

NI 43-101 Technical Report for the Choquelimpie Au-Ag Project, Region 1, Chile

Prepared by Thomas Henricksen, Ph.D., CPG Jaime Alcazar Escarate, P.Geo.

Effective Date: December 22, 2020

Certificate

Thomas A. Henricksen 1975 Bruce Rd, Apt. 129 Chico, California 95928 USA

Email: thenricksen@gmail.com

This certificate applies to the report titled "NI 43-101 Technical Report for the Choquelimpie Au-Ag Project, Region 1, Chile" dated December 22, 2020 (the "**Technical Report**") with respect to the Choquelimpie project located in Chile prepared for Norsemont Mining Inc. ("**Norsemont**"). I, Thomas A. Henricksen, working as a consultant geologist and residing at 1975 Bruce Rd, Apt 129, Chico, California, do hereby certify that:

1. I am a Registered Member of the United States Society of Mining, Metallurgy & Exploration (SME), Englewood, Colorado.

2. I am a Fellow of the Society of Economic Geologists.

3. I have continuously and actively engaged in the assessment and development of mining projects worldwide since 1974. I have had extensive experience in Latin American porphyry copper deposits in Chile and Peru, including the Constancia and Zafranal copper deposits in Peru and several districts in Chile, including the Mocha copper deposit as well as a big porphyry copper deposit at Recsk, Hungary.

4. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("**NI 43-101**"). My co-author is familiar with the Choquelimpie project having worked as a consultant on-site in 2014. He revisited the project in December 2020.

5. Jaime Alcázar Escárate and I are responsible for the preparation and final editing of all parts of the Technical Report.

6. I have had no prior involvement with the Choquelimpie properties.

7. At the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading. I am not aware of any material fact of material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

8. I am independent of Norsemont in accordance with the application of Section 1.5 of NI 43-101.

9. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.

10. I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in public company files or on their website and accessible by the public, of the Technical Report.

Signed and dated this 22nd of December, 2020, Chico, California, USA

"Thomas A. Henricksen"

Original document signed and sealed by Thomas A. Henricksen

QP Statement

Jaime Alcázar 1257 Ramon de Rojas Caravante La Serena, Chile

Email: jaime.alcazar@hotmail.com

This certificate applies to the Technical Report NI 43-101with respect to Choquelimpie deposit, Arica, Chile. I, Jaime Alcázar, working as a Consultant Geologist and residing at 1257 Ramon de Rojas Caravante, La Serena, Chile do hereby certify that:

1. I am fellow of Chilean Geologic Society.

2. I have continuously and actively engaged in the assessment and development of mining projects since 1994.

3. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101), register number 062, Mining Commission of Chile.

4. I am responsible for the preparation and final editing of geological model of this Technical Report.

I have had no prior involvement with Norsemont. I worked as a consultant on the property in 2014 and then recently re-visited the Choquelimpie property in December 2020 for the purpose of this report.

6. To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading. I am not aware of any material fact of material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

7. I am independent of Norsemont Mining Inc. in accordance with the application of Section 11.4 of NI 43-101.

 I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.

9. I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in public company files or on their website and accessible by the public, of the Technical Report.

Signed and dated this 22 of December, 2020, La Serena, Chile

Original document signed and sealed by

"Jaime Alcazar"

Jaime Alcázar Consultant Geologist



TABLE OF CONTENTS

1	SUM	MARY			
	1.1	Location and Property Description13			
	1.2	History of Exploration and Mining13			
	1.3	Geology and Mineralization15			
	1.4	Project Infrastructure			
	1.5	Conclusions and Recommendations17			
2	INTR	ODUCTION			
	2.1	Terms of Reference			
	2.2	Qualified Persons			
	2.3	Site Visits and Scope of Personal Inspection18			
	2.4	Information Sources and References18			
		2.4.1 Previous Technical Reports			
	2.5	Abbreviations and Units of Measurement18			
3	RELI	ANCE ON OTHER EXPERTS			
4	LOCA	ATION AND PROPERTY DESCRIPTION			
	4.1	Location and Access			
	4.2	Land Tenure			
	4.3	Terms of the Transaction			
	4.4	Royalties			
		4.4.1 Royalty Payable to Minera Choquelimpie			
		4.4.2 Royalty payable to Minera Altiplano			
5	PHYS	SIOGRAPHY, CLIMATE, LOCAL RESOURCES AND INFRASTRUCTURE			
	5.1	Physiography25			
	5.2	Climate			
	5.3	Local Resources and Infrastructure			
6	GEOI	LOGICAL SETTING AND MINERALIZATION			
	6.1	Regional Geology27			
	6.2	Local Geology			
	6.3	Alteration and Mineralization			
7	HIST	ORY INCLUDING ESTIMATED RESOURCES			
8	DEPC	OSIT TYPES			
9	EXPL	LORATION			
	9.1 Epithermal Au-Ag Mineralization under and adjacent to the existing pits				
	9.2	Additional outlying exploration targets			

	9.3 Deep porphyry Cu-Au potential
10	DRILLING
11	SAMPLE PREPARATION, ANALYSES & SECURITY
12	DATA VERIFICATION
13	MINERAL PROCESSING AND METALLURGICAL TESTING
14	MINERAL RESOURCE ESTIMATES
15	MINERAL RESERVE ESTIMATES
16	MINING METHODS
17	RECOVERY METHODS
18	INFRASTRUCTURE
19	ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT
20	CAPITAL AND OPERATING COSTS
21	ECONOMIC ANALYSIS
22	ADJACENT PROPERTIES71
23	OTHER RELEVANT DATA AND INFORMATION72
24	INTERPRETATION AND CONCLUSIONS
25	RECOMMENDATIONS
26	REFERENCES
27	APPENDIX 1 – DRILLING INFORMATION

FIGURES

Figure 1-1.	Project infrastructure
Figure 4-1.	Location Map. Region 1 - Arica and Parinacota, Northern Chile20
Figure 4-2.	Access to the Project area. Red rectangle represents the mining concessions. From Correa, 2008
Figure 4-3.	Plan map showing boundaries of Presidential decrees and mining concessions21
Figure 4-4.	Detailed plan map and list of mining concessions
Figure 5-1.	Looking North-North East over Quebrada Misituni to Cerro Chivaque. High-relief dome is the Project area and represents the throat of the Pliocene "Volcan Choquelimpie"
Figure 6-1.	Simplified district geology. Hydrothermal alteration and epithermal gold-silver mineralization in and around the central dome. Garcia et al, 2004
Figure 6-2.	Choquelimpie Project geology map (Correa et al., 2007)
Figure 6-3.	Geology of the central altered and mineralized dome at Choquelimpie. The dome occurs within a strong North-North East-trending structural corridor, reflected by major lineaments aligned intrusions, alteration and mineralization (Correa et al., 2008)
Figure 6-4.	Diatreme in middle of Choque pit. Crackle breccia of porphyritic dacite (no quartz eyes) with matrix of crushed rock and finely disseminated pyrite
Figure 6-5.	Cross-section through and adjacent to the main Choque pit
Figure 6-6.	Surface alteration map of the Choque pit, (Correa et al., 2007)
Figure 6-7.	Gold-silver bulk-mineable open pits at the Choquelimpie Project (Correa et al., 2008)33
Figure 6-8.	Apparent near-surface metal zoning across the Choquelimpie Project (Correa et al., 2008)
Figure 7-1.	Distribution of drill holes across the Project area, excluding blast-holes, AFW, 2017, UTM zone 19S, Datum PSAD56
Figure 7-2.	Vertical section (±20m). Levels of confidence (upper). Classification of Mineral Resources (lower)
Figure 8-1.	Top left: Schematic reconstruction of a high-sulphidation deposit (Sillitoe, 1999). Alteration in orange lettering; mineralization in light blue. Bottom left: Pliocene gold belt located east of Eocene-Oligocene porphyry copper occurrences. Right: Other Andean HS epithermal gold occurrences (Bissig et. Al., 2014)
Figure 9-1.	Range of Gold grades (g/t) mined, as well as under and adjacent to the Choque pit43
Figure 9-2.	Cross-section through Choque pit showing shallow drilling and untested areas under and adjacent to existing mineralization. (AFW report, 2017). UTM, Datum PSAD1956
Figure 9-3.	Oblique view looking north. Alteration mineralogy (ASTER) showing district target areas.
Figure 10-1.	Distribution of drill holes by Shell Chile / SCM Vilacollo (red, 1984-1992) and by Minera Can Can (blue, 1993-2012) from AFW report, 2017. UTM, Datum PSAD5646

Figure 10-2.	Drilling by Minera Can Can 2008
Figure 10-3.	Location of three deep drill holes completed by Minera Can Can in 2012 (AFW, 2017)49
Figure 10-4.	Schematic Cross section of deep drill holes PCH01 and PCH02. Py = pyrite; Cpy = Chalcopyrite, Bo = Bornite, Ga = Galena, Bl = Sphalerite
Figure 10-5.	Drill core from PCH01 and PCH 02. Note the intense sericitic alteration in PCH02, suggesting the possibility of a deeper porphyry system
Figure 12-1.	Top left: Core storage in wooden boxes; Bottom left: Core and cuttings storage; Centre: Core storage; Top right: Core labelling; Bottom Right: Chip trays from RC drilling
Figure 16-1.	Top left, right, Bottom left: Main Choqui open-pit and benches, Bottom right: Operations 1990
Figure 24-1.	Dumps – potential for reprocessing74

TABLES

Table 1-1.	Tonnage-Grade summary with different cut-off grades (AFW, 2017) using Gold Price US\$1,300/ounce; Silver Price US\$20/ounce; Gold recoveries 70%; Silver recoveries 60%.
Table 7-1.	Tonnage-Grade summary with different cut-off grades, (AFW, 2017) using Gold Price US\$1,300/ounce; Silver Price US\$20/ounce; Gold recoveries 70%; Silver recoveries 60%.
Table 7-2.	Tabulation of levels of confidence (0.3 g/t Au cut-off)
Table 7-3.	Tabulation of classifications of Mineral Resource (0.3 g/t cut-off)40
Table 10-1.	Selected intersections from deep drill hole PCH01. Narrow gold-rich copper sulphosalt intervals followed by elevated gold in anomalous lead-zinc sections
Table 10-2.	Selected intersections in deep drill hole PCH02. Anomalous lead and zinc to base of hole with sericitic alteration
Table 10-3.	Selected intersections in deep drill hole PCH03. Elevated gold with anomalous lead-zinc sections
Table 13-1.	Summary bottle roll results for Choquelimpie Project Mineralization and Dumps. Data summary Internal Metallurgical Report, Minera Can Can (2005)
Table 13-2.	Summary column leach results for Choquelimpie mineralization and dumps. Data summary from Internal Metallurgical Report, Minera Can Can (2005)
Table 13-3.	Summary flotation test results for Choquelimpie mineralization and dumps, from Internal Metallurgical Report, Minera Can Can (2005)
Table 13-4.	Source and mineral type of SGS Chile metallurgical tests, 2017

GLOSSARY

Units of Measure

Degrees Celsius	•C
Dollar (American)	US\$
Dollar (Canadian)	Cdn\$
Foot	ft
Gram	g
Grams per tonne	g/t
Greater than	>
Hectare (10,000 m2)	ha
Kilo (thousand)	k
Kilogram	kg
Kilometer	km
Kilotonne	kt
Kilovolt	kV
Kilovolt-ampere	kVA
Kilowatt hour	kWh
Kilowatt	kW
Less than	<
Litres per second	lt/s
Megawatt	MW
Metre	m
Metres above sea level	m asl
Million	M
Million ounces	Moz

Million tonnes	Mt
Ounce	0Z
Parts per million	ppm
Parts per billion	ppb
Percent	
Specific gravity	SG
Tonne (1,000 kg) (metric ton)	t
Watt	W

Abbreviations and Acronyms

Adsorption, Desorption, Regenerating	ADR
Amec Foster Wheeler	AFW
Antimony	Sb
Argillic	ARG
Arsenic	As
Atomic Adsorption	AA
Audio-frequency Magnetotelluric geophysical survey	AMT
Barium	Ba
Bond Ball Mill Work Index	BWi
Bottle Roll	BR
Comision Regional del Medio Ambiente	COREMA
Compania Minera Cana Can	Minera Can Can
Confidence Interval	
Copper	Cu
Diamond Drill Hole	DDH
East	E
Environmental Impact Assessment	EIA

General and Administration	G&A
Geochemical Laboratorío, Georadar Ltda.	Geochemical Labs
Gold	Au
High – Sulphidation	HS
Inductively Coupled Plasma	ICP
Induced Polarization	
Inversiones Alxar S.A.	Alxar
Iron	Fe
Lead	Рь
Manganese	Mn
Measured & Indicated	
Mercury	Нg
Million Years	Ma
Multi-element Inductively Coupled Plasma	ICP
National Instrument 43-101	NI 43-101
Net Smelter Return	NSR
Norsemont Mining Inc.	Norsemont
North	N
North East	NE
Northgate Minerals Corp	Northgate
North West	NW
Promel Ltda	Promel
Qualified Person(s)	
Quality assurance	QA
Quality control	QC
Reverse Circulation	

Rio Tinto Mining and Exploration Limited	Rio Tinto
Royal Dutch Shell Chile	Shell Chile
Rock Quality Designation	RQD
Servicio de Geologia y Mineria	Sernageomin
Share Purchase Agreement	SPA
Silver	Ag
Sociedad Contractual Minera Vilacollo	SCM Vilacollo
South	S
South East	
South West	SW
Specific Gravity	SG
Sulphur	S
Short Wave Infrared Reflectance	SWIR
Universal Transverse Mercator	UTM
West	W
X-ray flourescence	XRF
Zinc	Zn

1 SUMMARY

Thomas A. Henricksen, SME professional member and Jaime Alcazar, Chilean professional geologist, prepared this NI 43-101 Technical Report (the "**Technical Report**") on the Choquelimpie gold-silver Project (the "**Choquelimpie Project**" or "**Project**"), Region 1, Chile dated December 22, 2020. The Project is located in the Province of Parinacota in Region 1 of northern Chile.

The Choquelimpie Project was the site of previous mining by Sociedad Contractual Minera Vilacollo ("SCM Vilacollo") during 1988-1992 with a focus on bulk mining of lower-grade oxidized breccia-hosted ores which were variably amenable to modern heap-leaching extraction. Subsequently between 1994-1996 Northgate Minerals Corp. ("Northgate") completed additional washing of the heap leach. Through to October 1996 the operation produced some 398,900 ounces of gold ("Au") and some 2,192,000 ounces of silver ("Ag") (Domic, 1996).

The purpose of the Technical Report is to present up-to-date information in compliance with the National Instrument 43-101 - Standards for Disclosure for Mineral Projects ("**NI 43-101**"), following the acquisition of the project by Norsemont Mining Inc. ("**Norsemont**"). The data presented here provide the latest technical information available to support ongoing exploration activities by Norsemont.

Choquelimpie is considered an excellent target for additional open pittable epithermal gold-silver resources below and adjacent to the existing pits, as well as for a potential deep porphyry copper-gold deposit.

1.1 Location and Property Description

The Choquelimpie Project is located in the Andean Cordillera of northern Chile within the Administrative Region of Arica and Parinacota, and in the Parinacota Province. It is located about 115 kilometre's east of the coastal city and port of Arica, and 35km east of the provincial capital of the Parinacota Province, the town of Putre, with a population of slightly over 2,000 permanent residents.

The property consists of 5,757 hectares of exploitation mining concessions, six open pits, waste dumps and heaps from the previous mining and leach operations of 1988-1992 and 1994-1996, a processing facility and a fixed camp to accommodate approximately 35 people.

On July 16, 2020, Norsemont announced a signed agreement to acquire the issued and outstanding shares in Tavros Gold Corp. ("**Tavros**") which held the rights to acquire SCM Vilacollo and whose principal asset was the Choquelimpie Project (see section 4.3 Terms of the Transaction, for more details).

1.2 History of Exploration and Mining

The earliest mining activity in the Project area involved intermittent mining of the silver veins by the Spaniards in the 17th century. In the 1920's and 30's the Arica Mining Company employed mechanized methods for the extraction of vein material. With the rise in silver and gold prices around 1980, Promel Ltda, ("**Promel**") a local metals processing company, began trucking material to a flotation plant in the Administrative Region of Arica and later included gold-silver oxide ores which it extracted from small open pits and treated in a heap leach plant located some 60 km from the mine at a lower elevation.

In 1985, Royal Dutch Shell Chile ("Shell Chile" or "Minera Altiplano") signed an Option Agreement with Promel, to buy the Choquelimpie mining concessions. Between 1985-1988, Shell Chile developed the first modern geological model (Sillitoe, 1985) and carried out exploration campaigns that included 1,114 reverse circulation ("RC") drill and blast holes. This work generated a historical reserve calculation of 6.7 million metric tons of oxide ore at grades estimated as 2.23 g/metric ton gold and 87 g/metric silver within a historical "mineral resource" of some 11 million metric tons (Mining Journal, 1987). A 5,500 metric-ton/day open-pit heap leach operation was brought onstream in 1988 by SCM Vilacollo whose shareholders at the time were Shell Chile, Westfield Minera and Citibank. In 1992 the Project was sold and subsequent owners reprocessed part of the leach pads during the period 1994-1996. Through to October 1996 total production from the operation was 398,900 ounces of gold and 2,192,000 ounces of silver (Domic, 1996).

In 2001 the Project was acquired by Compania Minera Can Can ("**Minera Can Can**"), who drilled some 900 diamond drill holes targeting several satellite zones to the main pit.

In 2006 Rio Tinto Mining and Exploration Limited ("**Rio Tinto**") signed an Exploration Agreement with SCM Vilacollo (then a subsidiary of Minera Can Can). In 2007, an Environmental Impact Statement was approved by the Comision Regional del Medio Ambiente ("**COREMA**") of the First Region and field activities commenced with geological mapping. They proposed three deep holes to explore for a possible deep porphyry copper-gold deposit, before terminating the option.

Au Cut-off (g/t)	Tonnage	Au Grade (ppm)	Ag Grade (ppm)	Cu Grade (%)	Total Au ounces	Total Ag ounces
0	461,059,703	0.350	6.02	0.029	5,186,838	89,192,937
0.1	380,346,678	0.413	6.95	0.033	5,047,628	84,962,387
0.2	284,325,027	0.504	8.08	0.039	4,605,464	73,831,450
0.3	216,710,421	0.583	8.86	0.041	4,063,605	61,717,196
0.4	159,512,830	0.667	9.53	0.044	3,422,064	48,854,915
0.5	114,051,785	0.754	10.21	0.048	2,765,550	37,444,153
0.6	65,787,985	0.907	11.54	0.055	1,917,511	24,407,335
0.7	41,248,904	1.063	12.75	0.061	1,409,770	16,912,933
0.8	27,866,960	1.215	14.05	0.067	1,088,973	12,585,764
0.9	18,676,505	1.396	15.91	0.072	838,461	9,551,050
1	13,574,520	1.566	17.34	0.079	683,305	7,565,842

In 2017, Amec Foster Wheeler Plc ("**AFW**") calculated a thorough, but non-compliant, "estimated" resource based on the mostly vertical shallow (~ 80 meters) drilling of SCM Vilacollo and Minera Can Can:

 Table 1-1. Tonnage-Grade Summary (Choque model only) at various cut-off grades (AFW, 2017) using Gold

 Price US\$1,300/ounce; Silver Price US\$20/ounce; Gold recoveries 70%; Silver recoveries 60%.

There is a large amount of historical information available on the Project but the validation of the quality of some of the early historical data (Shell Chile, Minera Can Can) is constrained due to apparent limited or lack of supporting documents for various activities. This may improve with further research. For instance:

- Lack of / limited availability of protocols (topography, drilling, sampling, chemical analyses and densities, among others)
- Lack of / limited availability of quality assurance and quality control ("QAQC") results
- Lack of / limited availability of grade certificates by Shell Chile
- Lack of / limited availability of historical collars at the site
- Lack of / limited availability of mining production or reconciliation reports
- Lack of / limited availability of density data, and
- Lack of / limited availability of geo-mechanical, structural and geo-metallurgical information.

Hence, the resource estimate is considered significant but non-compliant.

1.3 Geology and Mineralization

The Choquelimpie Project is located near the Arica bend of the South American continent, where the earth's crust has a thickness of more than 70 km. It lies in a belt of calc-alkalic to alkali-calcic Miocene to Recent volcanism which runs parallel to the Pacific coast and contains a series of volcanic-hosted precious metal deposits that have been worked in Peru, Chile and Bolivia since the time of the Spanish conquest usually for silver but also with locally important gold values.

The Project corresponds with the core of an extinct continental stratovolcano, of early Pliocene age $(6.6\pm0.2$ Ma, Gropper et. al., 1991). The Pliocene stratovolcano is characterized by intermediate composition extrusive volcanic rocks plus related and esitic-dacitic domal intrusive rocks (Clavero et. al., 2018).

Erosion of the central portion of the volcano has exposed a dome of intrusive rocks and breccias with hydrothermal alteration and gold-silver mineralization in the central "throat" of the stratovolcano. The breccias include structural, eruptive diatreme, and hydrothermal breccias. Hydrothermal alteration and gold-silver mineralization is related principally to the hydrothermal breccias and silicification. Argillic and advanced argillic alteration plus silicification are the dominant alteration types as is typical of high-sulphidation epithermal gold-silver deposits. The deeper drill holes at the Choquelimpie Project intersected sericitic alteration that may be related to a possible porphyry copper-gold system at depth.

Mineralization is associated with hydrothermal breccias and stockwork quartz veinlets, with native silver, native gold, electrum, argentite, argentiferous galena, realgar, and sphalerite (Gropper et. al., 1991). The highest grades for both gold and silver in core and cuttings occur in hydrothermal breccias associated with strong silicification.

The emplacement of hydrothermal breccias appear to have strong local structural control, mostly related to the dominant N45°E and N65°E, near vertical, structural trends throughout the district. Local northwest control on hydrothermal breccias is present in faults of the Suri Pit.

Several bulk-mineable gold-silver deposits have been identified, and variably exploited, and the open pits associated with these deposits are the Suri, Zorro, Choque, Intermedio, Vizcacha, Hundimiento, Española

and Chivaque. In the Suri Pit the hydrothermal breccias also contain enargite, luzonite, pyrite, and other sulfosalts, plus traces of covellite and chalcocite.

1.4 Project Infrastructure

The Choquelimpie Project camp and facilities are connected to the Great North Interconnected Electrical Grid (SING) through a dedicated 23 kV transmission line (capacity of the line is 5 MW), that connects to the Chapiquiña power plant that is located close to Putre (Figure 1-1). It also has a supply agreement with Engie for an additional 2.4 MW. The Choquelimpie Project has water rights on a currently operating well (PECH 4) for a flow of 40 lt/s located in the river Lauca from where it is pumped 11kms to the camp site. Additionally, there are water rights for 3 other wells for 36 lt/s (for a total of 76 lt/s). At the camp there is accommodation and offices to support a 35-person crew. Operational assets include:

- Crushing plant 3,000 tons / day to ½ inch
- Adsorption, Desorption, Regenerating effluent treatment plant (carbon activated), currently not operational
- Operating water and electricity service, with backup 600 kVA CAT-3412 diesel generator set
- System of pools and pumps to capture and recirculate solutions
- Electro-mechanical workshop
- Warehouses for spare parts and geological samples
- Laboratory equipped and operational for preparation of samples
- Tanks and fuel dumps
- Document Archives



Figure 1-1. Project infrastructure

1.5 Conclusions and Recommendations

The Choquelimpie Project represents a significant gold and silver resource.

A comprehensive program to consolidate existing drill hole data should be performed to generate a comprehensive and validated digital database supported by original source documents of collar coordinates, down-hole deviations, assay certificates, densities, QA/QC protocols (standards, duplicates, blanks, analytical repeats at second laboratory), recoveries, geotechnical data, and rock quality ("**RQD**") data as may be available for the diamond core holes. This digital database should be accessible and protected in a modern secure database framework such as acQuire or another industry-standard database.

Although the large number of relatively shallow boreholes (more than 1800 to date in the main Choque pit area) reduces the modelling risk in the near-surface, the preponderance of vertical drill holes testing structurally - controlled vertical mineralized structures may have led to an underestimate of the grade. Additional angle hole drilling should test this possibility. Alternatively, this could be tested by several short, 200 metre tunnels that could be driven across the vertical structures in a select area that has only vertical drilling.

Once a comprehensive database is constructed, on-going field activities in 2021 including drilling will be designed to deliver a robust NI 43-101 compliant resource that will drive the future direction of the Project.

2 INTRODUCTION

Thomas Henricksen and Jaime Alcazar were contracted to provide a NI 43-101 Technical Report for the Choquelimpie Project in Chile for Norsemont Mining Inc. of Vancouver, British Columbia, Canada. The effective date of this qualifying report is December 22, 2020.

2.1 Terms of Reference

Dr. Thomas A. Henricksen, SME Registered Member No. 4115974, along with Jaime Alcazar, a "qualified person" ("**QP**") as defined by NI 43-101 and professional geologist in Chile, prepared this Technical Report for the Choquelimpie project. This Technical Report presents the initial disclosure for the Choquelimpie Project under NI 43-101 for Norsemont, which will be using the Technical Report to support their Annual Report and fulfills disclosure and filing requirements with the Canadian securities regulators.

2.2 Qualified Persons

Dr. Thomas A. Henricksen and independent consultant geologist Jaime Alcazar serve as the QP for this Technical Report, as defined in NI 43-101.

2.3 Site Visits and Scope of Personal Inspection

Jaime Alcazar carried out a field visit to the Property in December 2020. Mr Alcazar is familiar with the Property having previously worked on-site in 2014 as an independent consultant to SCM Vilacollo. There has been no material change or physical work on the Choquelimpie Project since 2015, the core is still stored in the same location.

2.4 Information Sources and References

The QPs have used reports and figures submitted by the owners in support of regulatory filings as well as internal company and previous optionor reports in support of this Technical Report. The QPs have also used the information and references cited in Section 27 as the basis for the Technical Report. Additional information on the Choquelimpie Project was provided to the QPs from other consultants in specialist discipline areas. See "References" for a detailed list of all resources relied upon by the QPs.

2.4.1 Previous Technical Reports

To the best of the knowledge of the QPs, there have been no previous NI 43-101 compliant Technical Reports written for the Choquelimpie Project and prospect area. There has been no attempt by the authors to create a compliant resource for Choquelimpie. This will be the focus of future work.

2.5 Abbreviations and Units of Measurement

Monetary figures are in U.S. dollars, and measurements are presented as U.S. standard units, unless otherwise indicated. The reader is referred to the Glossary for further detail.

3 RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared by Thomas Henricksen, SME Registered Member No. 4115974, and Jaime Alcazar, a QP as defined by NI 43-101 and professional geologist in Chile. The QPs have relied upon on ownership information and information developed by both Norsemont and past owners of the Choquelimpie Project. Mr. Alcazar visited the Choquelimpie Project in December of 2020 to appraise the geological environment and assess the Choquelimpie Project. The information, opinions and conclusions contained herein are based on:

Information available to the QPs at the time of preparation of this Technical Report;

Assumptions, conditions, and qualifications as set forth in this Technical Report;

Data, reports, and other information supplied by the Company and other third-party sources as further detailed under the heading "References" in this Technical Report;

Mr. Alcazar's visit of the Choquelimpie Project in December 2020; and

The QPs review of all available reports, retained samples and legal documents.

As of the date of this Technical Report, the QPs is not aware of any material fact or material change with respect to the subject matter of this Technical Report that is not presented herein, or which the omission to disclose could make this Technical Report misleading.

4 LOCATION AND PROPERTY DESCRIPTION

4.1 Location and Access

The Choquelimpie Project (Figure 4-1) falls within the Province of Parinacota in Region 1 of northern Chile. The Project is approximately 115 kilometers east-northeast of the coastal city and port of Arica which is the only large city in the Region. The provincial center of the Parinacota Province is the town of Putre, with a population of around 2,000 permanent residents. The Project is located at the following Universal Transverse Mercator ("UTM") coordinates (universal WGS84-19S datum) 7,975,500N; 472,700E, and using the Chilean datum PSAD56-19S the UTM coordinate of the center point of the Project is approximately 7,976,000N; 473,000E. The Project lies at an elevation of 4,600 - 4,900m asl.



Figure 4-1. Location Map. Region 1 - Arica and Parinacota, Northern Chile.

The Project area is accessible from Arica, via the paved highway CH-11 which departs for the Pan-American Highway slightly north of Arica and travels part-way up the Lluta River Valley (Figure 4-2). The highway then zigzags up to the small town of Putre, and then continues up to the high Altiplano zone toward the border with Bolivia near Chungará Lake. A good gravel road departs from highway CH-11 southward for 45 km toward the small locality of Misituni, where a simple dirt road departs northeastward 6 km to the Choquelimpie Project camp and office complex. Driving time is approximately 3 hours to the site, which is at elevations between 4,600m - 4,900m asl (14,100 - 16,000 ft). The whole journey is accessible through single-wheel drive vehicles, although it is necessary to maintain defensive driving given the high traffic of trucks passing along the international route and along the gravel road to Guallatire.



Figure 4-2. Access to the Project area. The red rectangle represents the mining concessions. From Correa, 2008.



Figure 4-3. Plan map showing boundaries of Presidential decrees and mining concessions.

4.2 Land Tenure

Image: Section of the sectio	mN
CONCESION ROL Has CONCESION ROL Has	
ALBION 1/3 01101-0193-7 15 POZO 3 01101-0470-7 5	mbl
ALGECIRAS 1/3 01101-0202-K 15 SAN FRANCISCO 1/3 01101-0194-5 14	miN
ASPAS DE SAN LUIS 01101-0200-3 5 SAN JORGE 1013 01101-0199-6 5 8 7	I
DELIRIO 1/3 01101-0204-6 15 SAN JORGE 14/15 01101-0477-4 10	
DESEADA 1/3 01101-0203.8 15 SAN JORGE 69 01101-0476.6 4	!
LOS CONDORES 01101/0006.K 4500 SAN LUIS 1/3 01101-0196-1 12	
1/900 0/10/10/00 0/10/10/00/10 0/00/10/00/00/00/00/00/00/00/00/00/00/00	mN
MILLUNI 1/94 01301-0100-3 470 SAN LUIS 12/14 01101-0474-K 15	
PLANTA 1/130 01301-0099-6 610 SAN LUIS 15/16 01101-0475-8 10 0 Km 2	
PO2O 01101-0469-3 4 SAN LUIS 4/5 01101-0471-5 8	
POZO 1 01101-0195-3 5 SAN LUIS 8/10 01101-0472-3 15	

CONCESION	ROL NACIONAL	Has	CONCESION	ROL NACIONAL	Has
ALBION 1/3	01101-0193-7	15	POZO 3	01101-0470-7	5
ALGECIRAS 1/3	01101-0202-K	15	SAN FRANCISCO 1/3	01101-0194-5	14
ASPAS DE SAN LUIS	01101-0200-3	5	SAN JORGE 10/13	01101-0199-6	5
DELIBIO 1/3	01101-0204-6	15	SAN JORGE 14/15	01101-0477-4	10
DECITIO 1/0	01101 0204 0	15	SAN JORGE 6/9	01101-0476-6	4
DESEADA 1/3	01101-0203-8	15	SAN LUIS 1/3	01101-0196-1	12
LOS CONDORES 1/900	01101-0006-K	4500	SAN LUIS 11	01101-0473-1	5
MILLUNI 1/94	01301-0100-3	470	SAN LUIS 12/14	01101-0474-K	15
PLANTA 1/130	01301-0099-6	610	SAN LUIS 15/16	01101-0475-8	10
POZO	01101-0469-3	4	SAN LUIS 4/5	01101-0471-5	8
POZO 1	01101-0195-3	5	SAN LUIS 8/10	01101-0472-3	15

Figure 4-4. Detailed plan map and list of mining concessions

The Choquelimpie Project consists of 5,757 hectares that includes 21 contiguous exploitation mining concessions that includes three larger mining exploitation concessions (Los Condores 1-900, 4500 Has;

CONCESION	ROL	Has	CONCESION	ROL NACIONAL	Has
ALBION 1/3	01101-0193-7	15	POZO 3	01101-0470-7	5
ALGECIRAS 1/3	01101-0202-K	15	SAN FRANCISCO 1/3	01101-0194-5	14
ASPAS DE SAN LUIS	01101-0200-3	5	SAN JORGE 10/13	01101-0199-6	5
8/11 DEUDIO 1/2	01101.0201.6	15	SAN JORGE 14/15	01101-0477-4	10
DELINIO 1/3	01101-0204-0	15	SAN JORGE 6/9	01101-0476-6	4
DESEADA 1/3	01101-0203-8	15	SAN LUIS 1/2	01101 0106 1	10
LOS CONDORES	01101-0006-K	4500	SAN LUIS 11	01101-0473-1	5
MILLUNI 1/94	01301-0100-3	470	SAN LUIS 12/14	01101-0474-K	15
PLANTA 1/130	01301-0099-6	610	SAN LUIS 15/16	01101-0475-8	10
POZO	01101-0469-3	4	SAN LUIS 4/5	01101-0471-5	8
POZO 1	01101-0195-3	5	SAN LUIS 8/10	01101-0472-3	15

Planta 1-130, 610 Has; and Milluni 1-94, 470 Has) and 18 smaller exploitation concessions (

Figure 4-4).

The mining concessions which comprise the Choquelimpie Project are owned and registered in the name of SCM Vilacollo, and fees to maintain ownership are due annually in March. As of the date of this Technical report, all fees are fully paid.

The block of mining concessions occurs within the Las Vicuñas National Reserve ("**Reserve**"). The Reserve has been declared an area of scientific interest. SCM Vilacollo is able to operate within the Reserve by way of obtaining the following permits:

- Exploitation Permit: Supreme Decree No. 129, 1983 of the Ministry of Agriculture and Presidential Supreme Decree No. 36 of April 12, 1988 (417 Has), published on May 19th, 1988. This allowed for mining activities to commence in 1988.
- Exploration Permit: Presidential Supreme Decree No. 62, 1996 (650 Has) of November 6, 1996, published on December 24th, 1996. Authorizes SCM Vilacollo to carry out exploration activities over a 650 Has area surrounding the exploitation permit (Figure 4-3).

There are no superimposed third-party concessions. The presidential decrees remain valid. There exists private property under much of the concessions area and there exist current contracts for access on those properties. There are no known environmental liabilities to which the Project is subject.

4.3 Terms of the Transaction

On July 16, 2020, Norsemont (CSE: NOM, OTCQB: NRRSF, FWB: LXZ1) announced that it had completed the acquisition of the Choquelimpie Project in northern Chile by way of a share purchase agreement ("SPA") dated 15th July 2020 with Tavros, an arm's-length private British Columbia corporation, whereby Norsemont has agreed to acquire all of the issued and outstanding shares of Tavros from the shareholders in consideration for aggregate cash payments of US\$3.3 million (broken down into various property acquisition and other payments payable over 18 months) and the issuance of 15 million

common shares ("**Consideration Shares**") in the capital of the Company. The Consideration Shares are subject to a voluntary escrow (the "**Escrow**") and a right of first offer (the "**ROFO**") pursuant to the terms of the SPA. The Consideration Shares are to be released from Escrow over a period of 24 months and subject to the ROFO.

Tavros holds a 100% interest in the shares of Inversiones y Servicios Loma Larga SpA which in turn owns 100% interest in SCM Vilacollo, a private Chilean corporation whose main asset is the Choquelimpie Project.

4.4 Royalties

4.4.1 Royalty Payable to Minera Choquelimpie

In 1987, Minera Altiplano (Shell Chile) exercised an option to purchase the Choquelimpie Project mineral deposit from Minera Choquelimpie. SCM Vilacollo as the current owner of the mineral deposit must pay a royalty to Minera Choquelimpie of the US\$ equivalent of 0.0239 g/t gold and 1.2960 g/t silver per tonne of material extracted and processed. This annual payment has a 40-year term beginning on the third year of production, without any interruptions for production stoppage or suspension of mining. The agreement was signed in 1987. The mine operated from 1988 to 1992 and therefore the royalty will be in effect until 2030.

4.4.2 Royalty payable to Minera Altiplano

In 1996, Minera Altiplano sold the Project to SCM Vilacollo. SCM Vilacollo must make scaled Net Smelter Return payments ("**NSR**") to Minera Altiplano on a quarterly basis for 50 years (i.e., until April 2045) as follows:

- 0% on the NSR portion from US\$ M 0 to 20,
- 5% on the NSR portion from US\$ M 20 to 80,
- 3% on the NSR portion from US\$ M 80 to160, and
- 1% on the NSR portion over US\$ M 160.

5 PHYSIOGRAPHY, CLIMATE, LOCAL RESOURCES AND INFRASTRUCTURE

5.1 Physiography

The broad physiography of the greater Choquelimpie district is a combination of High Andean Cordillera and rolling Altiplano terrain. Elevations range between 3,900m and 4,900m (12,800ft – 19,300ft). Within the Project area the elevation ranges from 4,600m to 4,900m (15,000ft – 16,076ft). Figure 5-1 depicts the strong relief within the Project area: in the image there are 500m (1,640ft) of relief between the lowest point in the Quebrada Misituni to the highest point at the peak of Cerro Chivaque, with the historical Choque pit visible on the flank of Cerro Chivaque.



Figure 5-1. Looking north-north east over Quebrada Misituni to Cerro Chivaque. High-relief dome is the project area and represents the throat of the Pliocene "Volcan Choquelimpie".

The high Andean Cordillera is composed of a chain of recent and/or live volcanoes which represent the current chain of modern volcanism, and which represents the highest and youngest portion of the Andes Cordillera. The Guallatire and Parinacota Volcanos have existing fumaroles, and the Parinacota Volcano has had Pleistocene eruptive activity; they represent the modern active volcanic arc of the high Andes, South America. The axis of the Andes is located 12 Km to the east of the Choquelimpie Project area and coincides with the international border of Chile-Bolivia.

5.2 Climate

The Project area is within the high Altiplano portion of the Andean Cordillera with nearly all elevations between 4,500-5,000m (14,760-16,400ft) and climactic conditions similar to the Altiplano in neighboring Peru and Bolivia. Annual temperatures vary widely, up to 20°C (80°F) during the day in the warmest summer season (November-February), and a minimum of -4°C (24°F) during the coldest winter nights (May-August), with an annual average of 2.4°C (66.2°F). The temperature can vary widely between day and night, often with drastic changes of up to 20°C (35°F) within a 24-hour period.

Precipitation is sparse, an average of 30cm per year and which falls principally during brief episodic thunderstorms during the summer season (November-March) as rain, snow, and hail that can be accompanied by thunderstorms and lightning. Wind is always present, persistent and can include violent gusts of turbulence. The winter months (April-October) are dry, sunny and cold, with bright and clear skies. While it is possible to work throughout the year, the best months for field activities are between April and October with sunny and calm skies.

The vegetation is characteristic of the harsh, high altitude, semi-desert conditions and includes short sparse vegetation species which resist the wind and are adapted to the saline soils of the high desert. A special Altiplano-specific habitat named "bofedal" is common and is generally protected for purposes of biodiversity. The bofedal is an Altiplano wetlands-bog associated with small drainages and is a common focus of faunal habitat in the otherwise semi-desert climate of the sector.

The camelid species llama, guanaco, alpaca, and vicuña thrive and are indigenous to this zone, also the South American ostrich "ñandu", the South American puma, 3 species of foxes, a South American deer "huemul", condors, and a variety of indigenous rodents. Domesticated livestock other than the commented camelid species is almost nonexistent due to the high elevation and harsh winter conditions. There is negligible agricultural production from this area, and the only crops which are commonly cultivated are a high-altitude potato species "chuño" and the native Altiplano grain quinoa.

5.3 Local Resources and Infrastructure

There is limited infrastructure in the high Altiplano of Chile. The only significant population center near the Project area is the town of Putre, with 2,329 permanent residents (census of 2017, Institute Nacional de Estadísticos) which is also the local capital for the Province of Parinacota. Putre is located 35 km northwest of the Project but requires slightly more than an hour of travel by vehicle. Putre offers electricity 24 hours per day, rustic hotels and restaurants, a small branch of the state bank "Banco del Estado", a local cellular telephone network, but no fuel for vehicles.

The major city of Arica on the coast is a port and regional capital with a population of 229,689. It has an international airport with daily flights to Santiago but also to the foreign cities of Asuncion, Paraguay; Lima, Peru; and la Paz, Bolivia. Arica offers most modern amenities for travelers, plus a major port for importation-exportation. Arica would represent a potentially important source of labor and regional infrastructure for a mining operation at Choquelimpie but well-trained and experienced mine and plant personnel can also be sourced from Iquique or Antofagasta. Ground transport from Arica to the project site takes 2.5 to 3 hours. There are no emergency services for fuel available in-transit, and 4WD vehicles are appropriate for travel to/from the Project area. There is no fixed or cellular telephone service for Putre, and none in the Choquelimpie area. Telephone communications at the project camp are via direct satellite link.

Small, dispersed populations of indigenous people live in the greater vicinity of the Choquelimpie Project area and shepherds with herds of llama and alpaca that are present on a seasonal basis. These represent tiny clusters typically of 2-3 nuclear families living together locally. Most own the land on which they shepherd, and private property covers much of the region, including the Choquelimpie Project area. The sparse indigenous population is a combination of ethnic Aymara and Quechua, and most speak Spanish.

6 GEOLOGICAL SETTING AND MINERALIZATION

6.1 Regional Geology

The Regional geology of the sector is summarized in the geological maps of the Chilean government Servicio de Geologia y Mineria ("**Sernageomin**"), those by Clavero et. al (2018) and Garcia et. al (2004) and in Figure 6-1.

Choquelimpie is one of several epithermal mineral deposits lying in a belt located at an altitude of 3,600 to 4,600 m above sea level and running parallel to the Pacific Coast. These include Orcopampa, Arcata and Cailloma in Peru, and Todos Santos and Carangas in Bolivia (Gropper et. al., 1991). All are hosted by Miocene-Pliocene volcanic complexes developed on exceptionally thick crust, >70 km, in this part of South America. The epithermal deposits lie east and parallel to a belt of older porphyry copper deposits.

The Choquelimpie deposit represents the core of an extinct continental stratovolcano, of early Pliocene age at approximately 6.6 ± 0.2 Ma (Gropper et. al., 1991), and is characterized by intermediate composition extrusive volcanic rocks plus related dacitic domal intrusive rocks (Clavero et. al., 2018). Erosion of the central portion of the volcano has exposed a dome of intrusive rocks and breccias with hydrothermal alteration and gold-silver mineralization; this is the Choquelimpie deposit and represents the central "throat" of the volcano.



Figure 6-1. Simplified district geology. Hydrothermal alteration and epithermal gold-silver mineralization in and around the central dome. Garcia et al, 2004.

The older rocks which underlie the Choquelimpie volcanic complex and which outcrop to the east of the district pertain to the Lupica Formation of Upper Oligocene or Lower Miocene age. This formation comprises a continental sedimentary sequence of intra-volcanic sediments: clastic sequences derived from volcanics, water-lain tuffs and minor intercalated volcanic flows of intermediate composition.

To the west and south of Choquelimpie the younger Pliocene-Quaternary age Lauca Formation outcrops. This formation includes sedimentary rocks and modern sediments, mostly fluvial but also lacustrine locally, largely unconsolidated and intercalated with Quaternary ignimbrite tuff.

Three kilometres to the north-northeast the Choquelimpie complex is in direct contact and coalesces with another volcano of similar composition and age, the Mio-Pliocene volcano Ajoya (Ajoya is possibly slightly older; Clavero et. al., 2018, Figure 6-1). This volcano exhibits a similar level of erosion and has intercalated volcanic outflow facies with the Choquelimpie volcano. Both volcanoes are located along the same northeast regional structure that passes through the Milluni creek (Milluni Lineament), which would indicate a common deep-seated zone of weakness that facilitated the extrusion of these two volcanic units and focussed subvolcanic intrusions and hydrothermal activity. They evidently have the same Andean batholitic-magmatic source. Further to the northeast is the modern active Parinacota Volcano of Quaternary age and the nearby caldera complex of Lago Chungará.

6.2 Local Geology

The overall axis of the Andes trends north-south in the Choquelimpie area, but the dominant fault-structural trend for the Choquelimpie complex, likewise for the adjoining Ajoya complex, is N35-40°E within 5-8 km of Choquelimpie. It changes to N45-60°E some 45-50 Km farther to the northeast.



Figure 6-2. Choquelimpie Project geology map (Correa et al., 2007)

There exist less-pronounced north-south and northwest regional fault and fold sets; all three structural expressions are present in the central dome of the Choquelimpie centre, but the north-eastern trend is dominant and appears to have controlled the emplacement of the silicified mineralized breccias in the main Choque open pit.

The Choquelimpie volcanic complex sits uncomfortably on older intermediate composition Ignimbrites which are probably of middle Miocene age (Figure 6-2). The volcanic stratigraphy of the paleo-volcano has been described by Gropper et al., (1991). It is lithologically relatively homogeneous, composed of intermediate andesitic composition flows and autoclastic flow breccias. There exists a subtle upward gradation into slightly more felsic dacitic flows and breccias with sparse quartz eyes, and proportionately more flow breccia units. These uppermost outflow facies also correspond lithologically to the central hypabyssal domal plugs of similar quartz-eye dacitic lithologies and which in turn represent the latest intrusive events within the central conduit ("throat") of the Choquelimpie paleo volcano (Figure 6-2).



Figure 6-3. Geology of the central altered and mineralized dome at Choquelimpie. The dome occurs within a strong North-North East-trending structural corridor, reflected by major lineaments aligned intrusions, alteration and mineralization (Correa et al., 2008).

The central hydrothermally altered dome is the principal locus of gold-silver mineralization and is characterized by eruptive diatreme breccia and hydrothermal breccias, both of which are spatially associated with feldspar-rich dacitic intrusive plugs of variably porphyritic texture. The porphyritic plugs contain phenocrysts of plagioclase, quartz, biotite, and hornblende in an aphanitic to locally glassy groundmass, and are largely altered to argillic and advanced argillic assemblages, with highly variable silicification. The diatreme breccias consist of crystal-lithic clasts (Figure 6-2 and Figure 6-3, above) with variably milled dacitic matrix and quartz eyes, and the degree of brecciation typically varies throughout the overall diatreme complex.



Figure 6-4. Diatreme in middle of Choque pit. Crackle breccia of porphyritic dacite (no quartz eyes) with matrix of crushed rock and finely disseminated pyrite.

The overall breccia geometry is generally concentric to the central quartz dacite plugs but with greater extension to the south. Likewise, the elongation of silicified and mineralized hydrothermal breccias within the central dome are broadly concentric with respect to the dome itself. There also exist blocks of diatremerelated "puzzle" and "crackle" texture breccias of fractured but only partly brecciated wallrock (Figure 6-4).

Wallrock andesite clasts are incorporated into the diatreme near Cerro Antenna and along its western margin there are clasts of basement sedimentary rocks (Lupica Formation) incorporated as eruptive surge components.

The diatreme is variably altered in its more central portions within the overall dome-breccia complex. The central domal plugs, hydrothermal breccias, and hydrothermal alteration cut the diatreme breccias and hence post-date the diatreme complex. They probably represent a late phase of hydrothermal activity related to the cooling-solidifying batholith at depth.

A prominent circular feature is related to the domal walls, but neither collapse features nor eruptive pyroclastic rocks have been described which could correspond to a collapse-type caldera, so the circular geometry is probably a reflection of the central intrusive-eruptive conduit of the paleo volcano ("summit crater"), and the domal shape reflects erosional resistance of the plugs and hydrothermal silicification.



Figure 6-5. Cross-section through and adjacent to the main Choque pit.

6.3 Alteration and Mineralization

Hydrothermal alteration (Figure 6-6) is generally concentrically zoned, with the strongest advanced argillic alteration with silicification, in the central dome. Alteration intensity transitions outward into argillic alteration and finally into propylitic alteration in the peripheral dacitic and andesitic rocks.



Figure 6-6. Surface alteration map of the Choque pit, (Correa et al., 2007)

The alteration and mineralization at Choquelimpie are typical of high-sulphidation, epithermal gold-silver deposits. The deposits occur in the core of the Pliocene Choquelimpie volcano.

Multiple stages of mineralization were reported by Gropper et. al. (1991), with an early phase of fine quartz veining of the central feldspar porphyry plugs associated with sulphide and sulfosalt mineralization (pyrite, sphalerite, galena, chalcopyrite, minor pyrrhotite, magnetite, and arsenopyrite).

A subsequent stage includes native gold and silver, electrum, argentite, other silver sulfosalts and realgar associated mostly with stockwork quartz veinlets and hydrothermal breccias. The highest grades for both gold and silver in drill materials invariably occur in the hydrothermal breccias, especially those with strong advanced argillic alteration, silicification, pyrite and enargite. The accompanying gangue minerals are barite, quartz, chalcedony kaolinite, dickite, and alunite. Native gold occurs in interstices, or as inclusions within the sulfosalts, particularly enargite.

The latest event is represented by the formation of rare, narrow, subvertical veins along fractures which formed along the dominant northeast trend and which cut the hydrothermal breccias. These late veins contain massive sphalerite and minor galena but no pyrite, and they carry some gold and silver values.

Historically several bulk-mineable gold-silver deposits were identified, and variably exploited. The open pits associated with these deposits are the Suri, Zorro, Choque, Intermedio, Vizcacha, Hundimiento, Española and Chivaque (Figure 6-7).



Figure 6-7. Gold-silver bulk-mineable open pits at the Choquelimpie Project (Correa et al., 2008).

In the Suri Pit the hydrothermal breccias contain enargite, luzonite, pyrite, and other sulfosalts, plus traces of covellite and chalcocite that have a clear north-westerly structural control.

Further north hydrothermal breccias are related to the dominant N45°E and N65°E structural trends throughout the district. The hydrothermal breccias in part cut and impregnate the earlier diatreme breccia and its silicified matrix contains the gold and silver mineralization. The accompanying advanced argillic alteration occurs as "vuggy quartz" and amorphous bands of chalcedonic quartz. In the Choque pit covellite can occur as supergene coatings on sphalerite as well as hypogene growths along cleavage in enargite crystals. North of the Choque pit, on the north slope of the Milluni creek, there is a vein with realgar mineralization and in the Vizcacha pit there are native sulphur occurrences. The occurrences attest to the shallow (epithermal) level of formation and exposure in this area (Correa et. al., 2008).



Figure 6-8. Apparent near-surface metal zoning across the Choquelimpie Project (Correa et al., 2008)

These field observations suggest a possible mineral zoning across the Choquelimpie Project as shown in Figure 6-7 that needs to be further examined but may help vector to deeper porphyry mineralization.

Metal zonation begins with a distal area in the northeast where zinc predominates, associated with sphalerite mineralization. Moving to the southwest in the direction of increasingly higher temperature minerals, there is a lead ("**Pb**")-zinc ("**Zn**") zone, characterized by the presence of galena and sphalerite, that gradually gives way to a copper ("**Cu**")-Arsenic ("**As**") zone that is represented by the presence of enargite. Finally, there is an area rich in copper with lesser arsenic. Among the minerals present in this area are enargite, luzonite, sulfosalts (tennantite, tetrahedrite), covellite and chalcocite.

Early mining efforts sought the high-grade oxidized breccia zones and especially the vein-type mineralization in fault-fracture controlled quartz veinlets which contain visible gold, silver halides, and natural amalgam.

In contrast, the open-pit mining operation of SCM Vilacollo during 1988-1992 focused upon bulk mining of lower-grade oxidized breccia-hosted ores which were variably amenable to modern heap-leaching extraction. Subsequently between 1994-1996 Northgate completed additional washing of the heaps. Through to October 1996 the operation produced some 398,900 ounces of gold and some 2,192,000 ounces of silver (Domic, 1996). Copper was present but was not recovered during this mining phase.

In each of the identified deposits there remain unexploited breccias and mineralized veinlets, in part unoxidized "feeder zone" extensions to depth which were not amenable to recovery with the processing technology at the time. In several of the pits there remain hydrothermal breccias and quartz veinlets with enargite, luzonite, covellite, and chalcocite which contain relatively high copper contents at ranges of 0.05-0.3% Cu. In slightly deeper drill holes copper sulfosalts (tetrahedrite and tennantite) are common, with lesser chalcopyrite (Gropper et. al., 1991).

Of additional interest is the relatively high copper content of the epithermal mineralization in general, and the apparent transition from copper sulfosalts at surface to copper sulphides at depth, which suggest potential for a deeper porphyry Cu-Au deposit beneath the near-surface epithermal Au-Ag mineralization.

7 HISTORY INCLUDING ESTIMATED RESOURCES

Prehistoric mining activity in the Project area was noted by the Spaniards, who also mined local gold-silver veins on a minor scale. The Choquelimpie zone lies close to the historical Spanish mule trail between the Pacific port of Arica and the Spanish colonial center of La Paz (now the capital of Bolivia). There also was intermittent historical artisanal gold vein mining during the period 1883-1930 (Gropper et. al. 1991). Subsequent efforts between approximately 1960 and 1980 focused principally upon modern re-treatment of old vein dumps via gravity and flotation methods, for both gold and silver. The total production from these early efforts on vein-type mineralization is unknown, but it has been estimated at approximately 1.5 metric tons of gold and 200 tons of silver (Gropper et. al. 1991).

In 1985, Shell Chile signed an option agreement to buy the Choquelimpie Project mining concessions, developed the first integrated geological context (Sillitoe, 1985; Cuadra et. al., 1986) and explored during 1986-1988, which activity included extensive RC drilling. This work generated a historical reserve calculation of 6.7 million metric tons of oxide ore at grades estimated as 2.23 g/metric ton gold and 87 g/metric ton silver within a historical "mineral resource" of some 11 million additional metric tons (Mining Journal, 1987). A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves; and the Company is not treating the historical estimate as current mineral resources or mineral reserves. Part of this original estimated resource was depleted during openpit mining between 1988-1992.

Shell Chile in conjunction with Westfield Minera and Citibank formed an operating company SCM Vilacollo, which developed a modern open pit mine and initiated production in 1989-90 at 3,000 metric ton/day with heap leach recovery. Production was subsequently expanded to about 5,500 metric tons/day in 1991. Open-pit operations ceased in late 1992. Subsequently between 1994-1996 Northgate completed additional washing of the heap leach. Through to October 1996 the operation produced some 398,900 ounces of gold and some 2,192,000 ounces of silver (Domic, 1996).

Subsequent exploration has been intermittent, and in 2001 the Project was acquired by Minera Can Can which developed more comprehensive district-scale exploration activity, especially upon satellite zones.

Rio Tinto acquired an option to explore the Choquelimpie Project in 2006 and performed district-scale geological mapping during 2007 (Correa, 2008), that led to proposed deep drilling for a porphyry Cu-Au target. However, Rio Tinto terminated the option in early 2008, without any drilling.

In 2012 Minera Can Can drilled 3 deep core holes in search of a deeper porphyry-type target. They intersected favorable hydrothermal alteration in one of the three holes, but not the porphyry source.

The drill hole database for the Choquelimpie Project includes 76 diamond core holes, 1657 RC holes, and 147 blast holes. Figure 7-1 shows the overall distribution of RC and diamond core drill holes between the 7 generally identified sectors of the project area, including the principal Choque Pit area.


Figure 7-1. Distribution of drill holes across the Project area, excluding blast-holes, AFW, 2017, UTM zone 19S, Datum PSAD56.

While open-pit mining ceased in late 1992, leaching of the heaps continued until 1996. Other interim-type work has continued including exploration, metallurgy, spectrographic studies (Pima-II Short Wave Infrared Reflectance "SWIR"), petrographic studies, additional permitting work, and updated resource estimates. This work was performed variably by Rio Tinto, Minera Can Can, and Inversiones Alxar S.A. ("Alxar", a subsidiary of Empresas Copec S.A.).

All prior resource estimation efforts were based upon prior drilling for which there is a variable lack of quality control technical data in the existing database, including control standards, densities, laboratory checks, and RQD. Much of the historical drilling was done before the establishment of current "Best Practices" methodologies, including the principal drilling effort by Shell Chile to define the initial reserves and resources, during years 1986 and 1987. Further, the geological models upon which these estimates are based were not fully standardized, that is, the detailed geological logging of drill materials was not standardized between multiple logging geologists and multiple drilling campaigns, and despite the

extensive drilling the derived geological models are not fully internally consistent as basis for resources estimates. Recommendations for improvement are included in section 26: Recommendations.

In their report of January 27, 2017, AFW released their findings on the Choquelimpie Project resources to the property owners, Alxar. A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves; and the Company is not treating the historical estimate as current mineral resources or mineral reserves.

Au Cut-off (g/t)	Tonnage	Au Grade (ppm)	Ag Grade (ppm)	Cu Grade (%)	Total Au Ounces	Total Ag Ounces
0	461,059,703	0.350	6.02	0.029	5,186,838	89,192,937
0.1	380,346,678	0.413	6.95	0.033	5,047,628	84,962,387
0.2	284,325,027	0.504	8.08	0.039	4,605,464	73,831,450
0.3	216,710,421	0.583	8.86	0.041	4,063,605	61,717,196
0.4	159,512,830	0.667	9.53	0.044	3,422,064	48,854,915
0.5	114,051,785	0.754	10.21	0.048	2,765,550	37,444,153
0.6	65,787,985	0.907	11.54	0.055	1,917,511	24,407,335
0.7	41,248,904	1.063	12.75	0.061	1,409,770	16,912,933
0.8	27,866,960	1.215	14.05	0.067	1,088,973	12,585,764
0.9	18,676,505	1.396	15.91	0.072	838,461	9,551,050
1	13,574,520	1.566	17.34	0.079	683,305	7,565,842

Table 7-1. Tonnage-Grade summary (Choque model only) at various cut-off grades, AFW, 2017 using Gold Price US\$1,300/ounce; Silver Price US\$20/ounce; Gold recoveries 70%; Silver recoveries 60%.

The classification of mineral resources consists in determining the levels of confidence associated with the grade, tonnage and metal-content predictions of the estimated mineral resources. For this purpose, AFW generated a mesh spacing determination. This methodology is aimed at defining what specific (mesh) spacing is associated with a given confidence interval ("CI"), in other words, the spacing needed to ensure a (grade) error within the $\pm 15\%$ range for a 90% CI (9 times over 10), for a given production volume, as approximately projected for the project under study.

This determination yielded 40 x 40 m thresholds for "high" levels of confidence and 70 x 70 m for "moderate" ones. Blocks with spacing over 70 x 70 m were catalogued as having "low" confidence.

Before classifying the project mineral resources, AFW applied a reassignment (downgrade) to blocks with initial high and medium confidence levels (because of the poor quality and traceability of the information, as previously described).

Figure 7-2 shows a vertical section with the initially assigned levels of confidence (above), and the subsequent post-reassignment classification (below). It can be observed that high or intermediate levels of confidence have been assigned to the sections where the volume of information is denser (higher segments of the pit). Initially, the high level of confidence corresponded to 29% of material inside the pit (using a 0.3 g/t Au cut-off grade), and 15% of this material had an intermediate level of confidence.

After the reassignment, the 29% with high confidence was downgraded to the category of indicated resources, and the 15% was added to the material with low confidence, for a final overall 71% inferred resources.



Figure 7-2. Vertical section (±20m). Levels of confidence (upper). Classification of Mineral Resources (lower)

Table 7-2 lists the tonnages and grades with their initially assigned levels of confidence, at a gold cut-off grade of 0.3 g/t as determined by Alxar. Table 7-3 lists the confidence and resulting classification of mineral resources, using the stated cut-off at 0.3 g/t Au. It should be noted that AFW recommends a sensitivity analysis of the forenamed cut-off grade and that the mineral resource tabulations are not considered compliant resources.

	Choqu	e Model				
Confidence Level	Tons	Au Grade (ppm)	Ag Grade (ppm)	Cu Grade (%)	Total Au Ounces	Total Ag Ounces
1	62,344,040	0.72	12.44	0.054	1,435,541	24,928,841
2	31,589,900	0.58	8.53	0.037	584,826	8,667,977
3	122,776,481	0.52	7.12	0.036	2,043,238	28,120,378
Total	216,710,421	0.58	8.86	0.041	4,063,605	61,717,196

	Españo	la Model				
Confidence Level	Tons	Au Grade (ppm)	Ag Grade (ppm)	Cu Grade (%)	Total Au Ounces	Total Ag Ounces
1	1,488,095	0.58	11.26	0.059	27,898	538,712
2	385,310	0.52	9.36	0.035	6,388	115,941
3	252,645	0.55	14.75	0.011	4,430	119,836
Total	2,126,050	0.57	11.33	0.049	38,716	774,489
Grand Total	218,836,471	0.58	8.88	0.041	4,102,320	62,491,684

Table 7-2. Tabulation of levels of confidence (0.3 g/t Au cut-off)

	Choqu	ue Model				
Classification	Tons	Au Grade (ppm)	Ag Grade (ppm)	Cu Grade (%)	Total Au Ounces	Total Ag Ounces
Indicated	62,344,040	0.72	12.44	0.054	1,435,541	24,928,841
Inferred	154,366,381	0.53	7.41	0.036	2,628,064	36,788,355
Total	216,710,421	0.58	8.86	0.041	4,063,605	61,717,196
	Españo	ola Model				
Classification	Tons	Au Grade (ppm)	Ag Grade (ppm)	Cu Grade (%)	Total Au Ounces	Total Ag Ounces
Indicated	1,488,095	0.58	11.26	0.059	27,898	538,712
Inferred	637,955	0.53	11.50	0.025	10,817	235,777
Total	2,126,050	0.57	11.33	0.049	38,716	774,489
Grand Total	218,836,471	0.58	8.88	0.041	4,102,320	62,491,684

Table 7-3. Tabulation of classifications of Mineral Resource (0.3 g/t cut-off)

Notes:

- This classification of mineral resources was not prepared as part of a NI 43-101 compliant technical report.
- These mineral resources were estimated as of January 19, 2017.
- The economic viability of mineral resources that are not reserves is nil.
- These mineral resources have been estimated on the basis of a 0.3 g/t Au cut-off grade, with volumes measured in a resource pit, and reported according to a price of US\$ 1,300/ oz.
- This classification of mineral resources is based on the average space between drills, levels of confidence of grade estimates and drilling data traceability.

8 DEPOSIT TYPES

All evidence indicates that the principal deposit type is classic epithermal gold-silver-copper mineralization associated with argillic and advanced argillic hydrothermal alteration, variable silicification, and spatially associated with zones of hydrothermal breccias but with additional mineralization into brecciated wallrock of the greater central dome-breccia complex. This deposit type formed at shallow levels in the central solidified "neck" of the late Pliocene Choquelimpie volcano during the late waning stage of eruptive and hydrothermal activity (Figure 8-1).



Figure 8-1. Top left: Schematic reconstruction of a high-sulphidation deposit (Sillitoe, 1999). Alteration in orange lettering; mineralization in light blue. Bottom left: Pliocene gold belt located east of Eocene-Oligocene porphyry copper occurrences. Right: Other Andean HS epithermal gold occurrences (Bissig et. Al., 2014).

Typical characteristics and evolution of these systems include early diatreme development intruded by dome complexes followed by early shallow acidic condensates that generate steam heated zones and barren or weakly mineralized lithocap (beneath paleowater table). Later evolved high-sulphidation ("HS") gases and fluids generate advanced argillic alteration and deposit gold +/- silver in permeable zones (vuggy silica, hydrothermal breccias, ignimbrites). Gold-copper sulphosalt mineralization occurs in root zones and below the lithocap as veins and massive sulphide lenses. At some localities HS mineralization extends downwards

into the sericitic zone, most spectacularly over a structurally controlled vertical interval of at least 1000 m at Chuquicamata (Fr6raut, Ossand6n and Gustafson, 1997) The deep parts of the HS environment are characterized by high sulphidation-state sulphides comprising several of bornite, digenite, chalcocite and covellite, all of them hypogene in origin.

The zones of transition between HS and porphyry mineralization are typically characterized by downward changes from advanced argillic alteration, (quartz-dickite±pyrophyllite±diaspore), to sericitic (quartz-sericite-pyrite) alteration (Sillitoe et al, 1998), Sericitic alteration grades downwards into K-silicate alteration containing chalcopyrite-(bornite)-pyrite.

In the Andes of South America (Figure 8-1) the Cajamarca-Huaraz belt in northern Peru and the El Indio-Maricunga belt in northern Chile, each ~400 km long are the two main concentrations of large highsulphidation epithermal gold deposits. Both belts occur within the two late Miocene to Recent, amagmatic or low level magmatic, flat-slab segments with thickened crust of the central Andes (Barazangi and Isacks, 1976).

Cross-arc zones of Miocene tectono-magmatic activity, up to several tens of kilometers wide, appear to have localized the Alto Chicama and Yanacocha high-sulphidation gold deposits in the Cajamarca-Huaraz belt. Turner (1999), and Longo and Teal (2005), defined the 200-km-long, northeast-striking, Chicama-Yanacocha structural corridor, which encompasses the 25-km-long alignment of volcanic and hydrothermal centers at Yanacocha as well as nearby high-sulphidation gold and porphyry copper-gold deposits. An apparently similar, but northwest-striking basement feature is present in the El Indio part of the El Indio-Maricunga belt, with the 6-km-long Pascua-Veladero trend coincident with its northern margin (Bissig et al., 2001).

All historical mining activity at Choquelimpie focused upon the exposed epithermal precious metals mineralization. However, there exists potential for an additional deposit type at greater depth, a possible deep porphyry Cu-Au type of deposit which may exist at an as yet undetermined depth beneath the epithermal mineralization, and which may have been the source of hydrothermal fluids, wallrock alteration, and the Au-Ag-Cu mineralization as encountered in the exposed central dome of the Choquelimpie district. This deep porphyry possibility is discussed in the next section 9.

9 EXPLORATION

Exploration potential is recognized for resources believed to exist under the existing pits, along the northeast trend of the known zones, and in other zones discussed herein.

9.1 Epithermal Au-Ag Mineralization under and adjacent to the existing pits

Historical exploration activity (Figure 9-1) largely consisted of surface prospecting until the Shell Chile and SCM Vilacollo drill programs of 1984-1992, when 1,142 RC drill holes and blastholes were completed. Subsequent exploration by Minera Can Can, included 766 drill holes testing multiple satellite mineralized zones and other targets in the district between 1993-2012.



Figure 9-1. Range of Gold grades (g/t) mined, as well as under and adjacent to the Choque pit

The Shell Chile and SCM Vilacollo programs included surface geological mapping, sampling, and extensive RC drilling. The drilling focused upon the exposed shallow parts of the mineralized hydrothermal breccias for which drilling was generally shallow, mostly vertical RC holes to depths of 70-80 meters, and for which the target was exclusively oxidized Au-Ag mineralization for bulk open-pit exploitation and heap-leach extraction (Gropper et. al., 1991, and Figure 9-1). However, few holes penetrated deeper than 100 meters. Both mixed and sulphide mineralization was excluded from exploitation for the oxide heap leaching operation. Consequently, much of the depth extension to existing mineralization has been only sparsely drilled (e.g., Figure 9-2). The potential for additional sulphide mineralization remains largely untested. Indeed, a large proportion of in-pit holes terminated in grades over 1 g/t gold equivalent, mostly in mixed and sulphide mineralization. Additional drilling will be recommended to identify and define the under-pit potential and that of the same mineralized zones outside the old pits. This will be mostly mixed and sulphide material, but the volume potential is manifestly greater than that of the previously mined oxide ore.



Figure 9-2. Cross-section through Choque pit showing shallow drilling and untested areas under and adjacent to existing mineralization. (AFW report, 2017). UTM, Datum PSAD1956.

9.2 Additional outlying exploration targets

Several additional targets (Figure 9-3) have been identified and merit additional exploration. The following targets are included with more detail in Section 26: Antenna, Milluni, Española, Blanca and Proa. There exists another target area farther to the northeast, at Ajoya however this falls outside current permitted areas for exploitation and exploration.



Figure 9-3. Oblique view looking north. Alteration mineralogy (ASTER) showing district target areas.

9.3 Deep porphyry Cu-Au potential

There also exists the potential for a deep porphyry Cu-Au deposit at Choquelimpie. In recent years there have been discoveries of deep and large-volume porphyry deposits beneath epithermal precious metals districts, such as Lepanto, Philippines and Yanacocha, Peru. Most are large, disseminated copper-gold intrusive porphyry-related deposits with hundreds of millions of tons of low-grade copper-gold mineralization, generally characterized as Circum-Pacific porphyry copper-gold deposits. (Sillitoe, 1992). Between 2007-2008, Rio Tinto's principal target was a large deep porphyry deposit. Their work included district-scale geological mapping, spectral characterization of hydrothermal alteration, and evaluating metal ratio trends and alteration zonation on the surface and in drill holes. This data is available to the current project. The work led Rio Tinto to propose deep drill holes but they terminated their option before drilling. However, in 2012 Minera Can Can did drill 2,834m in three deep holes in the central portion of the district (Section 10 on Drilling). While this drilling did not intersect a porphyry-type deposit, the second hole intersected porphyry-style sericitic alteration in wallrock with characteristic stockwork "D-type" quartz-pyrite-sericite+/- chalcopyrite veinlets, that may indicate a nearby porphyry intrusion.

10 DRILLING

The existing drill hole databases register 2,119 holes across the district, which comprise some 143,047 meters of historical drilling. The vast majority of the drilling was carried out by two companies, Shell Chile (1,142 holes) and Minera Can Can (766 holes; AFW, 2017). RC and blast holes account for 90% of the drilling. There is no clear separation in the existing database of geotechnical and condemnation drilling versus resource and exploration drilling, although the vast majority certainly was for resource definition given the high density of short holes (typically 70-80m) in the existing pits and the semi-regular 20 x 20m grid drilling.



Figure 10-1. Distribution of drill holes by Shell Chile / SCM Vilacollo (red, 1984-1992) and by Minera Can Can (blue, 1993-2012) from AFW report, 2017. UTM, Datum PSAD56.

Approximately 55% of the drill holes had inclinations of -80° (near-vertical) to vertical, the remainder (45%) are angle holes. The large number of drill holes provides substantial control in the central mineralized portion of the district.

Essentially all the drill hole information and likewise general project location data is registered in UTM coordinates with the Datum PSAD56, Zone 19 South.



Figure 10-2. Drilling by Minera Can Can, 2008.

There are slightly more than 76,000 sample analyses in the database, almost exclusively for Au, Ag, and Cu. Currently no digital trace-element data is available in the database for this report, but this condition may be due simply to a lack of systematic consolidation of the existing trace-element data, and a recommendation is presented (Section 26) to review and consolidate all available analytical data to generate a complete analytical database.

There exists Redox (Minzone) data for oxide/mixed/sulphide definition for some 5,400 drill intervals which is relatively sparse given the much more extensive drill hole database, so additional relogging of drill holes along selected cross sections is recommended to improve the Redox character and distribution of identified mineralization.

The most recent and comprehensive review of the drill database (AFW report, 2017) indicates that many original drill hole documents / certificates are missing for collar coordinates and/or down-hole deviations. Plots of the drill holes on the digital topographic surfaces indicate that the collars do correctly fall on the topographic surfaces, both pre-mining and post-mining surfaces depending upon the relative historical timing of drill holes, which in turn provides confidence in the vertical component of drill collar locations. The apparent lack of certificates may represent only a deficiency in the compilation-consolidation of

existing data into a digital database, rather than missing documentation. In any case a concerted campaign of database consolidation is recommended.

The greater proportion of holes were drilled by RC, for which some 85-90% were short, vertical holes to depths of typically 70-80 meters, and were drilled mostly for resource definition in the identified pit areas.

Geological logging of drill holes varied significantly from the early drill holes by Shell Chile, as derived from RC drill cuttings, and the later drilling by Minera Can Can as derived from diamond drill holes. There was little standardization of geological terminology between logging geologists, especially for alteration. Consequently, it has not been possible to generate a hydrothermal alteration model for this report. The alteration model is important to control the distribution of mineralization and should be applied to 3D statistical analysis and resource interpolation. It is recommended to re-log suites of drill holes along selected cross sections, and to include the systematic collection of supportive SWIR mineralogical data (Terraspec or PIMA) to generate integrated 3-dimensional solids models for geological structure, hydrothermal alteration, Redox, and lithology which may be applied to improve the confidence of resource analysis. This recommendation is presented in more detail in section 26.

There are no documented protocols associated with the project topography and no authors are specified. Again, this may be for lack of digitization and an integrated project database system, but then a proper digitization effort is recommended to document all pertinent supportive information.

Minera Can Can also developed multiple short underground accesses in several pit areas in search of highgrade and structurally controlled mineralization which could be amenable to underground extraction (Internal Geological Report Can Can 2005). They developed 813m of tunnels plus 530m of cross drifts and chimneys. Multiple short tunnels of 15-46 meters were developed by horizontal drifting from beneath existing pits to identify mineralized structures, evaluate vertical continuity from the surface, and to sample in detail. They sampled wallrock on 1-meter intervals on one side of each advance with a diamond saw and drilled fans of short diamond drill holes from some of the tunnels.



Figure 10-3. Location of three deep drill holes completed by Minera Can Can in 2012 (from AFW, 2017)

As mentioned, between 2007-2008 the Choquelimpie Project was optioned by Rio Tinto who targeted a large deep porphyry deposit. Their work led to a proposal for deep drilling (which was not followed-up). However, in 2012 Minera Can Can did drill three deep holes in the central portion of the district (Figure 10-3).

The coordinates, direction, and inclination of deep drill holes are as follows:

Drillhole	East	North	Inclination	Azimuth	Depth (m)
PCH-01	472.220	7.975.581	-75°	74°	836
PCH02	473.183	7.976.308	-65°	230°	798
PCH-03	473.410	7.975.430	-65°	300°	1,200

Drill hole PCH-01 was drilled from a platform in the access road to the Milluni canyon, immediately west of the Suri open pit and drilled in an East-North East direction to a depth of 836 meters.

Drill hole PCH-2 was drilled on a platform located in the Vizcacha open pit and was drilled at an angle to the West-South West to a depth of 798 meters. The hole encountered elevated gold and silver near surface grading at depth into elevated values of silver, lead ("**Pb**"), and zinc ("**Zn**"), accompanied by abundant manganese, and variable quantities of arsenic, copper, and molybdenum and sericitic alteration.

Drill hole PCH-03 was drilled from a platform located in the Espanola open pit, with an azimuth of 300 degrees at an inclination of -65 degrees. The hole was planned to explore below the Chivaque peak, to the south of the Choque and Viscacha open pits. The drill hole contained disseminated sulphides throughout,

principally pyrite, sphalerite, and galena and was drilled to 1200 meters depth. Abundant sericitic alteration was recognized, however propylitic alteration was noted at the base of the hole.



Figure 10-4. Schematic Cross section of deep drill holes PCH01 and PCH02. Py = pyrite; Cpy = Chalcopyrite, Bo = Bornite, Ga = Galena, Bl = Sphalerite



Figure 10-5. Drill core from PCH01 and PCH 02. Note the intense sericitic alteration in PCH02, suggesting the possibility of a deeper porphyry system.

The principal intercepts of gold (Au), silver (Ag), copper (Cu), lead (Pb) and zinc (Zn) in the assayed intervals of each deep drill hole are shown below:

Número de Sondaje	Zona	Zona Desde Hasta Longitud Au Ag (Metros) (Metros) (Metros) (g/T) (g/T)		Cu (ppm)	Pb (ppm)	Zn (ppm)			
							-		
	Rajo Suri	248	252	4	0.07	0.51	56.00	405.50	615.00
	Rajo Suri	378	382	4	0.07	4.50	107.50	600.00	94.50
	Rajo Suri	522	528	6	0.25	30.00	1813.67	2387.67	1823.00
	Rajo Suri	560	580	20	0.20	5.75	172.08	1077.92	992.92
PCH-UI	including	562	568	6	0.41	9.80	272.00	1848.30	1491.00
	Rajo Suri	596	602	6	0.01	0.01	42.67	453.33	864.67
	Rajo Suri	634	656	22	0.04	0.19	55.09	291.55	502.73
	Rajo Suri	832	836.15	4.15	0.22	0.01	12.00	25.67	130.67

Table 10-1. Selected intersections from deep drill hole PCH01. Narrow gold-rich copper sulphosalt intervals followed by elevated gold in anomalous lead-zinc sections.

Número de Sondaje	Zona	Desde (<i>Metros)</i>	Hasta (Metros)	Longitud <i>(Metros)</i>	Au (g/T)	А <u>g</u> (g/T)	Cu (ppm)	Pb (<i>ppm)</i>	Zn (ppm)
						I	1	1	1
	Vizcachas	5.18	180	174.82	0.35	5.46	232.11	371.18	722.30
	including	5.18	32	26.82	0.53	3.70	179.80	430.20	212.23
	including	58	116	58	0.43	1.70	78.70	233.60	610.28
	including	134	140	6	0.37	83.00	3202.30	408.30	1197.30
	Vizcachas	188	200	12	0.20	139.34	2060.50	490.33	1391.83
	Vizcachas	214	222	8	0.18	1.00	35.00	75.25	179.50
	Vizcachas	228	240	12	0.07	1.17	53.67	169.00	433.83
	Vizcachas	266	278	12	0.08	2.00	39.67	145.17	461.83
	Vizcachas	278	310	32	0.34	0.82	73.25	189.88	311.75
PCH-02	including	290	308	18	0.46	0.80	73.30	203.30	308.22
	Vizcachas	328	334	6	0.26	1.34	62.67	229.00	759.67
	Vizcachas	334	356	22	0.08	0.73	50.82	134.64	511.91
	Vizcachas	378	386	8	0.03	1.01	86.75	228.50	568.00
	Vizcachas	510	536	26	0.19	2.43	119.71	950.48	1628.21
	Vizcachas	548	566	18	0.26	5.89	370.78	1039.62	1971.33
	Vizcachas	722	748	26	0.01	4.62	83.92	669.08	1146.54
	Vizcachas	758	780	22	0.01	3.64	199.55	948.64	1705.18
	Vizcachas	790	798.6	8.6	0.05	6.80	442.40	2482.40	3573.40

Table 10-2. Selected intersections in deep drill hole PCH02. Anomalous lead and zinc values to base of hole with sericitic alteration

Número de Sondaje	Zona	Desde (<i>Metros</i>)	Hasta (Metros)	Longitud <i>(Metros)</i>	Аи (g/T)	Ад (g/T)	Cu (ppm)	Pb (ppm)	Zn (ppm)
		r				r	r	1	
	Española	260	264	4	0.00	0.51	60.50	129.50	569.50
	Española	356	370	14	0.05	4.43	54.57	604.86	732.14
	Española	510	518	8	0.09	6.00	105.50	794.00	1248.75
	Española	536	544	8	0.08	5.75	166.50	959.25	1909.50
	Española	584	590	6	0.08	7.00	204.67	1081.33	1912.67
	Española	594	606	12	0.05	6.33	123.33	1058.83	1289.50
	Española	654	718	64	0.08	7.44	130.00	1348.22	1063.20
	including	670	688	18	0.08	15.80	294.60	3297.70	3778.00
	Española	726	768	42	0.05	3.00	118.33	294.81	609.05
PCH-03	Española	834	872	38	0.10	1.84	112.05	222.47	577.05
	Española	890	908	18	0.17	9.45	151.33	1364.11	2349.78
	Incluye	904	908	4	0.32	22.00	188.00	3550.00	5185.00
	Española	918	980	62	0.07	3.68	160.97	904.19	1522.71
	Española	988	1018	30	0.07	2.40	218.07	693.20	1161.20
	Española	1032	1054	22	0.06	2.82	63.64	749.73	1164.64
	Española	1074	1108	34	0.08	2.82	138.94	655.06	1176.88
	Española	1126	1170	44	0.07	2.46	315.82	560.77	981.09
	Española	1174	1201.3	27.3	0.12	2.58	223.29	592.64	1153.07

Table 10-3. S	Selected intersections	in deep drill hole]	PCH03. Elevated g	gold with an	omalous lead-zi	nc sections.

Additional drill testing for a possible deep porphyry copper-gold deposit is presented in the recommendations section.

11 SAMPLE PREPARATION, ANALYSES & SECURITY

As a preliminary commentary it is noted that approximately 80% of the Choquelimpie drilling and related analytical work was performed during the period 1986-1993, which was prior to the development of modern "best practices" methodologies.

Available drill assays and associated information is attached in APPENDIX 1.

There are no available project methodology / protocols followed for QAQC during the various historical drilling campaigns. There is no available information on protocols of methodology for handling and analyzing drill samples for the historical drilling, neither for the early RC and blasthole drilling by Shell Chile nor for the subsequent diamond drilling by Minera Can Can. A minor exception is a brief description by Ruz et al. (2000) for the Minera Can Can program in year 2000 which reported that for the 35 holes from the year 2000 campaign the sample preparation included primary crushing of the entire sample, secondary crushing to 2 mm, and successive size reduction in stages by mechanical grinding down to a final sample of about 3 kg at -150 mesh, which was then sent for chemical analysis.

Evidently most of the drilling programs used the onsite Choquelimpie laboratory for analytical work, plus controls which were variably sent to Acme Chile (control samples from the 1999 and 2003-2005 campaigns) and Andes Analytical Laboratory (2012 campaign). However, data concerning the quantity and frequency of controls were not available for this report. There is currently no information available to include in this report concerning sample preparation and analyses by outside laboratories, nor information concerning reconciliation with those outside laboratories.

The report of AFW (2017) indicates that analytical data is available for the following elements for at least part of the drill holes: gold (Au ppm), silver (Ag ppm), copper (Cu %), zinc (Zn %), lead (Pb %) and molybdenum (Mo ppm). However, the percentage of holes for which this multi-element data is available was not specified and only analyses for Au (ppm) and Ag (ppm) data are available for this report.

The currently available drill sample analytical data includes the following analyses for Au, Ag, and Cu, after removing the negative and nil grades:

Element	Number of Values
Au ppm	78,909
Ag ppm	77,455
Cu %	42,000

Internal reports from Minera Can Can contain references to multi-element ICP analyses, but none was available for this technical report. Evidently there exists supplementary geochemical data but which is not digitized or otherwise is unavailable, for lack of a consolidated and comprehensive analytical database.

12 DATA VERIFICATION

Complete data verification has not yet been performed by Norsemont, mostly because of Covid-19 restrictions in Chile in Region I and Arica. The core has been stored at the Choquelimpie camp in an acceptable manner (Figure 12-1) as observed before the Covid-19 shutdown. As a general observation, there is but little information available to this Technical Report concerning drilling and sample collection methodology, sample preparation and custody, sample analyses, drill hole collar coordinates, downhole surveys, QA/QC control, and other general backup supportive documentation. The AFW report (2017) states that the drilling data is in a general state of disorder and has not been consolidated usefully into a referential database. The following are quotes from the AFW report (2017) with regard to the current condition of data and core:



Figure 12-1. Top left: Core storage in wooden boxes; Bottom left: Core and cuttings storage; Centre: Core storage; Top right: Core labelling; Bottom Right: Chip trays from RC drilling.

"The information is physically stored at the mine site offices. There is a large volume of unclassified information erratically placed in different offices, and no physical space has been defined for the safe and secure storage thereof. However, we were able to confirm the existence of binders containing drill folders with geological mapping, collar certificates, down-hole surveys, analyses, densities and QA/QC." (AFW report, 2017, Fig. 2-7)

-and-

"At the mine site offices, Amec Foster Wheeler also found a large amount of historical information on paper, including flow sheets, chronograms and mine plans, as well as production reports, but without any order or systematization, which explains why it could not be assessed in this study."

However, this current condition does not imply that such backup data does not exist, rather that it must be inventoried, consolidated, verified, digitized, and organized into a modern digital database file system. A comprehensive program of data digitization and verification is recommended in order to generate an integrated, validated, and usable database.

Once the basic data is in consolidated and usable format, then subsequent stages of data verification can be configured and performed, to include twinning of drillholes along key cross sections. Similarly, it may be appropriate to re-analyze core and existing pulps and/or splits of previous analytical samples, and re-survey a proportion of the original the collars of drill holes, especially along the selected cross sections. However specific field-based data validation work should wait until the basic data is organized into a consolidated database in order to determine what activities will be appropriate. Recommendations are proposed in Section 26.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

Early metallurgical work as performed by Shell Chile – SCM Vilacollo for the open-pit exploitation of 1988-1992 was not available for this Technical Report. This development effort focused exclusively upon near-surface oxide mineralization, typically within 60-70 meters of the original surface, and for which most of the evaluation drill holes were only 70-80 meters depth. Many of these short holes bottomed in significant gold-silver mineralization, variably oxide, mixed, or sulphide mineralization.

The mining operation of 1988-1992 applied classical open pit mining of oxide mineralization with heap leach extraction by sodium cyanide and carbon-in-pulp recovery, principally of gold. Specific recovery data for this early mining operation reportedly varied significantly but generally within a general range of 75-80% recovery for gold and 20-45% for silver. Copper is present but was not recovered.

Subsequently Minera Can Can performed several metallurgical programs, *mostly upon the existing dumps for reprocessing considerations,* but also upon drillholes and channel samples in the Vizcacha, Choque, and Suri pits. The samples for this work were derived from trench sampling of the dumps, and diamond drill hole core was used in the pits. The drillholes penetrated underneath the existing pits and so represent mostly material of mixed oxide/sulphide character. Tables from the pertinent summary report (Internal Metallurgical Report, Minera Can Can, 2005) are presented below:

	Bottlo Roll Leach tests									
PIT or ZONE	Head grad	des (assay /	calculated)	1	Recovery	(%)	REAGENT CONSUMPTION			
FIT OF ZONE	Au	Ag	Cu	Au	Ag	Cu	pH	NaCN	CaO	
	ppm	ppm	%	%	%	%	1	Kg/t	Kg/t	
Rajo Vizcacha (channel samps)	/ 5.52	/ 7.6	/ 0.022	65.90	33.70	63.70	4 a 11	18.85	17.28	
(WARNED WARNED WA	6.0 / 6.83	5.4 / 5.18		73.48	33.52		10.40	4.61	27.95	
	6.0 / 8.48	5.4 / 6.8		59.44	24.86		11.00	7.90	40.55	
Daia Viasaaka (daillaataa)	(7.60	145.00	10.064	24.04	26.24	70.00	44.00	P 46	42.05	
Rajo vizcacha (dminoles)	22 99 / 22 0	/ 15.00	0.17/0.17	34.94	20.51	79.00	11.00	0.15	12.03	
	32.00/ 32.0	9.07 6.1	0.1770.17	55.00	34.50	02.90	-	7.19	3.30	
Rajo Choque (drillholes)	/ 6.57	/ 324	/ 0.406	48.60	31.70	95.10	12.00	23.84	3.50	
	7.42 / 7.11	504 / 492.5		43.68	0.77		10.42	3.80	1.02	
	7.42 / 6.19	504 / 453.2		42.45	14.93		11.00	3.69	2.60	
DUMP 1 (trenches)	1.0/1.64	16.2 / 15	0.028 / 0.02	57.30	49.20	64.00	11.00	6.09	37.18	
		1	1		12					
DUMP 2 (trenches)	0.68 / 1.45	59.5 / 71.1	0.017 / 0.018	58.70	62.80	65.30	11.00	4.60	63.40	
NIMP 2 (transhard)	0.02/4.49	06106	0.001/0.005	50.40	42.40	45.40	44.00	2.42	46.66	
DOMP 3 (trenches)	0.9371.48	0.070.0	0.00170.005	59.40	42.40	45.10	11.00	2.13	10.05	
DUMP 4 (trenches)	0.8/1.19	8.9 / 9.38	0.004 / 0.006	74.90	46.70	41,50	11.00	1.32	11.16	
Tall column of 6 metrers										
DUMP 5 (trenches)	/ 1.5	/ 24.9	/ 0.026	93.30	44.10	66.20	11.00	7.29	7.84	
(Intermediate dump)	/ 1.57	/ 14	/ 0.018	93.60	68.40	71.00	11.00	6.87	12.26	
DUMP 6	/ 3 74	/ 20.9	/ 0 022	69.70	48.00	58.60	11.00	8 15	15.44	
(Vizcachas dump; trenches)	/ 2.09	/ 17.3	/ 0.022	71.20	72.90	65.90	11.00	8.05	18.57	
Contract Contract Contract Contract		-						-		
DUMP 7 (trenches)	1.1 / 1.45	10.9 / 11.79	0.022 / 0.015	65.50	46.80	76.00	11.00	8.44	19.19	
DUMP 8 trenches)	0.6 / 1.76	12.9 / 9.54	0.01 / 0.014	88.60	35.20	38.90	11.00	1.92	11.30	
					1			1		
BOTADERO 9 (trenches)	0.9 / 1.55	26 / 14.74	0.028 / 0.028	87.10	59.30	52.70	11.00	2.16	11.66	
BOTADERO 10 (trenches)	0.3 / 1.39	6 / 9.12	0.004 / 0.008	78.30	34.20	50.80	11.00	3.45	4.79	
				7						
BOTADERO 11 (trenches)	/ 1.07	/ 27.25	/ 0.011	71.90	83.40	62.80	11.00	3.66	10.18	
SHELL HEAP										
SHELL HEAP (hole P6)	0.3 / 2.94	35.7/37	0.003 / 0.003	89.80	53.50	3.50	12.00	0.95	0.00	
SHELL HEAP (hole P6)	2.03 / 0.8	53.4 / 51.95	0.003 / 0.006	85.20	45.80	1.40	12.00	0.64	0.00	
COMPOSITE 111 trench samps	0.3 / 0.17	27.43 / 33.5	0.003	55.50	34.65		11.00	0.49	5.90	
COMPOSITE 111 trench samps	0.45 / 0.48	32.1/31.8	0.081 / 0.065	58.65	18.43	5.52	10.50	2.83	0.88	
MIX of Hi-grade SUI FIDES									-	
HIGH GRADE	7.6/7.2	87.2/98.6	0.37 / 0.376	69.90	21.12	36.65	11.50	6.67	6.16	
			1	1		11. 8		·	5	

Table 13-1. Summary bottle roll results for Choquelimpie Mineralization and Dumps. Data summary Internal Metallurgical Report Minera Can Can (2005).

				Column L	each Tests				
DIT of ZONE	Head grad	des (assay / o	alculated)	R	ecovery (%)	REAGENT CONSUMPTION		
FIT OF ZONE	Au	Ag	Cu	Au	Ag	Cu	pH	NaCN	CaO
	ppm	ppm	%	%	%	%		Kg/t	Kg/t
DUMP 1 (trenches)	1.05 / 1.20	12.0 / 10.23	0.002 / 0.006	58.05	23.21	99.48	12.00	2.98	37.18
DUMP 2 (trenches)	0.8 / 1.00	69.4 / 78.57	0.002 / 0.005	60.41	38.24	40.06	12.00	1.61	35.19
DUMP 3 (trenches)	0.93 /	8.6 /	0.002/	45.97	22.16	54.09	17 A	1.24	16.23
DUMP 4 (trenches)	0.75 /	7.4 /	0.003 /	83.62	30.27	41.77	11.00	0.77	10.81
Tall column of 6 metrers	0,55 / 0,47	9,1 / 1,15	0,003 / 0,003	86.60	13.00	16.83		0.74	
DUMP 5 (trench samps) (Intermediate dump)	1.3 / 2,16	12 / 16,0	0.018 / 0,017	97.70	40.30	75.22		4.06	10.20
DUMP 6 (Vizcachas dump; trenches)	1,3/	22,1/	0,012/	95.40	67.23	74.40		2.69	18.60
DUMP 7 (trenches)	1,6 /	18/	0,017/	59.60	31.73	70.48		2.27	23.20
DUMP 8 (trenches)	1,2 / 0,69	20,8 / 22,12	0,005 / 0,004	48.50	38.00	38.20		1.56	13.50
Dump 9 (trenches)	1,30 / 1,09	17,2/21,73	0,013 / 0,013	59.80	41.40	38.12		1.62	14.00
DUMP 10 (trenches)	1,75/2,25	20,8 / 18,31	0,008 / 0,01	89.80	20.90	22.50		2.25	5.73
DUMP 11 (trenches)	1,3 / 2,05	75,5 / 70,87	0,017 / 0,022	98.00	30.80	56.10		1.29	12.20
SHELLHEAP									
SHELL HEAP (hole P6)	0.25/	33.4 /	0.003 /	27.31	12.21	16.58	12.00	0.26	10.00
SHELL HEAP (hole P6) COMPOSITE 111 trench samps	0.30/	41.2/	0.001/	26.68	14.91	20.43	12.00	0.39	10.00
COMPOSITE 111 trench samps	0.35 / 0.27	32.0/6.33	0.004 / 0.004	76.58	19.78	98.43	12.00	0.19	0.30

Table 13-2. Summary column leach results for Choquelimpie mineralization and dumps. Data summary fromInternal Metallurgical Report Minera Can Can (2005).

	FLOTATION TESTS						
PIT or ZONE	Head Gra	des (assay /	calculated)	1	Recovery (%)	
FIT OF ZONE	Au	Ag	Cu	Au	Ag	Cu	
	ppm	ppm	%	%	%	%	
Rajo Vizcacha (channel samps)	6.0 / 7.12	5.4 / 2.92	0.022/ 0.024	37.30	52.40	52.20	
2267	6.0 / 8.42	5.4 / 6.86	0.022 / 0.024	16.93	33.49	32.10	
Raio Vizcacha (drillboles)	7 69 / 7 16	16/974	/ 0.064	68 13	66.92	49 71	
riajo rizodona (animoloo)	/ 5.7	/ 10.91	/ 0.054	69.49	70.49	85.15	
	/ 6.71	/ 16.96	/ 0.055	66.75	71.90	56.56	
			L. S. Charge		1		
Rajo Choque (drillholes)	7.42/6.1	504 / 481.9	0.62/0.56	81.55	64.92	89.66	
	7.42/6.8/	504 / 451.9	0.627 0.62	87.92	75.23	95.74	
Suri (drillholes)	21.5 / 20.4	204.6 / 170.1	2.97 / 2.42	90.56	91.92	94.91	
	/ 6.56	/ 55.24	/ 2.48	53.10	77.20	52.30	
	/ 6.95	/ 57.44	/ 2.48	55.74	78.04	52.32	
	/ 7.55	/ 68.4	/ 1.36	33.53	36.57	47.57	
	/ 10.76	/ 93.7	/ 2.31	40.05	51.98	56.91	
				2			
DUMP1 (trenches)	/ 0.75	/ 18.62	/ 0.0156	89.50	37.32	28.31	
			S. Vietnamer		1		
DUMP 2 (trenches)	/ 1.1	/ 58.73	/ 0.0146	55.73	51.45	71.55	
DUMP 3 (trenches)	/ 0.5	/ 6.69	/ 0.0039	85.73	46.33	44.71	
				:			
DUMP 4 (channel samps)	/0.66	/ 9 99	/ 0.0044	43.96	29.99	49.94	
Tall column of 6 metrers	7 0.00	1 0.35	70.0044	43.00	20.00	40.04	
		2	1.		5		
DUMP 5 (channel samps)	/ 0.98	/ 19.74	/0.015	43.31	40.41	81.73	
DUMP 6	/ 1.92	/ 14.57	/ 0.0191	37.34	35,99	48.69	
(Vizcachas dump; trenches)							
					3		
DUMP 7 (trenches)	/ 1.3	/ 10.33	/ 0.0097	40.94	39.05	63.88	
	100.000					2.545	
DUMP 8 (trenches)	/ 0.38	/ 11.16	/ 0.0082	81.60	46.36	48.70	
DUMP 9 (trenches)	/ 0.97	/ 16.15	/ 0.0092	54.38	54.39	58.94	
				-			
DUMP 10 (transhee)	/0.0	/ 17.02	(0.0101	42.60	20.15	40.75	
DOMP TO (trencnes)	70.9	/ 17.02	70.0101	43.60	39.15	42.13	
			D marine		S		
DUMP 11 (trenches)	/ 1.04	/ 43.48	/ 0.0062	47.43	50.86	56.09	
NAME AND		11100 Day 1000	 An and a second s	Sector Sector	2	10.000 (10.000)	
MIX of Hi-grade SULFIDES	/ 6.53	/ 136.56	/ 0.3969	62.17	62.30	72.13	
	70/700	07/402	0.07/0.00	00.04	00.00	07.00	
Tabla 1 Il Cleaner	7.6/7.06	877103	0.37/0.36	86.34	86.88	97.39	
Tabla 2. Il Cleaner	76/7.04	87/106	0.37/0.30	90.59	95.84	97.11	
Tabla 2 Rougher	7.6 / 7.04	87 / 106	0.37 / 0.39	91.03	89.52	97.75	
Tabla 3 Il Cleaner	7.6 / 5.11	87 / 95	0.37 / 0.38	87.69	89.95	94,35	
Tabla 3 Rougher	7.6 / 5.11	87 / 95	0.37 / 0.38	84.64	87.06	98.70	
Tabla 4 Il Cleaner	7.6 / 7.28	87 / 106	0,37 / 0.41	98.08	99.13	99.55	
Tabla 4 Rougher	7.6 / 7.28	87 / 106	0,37 / 0.41	88.97	87.85	98.57	
Tabla 5 Rougher	7.6 / 4.47	87 / 101	0.37 / 0.38	83.71	88.45	98.20	
Tabla 6 Il Cleaner	7.6 / 6.92	87/99	0.37 / 0.35	91.39	94.85	96.58	
Tabla 6 Rougher	7.6 / 6.92	87/99	0.37 / 0.35	57.44	53.27	68.94	

Table 13-3. Summary flotation test results for Choquelimpie mineralization and dumps, from Internal Metallurgical Report Minera Can Can (2005)

The materials collected for bottle rolls and column tests were not well classified with respect to redox condition (oxide/mixed/sulphide), so the resultant recoveries by bottle rolls and column tests were highly variable, depending in part upon the proportions of oxidized versus sulphide material in each trench sample. However, the flotation test work was performed exclusively upon sulphide material and so presents a narrower and more representative range of recoveries.

It should be noted that the dumps represent material which was rejected during the early heap-leaching mining effort of 1988-1992, generally for either low grade and/or the presence of sulphide material, and so they do not represent the grades or recoveries of mineralization in general but rather an approximation of what could be expected from re-processing the dumps by either heap leaching or flotation.

The report by Domic (1996) reports that bacterial pre-leaching of sulphide ores improves gold recoveries via cyanide leaching, from the range of 20% for run-of-mine sulphide mineralization to over 60% with partial decomposition of sulphides by bacteria. This characteristic also confirms the petrographic studies which indicate that most of the gold is partially encapsulated within primary sulphides. This condition is typical for high-sulphidation epithermal gold mineralization in general. However, bacterial action did not seem to significantly improve the silver recoveries, indicating a different sulphide/sulfosalt mineralogical configuration for silver.

An "exploratory-level" mineralogical-metallurgical analysis was performed in 2017 by SGS Chile, upon 7 bulk samples of sawed half-core of "HQ" diameter. Work focused principally on different mineralogical associations of gold and silver, with leaching and flotation tests on selected samples.

The sources of these samples are indicated in Table 8, from Table 1 of SGS Chile (2017). All samples were crushed and ground to -10 Tyler mesh and then finer as appropriate for each extractive-analytical technique.

Date Sent	Sample Number	Composite	Type of Mineralization	DH	Core size	Sample wt., kg
20-12-2016	181777	M- 1	Hydrothermal Breccia, Sulfides	D-69	1/2 H.Q	11.24
	181778			D-69	1/2 H.Q	11.20
	181779			D-69	1/2 H.Q	6.88
	181780	M- 2	Hydrothermal Breccia, Sulfides With Alunite in Matrix	D-69	1/2 H.Q	10.14
	181781			D-69	1/2 H.Q	11.70
	181782	1000		D-69	1/2 H.Q	9.96
	181783	M- 3	Hydrothermal Breccia, Porphyritic Dacite Oxides	D-50	1/2 H.Q	9.26
	181784			D-50	1/2 H.Q	8.32
	181785			D-50	1/2 H.Q	9.24
	181786			D-50	1/2 H.Q	9.10
	181787	M- 4	Porphyritic Dacite, Sulfides	PCH-02	1/2 H.Q	6.58
	181788			PCH-02	1/2 H.Q	8.08
	181789			PCH-02	1/2 H.Q	7.92
	181790			PCH-02	1/2 H.Q	7.18
	181791		Hydrothermal Breccia, Sulfides	D-40	1/2 H.Q	9.12
	181792	M- 5		D-40	1/2 H.Q	8.02
21-02-2017	178801	M- 7	Hydrothermal Breccia, Sulfides		1/2 N.Q.	6.52
	178802			1.4	1/2 N.Q.	7.39
	178803				1/2 N.Q.	6.84
	178804			2.00	1/2 N.Q.	4.61
	178805			(2)	1/2 H.Q.	9.91
	178806				1/2 H.Q.	12.11
	178807			*	1/2 H.Q.	12.68

Table 13-4. Source and mineral type of SGS Chile metallurgical tests, 2017.

All samples were analyzed by quantitative evaluation of minerals by scanning electron microscopy ("QEMSCAN"), multi-element Inductively Coupled Plasma ("ICP"), and X-ray fluorescence ("XRF"), in the SGS analytical laboratory Santiago. The samples were tested for metallic gold nugget effect.

Gold occurs almost exclusively as native gold but associated with multiple sulphides and sulfosalts, mostly enargite, pyrite, tetrahedrite and lesser association with sphalerite, tennantite, and chalcopyrite.

Silver occurs within the following sulphides and sulfosalts: Pearceite, proustite, argentite, pyrargyrite and unidentified silver sulfosalts variably of silver-copper-arsenic-antimony-sulphur or silver-arsenic-antimony-sulphur. There also are a series of base-metal sulphides and sulfosalts, notably of copper (principally enargite and tennantite), lead (mostly galena), and zinc (mostly sphalerite).

A single Bond Work Index ("BWi") was determined for sample M-7, with a result BWi 15.69 - 17.30.

14 MINERAL RESOURCE ESTIMATES

The mineral resource estimates of AFW (AFW, 2017) are not considered compliant at this point due to limited supporting documentation. Further research and compilation of the extensive paper archives as well as new re-assaying and QA/QC studies may improve this situation.

A discussion of the historical resource estimate is presented in section 6 of this Technical Report.

15 MINERAL RESERVE ESTIMATES

There are no current mineral reserve estimates. Original reserve estimates as applied to the initial mining phase of 1998-1992 are no longer pertinent due to the depletion of such reserves by active mining.

16 MINING METHODS

SCM Vilacollo carried out the most recent open pit mining in 1988-92 (Figure 16-1). Norsemont is currently examining economic viability of future operations.



Figure 16-1. Top left, right, Bottom left: Main Choqui open-pit and benches, Bottom right: Operations 1990.

17 RECOVERY METHODS

Not Applicable

18 INFRASTRUCTURE

A summary of infrastructure and logistic requirements for the Project is provided in section 5.

19 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

The area designated for mining (by Decree 36, 1988) formed the boundary of the SCM Vilacollo operations between 1988-1992 and remain in effect.

The data generated by Shell Chile - SCM Vilacollo were used in the design of follow-up exploration campaigns by others including Minera Can Can, Rio Tinto, and Alxar. The area designated for exploration activities (by Decree 62, 1996) are shown in Figure 4-3 and remain in effect.

The area is also protected by Mining Concessions (Figure 4-4) that are in good standing.

20 CAPITAL AND OPERATING COSTS

Not Applicable

21 ECONOMIC ANALYSIS

Not Applicable

22 ADJACENT PROPERTIES

There are no significant adjacent precious metal properties in Chile.

23 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data and information.
24 INTERPRETATION AND CONCLUSIONS

The Choquelimpie Project deposits are typical epithermal high-sulphidation gold-silver deposits that are located in the core of the Pliocene Choquelimpie volcano. Mineralization is associated with hydrothermal breccias and stockwork quartz veinlets, with native silver, native gold, electrum, argentite, argentiferous galena, realgar, and sphalerite (Gropper et. al., 1991). The highest grades for both gold and silver in drill materials are mainly associated with hydrothermal breccias and silicification.

Several bulk-mineable Au-Ag deposits were defined and exploited, and the open pits associated with these deposits are the Suri, Zorro, Choque, Intermedio, Vizcacha, Hundimiento, Española and Chivaque

In 1985, Shell Chile signed an option agreement to acquire the Choquelimpie Project mining concessions. Through 1986-1988 they developed the first integrated geologic studies (Sillitoe, 1985; Cuadra et. al., 1986) which included extensive RC drilling (mainly vertical holes). This work generated a historical open pittable reserve calculation of 6.7 million metric tons of oxide ore, at grades of 2.23 g/t gold and 87 g/t silver. This resource was within a historical "mineral resource" of some 11 million additional metric tons (Mining Journal, 1987). Open pit mining and heap leaching was carried out from 1988 through 1992 by SCM Vilacollo and ultimately closed due to the depletion of near surface oxides and transitional oxide/sulphide mineralization. Subsequently between 1994-1996, Northgate completed additional washing of the heap leach. Through to October 1996 the operation produced some 398,900 ounces of gold and some 2,192,000 ounces of silver (Domic, 1996).

A thorough, but non-compliant, resource was modeled and calculated by AFW in 2017 (Table 7-1. Tonnage-Grade summary (Choque model only) at various cut-off grades, AFW, 2017 using Gold Price US\$1,300/ounce; Silver Price US\$20/ounce; Gold recoveries 70%; Silver recoveries 60%.

This resource estimate was based on the mostly vertical, shallow (average 80m depth) drilling of Shell Chile - SCM Vilacollo, Rio Tinto, Minera Can Can, and Inversiones Alxar and included 2,119 drill holes totaling more than 143,000 meters of drilling. AFW noted from surface rock sampling that elevated gold and silver grades are concentrated in sub-vertical hydrothermal breccia ("**HTB**") and vertical structures, with a grade reduction towards its margins in the brecciated porphyry ("**BREP**") with stockwork structures. In terms of volume, the rock defined as dacite porphyry ("**DACP**") for this study concentrates the greater volume of mineralization, though with lower grades than HTB and BREP, and without a geologically defined limit for lack of boundary delimitation drilling (condemnation).

AFW has interpreted the mineral zones as Oxide ("**OX**"), Mixed ("**MIX**") and Sulphides ("**SULF**") for this study, mostly by the presence of limonite (jarosite-goethite), sulphides, or both. The MIX zone is marginal in terms of volume, and the OX zone, located on the lower edges of the mined pit, is significantly smaller than the SULF zone. This latest estimated resource is predominantly sulphide mineralization. Metallurgical recoveries in the different mineral types needs to be further evaluated.

In addition to the hard rock gold and silver potential, in 2005 Alxar – SCM Vilacollo estimated the tonnage of material contained in dumps as 6,772,285 tonnes containing variable oxide and sulphide ores with an average grade of 1.17 g/t Au. It is yet to be established how much of this material remains. The locations of the dumps are shown in Figure 24-1.



Figure 24-1. Dumps – potential for reprocessing

AFW noted that 55% of the drillholes have an inclination of greater than -75°. Vertical holes testing vertical mineralized zones may underestimate grade and hence additional angle drilling is recommended in any future campaigns. AFW also emphasize that the quality control of the data is limited or lacking and hence the resource is considered to be non-compliant. A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves; and the Company is not treating the historical estimate as current mineral resources or mineral reserves. Further research in the extensive archives may improve the situation. Current deficiencies in the database include:

- Lack of / limited availability of protocols (topography, drilling, sampling, chemical analyses and densities, among others),
- Lack of / limited availability of QAQC results,
- Lack of / limited availability of grade certificates by Shell Chile,
- Lack of / limited availability of historical collars at the site,
- Lack of / limited availability of mining production or reconciliation reports,
- Lack of / limited availability of density data,
- Lack of / limited availability of geo-mechanical, structural and geo-metallurgical information.

Historical reports and studies by Rio Tinto (2007) postulate a copper-gold porphyry in depth. Deep drilling by Minera Can Can/ Inversiones Alxar in 2012 revealed porphyry-style sericitic alteration and weak mineralization approximately 800 meters under the Choque pit.

25 RECOMMENDATIONS

A comprehensive program should be developed to organize and digitize all backup documents to generate a reliable and integrated database of existing drillhole data, including QA/QC data. This database should include drill hole surveys (collar co-ordinates and down-hole deviations), digital logs, recoveries, densities and RQD measurements, protocols of sample collection and sample preparation, laboratory analytical work, assay certificates, density and RQD measurements and control samples (standards, blanks, duplicates, analytical repeats at second laboratory). Reportedly part of this information is onsite at the Choquelimpie Project and part is at the Alxar offices in Santiago. A modern digital database should be developed in a secure database framework such as acQuire or other industry-standard database, for data access and protection. This validated digital database would be the basis for further planning and programs.

In addition, a re-assaying campaign with appropriate QA/QC should be undertaken to independently confirm and support existing drill data, both of the dumps and for the broader resource. Low impact sonic drill testing of the dumps should be considered. A better understanding of the tons and grade of the existing dumps is important as a potential near term production option.

For the evaluation of the broader in-situ mineralization some relogging of diamond drill holes along selected sections is recommended to help develop more reliable 2D and 3D models for lithology, hydrothermal alteration and redox. A SWIR-type device (Terraspec or PIMA) should be used to assist in defining alteration types. This will improve understanding of controls to mineralization and oxide-sulphide distribution (important when considering possible processing options).

An analysis of this information together with data from historic drilling will be incorporated into planning and executing follow-up DDH and RC drill programs (reducing drill hole spacing where appropriate, drilling twinned holes) that will provide additional quality geologic and QA / QC data to support updated models and the generation of a NI 43-101 compliant resource.

A two-phase technical program is envisaged that would complete the objective of delivering a compliant resource for the dumps and for the remaining in-situ mineralization.

Phase 1 would include continued compilation, digitization and analysis of historic data, a significant reassaying campaign (drill cuttings and core, with appropriate QA/QC protocol) to allow a comparison with historic results, as well as check sampling and potentially sonic drilling of the dumps if historic data is lacking. A thorough examination of the three ~800m deep holes by Minera Can Can/Alxar should be carried out, as well as some deep seeking vector Induced Polarization ("Vector IP") and /or Audio-frequency Magnetotelluric ("AMT") surveys to determine the deep porphyry copper potential.

Analysis of this data would determine optimal drill hole locations and spacing of an extensive diamond and RC Phase 2 drilling program (10-15,000m) with the objective of effectively and efficiently defining a compliant resource.

While it is currently anticipated and planned that the two phases will naturally flow from one into the other, it also provides the option for a pause depending on preparations and permitting for the Phase 2 drill

program. There is sufficient encouragement from historic drill results that the Phase 2 drilling is not dependent on Phase 1 but rather Phase 1 helps refine the Phase 2 program.

Previous mining and exploration have produced abundant roads and platforms for drilling, which should be predominantly core drilling at first. An estimated technical budget is outlined below (excludes SCM Vilacollo G&A, Operations budgets).

EXPLORATION - CONTRACT SERVICES	Phase 1	Phase 2	Total US\$
DDH Drilling	-	1,000,000	1,000,000
RC Drilling / Sonic Drilling	310,000	690,000	1,000,000
Consultants (Data Compilation, Resource Modelling)	70,000	30,000	100,000
Geophysics (IP, Magnetics)	150,000		150,000
Geochemistry (Field samples, Drilling, QA / QC)	350,000	180,000	530,000
	880,000	1,900,000	2,780,000

EXPLORATION - DIRECT COSTS	Phase 1	Phase 2	Total US\$
Camp Field - Accomodation and Food	100,000	150,000	250,000
Camp Equipment and Supplies	26,000	8,000	34,000
Travel - Flights, Vehicles, Fuel	100,000	50,000	150,000
Computer Expenses - Hardware / Software	19,000	-	19,000
Communication - Phones / Internet	4,000	2,000	6,000
Tenure - Surface Access, Concessions, Baseline, Permitting	145,000	-	145,000
HSEC - Supplies, Signage, Enviro / Archeological Protection	28,000	8,000	36,000
	422,000	218,000	640,000

FIELD STAFF	Phase 1	Phase 2	Total US\$
Salaries	425,000	275,000	700,000
CONTINGENCY (10%)	Phase 1	Phase 2	Total US\$
	470 700		440.000
	1/2,/00	239,300	412,000

The program of 60-80 mostly inclined holes would target the areas adjacent to and under the Choque open pit, the Vizcacha pit, the Suri pit, the Zorro pit, and possibly the Espanola pit, for all-in costs estimated to be in the order of US\$4-5,000,000 (including contingencies).

26 REFERENCES

Amec Foster Wheeler, 2017. Informe Proyecto Nilo, Geologia and Recursos Nilo Proyecto, 86 pp.

Alcazar J., 2020. Geologic model for Choquelimpie; personal communications

Barazangi M., and Isacks B.L., 1976. The Spatial distribution of earthquakes and subduction of the Nazca plate beneath South America. V4, No. 11. P. 686-692

Bissig T., Lee J.K.W., Clark A.H., and Heather K.B., 2001, The Cenozoic history of volcanism and hydrothermal alteration in the central Andean flatslab region: New 40Ar-39Ar constraints from the El Indio-Pascua Au (-Ag, Cu) belt, 29°20'-30°30' S: International Geology Review, v. 43, p. 312–340.

Cecioni A., Cornejo C., and Ruz L., 2000. Choquelimpie, an epithermal Au-Ag deposit, related to the nucleus of a stratavolcano. IX Chilean Geological Congress

Clavero J., Droguett B., Quiroga R., Álvarez P., 2018. Carta Geológica Chungará. Región de Arica y Parinacota. Carta Geológica de Chile. Serie Geología Básica. Escala 1:100.000

Compania Minera Can-Can S.A., 2005. Resumen Geológico y Metalúrgico del proyecto Choquelimpie.

Correa A., 2007. Rio Tinto Internal Report

Correa A., 2008: Rio Tinto Internal Final Report "Informe Final, Proyecto Choquelimpie, Rio Tinto"

Cuadra et. Al., 1986. Preliminary report on the Choquelimpie Project, Region 1, Chile. Shell Chile Internal report.

Domic Engineering and Construction, 1996. Choquelimpie - Metallurgical synthesis of sulphide Ores

Frerault R., Ossandon G., and Gustafson L.B., 1997. Geological Model of Chuquicamata 8th Chilean Geological Congress Antofagasta v. III p. 1898-1902

Garcia M., Gardeweg M., Clavero J., & Herail G., 2004. Hoja Arica, Region de Tarapaca. Un mapa escala 1:250.000 con texto explicativo. Servicio Nacional de Geologia y Mineria, Santiago, Carta Geologica de Chile, Serie Geologia Basica, 84 pp.

Gröpper H., et al., 1991. The Epithermal Gold-Silver Deposit of Choquelimpie, Northern Chile. Econ Geology, V.86, pp 1206-1221

Longo A.A., and Teal L., 2005, A summary of the volcanic stratigraphy and the geochronology of magmatism and hydrothermal activity in the Yanacocha gold district, northern Peru, *in* Rhoden, H.N., Steininger, R.C., and Vikre, P.G., eds., Symposium 2005: Window to the world, v. 2: Reno/Sparks, Geological Society of Nevada, p. 797–808.

Minera Can Can Internal Metallurgical Report, 2005

Mining Journal, 1987. Shell and Westfield in Chile gold venture, v. 309, no. 7938, p. 987

Morelli, P.; Pardo, R., and Siebert, C.; 2007: Rio Tinto Unpublished Report, "Proyecto Choquelimpie, Recomendación de Sondajes Agosto 2007"

Morelli P., Pardo R., and Siebert C., 2007. Rio Tinto - Choquelimpie Geological and Alteration Maps.

Ruz L., Cornejo C., and Cecioni A., 2000. "Proyecto Choquelimpie 1999-2000", Minera Can Can Internal Report

Sillitoe R. H., 1985. Internal report for Shell Chile. An appraisal of the Choquelimpie, Locura and Llipe precious metal prospects, Chile.

Sillitoe R.H., 1992. Gold and copper metallogeny of the central Andes – Past, present, and future exploration objectives (SEG Distinguished Lecture): Economic Geology, v. 87, p. 2205–2216.

Sillitoe R. H., 1995. Exploration of porphyry copper lithocaps. Proceedings of Pacific Rim Congress, 95, 527-532

Sillitoe R.H., 2003. Geological Overview and Exploration Recommendation: Choquelimpie Gold-Silver Deposit. Internal Report

South American Gold and Copper Company Limited, 1998. Changing the emphasis from presently uneconomic low grade open pit operation, to underground mining of high grade sulphides in wide structures.

SCM Vilacollo Internal Report, 1999. Unpublished report - Choquelimpie Mine and precious metal prospects, Chile.

SGS Chile, 2017. Internal report. Final Report. Metallurgical program - Grinding, Flotation, Leaching of Gold, Project Nilo. for Alxar SA

Turner S.J., 1999, Settings and styles of high-sulphidation gold deposits in the Cajamarca region, northern Perú: Pacrim '99, Bali, Indonesia, 1999, Proceedings: Melbourne, Australasian Institute of Mining and Metallurgy, p. 461–468.

27 APPENDIX 1 – DRILLING INFORMATION



2_BD_Choquelimpie\ minzon.csv



2_BD_Choquelimpie\ alte.csv



2_BD_Choquelimpie\ assays.csv



2_BD_Choquelimpie\ survey.csv



2_BD_Choquelimpie\ lito.csv



2_BD_Choquelimpie\ collar.csv