PORTFOLIO OF

ADVANCED PROJECTS

Silver

Ministerio de
Desarrollo Productivo
Argentina

Secretaría de Minería

DISCLAIMER

The purpose of this Argentine Government publication is to disseminate third-party information on the exploratory results of advanced projects and the country's geological mining potential.

The information was obtained through different sources, mainly from public access websites of the operating/controlling companies and from technical reports published by them in different web pages under international standards in order to guarantee a higher degree of reliability.

In some cases, the data are estimated. The SECRETARIAT OF MINING is not responsible for their accuracy or reliability.

For further information on the legal, social and/or environmental status of the projects, interested parties should consult the corresponding provincial authorities, since mines are property of the Nation or of the Provinces, depending on the territory in which they are located (according to Articles 124 and 75 paragraph 12 of the NATIONAL CONSTITUTION, and Article 7 and concordant articles of the NATIONAL MINING CODE, approved by Law No. 1919).

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ADVANCED SILVER PROJECTS

CAPEX
1,133e M USD

1

CONSTRUCTION
1 - PROVIDENCIA

3

PEA (Pref. Econ. Asses.)
2 - DIABLILLOS
3 - EL QUEVAR
4 - NAVIDAD

IDENTIFICABLE RESOURCES
928.1 Moz Ag

2

ADVANCED EXPLORATION
5 - PINGÜINO
6 - EL FIERRO

Mt: millions of tons- Moz: million of ounces kt: thousands of tons- koz: thousand of ounces - M USD: Million of dollars.

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PROVIDENCIA 1

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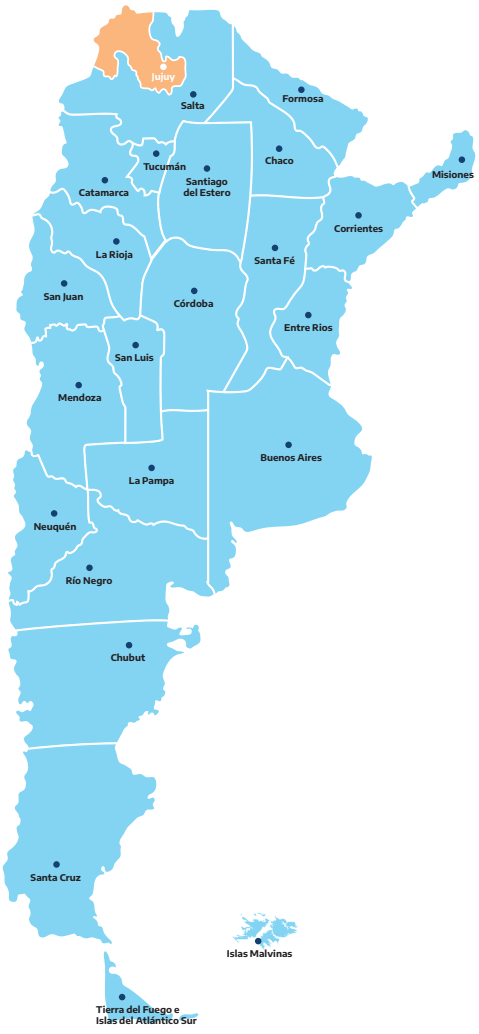
PROVIDENCIA



LOCATION

(23° 15' 41'' Lat. S; 66° 48' 2,9'' Long. W)

The Providencia Property is located in the northwestern corner of Argentina. It is located in the "Puna", an extension of the Bolivian altiplano at elevations varying from 4,200 to 4,700 meters.

The property consists of seven mineral concessions aggregating an area of 17,035 hectares. Access is by road from either San Salvador de Jujuy (260 Kilometers) or Salta (370 kilometers).

MINERALIZATION TYPE

Sulphidation Epitermal style

PROPERTY DATA
OWNER / CONTROLLER

Hanaq Group.

AREA

12,843 ha

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PROVIDENCIA

PROJECT GEOLOGY

Regional Geology

The geological province of the Puna was described by Turner (1970). It forms the southern end of the Bolivian Atiplano and corresponds to a belt, morphologically between the "Cordillera Oriental" to the east and passing transitionally into the "Sierras Pampeanas Septentrionales" to the south. The puna is characterized by an elevated plateau with an average altitude of 4,000 meters above sea level. The border between Argentina and Chile forms the western boundary, defined by volcanoes of the upper Cenozoic volcanic arc.

The basement is composed of marine sediments and low-grade metamorphic rocks, which are Ordovician in age and are highly deformed along the western margin. These sediments overlie a metamorphic basement, which is identified in the north by the presence of xenoliths brought to surface by Tertiary volcanics, while in the south these metamorphic rocks are found in outcrop.

The geological province of the Puna has been subdivided into two sectors (Alonso et al. 1984) according to their regional geological characteristics, namely the Puna Septentrional or Puna Jujena and the Puna Austral or Puna Saltocatamarquena. The oldest rocks outcropping in the Puna Jujena are Ordovician in age, while those in the Puna Saltocatamarquena are Proterozoic metamorphic rocks. The Calama-Olalcapato-El Toro lineament forms the boundary between the two sub-provinces. Other differences are an Ordovician eruptive belt in the south and the development of lower Quaternary basaltic volcanism related to an extensional event.

Deposit Geology

The properties are located within a basin-and-range type terrane with north-trending linear blocks bounded by high angle reverse faults separating Tertiary-age strike-slip (pull-apart) basins, many of which have developed salt flats or salars. All lithologies in the vicinity of La Providencia have been altered to a varying degree both locally and on a property scale. Pervasive hematization has resulted in the red hue evident in the Dark Red Conglomerate and the Eocene sandstones.

Approaching the mineralized zones, carbonate content in the rocks becomes higher and, as mineralization increases, there is an increase in the abundance of sericite until, in the core of the higher grade zone, sericite appears to replace biotite and plagioclase. Calcite, on the other hand, appears depleted in the higher grade core zones.

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PROVIDENCIA

Contact

Av. Sarmiento 447, A440ERE,
Salta. Argentina
(+54) 0387 4218489
contacto@hanaqgroup.com

Project Status CONSTRUCTION

Company´s Last Announcement

During the years 2018 and 2019, Hanaq has optimized mineral reserves and an Environmental Impact Report for the exploitat on stage has been presented to the authorities of the Province of Jujuy.
Hanaq expected to start the construction of this mine during 2021. It is a small-scale production mine (500 tons / day) that will generate more than 50 direct jobs for 9 years and a significant indirect economic impact for the entire the region.

The Providencia deposit displays many of the characteristics of sediment hosted, redbed copper type deposits.

Compania Minera La Providencia (1987) put the property in production and it is estimated that between 250,000 and 400,000 tonnes at an approximate grade of 250 g/t silver was mined and milled.

In 1999 Penoles Ltda. completed an exploration program which included an induced polarization survey, but did not option the property.

Grades of the mineralization are extremely variable and selected samples have returned values as high as 7,600 g/t silver. Past production records suggest an average grade of about 250 g/t silver for the 250,000 to 400,000 tonnes mined between 1987-97. The program of exploration carry outthe take of 1,033 channel samples taken from the surface workings was 172 g/t Ag, 1540 PPM Cu, 4656 PPM Pb and 4701 PPM Zn. The average grade of mineralization encountered in the current drilling program 90.6 g/t Ag, 238 PPM Cu, 1346 PPM Pb and 2229 PPM Zn

Technical and Economic Information

Estimated average annual production: silver lead and zinc concentrate
Product to obtain: N/A
CAPEX: 10 M USD
Estimated annual employment in operation: 36 and subcontracted staff: 24 people
Estimated employment in construction: N/A
Estimated LOM: 8 years
Mining Method: N/A

Sources Consulted

https://www.hanaqgroup.com/projects/providencia/

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DIABLILLOS

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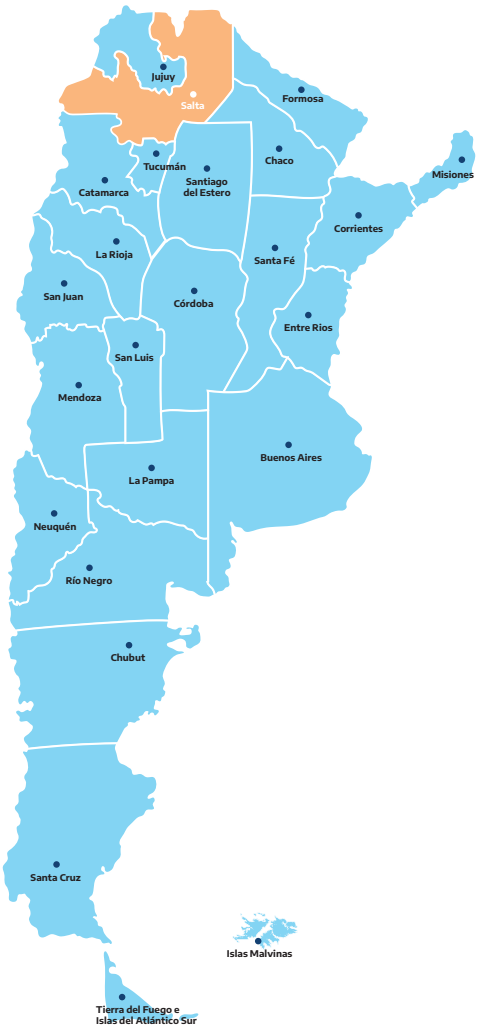
DIABLILLOS



LOCATION

(25° 16' 29'' Lat. S; 66° 47' 23'' Long. W)

The Diablillos project is located 150 km southwest of the city of Salta, at 4,000 meters above sea level, immediately southwest of the Diablillos Volcano.

Access is easy from the city of Salta to the northwest to the city of San Antonio de los Cobres along the RN 51.

MINERALIZATION TYPE

High Sulphidation Epitermal style

PROPERTY DATA

OWNER / CONTROLLER

AbraSilver Resource Corp.

OPERATOR

Abra Plata Argentina S.A.

AREA

7,919 ha

Ag

DIABLILLOS

PROJECT GEOLOGY

Regional Geology

The project is located in the Postacretionary Metalogenetic Belt associated with the Neogene magmatic arc, linked to NE-SO transtensional zones. It is characterized by a vulcanism that has not evolved much in the Miocene period. It includes corridors to the NE that control the magmatic and hydrothermal activity, where polymetallic mineralizations in the N (Farallón Negro) and porphyries with subtypes linked to the characteristics of magmatism such as Agua Rica and Alumbrera are located. The dissected volcanoes of the upper Miocene in the Puna usually host areas with intermediate argillic alteration and silicification. In the highest levels of these systems, in their final episodes, golden manifestations such as Diablillos and Organullo were recognized.

Deposit Geology

In the vicinity of the project, the Diablillos-Cerro Galán fault zone is approximately 10 km wide. Magmatism and hydrothermal activity often occur at the intersection of the faults with shear structures, such as the Cerro Ratones line. Tertiary andesitic flows and flow breccias develop with intermediate tufa and pelic units, and subvolcanic porphyry rocks. Precambrian granitic and granodioritic rocks underlie most of the volcanic sequence. Drilling by Silver Standard Resources identified a highly permeable erosive discordance that would control hydrothermal fluids.
The recognized alteration contains silica clay-alunite-jarosite, indicative of strong acid leaching, which is related to the presence of gold in silica.

Contact

AbraSilver Resource Corp.
220 Bay St, Suite 550. Toronto, ON M5J 2W4
Sr. John Miniotis,
President and Executive Director
+1 416-306-8334 / info@abrasilver.com

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DIABLILLOS

Project Status PRELIMINARY ECONOMIC ASSESSMENT

Company´s Last Announcement

Technical Report - DIABLILLOS PROJECT 01-2022

Resources and Reserves

Category		Tonnage (000 t)	Ag (g/t)	Au (g/t)	Contained Ag (000 oz Ag)	Contained Au (000 oz Au)
TOTAL	Measured	8,235	124	0.98	32,701	259
	Indicated	32,958	54	0.70	57,464	744
	Measured & Indicated	**41,193**	**68**	**0.76**	**90,165**	**1,002**
	Inferred	2,884	34	0.7	3,181	66

Technical and Economic Information

Estimated average annual production:
Silver: 4.2M oz | Gold: 52 koz
Product to obtain: Doré
CAPEX: 255 M USD
Estimated annual employment in operation: 1,630 jobs
Estimated employment in construction: N/A
Estimated LOM: 16 years
Mining Method: Open pit

Sources Consulted

https://www.abrasilver.com/projects/diablillos/
Corporate presentation, March 2022
https://www.abrasilver.com/_resources/presentations/corporate-presentation.pdf?v=0.113

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EL QUEVAR

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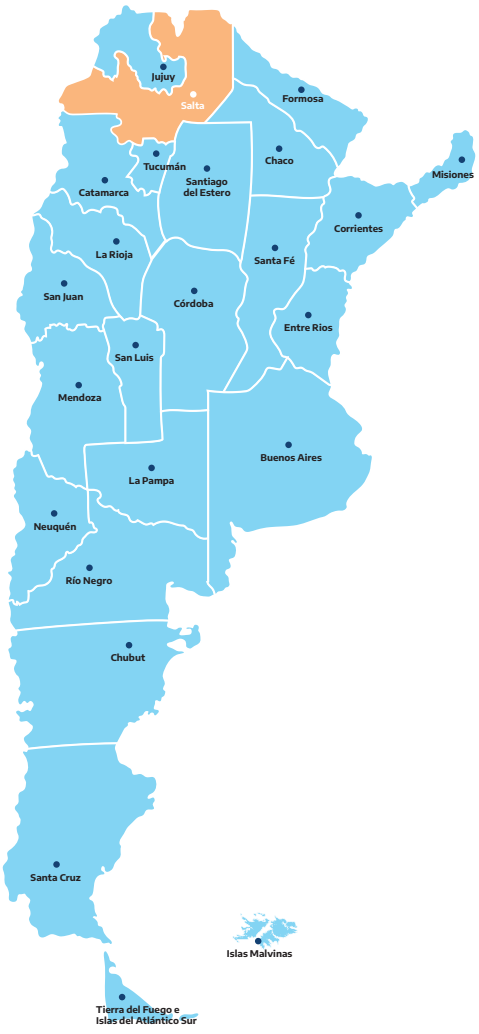
EL QUEVAR



LOCATION

(24° 20' 08'' Lat. S; 66° 46' 57'' Long. W)

The project is located in the department of Los Andes, at 4,800 m.a.s.l, about 300 km NW of the city of Salta. It can be accessed from Salta city through RN 51 to the detour with RP 27, continuing for 30 km. Driving time from Salta city is approximately 4 - 5 hours.

MINERALIZATION TYPE

High Sulphidation Epithermal

PROPERTY DATA

OWNER / CONTROLLER

Barrick Gold Corp. (70%)
Golden Minerals Company (30%)

OPERATOR

SILEX Argentina S.A.

AREA

57,000 ha

Ag

EL QUEVAR

PROJECT GEOLOGY

Regional Geology

The project is located at the eastern end of the Puna unit in Argentina. Dominated by tertiary rocks of the El Quevar volcanic complex, these Shoshone rocks result from a rift basin during the Cretaceous to the Paleocene. It is bounded by structural lines (120° heading) to the north (Calama-Olacapato-Toro) and another parallel to the south. An older, secondary lineament system of 25° heading is interpreted to be associated with folding of the basement rocks during the Palaeozoic.The El Quevar volcanic complex was formed from the Miocene to the early Quaternary in several events. The dominant product was ignimbritic flows covered by rhyolithic flows and followed by andesitic flows and dacitic intrusions (domes). The latter related to alteration and mineralization events. Erosion windows expose the intrusive and extensive areas of alteration. The southern window includes the mineralized areas of El Quevar. And to the North the Campo Viejo target.

Deposit Geology

The geology of the project is characterized by the presence of dacite domes associated with breccia complexes. These cover haematetic breccias and slope to the southwest. The ensemble is overprinted by argillic alteration and silicification controlled by E-W structures and later NE-SW faults. Along the earlier structures mineralization is associated with Vuggy Silica and SilicoPyrite alteration in brecciated rock (auto-breccia). In the Yaxtché deposit the mineralization is associated with intensely altered and structurally controlled zones within the older volcanic rocks. Silver-bearing sulfides are mostly in gap-filling veins and less frequently disseminated.

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EL QUEVAR

Contact
Gral Alvarado 1185 Salta
information@goldenminerals.com

Project Status

PRELIMINARY ECONOMIC ASSESSMENT

Company´s Last Announcement

NI 43-101 Technical Report on Updated Mineral Resource Estimate, Feb. 26, 2018

Resources and Reserves

RESOURCES	Tonnage (Mt)	Grade	Metal Content
		Ag (g/t)	Ag (Oz)
Indicated	2,93	482	45.300.000
Inferred	0,31	417	4.100.000

Technical and Economic Information

Estimated average annual production:
Silver: 4.800.000 Oz
Product to obtain: Silver concentrate
CAPEX: 96,8 M USD
Estimated employment in operation: N/A
Estimated LOM: 6 years
Mining Method: Underground

Sources Consulted

NI 43-101 Technical Report on Updated Mineral Resource Estimate, Feb. 26, 2018
http://www.goldenminerlas.com/projects/el_quevar/

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NAVIDAD

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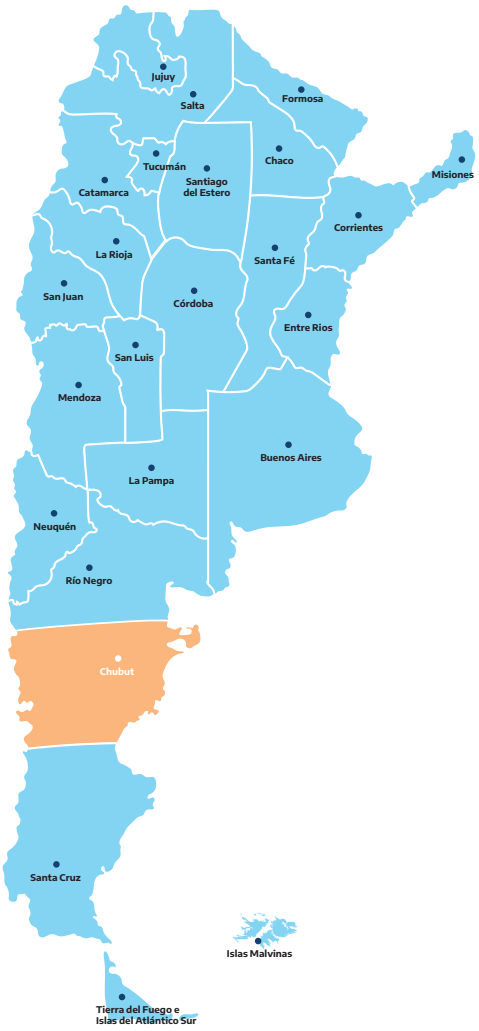
NAVIDAD



LOCATION
(42° 24' 54'' Lat. S; 68° 49' 12'' Long. W)

The Navidad Project is located about 35 km from the town of Gastre, in the department of the same name, in the north of the province of Chubut.

MINERALIZATION TYPE
Intermediate Sulphidation epithermal style

PROPERTY DATA
OWNER / CONTROLLER
Pan American Silver Corp.

OPERATOR
Minera Argenta S.A.

AREA
10,000 ha

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NAVIDAD

PROJECT GEOLOGY

Regional Geology

The Navidad Project is located on the southwest edge of the Northern Patagonia Massif in southern Argentina. This boundary of the massif is coincident with the “Gastre Fault System”, a mega-structural feature believed to be the result of continental-scale northeast to southwest extension that produced through down-faulting a series of northwest to southeast trending half grabens and tectonic basins (von Gosen et. al. 2004). Granitoid rocks of the basement in northern Chubut Province belong to the Palaeozoic age Mail Choique and Lipetren formations. Locally these rocks were exposed at surface in windows through the overlying Mesozoic age volcanic and sedimentary rocks. At Navidad the Mesozoic sequence consists of the Lonco Trapial Formation and overlying Cañadón Asfalto Formation. The latter of these formations hosts the Navidad mineralisation.

Deposit Geology

Navidad mineralisation is epithermal, as demonstrated by widespread open space-filling crustiform and cockade textures in the gangue minerals (carbonate, barite) and sulphide assemblages. The abundance of base metals, combined with carbonate-rich gangue, suggests that the deposit is intermediate, rather than low, sulphidation in style. Typical high sulphidation sulphides and gangue minerals are absent, but there is rare late stage kaolinite and minor hydrothermal alunite that implies late ingress of a hypogene acid fluid.

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NAVIDAD

Contact
625 Howe Street, Suite 1440
Vancouver, British Columbia
V6C 2T6 Canada
(604) 684-1175

Project Status PRELIMINARY ECONOMIC ASSESSMENT

Company´s Last Announcement

The Company reports that, on December 20, 2021, the executive of the Province of Chubut issued a decree to the legislature to repeal the legislative bill passed on December 15, 2021 that would have modified the provincial mining law to allow permitting of open pit mining in certain zones in the Departments of Gastre and Telsen.

Resources and Reserves

RESOURCES	Tonnage (Mt)	Grade			Metal Content		
		Ag (g/t)	Pb (%)	Cu (%)	Ag (MOz)	Pb (Mlb)	Cu (Mlb)
Measured	15.4	137	1.44	0.10	67	489	35
Indicated	139.8	126	0.79	0.04	565	2,425	127
Inferred	45.9	81	0.57	0.02	119	580	22

Technical and Economic Information

Estimated average annual production:
Silver: 16.200.000 Oz
Product to obtain: Concentrate
CAPEX: 760 M USD
Estimated annual employment: N/A
Estimated LOM: 17 years
Mining Method: Open pit

Sources Consulted

https://www.panamericansilver.com/assets/Operations-documents/2e445fea82/Navidad-Technical-Report.pdf
https://web.archive.org/web/20151208081400/http://www.segemar.gov.ar/bibliotecaintemin/FICHASTECNICASMINERAS/FichasTecnicasMineras61Navidad.pdf

Thank you

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