp. – Joe Mann Project

Domain	Count	Count Capped	Cap (g/t Au)	Mean (g/t Au)	Capped Mean (g/t Au)	Min. (g/t Au)	Max. (g/t Au)	Capped Max. (g/t Au)	CV <sup>1</sup>	Capped CV
				G	old					
Main01	24	2	45	6.59	5.64	0	78.16	45	2.27	2.0
West01	296	9	45	5.77	4.74	0	261.6	45	3.06	2.06
West02	139	1	45	3.19	3.07	0	85.58	45	2.65	2.43
Domain	Count	Count Capped	Cap (% Cu)	Mean (% Cu)	Capped Mean (% Cu)	Min. (% Cu)	Max. (% Cu)	Capped Max. (% Cu)	CV <sup>1</sup>	Capped CV
					Copper					
West01, West02 and Main01	461	2	2.5	0.14	0.14	0	2.55	2.5	2.28	2.27

Note:

1. Coefficient of Variation (CV)

The result of the gold capping analysis for the combined domains is presented in Figure 14-2.







#### 14.5.1.2 High Grade Restriction

The Main Zone (Main01) is composed of seven drill hole intercepts, three of which lie above the gold cutoff grade of 2.6 g/t Au, with capped full-length composite values of 4.94 g/t Au, 22.58 g/t Au, and 23.13 g/t Au. The influence of these high grade gold intercepts was moderated by the application of a high grade gold restriction during interpolation which capped the composites to 20 g/t Au at distances greater than 18.75 m in the x-axis and 75 m in the y-axis on the second pass of ID<sup>3</sup>. Additional high grade restrictions were not applied in the copper interpolation.

#### 14.6 Compositing

Capped assay samples at Joe Mann were composited to represent the full-length intercept of each domain. A histogram of assays lengths within all mineralization domains is presented in Figure 14-3 and gold and copper assay and composite statistics per domain are summarized in Table 14-4. SLR notes that the longer full-length composites are the representation of drill holes oriented down dip, due to the angle of drilling with respect to the vein orientation, necessary due to the deep target depth.





# Table 14-4:Capped Full-Length Gold and Copper Assay and Composite Statistics<br/>Doré Copper Mining Corp. – Joe Mann Project

				Assay						Composi	te	
Domain			Original			Сар	ped			Capped		
Gold	Count	Length (m)	Min. (g/t Au)	Mean (g/t Au)	Max. (g/t Au)	Mean (g/t Au)	Max. (g/t Au)	Count	Length (m)	Min. (g/t Au)	Mean (g/t Au)	Max. (g/t Au)
Main01	26	21.03	0.00	8.47	78.16	7.14	45.00	7	21.03	0.87	7.14	23.13
West01	296	121.79	0.00	5.77	261.60	4.74	45.00	42	121.79	0.00	4.74	17.47
West02	139	79.41	0.00	3.19	85.58	3.07	45.00	19	79.41	0.00	3.07	12.82
Total	461	222.22	0.00	5.10	261.60	4.37	45.00	68	222.22	0.00	4.37	23.13
Copper		(m)	(%)	(%)	(%)	(%)	(%)		(m)	(%)	(%)	(%)
Main01	26	21.03	0.00	0.24	2.55	0.23	2.50	7	21.03	0.00	0.23	1.30
West01	296	121.79	0.00	0.15	2.55	0.15	2.50	42	121.79	0.00	0.15	0.47
West02	139	79.41	0.00	0.10	2.05	0.10	2.05	19	79.41	0.00	0.10	0.65
Total	461	222.22	0.00	0.14	2.55	0.14	2.50	68	222.22	0.00	0.14	1.30

Notes:

1. Length Weighted

2. Unsampled intervals assigned a null value

### 14.7 Trend Analysis

#### 14.7.1 Variography

Experimental semi variograms and transformed variograms oriented in the plane of mineralization were constructed for domains MainO1 and WestO1, to assess grade continuity and confirm observed mineralization trends. The mineralization domains lacked sufficient samples to obtain robust variograms, however, the results were useful in supporting the range of expected grade continuity. Variogram maps results are presented in Figure 14-4 (WestO1) and indicate mineralization continuity of approximately 60 m.



#### Figure 14-4: Domain West01 Variogram Map and Back-Transformed Model Results

#### 14.7.2 Grade Contouring

To assist in conducting variography studies and to understand the continuity of the gold grades in the mineralized wireframes, SLR prepared a traditional longitudinal projection for the Joe Mann wireframes. For this exercise, the average uncapped gold grade across the entire width of all the mineralized wireframes were contoured to identify the gold trends (Figure 14-5).

Examination of the grade distributions in the contouring indicate one principal trend of elevated gold grades in the West01 domain. Results are sensitive to the drilling density, which is much lower in the Main01 domain, as such no trend could be defined from grade contouring in that area. SLR notes, however, that the Main01 domain is located directly beneath the former Joe Mann Mine and SLR was able to identify a principal gold assay trend in the Main01 domain (Figure 14-6), where the historic stopes and grades indicate a continuation of the previously mined ore shoots at depth. This trend is presented visually in Figure 14-6. SLR notes that the trends have not been drilled tested at depth. The search ellipse parameter selection for the ID<sup>3</sup> was also influenced by these trends. SLR recommends reviewing the observed grade trend and plunges at Joe Mann following additional drilling.





<u>SLR</u>



### **14.8** Search Strategy and Grade Interpolation Parameters

Grade interpolation was performed on a parent block basis using ID<sup>3</sup> and two progressively larger interpolation passes (Table 14-5). Search ellipses for grade interpolation were anisotropic for all zones and designed to mimic the observed and historically understood grade trends. Search ellipse dimensions and orientations are detailed in Table 14-5 and the composite selection plan is outlined in Table 14-6.

SI R<sup>Q</sup>

				1 <sup>st</sup> Docc				nd Dace	
Domain	Method	X-axis	Y-axis	Z-axis	Orientation	X-axis	Y-axis	Z-axis	Orientation
		(11)	(11)	(11)		(11)	(11)	(11)	
				Joe N	lann				
Main01	ID <sup>3</sup>	25	75	25	68/85/179	75	300	75	68/85/179
West01, West02	ID <sup>3</sup>	25	75	25	68/85/179	50	175	50	68/85/179

## Table 14-5:Search Strategy and Grade Interpolation ParametersDoré Copper Mining Corp. – Joe Mann Project

# Table 14-6:Composite Selection PlanDoré Copper Mining Corp. – Joe Mann Project

	Pass	2 <sup>nd</sup> Pass			
Domain	Min No.	Max No.	Min No.	Max No.	Gold Grade Restriction
		Joe N	/lann		
Main01	2	15	1	15	20 g/t, 25% distance
West01, West02	4	15	1	15	

### 14.9 Bulk Density

A total of 603 density measurements were collected at Joe Mann during 2020 and 2021 and analyzed using the water immersion method. Densities ranged from 2.78 g/cm<sup>3</sup> to 3.07 g/cm<sup>3</sup> within mineralization domains and from 1.28 g/cm<sup>3</sup> to 3.24 g/cm<sup>3</sup> in adjacent material. Basic density statistics for Joe Mann are presented in Table 14-7. In SLR's opinion, the densities are reasonable for the type of mineralization.

A density of 2.84 g/cm<sup>3</sup> was applied to the mineralization domains. SLR recommends continuing to measure density in the mineralized zones.

Domain	Count	Mean	CV	Min	Max
Main01	12	2.92	0.03	2.78	3.07
West01	14	2.86	0.02	2.79	2.95
Waste	577	2.84	0.04	1.28	3.24
All	603	2.84	0.04	1.28	3.24

# Table 14-7:Density Statistics by DomainDoré Copper Mining Corp. – Joe Mann Project

### 14.10 Block Models

Block model construction and estimation was completed in Seequent's Leapfrog Edge software. Block model positions and dimensions for the Main and West zones are presented in Table 14-8. SLR considers the block model sizes appropriate for the deposit geometry and proposed mining methods.

	Doré Copper Mining C	Corp. – Joe Mann Project	
Туре	х	Y	Z
	Ν	lain	
Base Point (m)	541,594	5,481,767	-655
Boundary Size (m)	190	140	305
Parent Block Size (m)	5	1	5
Min. Sub-block Size (m)	1.25	0.25	1.25
Rotation (°)	0	5	0
	v	Vest	
Base Point (m)	540,181	5,482,277	-476
Boundary Size (m)	530	255	455
Parent Block Size (m)	5	1	5
Min. Sub-block Size (m)	1.25	0.25	1.25
Rotation (°)	0	30	0

# Table 14-8:Metric Dimensions and Position of Block Models (Local Grid)Doré Copper Mining Corp. – Joe Mann Project

### **14.11 Classification**

Definitions for resource categories used in this Technical Report are consistent with those defined by CIM (2014) and adopted by NI 43-101. In the CIM classification, a Mineral Resource is defined as "a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction". Mineral Resources are classified into Measured, Indicated, and Inferred categories. A Mineral Resource" defined as the "economically mineable part of a Measured and/or Indicated Mineral Resource" demonstrated by studies at Pre-Feasibility or Feasibility level as appropriate. Mineral Reserves are classified into Proven and Probable categories.



At Joe Mann, only Inferred Mineral Resources have been defined since drill hole spacing ranged between approximately 20 m and 100 m. Also, considering geological understanding and grade continuity, it was opted to classify all material as Inferred. During the design of Main01 wireframe, lower grade material was included to preserve continuity. SLR created a reporting boundary shape to exclude this material at classification apart from one composite which is midway with above cut-off grade samples.

### 14.12 Block Model Validation

Blocks were validated using industry standard techniques including:

- Visual inspection of composite versus block grades (Figures 14-7, 14-8, and 14-9 for gold and Figures 14-10, 14-11, and 14-12 for copper)
- Comparison between ID<sup>3</sup> and NN means
- Swath plots (Figure 14-13)
- Wireframe to block model volume confirmation (Table 14-9)

SLR reviewed gold grades and proportions relative to the blocks, drilled grades, composites, and modelled solids. SLR observed that the block grades exhibited general accord with drilling and sampling and did not appear to smear significantly across sampled grades. Swath plots generally demonstrated good correlation, with gold block grades being somewhat smoothed relative to composite grades, as expected.





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#### X-axis

Y-axis

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#### Figure 14-13: Swath Plot Comparing ID<sup>3</sup> and NN Estimate Results within the West Domains

Domain	Wireframe Volume (000 m <sup>3</sup> )	Block Model Volume (000 m³)	Confirmation
Main01	89.67	88.41	98.6%
West01	151.79	149.13	98.3%
West02	76.10	76.08	99.9%

# Table 14-9:Wireframe to Block Model Volume ConfirmationDoré Copper Mining Corp. – Joe Mann Project

### 14.13 Mineral Resource Reporting

Joe Mann Mineral Resources are reported as per the Mineral Resource estimation methodologies and classification criteria detailed in this Technical Report. They are reported using a minimum thickness of 1.2 m, and a gold cut-off grade of 2.6 g/t. Mineral Resources at Joe Mann are underlying existing mine workings and have been depleted where such workings were present. Joe Mann Mineral Resources are summarized in Table 14-10.

# Table 14-10:Mineral Resource Estimate – July 21, 2021Doré Copper Mining Corp. – Joe Mann Project

Catagony	egory Domain Tonnage (000 t)	Tonnage	Gra	ade	Containe	<b>Contained Metal</b>		
Category		(g/t Au)	(% Cu)	(000 oz Au)	(000 lb Cu)			
Inferred	West 01	282	4.98	0.16	45	982		
Inferred	West 02	128	5.23	0.18	22	496		
Inferred	Main 01	197	10.36	0.41	66	1,803		
Inferred	Total	608	6.78	0.24	133	3,281		

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.

2. Mineral Resources are estimated at a cut-off grade of 2.60 g/t Au.

3. Mineral Resources are estimated using a long term gold price of US\$1,800/oz Au, metallurgical gold recovery of 83%, and a US\$/C\$ exchange rate of 0.75.

4. A minimum mining width of 1.2 m was used. A small number of lower grade blocks within Main 01 have been included for continuity.

5. Bulk density is 2.84 t/m<sup>3</sup>.

6. Mineral resources that are not Mineral Reserves do not have demonstrated economic viability.

7. Numbers may not add due to rounding.

### **15.0 MINERAL RESERVE ESTIMATE**

There are no Mineral Reserves estimated for the Joe Mann Project.

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### **16.0 MINING METHODS**

### **17.0 RECOVERY METHODS**

### 17.1 Introduction

In Section 13.0, DCM reported the historical recovery for the former Joe Mann Mine during the period from 2005 to 2007 when the ore was treated at the Copper Rand Mill, now wholly owned by DCM.

The Copper Rand Mill operated from 1959 to the end of 2008. Upon closure, the bins, ball mills, flotation cells, slurry lines, thickeners, and filters were emptied. The mills were raised on jacks so that the bearings were not under strain. The Copper Rand Mill has been not operational since that time. Prior to a restart of the Copper Rand Mill, each component will be evaluated, and any repairs or necessary replacements will be completed. The following subsections provide a summary of the flow sheet, equipment characteristics and specifications, and the projected work that will be required for a restart of the Copper Rand Mill.

### **17.2** Flow Sheet Description

The crushing circuit consists of three stages of crushing: jaw crusher as the primary crusher and standard and short head cone crushers as the second and tertiary crushers. Both cone crushers are in a closed circuit with two double deck vibrating screens. The fine ore passing the screens will be conveyed to and stored in three 1,179 t fine ore bins.

Crushed ore is fed to the rod mill operating in open circuit. Rod mill discharge is then pumped to the primary ball mill and primary Knelson, which are in a closed circuit with Goulds Model SRL pumps and primary hydrocyclone classifiers. Two ball mills and two Knelsons are utilized in this circuit. The overflow of the primary hydrocyclones would be pumped to the secondary hydrocyclones, the underflow of which is fed to the flash cell and secondary Knelson. The concentrate of the two stages of Knelson continues to the shaking table, where the final gold and silver concentrate is collected and melted in a furnace. The concentrate of the flash cell flotation is directly sent to the concentrate thickener. Tailings from the flash cell are pumped to the secondary ball mill grinding circuit.

The flotation circuit feed is from the overflow of the secondary hydrocyclones. The flotation circuit consists of four Maxwell rougher tanks, two Denver 500 scavenger banks, and three Denver cleaner banks. Concentrate from the rougher flotation cells is sent to directly to regrind, then cleaned in three stages of cleaner cells and pumped to the concentrate thickener.

The tailings or middlings from the flotation cleaning circuit can either go to the first cleaner as shown in the flowsheet (Figure 17-1) or can be returned to the rougher circuit. The concentrate from the scavenger is also recycled to the rougher flotation cells. Tailings from the scavenger proceed to the tailings pond.

The thickened concentrate is pumped to a filter press, then washed, dried, discharged, and stored.

A process flow sheet for the Copper Rand Mill is presented in Figure 17-1.

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### **17.3 Equipment Characteristics and Specifications**

Table 17-1:

The principal equipment of the Copper Rand Mill is listed in Table 17-1.

	FO #	Equip Name	Sizo	ЦD
	12.001			125
	13-001	Jaw crusher	30 in. x 42 in.	125
	14-001	Cone crusher (standard)	5 ½ ft	200
	14-002	Cone crusher (short head)	5 ½ ft	200
Crushing Circuit	15-001	Vibrating screen	72 in. x 192 in.	10
	15-002	Vibrating screen	72 in. x 192 in.	10
	23-002	Fine ore bin	1,300 st	
	23-003	Fine ore bin	1,300 st	
	23-010	Fine ore bin	1,300 st	
	16-004	Rod mill	9 ½ ft x 12 ft	550
	15-014	Primary Knelson concentrator	30 in.	15
	15-015	Primary Knelson concentrator	30 in.	15
	16-001	Primary Ball mill	9 ft x10 ft	400
Drimory Grinding &	16-002	Primary Ball mill	9 ft x10 ft	400
Gravity Circuit	15-016	Vibrating screen	4 ft x 6 ft	10
	15-017	Vibrating screen	4 ft x 6 ft	10
	18-007	Primary Cyclone	18 in.	
	18-008	Primary Cyclone	18 in.	
	18-009	Primary Cyclone	18 in.	
	18-010	Primary Cyclone	18 in.	
	18-011	Primary Cyclone	18 in.	
	18-012	Secondary cyclone	18 in.	
	18-013	Secondary cyclone	18 in.	
	18-014	Secondary cyclone	18 in.	
Secondary Grinding & Gravity Circuit	15-012	Secondary Knelson	30 in.	15
a drawity circuit	19-100	Flash flotation cell	8 m <sup>3</sup>	
	16-020	Secondary ball mill	8 ft x 12 ft	400
	16-021	Secondary ball mill	9 ½ ft x 12 ft	500

#### **Principal Equipment in the Copper Rand Mill** Doré Copper Mining Corp. – Joe Mann Project



	EQ #	Equip. Name	Size	НР
	15-006	Shaking table	4 ft x8 ft	
	15-011	Knelson	12 in.	1.5
	19-087	Rougher Maxwell 12	32 m <sup>3</sup>	10.5
	19-088	Rougher Maxwell 10	20 m <sup>3</sup>	
	19-089	Rougher Maxwell 10	20 m <sup>3</sup>	
Flotation Circuit	19-090	Rougher Maxwell 10	20 m <sup>3</sup>	
	16-025	Regrinding ball mill	7 ft x10 ft	200
	19-059	Cleaner Denver 200	200 ft <sup>3</sup>	20
	19-060	Cleaner Denver 200	200 ft <sup>3</sup>	20
	19-086	Cleaner Denver 300	300 ft <sup>3</sup>	30
	19-099	Cleaner Denver 500	500 ft <sup>3</sup>	40
Thickening &	20-004	Dorr-Oliver thickener	36 ft x 10 ft	
Filtration Circuit	21-019	Lasta filter press	1500 x 28 x 22 mm	
	21-003	Disc filter	8 ft x 6 ft	

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### **18.0 PROJECT INFRASTRUCTURE**

### **19.0 MARKET STUDIES AND CONTRACTS**

### 20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

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### **21.0 CAPITAL AND OPERATING COSTS**

### **22.0 ECONOMIC ANALYSIS**

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### **23.0 ADJACENT PROPERTIES**

There are no adjacent properties to report in this section.

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### **24.0 OTHER RELEVANT DATA AND INFORMATION**

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

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### **25.0 INTERPRETATION AND CONCLUSIONS**

SLR offers the following conclusions:

#### 25.1 Geology and Mineral Resources

- Good potential exists to increase the Joe Mann Mineral Resource base, and additional exploration and technical studies are warranted.
- There is good understanding of the geology and nature of gold mineralization at the Property. The Project is a greenstone-hosted quartz carbonate vein deposit, which consists of three principal mineralized zones with similar morphologies, structural controls, and mineralization styles.
- The sample collection, preparation, analytical, and security procedures, as well as the quality assurance/quality control (QA/QC) program as designed and implemented by DCM is adequate, and the assay results within the database are suitable for use in Mineral Resource estimation.
- The QA/QC program indicates very good precision, negligible sample contamination, and a low bias at the primary laboratory. Field duplicate results, however, are inconclusive as the sample results do not address the grade range of interest. The LeachWELL results from the check assay program identify differences between the two assay techniques.
- Inferred Mineral Resources are estimated to total 608,000 t at a gold grade of 6.78 g/t Au, copper grade of 0.24% Cu and containing 133,000 oz Au and 3,281,000 lb Cu.

### 25.2 Mineral Processing

- DCM has not initiated any metallurgical testing at Joe Mann.
- The DCM's wholly owned Copper Rand Mill is currently not operational. Gold metallurgical recoveries from 2005 to 2007, when the Copper Rand Mill was operating, were reported to be consistently between 82.71% and 84.87%.
- The recovery of gold and silver by gravity compared to the metals recovered by flotation in the chalcopyrite concentrate ranged between 39.8% and 45.9%.
- Moisture levels in the concentrate varied between 8% and 12%, depending on the type of filter used during production.
- During the period from 2005 to 2007 in which the ore was treated at the Copper Rand Mill, there were no processing factors or deleterious elements that had a negative effect on the extraction or the concentrate.

### **26.0 RECOMMENDATIONS**

SLR offers the following recommendations:

#### 26.1 Geology and Mineral Resources

 There is potential to increase the Mineral Resource base at Joe Mann, and additional exploration and technical studies are warranted. SLR has reviewed and concurs with DCM's proposed work, exploration programs, and budgets. Joe Mann is part of DCM's planned hub and spoke strategy to restart its Copper Rand Mill with Joe Mann and other deposits in the region providing ore. DCM plans to include Joe Mann Mineral Resources within a preliminary economic assessment (PEA) alongside other DCM assets. Estimated expenses directly related to Joe Mann are included in the Table 26-1, as are details of the recommended Phase I program.

ltem	Cost (C\$)
Head Office Expenses & Property Holding Costs	1,600,000
Project Management & Staff Cost	80,000
Travel Expenses	20,000
Permitting & Environmental Studies	250,000
PEA Social/Consultation	100,000 25,000
Subtotal	2,075,000
Contingency (10%)	207,500
Total	2,282,500

# Table 26-1:Proposed Budget – Phase IDoré Copper Mining Corp. – Joe Mann Project

Future work pertaining to Phase II will be incorporated into a Feasibility Study (FS) and is planned to commence in Q2 2022. A Phase II exploration program will include an underground diamond drilling program at 50 m spacing over a strike length of 1,000 m and a depth of 250 m for a total of 100 holes after dewatering and drill bay rehabilitation is completed. Permitting, environmental, and technical studies will be completed to support a FS. As with the PEA, the FS will pertain to a hub and spoke operation where other mines will likely commence operation prior to Joe Mann and the FS and other non direct costs are the portion represented by Joe Mann activities. The estimate of the contingent Phase II program is presented in Table 26-2

# Table 26-2:Proposed Budget – Phase IIDoré Copper Mining Corp. – Joe Mann Project

ltem	Cost (C\$)	
Head Office Expenses and Property Holding Costs	1,900,000	


Item	Cost (C\$)				
Project Management and Staff Cost	200,000				
Travel Expenses	30,000				
Dewatering	5,500,000				
UG Drill Bay Rehab	1,000,000				
Diamond Drilling (20,000 m)	2,400,000				
Assaying	100,000				
Mineral Resource Estimate Update	75,000				
Metallurgical Studies	20,000				
Permitting/Environmental Studies	200,000				
FS	300,000				
Social/Consultation	80,000				
Subtotal	11,805,000				
Contingency (10%)	1,180,500				
Total	12,985,500				

2. Review the QA/QC protocol to include certified reference material (CRM) that is representative of the cut-off grade and the average grade of the Main and West Zones.

- 3. Include pulp and coarse duplicate samples in future programs, to help understand the field duplicate sample results.
- 4. Send approximately 5% of the pulps assayed at the primary laboratory to an accredited second laboratory.
- 5. Increase the proportion of duplicate sample pairs with grades above the cut-off grade.
- 6. Investigate and resolve the discrepancies observed in fire assay results versus LeachWELL results for all grade ranges at the SGS laboratory in Val-d'Or, Québec (SGS).
- 7. Work with the primary laboratory (SGS) to determine if field duplicate and check assay results from Joe Mann can be improved with procedural modifications.
- 8. Prepare quarterly and yearly QA/QC reports which evaluate longer term trends and contextualize results from the individual properties.
- 9. Verify historic drill hole assay values outside the mineralized wireframes.
- 10. Migrate from a Microsoft Excel database to an industry standard database management system.
- 11. Investigate the observed grade trend and plunges at Joe Mann following additional exploration drilling.
- 12. Continue surface exploration work including follow-up geophysical surveys.



## 26.2 Mineral Processing

- 1. Should the existing Copper Rand Mill be used for processing mineralization from Joe Mann, consider assessing the overall plant throughput, infrastructure requirements, and process modifications to achieve the expected gold recoveries.
- 2. Conduct a metallurgical test work program to better understand metallurgical performance and to confirm the metallurgical response and gold recoveries observed in historical operations.

## 26.3 Permitting

1. Initiate a plan to dewater the former Joe Mann Mine by completing the required studies prior to applying for an attestation of exemption permit.

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## **27.1** List of Statutory Works

**GM 56367** GAMACHE, LA DAUVERSIERE,

ROHAULT RAPPORT ANNUEL D'EXPLORATION 1996-97, PROPRIETE JOE MANN (1118). [Contient: 29 journaux des sondages (au diamant) suivants H-535, H-548 @ H-574,1086-95-01, 1086-96-01] RESSOURCES MESTON INC. 1997. 611 pages. 31 cartes. 32G07, 32G08.

GM 52778 GAMACHE, LA DAUVERSIERE,



ROHAULT CAMPAGNE DE CARTOGRAPHIE, DE DECAPAGE ET DE FORAGE, PROPRIETE JOE MANN (1118). [Contient: 19 journaux des sondages (au diamant) suivants H169, H174, H177 @ H 179, H193, H199, H477 @ H488] RESSOURCES MESTON INC, SOQUEM. 1994. 242 pages. 38 cartes. 32G07, 32G08, 32G09.

**GM 54746:** RAPPORT SYNTHESE, PROPRIETE LAC JAMES (10864). MRN – GÉOINFORMATION. 1997. Lawry Schmitt, Mars 1997. 32G08

GM 50974 GAMACHE, ROHAULT

DESCRIPTION DE CAROTTE. [Contient: 33 journaux des sondages (au diamant) suivants] RESSOURCES DU LAC MESTON INC. 1991. 234 pages. 1 carte. 32G07, 32G08.

GM 49692 GAMACHE, LA DAUVERSIERE, ROHAULT

DESCRIPTION DE CAROTTE, MINE MESTON. [Contient: 67 journaux des sondages (au diamant) suivants] RESSOURCES DU LAC MESTON INC.

1990. 336 pages. 1 carte. 32G07, 32G08.

GM 50048 GAMACHE, ROHAULT

JOURNAUX DE SONDAGE AU DIAMANT, MINE MESTON. [Contient: 26 journaux des sondages (au diamant) suivants] RESSOURCES DU LAC MESTON INC. 1990. 136 pages. 1 carte. 32G07, 32G08.

**GM 45786** CAMPAGNE DE FORAGE, PROPRIETE ROHAULT #1. LAROUCHE, C. 1987. Document des compagnies d'exploration minière. Travaux statutaires. 32G08.

**GM 01283B** DIAMOND DRILL RECORD. 1952. Document des compagnies d'exploration manière. 32G08

**DV 98-04** Geology and Metallogeny of the Chapais-Chibougamau Mining District, Pierre Pilote, (1998) P109-114.

**MB 88-29** Étude métallogénique de la bande Caopatina-Quévillon: Gîtologie de la mine Joe Mann-Région de Chibougamau, Dion and Guha (1988).



# **28.0 DATE AND SIGNATURE PAGE**

This report titled "Technical Report on the Joe Mann Project, Northwest Québec, Canada" with an effective date of July 21, 2021, was prepared and signed by the following authors:

#### (Signed & Sealed) Valerie Wilson

Dated at Toronto, ON September 10, 2021

Valerie Wilson, M.Sc., P.Geo. Principal Geologist

(Signed & Sealed) Marie-Christine Gosselin

Dated at Toronto, ON September 10, 2021 Marie-Christine Gosselin, P.Geo. Geologist

# **29.0 CERTIFICATE OF QUALIFIED PERSON**

## 29.1 Valerie Wilson

I, Valerie Wilson, M.Sc., P.Geo., as an author of this report entitled "Technical Report on the Joe Mann Project, Northwest Québec, Canada" with an effective date of July 21, 2021 prepared for Doré Copper Mining Corp., do hereby certify that:

- 1. I am Principal Geologist with SLR Consulting (Canada) Ltd, of Suite 501, 55 University Ave., Toronto, ON, M5J 2H7.
- 2. I am a graduate of the Camborne School of Mines, University of Exeter, UK in 2010 with a master's degree in Mining Geology and a graduate of the University of Victoria, BC in 2006 with a bachelor's degree in Geoscience.
- 3. I am registered as a Professional Geologist in the Province of Ontario (Reg. #2113). I have worked as a geologist for a total of 15 years since graduation from my bachelor's degree. My relevant experience for the purpose of the Technical Report is:
  - Exploration geologist on a variety of gold and base metal projects in Canada, Norway, and Sweden.
  - Mineral Resource estimation work and reporting on numerous mining and exploration projects around the world.
- I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I visited the Joe Mann Project on June 16, 2021.
- 6. I am responsible for the overall preparation of the Technical Report, and in particular for Sections 1 to 9, 13, 14, 17 and 23 to 27.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have had no prior involvement with the property that is the subject of the Technical Report.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, Sections 1 to 9, 13, 14, 17 and 23 to 27 of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 10<sup>th</sup> day of September, 2021.

#### (Signed & Sealed) Valerie Wilson

Valerie Wilson, M.Sc., P.Geo.



## 29.2 Marie-Christine Gosselin

I, Marie-Christine Gosselin, P.Geo., as an author of this report entitled "Technical Report on the Joe Mann Project, Northwest Québec, Canada" with an effective date of July 21, 2021 prepared for Doré Copper Mining Corp., do hereby certify that:

- 1. I am a Geologist with SLR Consulting (Canada) Ltd, of Suite 501, 55 University Ave., Toronto, ON, M5J 2H7.
- 2. I am a graduate of Université Laval, Québec, QC in 2014 with a B.Sc. degree in geology.
- 3. I am registered as a Professional Geologist with l'Ordre des Géologues du Québec (Reg.#02060). I have worked as a geologist for a total of 7 years since my graduation. My relevant experience for the purpose of the Technical Report is:
  - Lithology and mineralization modelling
  - Target generation and drill hole planning
  - Data analysis
  - Experience as Production Geologist, Exploration Geologist with porphyry copper, sediment hosted copper, Canadian Archaean gold, and VMS deposits in Canada
  - Experienced user of Leapfrog Geo, Vulcan, ArcGIS, and acQuire
- I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I visited the Joe Mann Project on June 16, 2021.
- 6. I am responsible for Sections 10, 11, and 12 of the Technical Report.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have had no prior involvement with the property that is the subject of the Technical Report.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, Sections 10 to 12 of the Technical Report for which I am responsible, contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- 11. Dated this 10<sup>th</sup> day of September, 2021.

#### (Signed & Sealed) Marie-Christine Gosselin

Marie-Christine Gosselin, P.Geo.



# **30.0 APPENDIX 1**

**30.1 Land Tenure Claims** 

Map Reference	Type1	Title Number	NTS Sheet	Inscription Date	Expiry Date	Area (ha)	Works Requirement (\$)	Request Fees (\$)
1	CDC	2361693	32G08	10/1/2012	12/20/2021	1.74	1,000.00	34.25
2	CDC	2361694	32G08	10/1/2012	12/20/2021	0.62	1,000.00	34.25
3	CDC	2361695	32G08	10/1/2012	12/20/2021	39.5	2,500.00	67.00
4	CDC	2361696	32G08	10/1/2012	12/20/2021	9.76	1,000.00	34.25
5	CDC	2361697	32G08	10/1/2012	12/20/2021	27.5	2,500.00	67.00
6	CDC	2361698	32G08	10/1/2012	12/20/2021	3.22	1,000.00	34.25
7	CDC	2362090	32G08	10/22/2012	10/24/2021	1.39	1,000.00	34.25
8	CDC	2362091	32G08	10/22/2012	10/24/2021	1.67	1,000.00	34.25
9	CDC	2362092	32G08	10/22/2012	10/24/2021	4.76	1,000.00	34.25
10	CDC	2362093	32G08	10/22/2012	10/24/2021	6.27	1,000.00	34.25
11	CDC	2485644	32G09	3/22/2017	3/21/2022	55.9	1,200.00	67.00
12	CDC	2485645	32G09	3/22/2017	3/21/2022	55.9	1,200.00	67.00
13	CDC	2485646	32G09	3/22/2017	3/21/2022	55.9	1,200.00	67.00
14	CDC	2485647	32G09	3/22/2017	3/21/2022	55.9	1,200.00	67.00
15	CDC	2485648	32G09	3/22/2017	3/21/2022	55.9	1,200.00	67.00
16	CDC	2485649	32G09	3/22/2017	3/21/2022	55.9	1,200.00	67.00
17	CDC	2485652	32G09	3/22/2017	3/21/2022	55.89	1,200.00	67.00
18	CDC	2485653	32G09	3/22/2017	3/21/2022	55.89	1,200.00	67.00
19	CDC	2485654	32G09	3/22/2017	3/21/2022	55.89	1,200.00	67.00
20	CDC	2485655	32G09	3/22/2017	3/21/2022	55.89	1,200.00	67.00
21	CDC	2485656	32G09	3/22/2017	3/21/2022	55.89	1,200.00	67.00
22	CDC	2485657	32G09	3/22/2017	3/21/2022	55.89	1,200.00	67.00
					Subtotal:	767.17	27,400.00	1,212.00

# Table 30-1:List of CBAY Held Exploration ClaimsDoré Copper Mining Corp. – Joe Mann Project

Notes:

1. CDC: Exploration Claim

Map Reference	Type <sup>1</sup>	Title Number	NTS Sheet	Inscription Date	Expiry Date	Area (ha)	Works Requirement (\$)	Request Fees (\$)
23	CDC	2374316	32G07	4/22/2013	2/13/2022	55.94	2,500.00	67.00
24	CDC	2374317	32G07	4/22/2013	2/13/2022	34.37	2,500.00	67.00
25	CDC	2374318	32G07	4/22/2013	2/13/2022	18	1,000.00	34.25
26	CDC	2374319	32G07	4/22/2013	2/13/2022	5.74	1,000.00	34.25
27	CDC	2374320	32G07	4/22/2013	2/13/2022	50.96	2,500.00	67.00
28	CDC	2374321	32G07	4/22/2013	2/13/2022	55.93	2,500.00	67.00
29	CDC	2374322	32G07	4/22/2013	2/13/2022	17.4	1,000.00	34.25
30	CDC	2374323	32G07	4/22/2013	2/13/2022	55.93	2,500.00	67.00
31	CDC	2374324	32G07	4/22/2013	2/13/2022	12.29	1,000.00	34.25
32	CDC	2374325	32G07	4/22/2013	2/13/2022	54.09	2,500.00	67.00
33	CDC	2374326	32G07	4/22/2013	2/13/2022	54.99	2,500.00	67.00
34	CDC	2374327	32G07	4/22/2013	2/13/2022	50.43	2,500.00	67.00
35	CDC	2374328	32G07	4/22/2013	2/13/2022	35.78	2,500.00	67.00
36	CDC	2374329	32G07	4/22/2013	2/13/2022	13.49	1,000.00	34.25
37	CDC	2374330	32G07	4/22/2013	2/13/2022	2.02	1,000.00	34.25
38	CDC	2374331	32G07	4/22/2013	2/13/2022	4.65	1,000.00	34.25
39	CDC	2374332	32G07	4/22/2013	2/13/2022	14.96	1,000.00	34.25
40	CDC	2377614	32G08	4/22/2013	4/4/2022	55.95	2,500.00	67.00
41	CDC	2377615	32G08	4/22/2013	4/4/2022	55.95	2,500.00	67.00
42	CDC	2377616	32G08	4/22/2013	4/4/2022	55.95	2,500.00	67.00
43	CDC	2377617	32G08	4/22/2013	4/4/2022	55.94	2,500.00	67.00
44	CDC	2377618	32G08	4/22/2013	4/4/2022	55.94	2,500.00	67.00
45	CDC	2377619	32G08	4/22/2013	4/4/2022	55.94	2,500.00	67.00
46	CDC	2377620	32G08	4/22/2013	4/4/2022	55.94	2,500.00	67.00
47	CDC	2377621	32G08	4/22/2013	4/4/2022	55.93	2,500.00	67.00
48	CDC	2377622	32G08	4/22/2013	4/4/2022	55.93	2,500.00	67.00
49	CDC	2377623	32G08	4/22/2013	4/4/2022	55.93	2,500.00	67.00
50	CDC	2377624	32G08	4/22/2013	4/4/2022	55.93	2,500.00	67.00
51	CDC	2377625	32G08	4/22/2013	4/4/2022	11.64	1,000.00	34.25
52	CDC	2377626	32G08	4/22/2013	4/4/2022	1.96	1,000.00	34.25

#### List of CBAY/Ressources Jessie Option Held Claims Table 30-2: Doré Copper Mining Corp. – Joe Mann Project

Doré Copper Mining Corp. | Joe Mann Project, SLR Project No: 233.03410.R0000 NI 43-101 Technical Report - September 10, 2021 30-3

							SLR <sup>Q</sup>		
Map Reference	Type <sup>1</sup>	Title Number	NTS Sheet	Inscription Date	Expiry Date	Area (ha)	Works Requirement (\$)	Request Fees (\$)	
53	CDC	2377627	32G08	4/22/2013	4/4/2022	4.88	1,000.00	34.25	
54	CDC	2377628	32G08	4/22/2013	4/4/2022	55.94	2,500.00	67.00	
55	CDC	2377629	32G08	4/22/2013	4/4/2022	16.43	1,000.00	34.25	
56	CDC	2377630	32G08	4/22/2013	4/4/2022	3.84	1,000.00	34.25	
57	CDC	2377631	32G08	4/22/2013	4/4/2022	0.41	1,000.00	34.25	
58	CDC	2377632	32G08	4/22/2013	4/4/2022	55.94	2,500.00	67.00	
59	CDC	2377633	32G08	4/22/2013	4/4/2022	18.24	1,000.00	34.25	
60	CDC	2377634	32G08	4/22/2013	4/4/2022	5.27	1,000.00	34.25	
61	CDC	2377635	32G08	4/22/2013	4/4/2022	43.81	2,500.00	67.00	
62	CDC	2377636	32G08	4/22/2013	4/4/2022	55.95	2,500.00	67.00	
63	CDC	2377637	32G08	4/22/2013	4/4/2022	55.94	2,500.00	67.00	
64	CDC	2377638	32G08	4/22/2013	4/4/2022	48.75	2,500.00	67.00	
65	CDC	2377639	32G08	4/22/2013	4/4/2022	35.31	2,500.00	67.00	
66	CDC	2377640	32G08	4/22/2013	4/4/2022	3.83	1,000.00	34.25	
67	CDC	2377641	32G08	4/22/2013	4/4/2022	55.95	2,500.00	67.00	
68	CDC	2377642	32G08	4/22/2013	4/4/2022	10.03	1,000.00	34.25	
69	CDC	2377643	32G08	4/22/2013	4/4/2022	26.75	2,500.00	67.00	
70	CDC	2377644	32G08	4/22/2013	4/4/2022	34.03	2,500.00	67.00	
71	CDC	2377644	32G08	4/22/2013	4/4/2022	34.03	2,500.00	67.00 \$	
72	CDC	2377645	32G08	4/22/2013	4/4/2022	55.94	2,500.00 \$	67.00	
73	CDC	2377646	32G08	4/22/2013	4/4/2022	55.95	2,500.00	67.00	
74	CDC	2377647	32G08	4/22/2013	4/4/2022	55.93	2,500.00	67.00	
75	CDC	2377648	32G08	4/22/2013	4/4/2022	34.08	2,500.00	67.00	
76	СМ	420	32G08	6/6/1955		53.52	-	-	
77	СМ	425	32G08	11/30/1955		12.45	-	-	
78	BM	799	32G08	9/27/1991	9/26/2021	14.82	-	-	
					Subtotal:	2013.9	105,500.00	2,961.50	

Notes:

CM: Mining Concession
BM: Mining Lease
CDC: Exploration Claim

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