Catalogue of **Advanced Gold Projects**

Argentina unida

Ministerio de Desarrollo Productivo
Argentina

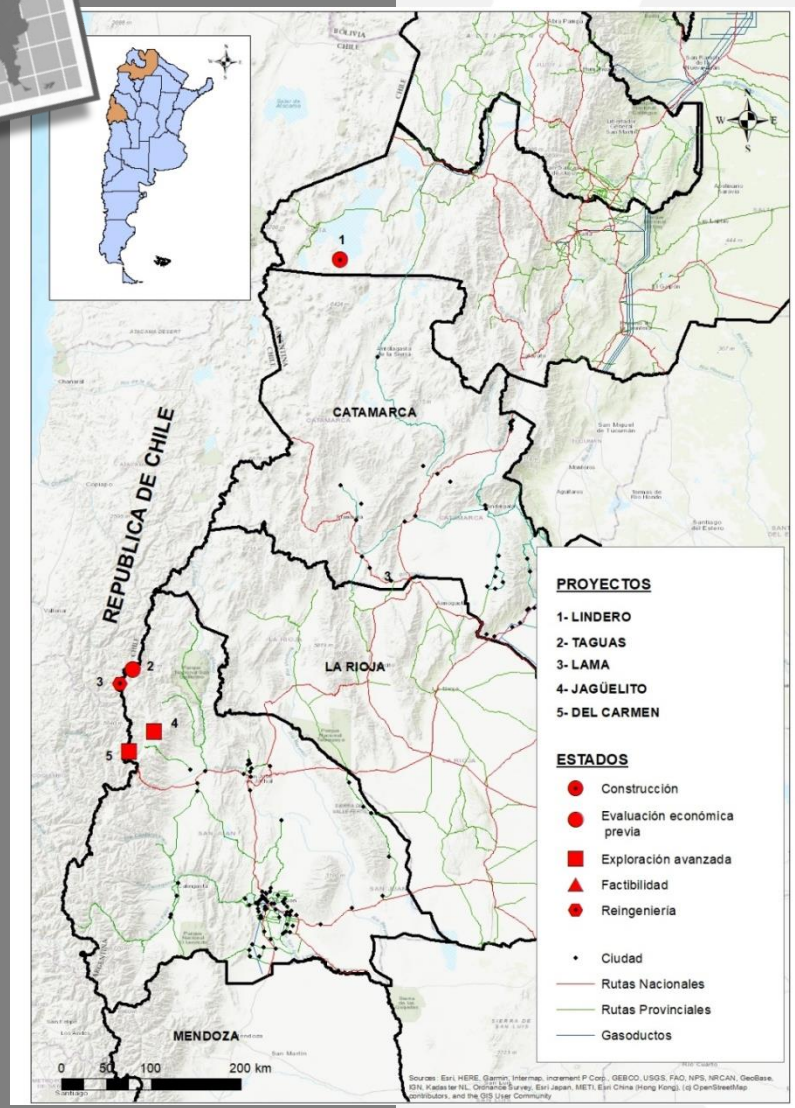
Disclaimer

This publication of the National Government aims to display information from third parties on the exploratory results of advanced projects and the mining geological potential of the country. The information is obtained through diverse sources, mainly from public access portals of the operator/controller companies and from technical reports published by them on various websites under international standards aimed at guaranteeing a greater degree of reliability. In some cases the data are estimates, when this is the case, it is pointed out and indicated in the footer.

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

The SECRETARY OF MINING is not responsible for the misuse of this information.

Catalogue of
ADVANCED GOLD PROJECTS



1- Taguas

2- Lama

3- Jagüelito

4- Del Carmen

Au

Ident. Res. **14.3 Moz Au**

CAPEX **1,600 MUSD**

Pot. aditional production
Au 481 koz/y
Ag 13.3 Moz/y

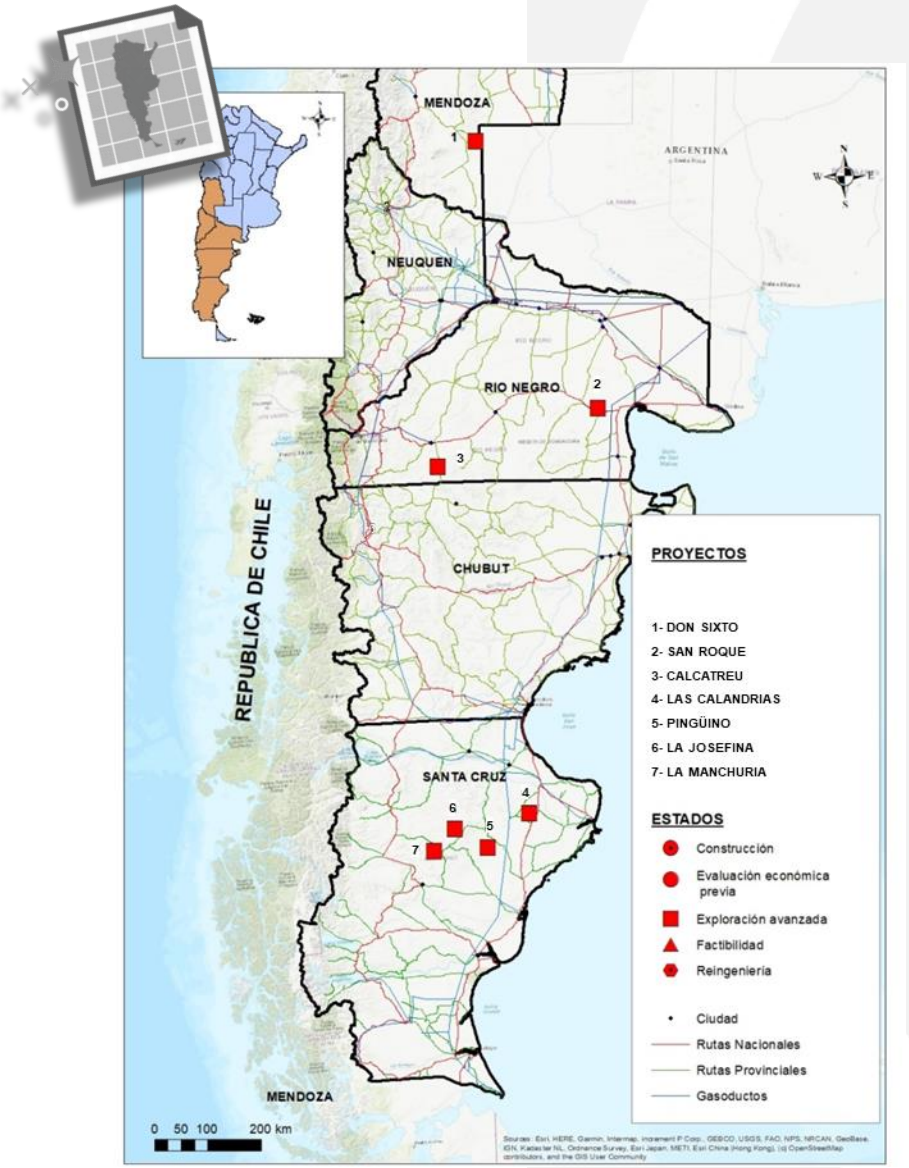
8 MINES

3 CONSTRUCTION

4 PEA TO DFS

8 ADV. EXPL.

Catalogue of
ADVANCED GOLD PROJECTS



1- Don Sixto

2- San Roque

3- Calcatreu

4- Las Calandrias

5- Pingüino

6- La Josefina

7- La Manchuria

Au

Ident. Res. **14.3 Moz Au**

CAPEX **1,600 MUSD**

Pot. aditional production
Au 481 koz/y
Ag 13.3 Moz/y

8 MINES

3 CONSTRUCTION

4 PEA TO DFS

8 ADV. EXPL.

CALCATREU

25 de Mayo
Río Negro

1300
m.a.s.l.

LOCATION
24° 48' 36" Latitude South
68° 18' 00" Longitude West

COMMODITY
Au
Ag

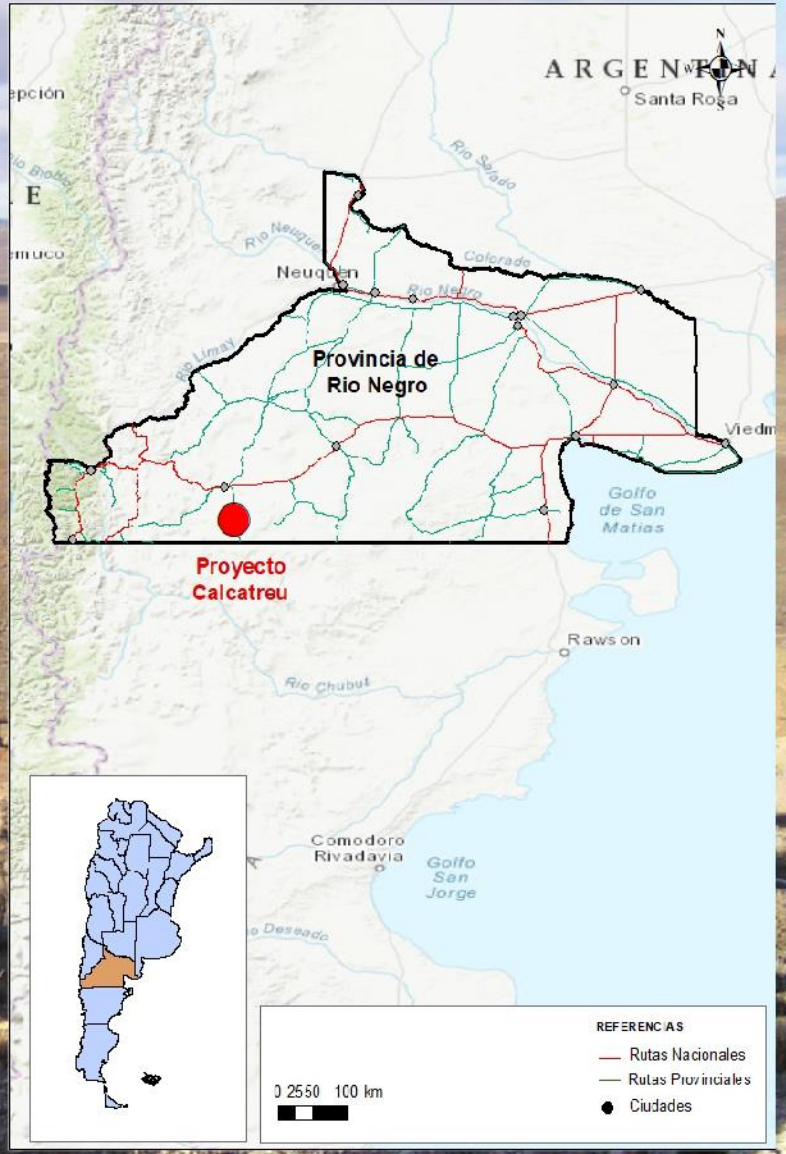
MINERALIZATION TYPE
Low Sulphidation
Epithermal

LOCAL OPERATOR
Minera Aquiline Argentina S.A.

COMPANY
Patagonia Gold

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	-	-
Indicated	2.11	669,000
Inferred	1.34	348,000



CALCATREU

LOCATION *(41° 43' 54" Lat. S; 69° 25' 21" Long. W)*

It is located approximately 165 km (240 km by road) southeast of San Carlos de Bariloche (Bariloche), province of Río Negro, and 1,500 km southwest of Buenos Aires. Calcatreu extends over the southern limit of the province of Río Negro and the northern limit of the province of Chubut. The closest city is Ingeniero Jacobacci, approximately 60 km to the south, or 90 km by road.

PROPERTY DATA

- **OWNER / CONTROLLER: Patagonia Gold PLC.**
- **OPERATOR: MINERA AQUILINE ARGENTINA S.A**
- **AREA: 75.000 ha.**

PROJECT STATUS - PRELIMINARY ECONOMIC ASSESSMENT

LAST PUBLIC TECHNICAL REPORT

- PROSPECTING
- INITIAL EXPLORATION
- ADVANCED EXPLORATION
- **PREL. ECON. ASSES. (PEA)**
- PREFEASIBILITY
- FEASIBILITY
- CONSTRUCTION
- OPERATION

COMPANY'S LAST ANNOUNCEMENT

2019-05-30 Report 43-101 with estimated resources for the Calcatreu project.

PROJECT GEOLOGY

TYPE OF DEPOSIT:
Low Sulphidation epithermal style (Au-Ag)

REGIONAL GEOLOGY

The southwestern margin of Argentina is dominated by the Andes, a mountain range dominated by volcanic rocks.To the east of the mountain range is the Somuncura massif in the northern sector and the Deseado massif in the south. These two volcanic massifs are separated and dissected by valleys filled with river sediments that drain from the Cordillera to the east. Regionally, the Calcatreu project is located in the Somuncura massif.

DEPOSIT GEOLOGY

The Calcatreu Project is hosted by volcanic calc - alkaline rocks of bimodal composition. They are of Jurassic age corresponding to the Taquetrén Fm. The local geology is complex and under discussion among researchers. Some associate the mineralization to a complex of intrusives and breccias located during the end of the last of four volcanic-sedimentary cycles. The main areas explored are the so-called Veta 49 and Nelson (up to 2 km long and up to 20 m wide), Castro Sur, Belén and Viuda de Castro.The Veta 49 and Nelson deposits are low-sulphidation epithermal veins and are hosted in brecciated rocks with silicification and argilitization. The host rock is interpreted as porphyritic lavaic andesitic flows.

CALCATREU

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		67,000 Oz
Silver		621,000 Oz

PRODUCT TO OBTAIN: doré

CAPEX: 66 M USD

Estimated annual employment in operation: n/a
Estimated annual employment in construction stage: n/a

Estimated LOM: 5 years

Mining Method: OPEN PIT

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade		Metallic content	
		Au (g/t)	Ag (g/t)	Au (Oz)	Ag (Oz)
Indicated	9,84	2,11	19,83	669.000	6.275.000
Inferred	8,08	1,34	13,09	348.000	3.399.000

SOURCES CONSULTED

http://www.patagoniagold.com/projects/calcatreu/
--Aquiline Resources Inc, CALCATREU GOLD PROJECT, Initial Feasibility Study. Prepared by Snowden.

CONTACT

Patagonia Gold SA
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C1001ABR Buenos Aires, Argentina
info@patagoniagold.com

DON SIXTO

Malargüe
Mendoza

900
m.a.s.l.

LOCATION
36° 15' 36" Latitude South
68° 22' 12" Longitude West

COMMODITY
Au

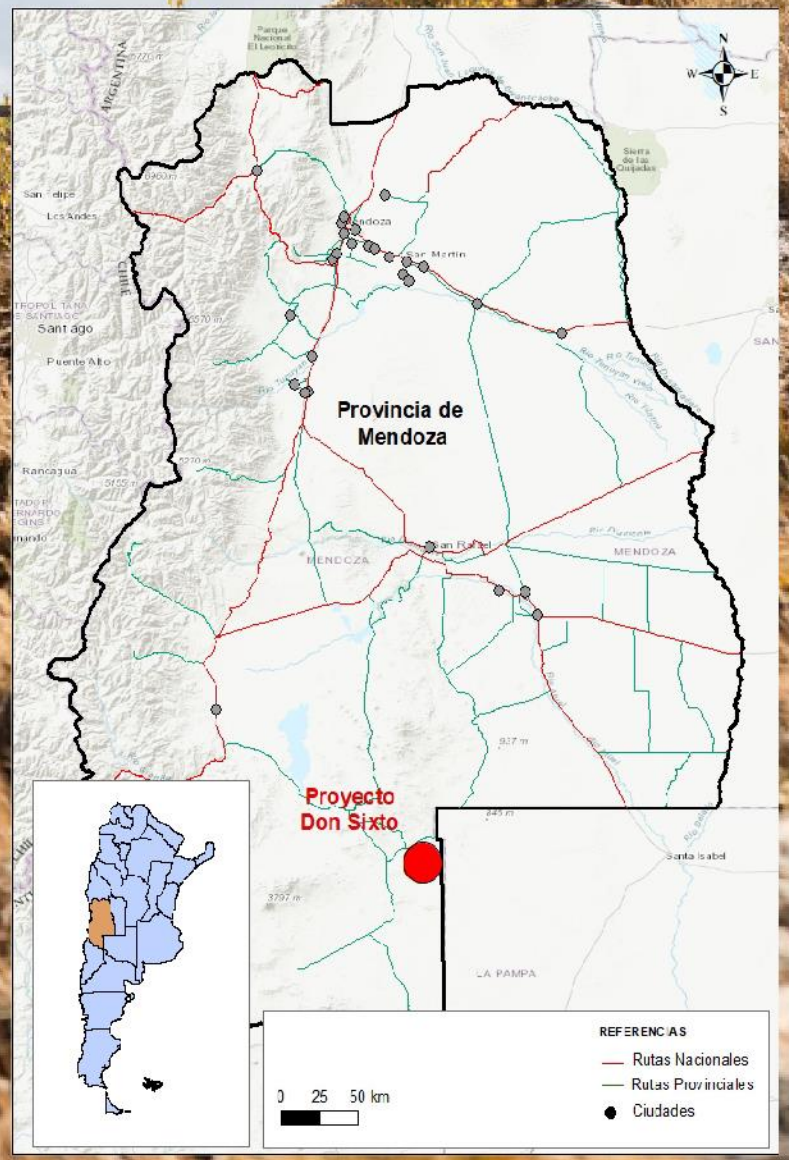
MINERALIZATION TYPE
Low Sulphidation
Epithermal

LOCAL OPERATOR
Cognito Ltd.
Sucursal
Argentina

COMPANY
Yamana
Gold

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	1.52	400,000
Indicated	1.32	525,000
Inferred	1.12	334,000



DON SIXTO

LOCATION *(36° 16’ 00’’ Lat. S; 68° 22’ 00’’ Long. W)*

The Don Sixto Project is located in central-western Argentina, 370 km from the city of Mendoza, capital of the province of the same name.

PROPERTY DATA

- **OWNER / CONTROLLER: Yamana Gold**
- **OPERATOR: Cognito Limited Sucursal Argentina**
- **AREA: 21.000 ha**

PROJECT STATUS

LAST PUBLIC TECHNICAL REPORT | COMPANY'S LAST ANNOUNCEMENT

- PROSPECTING
- INITIAL EXPLORATION
- **ADVANCED EXPLORATION**
- PREL. ECON. ASSES. (PEA)
- PREFEASIBILITY
- FEASIBILITY
- CONSTRUCTION
- OPERATION

NOTICIAS

Latest data by EXTORRE 2007, resource estimate.

PROJECT GEOLOGY

TYPE OF DEPOSIT
Low Sulphidation epithermal style (Au-Ag)

REGIONAL GEOLOGY
The lithology corresponds to deposits from a regional sedimentary basin. It is characterized by a thick succession of volcanic and sedimentary deposits starting with metasediments covered by Precambrian volcaniclastic deposits up to Quaternary basalts. The regional slopes are gentle and the faults are generally normal with a west-northwest direction.The Precambrian basement is composed of metasedimentites and is covered by sandstones and siltstones of the Agua Escondida Carboniferous Formation. This unit is intruded by granites and the set covered in discordance by volcanic and volcaniclastic felsic deposits of the Choiyoi Group (Permo - Triassic). Triassic-age felsic dikes cut into the Choiyoi Group. Tertiary and Quaternary basalts lie at the top of the sequence.

DEPOSIT GEOLOGY
In the Project the lithological sequence starts at the base with sediments, volcaniclastics and pyroclastics of the Agua Escondida Formation (Carboniferous). Covering the previous one is a unit of sedimentary and volcaniclastic felsics (Choique Mahuida Formation of G. Choiyoi). In the contact between both, drillings intercepted discontinuous basaltic mantles. The felsic unit is composed of two members: lower with ignimbrites with abundant fiammes and upper with greater content of Quartz fragments. The assembly is intruded by multiple phases of felsic domes.
In general, mineralization is found in filling or replacement Quartz veins in shear and breccia zones. They are discontinuous and lenticular.

DON SIXTO

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		n/a
Silver		n/a

PRODUCT TO OBTAIN: n/a

CAPEX: S/D

Estimated annual employment in operation: n/a
Estimated annual employment in construction stage: n/a

Estimated LOM: n/a

Mining Method: n/a

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade		Metallic content	
		Au (g/t)	Ag (g/t)	Au (Oz)	Ag (Oz)
Measured	8,15	1,52	6,83	400.000	1.632.649
Indicated	12,33	1,32	5,12	525.000	2.229.942
Inferred	9,29	1,12	3,83	334.000	1.077.048

SOURCES CONSULTED

www.sedar.com/ Issuer Profile Exter Resources Corporation Date of filing Feb 20 2008
Tipe Document: Technical Report (NI 43-101) – English / Technical Report 2007 Revised Resource Estimation Don Sixto Gold Project, Mendoza Province, Argentina, September 14, 2007

CONTACT

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Web: http://www.yamana.com
mhernandez@yamana.com

LA JOSEFINA

Deseado
Santa Cruz

700
m.a.s.l.

LOCATION
47° 50' 24" Latitude South
69° 21' 36" Longitude West

COMMODITY
Au
Ag

MINERALIZATION TYPE
Low Sulphidation
Epithermal

LOCAL OPERATOR
Cerro
Cazador S.A.

COMPANY
Patagonia
Gold Plc.

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	1.15	88,928
Indicated	1.27	33,420
Inferred	0.87	3,129

LA JOSEFINA

LOCATION *(36° 16' 00" Lat. S; 68° 22' 00" Long. W)*

Located within Patagonia's highly prospective Deseado Massif mining district, La Josefina lies approximately 100km northwest of the Cerro Vanguardia (AngloGold Ashanti) gold-silver mine. The nearest town, Gobernador Gregores, is 120km to the south.

PROPERTY DATA

- **OWNER / CONTROLLER: Patagonia Gold**
- **OPERATOR: Cerro Cazador S.A.**
- **AREA: 52.800 ha**

PROJECT STATUS

LAST PUBLIC TECHNICAL REPORT | **COMPANY'S LAST ANNOUNCEMENT**

- PROSPECTING
- INITIAL EXPLORATION
- **ADVANCED EXPLORATION**
- PREL. ECON. ASSES. (PEA)
- PREFEASIBILITY
- FEASIBILITY
- CONSTRUCTION
- OPERATION

Latest data By Hunt Mining 2010, resource estimate.

PROJECT GEOLOGY

TYPE OF DEPOSIT
Low Sulphidation epithermal style (Au-Ag)

REGIONAL GEOLOGY
The Project is located in the Deseado Massif, a morphological-structural unit formed by continental volcanism after the Jurassic extensional rifting.
The Deseado Massif is dominated by volcanic and volcaniclastic rocks from the middle to upper Jurassic. Regional faults affect the sequence as a consequence of reactivation of NW-SSE basement structures forming horst and grabens.
In the Jurassic period, normal NW - SE and NE - SW faults acted. The deformation processes were relatively low, the deposits are sub-horizontal to weakly inclined. Near the fault there are exceptions where the deformation is greater and subvolcanic bodies (dome) were hosted.

DEPOSIT GEOLOGY
In the area outcrops shales (Fm. La Modesta) from Precambrian to Lower Paleozoic basement. In angular discordance they are covered by Jurassic andesites of the Bajo Pobre formation. Intermediate volcanism is covered by the Jurassic Bahía Laura Group, subdivided into the Chon Aike and La Matilde formations. The Chon Aike unit is formed by a pyroclastic and volcaniclastic sequence, intruded by rhyolithic domes, related to the epithermal system (Upper Jurassic). Locally, breccias are observed with large fragments of ignimbrites assigned to collapse at caldera edges. Finally, the sequence is covered by Tertiary and Quaternary basaltic lavas.
The mineralization is found in a vein system hosted by ignimbrites of the Chon Aike Formation

LA JOSEFINA

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		n/a

PRODUCT TO OBTAIN: n/a

CAPEX: n/a

Estimated annual employment in operation: n/a
Estimated annual employment in construction stage: n/a

Estimated LOM: n/a

Mining Method: n/a

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade		Metallic content	
		Au (g/t)	Ag (g/t)	Au (Oz)	Ag (Oz)
Measured	2,4	1,15	21,62	88.928	1.671.858
Indicated	0,82	1,27	1,95	33.420	51.215
Inferred	0,11	0,87	1,28	3.129	4.579

SOURCES CONSULTED

www.huntmining.com
-Registros de Dirección Nacional de Inversiones Mineras (MEM)
-La Josefina Project, NI 43-101 Compliant Technical Report Santa Cruz Province, Argentina For Cerro Cazador S.A. By James F. Ebisch, R.P. Geo September 2009
-Martha Silver and Gold Project, Santa Cruz, Argentina, Technical Report, July 29, 2016, Prepared by or under the Supervision of: Donald J. Birak.

CONTACT

Bret Boster
Castex 3123 2° - CABA
C.P.: C1425CDA
http://patagoniagold.com

TAGUAS

Iglesia
San Juan

4500
m.a.s.l.

LOCATION
29° 11' 24" Latitude South
69° 51' 36" Longitude West

COMMODITY
Au
Ag

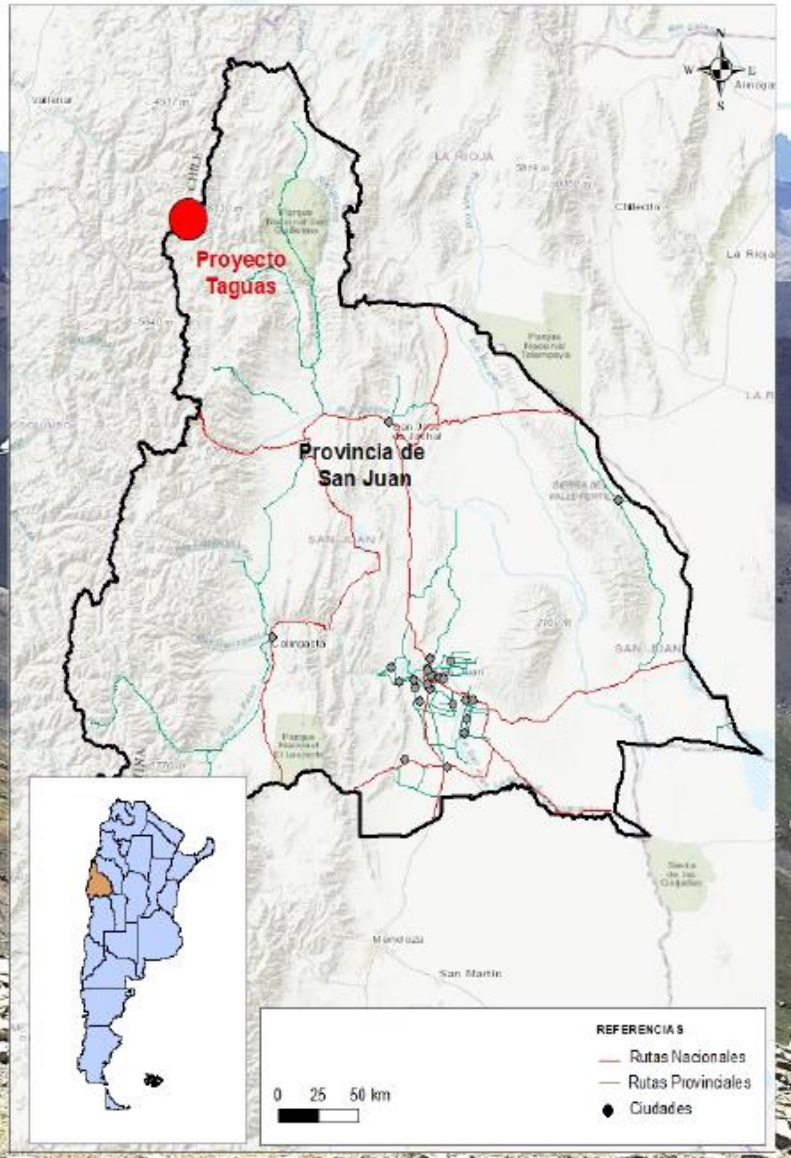
MINERALIZATION TYPE
High Sulphidation
Epithermal

LOCAL OPERATOR
Compañía
Minera
Piuquenes S.A.

COMPANY
Orvana
Minerals

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	-	-
Indicated	-	-
Inferred	0.4	494,000



TAGUAS

LOCATION *(29º 11' 27.79" Lat. S; 69º 52' 35.98" Long. W)*

Access to the site is from the town of Tudcum, located 200 km from the city of San Juan. To reach Taguas, the 148 km mining road that links Tudcum to the Veladero gold mine is used.
From Veladero one must travel 25 km further north along the Las Taguas River to reach the Project camp.

PROPERTY DATA

- **OWNER / CONTROLLER: Orvana Minerals Corp**
- **OPERATOR: Compañía Minera Piuquenes S.A**
- **AREA: 3,274 ha**

PROJECT STATUS

LAST PUBLIC TECHNICAL REPORT | **COMPANY'S LAST ANNOUNCEMENT**

- PROSPECTING
- INITIAL EXPLORATION
- ADVANCED EXPLORATION
- **PREL. ECON.ASSES. (PEA)**
- PREFEASIBILITY
- FEASIBILITY
- CONSTRUCTION
- OPERATION

NOTICIAS

Preliminary Economic Assessment - NI 43-101 Technical Report- June 2019

PROJECT GEOLOGY

TYPE OF DEPOSIT

High Sulphidation epitermal style (Au-Ag)

REGIONAL GEOLOGY

Taguas is located at the northern end of the Cura Valley volcanic belt, of tertiary age, and on the eastern flank of the El Indio metallogenic belt (Siddeley and Araneda, 1990). The physical continuity of the volcanism and stratigraphy of the thin Chilean Cura Valley volcanic belt has been confirmed by several regional studies (Ramos 1995, 1998 and Godeas et al., 1993). The Cura Valley belt has similarities with the Chilean flank in both age and type of basement and alterations (Davidson and Mpodozis, 1991) and is an extension of the El Indio belt in Argentina.

DEPOSIT GEOLOGY

The Taguas property is home to a high-sulfidation gold-silver epithermal system housed in altered Tertiary volcanic rhyolites. Supergene gold-silver oxide mineralization occurs in the southern half of Taguas, at Cerro Taguas Norte, Cerro Taguas Sur, Cerro III and Cerro IV. This mineralization consists of sub-vertical mineralized structures, which also impact in the northeast, in a zone of lower grade mineralization. The high grade zones range in width from 1.5m to 8m and in length from 40m to over 500m. High grade zones consist of relatively continuous mineralization with gold grades ranging from 0.2 to over 4.0 g/t Au and 10 to over 50 g/t Au. Oxidation extends from the surface to approximately 200m below the surface.
Gold-silver sulphides (pyrite-enargite) have been found in the north central zone of the property, at Cerro Campamento, and at Cerro Silla Sur. In addition, intersections grading over 50 g/t Au and 100 g/t Ag have been recognized in discrete mineralized vein structures ranging in length from 1.5 m to 5 m. Evidence of porphyry copper-gold mineralization has also been found on the Taguas property.

TAGUAS

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		41,000 oz
Silver		902,300 oz

PRODUCT TO OBTAIN : gold-silver doré bars

CAPEX: 92,8 M USD

Estimated annual employment in operation: 700 (e)
Estimated annual employment in construction 350 (e)

Estimated LOM: 10 years

Mining Method: open pit

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade		Metallic content	
		Au (g/t)	Ag (g/t)	Au (Oz)	Ag (Oz)
Inferred	36,6	0,4	14,6	494.000	18.110.000

SOURCES CONSULTED

https://www.orvana.com/English/news/news-details/2019/Orvana-Announces-Taguas-Mining-Property-Preliminary-Economic-Assessment-Report/default.aspx

Taguas Oxide Gold-Silver Project, San Juan, Argentina. -Preliminary Economic Assessment - NI 43-101 Technical Report – FOR ORVANA MINERALS CORP- (WOOD) May 14th . 2019

CONTACT

Orvana Minerals Corp. - 170 University Avenue - Suite 900 - Toronto, Ontario, M5H 3B3
Financial director: Nuria Menéndez - email: nmenendez@orvana.com

LAS CALANDRIAS

Deseado
Santa Cruz

150
m.a.s.l.

LOCATION
47° 36' 36" Latitude South
67° 29' 24" Longitude West

COMMODITY
Au
Ag

MINERALIZATION TYPE
Low Sulphidation
Epithermal

LOCAL OPERATOR
Minera
Mariana S.A.

COMPANY
New
Dimension
Resources Ltd.

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	-	-
Indicated	1.49	391,000
Inferred	0.74	42,100

LAS CALANDRIAS

LOCATION *(47° 36' 21" Lat. S; 67° 29' 20" Long. W)*

Las Calandrias Project is located in the extreme east of the Province of Santa Cruz, approximately 210 km south of the city of Comodoro Rivadavia (Province of Chubut)

PROPERTY DATA

- **OWNER / CONTROLLER: New Dimension Resources**
- **OPERATOR: Minera Mariana Argentina S.A.**
- **AREA: 5.594 ha**

PROJECT STATUS

LAST PUBLIC TECHNICAL REPORT | **COMPANY'S LAST ANNOUNCEMENT**

- PROSPECTING
- INITIAL EXPLORATION
- **ADVANCED EXPLORATION**
- PREL. ECON. ASSES. (PEA)
- PREFEASIBILITY
- FEASIBILITY
- CONSTRUCTION
- OPERATION

Technical Report on Gold and Silver Resources at Las Calandrias 2011

PROJECT GEOLOGY

TYPE OF DEPOSIT
Low Sulphidation epitermal style (Au-Ag)

REGIONAL GEOLOGY

The project is in the Deseado Massif, a 60,000 km^2 rigid cortical block in southern Argentina. The basement of the Massif consists of Cambrian metasedimentary rocks, intruded by granites and tonalites. These are covered by continental sedimentary rocks from the Permo-Triassic and Triassic periods. It is dominated by volcanic and intrusive jurassic rocks. Cretaceous lacustrine deposits covered by tertiary and quaternary alkaline basalts partly cover the volcanic plateau of the Jurassic. The volcanic-sedimentary sequence of the Permian, Mesozoic and Cenozoic is more or less horizontal, interrupted mainly by extensional structures of northern and northwestern tendency.
In the Deseado Massif, breccia deposits and low-sulphidation epithermal veins abound, with quartz and precious metals, related to jurassic acid volcanism.

DEPOSIT GEOLOGY

The geology is dominated by Jurassic volcanic units. In the vicinity of Calandria Norte, Calandria Sur and the El Nido complex, domes, rhyolites, ignimbrites and tuffs, and lake sedimentary rocks predominate. Calandria Sur, the best explored target and with the largest resources, hosts gold mineralization in northwestern structures within the rhyolite dome in a lenticular shape.
The low grade gold mineralization occurs as sulfide and quartz stockwork, generally discontinuous with high grade mineralization pockets, all within the rhyolite dome. The main alteration is silicification and kaolinitization. The sulfides are mainly pyrite, with minor amounts of marcasite, arsenopyrite and acantite.

LAS CALANDRIAS

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		n/a

PRODUCT TO OBTAIN : n/a

CAPEX: n/s

Estimated annual employment in operation: n/a
Estimated annual employment in construction stage: n/a

Estimated LOM: n/a

Mining Method: n/a

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade		Metallic content	
		Au (g/t)	Ag (g/t)	Au (Oz)	Ag (Oz)
Indicated	8,16	1,49	23,14	391.000	6.070.000
Inferred	1,76	0,74	7,09	42.100	401.500

SOURCES CONSULTED

-Registros de Dirección Nacional de Inversiones Mineras.
-Technical Report on Gold and Silver Resources at Las Calandrias – An Update. Mariana Resources Ltd. Effective Date: March 6, 2011. Report Date: August 7, 2011.

CONTACT

Suite 1020 – 625 Howe Street, Vancouver, BC Canada
Web.: www.newdimensionresources.com
info@newdimensionresources.com

LA MANCHURIA

Río Chico
Santa Cruz

600
m.a.s.l.

LOCATION
48° 11' 24" Latitude South
69° 54' 36" Longitude West

COMMODITY
Au
Ag

MINERALIZATION TYPE
Low Sulphidation
Epithermal

LOCAL OPERATOR
Patagonia
Gold S.A.

COMPANY
Patagonia
Gold Plc.

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	-	-
Indicated	2.59	39,500
Inferred	1.3	76,500

LA MANCHURIA

LOCATION *(48° 12' Lat. S; 69° 44' Long. W)*

The La Manchuria project is located in the central-west of the Deseado Massif, 70 km north of Gobernador Gregores and 50km SE of the Cap Oeste deposit, in Santa Cruz province, Argentina.

PROPERTY DATA

- **OWNER / CONTROLLER: Patagonia Gold**
- **OPERATOR: Patagonia Gold S.A.**
- **AREA: 33.000 ha**

PROJECT STATUS

LAST PUBLIC TECHNICAL REPORT | **COMPANY'S LAST ANNOUNCEMENT**

- PROSPECTING
- INITIAL EXPLORATION
- **ADVANCED EXPLORATION**
- PREL. ECON. ASSES. (PEA)
- PREFEASIBILITY
- FEASIBILITY
- CONSTRUCTION
- OPERATION

2019-09-27 Manchuria Project Resources Update, Santa Cruz.

PROJECT GEOLOGY

TYPE OF DEPOSIT
Low Sulphidation epitermal style (Au-Ag)

REGIONAL GEOLOGY
It is located in the central sector of the Deseado Massif, where volcanic and pyroclastic units predominate, with subordinate sedimentary episodes of the Jurassic age. They are grouped in the Bajo Pobre Fm. (Middle Jurassic) and Bahía Laura Group. In addition, in the northern sector of the area, Tertiary olivinic basalts were recognized, which are located in the high topographic areas. In the zone, Quaternary basalts were identified that occupy the lower topographic areas, reaching a wide areal distribution. Modern colluvial and alluvial deposits complete the geology. Structurally, lines and fractures are recognized, with the El Tranquilo N30°-40°W and Bajo Grande N55°-60°W systems and fractures N80°-100°E and N10°E being the most relevant. It is important to highlight a ring line located in the center of the area that has been interpreted as a possible edge of a caldera approximately 6 km in diameter.

DEPOSIT GEOLOGY
Based on the mineral paragenesis, the different alterations identified, the recorded geochemical values and the characteristics of the fluid inclusions, it is interpreted that the gold and silver mineralizations of the Manchuria area, respond to a hot spring type epithermal system, where hydrothermal fluids have circulated through different fracture systems and permeable rocks, causing replacements and fillings in volcaniclastic rocks of the Chon Aike Formation.

LA MANCHURIA

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		n/a

PRODUCT TO OBTAIN : n/a

CAPEX: n/a

Estimated annual employment in operation: n/a
Estimated annual employment in construction stage: n/a

Estimated LOM: n/a

Mining Method: n/a

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade		Metallic content	
		Au (g/t)	Ag (g/t)	Au (Oz)	Ag (Oz)
Indicated	0,47	2,59	129	39.500	1.969.000
Inferred	1,84	1,30	40	76.500	2.375.000

SOURCES CONSULTED

-Registros de Dirección Nacional de Inversiones Mineras
-http://www.patagoniagold.com/projects/la-Manchuria/
2019-09-27 Actualización de Recursos del Proyecto La Manchuria, Santa Cruz. .

CONTACT

Diego Bauret (apoderado)
Avda. Del Libertador 498 - Piso 26 - C.A.B.A.
www.patagoniagold.com

DEL CARMEN

Iglesia
San Juan

5000
m.a.s.l.

LOCATION
30° 0’ 36” Latitude South
69° 54’ 00” Longitude West

COMMODITY
Au
Ag

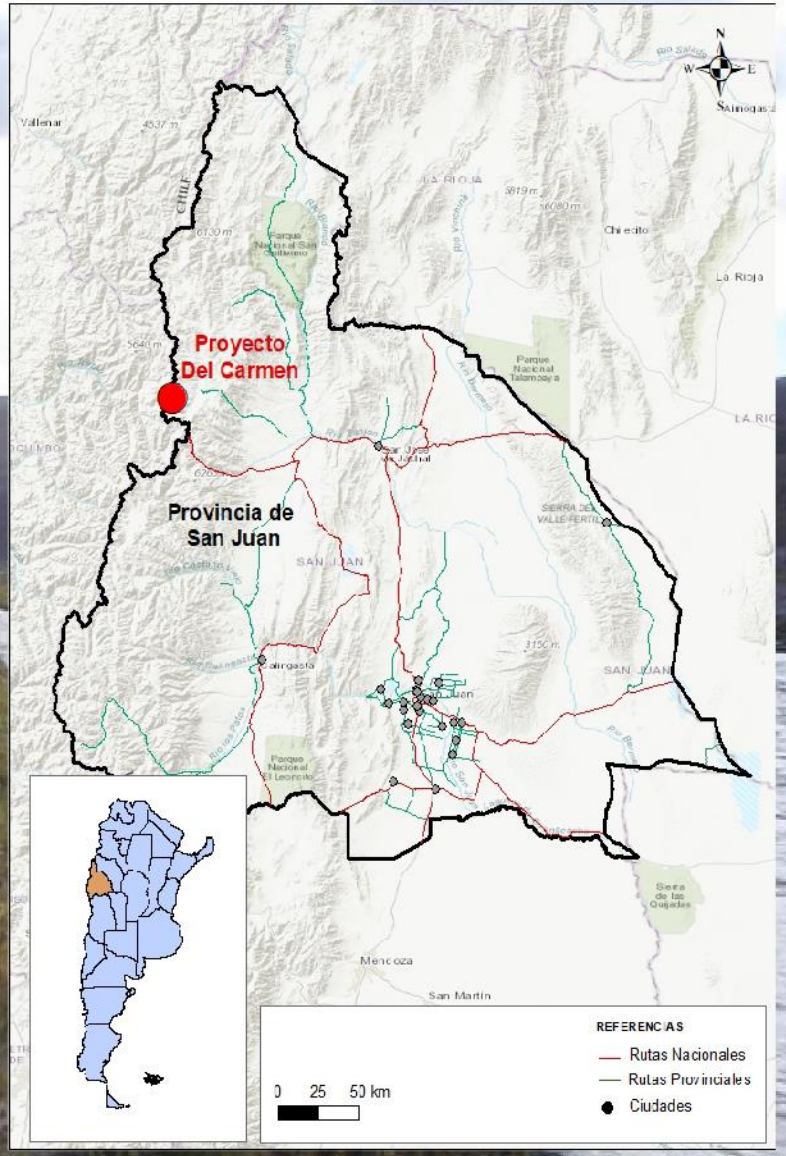
MINERALIZATION TYPE
High Sulphidation
Epithermal

LOCAL OPERATOR
Minera del Carmen S.A.

COMPANY
Barrick Gold Corporation

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	-	-
Indicated	-	-
Inferred	1.01	1,010,000



DEL CARMEN

LOCATION *(30° 00'06" Lat. S; 69° 54'06" Long. W)*

The project is within the Cura Valley, located on the eastern flank of the Andes, adjacent to the border with Chile, approximately 280 km NW of the city of San Juan, requiring 5 hours of driving to arrive from the city.

PROPERTY DATA

- **OWNER / CONTROLLER: Barrick Gold Corp.**
- **OPERATOR: Minera Del Carmen S.A**
- **AREA: 15.129 ha.**

PROJECT STATUS

LAST PUBLIC TECHNICAL REPORT

- PROSPECTING
- INITIAL EXPLORATION
- **ADVANCED EXPLORATION**
- PREL. ECON. ASSES. (PEA)
- PREFEASIBILITY
- FEASIBILITY
- CONSTRUCTION
- OPERATION

COMPANY'S LAST ANNOUNCEMENT

2013-10-09 An Updated Mineral Resource Estimate (MALBEX)

PROJECT GEOLOGY

TYPE OF DEPOSIT
High Sulphidation epithermal style (Au-Ag)

REGIONAL GEOLOGY

The Del Carmen property is located in the upper region of the Cura Valley within the El Indio belt. The belt consists of extrusive Eocene to Pliocene volcanic deposits and intrusions emplaced superficially on a carboniferous to triassic sedimentary base and volcanic and intrusive rocks. The El Indio gold belt hosts several epithermal deposits of high sulfidation gold-silver ± copper (e.g., El Indio, Tambo, Veladero and Pascua-Lama).
The El Indio gold belt lies within a belt of Tertiary and related intrusive volcanic rocks bounded by steep faults formed by convergence of the Tertiary plate tectonics, interrupted by periods of regional extension. All significant volcanic activity related to economic mineralization concluded prior to flattening and eastward migration of the Nazca plate.

DEPOSIT GEOLOGY

Permo-triassic lava and tuff and subordinate volcanic rocks assigned to the Choiyoi Group form the faulted eastern margin of the Cura Valley. Presumed banded volcanic rocks of the Valle del Cura Fm. are exposed in the lower sections of the Quebrada del Medio. These rocks appear to be covered to the west by lava, breccia, tuff and fresh andesite to dacite volcanic rocks extending east and south from Cerro de las Tórtolas.
Gold and silver mineralization in high-sulfidation epithermal deposits typically occurs as disseminations in zones of intense silicification, commonly characterized as vuggy silica due to open spaces (vugs) in silicified rocks produced by the complete hydrothermal dissolution of feldspar phenocrystals in the originally porphyritic host. The silicified zone is typically enveloped by a quartz-alunite alteration where the original sites of feldspar phenocrystals are occupied by alunite. The quartz-alunite zone is succeeded by the quartz-kaolinite alteration.

DEL CARMEN

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		n/a
Silver		n/a

PRODUCT TO OBTAIN : n/a

CAPEX: n/a

Estimated annual employment in operation: n/a
Estimated annual employment in construction stage: n/a

Estimated LOM: n/a

Mining Method: n/a

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade		Metallic content	
		Au (g/t)	Ag (g/t)	Au (Oz)	Ag (Oz)
Inferred	30,9	1,01	11	1.010.000	10.964.000

SOURCES CONSULTED

-2013-10-09 AN UPDATED MINERAL RESOURCE ESTIMATE AND PRELIMINARY ECONOMIC ASSESSMENT FOR THE ROJO GRANDE DEPOSIT AT THE DEL CARMEN PROPERTY, EL INDIO GOLD BELT SAN JUAN PROVINCE, ARGENTINA. MALBEX

CONTACT

JAGÜELITO

Iglesia
San Juan

3900
m.a.s.l.

LOCATION
29° 48' 36" Latitude South
69° 39' 00" Longitude West

COMMODITY
Au
Ag

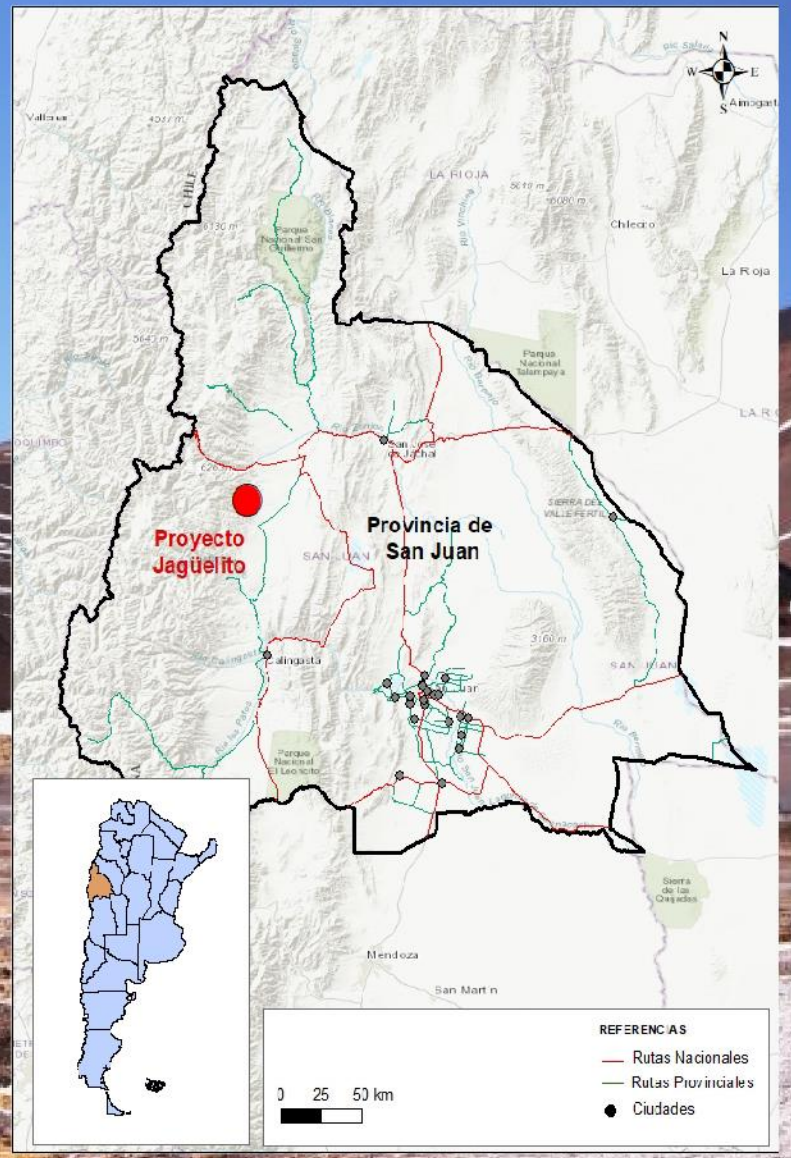
MINERALIZATION TYPE
High Sulphidation
Epithermal

LOCAL OPERATOR
Mexplort
Perforaciones
Mineras S.A.

COMPANY
Corporación
América

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	0.53	29,000
Indicated	0.96	93,000
Inferred	1.38	35,000



JAGÜELITO

LOCATION *(29° 48'23" Lat. S; 69° 38'46" Long. W)*

The project is located in the Cura Valley, in an uninhabited area of the high prospective potential of the Andes Mountains. It is located 225 km NW - in a straight line - from the city of San Juan.

PROPERTY DATA

- **OWNER / CONTROLLER: Corporación América**
- **OPERATOR: Mexplort Perforaciones Mineras S.A**
- **AREA: 11.000 ha.**

PROJECT STATUS

LAST PUBLIC TECHNICAL REPORT

- PROSPECTING
- INITIAL EXPLORATION
- **ADVANCED EXPLORATION**
- PREL. ECON. ASSES. (PEA)
- PREFEASIBILITY
- FEASIBILITY
- CONSTRUCTION
- OPERATION

COMPANY'S LAST ANNOUNCEMENT

A new vision of exploration in advanced projects. Jagüelito case. Mexplort, September 05, 2014

PROJECT GEOLOGY

TYPE OF DEPOSIT
High Sulphidation epithermal style (Au-Ag)

REGIONAL GEOLOGY

In the Andes, in the Jagüelito sector, there is a pile of sedimentary deposits, arch volcanic rocks and associated intrusive rocks of Permian to Tertiary age, which are covering deformed marine sediments of the Carboniferous. The basement units are dominated by andesitic, rhyolithic and riodactitic volcanic rocks of the Choiyoi Group of Permo-Triassic age.
It is postulated that the basement has been intruded by Tertiary dacite domes and partially covered by associated andesites, tuffs and dacite pyroclasts

DEPOSIT GEOLOGY

The identified alteration and mineralization are mainly in the Jagüelito Norte deposit (targets: Capote, Alcatraz, Filo Guanaco and La Cuña) and in the Alumbre prospect (3.5 km SW of Jagüelito Norte). These two prospective areas are partially and genetically related to mid to upper tertiary domes of 2 km diameter.
Mineralization is dominated by an epithermal sulphidation system that is well preserved at the Alumbre prospect.

JAGÜELITO

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		n/a
Silver		n/a

PRODUCT TO OBTAIN : n/a

CAPEX: n/a

Estimated annual employment in operation: n/a
Estimated annual employment in construction stage: n/a

Estimated LOM: n/a

Mining Method: n/a

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade		Metallic content	
		Au (g/t)	Ag (g/t)	Au (Oz)	Ag (Oz)
Measured	1,7	0,53	51	29.000	2.787.000
Indicated	3	0,96	71	93.000	6.848.000
Inferred	9,34	0,7	89,20	214.000	26.800.000

SOURCES CONSULTED

Una nueva visión de exploración en proyectos avanzados. Caso Jagüelito. Mexplort, 05 de Septiembre de 2014

CONTACT

Santa Fe Oeste 117- piso 1° - Of B (J5402ACC) – San Juan, Argentina

LAMA

Iglesia
San Juan

4500
m.a.s.l.

LOCATION
29° 19' 48" Latitude South
69° 59' 24" Longitude West

COMMODITY
Au
Ag

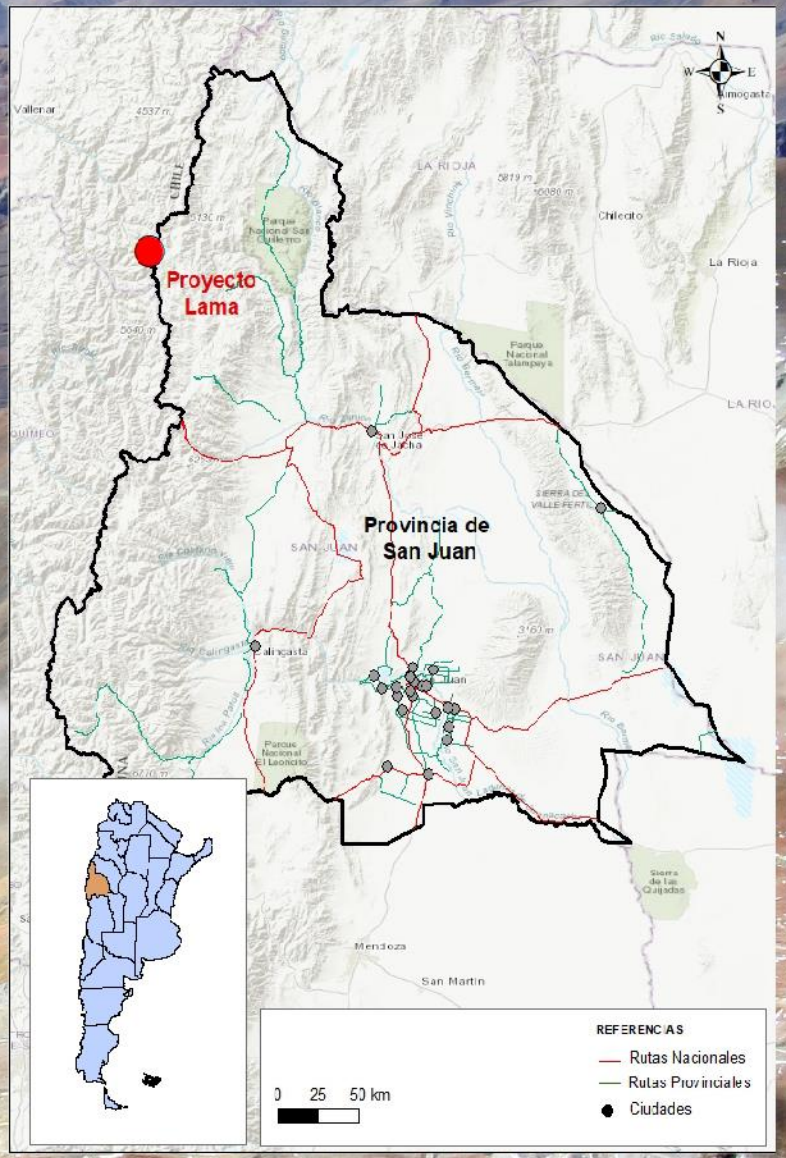
MINERALIZATION TYPE
Epithermal

LOCAL OPERATOR
Barrick Exploraciones Argentina S.A.

COMPANY
Barrick Gold Corporation

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	-	461,520
Indicated	-	3,380,940
Inferred	-	155,340



LAMA

LOCATION *(29° 19'45" Lat. S; 69° 59'33" Long. W)*

Located at more than 4,000 meters above sea level on the border between Chile and Argentina (between 3,800 and 5,200 meters above sea level). The property is accessed through a 360-kilometer gravel road from the City of San Juan, capital of the homonymous province, using the same route that provides access to the Veladero mine.

PROPERTY DATA

- **OWNER / CONTROLLER: Barrick Gold Corp.**
- **OPERATOR: Barrick Exploraciones Argentina S.A**
- **AREA: 6.747 ha.**

PROJECT STATUS

LAST PUBLIC TECHNICAL REPORT

- PROSPECTING
- INITIAL EXPLORATION
- ADVANCED EXPLORATION
- EVAL. ECON. PREVIA (PEA)
- PREFEASIBILITY
- **FEASIBILITY-RE-ENGINEERING**
- CONSTRUCTION
- OPERATION

COMPANY'S LAST ANNOUNCEMENT

2011-03-31 informe 43-101 Technical Report Pascua-Lama Project Region III, Chile San Juan Province, Argentina. Barrick Gold

PROJECT GEOLOGY

TYPE OF DEPOSIT
High Sulphidation epithermal style (Au-Ag)

REGIONAL GEOLOGY

The geology in the region is dominated by extrusive volcanic rocks that are locally intruded by hypabyssal stocks of varying size and numerous dikes and sills, while the regional structure in and around the gold deposits and prospects in the El Indio belt is dominated by northerly-trending high angle reverse faults, normal faults and fold belts oriented parallel to the major structural grain. Lama is positioned near the center of a northerly trending graben that contains nearly the entire Tertiary volcanic sequence that is distributed along the spine of the cordillera in Chile and Argentina.

DEPOSIT GEOLOGY

Lama area has been the center of repeated intrusive and volcanic activity, beginning with a sequence of dacite and rhyolite ignimbrite ash flows deposited in the early Permian. The flows were then intruded during Late-Permian/Triassic time by a granite batholith, which comprises the Pascua-Lama granite intrusive complex and occupies the central and eastern portions of the district, the dominant host lithology for the deposit. After a long hiatus that extended into the Oligocene, numerous small diorite stocks and dikes were intruded into the granite complex and volcanics. Dike emplacement continued into the Miocene, followed by deposition of Upper Middle Miocene dacite ash flows. This Miocene intrusive activity was the precursor to the magmatism and associated hydrothermal activity around 8.78-8.79 My that produced the deposit.

LAMA

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		825.000 Oz Au/year
Silver		35.000.000 Oz Ag/year

PRODUCT TO OBTAIN: Doré (Au-Ag)

CAPEX: 1,200 M USD

Estimated annual employment in operation: n/a
Estimated annual employment in construction stage: n/a

Estimated LOM: 23 years

Mining Method: Open pit

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade			Metallic content*	
		Au (g/t)	Ag (g/t)	Cu(%)	Au (Oz)	Ag (Oz)
Measured	42,81	1,86	57,21	0,10	461.520	27.561.450
Indicated	391,73	1,49	52,22	0,08	3.380.940	230.201.300
Inferred	15,4	1,74	17,83	0,05	155.340	3.090.500

* the metal content expressed corresponds to the portion on the Argentinean side of the project (Lama). Source: Technical Report 2011-03-31. Barrick Gold Corp.

SOURCES CONSULTED

-2011-03-31 Technical Report 43-101 Pascua-Lama. Barrick Gold Corp.

CONTACT

http://barricklatam.com
comunicacionesargentina@barrick.com

SAN ROQUE

Valcheta
Río Negro

200
m.a.s.l.

LOCATION
40° 46’ 48” Latitude South
65° 48’ 00” Longitude West

COMMODITY
Au
Ag
In

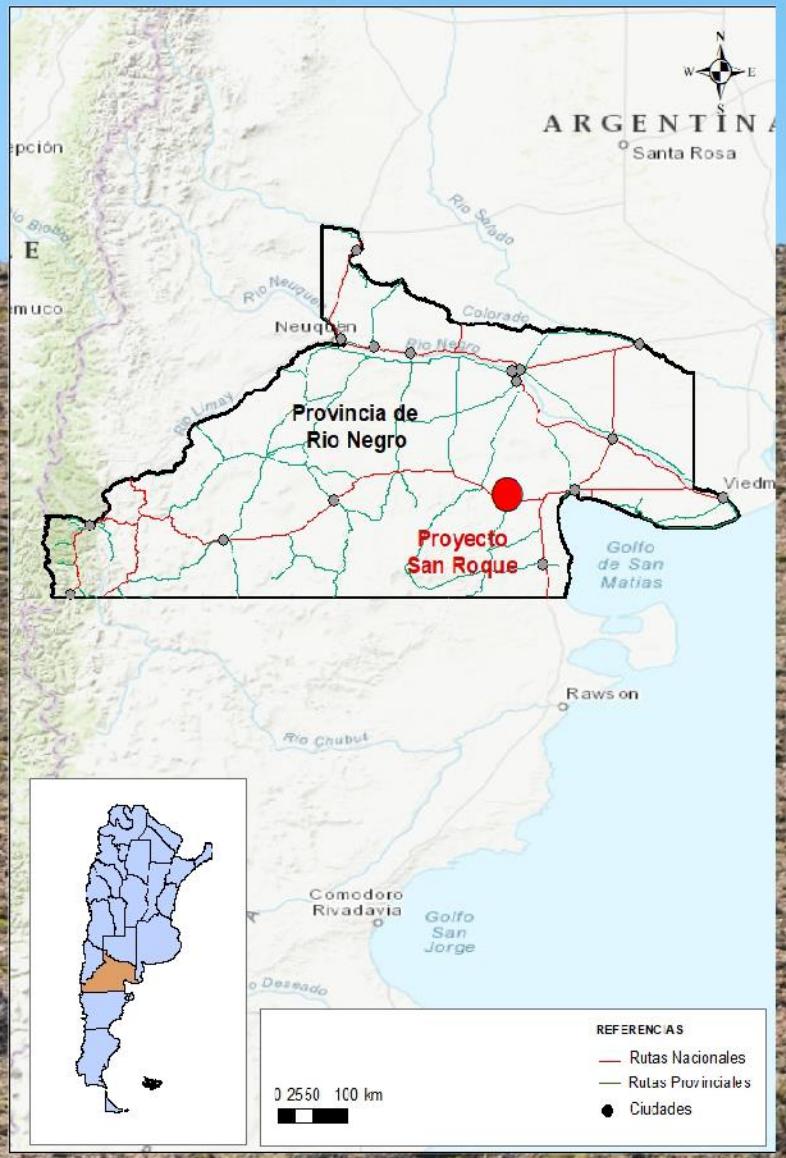
MINERALIZATION TYPE
Low Sulphidation
Epithermal

LOCAL OPERATOR
Marifil S.A.

COMPANY
Marifil
Mines Ltd.

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	-	-
Indicated	-	-
Inferred	0.46	486,600



SAN ROQUE

LOCATION *(40° 47'10" Lat. S; 65° 47'47" Long. W)*

The San Roque Project is located on the eastern edge of the Somuncura Massif in the Province of Río Negro, Argentine Patagonia. It is located 70 km west of the coastal city of San Antonio Oeste in a straight line. The area is easily accessible by paved provincial roads (first section 50 km) and local dirt roads.

PROPERTY DATA

- **OWNER / CONTROLLER: Marifil Mines Ltd.**
- **OPERATOR: Marifil Mines Ltd.**
- **AREA: 118.426 ha.**

PROJECT STATUS

LAST PUBLIC TECHNICAL REPORT | **COMPANY'S LAST ANNOUNCEMENT**

- PROSPECTING
- INITIAL EXPLORATION
- **ADVANCED EXPLORATION**
- EVAL. ECON. PREVIA (PEA)
- PREFEASIBILITY
- FEASIBILITY
- CONSTRUCTION
- OPERATION

Technical Report And Mineral Resource Estimate On The San Roque Project, Rio Negro Province, Argentina - July 22, 2019

PROJECT GEOLOGY

TYPE OF DEPOSIT
Low Sulphidation epithermal style (Au-Ag)

REGIONAL GEOLOGY
The San Roque Project is located in the eastern sector of the Somuncurá Massif, province of Río Negro. The mineralization is characterized by the formation of quartz and sulphide veins, veinlets and stockworks. The veins are hosted in rocks with diverse volcaniclastic facies of rhyolithic composition from the Jurassic Marifil Formation and in shales from the Paleozoic base.

DEPOSIT GEOLOGY
The mineralization is found in veins: Quartz + Fluorite, Milky Quartz and Gossan Breccia. The former are hosted in felic intrusive rocks, the milky quartz in brecciated rhyolites and the breccias in silicified sandstones. Ore minerals are mainly sphalerite, chalcopyrite, and minor galena. The In content reaches values higher than 1500 ppm in primary ore (drill samples) and almost 15,000 ppm in oxidized ore ("trench" samples). In is mainly found in sphalerite and minority in roquesite (CuInS2), in the primary zone, and in dzhalindite [In (OH)3] in the oxidized zone.

SAN ROQUE

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		n/a
Silver		n/a

PRODUCT TO OBTAIN: n/a

CAPEX: n/a

Estimated annual employment in operation: n/a
Estimated annual employment in construction stage: n/a

Estimated LOM: n/a

Mining Method: n/a

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade			Metallic content		
		Au (g/t)	Ag (g/t)	In (%)	Au (Oz)	Ag (Oz)	In (t)
Inferred	32,8	0,46	12,08	11,9	486.600	12.770.600	12.586.000

SOURCES CONSULTED

http://www.marifilmines.com/s/news.asp?ReportID=542133
- SAN ROQUE GOLD PROJECT, RIO NEGRO PROVINCE, ARGENTINA Notes and recommendations following an introductory field review. S. J Meldrum. October 27th 2000.
Technical Report And Mineral Resource Estimate On The San Roque Project, Rio Negro Province, Argentina - July 22, 2019

CONTACT

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hoswald@marifilmines.com

PINGÜINO

Deseado Santa Cruz

350 m.a.s.l.

LOCATION

48° 10' 12" Latitude South
68° 33' 36" Longitude West

COMMODITY

Au

Ag

MINERALIZATION TYPE
Polymetallic

LOCAL OPERATOR

COMPANY
Austral Gold

RESERVES	GRADE (%)	MINERAL CONTENT (Tons)
Proven	-	-
Probable	-	-

RESOURCES	GRADE (g/t)	MINERAL CONTENT (Tons)
Measured	-	-
Indicated	0.58	116,800
Inferred	0.66	46,955

PINGÜINO

LOCATION *(48° 09'58" Lat. S; 68° 33'30" Long. W)*

The project is located about 300 km SW of the city of Comodoro Rivadavia and about 220 km NW of Puerto San Julián. It can be accessed by RN 3, and turning west at Tres Cerros on RP 87 (gravel road) for 40 km, then northwest on RP 75 (gravel road) for 45 km until the Ea. El Piche, then another 8.7 km on smaller roads to the Ea. Cerro León, and then another 5 km to the project's campsite location.

PROPERTY DATA

- **OWNER / CONTROLLER: Austral Gold**
- **OPERATOR: Austral Gold**
- **AREA: 10.000 ha.**

PROJECT STATUS

LAST PUBLIC TECHNICAL REPORT

LAST PUBLIC TECHNICAL REPORT

- PROSPECTING
- INITIAL EXPLORATION
- ADVANCED EXPLORATION
- **PREL. ECON. ASSES. (PEA)**
- PREFEASIBILITY
- FEASIBILITY
- CONSTRUCTION
- OPERATION

2014-09 Resources update

PROJECT GEOLOGY

DEPOSIT TYPE
Indium Rich Polymetallic Vetiform System

REGIONAL GEOLOGY

The Penguin project is located within the Deseado Massif, which together with the Somunucurá Massif represent the products of massive continental volcanism during the break-up of the South American and African continent in the Jurassic period. Both massifs are composed mainly of rhyolite lava, tuff and ignimbrites.

The Deseado Massif is dominated by volcanic and felsic volcanic rocks belonging to various regional sequences that were deposited in the Middle to Late Jurassic. The rocks are crossed by a series of regional fractures that probably represent reactivations of basement structures. The period of intense Jurassic extension and volcanism with a tendency mostly from north to northwest, and form a series of grabens, hemi-grabens and horst, which are slightly inclined towards the east.

DEPOSIT GEOLOGY

The geology at Pingüino is dominated by rocks that are prior to the middle or late Jurassic extension, such as the epi and volcaniclastic rocks of the Roca Blanca F. (late Jurassic), basaltic flows of the El Piche F. (early Jurassic) and andesitic flows of the Cerro F. The El Tranquilo fault, with a northwestern trend, is the main structure in the project area. The Roca Blanca F. and the El Tranquilo F. host the mineralization at Pingüino. Mineralization at Pingüino occurs in multiple veins grouped into three main orientations: 330 W, 300 W and 70 W. Vein widths are highly variable but can reach up to 13 m wide and vein zones can reach up to 20 m wide. Five types of penguin veins are recognized: Ag-Au - low T° rich quartz, Ag - low T° rich quartz, Ag-In-Zn-Pb - intermediate T° polymetallic, Au-In-Cu - high T° polymetallic and Ag rich quartz with polymetallic vein clasts.

PINGÜINO

TECHNICAL / ECONOMIC INFORMATION OF THE PROJECT

AVERAGE ANNUAL PRODUCTION

Gold		6.400 Oz
Silver		657.000 Oz

PRODUCT TO OBTAIN: Doré

CAPEX: 20,7 MUSD

Estimated annual employment in operation: N/A
Estimated annual employment in construction stage: n/a

Estimated LOM: 8 years

Mining Method: Open Pit

RESOURCES AND RESERVES - ESTIMATION

RESOURCES	Tonnage (Mt)	Grade				Metal Content			
		Au (g/t)	Ag (g/t)	Zn (%)	Pb (%)	Au (Oz)	Ag (Oz)	Zn (t)	Pb (t)
Indicated	6,28	0,58	103,4	0,77	0,54	116.800	20.877.000	48.636	34.016
Inferred	2,21	0,66	65,3	0,52	0,35	46.500	4.632.000	11.511	7.-739

SOURCES CONSULTED

ARGENTEX RECEIVES PRELIMINARY ECONOMIC ASSESSMENT RESULTS ON PINGUINO'S NEAR-SURFACE SILVER-GOLD OXIDE RESOURCE – 2011-03-22. https://www.prnewswire.com/news-releases/argentex-receives-preliminary-economic-assessment-results-on-pinguinos-near-surface-silver-gold-oxide-resource-118429729.html

Upadated Technical Report on the Pingüino Project for Argentex Mining Corporation. Sept 19-2014

CONTACT

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diego.guido@australgold.com
www.australgold.com