# Technical Report on Polaris Project, Chile Report for NI 43-101

**Qualified Person:** 

Joaquín Merino, P. Geo.

Report prepared for:

Halcones Precious Metals Corp.

December 20, 2024



Technical Report on Polaris Project 36 Lombard Street, Floor 4 Toronto, ON, Canada, M5C 2X3

Prepared by

Joaquín J. Merino Márquez Fray Francisco de Pareja 18, 41007 Sevilla, Spain For Halcones Precious Metals Corp. 36 Lombard Street, Floor 4, Toronto, Ontario, Canada, M5C 2X3

> Effective Date – October 19, 2024 Signature Date December 20, 2024



#### **CERTIFICATE OF QUALIFIED PERSON**

Joaquín J. Merino-M., M. Sc., P. Geo. Senior Geologist Consultant Fray Francisco de pareja 18 41007 Sevilla (Spain)

I, Joaquin J. Merino-M., am the author of the technical report entitled "Technical Report on the Polaris Project" that has an effective date of 19 of October 2024 prepared for Halcones Precious Metals Corp. ("Halcones").

I graduated from the University of Seville, Spain, with a Bachelor in Geological Sciences degree in 1991, and obtained a Master of Science degree in Economic Geology from Queens University, ON, Canada, in 2000.

I am a member of the Association of Professional Geoscientists of Ontario (P.Geo. #1652).

I have practiced my profession continuously since 1993. I have held technical positions working with resource estimation, mineral exploration, project evaluation, geological modeling, mine production, and reconciliation matters with projects and operations in the USA, Canada, Mexico, Peru, Ecuador, Chile, Bolivia, Brazil, Colombia, Venezuela, Argentina, Australia, Papua New Guinea, Spain, Portugal and Finland.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101).

I visited the Polaris project in Chile on October 19, 2024.

I am responsible for and have read all sections of the report entitled "Technical Report on the Polaris Project" that has an effective date of October 19, 2024.

I am independent of Halcones, Austral Exploraciones SpA and the Polaris Project as that term is described in Section 1.5 of NI 43–101. I have not had any previous involvement with the Polaris project, which is the subject of this Technical Report.

I have read NI 43–101, and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 20 day of December 2024

Joaquin J. Merino-M.

"Signed and sealed"

Joaquín J. Merino-M., M. Sc., P.Geo.



Senior Geologist Consultant



# TABLE OF CONTENT

1	SUMMARY	1
1.1	Introduction	1
1.2	Property Description and Location	1
1.3	Mineral Tenure, Royalties, and Agreements	1
1.4	Geology and Mineralization	2
1.5	History	3
1.6	Exploration	3
1.7	Data verification	4
1.8	Conclusions	4
1.9	Recommendations	5
1	.9.1 Work Program	5
2	INTRODUCTION	7
2.1	Purpose of the technical Report	7
2.2	Qualifications, Experience and Property visit	7
2.3	Independence	7
2.4	Principal Sources of Information	8
2.5	Effective Date	8
2.6	Abbreviations and Units of Measure	8
3	RELIANCE ON OTHER EXPERTS	11
4	PROPERTY DESCRIPTION AND LOCATION	12
4.1	Location	12
4.2	Property Description	14
4.3	Mineral Rights in Chile	15
4.4	Mining Concessions in Chile	15
4.5	Polaris Mining Concessions	16
4.6	Mineral rights acquisition agreements or underlying agreements	19
4.7	Ownership, royalties, and other payments	20
5	ACCESSIBILITY, CLIMATE, INFRASTRUCTURE, PHYSIOGRAPHY AND VEGETATION	21
5.1	Accessibility	21



5.2	Cli	imate22
5.3	Lo	cal Resources and Infrastructure23
5.4	Ph	nysiography24
5.5	Ve	egetation and Wildlife25
6	HIST	ORY27
7	GEO	LOGICAL SETTING AND MINERALIZATION29
7.1	Re	gional Geology setting
7.	.1.1	Structural Geology
7.	.1.2	Stratigraphy34
7.2	Lo	cal Geology35
7.3	Al	teration and Mineralization
7.4	Pr	oject Geology
8	DEPO	OSIT TYPES
8.1	In	trusive Related Gold Deposits (IRG)43
9	EXPL	ORATION45
9.1	На	alcones Exploration45
9.2	Αι	stral Exploration47
9.	.2.1	Rock sampling survey51
9.	.2.2	Geophysical survey52
9.	.2.3	Targets
10	DRIL	LING55
11	SAM	PLE PREPARATION, ANALYSIS AND SECURITY56
11.1	L HA	ALCONES QA/QC Program
11.2	2 HA	ALCONES SAMPLING PROCEDURE
1:	1.2.1	Sample registration and selection57
1:	1.2.2	Assignment of sample number and bag57
11	1.2.3	Sampling57
11	1.2.4	Bagging and labelling
11	1.2.5	Evidence and sampling record58
1	1.2.6	58 Bagging and sealing



11	1.2.7	Transport of samples to laboratory.	59
11	1.2.8	Entry and reception of samples.	59
11.3	AU	ISTRAL SAMPLING	59
11.4	CE	RTIFIED LABORATORY	60
12	DATA	VERIFICATION	61
13	MINE	RAL PROCESSING AND METALLURGICAL TESTING	63
14	MINE	RAL RESOURCE ESTIMATES	64
15	MINE	RAL RESERVE ESTIMATES	65
16	MINI	NG METHODS	66
17	RECO	VERY METHODS	67
18	PROP	PERTY INFRASTRUCTURE	68
19	MARI	KET STUDIES AND CONTRACTS	69
20	ENVI	RONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT	70
21	CAPI	TAL AND OPERATING COSTS	71
22	ECON	IOMIC ANALYSIS	72
23	ADJA	CENT PROPERTIES	73
24	OTHE	R RELEVANT DATA AND INFORMATION	76
25	INTEF	RPRETATIONS AND CONCLUSIONS	77
25.1	Int	erpretations:	77
25.2	Со	nclusions	77
26	RECO	MMENDATIONS	79
26.1	Wo	ork Program	79
26.2	Bu	dgets	81
27	REFEI	RENCES	82
28	DATE	AND SIGNATURE PAGE	83



# **FIGURE INDEX**

Figure 1: Regional location map of Polaris12
Figure 2: Location of Polaris project, main cities, routes and nearby infrastructure
Figure 3: Polaris property limits14
Figure 4: Polaris property concession UTM coordinates WGS84/19s and PSAD56/19S18
Figure 5: Mining concessions of Polaris19
Figure 6: Access to the Project from Antofagasta City21
Figure 7: Images of access routes to the Polaris Project. Above: Route 710 heading south to the project. Below: Access roads inside the project
Figure 8: Internal roads in the project are in very poor condition, for safety reasons the use of 4x4 trucks is mandatory
Figure 9: View to the south from the project showing characteristic physiographic features
Figure 10: Shrub vegetation observed in the project area25
Figure 11: Fauna observed in the project. Red-headed Vulture and Liolaemus Lizard
Figure 12: Old trenches, pits and tunnels from artisanal mining activity at Polaris Project
Figure 13: Map of the regional geology with the main lithologies in relation to the project area. (Modified form Sernageomin 2016)
Figure 14: Map of the main structures related to the Atacama fault zone, present in the project area and their location in relation to the Polaris Project. (Modified from Sernageomin 2016)
Figure 15: Izcuña Fault, part of the Atacama Fault Zone, puts the Izcuña quartz-Diorite (Jurassic- Cretaceous) in contact with sedimentary and volcanic rocks (Triassic-Jurassic)
Figure 16: Stratigraphic column of the units present in the Polaris Project. (Based on Sernageomin 2016). 
Figure 17: Millimetric to centimetric quartz and epidote veinlets with the presence of limonites
Figure 18: Lithology (Left) and alteration (Right) map of the north zone of the Polaris Project
Figure 19: Left, Stockwork with limonites in diorite, with moderate argillic-chlorite alteration and presence of epidote. Right, Stockwork of quartz veinlets, strong argillic-chlorite alteration (In red, veinlets of quartz)
Figure 20: Stockwork with limonites in diorite, with intense argillic-chlorite alteration
Figure 21: Distribution of diorite stockwork according to its intensity recognized in the northern area of the project41



Figure 22: General plan model of RIRGS from the Tintina Gold Province
Figure 23: Sampling distribution carried out by Halcones in relation to the distribution of samples in the Austral Exploraciones database
Figure 24: Sample location and Au values from Austral database, defining the two preliminary zones of interest, North and South Zone. Old mining workings in yellow triangles. (Sernageomin database)47
Figure 25: Location and sampling results in Austral Exploraciones database. Values over 5 ppm Au 50
Figure 26: Chargeability profile of IP line 350420 East
Figure 27: Resistivity profile of IP line 350420 East53
Figure 28: Sample bags with tags and sealed with staples
Figure 29: Aluminum identification tag installed at the sampling site
Figure 30: Sacks with samples and sealed with numbered seal59
Figure 31: Andes Analytical Assay Laboratory facilities60
Figure 32: Location of samples taken by the author. Austral Exploraciones sampling as reference 61
Figure 33: Mining concessions belonging to the Polaris Project in relation to the concessions of other properties73
Figure 34: Location of Montecristo and Julia districts in relation to the Polaris Project

# TABLE INDEX

Table 1: List of used abbreviations and units.	8
Table 2: Polaris Mining concessions	17
Table 3: Location and results of sampling carried out by Halcones.	45
Table 4: Location and sampling results in Austral Exploraciones database. Values over 5 ppm Au	48
Table 5: Halcones Precious Metals QA/QC Program	56
Table 6: Standards for Polaris Project	56
Table 7: Results of sampling carried out by the author during the visit to the Polaris Project	62
Table 8: Budget Phase 1	81
Table 9: Budget Phase 2	81



# 1.- SUMMARY

# 1.1 Introduction

This technical report detailing the exploration potential of Polaris project ("the Project" or "the Property") has been prepared and compiled by Joaquín Merino Márquez, P. Geo, for Halcones Precious Metals Corp. ("Halcones"), a public Canadian Company listed on the TSX Venture Exchange.

This report has been commissioned by Halcones in connection with an option agreement between Halcones and Austral Exploraciones SpA ("Austral") pursuant to which Halcones has agreed to option the Project from Austral.

The report was prepared according to the guidelines set out under Canadian Securities Administrators "Form 43-101F1 Technical Report" of National Instrument Standards of Disclosure for Mineral Projects (NI 43-101).

#### **1.2** Property Description and Location

The Polaris Property consists of a contiguous, irregularly shaped block of concessions extending for approximately 5 km in an East-West direction and approximately 13 km in a North- South direction. It comprises twenty-three exploration mining concessions and two exploitation mining concessions covering 5,777.5 has.

The Polaris Property is centered at 7,250,210N and 350,550E (UTM WGS84 zone 19S) at an average altitude of 1,660 meters above sea level. It is located approximately 150 km South of Antofagasta city (population 361,873), which is an important regional mining center located 1,376 km North of Santiago (Figure 1). Polaris site is close to key mining infrastructure – including ports at Antofagasta and Mejillones, both connected by the Pan- American Highway and the provincial road network. Politically, the Property is in the Antofagasta municipality of the Antofagasta Province, Antofagasta Region.

# **1.3** Mineral Tenure, Royalties, and Agreements

The Polaris group of mining concessions was incorporated by Austral Exploraciones before the Civil Court of Taltal. The mining concessions are duly registered under its name before the Custodian of Mines of Taltal.

On October 23, 2024, Halcones agreed with Austral to a purchase option to acquire the mining concessions of the Project. Through the purchase option with Austral, Halcones shall make the following payments and comply with the following obligations:

- Total cash payment of USD2,600,000:
  - The amount of USD \$100,000 upon approval of the TSX Venture Exchange.
  - A second payment of USD \$100,000 twelve months thereafter.



- A third payment of USD \$150,000 twenty-four months thereafter.
- A fourth payment of USD \$250,000 thirty-six months thereafter.
- A fifth payment of USD \$2,000,000 forty-eight months thereafter.
- Drilling: 2,000m of drilling to be done before October 23<sup>rd</sup>, 2025, subject to permits being obtained.
- NSR: 2% NSR payable to Austral.

Additionally, Halcones has the following obligations to Mr. Pablo Frutos and Mr. Joe Jordan:

- The issuance of 25 million shares in the capital of Halcones to each of Jordan and Frutos on the closing of the transaction.
- The issuance of 7.5 million shares in the capital of Halcones to each of Jordan and Frutos upon Halcones publicly filing a NI 43-101 compliant technical report with a mineral resource estimate of greater than 2 million ounces of gold (at a minimum of 1g/t of heap leachable material at a 0.25 g/t minimum cut-off grade);
- The issuance of 7.5 million shares in the capital of Halcones to each of Jordan and Frutos upon Halcones publicly filing a NI 43-101 compliant economic study; and
- The issuance 7.5 million shares in the capital of Halcones to each of Jordan and Frutos upon Halcones publicly filing a NI 43-101 compliant feasibility study.

The holder has the right to carry out all types of exploration activities including geological studies, soil geochemistry, geophysics, and drilling.

# 1.4 Geology and Mineralization

The Polaris Project is located in the metallogenic belt of the coastal mountain range, where it is possible to observe numerous deposits, among which copper deposits are most prevalent, followed by a smaller number of gold, silver, manganese and mercury deposits, with the most frequent being the vein hosted. The origin of the deposits is mainly related to the magmatism of the Jurassic-Lower Cretaceous, spatially related to the major structural systems of the Atacama Fault Zone, represented in the area by the Paposo, Izcuña and El Médano faults.

In the project area, the dioritic intrusive (Izcuña Diorite) is observed, cut by abundant dikes of monzodiorite composition, dikes of microdiorite composition and in some sectors porphyritic dikes of andesitic composition. This interaction of different dike emplacements combined with the strong influence of the adjacent Atacama fault zone, results in intense fracturing with local shear, with mylonite zones with NNE strike parallel to the Izcuña fault (AFZ). All these rocks are covered by wide zones of colluvium overburden with intermittent bedrock exposures.



The Project mineralization is associated with stockwork zones of narrow to + 1 meter quartz-gold veins located immediately west of the Izcuña fault, hosted in diorites, quartz diorites and monzodiorites of the Paranal Plutonic Complex. Mineralization consists of native gold with minor amounts of copper oxides with quartz, iron oxides and pyrite as gangues.

# 1.5 History

Historical mining at the site dates back to the early part of the 20<sup>th</sup> century when local residents from the town of Taltal extracted material from high grade quartz veins, breccias and veinlets for direct shipping to local process plants. Artisanal scale mining was concentrated on the larger exposed quartz veins and breccias and the material was transported by mules and horses along trails down to the coast to the fishing village of Paposo some 25km to the southwest. Numerous old pits, tunnels, trenches and shafts on the property are evidence of a significant mining operation.

Following this period of activity, the district was dormant until the early 1970's when Eulogio Gordo (a miner from Antofagasta) picked up some claims and operated at a small scale (some 5 tons/month) over approximately ten years. After this, the property has remained inactive and there are no records of modern exploration ever having been carried out on the district until now.

In 2022, Austral Exploraciones began its exploration activities in the area defined at that time as the "Costa Taltal" target with the acquisition of the first exploration claims and surface sampling, with positive results that showed the economic potential of the project. At the end of that year, the project began to be offered to Junior and Major companies.

In March 2023, an exclusivity contract was signed with Newmont to reach an "Earn In Agreement" type agreement. After 18 months of negotiations, the exclusivity period ended and Austral Exploraciones decided not to extend it.

# **1.6 Exploration**

Exploration at the Polaris project is limited to what has been carried out since 2022 by Austral Exploraciones. Since then, the work has consisted of surface sampling of chips, some basic geological mapping, an inventory of old mining workings and a test of geohysical IP Line.

Since Halcones entered in an Option Agreement with Austral Resources, the Company has carried out the review of historical data, the compilation of previous exploration work, a field geological reconnaissance survey, a preliminary rock chip sampling comprising 13 samples that showed economic and anomalous gold values.



# 1.7 Data verification

During the October 19 of 2024 site visit, the author collected eight representative samples of stockwork, veins, from exposed rocks and old mines dups within the Polaris Property. Sample details are provided in Table 6 (section 12). All samples were shipped to ANDES ANALYTICAL ASSAY Laboratory in Santiago, Chile, an independent laboratory, for gold and silver analysis as well as a suite of 33 other elements. The assay results reported significant gold values supporting the hypothesis of the existence of disseminated gold mineralization at Polaris Project.

#### **1.8 Conclusions**

- a. Due to the amount of exploration carried out up to date on the property, Polaris can be considered a Grass Root project.
- b. Surface sampling by Halcones confirms the occurrence of gold mineralization and repeats some of the high values obtained by Austral.
- c. Surface sampling by the author confirms the occurrence of gold mineralization and replicates some of the high values obtained by Austral and Halcones.
- d. Gold mineralization is associated to the quartz structures with a preferential NNE orientation as well as in the stockwork in the quartz diorite.
- e. The mineralization in veins and stockwork make Polaris potentially suitable for exploitation as an open pit.
- f. Field observations together with sampling carried out by Halcones confirm that the mineralization is associated with veins and stockwork in dioritic intrusives with intense to moderate chloritic argillic alteration.
- g. There is undoubtedly gold in the system. This is demonstrated by the following statistics:
  - 59% of the geochemical samples returned gold concentrations.
  - 39% of the samples returned grades above 1 g/T of Gold.
  - 17% of the samples returned grades above 5 g/T of Gold.
  - 7% of the samples returned grades above 10 g/T of Gold.
  - The average grade of all the samples in the database is 2.03 g/T of Au
- h. The mineralization is found in outcrops close to the surface, which would facilitate the exploitation of the deposit.
- i. The distribution and results of all the samples allow us to define 3 preliminary zones that could be considered as targets for an exploration program.
- j. As with all early-stage project, there is a fundamental risk in the exploration process. The property has not been drilled and until such time as drill holes are done, there is no way to confirm what happens to the gold mineralization at depth.



k. Even if the initial drill program is successful, there will remain several steps and bench marks that need to be passed in order to transform the project into an economic deposit.

#### **1.9 Recommendations**

Considering all the information available and reviewed and the observations made during the field visit, the author makes the following recommendations:

1.- Carry out a sampling campaign in the areas that separate the 3 zones defined as possible targets in order to test for continuity of the mineralization and possibly develop a single larger target area.

2.- Carry out detailed geological mapping with special emphasis on structural geology and alteration patterns.

3.- Carry out a petrographic and calcographic study of thin and polished sections to characterize, understand and relate lithology, alteration and mineralization events.

4.- Carry out trenches and clean areas with cover to obtain better information and sampling that allows a better understanding of the geological events.

5.- Evaluate the scope and effectiveness of carrying out geophysical studies.

6.- Carry out a DDH drilling program in the areas defined as targets to confirm mineralization at depth and understand the emplacement dynamics of the mineralization.

# 1.9.1 Work Program

An exploration program for the Polaris Project consisting in two phases is proposed. Exploration Phase 2 is conditional on the results of Exploration Phase 1.

The objective of the overall exploration program is to make a discovery in the Polaris Project.

#### Phase 1.

Phase 1 is designed primarily to characterize and expand current objectives and identify new ones in the areas covered with the following recommendations for Phase 1:

- 1.- Carrying out geological mapping and sampling campaigns with special emphasis put in structural geology and alteration patterns.
- 2.- Samples to be assayed by ICP and FA methods for gold.
- 3.- Petrographic and chalcographic studies of thin sections.



The technical information collected in this Phase 1, together with a 2D model, which will include geological mapping and surface sampling, should define the exploration targets for Phase 2. Phase 1 will only be completed once the targets for Phase 2 are defined.

Estimated completion time: 4 months. Estimated Budget: US\$110,000.

#### Phase 2.

The technical information gathered in Phase 1 together with a 2D model, which will include geological mapping and surface sampling should deliver drill targets. Phase 2 will be initiated upon soon after results of Phase 1 interpretation is completed. and the details of the drill program will be based on those results and their interpretation.

Phase 2 will only be initiated following the completion of Phase 1. All results and interpretations on which the details of the drilling program will be based will be reviewed. A drill program of 2000 m of diamond drilling is proposed based on these results and will 3 months. Specific work items are as below:

- 1.- Opening trenches in covered areas.
- 2.- Surface and trench Sampling.
- 3.- Establish an exploration camp on site.
- 4.- Drill Program of 2000 m of diamond drilling.

Estimated completion time: 3 months. Estimated Budget: U\$\$946,000.



# **2.- INTRODUCTION**

# 2.1 Purpose of the technical Report

The author was retained by Halcones to prepare an independent NI 43-101 compliant Technical Report on the Polaris Project located in Antofagasta Region, Chile. The purpose of this Technical Report is to provide independent evaluation and advice on the exploration potential of the Polaris Project. Specific reference was given to confirming the type and style of Intrusive Related Gold System (IRGS) mineralization.

The report was prepared according to the guidelines set out under Canadian Securities Administrators "Form 43-101F1 Technical Report" of National Instrument Standards of Disclosure for Mineral Projects (NI 43-101).

Halcones is a public company incorporated under the laws of the Province of Ontario and trading on the TSXV, which owns an option agreement to acquire 100% of the right, title and interest of the Polaris Project by mutual agreement with Austral signed on October 23, 2024.

This technical Report details the available information regarding the potential of the Property to host economic gold mineralization by reviewing technical issues as the regional and local geology, mineralogy, alteration, adjacent projects and specially the work that was carried out by previous companies and Halcones on the Property. The report was prepared and compiled by Joaquín Merino Márquez at the request of Halcones, and it was elaborated according to the guidelines set out under Canadian Securities Administrators "Form 43-101F1 Technical Report" of National Instrument Standards of Disclosure for Mineral Projects.

# 2.2 Qualifications, Experience and Property visit

The author is the Qualified Person responsible for the preparation of this Technical Report as defined by NI 43-101. The author is a professional geologist with over 31 years of experience in exploration and mining geology. He obtained a Bachelor of Science (Honours) from the University of Sevilla in 1991 and a M. Sc. in Economic Geology from Queens University in 2000. He is a member of the Association of Professional Geoscientists of Ontario (P.Geo. #1652) and has the appropriate relevant qualifications, experience and independence as defined by NI 43-101.

The author visited the Polaris Property from October 19<sup>th</sup> to 20th 2024 and conducted a personal inspection to the Property for location, accessibility, physiography, nearby infrastructure, local geology, and style of mineralization. Surface mapping and geochemical sampling were being conducted on the property during the site visit. Eight check rock chip samples were collected on the project by the author.

# 2.3 Independence

Neither the author nor his associates have any type of interest in Halcones or Austral and is independent of both entities. The author's relationship with Halcones is solely one of professional association between



client and independent consultant and the author has no relationship with Austral Exploraciones This report is prepared in return for fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.

# 2.4 Principal Sources of Information

This report is based on reports and maps prepared by Halcones, and reports and maps published by SERNAGEOMIN (Chilean Geological Survey), scientific literature and public information, as listed in Section 27 of this Report. It is also based on the information cited in Section 3. See Section 27 for a complete list of references.

The author visited, collected samples, and discussions held with Halcones' personnel, Andrés Mestre B. (Project Geologist) and Vernon Arseneau (Chief Operating Officer) have also been a valuable source of information for the compilation of this Report.

#### 2.5 Effective Date

The Effective Date of this report is taken to be the date of the completion of the Property visit by the author on 19th October 2024. Assay results of rock chip sampling during visit were received and incorporated to this Report between the Effective Date and Signature Date of the report.

#### 2.6 Abbreviations and Units of Measure

Units of measurement used in this report conform to the metric system. All currency in this Technical Report is US dollars (US\$) unless otherwise noted. The abbreviations or acronyms used in this report are listed in the Table 1.

Abbreviation or Acronym	Description		
%	Percent		
°C	Celsius degrees		
AAS:	Atomic absorption spectroscopy		
AES:	Atomic emission spectroscopy		
AFZ:	Atacama faul Zone		
Ag	Silver		
Au	Gold		

#### Table 1: List of used abbreviations and units.



Abbreviation or Acronym	Description
As	Arsenic
Bi	Bismut
Cu Ox:	Copper Oxides
Cu	Copper
DDH	Drill Diamond Hole
E	East
e.g.	Latin phrase meaning "for example"
ENAMI	Empresa Nacional de Minería (Chile)
Eq	Equivalent
ESE:	East South East
et al.	Latin phrase meaning "and others"
Fig.	Figure
Fm	Formation
50	grams
g/T	grams per Ton
GPS	Global Position System
н	Hour
Has	Hectares
ICP	Inductively Coupled Plasma
IP	Induced Polarization
IRG	Intrusive Related Gold
RIRGS	Reduced Intrusive Related Gold System
km	Kilometer
Μ	Million
m	meter
Mass.	Massive
Min	Minute
mm	Millimeters
Ν	North
NE	Northeast
NI 43-101	National Instrument 43-101
NNE	North-Northeast
NNW	North-Northwest
N⁰	Number
NSR	Net Smelter Return
NW	Northwest
Oz	ounce
Pb	Lead
P. Eng.	Professional Mining Engineer
P.Geo.	Professional Geologist



Abbreviation or Acronym	Description
ppm	parts per million
PSAD56	Coordinate Reference System type
	Quality Assurance / Quality Control
renlac	Benlacement
RIIT	Replacement Bol Unico Tributario
SE	Southeast
3L	Southeast Servicio Nacional de Geología y Minería
SERNAGEOMIN	(Chilean Geological Survey)
SNF	Sistema Nacional Eléctrico
SnA	Sociedad por Acciones
sin/	Southwest
T	Toppo
1 T-	
le	
TSX/TSXV	Toronto Stock Exchange / Toronto Stock
	Venture Exchange
US\$	United States Dollars
USD	United States Dollars
	Universal Transverse Mercator
UTIVI	map projection
W	West
WGS84	World Geodetic System 1984
Yr	Year



# **3.- RELIANCE ON OTHER EXPERTS**

The preparation of this Technical Report has counted on the documentation produced by Halcones and the material prepared by the author of this report. It also includes public documents such as scientific papers and SERNAGEOMIN publications.

The author did not independently verify the legal status, ownership of the Project area or underlying property agreements since he is not qualified to provide comment on legal issues associated with the Property. Instead, Marinovic & Alcalde legal firm from Santiago supplied the information stated in Sections 4.3, 4.4, 4.5 and 4.6 based on Chile Mining Regulations 2024 and the Halcones-Austral option Agreement signed October 23 of 2024. The author has fully relied upon this information and disclaims responsibility for the statements in those sections.



# 4.- PROPERTY DESCRIPTION AND LOCATION

#### 4.1 Location

The Polaris Property is centered at 7,250,210N and 350,550E (UTM WGS84 zone 19S) at an average altitude of 1,660 meters above sea level. It is about a linear distance of 150 km South of Antofagasta city (population 361,873), which is an important regional mining center located 1,376 km North of Santiago (*Figure 1*). Polaris site is close to key mining infrastructure – including ports at Antofagasta and Mejillones, and connected by the Pan- American Highway and the provincial road network. Politically, the Property is in the Antofagasta municipality of the Antofagasta Province, Antofagasta Region. (*Figure 2*)



Figure 1: Regional location map of Polaris.



Geologically, the Polaris Project is located in the Coastal Mountain Range south of the Antofagasta Region and is part of the Atacama Fault Zone and the Coastal Escarpment. The Atacama Fault Zone (AFZ) is one of the most important structures in the Coastal Range of the Great North of Chile, extending for an order of 800 km.



Figure 2: Location of Polaris project, main cities, routes and nearby infrastructure.



#### 4.2 Property Description

The Polaris Property consists of two roughly rectangular blocks almost bordering the Pacific Ocean. The first block has a main North-South orientation and an extension of approximately 13 km in a North-South direction and 5 km in a East-West direction, the second block has an extension of approximately 1 km in a North-South direction and 2 km in a East-West direction. It comprises twenty-three exploration mining concessions and two exploitation mining concessions covering 5,777.5 hectares. (*Figure 3*). There is no previous mining infrastructure, other than artisanal mining, and there are no nature reserves or protection zones within the property boundaries. It should also be noted that there are no known environmental liabilities related to mining or any other activity, nor other significant factors that may affect access or the ability to carry out work. There is also no known environmental impact report.



Figure 3: Polaris property limits.



# 4.3 Mineral Rights in Chile

Under the mining laws of Chile, the State owns all mineral resources, but exploration and exploitation of these resources by private parties is permitted through mining concessions, which are granted by the courts. These concessions are respectively known as "exploration mining concessions" and "exploitation mining concessions". The following sections describe the most relevant aspects of Chile's Mining Law No. 18248, as provided by the law firm Marinovic & Alcalde, an expert firm in mining matters based in Santiago, Chile.

#### 4.4 Mining Concessions in Chile

The owner of an exploration mining concession has the right to carry out all types of mining exploration activities within the area of the concession. Exploration mining concessions can overlap or be granted over the same area of another mining concession but the rights granted by an exploration concession can only be exercised by the holder with the earliest dated exploration mining concession over a particular area.

The duration of an exploration mining concession is for a maximum period of 4 years. At the end of this period, they may (i) be extended as an exploration concession for four further years if its holder complies with the requirements established on article 112 of the Chilean Mining Code, or (ii) be converted, totally or partially, into exploitation mining concessions.

The holder of the earliest dated exploration concession has a preferential right to an exploitation mining concession in the area covered by the exploration mining concession, over any third parties with a later dated exploration mining concession for that area or without an exploration concession at all and must oppose any applications made by third parties for exploitation.

The holder of an exploitation mining concession has the same rights than the holder of an exploration mining concession along with the right to own, process, and sell all minerals extracted within the area of the mining concession. Exploitation mining concessions cannot overlap or be granted over another exploitation mining concession in the same area.

There is no limit on the duration of exploitation mining concessions, and holders are only required to pay the corresponding mining fees to maintain the exploitation mining concession in force.

For each mining concession, the titleholder must pay a mining annual fee to the Chilean Treasury. There are two types of mining fee payments. The first type, the holder of a mining concession must pay a yearly license fee equivalent to three fiftieth of a Monthly Tax Unit (Unidad tributaria mensal) per hectare in the case of exploration concessions.

In the case of exploitation mining concessions, the yearly mining fee shall be one tenth of a monthly tax unit for each full hectare it comprises if the mining project is exploited by its holder or complies with the conditions established on article 142 bis of the Chilean Mining Code.



Please note that, the non-exploited mining concessions should pay the following mining fees for each full hectare: a) Four tenths of a monthly tax unit for the first five years of the concession's validity. b) Eight tenths of a monthly tax unit from the sixth to the tenth year of the concession's validity. c) Nine tenths of a monthly tax unit from the eleventh to the fifteenth year of the concession's validity. d) One point two monthly tax units from the sixteenth to the twentieth year of the concession's validity. e) Three monthly tax units from the twenty-first to the twenty-fifth year of the concession's validity. f) Six monthly tax units from the thirtieth year of the concession's validity. g) Twelve monthly tax units starting from the thirty-first year of the concession's validity. g) Twelve monthly tax units starting from the thirty-first year of the concession's validity.

The payment must be made in the month of March of each year. Failure to pay the annual property payment may result in the loss of the mining concession title. Nevertheless, the holder could pay after the expiration of the legal term but charged with the double amount and before the auction.

#### 4.5 Polaris Mining Concessions

The Polaris Property comprises 25 mining concessions with a total area of 5,777.5 ha. The project is comprised of 2 exploitation mining concessions and 23 exploration mining concessions. The option to acquire the mining concessions was granted by Austral to Halcones on October 23, 2024, through a Purchase Option Agreement. The list of concessions that constitute the Polaris Project and all the information related to them is found in **Table 2.** The boundaries and coordinates UTM/WGS84 19S and PSAD56 19S system of the vertices of the Polaris Project are detailed in **Figure 4**. The location of the Polaris concessions is illustrated in **Figure 5**. The annual fee of the concessions was paid, thus they are valid up to March 2025, when the fees for renewal of the concessions are due.



# Table 2: Polaris Mining concessions

N °	Rol-Number	Concession Name	CONCESSION TYPE	Owner Name	TITULAR RUT Number	Has	EXPIRATION DATE
1	02202-8692-4	POLARIS 1A 1 AL 60	Exploitation	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
2	02202-8693-2	POLARIS 2A 1 AL 60	Exploitation	Austral Exploraciones SpA	Austral 76.912.998-7 Exploraciones SpA		31-03-2025
1	02202-W874- К	POLARIS 28	Exploration	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
2	02202-W875- 8	POLARIS 30	Exploration	Austral Exploraciones SpA	76.912.998-7	275	31-03-2025
3	02202-W876- 6	POLARIS 33	Exploration	Austral Exploraciones SpA	76.912.998-7	275	31-03-2025
4	02202-W877- 4	POLARIS 35	Exploration	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
5	02202-W878- 2	POLARIS 37	Exploration	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
6	02202-W880- 4	POLARIS 40	Exploration	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
7	02202-W879- 0	POLARIS 39	Exploration	Austral Exploraciones SpA	76.912.998-7	200	31-03-2025
8	02202-W101- K	POLARIS 25	Exploration	Austral Exploraciones SpA	76.912.998-7	250	31-03-2025
9	02202-W102- 8	POLARIS 24	Exploration	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
1 0	02202-W053- 6	POLARIS 5	Exploration	Austral Exploraciones SpA	76.912.998-7	200	31-03-2025
1 1	02202-W054- 4	POLARIS 6	Exploration	Austral Exploraciones SpA	76.912.998-7	250	31-03-2025
1 2	02202-W043- 9	POLARIS 9	Exploration	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
1 3	02202-W055- 2	POLARIS 10	Exploration	Austral Exploraciones SpA	76.912.998-7	250	31-03-2025
1 4	02202-W019- 6	POLARIS 1	Exploration	Austral Exploraciones SpA	76.912.998-7	250	31-03-2025
1 5	02202-W042- 0	POLARIS 11	Exploration	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
1 6	02202-W044- 7	POLARIS 12	Exploration	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
1 7	02202-W041- 2	POLARIS 13	Exploration	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
1 8	02202-W040- 4	POLARIS 14	Exploration	Austral Exploraciones SpA	76.912.998-7	300	31-03-2025
1 9	02202-W020- K	POLARIS 2	Exploration	Austral Exploraciones SpA	76.912.998-7	250	31-03-2025
2 0	02202-W021- 8	POLARIS 3	Exploration	Austral Exploraciones SpA	76.912.998-7	250	31-03-2025
2 1	02202-W022- 6	POLARIS 4	Exploration	Austral Exploraciones SpA	76.912.998-7	250	31-03-2025
2 2	02202-W038- 2	POLARIS 16	Exploration	Austral Exploraciones SpA	76.912.998-7	27,5	31-03-2025
2 3	02202-W050- 1	POLARIS 17	Exploration	Austral Exploraciones SpA	76.912.998-7	50	31-03-2025



	Vertex	WGS	84/195	PSAD	56/195
Ņ ()2	N°	Easting	Northing	Easting	Northing
	1	349811	7260591	349994	7260963
16/15	2	352811	7260591	352994	7260963
	3	352811	7255591	352994	7255963
13.13	4	353811	7255591	353994	7255963
	5	353811	7254591	353994	7254963
	6	351811	7254591	351994	7254963
	7	351811	7247591	351994	7247963
34	8	346311	7247591	346494	7247963
12	9	346311	7254591	346494	7254963
91066	10	347811	7254591	347994	7254963
17	11	347811	7255091	347994	7255463
	12	349811	7255091	349994	7255463
2019	13	349811	7258091	349994	7258463
	14	350311	7258091	350494	7258463
	15	350311	7259091	350494	7259463
	16	349811	7259091	349994	7259463
	17	347811	7253591	347804	7253554
	18	348811	7253591	348804	7253554
	19	348811	7252591	348804	7252554
	20	347811	7252591	347804	7252554
87	21	346311	7245591	346494	7245963
	22	347811	7245591	347994	7245963
0	23	347811	7244591	347994	7244963
20 22 22 25 25	24	347251	7244591	347434	7244963
	25	347251	7245362	347434	7245734
0 0,5 1 2 3 4	26	346311	7245362	346494	7245734

*Figure 4:* Polaris property concession UTM coordinates WGS84/19s and PSAD56/19S.





Figure 5: Mining concessions of Polaris.

#### 4.6 Mineral rights acquisition agreements or underlying agreements

The Polaris group of mining concessions was incorporated by Austral Exploraciones before the Civil Court of Taltal. The mining concessions are duly registered under its name before the Custodian of Mines of Taltal.



On October 23, 2024, Halcones agreed with Austral Exploraciones to a purchase option for acquiring the mining concessions of the Project. Through the purchase option with Austral Exploraciones, Halcones shall make the following payments and comply with the following obligations:

- Total cash payment of USD2,600,000:
  - The amount of USD \$100,000 upon approval of the TSX Venture Exchange.
  - A second payment of USD \$100,000 twelve months thereafter.
  - A third payment of USD \$150,000 twenty-four months thereafter.
  - A fourth payment of USD \$250,000 thirty-six months thereafter.
  - A fifth payment of USD \$2,000,000 forty-eight months thereafter.

• Drilling: 2,000m of drilling to be done before October 23<sup>rd</sup>, 2025, subject to permits (firm commitment).

• NSR: 2% NSR payable to Austral Exploraciones.

Additionally, Halcones has the following obligations with each of Mr. Pablo Frutos and Mr. Joe Jordan, shareholder of Austral:

- The issuance of 25 million shares in the capital of Halcones to each of Jordan and Frutos on the closing of the Option transaction.
- The issuance of 7.5 million shares in the capital of Halcones to each of Jordan and Frutos upon Halcones publicly filing a NI 43-101 compliant technical report with a mineral resource estimate of greater than 2 million ounces of gold (at a minimum of 1g/t of heap leachable material at a 0.25 g/t minimum cut-off grade);
- The issuance of 7.5 million shares in the capital of Halcones to each of Jordan and Frutos upon Halcones publicly filing a NI 43-101 compliant economic study; and
- The issuance 7.5 million shares in the capital of Halcones to each of Jordan and Frutos upon Halcones publicly filing a NI 43-101 compliant feasibility study.

The holder has the right to carry out all types of exploration activities including geological studies, soil geochemistry, geophysics, and drilling.

# 4.7 Ownership, royalties, and other payments

There is an annual fee to be paid, and the obligation by Halcones of executing a 2,000 m drilling program before October 23, 2025. Beside this and according to the option agreement, there is a 2%NSR to be paid to Austral Exploraciones (see section 4.5). There are no other royalties, taxes or administrative liabilities associated to the project.



# 5.- ACCESSIBILITY, CLIMATE, INFRASTRUCTURE, PHYSIOGRAPHY AND VEGETATION

#### 5.1 Accessibility

Antofagasta is the closest city to Polaris Property, which is located 1,376 km of the capital Santiago, accessible by national road and regular commercial flights.



Figure 6: Access to the Project from Antofagasta City.



The Polaris property can be accessed by pickup truck (4x4) from Antofagasta 54 km along the Pan-American Highway (Ruta 5), which leads to the paved route B-70. Follow this route for 14 km to the detour to Caleta El Cobre where you access route B-710 to Paposo. After 91 km on the B-710 route (at km 32 sign) take the gravel road to the west which leads to the property in 30 minutes (**Figure 6** and **Figure 7**). The total distance from Antofagasta is 155 km and takes about 2 hours. The road is open all year round.



Figure 7: Images of access routes to the Polaris Project. Above: Route 710 heading south to the project. Below: Access roads inside the project.

#### 5.2 Climate

The Polaris Project area is located 1,660 m above the sea level, in the Coastal Mountain Range, which is part of the desert of the Atacama region in the central Andes, between 800 and 2,300 meters above sea level. Thus, the climate in the Coastal Mountain Range is characterized by abundant cloud cover and high



relative humidity in the coastal cliff area. In the high areas it has a clean atmosphere with low relative humidity and high daily temperature fluctuations between day and night. The average annual temperature is of the order of 18°C, with a daily maximum of about 30°C in January (summer) to a daily minimum of about minus 2 °C in June/July (winter).

The climate is relatively humid with frost during the winter months, and rainfall of about 25 mm/year, related to precipitation due to coastal influence.

Presence of strong winds due to differences in altitude and cliffs.

# 5.3 Local Resources and Infrastructure

The Polaris Project is in the early stages of exploration, so the existing infrastructure at the site is limited to only very rudimentary roads (**Figure 7** and **Figure 8**). At the time of the visit, sampling work was being carried out based in the village of Paposo and daily trips in 4x4 trucks, although Halcones was in the process of establishing a camp with containers.



Figure 8: Internal roads in the project are in very poor condition, for safety reasons the use of 4x4 trucks is mandatory.

Mining at all its scales has been practiced in the region since colonization and today Chile is an advanced country in terms of mining technology and infrastructure, providing high-quality mining professionals to other countries. Exploration and mining-related work, as well as experienced labor, are widespread throughout Chile. Antofagasta is one of the most important cities in Chile and the closest major city to the Polaris Project, has a population of approximately 361,000 people and is located approximately 145 linear km from the Project and is accessible by road. This city has all the services of a large city and therefore obtaining supplies and well-trained and experienced professionals from Antofagasta should be easy.



Transportation: All transportation of the workforce is done in private vehicles and the exploration project will house its workers in a fully-serviced container camp, where workers will enter and leave on a shift basis.

Electricity: There is an electrical line through high-voltage towers with a route close to the project and belonging to the National Electric System (SNE). The electric power needed for an exploration camp will be obtained through a portable diesel-powered generator.

Water: The supply of drinking water as well as industrial water for future drilling campaigns can be obtained from the town of Paposo or from the city of Taltal, 35 km and 85 km respectively from the Polaris project. In these towns there are points authorized by the State of Chile for the sale of water to industry and it is where Halcones will be supplied for exploration work, including drilling.

Ports: The main ports in Chile are located in the Antofagasta region. Antofagasta is a port city and also located 61,5 km to the south of the industrial port town of Mejillones. Both ports are dedicated to mining and close to the Polaris Project.

# 5.4 Physiography

The Project is located in the coastal area of the Atacama Desert in the Antofagasta region, specifically in the coastal mountain range. The coastal mountain range is the geomorphological feature that covers most of the area with an approximate width of between 40 and 60 km. It is bordered to the west by the coastal plains through the Coastal Escarpment and to the east by the Central Depression. To the west of the Paposo Fault, there is the Izcuña mountain range with a N-S orientation, located in the N sector of the Polaris project.



*Figure 9: View to the south from the project showing characteristic physiographic features.* 



The average altitude of the project is 2000 meters above sea level, with steep to moderate slopes towards the East and with the abrupt coastal escarpment towards the west bordering the coastal plain. In general, the coastal plain is very narrow and in large areas of the coast it disappears, allowing the coastal cliff to descend to the sea.

In the eastern sector of the project, the relief generates an abundant number of ravines with a preferential ESE orientation. The drainage systems present in this area are sporadic. In the coastal sector of the study area, this system presents general east-west runoff in the form of narrow and steep ravines. (Figure 9)

#### 5.5 Vegetation and Wildlife

The climate in the Coastal Range is characterized by abundant cloud cover and high relative humidity in the coastal cliff area, which allows the growth of some cacti, isolated shrubs and hard grasses (**Figure 10**).



Figure 10: Shrub vegetation observed in the project area.

Wildlife is scarce, but it is possible to find guanacos, vicuñas, foxes, lizards and some rodents. Lizards and red-headed vultures have been observed inhabiting some ravines and near the sparse vegetation. In general, there are no domestic animals or crops near the Project area (**Figure 11**).





Figure 11: Fauna observed in the project. Red-headed Vulture and Liolaemus Lizard.



# 6.- HISTORY

Historical mining at the site dates back to the early part of the 20<sup>th</sup> century when local residents from the town of Taltal extracted material from high grade quartz veins, breccias and veinlets for direct shipping to local process plants. Artisanal scale mining was concentrated on the larger exposed quartz veins and breccias and the material was transported by mules and horses along trails down to the coast to the fishing village of Paposo some 25km to the southwest. Numerous old pits, tunnels, trenches and dumps resulting from artisanal mining activity on the property are evidence of the significant potential of the project area. (Figure 12)



Figure 12: Old trenches, pits and tunnels from artisanal mining activity at Polaris Project.

Following this period of activity, the district was inactive until the early 1970s when Eulogio Gordo (a miner from Antofagasta) acquired some rights and mined them on a small scale (about 5 tons per month) for about ten years. After this, the property has remained inactive and there are no records of any modern exploration having been carried out in the district to date. There are no known NI 43-101 compliant mineral resource and reserve estimates for this project.

In 2022, Austral Exploraciones began its exploration activities in the area defined at that time as the "Costa Taltal" target with the acquisition of the first exploration claims and surface sampling, with positive results that showed the economic potential of the project Austral Exploraciones began promoting the project in late 2022.

In March 2023, an exclusivity contract was signed between Austral and Newmont to reach an "Earn In Agreement" type agreement. After 18 months of negotiations, the exclusivity period ended and Austral Exploraciones decided not to extend it.


Exploration at the Polaris project is limited to what has been carried out since 2022 by Austral Exploraciones. Since then, the work has consisted of surface sampling of chips (**Figure 24** and **Figure 25**) (**Table 4**), some basic geological mapping, an inventory of old mining workings and a test of geohysical IP Line.

Exploration work conducted by Halcones on the Polaris Property since the acquisition in October 23 of 2024, comprises the compilation of previous exploration work, field geological reconnaissance surveys, geochemical rock chip sampling (**Figure 23**) (**Table 3**).



# 7.- GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 Regional Geology setting

The Polaris Project is located in the Coastal Mountain Range south of the Antofagasta Region, bordered to the west by a steep north-south slope reaching up to 2,200 meters above sea level near the area, where a narrow marine abrasion platform no more than 1 km wide is located at the foot of the cliff.

The oldest geological units are composed of metamorphic, sedimentary, plutonic and volcano sedimentary rocks of Paleozoic age (Chañaral Epimetamorphic Complex) which, as a whole constitute the basement of the Mesocenozoic sequences. Unconformably covering the basement rocks, volcanic and sedimentary rocks of the Upper Triassic (Cifuncho Formations) outcrop, which show depositional processes in a continental environment, that vary towards rocks typical of a marine to lacustrine environment. This is interpreted as the beginning of a marine transgression which coexisted with explosive volcanic events and effusion of andesitic flows. This transgression would have continued during the Lower Jurassic and would have allowed the deposition of the deepest marine facies of the Pan de Azúcar Formation, which were synchronous with the intense explosive volcanic activity already initiated during the Upper Triassic. (Álvarez et al, 2016)

During the Lower Jurassic and Middle Jurassic volcanic activity continued and intensified, which was very well recorded in the rocks of the La Negra Formation, as a volcanic arc associated with an extensional regime (Rogers and Hawkesworth, 1989; Grocott and Taylor, 2002 in Álvarez et al, 2016) or sinistral transcurrent (Scheuber and González, 1999 in Álvarez et al, 2016). Between the Lower Jurassic and the Lower Cretaceous, there was an important magmatic activity represented by the emplacement of numerous plutons in the region (Vicuña Mackenna Batholith), of which the Paranal Plutonic Complex stands out, made up of Diorites, Gabbros and granodiorites with their monzonitic and quartz varieties, corresponding to the Middle Jurassic (Hervé M., 1989) and the Izcuña Quartz Diorites, which are the rocks that predominate in the Polaris Project.

The property is located in the metallogenic belt of the coastal mountain range, where it is possible to observe numerous deposits, among which copper deposits stand out due to their greater economic importance, followed by a smaller number of gold, silver, manganese and mercury deposits, with the most frequent being the vein-shaped ones. Marinovic et al (1995) details that these deposits, according to their characteristics such as mineralization, hydrothermal alteration, shape and radiometric background, indicate that their origin is mainly related to the magmatism of the Jurassic-Lower Cretaceous and spatially related to the major structural systems of the Atacama Fault System, represented in the area by the Paposo, Quebrada Grande, El Jote, Izcuña and El Médano faults (**Figure 13**).





Figure 13: Map of the regional geology with the main lithologies in relation to the project area. (Modified form Sernageomin 2016).

# 7.1.1 Structural Geology

In the Coastal Range the most important structural systems are represented by the Atacama Fault Zone and the Coastal Escarpment, a system initiated in the Jurassic as a ductile shear zone at relatively deep cortical levels along the axis of the Jurassic magmatic arc and showing evidence of brittle reactivation in the Upper Cenozoic. (Marinovic N. et al, 1995)



The Atacama Fault Zone (AFZ) is one of the most important structures in the Coastal Range of the Northern Chile, extending for more than 1000 km from Iquique to La Serena (Scheuber and Andriessen, 1990 in Álvarez et al, 2016). The AFZ was subdivided into three main segments (Arabasz, 1971 in Hervé, 1987): from Antofagasta to the north, Antofagasta to Taltal and a third to the south of Taltal. It would have been formed with a sense of sinistral movement between the Upper Jurassic and the Lower Cretaceous, as a result of the deformation produced by oblique subduction in that period of time. During the Miocene it would have begun its reactivation as a high-angle normal fault system (Hervé, 1987)

The AFZ section between Antofagasta and Taltal can be subdivided into three structural subsystems, the most important of which corresponds to the Paposo Fault; to the west of this fault is located the subsystem formed by the Izcuña and El Médano Faults and to the east of the Paposo Fault is located the subsystem formed by the Quebrada Grande and El Jote Faults. (Álvarez, et al, 2016) (**Figure 14**).



Figure 14: Map of the main structures related to the Atacama fault zone, present in the project area and their location in relation to the Polaris Project. (Modified from Sernageomin 2016).



The Paposo Fault subsystem extends from Paposo to Caleta El Cobre. It consists of a fault with a strike of 15° and a subvertical dip slightly inclined to the east (Álvarez, et al, 2016), a direction in which results in a 300 m fault scarp, developing triangular facets along 80 km in length slightly concave to the west generated by relative uplift of the western block. (Marinovic, N. 1995).

The Izcuña Fault-Medano Fault subsystem is located between the Coastal escarpment and the Paposo Fault. The Izcuña fault dips to the east with an azimuth of approximately 10° extending from the coastal cliff for 55km to the north, while the Médano fault extends from the Izcuña fault for 42 km NW along an azimuth of approximately 350° intersecting at the latitude of the Médano hill. Between both faults there are various faults of lesser importance with a preferential NNW orientation configuring a duplex where the faults present a sinistral movement. (Álvarez, et al, 2016).(**Figure 15**)



Figure 15: Izcuña Fault, part of the Atacama Fault Zone, puts the Izcuña quartz-Diorite (Jurassic-Cretaceous) in contact with sedimentary and volcanic rocks (Triassic-Jurassic).



The Quebrada Grande Fault-El Jote Fault subsystem is located to the east of the Paposo Fault, furthest from the project area. The Quebrada Grande Fault is subvertical with a curved trace, concave to the west, made up of 2 segments. The northern segment has a small scarp 40 m high for 10 km of its trace. From the Sierra del Muerto, a few km west of the previous fault the El Jote Fault crops out. This fault, together with other minor faults associated with the subsystem with a NNE orientation have a superficial expression from the Sierra del Muerto to the south; on the other hand towards the north they seem to be truncated by rocks from the Lower Cretaceous. In Sierra del Muerto there is a transfer zone between the El Jote Fault and the northern segment of the Quebrada Grande Fault, a place that houses minor faults, tensional veinlets and dikes. All these elements have a NW direction. In this area a negative flower-type structure is generated, which is interpreted as a left-south movement of the Quebrada Grande Fault. (Álvarez, et al , 2016)

The second important structural system corresponds to the Coastal Escarpment, which is a morpho structural feature with an approximate north-south orientation, located on the western margin of the Chilean Coastal Range from northern Chile to the city of Caldera. There is a marine abrasion platform that does not exceed 1 km in width reaching its maximum height near the area of 2,000 m a.s.l. on Paranal Hill, between the coastline and the edge of the escarpment. In Álvarez et al., 2016 they state that Niemeyer et al. (1996) and Paskoff (1978, 1979) state that the straight line of the cliff is not necessarily related to a fault and would only indicate that in an extremely arid area the erosive action of the sea is much more important than that of other agents, also indicating that Naranjo and Paskoff (1985) and Naranjo (1987) suggest that the cliff would have retreated to the east during a marine transgression in the Upper Miocene.



# 7.1.2 Stratigraphy

In Álvarez, et al (2016) the regional stratigraphic column is structured as follows:

The oldest rocks observed in the area correspond to the Chañaral Epimetamorphic Complex (Godoy and Lara, 1998) belonging to the Upper Devonian-Carboniferous, composed of meta-sandstones and metapelites of low metamorphic grade, in the greenschist facies. The protolith of these rocks are turbidites deposited in a submarine fan environment (distal and intermediate facies), which during the Upper Pennsylvanian and Lower Permian, were incorporated into an accretionary prism experiencing mild to moderate deformation and low to medium grade metamorphism.

The Triassic in the area is represented by the Cifuncho Formation (García, 1967; Marinovic et al., 1995; Álvarez et al., 2016) which presents angular unconformity over the Chañaral Epimetamorphic Complex, inferring a maximum age of deposition of 225 Ma. The basal rocks of this formation (conglomerates and sandstones) show deposits of continental environment that evolve towards marine-lacustrine conditions (limestone, limonites and calcarenites) towards the roof of the formation (beginning of a marine transgression). This transgression coexisted with explosive volcanic events and effusion of andesitic flows that are evidenced in the intercalation of these rocks with tuffs and strata of andesitic lavas. The Cerro Carnero Tonalite Unit (Álvarez et al., 2016) is also located in this period, which specifically intrudes the Chañaral Epimetamorphic Complex. (Figure 16)



Figure 16: Stratigraphic column of the units present in the Polaris Project. (Based on Sernageomin 2016).



The Jurassic is characterized by the Pan de Azúcar Formation, which was deposited during the marine transgression of the Lower Jurassic that began in the Triassic, presenting deeper marine facies than the previous ones (calcareous shales with sandstones in accordance with the Cifuncho Fm). The explosive volcanic activity continued with massive thanatocenosis in fossiliferous strata related to subaqueous pyroclastic layers. The intensification of this activity generated the La Negra Formation, representing a volcanic arc under an extensional or transcurrent sinistral regime, where marine sedimentary intercalations and pillow lavas are observed (concordant with the Pan de Azúcar Fm), suggesting a shallow marine environment, which varies to a coastal continental volcanic environment. At the end of the Jurassic and beginning of the Cretaceous, there was significant magmatic activity represented by the emplacement of numerous plutons of varied compositions that cover a large part of the area, related to the activity of the Paposo Fault subsystem and accompanied by discrete pulses of subvolcanic activity. Among these plutons, the Paranal Plutonic Complex (Upper Jurassic) stands out. It belongs to the Vicuña Mackenna Batholith, which intrudes the Chañaral Epimetamorphic Complex, the Cifuncho, Pan de Azúcar and La Negra Fm, which covers a large part of the project area and to a lesser extent the Lower Jurassic Hypabyssal Intrusives (Lower Jurassic), consisting of Andesitic and dacitic Dikes that also intrude the Paranal Plutonic Complex, Pan de Azúcar Fm and Cifuncho Fm.

The subaerial deposition processes during the Early Cretaceous were synchronous with a significant activity of the Atacama Fault System, which would have generated the space for the deposition of continental clastic sediments of the Caleta Coloso Formation during the Berriasian Cretaceous. Later, in the Aptian-Albian there would have been significant pyroclastic activity, represented by the subaerial tuffs, andesitic lavas and red sandstones of the Aeropuerto Formation.

There is no record of Paleogene rocks or deposits in the area, which suggests that during that period there was a depositional hiatus or that this area was predominantly exposed to the action of erosive processes. Therefore, the Cenozoic is present through abundant deposits of alluvial and colluvial material with ages between the Miocene and the Pliocene, which come mainly from nearby topographic highs. These deposits are locally cut by the trace of the Paposo Fault and other minor faults. It is therefore inferred that the Paposo Fault would have been reactivated normally in the Miocene (Hervé, 1987b; Domagala et al., 2016 in Álvarez et al., 2016). Finally, between the Pleistocene and the Holocene, aeolian, colluvial and marine sediments were deposited on the coastal margin.

# 7.2 Local Geology

The oldest rocks in the Polaris Project area are those of the Pan de Azúcar Formation (Lower Jurassic), which outcrop on the southeastern boundary of the property in the eastern block of the Izcuña Fault, characterized by limestones, calcareous sandstones and shales with intercalations of ash to carbonated lapilli tuffs. Intruding this formation are the Hypabyssal Intrusives of the Lower Jurassic, composed of mantle veins and dikes of andesitic composition aligned in a NNE direction that outcrop punctually in the southeast corner of Polaris. Concordant on the Pan de Azúcar Fm is the La Negra Formation, which also



outcrops near the southern boundary of the property, on the eastern flank of the Izcuña Fault, presenting porphyritic andesites with centimeter-long intercalations of red sandstones and tuffaceous sandstones.

The Paranal Plutonic Complex (Upper Jurassic) is intruding the Pan de Azúcar Fm and the La Negra Fm. This complex covers most of the southern area, from the coastal cliff and the El Médano fault. It is represented mainly by diorites, quartz diorites and gabbros, intruded by dioritic dikes, granitic dikes spatially associated with pegmatitic veins and local dioritic enclaves. In the southern part of the area, within this Complex, the presence of thin veinlets of Quartz and/or Quartz-Epidote is noted, often accompanied by limonites. These veinlets range from millimeters to 5 cm thick at times. It is possible to see them in the form of stockwork which causes intense fracturing of the rock, making it difficult to recognize the lithology of the host rock (**Figure 17**). In addition, the recurrent presence of quartz-limonite veins distributed in the southern area is recorded, which contain Cu Ox and, according to geochemical analysis, the presence of Gold.



*Figure 17: Millimetric to centimetric quartz and epidote veinlets with the presence of limonites.* 

In structural contact with the Paranal Plutonic Complex, there is the Izcuña Quartz Diorite Unit, which is in contact with this complex through the Izcuña and Médano faults, to the east and west respectively. Its lithology corresponds to quartz diorites and quartz monzodiorites of amphibole and/or clinopyroxene, with scarce to absent biotite, gradually and continuously varying to quartz monzonites and diorites of amphibole, pyroxene and biotite. On the western flank of the Izcuña fault, this Unit presents propylitic alteration up to the intersection with the El Médano fault. Izcuña Quartz Diorite covers the northeastern half of the property, being together with the Paranal Plutonic Complex the largest units within the Polaris Project area.

Miocene-Pliocene alluvial deposits are distributed in a restricted manner in the south of the area, supported by erosional unconformity on all the lithologies described above. It is made up of gravel, sand



and silt with ash intercalations. Towards the coast, in the southwestern sector of the Project, Alluvial and Colluvial Deposits are observed, corresponding to unconsolidated, monomictic or polymictic deposits, made up of gravel, sand and silt, and Coastal Colluvial Deposits, composed of deposits of gravel, sand and silt of gravitational origin, located on the slope of the coastal cliff forming alluvial cones.

# 7.3 Alteration and Mineralization

The metallic deposits in the area belong to the Metallogenic Belt of the Coastal Range. The mineralization is associated with the intense plutonic activity that took place from the Middle Jurassic to the Early Cretaceous, and spatially related to the major structural systems, metallic mineralization was deposited in intrusive rocks of Jurassic and Cretaceous age and in volcanic and sedimentary rocks of the La Negra, Aeropuerto and Chañaral Epimetamorphic Complex formations. In general terms, to the west of the Paposo Fault, there are mainly small vein-shaped deposits with variable contents of gold, silver and copper, mostly hosted in plutonic rocks from the Middle Jurassic to the Lower Cretaceous, while to the east of the Paposo Fault, there are vein-shaped and stratabound deposits with variable contents of Fe, Cu, Au and Mn, hosted in plutonic rocks from the Middle Jurassic and in volcanic and sedimentary rocks from the Middle Jurassic to the Lower Cretaceous.

The Polaris project is located between the Panul District, characterized by gold and silver mineralization with subordinate copper, the Parañao District of gold and subordinate Cu and the Yumbes District of silver mineralization. Marinovic et al. (1995) describes these 3 districts as:

- The Panul District, located NW of the Property, corresponds to veins embedded in Diorites and monzodiorites of the Paranal Plutonic Complex, presenting NW, N-S and NE orientations with sub-vertical inclinations. The presence of dioritic composition dikes associated with the characteristic veins present in Polaris is common. The ore is made up of native gold, atacamite, chrysocolla and malachite, while the gangue consists of quartz and pyrite.

- The Parañao District, the district closest to the property limits, corresponds to thin gold veins located immediately west of the Izcuña fault, hosted in diorites, quartz diorites and monzodiorites of the Paranal Plutonic Complex. They have preferred orientations NS-N35W and inclinations of 30-90°. Mineralization consists of native gold with minor amounts of copper oxidizers, with quartz, iron oxides and pyrite as gangues.

- The Yumbres District located to the east of the property, in the sector closest to the Yumbes fault and the Paposo fault, represented by 2 main veins with a trend of N80W/65N and N65W/90° embedded in diorites and quartz diorites of the Paranal Plutonic Complex. In both deposits, mineralization consists mainly of silver oxides and galena in the primary zone.

Zones of weak propylitic alteration have been identified that affect rocks of the Paranal Plutonic Complex (main component of the surface of the area), Displaced Pluton and Izcuña Diorite. These alteration zones are aligned along a N15° E trend especially west of the Izcuña Fault and form discrete, elongated zones



with a maximum width of 800 m. thin veinlets and microveins with variable amounts of epidote, calcite, zeolites, chlorite and subordinate limonites affecting diverse lithologies were identified, which locally generate millimetric alteration halos and light brown-pink colors. The development of this alteration would be related to the activity of the Izcuña Fault and, probably to the emplacement of Upper Jurassic-Lower Cretaceous plutonic bodies.

In the Punta Amarilla sector south of the project, at the height of Paposo, a wide area of propylitic alteration of at least 16 km2 is recorded, affecting diorites and monzodiorites of the Diorite-Granite Sierra Amarilla, evidencing the replacement of its ferromagnesians by chlorite and epidote. In this sector it was also possible to delimit zones of advanced argillic and argillic alteration, which form zones with more restricted areas, and spatially associated with structures with a N30° W direction and subvertical mantle. They are characterized by the occurrence of strong silicification together with natroalunite, deuteric alunite, hematite, jarosite and kaolinite, which suggests the superposition of a supergene argilization process by an association of hypogene advanced argillic alteration.

In the headwaters of the Yumbes ravine close to the south limit of the project area, a silicification zone of approximately 1 km2 is recognized that affects quartz diorites of the Remiendos Plutonic Complex, which presents an elongation N80°E. The rocks are cut by quartz veins of millimeter thickness and chloritization of the primary ferromagnesians of the rock. The genesis of this zone is related to hydrothermal fluids channeled by the Paposo Fault and its maximum age would be Lower Cretaceous, constrained by that of the Remiendos Plutonic Complex, which hosts the zone. (Álvarez et al., 2016)

### 7.4 Project Geology

In the Polaris project area the dioritic intrusive (Izcuña Diorite) can be observed where it is cut by abundant dikes of monzodiorite composition, dikes of microdiorite composition and in some sectors porphyritic dikes of andesitic composition. This interaction of different dike emplacements combined with the strong influence of the adjacent Atacama fault zone, results in intense fracturing of the rock, with local shear and with mylonite zones with NNE strike parallel to the Izcuña fault (AFZ). All these rocks are covered by extensive zones of colluvium overburden and intermittent bedrock exposures (**Figure 18**).





Figure 18: Lithology (Left) and alteration (Right) map of the north zone of the Polaris Project.

The strong argillic-chlorite alteration can be observed with intense shear in the areas close to the small historical mining works. Chlorite-epidote alteration is widely present surrounding these areas. (Figure 19 and Figure 20).



*Figure 19: Left, Stockwork with limonites in diorite, with moderate argillic-chlorite alteration and presence of epidote. Right, Stockwork of quartz veinlets, strong argillic-chlorite alteration (In red, veinlets of quartz).* 





Figure 20: Stockwork with limonites in diorite, with intense argillic-chlorite alteration.



The mineralization is mainly gold associated with stockworks hosted in Diorites and zones with intense quartz-limonite-gold sheeted veins. Although vein intensity outside of old mine areas decreases, areas of intense stockwork related to structural corridors outcrop and remain open in all directions. (Figure 21)



Figure 21: Distribution of diorite stockwork according to its intensity recognized in the northern area of the project



# 8.- DEPOSIT TYPES

The mineralization is, and spatially related to the major structural systems. Metallic mineralization was deposited in intrusive rocks of Jurassic and Cretaceous age and in volcanic and sedimentary rocks of the La Negra, Aeropuerto and Chañaral Epimetamorphic Complex formations.

The Polaris Project is located in an active regional structural environment represented by the Atacama Fault Zone (AFZ) and which is locally affected by the Médano fault of regional extension, generating shear and fracturing. This aspect allows the generation of spaces suitable for the mobilization of mineralizing fluids.

Lithologically, it is located in intrusive rocks (diorites, quartz diorites and gabbros) associated with the intense plutonic activity that took place from the Middle Jurassic to the Early Cretaceous that are intruded by aplitic and granodioritic dikes.

These intrusives are altered, with the predominant argilic-chlorite alteration with different intensities, silicification and the presence of limonites and epidote, and clear evidence of hydrothermal activity that would have generate mineralization. Regionally, this mineralization is associated with this intense plutonic activity.

In the field, mineralized structures of sheeted veins, veins and stockwork type are identified with quartz, calcite, epidote filling with abundant limonites in fractures and occasionally pyrite boxwork.

Geochemically, economic gold values have been confirmed in the veins, sheeted veins and stockworks.

Although the Polaris Project is in a very early exploration stage, with the information mentioned above, similarities can be found with deposits with the same characteristics and it can be assumed that it could be an Intrusive Related Gold (IRG) deposit.

Some examples of this type of deposit are:

Tintina in Fairbanks, Alaska, USA

The Côté Gold Au(-Cu) in Ontario, Canada

El Zorro (La Ternera) in Atacama, Chile.



# 8.1 Intrusive Related Gold Deposits (IRG)

IRG as defined in Hart (2007) include a wide range of gold-rich mineral deposit styles that are considered to have had a direct genetic link with a cooling felsic intrusion during their formation.

Associated deposit styles are varied, such as skarns, veins, disseminations, stockworks, replacements, and breccias. Different styles and metal associations of deposits are zoned around a central, reduced (ilmenite-series) felsic to intermediate intrusion with host lithology and structural setting providing secondary controls. (**Figure 22**Figure 22: General plan model of RIRGS from the Tintina Gold Province.)

Reduced intrusion-related gold systems (RIRGS) are characterized by widespread arrays of sheeted auriferous quartz veins that preferentially form in the brittle carapace at the top of small plutons, where they form bulk-tonnage, low-grade Au deposits characterized by a Au-Bi-Te-W metal assemblage, such as the Fort Knox and Dublin Gulch deposits.



Figure 22: General plan model of RIRGS from the Tintina Gold Province.

RIRGS also include a wide range of intrusion-related mineral deposit styles (skarns, replacements, veins) that form within the region of hydrothermal influence surrounding the causative pluton, and are characterized by proximal Au-W-As and distal Ag-Pb-Zn metal associations, thereby generating a zoned mineral system.



Plutons that generate RIRGS form in tectonic settings characterized by weak post-collisional extension behind a thickened continental margin. Such settings are also conducive to the formation of W deposits, and thereby generate a regional Au-W metallogenic association, but individual plutons can generate both W and Au deposits. Associated magmas are diverse and have characteristics of I-, S-, and A-type granitoids. The most prolific Au systems comprise metaluminous, moderately reduced, moderately fractionated, biotite>>hornblende>pyroxene quartz monzonites that have mixed with volatile-rich lamprophyric melts. The magmas have a reduced primary oxidation state that form ilmenite-series plutons. This reduced state causes associated sulphide assemblages to be characterized by pyrrhotite, and quartz veins that host methane-rich inclusions. RIRGS mostly form at a depth of 5 to 7 km and generate mineralizing fluids that are low salinity, aqueous carbonic in composition and are, therefore, unlike typical porphyry Cu deposits. The RIRGS class was developed on well-studied examples in Yukon and Alaska. Other suggested Canadian examples are in southeastern British Columbia and New Brunswick; numerous global examples have been suggested, but many are controversial.



# 9.- EXPLORATION

### 9.1 Halcones Exploration

The Company has completed a chip sampling program in order to replicate the results from the database provided by the owners.

Halcones surface sampling consisted in Rock chip samples acquired form the North Zone target, South Zone Target, and the north limit zone. A total of 13 samples were collected (Error! Reference source not found.), with one reference material (Standard) inserted for Quality Control. The results are presented in **Table 3**.

Sample ID	EAST UTM WGS84 19S	NORTH UTM WGS84 19S	Au (ppm)	Ag (ppm)	Description
59432	350238	7249743	2.500	4.0	Stockwork in Diorite with limonites
59433	350253	7249737	10.000	10.0	Stockwork of fine veinlets of qz in diorite
59434	350246	7249753	0.045	1.0	Stockwork in Diorite with limonites
59435	350285	7249755	0.015	1.0	Stockwork in Diorite with limonites
59437	350264	7249739	0.060	1.0	Stockwork of fine veinlets of qz in diorite
59438	350226	7249617	9.340	4.0	Old mine dumps
59439	350226	7249617	10.000	3.0	Old mine Qz Vein
59440	350169	7249721	3.700	1.0	Stockwork of fine veinlets of qz in diorite
59441	350612	7249217	0.043	1.0	Stockwork in Diorite with limonites
59442	351083	7251009	0.022	1.0	Stockwork in Diorite with limonites
59443	351071	7251022	0.075	1.0	Stockwork of fine veinlets of qz in diorite
59444	351021	7251044	0.738	1.0	Stockwork with limonites and Cu oxides
59445	351029	7251043	0.058	1.0	Stockwork in Diorite with limonites

#### Table 3: Location and results of sampling carried out by Halcones.





Figure 23: Sampling distribution carried out by Halcones in relation to the distribution of samples in the Austral Exploraciones database.



## 9.2 Austral Exploration

Exploration at the Polaris project is limited to that carried out since 2022 by Austral Exploraciones. Since then, the work has consisted of surface chip sampling (Figure 24 and Figure 25) (Table 4), some basic geological mapping, an inventory of old mining workings and a geophysical IP line test.



Figure 24: Sample location and Au values from Austral database, defining the two preliminary zones of interest, North and South Zone. Old mining workings in yellow triangles. (Sernageomin database)



	EAST	NORTH			Cu ppm	
Comula ID	UTM	UTM	A., (mmm)	A.g. (mmm)		
Sample ID	WGS84	WGS84	Au_(ppm)	Ag_(bbiii)		
	195	195				
J2	349678	7248297	8.83	27	>5,000	
MT-44	349728	7248098	28.38	9	1,036	
MT-43	349800	7248172	30.59	18	4,184	
10318	349860	7248396	5.89	<3	1,722	
MT-25	349973	7248389	6.93	7	634	
39510	349974	7248616	8.45			
MT-24	350027	7248468	7.53	9	1,113	
MT-28	350042	7248363	6.35	7	353	
MT-23	350044	7248394	5.14	6	783	
MT-22	350053	7248465	13.76	6	1,364	
MT-21	350054	7248472	10.72	12	960	
10474	350058	7248574	7.36	3	640	
MT-38	350071	7248591	6.85	<3	403	
MT-20	350079	7248480	9.01	9	672	
MT-26	350082	7248367	25.27	8	1,247	
MT-18	350106	7248425	6.35	4	387	
MT-19	350117	7248396	12.31	6	4,474	
10312	350150	7249449	12.60	9	84	
MT-7	350168	7249694	11.02	4	99	
434631	350171	7249700	5.11			
MT-3	350187	7249577	19.56	4	159	
MT-5	350205	7249550	36.64	13	300	
MT-4	350207	7249603	12.75	<3	126	
MT-6	350207	7249659	33.70	10	123	
MT-1	350226	7249591	10.26	3	130	
MT-2	350226	7249591	14.34 3		59	
434634	350229	7249725	7.75			
MT-29	350230	7248243	22.36	10	660	
40075	350233	7250655	13.95			
MT-9	350240	7249664	5.96 <3		49	
10395	<b>10395</b> 350244 7249589		55.30	22	331	
10399	350244	7249714	20.94	7	83	
77805	350244	7249589	6.20			
77801	350248	7249712	5.14			
434613	350254	7249664	5.04			
39494	350254	7249663	6.31			

Table 4: Location and sampling results in Austral Exploraciones database. Values over 5 ppm Au.



Sample ID	EAST UTM WGS84 19S	NORTH UTM WGS84 19S	Au_(ppm)	Ag_(ppm)	Cu ppm
39488	350256	7249659	5.28		
434611	350257	7249667	5.88		
MT-8	350257	7249654	11.26	<3	38
39508	350260	7249667	11.75		
10349	350269	7249655	5.19	<3	156
39468	350274	7249672	11.20		
10341	350275	7249658	15.61	<3	154
10306	350281	7249546	7.77	<3	213
10338	350286	7249636	6.77	4	57
10337	350296	7249637	11.84	<3	62
10339	350296	7249644	6.09	<3	38
10498	350304	7249083	6.42	<3	1,468
10343	350308	7249654	5.00	<3	230
10336	350309	7249621	5.22	<3	132
39956	350380	7250631	9.21		
10386	350500	7249489	6.16	<3	65
39989	350591	7250160	6.05		
39934	350602	7250417	43.40		
10455	350796	7250231	9.44	<3	54
40019	351025	7251016	8.27		





Figure 25: Location and sampling results in Austral Exploraciones database. Values over 5 ppm Au.

Considering the gold values above 5 g/T, a third zone of interest can be defined (North limit Zone). Although sampling is not continuous throughout the entire zone, sampling in the areas with lower sample density would allow the three zones to be connected and therefore project a continuity of potential mineralization for approximately 4 km.



# 9.2.1 Rock sampling survey

The historical rock sampling survey consisted of 350 rock chip samples. All samples were analyzed for gold and a suite of other 34 elements at ANDES ANALYTICAL ASSAY Laboratory in Santiago, Chile. Gold was determined using fire assay pre-concentration, hot four-acid digestion, and AA finish. The other elements were determined on a hot four-acid digestion and ICP finish. Figure 19 shows the location of this sampling, Table 3 shows the result over 5 ppm of gold of the rock sampling survey for the key elements Au.

The results obtained from the sampling carried out in the old mining workings as well as from the surface sampling, allow us to preliminarily define two main zones of interest with high concentrations and anomalous values of gold. These zones have been called North Zone and South Zone (Figure 19).

The results of surface sampling and old workings confirm the existence of gold mineralization in the area.

The average concentration of the total samples is 2.03 g/T of Au.

There is undoubtedly gold in the system. This is demonstrated by the following statistics:

- 59% of the geochemical samples returned gold concentrations.
- 39% of the samples run grades above 1 g/T of Gold.
- 17% of the samples run grades above 5 g/T of Gold.
- 7% of the samples run grades above 10 g/T of Gold.
- The average grade of the total of samples is 2.03 g/T of Au



# 9.2.2 Geophysical survey

Within the information provided by Austral Exploraciones, a section of IP geophysics was provided (Line 350420 E). There is no date or report that allows the data to be reviewed, only that the work was carried out by Argalí Geofísica, and that there was just one test line.

The IP line was positioned through the main mineralized zones to help evaluate the depth and extent of shallow oxidation and to identify any deeper sulphide zones below the oxidation. At surface, gold is typically related to qtz-lim veins/veinlets in shear and stockwork zones. The limonite may be indicative of oxidized sulphide mineralization. The pole-dipole array was employed with 50m dipoles, n=1 to 10, with a depth penetration of about 270m

### **IP LINE 350420 EAST**

### **Chargeability Inversion**

The southern mineralized zone shows a moderately strong chargeability anomaly at depths of 75 to 150m. Low charge abilities near the surface suggest strong oxidation, while the higher charge abilities at depth probably indicate sulphide mineralization. A shallow chargeability anomaly remains open to the south.

Anomalies are weaker over the North target; However, low charge capabilities are outlined near the surface with higher charge capabilities at depth. The North zone is located approximately 400 m higher in elevation than the South zone, so higher chargeabilities may be present at greater depths on the North zone.

A moderately strong, shallow chargeability anomaly is observed between the North and South zones, suggesting the possibility of continuous sulphide mineralization at depth. (Figure 26)



Figure 26: Chargeability profile of IP line 350420 East



# Resistivity

The IP line discovered very high resistivity values at depth that is in accordance to the chlorite+/-argillic+/epidote altered Diorite intrusive batholith observed in Project area The flat lying conductive zone near the surface is likely enhanced weathering and oxidation.

The deeper resistive zones are likely unoxidized and possibly partially silicified the two deep, higher conductivity areas could be related to shear and faulting zones. (Figure 27)



Figure 27: Resistivity profile of IP line 350420 East.

# **Conclusions:**

Although the geophysical line was projected in a NS direction due to a geomorphological factor (too close to the scarp) and therefore almost parallel to the structures, the information obtained would support the possibility of continuous sulphide mineralization at depth in conjunction with shear and fault zones.



# 9.2.3 Targets

Considering logistical variables and based on the exploration carried out to date, there are 3 areas that have been selected as priorities to be considered as objectives for an exploration program.

The first area, called North Zone covers part of the old workings and is also where the largest amount of sampling has been carried out. The results of the sampling in this area show significant gold values associated with veins as well as outcrops with stockwork of veinlets and microveins in dioritic intrusive with strong argillic-chlorite alteration.

The second area, located about 1 km south from the North Zone, has been called South Zone, which also covers some old mining workings and geochemical sampling with high gold values and presents variations in the alteration in the stockworks with a greater presence of limonites in the fractures.

The third zone, called North Limit Zone is located about 2 km north of the previously mentioned zones, where there is not much sampling but the results have returned gold values above 5 g/T.

It should be noted that the 3 areas described present stockwork in diorite with different intensities and variations in the intensity of silicification and presence of limonites.

This separation into 3 zones is mainly due to the sampling density and high gold results, but it is important to mention that in the areas that separate them no sampling has been carried out, so they could become a continuous zone.



# 10.- DRILLING

This section is not applicable as there is no reported drilling on the Property to date.



# 11.- SAMPLE PREPARATION, ANALYSIS AND SECURITY

Halcones carried out limited chip sampling in order to confirm the results from the database provided by the owners, as well as confirming the existence of the sampling tags in the field. The sampling carried out by Halcones followed the protocol described below in order to guarantee its representativeness and custody until delivery to the Laboratory.

## 11.1 HALCONES QA/QC Program

The QA/QC program is a shared responsibility between geologists and management. The overall responsibility for ensuring that all procedures are shared is the COO of Halcones Precious Metals Corp. It is the responsibility of the Geologist to ensure that the appropriate target and standard are inserted

In order to ensure that sampling results are of high quality and reliable, Halcones has designed and implemented a set of processes which are mandatory for use by personnel involved in the sampling process. The QA/QC program is a shared responsibility between geologists and management. The overall responsibility for ensuring that all procedures are shared is the COO of Halcones Precious Metals Corp. It is the responsibility of the geologist to ensure that the appropriate blanks and standards are inserted.

### Table 5: Halcones Precious Metals QA/QC Program

	Rock/Soil	Sediments	Cores
Certified Standard	1 in 20	1 in 20	1 in 20
Fine Blank	1 in 50	1 in 50	1 in 20
Coarse Blank	1 in 50	1 in 50	1 in 50

### Table 6: Standards for Polaris Project.

Certified Standard	Au g/T	Ag g/T	Cu %
IN-M-358-174	0.452	6.4	1.787
CDN-ME-1312	1.27	22.3	0.446



### **11.2 HALCONES SAMPLING PROCEDURE.**

### **11.2.1** Sample registration and selection

The location of the sample is recorded with GPS in Datum WGS84 Zone 19S. It is defined if the sample is from rock or structure and in that case, it is taken its measurement. The final sample record will consider: Location, Strike / Dip, Width, sample number, mineralogical description.

# **11.2.2** Assignment of sample number and bag.

The sample number is assigned according to the numbered sampling tags book and a numbered bag is assigned with a permanent marker according to the assigned number.

# 11.2.3 Sampling.

Using a hammer and a pointed wedge, a chip sampling is carried out uniformly in 1 meter sections, taking care of the complete collection and representativeness of the sample. The sample quantity must be 2 kg.

# **11.2.4** Bagging and labelling.

A 65 x 30 cm plastic bag with a thickness of 250  $\mu$ m is used. Each bag must be marked with a permanent marker with the number assigned in the sampling tags book. The sampling tags book consists of 3 prepunched labels with the same number and laminated. Each sample is assigned 2 labels, one is inserted into the sample and the other is stapled to the bag. The bag is closed with 3 folds and sealed with 4 staples. (Figure 28)



Figure 28: Sample bags with tags and sealed with staples



# 11.2.5 Evidence and sampling record

Once the sample is taken, aluminum identification tags are installed with the sample number in relief for each sample. These tags are secured to the rock with a nail. To prove the existence of the sample, a piece of colored tape is tied to the nail.



Figure 29: Aluminum identification tag installed at the sampling site

# **11.2.6** Bagging and sealing.

The samples are ordered consecutively including the quality control inserts. The distribution of these inserts follows the company's QA/QC protocol. All samples are distributed in white sacks numbered with a permanent marker with the company name, code and shipping number, sample numbers, bag number and laboratory name. The sacks are sealed with a numbered plastic seal (**Figure 30**). The information of each bag associated with the seal is recorded and an internal document is issued with this information. Two copies are printed. This process is supervised at all times by the geologist responsible for the project. The entry form and the work order for the samples provided by the Laboratory are completed.





Figure 30: Sacks with samples and sealed with numbered seal.

## **11.2.7** Transport of samples to laboratory.

The samples are transported to the laboratory facilities by truck by company personnel. The custody and transfer of the samples is the responsibility of the company personnel.

# **11.2.8 Entry and reception of samples.**

The samples are received by the Laboratory personnel, who receive the Sample Submittal Form and the company's internal registration document with the details of the bags. The laboratory personnel, together with the company manager, check the information contained in the forms and the correspondence of the seals with the registry. The laboratory accepts the submission. It delivers stamped copies of the Sample submittal form and the company's internal document, declaring the acceptance of the reception. Both stamped copies are stored at the company office.

### **11.3 AUSTRAL SAMPLING**

The process of obtaining information and the sampling protocols carried out by Austral, were not supervised by Halcones. Halcones confirmed the existence of the sampling tags in the field. The information provided by Austral is considered reliable and was partly verified by Halcones during the due diligence process. The results obtained by Halcones returned good correlation with the results provided by Austral.



### **11.4 CERTIFIED LABORATORY**

All samples were bagged and sealed on site and delivered to **ANDES ANALITYCAL ASSAY Laboratory** in Copiapó, Chile. After sample preparation at ANDES ANALITYCAL ASSAY Laboratory in Copiapó, split pulp samples were shipped to ANDES ANALITYCAL ASSAY in Santiago, Chile for assaying gold by fire assay (AEF\_AAS\_1E42-FF), and for analyzing 34 other elements, including silver, by four acids (ICP\_AES\_AR34m1). Results are shown in table 4.

**ANDES ANALITYCAL ASSAY** is and independent laboratory certified with a global quality management system that meets all requirements of **International Standards ISO/IEC 17025:2017**, includes its own internal quality control samples comprising certified reference materials, blanks, and pulp duplicates. (**Figure 31**)



Figure 31: Andes Analytical Assay Laboratory facilities.

The protocols implemented in sample preparation, security and analytical procedures by **HALCONES** and **ANDES ANALITYCAL ASSAY** laboratory are considered by the author to be the most adequate available and thus the assays results reported are considered valid.



# 12.- DATA VERIFICATION

During the author's visit to the Polaris Project on October 19, 2024, eight outcropping stockwork samples with limonite and quartz veinlet fillings were taken, as well as samples from old mining dumps. These samples were delivered to the ANDES ANALYTIC TESTING Laboratory in Copiapó. A standard reference sample was included for quality control.

The location of the samples is presented in **Figure 32**, and the results presented in **Table 7**. Significant results from this sampling reinforce the hypothesis for the presence of disseminated gold at the Polaris project.



Figure 32: Location of samples taken by the author. Austral Exploraciones sampling as reference.



	EAST	NORTH					
Sample ID	UTM WGS84 19S	UTM WGS84 19S	ALTITUD	Au (g/t)	Ag (ppm)	Cu (ppm)	Description
57178	350133	7249799	1701	0.26	0,5	109	Stockwork in granodiorite with limonite and qz
57179	350260	7249761	1707	0.01	0,5	114	Stockwork in Diorite with limonites
57180	350253	7249691	1674	1.08	0,5	186	Stockwork of fine veinlets of qz in diorite
57181	350277	7249642	1673	9	2	456	Dumps at E-W tunnel entrance
57183	350226	7249618	1691	12.03	0,5	126	Old mine dumps
57184	349903	7248471	1480	0.02	0,5	67	Stockwork in unaltered diorite
57185	350040	7248481	1475	0.46	0,5	380	Old mine dumps
57186	351014	7251049	1752	0.17	0,5	114	Stockwork with limonites and Cu oxides

Tahle	7: Results o	f samplind	a carried out b	v the author	during the	e visit to the	Polaris Proiect.
IUDIC	7. Nesuns U	j sumpning	j cumeu out b	y the duthor	uurnig tin		r olulis rioject.

Data verifications for this report included examination and sampling of the mineral showings on the property also had access to the historical dataroom. The geology matched what has been seen by previous explorers, and several pre-Halcones sampling locations could be identified in the field and matched their location as recorded in the data base. The results of previous exploration programs (assay certificates and GPS location), QA/QC procedures and geophysical survey methodologies have also been reviewed. Confirmation of the option agreement and concession tiles by Halcones' lawyers have been checked. The author believes that these data verifications are sufficient for this exploration stage property.



# 13.- MINERAL PROCESSING AND METALLURGICAL TESTING

This section is not applicable as there has not been any mineral processing and metallurgical testing to date.


## 14.- MINERAL RESOURCE ESTIMATES

No mineral resource estimate is considered in this report.



## 15.- MINERAL RESERVE ESTIMATES

No mineral reserve estimate is considered in this report.



# 16.- MINING METHODS

No mining methods are considered in this report.



## 17.- RECOVERY METHODS

No recovery methods are considered in this report.



# 18.- PROPERTY INFRASTRUCTURE

No project infrastructure is considered in this report.



# **19.-** MARKET STUDIES AND CONTRACTS

No market studies and contracts are considered in this report.



## 20.- ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

No environmental studies, permitting and social or community impact are considered in this report.



# 21.- CAPITAL AND OPERATING COSTS

No capital and operating costs are considered in this report.



# 22.- ECONOMIC ANALYSIS

No economic analysis is considered in this report.



### 23.- ADJACENT PROPERTIES

The mining property of Polaris Project is surrounded by concessions owned by other owners. They are mainly constituted and in the process of being constituted exploration concessions. The exploitation concessions are not adjacent to the Polaris Project. There is a small window inside the project owned by a third party with the exception of one constituted that is located in the center of the project. The disposition of the concessions of other owners in relation to the properties belonging to Polaris is shown in Figure 33.



Figure 33: Mining concessions belonging to the Polaris Project in relation to the concessions of other properties.



The mining properties near the Polaris Project have been defined as districts and concentrate small and medium scale mining activity. The main ones are Montecristo and Julia, which are briefly described below. (Figure 34)

The Author has been unable to verify the information regarding the adjacent mining properties and the information is not necessarily indicative of the mineralization on the Polaris project.

### **Montecristo Mine**

The Montecristo sector is one of the initial and still active districts of mining in Taltal and dates back to the mid-19th century when Taltal Bay was enabled to operate as a minor port.

The main deposits in this sector are found in fault related veins embedded in diorites, quartz diorites and tonalites of the Matancilla Intrusive Complex, and in lesser manner in quartz diorites of the Remiendos Plutonic Complex. The veins have a predominantly NE trend, are vertical to sub-vertical with continuity of 100-800 m, a thickness of 0.5-2 m with pockets of up to 15-20 m, and depths between 35 and 140 m. The oxidized zone is relatively undeveloped reaching a depth of up to 55 m and is characterized by the presence of malachite, chrysocolla, atacamite, antlerite and a scarce red ochre with a gangue of hematite, magnetite, limonite and gypsum. Secondary sulfides mainly chalcocite and covellite are poorly developed with a maximum of 44 m in the Montecristo mine, and are associated with a gangue of hematite and magnetite. The primary mineralization has been recognized from 75 to 500 m depth and consists of chalcopyrite, pyrite, bornite and locally molybdenite, associated with a gangue of magnetite and hematite. The deposits are related to dikes and veins strongly altered to actinolite, whose original composition would have been andesitic to dioritic and albitization and propylitization are also recognized in the host rock. (Álvarez et al., 2016)

On average, some 1,500 tons of mineral are extracted monthly from the district. This estimate is for eight producers with an average workforce of twenty workers per operation with grades of 1.70% copper in oxides and 1.50% from sulfides. (Stumptner, 2021)

#### Julia

In the Julia District, the deposits correspond to veins hosted in granodiorites of the Matancilla Intrusive Complex and in sandstones and andesites of the La Negra Formation. The most important deposit corresponds to the Julia-Reventón vein system, whose mineralization is controlled by a fault with a general orientation of N25° E/80° E, hosted in a dioritic-monzodiorite, which reaches a maximum thickness of 30 m. The mineralization in the oxide zone reaches up to 130 m depth and consists of atacamite, chrysocolla, malachite, copper sulphates, cuprite, native copper and red ocher minerals in the mixed zone, the mineralization is mostly of covelline and chalcocite plus the oxides mentioned above. The hypogene mineralization includes chalcopyrite and bornite, and has been recognized up to 370 m below the surface.



Together with the hypogene mineralization, magnetite, pyrite and subordinate quantities of gold were observed. (Álvarez et al., 2016)

The Julia sector is divided into 16 small mines owned by small businessmen from the local communities, who employ an average of 12 people. As mentioned above, these deposits contain oxidized copper minerals with a significant presence of iron, in addition to sulfides. The average monthly production of the area is 5,000 tons of oxides and 1,000 tons of sulfides material that is transported and sold to ENAMI, in Taltal. (Stumptner, 2021)



Figure 34: Location of Montecristo and Julia districts in relation to the Polaris Project.



## 24.- OTHER RELEVANT DATA AND INFORMATION

There is, to the Author's knowledge, no additional data or information, of either a positive or negative aspect, that would change the data presented herein.



## 25.- INTERPRETATIONS AND CONCLUSIONS

All of the information presented in this report, the review of the data room and the field visit allows the author to summarize the following interpretations and conclusions:

### **25.1 Interpretations:**

- a. The significant magmatic activity developed during the Lower Jurassic and Lower Cretaceous puts the Polaris Project in a favorable environment for the emplacement of mineralized bodies (Paranal plutonic complex).
- b. The Atacama Fault Zone (AFZ), the most important structural system in the coastal mountain range and represented by the Izcuña and Médano Faults on the Polaris Project is a determining element that favors the creation of open spaces for the introduction of mineralizing fluids.
- c. The distribution of the old workings is concentrated in the intrusive of the Paranal Complex, in the western block of the Izcuña fault and also west of the El Médano Fault, and they align almost perfectly with the preferential direction of the main mineralized structures.
- d. The lithology present in the Polaris project area, composed mainly of diorites, gabbros and granodiorites is considered favorable for hosting mineralization.
- e. The information obtained from the surface sampling carried out by Austral Exploraciones shows gold mineralization in the Polaris project, with high concentration values in geochemical results that reach up to 55 g/T Au.
- f. The type and degree of alteration present in the area are evidence of hydrothermal activity in the area.

### 25.2 Conclusions

- I. Surface sampling by Halcones confirms the occurrence of gold mineralization and repeats some of the high values obtained by Austral.
- m. Surface sampling by the author confirms the occurrence of gold mineralization and replicates some of the high values obtained by Austral and Halcones.
- n. Gold mineralization is associated to the quartz structures with a preferential NNE orientation as well as in the stockwork in the quartz diorite.
- o. The mineralization in veins and stockwork make Polaris potentially suitable for exploitation as an open pit.
- p. Field observations together with sampling carried out by Halcones confirm that the mineralization is associated with veins and stockwork in dioritic intrusives with intense to moderate chloritic argillic alteration.
- q. There is undoubtedly gold in the system. This is demonstrated by the following statistics:



- 59% of the geochemical samples returned gold concentrations.
- 39% of the samples returned grades above 1 g/T of Gold.
- 17% of the samples returned grades above 5 g/T of Gold.
- 7% of the samples returned grades above 10 g/T of Gold.
- The average grade of all the samples in the database is 2.03 g/T of Au
- r. The mineralization is found in outcrops close to the surface, which would facilitate the exploitation of the deposit.
- s. The distribution and results of all the samples allow us to define 3 preliminary zones that could be considered as targets for an exploration program.
- t. As with all early-stage project, there is a fundamental risk in the exploration process. The property has not been drilled and until such time as drill holes are done, there is no way to confirm what happens to the gold mineralization at depth.
- u. Even if the initial drill program is successful, there will remain several steps and bench marks that need to be passed in order to transform the project into an economic deposit.



### 26.- RECOMMENDATIONS

Considering all the information available and reviewed and the observations made during the field visit, the author makes the following recommendations:

1.- Carry out a sampling campaign in the areas that separate the 3 zones defined as possible targets in order to test for continuity of the mineralization and possibly develop a single larger target area.

2.- Carry out detailed geological mapping with special emphasis on structural geology and alteration patterns.

3.- Carry out a petrographic and calcographic study of thin and polished sections to characterize, understand and relate lithology, alteration and mineralization events.

4.- Carry out trenches and clean areas with cover to obtain better information and sampling that allows a better understanding of the geological events.

5.- Evaluate the scope and effectiveness of carrying out geophysical studies.

6.- Carry out a DDH drilling program in the areas defined as targets to confirm mineralization at depth and understand the emplacement dynamics of the mineralization.

#### 26.1 Work Program

An exploration program for the Polaris Project consisting in two phases is proposed. Exploration Phase 2 is subject to the results of Exploration Phase 1.

The objective of the overall exploration program is to make a discovery in the Polaris Project.

#### Phase 1.

Phase 1 is designed primarily to characterize and expand current objectives and identify new ones in the areas covered with the following recommendations for Phase 1:

1.- Carrying out geological mapping and sampling campaigns with special emphasis put in structural geology and alteration patterns.

- 2.- Samples to be assayed by ICP and FA methods for gold.
- 3.- Petrographic and chalcographic studies of thin sections.

The technical information collected in this Phase 1, together with a 2D model, which will include geological mapping and surface sampling, should define the exploration targets for Phase 2. Phase 1 will only be completed once the targets for Phase 2 are defined.

Estimated completion time: 4 months.



### Phase 2.

The technical information gathered in Phase 1 together with a 2D model, which will include geological mapping and surface sampling should deliver drill targets. Phase 2 will be initiated upon soon after results of Phase 1 interpretation is completed. and the details of the drill program will be based on those results and their interpretation.

Phase 2 will only be initiated following the completion of Phase 1. All results and interpretations on which the details of the drilling program will be based will be reviewed. A drill program of 2000 m of diamond drilling is proposed based on these results and will 3 months. Specific work items are as below:

- 1.- Opening trenches in covered areas.
- 2.- Surface and trench Sampling.
- 3.- Establish an exploration camp on site.
- 4.- Drill Program of 2000 m of diamond drilling.

Estimated completion time: 3 months.



#### 26.2 Budgets

The two-phase program budget will consist initially of geological mapping, sampling and drilling the phase 1 budget is estimated at US\$110,000. Phase 2 is subject to results of Phase 1 and consists of site preparation, drilling and sampling. The Phase 2 budget is estimated at US\$946,000. The total program cost estimated is US\$1,056,000. (Table 8 and Table 9).

#### Table 8: Budget Phase 1

Phase 1 US\$ Cost	
Geological mapping and Sampling (Geologist, Technicians, samplers)	40,000
Assaying (500 samples @ \$60)	30,000
Petrographic and chalcographic studies (30 @ \$150)	4,500
Field Supplies (Sample bags, fuel, safety supplies, food)	10,500
Chile admin and project support (trucks, accommodation, office, mobilization)	15,000
Estimated Cost	100,000
Contingency – 10%	10,000
Total Cost Estimate	110,000

#### Table 9: Budget Phase 2

Phase 2. US\$ Cost	
Access, site preparation and Trenching (Tractor 250 hrs. @ \$120)	30,000
Surface and trench Sampling (Geologist, Technicians, samplers)	20,000
Diamond Drilling – 2,000m (2000 m @ \$335)	670,000
Core logging and sampling (Geologist, Technicians, samplers)	30,000
Assaying (800 samples @ \$60)	48,000
Field Supplies (Sample bags, fuel, safety supplies, food)	32,000
Chile admin and project support (trucks, accommodation, office, mobilization)	30,000
Estimate Cost	860,000
Contingency – 10%	86,000
Total Cost Estimate	946,000



### 27.- REFERENCES

Álvarez, J.; Jorquera, R.; Miralles, C.; Padel, M.; Martinez, P. 2016. Carta Punta Posallaves y Sierra Vicuña Mackenna, Región de Antofagasta. Servicio Nacional de Geología y Minería. Carta Geológica de Chile. Serie Geología básica Nos. 183-184. Mapa escala 1:100.000. Santiago.

Marinovic, N.; Smoje, I.; Hervé, M.; Mpodozis, C. 1995. Hoja Aguas Blancas. Servicio Nacional de Geología y Minería, Carta Geológica de Chile, Serie Geología Básica 70: 150 p., 1 mapa escala 1:250.000. Santiago.

Hart, Craig. (2007). Reduced Intrusion-related Gold Systems.

Hervé, M.; Marinovic, N. 1989. Geocronología y evolución del Batolito Vicuña Mackenna, Cordillera de la Costa, sur de Antofagasta (24-25°S). Revista Geológica de Chile 16 (1): 31-49. doi: 10.5027/andgeoV16n1-a02

Hervé, M. 1987a. Movimiento sinistral en el Cretácico Inferior de la Zona de Falla de Atacama al Norte de Paposo (24° S). Revista Geológica de Chile 31: 37-42. doi: 10.5027/andgeoV14n2-a05.

Hervé, M. 1987b. Movimiento normal de la falla Paposo, Zona de Falla Atacama, en el Mioceno, Chile. Revista Geológica de Chile 31: 31-36. doi: 10.5027/andgeoV14n2-a04.

Jovic, S.; Páez, G.; Galina, M.; Guido, D.; PermuyVidal, C.; López, L.; Kasaneva, S. 2020. Caracterización estructural del sistema de ledges y clavos mineralizados del sector Cachinalito, mina El Guanaco, Región de Antofagasta, Chile. Andean Geology Vol 48.

Laura R. Katz, Daniel J. Kontak, Benoît Dubé, Vicki McNicoll, Robert Creaser, Joe A. Petrus; An Archean Porphyry-Type Gold Deposit: The Côté Gold Au(-Cu) Deposit, Swayze Greenstone Belt, Superior Province, Ontario, Canada. Economic Geology 2020;; 116 (1): 47–89. doi: https://doi.org/10.5382/econgeo.4785

Marinovic, N.; Hervé, M. 1988. El Batolito Vicuña Mackenna (Jurásico Inferior-Cretácico), características petrográficas y geoquímicas. *In* Congreso Geológico Chileno, No. 5, Actas 3: 1297-1319. Santiago.

Marinovic, N.; Smoje, I.; Hervé, M.; Mpodozis, C. 1995. Hoja Aguas Blancas. Servicio Nacional de Geología y Minería, Carta Geológica de Chile, Serie Geología Básica 70: 150 p., 1 mapa escala 1:250.000. Santiago.

Stumpter, F. 2021. Mi Historia, La Minería hace Historia. Editorial Norpress y Consejo Regional Antofagasta. Fomento de Medios de Comunicación Social Antofagasta 2021. www.Diariodelamineria.cl



### 28.- DATE AND SIGNATURE PAGE

This report titled "Technical Report on Polaris Project, Chile" with an effective date of October 19, 2024, was prepared and signed by the following author:

(Signed and Sealed) Joaquín Merino Márquez

Dated at Sevilla, Spain

December 20, 2024

Joaquín Merino Márquez, P.Geo.

Senior Consultant Geologist.