

# NI 43-101 TECHNICAL REPORT MINERAL RESOURCE ESTIMATE DIABLILLOS PROJECT

## Salta Province, Argentina Prepared for AbraSilver Resource Corp. Report Date – November 28<sup>th</sup>, 2022 Qualified Persons: Luis Rodrigo Peralta, FAusIMM CP (Geo)

Joseph M. Keane, P.E., Q.P.



### Certificate

I, *Luis Rodrigo Peralta*, B.Sc. (Geo) FAusIMM, do hereby certify that I am author of the Sections 1 to 12 and section 14 to 26 of the Technical Report titled "NI 43-101 Technical Report – Mineral Resource Estimate - Diablillos Project, Salta Province, Argentina" prepared for AbraSilver Resource Corp. and dated November 28<sup>th</sup>, 2022.

- 1. My current work address is Virgen de Lourdes Oeste 1275, Capital, San Juan, Argentina, 5400.
- 2. I am an independent Senior Resource Geologist.
- 3. I graduated with a Bachelor of Science in Earth Sciences from the National University of San Juan, San Juan City, Argentina in 2008.
- 4. I am a registered Fellow and Chartered Professional in good standing of the Australasian Institute of Mining and Metallurgy, since 2010. FAusIMM membership number 304480.
- 5. I have practiced my profession continuously since 2008. My relevant experience includes over 15 years' experience working in relevant open pit and underground mines in South America. I have advanced in position since exploration geologist, senior resource geologist to Technical Services Manager, overseen the mineral resource estimate at Casposo Mine, Cerro Vanguardia Mine, El Toqui Mine, Pirquitas Mine and Chinchillas Mine. Also, I have worked as geologist consultant evaluating projects in South America in all their levels of study: green field exploration, brownfield exploration to resource definition and mining production.
- 6. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 7. I am responsible for the preparation of sections 1 to 12 and 14 to 26.
- 8. I have previously participated in the preparation of two technical reports for this property, dated October 28<sup>th</sup>, 2021 and January 3<sup>rd</sup>, 2022, as an independent senior consultant.
- 9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
- 10. I am independent of AbraSilver Resource Corp. (the Issuer) applying all the tests in section 1.5 of National Instrument 43-101.
- 11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- 12. I visited the Property from April 11<sup>th</sup> to April 20<sup>th</sup>, from June 3<sup>rd</sup> to June 9<sup>th</sup> and from September 10<sup>th</sup> to September 18<sup>th</sup> 2022 for the purposes of this report.
- 13. I consent to the filing of the Technical Report with any stock exchange and other



regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this  $28^{th}$  day of November 2022.

(signed) "Luis Rodrigo Peralta"

Luis Rodrigo Peralta, Bachelor in Geology Science, FAusIMM CP (Geo). Fellow of the Australian Institute of Mining and Metallurgy – Membership Number 304480.



#### Certificate

I, Joseph M. Keane, P.E. do hereby certify that:

- I am an Independent Mineral Processing Engineer Consultant and a Registered Member of the SME. I contributed to the report entitled "NI 43-101 Technical Report – Mineral Resource Estimate – Diablillos Project, Salta Province, Argentina" prepared for Abrasilver Resource Corp. and dated November 28<sup>th</sup>, 2022 as an associate of the following organization: SGS North America Inc., 3845 North Business Center Drive, Tucson, Arizona 85705, Telephone: 520-579-8315, Fax: 520-579-7045, E-Mail: Joseph.Keane@sgs.com
- 2. This certificate specifically applies to the Technical Report referenced above.
- 3. I graduated with a degree of Bachelor of Science in Metallurgical Engineering from the Montana School of Mines in 1962. I obtained a Master of Science degree in Mineral Processing Engineering in 1966 from the Montana College of Mineral Science and Technology. In 1989, I received a Distinguished Alumni Award from that institution. I have worked as a metallurgical engineer for a total of 60 years since my graduation from university.
- 4. I am a member of the Society for Mining, Metallurgy, and Exploration, Inc. (SME# 1682600) and am a registered professional metallurgical engineer in Arizona (#12979) and Nevada #5462).
- 5. I visited the property on 13<sup>th</sup> to 14<sup>th</sup> September 2022.
- 6. I have not had prior involvement with the property considered in the Technical Report.
- 7. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 8. I am responsible for Section 13 of the Technical Report and I am the Qualified Person for matters relating to the information contained in that report section.
- 9. I am independent of the issuer applying all of the tests in Section 1.5 of NI 43-101.
- 10. As of the date of this certificate, to the best of my knowledge, information, and belief, the technical report section for which I am responsible contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- 11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites assessable by the public.

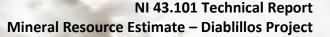


Dated this 28<sup>th</sup> day of November 2022.

(signed) "Joseph M. Keane"

Joseph M. Keane, P.E., Q.P.

SME Membership number 1682600 and Registered Professional metallurgical engineer in Arizona #12979 and Nevada #5462.





## **1 EXECUTIVE SUMMARY**

Mr. Peralta was retained by AbraSilver Resource Corp. ("AbraSilver") to complete an update Mineral Resource Estimate ("MRE") and its independent Technical Report of the Diablillos Silver-Gold Project ("the Project"), located in Salta province, Argentina. The purpose of this Technical Report is to support the public disclosure of the MRE results. Mr. Peralta visited the property from April 11<sup>th</sup> to April 20<sup>th</sup>, from June 3<sup>rd</sup> to June 9<sup>th</sup> and from September 10<sup>th</sup> to September 18<sup>th</sup> 2022 for the purposes of this report.

The Diablillos property is located within the Puna region of Argentina, in the southern part of Salta Province, approximately 160 km southwest of the city of Salta. The property comprises 15 contiguous and overlapping mineral leases acquired by AbraSilver in 2016. The mining concessions granted by the Government of Salta through an agreement with SSRM Mining ("SSRM", previously "SSRI") and Pacific Rim Mining Corporation Argentina SA. an Argentinian company and the registered owner of the Diablillos property.

Diablillos hosts several known occurrences of epithermal gold-silver mineralization. Exploration work, conducted by several operators over the history of the Project, includes 104,831.98 m of diamond drill holes ("DDH")(57,696 meters) and reverse circulation ("RC")(47,136 meters) drilling in 457 holes. The drilling allowed to outline the Oculto deposit, a weathered high-sulphidation epithermal gold-silver deposit hosted primarily in Tertiary volcanic and sedimentary rocks and more recently the Fantasma and Laderas deposits, two satellite zone of silver-rich epithermal mineralization, located approximately 800 m west of Oculto and 700m north respectively. The focus of this report is on the Oculto deposit only.

Mineral resources for the Diablillos Project in the Oculto deposit were estimated by Mr. Peralta ("QP"), who considers that the input data was suitable for use in a Mineral Resource Estimate.

Mineral Resources at the Diablillos Project are considered as potentially mineable by an open pit method and are estimated based on prior drilling and a more recent drilling campaign performed by AbraSilver between 2019 - 2022. The Mineral Resource is an updated Resource for the Oculto deposit. The Mineral Resource is reported inside a Whittle pit shell with a reasonable cut-off grade of 35 g/t silver equivalent, based on a gold price of US\$1750/oz and silver price of US\$25/oz, mining costs and metallurgical recoveries have been provided by AbraSilver as used in previous studies. In additions, the economics parameters as metal prices and mining cost are considered acceptable for use within the report and they represent the cost used for the purposes of the report.



Gold and Silver grades were estimated into the block model using Reverse Circulation Drill holes and Diamond Drill holes including the recent drilling between 2019 to July 30th, 2022. It was estimated using industry-standard estimation methodology: Ordinary Kriging ("OK") and bias was reviewed using a parallel estimation with inverse distance square ("ID2") for comparison. Drill hole intervals have been composited to a length of 1m, which is the average sample length for core sampling. Grade capping has been applied to composited grade intervals on a case-by-case basis within each estimation domain. The estimation domains were defined using a combination of lithology domains, alteration domains, and oxide / sulphide state, defining a set of 18 domains for gold and silver.

After the mineral resource estimate has been completed for Diablillos which yielded the following recommendations:

- The geological and alteration models at Oculto are constrained. A bigger model is suggested to be built, to add potential mineral resources.
- Consistent logging of historical and recent drilling will allow a robust geological model to be generated.
- Improve the structural knowledge of the deposit with surface mapping of outcrops, and/or with information from oriented drill core or televiewer methods will allow to determine the physical and elastic properties of each of the geotechnical domains identified.
- In the NorthEast zone of the Oculto, definition or infill drilling should be carried out, in order, to categorize into measured resource the actual inferred and indicated ones. An infill drilling campaign is estimated about 7,000 meters of DDH drilling, with an approximate cost of U\$\$ 3,500,000.
- A new update mineral resource estimate should be done once Phase III is finalized, as this drilling campaign could potentially impact in the global configuration of the property.
- Evaluate the mineral resource contained in the sulphide level.

Based on these outcomes Mr. Peralta recommends that Diablillos be moved to a Pre-Feasibility study. Specific recommendations to take advantage of potential upsides can also be found at the end of this report.

The Mineral Resource is summarized as per November 28<sup>th</sup>, 2022 and has been estimated in alignment with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines (CIM, 2019) and the Mineral Resource Estimate has been categorized in accordance with the CIM Definition Standards (CIM, 2014) and comprises a Measured, Indicated and Inferred Mineral Resource as summarised in Table 1-1.

This Technical Report is considered by Mr. Peralta ("QP") to meet the stated requirements of a Mineral Resource Estimate as defined in Canadian NI 43-101 regulations.



Zone	Category	Tonnage (000 t)	SG t/m³	Ag (g/t)	Au (g/t)	Contained Ag (000 oz Ag)	Contained Au (000 oz Au)
	Measured	18092	2.30	101	0.85	58655	495.8
Oxides	Indicated	30226	2.33	49	0.71	47502	688.1
Oxides	Measured & Indicated	48318	2.32	68	0.76	106156	1183.9
	Inferred	2090	2.36	31	0.50	2085	33.3
	Measured	1244	2.53	50	1.21	1979	48.5
Tropoition	Indicated	1752	2.61	22	1.13	1235	63.8
Transition	Measured & Indicated	2996	2.58	33	1.17	3214	112.7
	Inferred	127	2.60	7	0.80	29	3.3
	Measured	19336	2.31	98	0.88	60634	544.4
Oxides +	Indicated	31978	2.34	47	0.73	48737	751.9
Transition	Measured & Indicated	51314	2.33	66	0.79	109370	1296.6
	Inferred	2216	2.38	30	0.51	2114	36.5

Table 1-1: Oculto Mineral Resource Estimate – As of October 31th, 2022.

Notes for Mineral Resource Estimate:

- 1. Mineral Resources are not Mineral Reserves and have not demonstrated economic viability.
- The Mineral Resource is reported inside a conceptual Whittle open pit shell derived using US \$25.00/oz Ag price, US \$1750/oz Au price, 73.5% process recovery for Ag, and 86% process recovery for Au. The constraining open pit optimization parameters used were \$3.00/t mining cost, \$24.45/t processing cost, \$2.90/t G&A cost, and average 54-degree open pit slopes.
- The formula for calculating AgEq is as follows: Silver Eq Oz = Silver Oz + Gold Oz x (Gold Price/Silver Price) x (Gold Recovery/Silver Recovery).
- 4. The MRE has been categorized in accordance with the CIM Definition Standards (CIM, 2014).
- 5. All figures are rounded to reflect the relative accuracy of the estimates. Minor discrepancies may occur due to rounding to appropriate significant figures.
- 6. The Mineral Resource was estimated by Mr. Peralta, B.Sc., FAusIMM CP(Geo), Independent Qualified Person under NI 43-101.
- 7. The Mineral Resource is sub-horizontal with sub-vertical feeders and a reasonable prospect for eventual economic extraction by open pit methods.
- 8. A cut-off grade of 35 gt AgEq was used for the Mineral Resource.
- 9. The Mineral Resource models used Ordinary Kriging grade estimation within a three-dimensional block model and mineralized zones defined by wireframed solids, which are a combination of lithology and alteration domains. Constrained by a Whittle open pit shell. The 1m composite grades were capped where appropriate.
- 10. All tonnages reported are dry metric tonnes and ounces of contained gold and silver are troy ounces.
- 11. In-situ bulk density were assigned to each model domain, according to samples averages of each lithology domain, separated by alteration zones and subset by oxidation, as detailed in section 14.
- 12. Mining recovery and dilution factors have not been applied to the Mineral Resource estimates.
- 13. Mr. Peralta is not aware of any environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues that could materially affect the potential development of the Mineral Resource.
- 14. Totals may not agree due to rounding.



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## **2 INTRODUCTION**

AbraSilver Resource Corp. (TSX.V:ABRA) is a silver, gold, and copper exploration company with projects in Argentina and Chile. The Company develop projects which are various stages of exploration, from drill-ready to PEA. Its primary focus is on exploring and advancing the Diablillos project, which is a high sulphidation epithermal silver-gold deposit with a large resource.

On April 24, 2017, AbraSilver announced that it had completed a reverse takeover (RTO) transaction with Huayra Minerals Corp. ("Huayra"), the owner of the Project. Huayra's rights to the Project had been acquired from SSRI, now SSR Mining Inc. ("SSRM"), in 2016. As a result of the RTO, Huayra is now a wholly owned subsidiary of AbraSilver, and AbraSilver holds indirect ownership of the Project through Huayra.

The Diablillos property is located in the Puna region of Argentina, in the Province of Salta, approximately 160 km southwest of the city of Salta. The property comprises several mineral and easements concessions both within the Salta and Catamarca provinces, with several known occurrences of epithermal gold-silver mineralization. Exploration work, conducted by several operators over the history of the Project, includes diamond drill hole ("DDH") and reverse circulation ("RC") drilling of:

- 87,712m in 476 holes prior to 2018, as reported in RPA report (2018).
- 3,249m in 28 drillholes drilled during the 2017 campaign.
- 844m in two drillholes, drilled during the 2019 campaign.
- 9,200m in 34 drillholes, drilled during the 2020 campaign.
- 14,217m in 56 drillholes, drilled in 2021 Phase I drilling campaign.
- 8,532m in 31 drillholes, drilled in a 2022 Phase II drilling campaign.

The drilling allowed to outline the Oculto deposit, a weathered high-sulphidation epithermal gold-silver deposit hosted primarily in Tertiary volcanic and sedimentary rocks, and additionally, the Fantasma and Laderas deposits, two satellite zone of silver-rich epithermal mineralization, located approximately 800 m west of Oculto and 500m north respectively. This report specifically focuses on Oculto which has been the target of recent drilling and represents most identified mineral resources. While Fantasma and Laderas still represents a future opportunity, the potential upside has not been considered in the compilation of this report.

In 2009, Wardrop Engineering Inc. ("Wardrop") completed a Mineral Resource estimate and Technical Report for the Project for SSRI (Wardrop, 2009). In 2015, MFW Geoscience Inc. ("MFW") prepared an updated Mineral Resource estimate and in 2016, RPA audited the MFW estimate and prepared an independent Technical Report on the Project (RPA, 2016). In 2018, RPA prepared a Preliminary Economic Assessment and an independent Technical



Report (RPA, 2018), in 2021, Mining Plus ("MP") prepared an updated Mineral Resource Estimate (MP, 2021) with a subsequent Preliminary Economic Assessment and an independent Technical Report (MP PEA, 2022). This report relies substantially on the 2021 and 2022 reports, with updates reflecting progress or changes since that time, mostly due to recent drilling results.

The project allows for a conventional truck and shovel open pit mining operation using contractors. Previously, Oculto considered a small additional amount of material coming from the nearby Fantasma deposit. This study, however, considers the Oculto pit resource only, while an updated drilling strategy is being considered for future inclusion of the Fantasma and Laderas deposits. A 7,000 tonnes per day (tpd) conventional silver/gold processing plant incorporating crushing, grinding and cyanide leaching with Merrill Crowe precious metal recovery has been considered, while a 6000 tpd plant was considered in the previous 2018 PEA.

The document reviewed, as other sources of information, are listed at the end of this report in the References section.



## **3** RELIANCE ON OTHER EXPERTS

This report has been prepared by Mr. Peralta for AbraSilver Resource Corp ("AbraSilver"). The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to Mr. Peralta at the time of preparation of this report,
- Assumptions, conditions, and qualifications as set forth in this report, and
- Data, reports, and other information supplied by AbraSilver, and other third-party sources including the 2018 PEA Study and both technical reports prepared by Mining Plus in 2021 and 2022.

For the purpose of this report, Mr. Peralta has relied on ownership information provided by AbraSilver. Mr. Peralta has relied on land tenure information provided by AbraSilver. This includes a letter of legal opinion regarding the validity of the tenure from the legal firm, ZCA, of Buenos Aires (Zaballa Carchio, 2021). Mr. Peralta has not researched property title or mineral rights for the Project and expresses no opinion as to the ownership status of the property.

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



## **4 PROPERTY, DESCRIPTION AND LOCATION**

The Diablillos property is located in the high Puna and Altiplano region of north-western Argentina (Figure 4-1). Approximately 160 km southwest of the city of Salta, along the border between the Provinces of Salta and Catamarca, Argentina (Figure 4-2). The property encompasses an area of 11,403 ha (28,177 acres). The geographic coordinates at the center of the property are 25°18' South latitude and 66°50' West longitude.

### 4.1 Land tenure

Mr. Peralta has relied on land tenure information provided by AbraSilver. This includes a letter of legal opinion regarding the validity of the tenure from the legal firm, Perez Alsina Consultores Mineros, of Buenos Aires (Perez Alsina, November 15<sup>th</sup>, 2022).

The mining concessions (called "concesiones mineras" in the Argentine Mining Code) consist of 15 contiguous and overlapping mineral claims, some of them registered as a mining block "Grupo Minero Diablillos" through a different file number that includes several path and water easements, in addition, the company has added 2 mining claims for logistics purposes that are approx. 70km to the northwest of the main block, and has recently registered 5 new claims near the main block, but not contiguous, as listed in Table 4-1 and shown in Figure 4-2. The Project lies within an area disputed by the Provinces of Salta and Catamarca, however mining concessions covering the Project have been granted by both provinces in this area of dispute. The concessions were first granted by the Mining Judge of Salta but were subsequently overlapped by concessions applied for and afterwards granted by Catamarca province. In a 1985 judicial precedent, concerning a similar case but in a Salar de Diablillos neighboring project, the Supreme Court of Argentina ruled in favor of the prevailing competence of the Mining Judge of Salta, who was first to grant the concessions. Pacific Rim Mining Corporation Argentina S.A., current subsidiary of AbraSilver, applied for the Diablillos concessions in 1994 in the Province of Salta, prior to concessions granted by the Mining Judge of Catamarca, claimed in 2004 in said province for properties overlapping the Diablillos concessions. The Argentine Mining Code establishes that the first claim applying for a concession to be registered has precedence over subsequent claims. This precedence is consistent with the ruling of the Supreme Court of Argentina and, hence, it has proven to be a valid argument that may be used in a potential lawsuit to decide the applicable competence of the Salta and Catamarca provinces involved in the border dispute.



Despite AbraSilver belief that its title to the Diablillos concession in Salta should ultimately prevail, in 2017 AbraSilver acquired and effectively consolidated ownership and control of any and all overlapping, and potentially conflicting mineral rights granted by the Mining Judge of Catamarca on the same area of the Diablillos properties. With this acquisition AbraSilver eliminated any potential title risk, particularly if the provincial border dispute is resolved in the future granting the dispute area to Catamarca, since it currently holds title to all mining concessions and rights from both provinces.

It is worth mentioning that the Diablillos project has always been subject to the competence of Salta authorities for all main permits, controls and compliance under the Argentine Mining Code and provincial regulations. There is a common understanding between Salta and Catamarca provinces with few interferences with the project by Catamarca authorities. Salta competence over Diablillos has not been judicially disputed by Catamarca since the aforementioned ruling by the Supreme Court of Argentina in 1985.

However, the Governments of Salta and Catamarca are fully aware of the need to resolve competence issues and grant legal certainty for mining investors in the disputed area. Accordingly, due to the construction announcement made by POSCO ARGENTINA S.A.U. regarding its lithium project "Sal de Oro", both Governments arrived at an agreement this year to facilitate, and foster said project, partially lying within the border dispute area and neighboring the Diablillos project. According to this agreement, the Provinces of Salta and Catamarca will share royalties and taxes in equal portions. The mining, environmental and policing of the project will be managed by an Interprovincial Authority integrated by officers of both provinces. This agreement although still subject to the approval of the provincial Congresses of Salta and Catamarca is a good precedent for Diablillos. It is a mechanism to deal with these issues until the border conflict is finally resolved by the National Congress.

Table 4-1 lists the concessions granted by both Salta and Catamarca. Due to the overlaping of the claim groups, the areas could be misleading. The overall property area depicted in Figure 4-3 is approximately 11,403 ha.



Table 4-1:	Mineral	Tenure
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Tenement ID					
File N°	Name	Туре	Area (ha)	Date of Grant	Expiry Date
	Diablillos - CATAMARCA PROVINCE				
629/P/2009	Condor Yacu Este	Exploitation Concession	1880.14	12-03-10	N/A (*2 and *3)
408/M/2003	Cerro Bayo	Exploitation Concession	1500.00	10-06-04	N/A (*2 and *3)
550/M/2004	Cerro Bayo I	Exploitation Concession	1500.00	30-11-04	N/A (*2 and *3)
220/A/2007	Dorotea	Exploitation Concession	718.07	27-02-08	N/A (*2 and *3)
139/A/2013	Dorotea I	Exploitation Concession	2673.52	17-05-16	N/A (*2 and *3)

		Diablillos - SALTA PROVINCE				
os"	11749	Los Corderos	Exploitation Concession	598.65	13-02-84	N/A (*2 and *3)
Diablillos" (*1)	11750	Pedernales	Exploitation Concession	599.00	14-04-86	N/A (*2 and *3)
-	11751	Renacuajo	Exploitation Concession	600.80	15-02-84	N/A (*2 and *3)
Minero 18,69	11964	Relincho I	Exploitation Concession	624.66	29-04-85	N/A (*2 and *3)
	11902	Relincho II	Exploitation Concession	430.70	29-04-85	N/A (*2 and *3)
"Grupo Filo	11966	Relincho III	Exploitation Concession	668.10	29-04-85	N/A (*2 and *3)
"G	16031	Alpaca I	Exploitation Concession	300.00	03-07-98	N/A (*2 and *3)
	14840	Fantasma(*1)	Exploitation Concession	598.42	14-10-94	N/A (*2 and *3)
	19541	Alpaca(*1)	Exploitation Concession	3498.86	15-04-10	N/A (*2 and *3)
	21384	La Carito	Exploitation Concession	142.59	N/A (*7)	N/A (*2 and *3)
	745705	Alpaca III	Exploitation Concession	3149.54	N/A (*5)	N/A (*2 and *3)
	745714	Alpaca VI	Exploitation Concession	3227.75	N/A (*5)	N/A (*2 and *3)
	745720	Alpaca VII	Exploitation Concession	3426.75	N/A (*5)	N/A (*2 and *3)

Easements					
16225	Road and camp easement	Easement	25.00	N/A	N/A
18927	Road easement	Easement	36.00	N/A	N/A
19332	Water easement	Easement	1.00	N/A	N/A
19333	Water easement	Easement	1.00	N/A	N/A
19334	Water easement	Easement	6.00	N/A	N/A
752594	Water easement	Easement	4.00	N/A	N/A
752595	Water easement	Easement	4.00	N/A	N/A

(\*1) Mortgaged in favor of Silver Standard Resources INC. Registered on 11/6/18. For USD 15,050,000. Expiration: 08/08/37

(\*2) The Mining Concession does not expire, as long as the concessionaire fulfills all maintenance conditions under the regulations.

(\*3) All Mining Concessions and Discovery Claims are in force.

(\*4) Acquired recently. Awaiting formal registration in the name of Pacific.

(\*5) Requested as new Discovery Claims recently. Awaiting formal concession to Pacific.

(\*6) Pocitos properties are located approx. 70km to the north-northwest of Diablillos and were added for logistics purposes only.

(\*7) Vacant mine requested by Pacific and awaiting formal concession.

(\*8) Next canon due on December 31, 2022 for 1st semester 2023.



On November 1, 2016, AbraSilver Resource Corp. ("AbraSilver'), formerly AbraPlata Resource Corp. ("AbraPlata") and Angel BioVentures Inc. originally acquired the mining concessions granted by the Government of Salta through an agreement with SSRM Mining ("SSRM") and Pacific Rim Mining Corporation Argentina S.A. an Argentinian company and the registered owner of the Diablillos property. Under this agreement, AbraSilver acquired, through the merger with Huayra Minerals Corporation, certain subsidiaries of SSRM, including Pacific Rim Mining Corporation Argentina S.A. As consideration for the payment concessions, SSRM received US\$ 6.35 million in cash payments and 24.15 million in AbraSilver common shares comprising 17.65% of the issued and outstanding common shares at that time.

To fulfill the terms of the agreement, AbraPlata was required to make a cash payment by US\$7 million on construction start-up or at the fifth anniversary.

In addition to these payments, SSRM is entitled to receive 1.0% net smelter return ("NSR") royalty on production from the project.

As of September 6, 2017, AbraSilver completed the definitive documentation necessary to acquire a 100% equity interest in Minera Cerro Bayo SA ("Cerro Bayo"), the owner of the conflicting mineral rights granted by the government of Catamarca, thereby indirectly acquiring ownership and control of the conflicting mineral interests. As consideration, AbraSilver will pay US\$3.325 million in cash (US\$0.96 million paid) and issue 500,000 (Issued) common shares of the company to the shareholders of Cerro Bayo in instalments over a five-year period. On September 11, 2019, AbraPlata and Aethon Minerals Corporation ("Aethon") entered into a binding agreement whereby AbraPlata acquired all the issued and outstanding shares of Aethon. The transaction value was approximately \$10.9 million on a fully diluted in-the-money basis, and Aethon and AbraPlata shareholders received approximately 46% and 54% of the combined entity, respectively.

SSRM, the original vendor of the Diablillos property to AbraPlata, supported the Transaction and, agreed to defer the Diablillos property payment of US\$7 million on one of the earlier dates:

- Commercial Production starts in any of all parts of the Diablillos Concessions;
- Or July 31<sup>th</sup>, 2025.

On March 4th 2021, AbraPlata formerly changed name to AbraSilver Resource Corp.

On July 29,2021 SSRM announced that it has sold their royalty portfolio to EMX Royalties. This transaction includes the 1% NSR on Diablillos project as well as the remaining US\$7 Million payment which is due in 2025 (or upon commercial production).



Argentinian Mining Concessions are granted in perpetuity, under certain conditions, which must be met by the property holder. Among these conditions is the requirement for an annual payment of a canon to the province, paid in advance in two instalments due on June 30 and December 31 of each year. AbraSilver reports that the total annual amount of the canon is approximately US\$4,800 (AR\$497,600). A letter of legal opinion stated that the canon had been fully paid for 2021 (Zaballa Carchio, 2021) The next instalment will be due on December 31, 2022.

The surface rights for the concessions are not held by AbraSilver. Under the Argentine Mining Code, a mining concession grants its holder an easement right over the concession area and therefore owners of surface rights cannot prevent the holder of a mining concession from accessing and developing the property. Unless the land is fiscal, the owners are entitled to an indemnity for the easement granted, to cover any disturbance or loss of use of the land due to mining activities. The holder of the concession typically would negotiate an agreement with the surface owner; if they are unable to agree, an appropriate compensation will be determined by the Court. The Diablillos concessions are on fiscal lands owned by the Province of Salta and therefore no compensation is required according to the Argentine Mining Code.

AbraSilver either has or can readily acquire all required permits to conduct any proposed work on the property. The Biannual Update of the Environmental Impact Report, allowing drilling activities and any other exploration activity related was renewed, and lodged with the Provincial Secretary of Mines on April 27, 2021. The next renewal of the Environmental Impact Report will be filed in 2023.

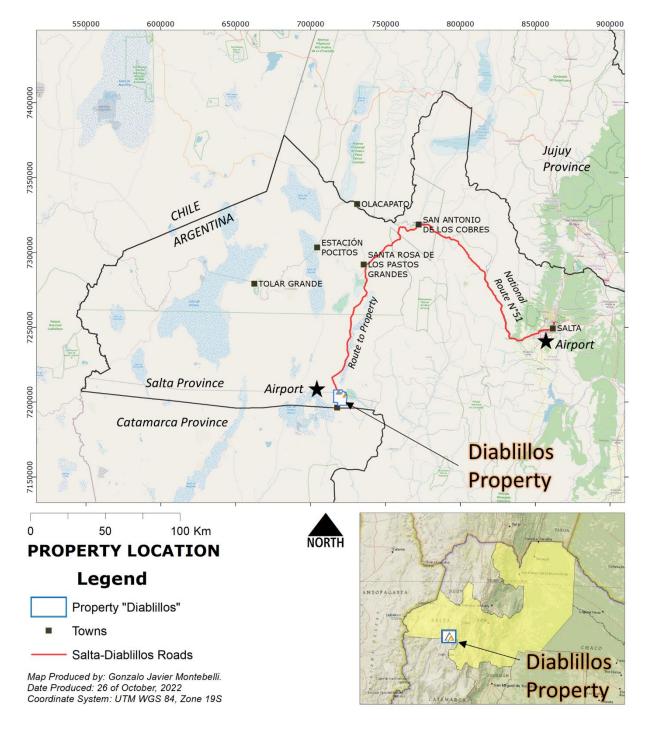
Mr. Peralta is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.





Figure 4-1: Property location. Source: Abrasilver Resource Corp. 2022.





*Figure 4-2: Detailed property location.* Source: Abrasilver Resource Corp. 2022.



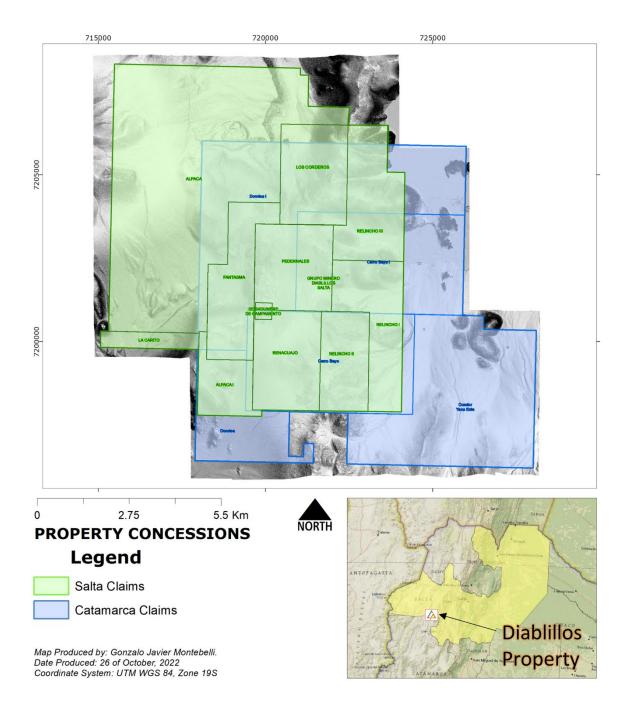


Figure 4-3: Overall property area. Source: Abrasilver Resource Corp. 2022.



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

#### 5.1 Accessibility

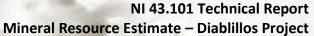
The Diablillos property is accessible from the City of Salta via the Town of San Antonio de Los Cobres along National Highway 51 (see Figure 4-2). There is a secondary all-weather gravel road that leads south to Santa Rosa de Los Pastos Grandes and then on to the property. Distance from Salta to the property is approximately 320 km, a driving time of five to six hours. An alternate route is via the town of Pocitos on Provincial Route 17, which is the main road to Antofagasta, Chile. This is the primary road access to the Borax Argentina's Tincalayu borate operations, located a few kilometers southwest of the Diablillos property on the northeastern margin of the Salar del Hombre Muerto.

Most of the local roads are gravel and can be traversed by two-wheel drive vehicles with high clearances, however, during rainy periods, sections of the access road are subject to flooding and small landslides. Four-wheel drive vehicles are required for access within the property.

Road maintenance is performed by the "Direccion de Vialidad de Salta" (Salta Province Highway Authority). Notably a plan was recently announced to the Pastos Grandes community that a permanent base was being considered there to handle maintenance of provincial road N°129. This road connects San Antonio de Los Cobres with the Salar del Hombre Muerto. The Diablillos project is approximately 19 Km to the south-east of this road. If this project comes to fruition, it will improve site access and reduce the length of the road that will have to be considered for maintenance.

The existence of good quality airstrips are being reported on the Salar del Hombre Muerto, 10 Km southwest of the property, at the Livent Corporation (formerly "FMC Corporation") Salar del Hombre Muerto lithium mine operations, approximately 40 km west of the Diablillos property and at the Posco lithium project approximately 15 Km to the Northwest of the properties.

It should additionally be noted that the Salta government has expressed an interest in building a "Mining Logistic Center" in the town of Olacapato. This project seeks to improve the local mining infrastructure. The scope has been noted to include an airport, industrial area, transportation, processing, service facilities, commercial premises, accommodation, parking facilities and a health center. While the Diablillos project does not rely on this infrastructure there will be considerable benefits if it progresses. It is also a good sign of the commitment to mining projects by regional authorities.



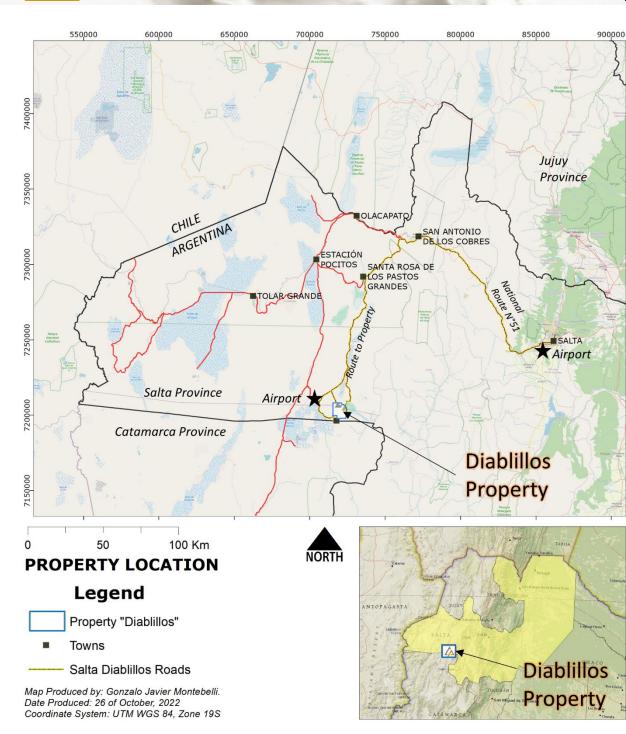


Figure 5-1: Accessibility to the property. Source: Abrasilver Resource Corp. 2022.



### 5.2 Physiography

The property is located within the "Puna" physiographic region, an Andean highland with broad valleys separating mountain ranges exceeding 3,500 m.a.s.l. The Puna extends southwards from central Peru, across the altiplano of Peru and Bolivia, and south along the spine of the Andes separating northern Chile and Argentina. Elevations on the property range from 4,100 m.a.s.l. to 4,650 m.a.s.l. Although located at high elevation, local relief is moderate to gentle.

Vegetation is sparse, typically comprising upland grasses and stunted shrubs.

#### 5.3 Climate

The climate is arid, with annual precipitation less than 200mm per year. However, in some years, no precipitation has been registered.

In the region, the only reliable meteorological data comes from Fénix meteorological station. Owned by Minera del Altiplano S.A., located in the western basin of the Salar del Hombre Muerto, approximately 45 Km SW of the Diablillos Project. According to historical data mean annual precipitation was 82.2 mm / year considering the 1992 to 2020 periods.

Rain falls mainly during February and March. Temperatures measured in the Project area range from a minimum of -26°C to a maximum of 32°C, with an annual average of 5.1°C. Strong northwesterly and westerly winds of more than 45 km/h are common in the area, especially during winter and spring.

#### 5.4 Local resources

Salta is the largest city in the region, and is serviced by daily commercial flights, major highways, and a narrow-gauge railway to Antofagasta, Chile. It is the principal source of supplies, fuel, and equipment for the property. The nearest permanent communities are San Rosa de Los Pastos Grandes and San Antonio de Los Cobres with estimated populations of 150 and 1,500 inhabitants, respectively. Limited basic supplies and some fuel may be purchased in San Antonio do Los Cobres.

The town of Pocitos is located approximately 100 km north of the property and is the nearest access point to the railway, as to the electrical power grid. Two solar plants have opened approximately 130 Km North of the property operated out of Pocitos and Olacapato.

A gas pipeline has recently been completed from Pocitos towards the Salar de Hombre Muerto Lithium mine, and a derivation valve has been placed on its trace at a distance 24 Km from the Diablillos property.



Furthermore, a second pipeline is planned by the Government of Salta as per Decree N°248/21 issued on March 23, 2021, declaring the "GASODUCTO PRODUCTIVO SALTEÑO ("GPS") (Salta Productive Gas Pipeline) of public interest and empowering Recursos Energéticos y Mineros de Salta SA ("REMSA"), the state-owned energy and mining company of Salta to carry out the call for Public Bidding of its GPS. AbraSilver is in close contact with the Government to secure the future use of natural gas from this pipeline, if it eventually gets into construction as it is currently delayed due to financial reasons. AbraSilver additionally intends to investigate solar and wind power as alternative sources of energy. In the event there are delays with these gas supply projects and its commissioning timelines, and/or constraints with the use of renewable energies diesel fuel will be used to secure the reliable supply for power generation.

Drilling by AbraSilver has additionally identified an aquifer nearby Oculto in the upper part of the Barranquillas valley basin. Two broad diameter holes drilled by Conhidro have encountered substantial aquifers which are extensions of others ones previously discovered by exploration drill holes 4 and 5. Holes 6 and 7 are 12-inch diameter rotary holes and hole 7 in particular has a sequence of gravels with abundant fresh water in excess of 50m. The hole was drilled in a water easement currently held by AbraSilver. It is believed this aquifer holds sufficient water to support operations for the life of the project. Permission has been granted for use the water only for exploration.

#### 5.5 Infrastructure

There is a small exploration camp at Diablillos, with accommodation for approximately 60 people. The property has reasonable access to local resources of power, water, and personnel for mining operations as mentioned in the previous section.

There are large areas adjacent to the Diablillos deposit that could potentially serve as areas for tailings impoundment, waste rock disposal, and plant facilities. As stated in Section 4 of this report, while AbraSilver does not own the surface rights to these areas, under Argentine mining laws, easements can be requested, or access can be negotiated with the owners.



## **6 HISTORY**

This section was largely extracted from MP PEA (2022) which was in turn largely extracted from RPA (2018), with contributions from Ronning (1997) and Stein (2001). In the property's exploration history, particularly before 1980, the property extents and locations of work completed do not appear to be clearly known. Consequently, some of the work reported from those early years may not have been done within the boundaries of the Diablillos property.

#### 6.1 Prior ownership

Modern exploration in the area surrounding Diablillos began in the 1960s, when Dirección General de Fabricaciones Militares, an arm of the Argentine military, evaluated the Argentine Puna for porphyry-style deposits of copper and/or molybdenum. Exploration directed specifically at Diablillos began around 1971, when the Secretaría de Minería de la Nación ("SMN") undertook geological and geochemical reconnaissance work in the area at a scale of 1:50,000. On December 31, 1971, the property was included in a federal government mineral reserve area for copper-molybdenum porphyry deposits, but this status expired in 1984 (Stein,2001).

Ronning (1997) reported that Abra de Mina, an Argentinean prospecting partnership, acquired the ground which now constitutes the Diablillos property in the late 1970s. Stein (2001) and Wardrop (2009), however, report that this occurred in 1984. Stein further reported that, at that time, the rights to the adjacent Condor Yacu property were held by Manfredo Arheit, of Buenos Aires.

Shell C.A.R.S.A, a joint venture between Shell and Billiton, explored in the area from 1984 to 1987, and optioned Diablillos in 1985.

The Ophir Partnership Ltd. ("Ophir"), a U.S. limited partnership, optioned the property in early 1987. Minera Utah International Ltd., a subsidiary of Broken Hill Proprietary Ltd. ("BHP"), began preliminary reconnaissance exploration in the area the following year, and by late 1989 had concluded agreements with Ophir and Abra de Mina. The property was held by BHP until September 1991, when the option agreement with Abra de Mina was terminated.

In 1992, Pacific Rim optioned the property from Abra de Mina, and completed the option requirements to acquire 100% of the property on July 1, 1997 (Stein, 2001). Pacific Rim conducted exploration work until 1996, when Barrick Exploraciones Argentina S.A., a wholly owned subsidiary of Barrick Gold Corporation ("Barrick"), obtained an option on the shares of Pacific Rim Mining Corporation Argentina S.A. Barrick continued exploration and initiated preliminary environmental impact and metallurgical studies.



SSRM acquired all assets of Pacific Rim Mining Corporation Argentina S.A. in December 2001, for a staged total of US\$3.4 M, paid as a combination of cash and shares.

On November 1, 2016, the Company closed a Share Purchase Agreement dated August 23, 2016, as amended, and restated on March 21, 2017, and further amended on September 11, 2019, with SSRM and Fitzcarraldo Ventures Inc. pursuant to which Huayra Minerals Corporation acquired from SSRM all of the issued and outstanding shares of Pacific Rim Mining Corporation Argentina S.A., ABP Global Inc. ("BVI") and ABP Diablillos Inc. ("BVI"). Through the acquisition of the SSRM subsidiaries, the Company acquired certain exploration projects in Salta and Chubut Provinces, Argentina as well as the rights to Diablillos.

On September 11, 2019, AbraPlata and Aethon entered into a binding arrangement agreement whereby AbraPlata acquired all the issued and outstanding shares of Aethon. The transaction value was approximately \$10.9 million on a fully diluted in-the-money basis, and Aethon and AbraPlata shareholders received approximately 46% and 54% of the combined entity, respectively.

SSRM, the original vendor of the Diablillos property to AbraPlata, supported the Transaction and, agreed to defer the Diablillos property payment of US\$7 million on one of the earlier dates:

- Commercial Production starts in any or all parts of the Diablillos Concessions;
- Or July 31, 2025.

On March 4<sup>th</sup>, 2021, AbraPlata formerly changed name to AbraSilver Resource Corp.

On July 29<sup>th</sup>, 2021, SSRM announced that it has sold their royalty portfolio to EMX Royalties. This transaction includes the 1% NSR on Diablillos project as well as the remaining US\$7 Million payment which is due in 2025 (or upon commercial production start).

#### 6.2 Exploration and development history

Work completed on the property throughout its history is summarized in Table 5-1.



Diablillos Project History				
Year	Operator	Description		
Pre 1983	Secretaría de Minería de la Nación	1,409 rock chip samples (includes 190 outcrop and 271 slope debris samples from Diablillos Sur)		
1984-1987	Shell C.A.R.S.A	Rock geochemical survey; three Winkie drill holes		
1987	Ophir Partnership	34 rotary drill holes (approximately 30 m deep) in the Corderos, Pedernales, Laderas, and Jasperoide areas		
1988-1991	внр	Geological mapping (1:1,000 to 1:7,500 scale); 380 rock chip samples; 1,200 m of bulldozer trenches; 56 air RC holes (6,972m)		
1991	ВНР	"Reserve" estimate (see below)		
1992-1993	Pacific Rim Mining Corporation	Five diamond drill holes (1,001.8 m) in the Oculto Zone		
1994	Pacific Rim Mining Corporation	148 km of chain and compass grid; geological mapping; 122 line-km of ground magnetic survey; 34 line-km of induced polarization (IP) survey; 213 hand auger samples; 2.5 km of trenching; 250+ rock chip samples; 12 diamond drill holes (2,016 m)		
1996-1999	Barrick Gold Corp.	Geological mapping; surface sampling; RC drilling; CSAMT survey; mag survey; environmental impact study; metallurgical test work		
1999	Pacific Rim Mining Corporation	Mineral Resource estimate		
2001	D. M. Stein (Barrick)	MSc thesis		
2001	Pacific Rim Mining Corporation	Mineral Resource estimate (see below)		
2003	Pacific Rim Mining Corporation (for Silver Standard)	20 diamond drill holes (3,046 m)		
2005	Pacific Rim Mining Corporation (for Silver Standard)	Five diamond drill holes each at Renacuajo and Alpaca, with a total of 10 diamond drill holes with 1,772m		
2007	Pacific Rim Mining Corporation (for Silver Standard)	54 diamond drill holes (10,324 m) on Oculto; one hole (203 m) at Laderos; three holes (unknown length) at Pedernales; five holes (unknown length) at Los Corderos; four HQ-size diamond drill holes sampled for metallurgical tests		
2008	Pacific Rim Mining Corporation (for Silver Standard)	52 diamond drill holes (7,971 m), three of these for geotechnical studies; additional metallurgical studies		
2009	Silver Standard Resources Inc.	Mineral Resource estimate		
2011-2012	Silver Standard Resources Inc.	Internal Preliminary Economic Assessment, rock chip sampling, 1,679 m diamond drilling (19 holes)		
2017	AbraSilver	28 drillholes and a total of 3,148.5m (Fantasma). Nick Tate visit redefining the geology and mineralization concepts		
2018	AbraSilver	Preliminary Economic Assessment (PEA 2018) including Resource estimate		
2019	AbraSilver	Phase I Drilling Campaign with 2 diamond drill holes (844 m) (Oculto deposit)		
2020 - 2021	AbraSilver	Fase II Drilling campaign of 55 drillholes and a total of 15,143 m expanding Oculto to North, West and East		
2021	AbraSilver	Preliminary Economic Assessment (MP PEA 2021) including Resource estimate		
2021-2022	AbraSilver	Phase II - Part B - Drilling Campaign of 84 drillholes and a re-logging campaign total of 106 drillholes. Extending West and north breccias. Infill drilling to convert to measured resources		

Table 5-1: Exploration and Development work conducted. AbraSilver Resource Corp, 2022.



# 6.2.1 1970s to 2012

Throughout the Diablillos property, several prospecting and exploration works have been developed (Table 5-1), the prospecting works were developed by Secretaría de Minería de la Nación and Shell C.A.R.S.A, which included geochemical rock sampling work and surface recognition of the geology of the project.

The main exploration ones have been developed mainly by Ophir Partnership, BHP, Pacific Rim Mining Corporation, Barrick Gold Corp and Silver Standard Resources Inc between 1987 until 2012, exploration work consisting of:

- Geological mapping.
- Rock chip samples.
- Trenching.
- Geophysical study: induced polarization (IP) survey, ground magnetic survey, CSAMT survey; mag survey.
- Drilling with diamond drill holes and rotary drill holes.
- Mineral Resource Estimation and metallurgical test work.

In 2010, SSRI commissioned M3 Engineering and Technology Corporation ("M3") to carry out a Preliminary Economic Assessment ("PEA"), which was completed in June 2011. This report was for internal purposes and was not made public.

#### 6.2.2 2015

SSRI retained MFW to update the resource estimate for Oculto.

#### 6.2.3 2016

RPA subsequently audited the estimate and prepared a Technical Report, which was issued November 2016 (RPA, 2016). This Technical Report was filed on SEDAR and is available to the public.

#### 6.2.4 2018

A preliminary economic assessment was undertaken by RPA.



### 6.2.5 2019 to 2021

The drilling campaign was designed to expand the Oculto deposit to the north, west and east. Targets were selected to track mineralized structures identified through geochemical, lithological and alterations analysis as well as structural maps of the zone.

Furthermore, targets were redefined in shape and connection between vertical feeders and horizontal mineralized zones, including the specific interest over shallow mineralization detected in maps made by Nick Tate (2018). These targeted mineralized areas were in a Main and Cross Breccia zone with 10m average intervals.

Also, infill drilling was performed, so as to increase confidence in Oculto to allow the potential estimation of measured resources.

Considering all drill holes throughout 2019, 2020 and the first part of 2021 up to hole DDH-21-021.

Overall, the 2019-2021 campaign contributed in advances into the geological model and a better understanding of the areas and behaviour of the continuity of mineralized levels.

An updated mineral resource estimate was performed in October with effective date as October 28<sup>th</sup>, 2021, with a subsequent preliminary economic assessment with effective date January 13<sup>th</sup>, 2022. Both technical reports were performed by Mining Plus.

#### 6.2.6 2021 to 2022

As mentioned in section 6.2.5, Phase II drilling campaign was designed to extend the North and West breccias and to recategorize into measured ones the actual indicated resources. A total of 143 drillholes are included in Phase II, totalling 35,827 meters, from DDH-20-001 to DDH-22-040. In July, 2022, AbraSilver decided to update the mineral resource estimate and is the objective of the present report.

# 6.3 Past production

No production has been reported from the property.



# 7 GEOLOGICAL SETTING AND MINERALISATION

The following sections are largely taken from MP PEA (2022) which was in turn taken from RPA (2018) and from Wardrop (2009), which summarized descriptions of the regional and local geology in Ronning (1997), Stein (2001), and MDA (2001).

# 7.1 Regional geology

The Project is located in the Argentine Puna region, which is the southern extension of the Altiplano of southern Peru, Bolivia, and northern Chile. It is a high plateau, separating the Cordillera Oriental to the east and the Andean Cordillera (Cordillera Occidental) to the west.

The Cordillera Occidental is a modern volcanic arc formed by the subduction of the Nazca Plate below the continental South American Plate. The Cordillera Oriental, or Precordillera, is an older north-south trending mountain chain extending 1,000 Km from the Argentina-Bolivia border to Neuquén. These domains are separated from one another by north-south trending regional scale faults (Figure 7-1), which are the dominant structural features of the entire region.

During the mid-Miocene Quechuan Orogeny, the subduction zone beneath the Puna gradually steepened as the South American plate overrode the Nazca plate. Extensive late Miocene to Pliocene volcanic activity occurred along the western margin of the Puna Plateau and along northwest-southeast conjugate structures. Easterly to northwest-southeast directed compression resulted in creation of reverse fault-bounded intra-arc basins, and uplift. Uplift began in the Early Miocene, with rapid uplift commencing in the Middle Miocene. It is estimated that since that time the southern Puna has undergone an elevation change in the order of 2,500 m. Presently, the average elevation in the southern Puna is approximately 4,000 m.a.s.l., with peaks reaching over 5,000 m.a.s.l.



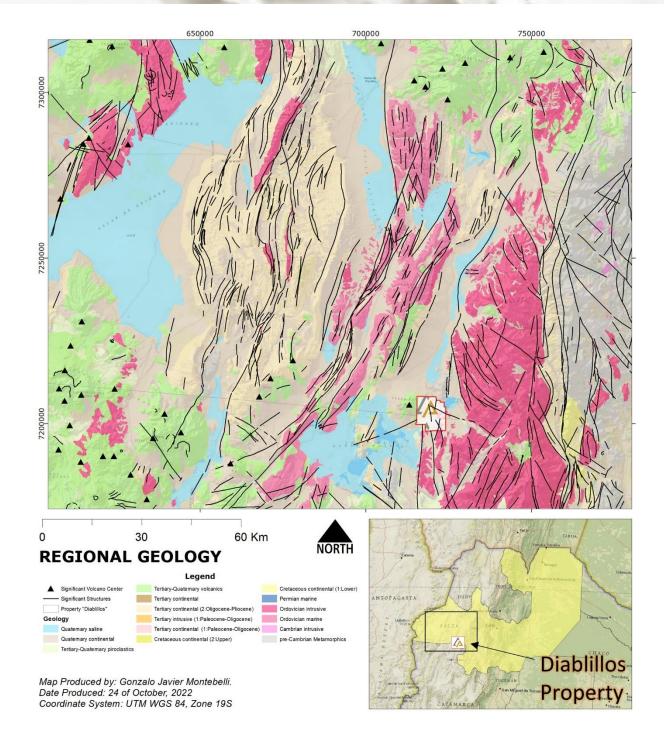


Figure 7-1: Regional geology, including faults. Source: Abrasilver Resource Corp., 2022.



# 7.2 Local geology

Diablillos lies near the eastern margin of the Puna, near the intersection of the north-south trending Diablillos - Cerro Galán fault zone with the north-westerly trending Cerro Ratones lineament (Figure 7-2). The Diablillos - Cerro Galán fault structure is one of several major north south brittles to ductile shear zones in the Puna that were formed during neoproterozoic and lower paleozoic tectonism, and then reactivated during the Mesozoic and Cenozoic. These zones are reportedly hundreds of kilometres long and several kilometres wide, within which there are anastomosing shears, sometimes bounding lenses of undeformed country rocks.

Ronning (1995) lists the following regional lithologic units occurring in the vicinity of the property:

- Stocks and Extrusive Domes:
  - 12 to 15 Ma-old sub-volcanic intrusives and extrusives, frequently associated with tephra deposits from low volume, plinian to phreatomagmatic eruptions. They are generally K<sub>2</sub>O-rich dacitic rocks with biotite and occasional amphibole mafic phenocrysts, and accessory apatite, ilmenite, allanite, and tourmaline.
- Cerro Ratones Volcanics:
  - $\circ$  Reportedly of Oligocene age (30 ± 3 Ma), but a recent 40Ar/39Ar age of approximately 7 Ma for biotite from a flank unit at Cerro Ratones indicates a possible wider age range.
- Faja Eruptiva Granitoids:
  - Magmatic rocks of broadly Ordovician age, widespread in north-western Argentina, including a belt known as the Faja Eruptiva de la Puna Oriental, or simply the Faja Eruptiva. This belt extends from approximately 27° South latitude in Argentina to approximately 22° South latitude in southernmost Bolivia. In the Diablillos area, the Faja Eruptiva is spatially coincident with the Diablillos–Cerro Galán fault zone.
  - Rocks of the Faja Eruptiva form large and elongate bodies of porphyritic and equigranular, partly hypabyssal granitoids rich in sedimentary xenoliths. Near Diablillos, rocks assigned to the Faja Eruptiva contain feldspar phenocrysts up to 4 cm long. They follow a calc-alkaline differentiation trend and are peraluminous. Based on five U-Pb age determinations, the igneous rocks of the Faja Eruptiva are believed to be middle Ordovician.



- Ordovician Sediments:
  - The Faja Eruptiva intrudes and is folded with a sequence of Ordovician metasedimentary rocks. Near Diablillos, these rocks are phyllites, metasiltstones, and quartzites. Farther north, the Ordovician metasedimentary rocks contain late Ordovician fossils, in contradiction to the middle Ordovician radiometric ages for the Faja Eruptiva.
- Precambrian Units:
  - The pre-Ordovician basement of the eastern Puna has been termed the Pachamama Igneous-Metamorphic Complex. It consists of three subparallel north south belts 200 km long. The Diablillos property is situated near the western margin of the eastern belt, which comprises metamorphosed pelitic, psammitic, and granitic rocks that have been intruded by younger granitoids of the Faja Eruptiva.

Disseminated and vein occurrences of the northern and central Puna are characterized by base metal, gold, silver, tin, and antimony mineralization commonly associated with small, potassic-rich, Tertiary stocks and extrusive domes. These intrusive/extrusive features have been dated at  $15 \pm 2$  Ma (Sillitoe, 1977, in Coira et al., 1993, quoted in Ronning, 1997). Elsewhere, the salars (salt flats) in the vicinity of Diablillos host borate and lithium occurrences.



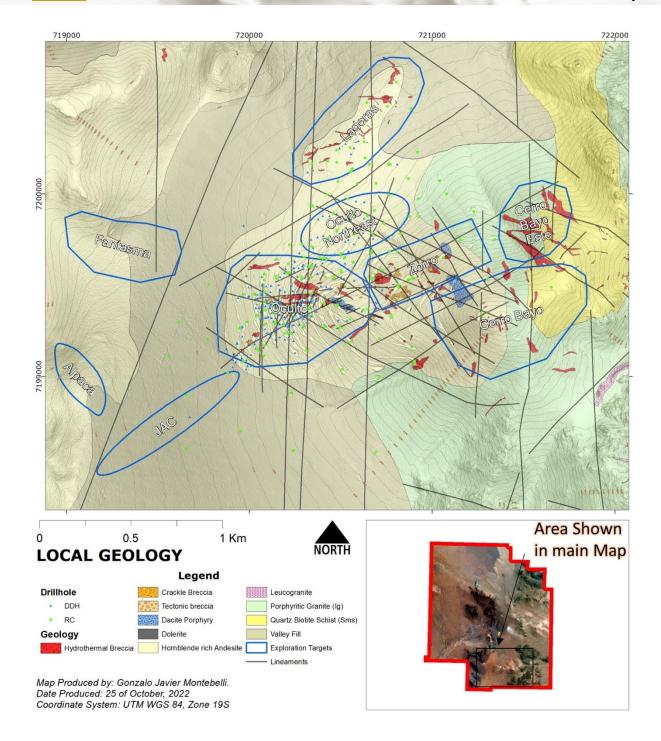


Figure 7-2: Simplified geology of Diablillos Project. Source: Modified from Grosse y Guzmán (2017), based on geology maps from SEGEMAR and Schnurr et al. (2006).



# 7.3 Lithology

The Diablillos property hosts several zones of high - sulphidation epithermal alteration and mineralization with strong supergene overprinting. The main zone of mineralization, the Oculto, is hosted by a subaerial volcanic sequence, ranging in composition from pyroxene – hornblende to biotite - hornblende andesite (Figure 7-3). These volcanic rocks have been age dated by Stein (2001) and assigned to the Middle Miocene Tebequincho Formation. Basement rocks comprise Ordovician-age alkali - feldspar, porphyritic granite of the Complejo Eruptivo Oire and Neoproterozoic to Cambrian age metasedimentary rocks of the Complejo Metamorfico Rio Blanco. Small, altered dacitic bodies have also intruded the basement and andesitic sequence (Stein, 2001).

The volcanic rocks are spatially restricted to areas west of the Pedernales fault. They are divided into two groups by the Jasperoide fault, with younger andesite flows and tuffs to the west and older pyroclastics and apron-bedded breccias to the east. Hydrothermal breccias form pipes and dikes throughout the area from the Jasperoide fault in the west to the Demonio fault located just east of the eastern property boundary. The basement complex is exposed in most areas, except west of the Jasperoide fault.

Basement phyllites are restricted to the far north-western corner of the map area and to the east of the Demonio fault. The phyllites contain approximately 2% by volume quartz boudinage with molybdenum and iron oxide staining.

The Faja Eruptiva granite of the basement complex occupies a 1.5 km wide north-south strip through the centre of the map area. The granite contains numerous xenoliths of the quartz mica schist, and locally is sheared to ultra-mylonites, which are subsequently pervasively silicified and injected with sheeted quartz veins. The largest of these shear zones forms a prominent ridge on Morro Eco, in the vicinity of the Cerro Viejo prospect (Figure 7-3).

The Faja Eruptiva granite is hosted in a quartz mica schist, located primarily west of the Pedernales fault, and limited to the east by the Demonio fault. The schist exhibits substantial deformation denoted by tight small-scale folding, which is enhanced on weathered surfaces by differential weathering of the layers. Where altered, the schist changes in appearance, becoming white in colour, with the alteration of the dark micas to light-coloured clays or possibly micas. In more intensely altered zones, the schist is completely silicified, imparting a sugary quartzite appearance on broken surfaces, however, the relic folded texture is maintained especially on weathered surfaces.

The basement complex is intruded by Tertiary stocks and dikes and mantled by their extrusive

equivalents. The stratigraphically lowest unit of the Tertiary volcanic units exposed between the Jasperoide and Pedernales faults consists of fragmental andesites (tuffs?), which



generally are strongly clay altered and do not form natural exposures. The best artificial exposures observed are located at field station (fs) DW 38 on the DAR 6 drill platform. At this location, a fault, oriented at 000°/62°E, limits alteration to the west and has preserved a pod of fresher andesite fragmental. The fragmental is believed to be overlain by a lithic pyroclastic like one found on top of the Oculto zone. This pyroclastic unit is relatively rare and has only been found in outcrop in one locality, where it is observed resting on top of the andesite fragmental.

The uppermost rocks in the volcanic stratigraphic column are apron breccias. These are heterolithic breccias which form prominent exposures and are locally well bedded. The strike and dip of the bedding ranges from 110°/05°SW at la Trucha to 237°/22°NW at Guanaco, indicating a source to the east. A minimum of two distinct phreatic events occurred, with the first dominated by clasts of andesite composition, followed by a more heterolithic clast event which included blocks from the earlier andesite. Locally, the apron breccias exhibit evidence of sedimentary reworking with channels and cross bedding.

Hydrothermal breccias crosscut all lithologies except for the younger andesites west of the Jasperoide fault and basement phyllites. The clasts in the hydrothermal breccias strongly reflect the host rock into which they were injected, although they nearly always contain clasts of Faja Eruptiva porphyritic K-spar granite. It is this cross-cutting of the andesite fragmentals that was the primary criterion originally used by site geologists to differentiate the hydrothermal breccias from the apron breccia, which they can closely resemble. The hydrothermal breccias form isolated round to elongate pipes and dike structures. The largest of the exposed pipes measures 70 m by 150 m and is located at the north end of Cerro del Medio (Figure 7-3). The largest of the dike-like hydrothermal breccias is discontinuously exposed over a strike length of 550 m. These dikes form three sub-populations in respect to their strike and alteration. These sub-groups are listed below:

- a. Striking 076° with strong silica-alunite alteration.
- b. Striking 100° with strong silicic alteration.
- c. Striking 167° with mixed silica and silica-alunite alteration.

Groups "a" and "b" are concentrated in the lower central part of the property. Group "c" is the least common and is restricted to the far eastern portion of the map area.

The Tertiary intrusives are largely quartz-feldspar porphyry and form small dikes and stocks on Cerro Viejo Este in the south-eastern corner of the map area. The porphyry exhibits a close spatial relationship to hydrothermal breccia; however, no clasts of the porphyry have been observed within the breccias even where enveloped by the porphyry.



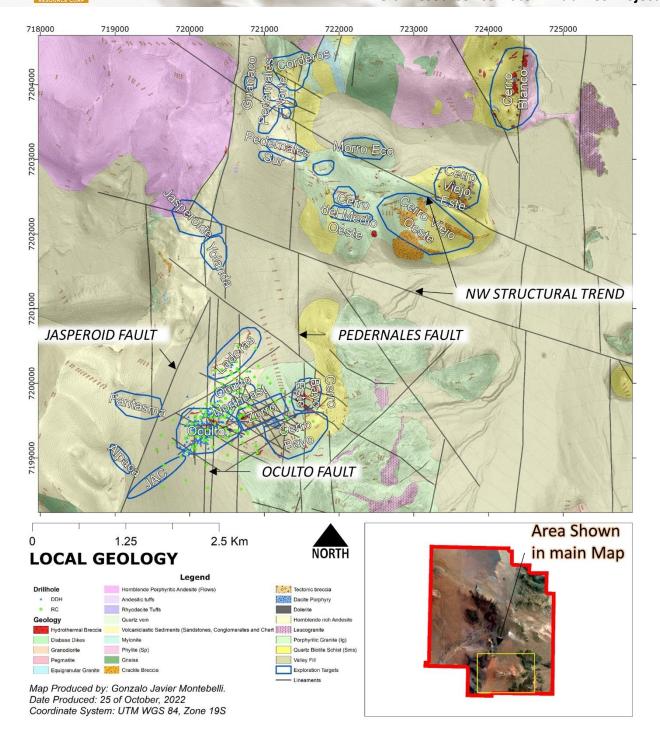


Figure 7-3: Main geologic aspect and lineaments of Diablillos Project. Source: Internal mapping from AbraSilver Resource Corp., 2022.



# 7.4 Structure

As stated above, Diablillos lies near the intersection of two regional fault structures: the north south Diablillos - Cerro Galán Fault, and the northwest trending Cerro Ratones lineament. Within the project area itself are two north-trending faults, the Pedernales, located in the central portion of the property, and the Jasperoid to the west (Figure 7-4). These faults bracket a wedge-shaped graben, within which most of the altered volcanic rocks occur. The graben ranges from 2.7 km wide at Oculto to 800 m wide at Pedernales, approximately 4.5 km to the north.

Numerous east-west and northwest-southeast structures branch from the main Diablillos -Cerro Galán corridor, and these faults are thought to have channelled local magmatic and hydrothermal activity. The northwest-trending structures appear to be related to regional movement along the Cerro Ratones lineament.

The Tertiary stratigraphy is generally flat lying to gently dipping. The underlying Ordovician and Precambrian rocks have been strongly deformed and metamorphosed during the Lower Palaeozoic Oclóyic Orogeny, which has resulted in a wide range of structural orientations.



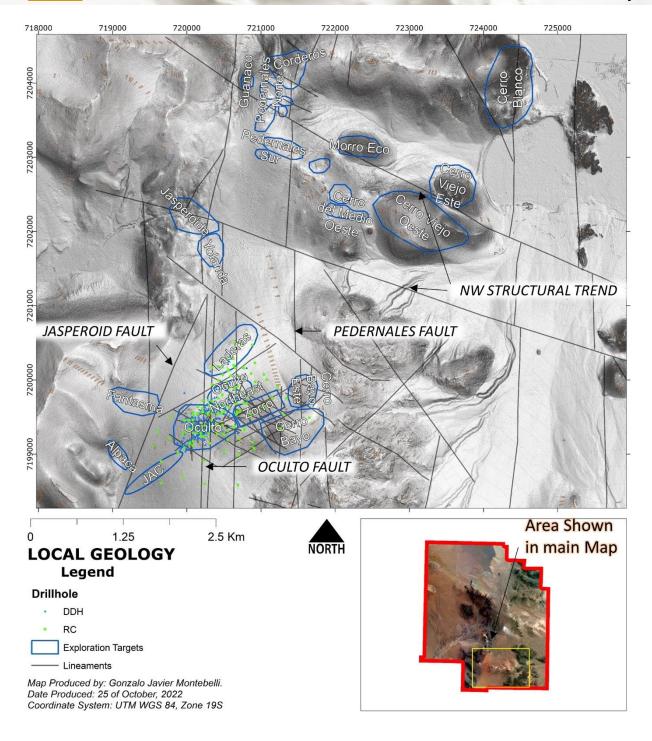


Figure 7-4: Main structure aspect and lineaments of Diablillos Project. Source: Internal mapping from Abrasilver Resource Corp., 2022.



# 7.5 Mineralization

There are several mesothermal, and epithermal precious and base metal occurrences situated along the trend of the Diablillos - Cerro Galán fault zone within the northern and central Puna, including Diablillos, Incahuasi, Cóndor Yacu, Inca Viejo, and Centenario (Figure 7-1 and Figure 7-2). Many of the mineral occurrences are spatially, and probably genetically, related to small Tertiary stocks and extrusive domes that are usually hydrothermally altered with disseminated and vein - hosted lead, zinc, silver, and gold (± tin, antimony, copper, and molybdenum) mineralization (Coira et al., 1993, quoted in Wardrop, 2009 and RPA, 2018).

There are seven known mineralized zones on the Diablillos property, with the Oculto zone being the most important and best explored (Figure 7-5). These mineralized zones are:

- 1. Oculto including the Oculto NE and Zorro.
- 2. Fantasma.
- 3. Laderas.
- 4. JAC.
- 5. Alpaca.
- 6. Pedernales including the Pedernales Sur subzone (including Truchas and Saddle showings) and Pedernales Norte subzone (including Vicuña, Corderos, Suri, and Guanaco showings).
- 7. Cerro Bayo.
- 8. Cerro del Medio.
- 9. Cerro Viejo.
- 10. Cerro Viejo Este.

Mineralization at Oculto is discussed below.



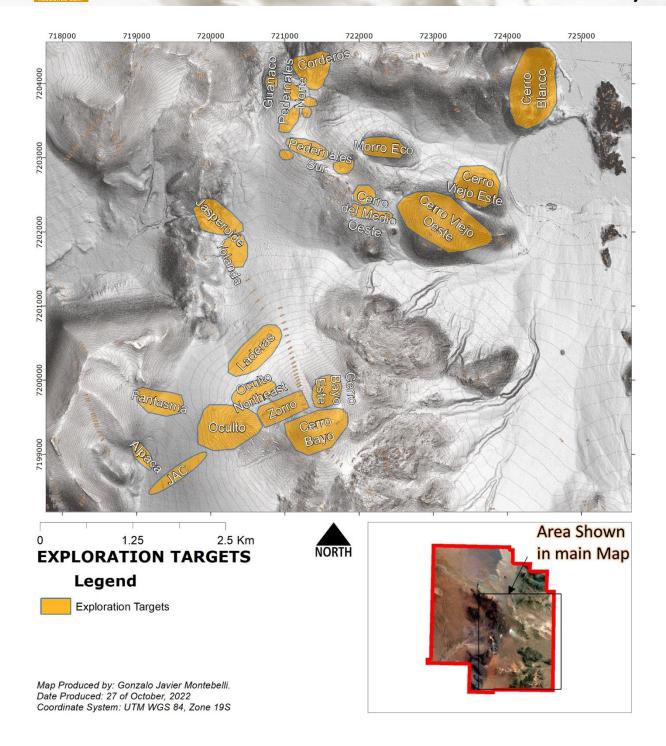


Figure 7-5: Diablillos Project mineral occurrences. Source: Internal mapping from Abrasilver Resource Corp., 2022.



Oculto is the main deposit on the property and contains most of the present Mineral Resource. It is a high-sulphidation epithermal silver-gold deposit derived from remnant hot springs activity following Tertiary-age local magmatic and volcanic activity. It is evidenced at surface by a broad zone of intense acid leaching located on the flank of Cerro Bayo, although the economic mineralization does not outcrop. Host rocks at surface are hornblende porphyritic andesite which has been intruded by a dacite porphyry body (or bodies) which are hypothesized to be the thermal driver(s) for the mineralization (Tate, 2018). The andesites overlie a basement assemblage of phyllites and granitic rocks. At the contact of the andesite with the basement, there is a paleo - surface occupied by a discontinuous conglomerate unit of widely ranging thickness. Recent review of drilling results suggest that this unit appears to thicken along a trend corresponding to one of the predominant controlling structures to mineralization and that this zone is coincident with broader lateral extent of the mineralization. Tate (2018) suggests that the conglomerate filled a paleo - trough related to that structure, which later reactivated and provided a conduit for ore-forming fluids.

The deposit is strongly oxidized down to depths in the order of 300 m to 400 m below surface. In the oxide zone, precious metal mineralization consists of native gold, chlorargyrite, comparatively less common iodargyrite, and locally common bismuthinite (Stein, 2001). These minerals occur as fine - grained fracture fillings and vug linings in association with quartz, jarosite, plumbojarosite, hematite, and goethite. Other accessory minerals include alunite, barite, native sulphur, and bismoclite.

Stein (2001) reported the occurrence of a high-grade zone of native gold, native silver, and acanthite with accessory chlorargyrite, iodargyrite, and jalpäite in the southwest extremity of

the deposit. Gangue minerals in this zone included quartz, alunite, jarosite, and iron oxides, along with intergrowths of barite.

Hypogene mineralization comprises vein and breccia-hosted sulphides and sulphosalts underlying the oxide zones. Primary sulphide and sulphosalt minerals include pyrite, galena, enargite, chalcopyrite, sphalerite, tennantite, and matildite. Accessory minerals include barite and alunite. Incipient supergene enrichment was observed by Stein (2001), with covellite partially replacing chalcopyrite and polybasite replacing tennantite. A review of the drilling results conducted by Tate (2018) has outlined a generally flat-lying zone of very high silver grades located between 100 and 120 m below surface. This zone has no apparent relationship with any contact or geological unit and so is viewed as a possible zone of supergene enrichment.

The precious metal mineralization throughout the deposit occurs as extremely fine grains along fractures and in breccias or coating the inside of vugs and weathered cavities. Mineral



grains are very difficult to identity in core or hand specimen, and much of the identification of these minerals was done using electron microscope or microprobe.

Principal controls to alteration and mineralization are predominantly structural with some influence imparted by lithology (Figure 7-5, Figure 7-6 and Figure 7-7). Fluid flow propagated along predominantly east - north-easterly and north-easterly trending steep fractures as well as along the unconformable contact between basement granites and phyllites and the overlying Tertiary andesitic pile.

Gold-silver mineralization is observed to occur in tabular silica veins, disseminations in bleached and altered wall rocks, and siliceous hydrothermal breccias, and has propagated laterally along the trend of the conglomerate and the Tertiary-Ordovician contact. This has imparted a complex geometry to the deposit, with a broadly north-easterly trend consisting of steeply dipping, structurally hosted zones along with more horizontal tabular bodies. The mineralization occurs within a vertical range of 3,965 m.a.s.l. and 4,300 m.a.s.l., predominantly between elevations of 4,050 m.a.s.l. and 4,250 m.a.s.l.

In the central and eastern portions of the property, up to an elevation of approximately 4,350 m.a.s.l., the upper Tertiary rocks exhibit evidence of a late, shallow steam-heated alteration, overprinting the earlier hypogene alteration (MDA, 2001, quoted in Wardrop, 2009). Late-stage altered rocks have a light grey colour and porous texture with abundant kaolinite and white, finely crystalline alunite, minor opal, and occasional native sulphur. Hypogene alteration of the volcanic rocks differs slightly from that of the intrusive rocks at Diablillos, due largely to different host mineralogy.



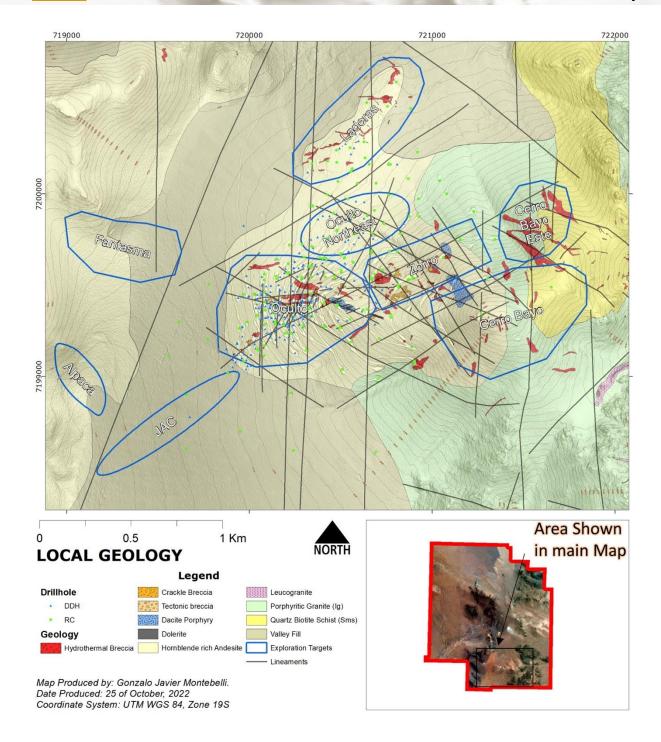


Figure 7-6: Oculto geology map. Source: updated from Ristorcelli and Ronning, 2001, with internal mapping from AbraSilver Resource Corp. 2022.



The alteration facies of volcanic and intrusive rocks mapped at Diablillos are as follows:

- Alteration Facies in Upper Volcanic Rocks
  - Propylitic: Mainly characterized by chlorite, usually with significant development of clay minerals. Propylitic alteration has been observed on the surface at the Pedernales Sur zone and subsurface at Laderas and Oculto zones.
  - Intermediate Argillic: More abundant than propylitic alteration with clay minerals being dominant.
  - Advanced Argillic: Argillic alteration occurs in most mineralized zones, typically comprising clay minerals, but at Oculto and Pedernales zones some alunite is present.
  - Quartz-Alunite: Alunite is typically the dominant or sole alteration mineral, sometimes completely replacing the protolith. Associated minerals identified in PIMA studies are dickite, pyrophyllite, and diaspore.
  - Vuggy Silica: The central core of the Oculto deposit consists of strongly developed vuggy silica, probably temporally related to late stage boiling epithermal fluids and steam alteration. Vugs may be lined or partly filled by pyrophyllite, dickite and diaspore, or by alunite.

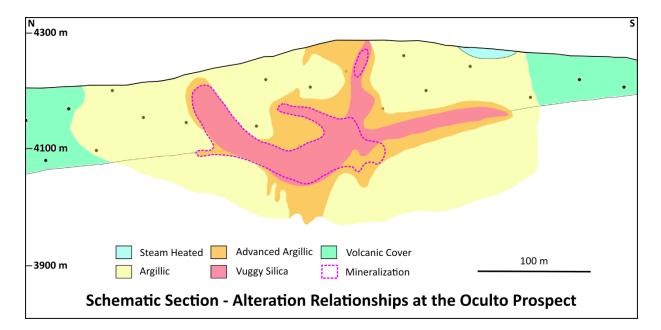


Figure 7-7: Oculto geology map. Source: Ristorcelli and Ronning, 2001

- Alteration Facies in Intrusive Rocks
  - Silicification: Silicification is most pronounced adjacent to main hydrothermal fluid channels. Tabular bodies of silica have the appearance of quartz veins or veinlets but are really silicified granitoid rocks.



- Alunitization: Alunite occurs as fine-grained or microcrystalline masses replacing feldspars and mafic minerals in the granitic rocks. Alunite also occurs with quartz as veinlets at times with jarosite.
- Argillization: Occurs away from loci of hydrothermal activity as clay alteration of feldspars and biotitization of mafic minerals.

Figure 7-7 and Figure 7-8 shows the conceptual mineralization model and the property-wide distribution of alteration facies.

Alteration at Oculto is similar in style and mineralogy to many high sulphidation epithermal systems, consisting of a series of roughly concentrically zoned assemblages (Figure 7-7). The core of the deposit is predominantly vuggy silica ± alunite surrounded by a zone of pervasive alunite and clay alteration, which in turn grades outwards into kaolinite with illite, smectite, and chlorite (Stein, 2001). Pervasive chlorite alteration underlies the mineralization in the southwest portion of the deposit. A steam-heated zone of alunite-clay-opal is preserved above 4,330 m.a.s.l. and occurs in outcrop in the central portion of the deposit.

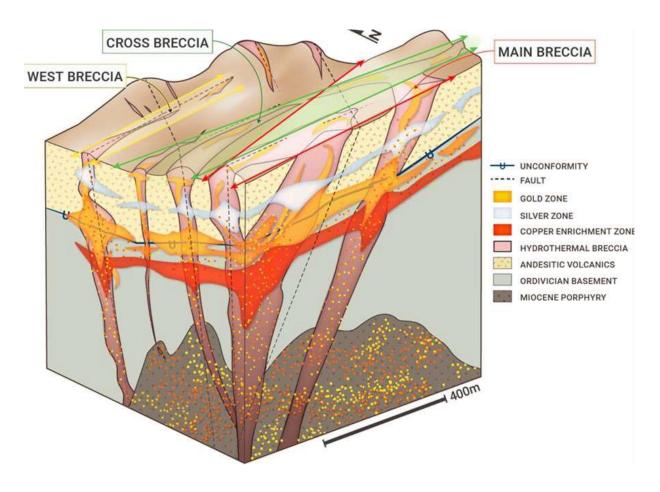


Figure 7-8: Oculto conceptual mineralization model. Source: Abrasilver Resource Corp., David O'Connor, 2019.



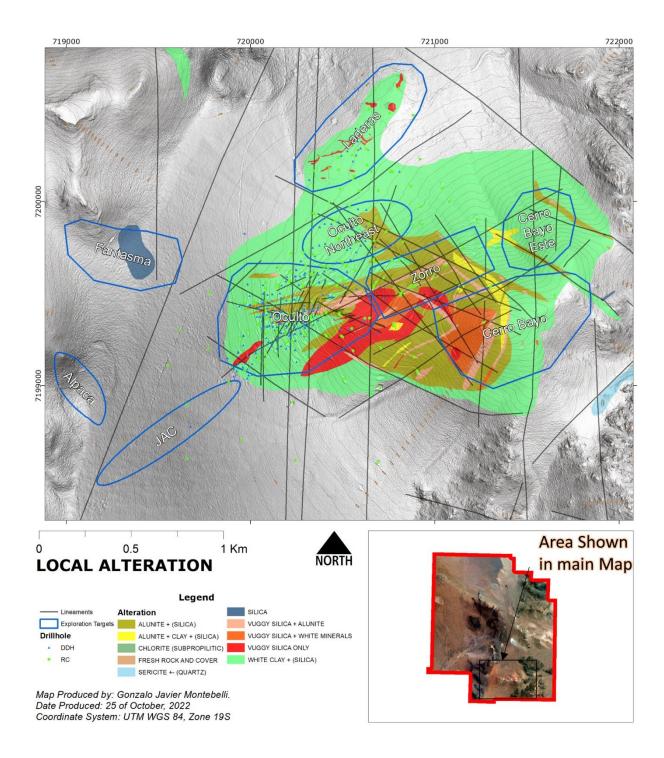


Figure 7-9: Alteration at Oculto. Source: modified from Ristorcelli and Ronning, 2001 with internal mapping of AbraSilver Resource Corp., 2022.



# **8 DEPOSIT TYPES**

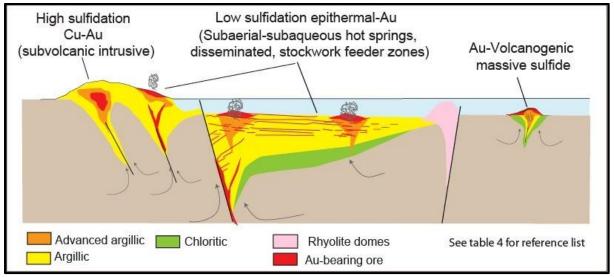
The deposits at Diablillos, are high - sulphidation epithermal silver - gold deposits, derived from activity of hydrothermal fluids in a relatively shallow environment, often associated with fumaroles and hot springs. The principal mineralizing process is by convective flow of meteoric waters driven by remnant heat from intrusive activity at depth, often related to copper porphyry systems. The term "high - sulphidation" refers to the dissociation of magmatic SO<sub>2</sub> in aqueous solution into H<sub>2</sub>SO<sub>4</sub> and H<sub>2</sub>S resulting in a highly acidic environment responsible for the diagnostic assemblage of alteration facies typically seen in these deposits. Mineral occurrences are structurally and hydrostatically controlled, with deposition occurring as open space filling at or near the level at which boiling occurs. As such, they characteristically subtend a limited vertical range, except where cyclical healing and failure of fractures results in up and down migration of the boiling zone.

High-sulphidation epithermal mineral deposits form in subaerial volcanic complexes of intermediate composition often associated with shallow porphyry intrusions in island arc, backarc, or transtensional tectonic regimes at convergent plate boundaries. Volcanic host rocks are typically andesitic to rhyodacitic flows and pyroclastic rocks and their subvolcanic intrusive equivalents. The age of most of these deposits is very close to that of the host rocks and typically ranges from Tertiary to Quaternary, although much older examples are known.

Principal economic minerals include native gold, acanthite, electrum, chalcocite, covellite, bornite, and enargite/luzonite, with accessory pyrite, chalcopyrite, sphalerite, tetrahedrite/tennantite, galena, marcasite, arsenopyrite, silver sulphosalts, and tellurides. Dominant gangue minerals are quartz and pyrite, occasionally with barite. Alteration is characterized by lateral and vertical zonations of silicic, advanced argillic, argillic, sericitic, andphyllitic facies. Rocks typically have a bleached appearance owing to the acidity of the mineralizing solutions. These deposits can encompass a wide range of geometries from large, lower-grade bulk-minable variants to smaller, higher-grade narrow vein types.

Comparatively nearby examples of high - sulphidation epithermal deposits include Yanacocha (Peru); El Indio (Chile); Lagunas Nortes/Alto Chicama (Peru) Veladero (Argentina); and Filo del Sol (Argentina).





*Figure 8-1: schematic model of high sulphidation deposits and its hydrothermal alterations. Gold deposits, USGS, 2012.* 



# 9 EXPLORATION

The following section is largely taken from RPA (2018), MP (2021) and MP PEA (2022).

There are several known mineralized zones on the Diablillos property, with the Oculto and Fantasma zones currently the most important. Exploration targets can be broadly grouped into those located in and around the current Mineral Resources and those which are further afield (Figure 9-1). Many of these targets have been mapped, trenched, and drilled by former operators of the Projects. This work is summarized in the section of this report entitled History.

Since acquiring the property, AbraSilver has continued with exploration work which, in 2017, included reconnaissance, geological mapping, and diamond drilling (at Fantasma). The diamond drilling is described in Section 10 of this report. Geological mapping and an overall review of exploration data was carried out by AbraSilver Consulting Geologist, Nick Tate.

Targets remote from the present resources are generally thought of as longer-term exploration projects whereas the more proximal targets are considered as potentially adding resources in the near term. Close-range, nearer-term targets would include the Oculto and Fantasma deposits themselves, Laderas, Alpaca and the recently discovered JAC target. Most of the longer-term distal targets, except for Yolanda, are aligned along a curving trend and are collectively known as the Northern Arc zones (Figure 9-1). These zones include the Cerro Viejo Este and Oeste, the Cerro del Medio Norte, Pedernales, and Corderos areas. This group of prospects lies approximately three to four kilometers north-northeast of the center of the Oculto deposit. All encompass epithermal silver-gold targets similar in style to Oculto, and one, Cerro Viejo, shows potential for porphyry mineralization.

#### 9.1 Extensions to known deposits

Oculto has been by far the most intensively explored prospect in the project area. A total of 431 RC and DDH holes were included in the Mineral Resource estimate, and many more have been drilled in the surrounding area. In both AbraSilver and author's opinion, several places within the Oculto area require further drilling. There is a need for resource definition drilling to confirm and upgrade the existing classification (possible union between Oculto and JAC, Fantasma, Laderas, Alpaca). In addition, there are several open-ended zones within the deposit area that have potential to expand the resource base.

Tate (2018) has observed that a broadly horizontal zone of higher-grade gold mineralization occurs at or near the contact of the Tertiary volcanic rocks and the Ordovician basement assemblage. The zone, termed the Deep Gold zone ("DG") by Tate, is approximately 30 m thick and in certain places correlates well with the erosive breccia that occupies this contact. This contact zone is not thoroughly drilled laterally until its ends yet and is viewed by AbraSilver as a target which could add Mineral Resources.



Tate (2018) has also observed that a high-grade zone of silver ("SE") measuring approximately 25 m thickness occurs at a depth of between 100 m and 120 m below surface. Insofar as this zone is not coincident with any specific stratigraphic horizon, he proposes that it represents supergene enrichment which parallels the current water table. This also provides a significant vector for discovery of additional Mineral Resources, not only at Oculto, but on other prospects as well.

Two satellite bodies have been intersected by drilling on the eastern (Oculto Northeast) and north-eastern (Cerro Bayo Este & Zorro) margins of Oculto (see Figure 9-2). These zones are barely drilled and understood due to the small amount of drilling conducted on them but are coincident with surface exposures of breccia and also to the two mineralized horizons proposed by Tate and clearly identified at the Oculto zone. As such, AbraSilver considers these targets to have significant potential to add mineral resources to the project with potential expansion to the northeast. The actual resources in these two zones nowadays are mainly categorized as indicated and inferred resource.

Tate (2018) has also noted that there is a potential along strike of two of the principals' controlling structures in the Oculto deposit. Potential exists to the southwest along the northeast southwest (Shallow mineralization) and east-northeast (Shallow mineralization) striking fracture zones that traverse the deposit (see Figure 9-2).

Fantasma, as previously stated, is located one kilometre west of Oculto. It is similar in style of mineralization, except for a lack of gold in the system, and there is significant evidence to suggest that it is an extension of the Oculto deposit. AbraSilver geologists have observed that the westerly-striking fault system at Oculto trends towards Fantasma (Figure 9-2), where it represents one of the key mineralizing structures for the Fantasma deposit. In AbraSilver opinion, there is potential to expand the Fantasma deposit eastwards with additional drilling, and with success, ultimately connecting with Oculto.

In a similar situation that Fantasma lies the newly and recent discovered of JAC deposit. The JAC deposit is located 500 meters approximately to the southwest of Oculto, with a similar style of mineralization. In AbraSilver opinion, there is potential to expand the JAC deposit with additional drilling, and with success, ultimately connecting with Oculto, delivering to the project a third option of shallow near-term resource together with Fantasma.





Figure 9-1: Exploration target areas at Diablillos Project. Source: AbraSilver Resource corp., 2022.



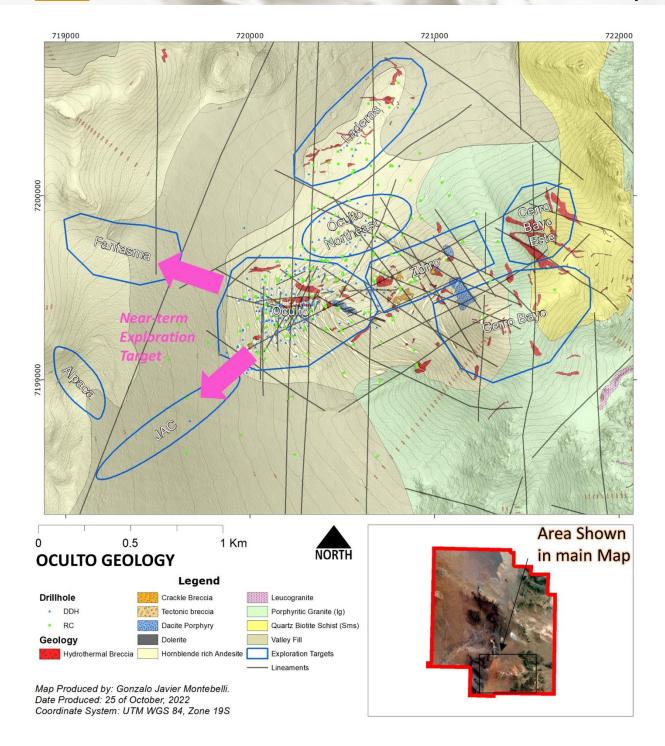


Figure 9-2: Near term exploration targets at Diablillos Project. AbraSilver Resource Corp., 2022.



#### 9.2 Near-term prospects

JAC is approximately 500 meters southwest of Oculto and 1 kilometre to the south of Fantasma. (Figure 9-2). It represents a southwest-northeast striking mineralized system. A shallow mineralization has been intersected with a 100 meters thickness cover of topsoil and altered andesite. AbraSilver geologists note that there is potential for shallow mineralization to be extended along the same trend in the direction to Oculto.

Recently conducted diamond holes indicate the potential of this newly target, as shown in hole DDH-22-019 not included in this mineral resource estimate and press releases dated August 03<sup>rd</sup>, October 12<sup>th</sup> and November 9<sup>th</sup> of 2022.

Alpaca is approximately 700 m southwest of Oculto and nearly due south of Fantasma (Figure 9-2). The east-northeast-southwest striking fracture system at Oculto is observed to trend in the direction of Alpaca, a zone of mineralization located approximately one kilometre away. AbraSilver geologists note that there is potential for mineralization to be extended along the same trend in the direction towards Oculto.

The Laderas target lies immediately north of Oculto, along the trend of a prominent east west trending ridge (Figure 9-2). Geological mapping and review of the Laderas drill results conducted in 2017 indicated that gold and silver mineralization occurs within structurally controlled breccias hosted in Tertiary sedimentary and volcanic rocks like Oculto (Tate, 2017). Controlling structures are steeply dipping and strike in a wide range of orientations including east-northeast, northeast, northwest, west-northwest, and west. The northwest, west-northwest, and westerly striking structures dip at 75° to 85° to the south or southwest. The east-northeast and northeast striking structures appear to dip north-westerly. The mineralized zones are accompanied by silica-alunite alteration which rapidly grades outwards to alunite at the walls of the breccias.

In Tate's reports (2018) and the author of this section's opinion, the drilling done to date has not fully explored the potential of the surroundings targets of Oculto (Shallow mineralization, Oculto NE, Zorro, Alpaca and Laderas) and the probably link between Oculto, Fantasma and JAC. Many holes have intersected the zones at relatively shallow depths, and experience at Oculto has shown that silver grades are generally low above approximately 100 m below surface. In addition, the mineralization has been observed at Oculto, Fantasma and JAC to extend out along permeable horizons in the host rocks. Holes drilled so far at these near-term targets have intersected these permeable horizons demonstrating the potential and the need to continue exploring the peripheral areas of the Oculto deposit.



# 9.3 Planned exploration

For the last three month of 2022 and the first six month of 2023, AbraSilver intends to drill some of the nearer-term target areas with the intention of both upgrading existing resources and discovering additional mineralization.

Priority will be placed on those targets that are considered to have the highest probability of adding to the present resource base and to increase knowledge of the actual known areas, to convert to measured and indicated some of the inferred resources estimated in this report. These target areas include:

- JAC target.
- Extension and resource definition at Oculto surroundings.
  - Oculto NE (definition).
  - o Laderas.
  - Shallow mineralization (To Fantasma direction).
  - Shallow mineralization (To Alpaca direction).

A total of 15,000 meters of diamond drilling with a total cost of US\$ 7.3 million are planned to be drilled in Phase III and a probable new phase of diamond drilling is to be completed during the second half of 2023.

This work will include re-logging of the historical existing core to ensure consistency throughout the new geological model and alteration model.

In the author's opinion, the exploration targets defined by AbraSilver geologists at Diablillos are based on reasonable and sound geological observations and interpretations. The author recommends that the planned exploration work shall be undertaken.



# **10 DRILLING**

The following section is largely taken from RPA (2018), MP (2021) and MP PEA (2022).

Prior to AbraSilver acquisition of the Project, previous operators drilled 476 RC and DDH, including 26 trenches on the property for an aggregate length of 87,712 meters. Much of this work was already discussed in the History section (Section 6) of this report. The descriptions for drilling prior to AbraSilver acquisition were largely taken from Wardrop (2009), MDA (2001), M3 (2011) and RPA (2018).

Most of the earlier drilling was carried out on the Oculto deposit, with 457 holes contributing to this Mineral Resource estimate. Since acquisition of the Project in 2016, AbraSilver has completed drilling the Fantasma deposit and Oculto deposit. Figure 10-1 shows the locations of the collars for all holes at Diablillos. Table 10-1 lists the holes by year, type and meters drilled per year. Graph 10-1 shows the total length drilled by year.

The Oculto area is shown in Figure 10-2 and Figure 10-3, along with the 457 holes used in the Mineral Resource estimate.

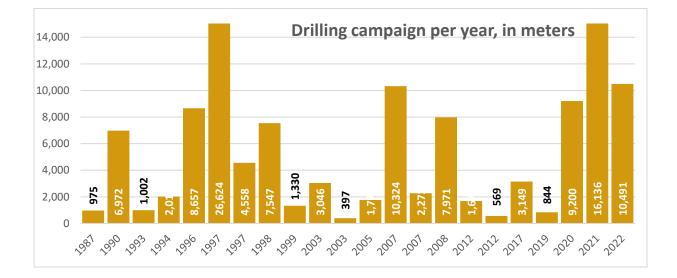


Figure 10-1: Summary of drilling campaign per year at Diablillos Project, AbraSilver Resource Corp., 2022.



Drilling Campaing	Type of Hole	Number of Holes	Meters Drilled	Average Meters Drilled	Min Metters Drilled	Max Metters Drilled
1987	RC	34	975	29	3	34
1990	RC	56	6 972	125	50	250
1993	DDH	5	1 002	200	146	254
1994	DDH	12	2 016	168	25	255
1996	RC	32	8 657	271	140	400
1997	RC	102	26 624	261	49	413
1997	DDH	19	4 558	240	31	380
1998	RC	24	7 547	314	220	370
1999	DDH	5	1 330	266	191	450
2003	RC	20	3 046	152	48	282
2003	DDH	6	397	66	46	76
2005	RC	10	1 772	177	101	252
2007	DDH	54	10 324	191	31	365
2007	Trench	20	2 273	114	38	284
2008	DDH	52	7 971	153	40	355
2012	DDH	19	1 679	88	41	126
2012	Trench	6	569	95	47	145
2017	DDH	28	3 149	112	40	327
2019	DDH	2	844	422	380	464
2020	DDH	34	9 200	271	50	610
2021	DDH	69	16 136	233	50	451
2022	DDH	40	10 491	262	100	411
Subtotal	RC	278	55593	190	87	286
Subtotal	Trenche	26	2841	104	43	214
Subtotal	DDH	345	69097	206	90	348
Grand total		649	127531	191	85	316

Table 10-1: Summary of drilling campaign by year, AbraSilver Resource Corp. – Diablillos Project



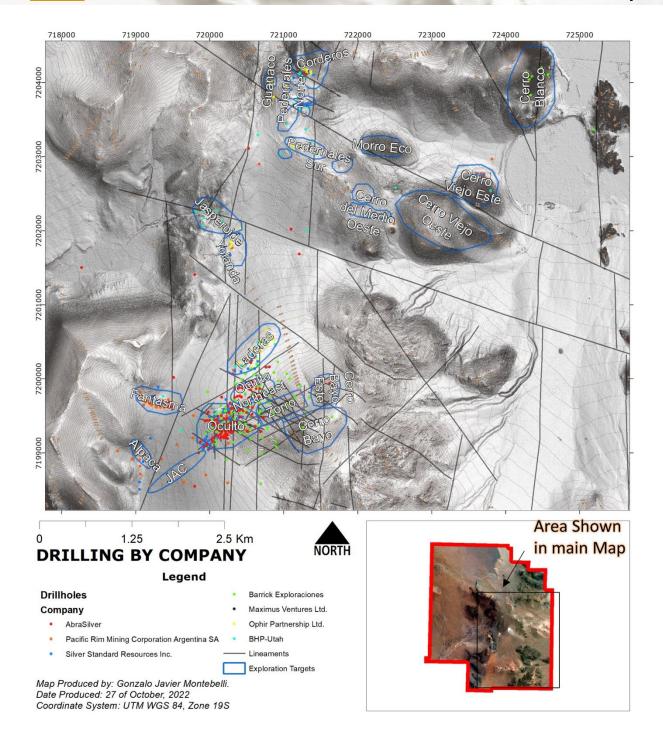


Figure 10-2: Diablillos drill hole locations by company. Source: AbraSilver Resource Corp., 2022.



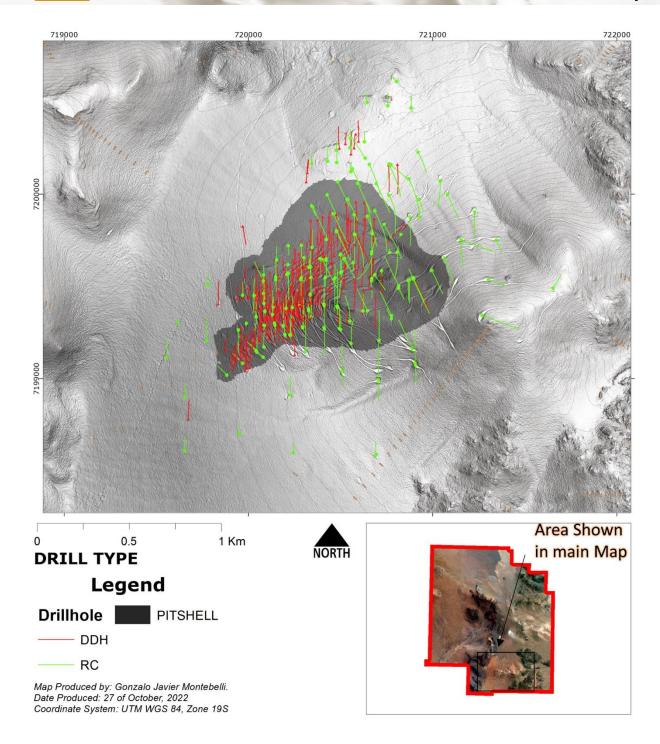


Figure 10-3: Oculto drill hole locations, coloured by type. Source: AbraSilver Resource Corp., 2022.



# **10.1** Drilling campaign by year

# 10.1.1 Drilling campaign 1987

Ophir drilled 34 shallow RC holes with an aggregate length of 975 m in several areas of the property, mostly at Laderas. No drilling was done at Oculto. Drilling was carried out contracting Dresser Atlas. No technical information could be found in the database regarding the hole sizes, surveys, or equipment used.

#### 10.1.2 Drilling campaign 1990

BHP drilled another 56 RC holes totalizing 6,972 m, six of which were in or around Oculto. The drilling contractor for this work was also Dresser Atlas.

# 10.1.3 Drilling campaign 1993 - 1994

Pacific Rim completed 3,018 m of DDH drilling in 17 holes, contracting Connors Argentina. Holes were generally collared as HQ and subsequently reduced to NQ. The program was entirely focused on Oculto, with holes oriented along sections aligned north-south as well as at approximately 155°/335°. All holes were inclined, at dips between -45° and -65°. Drilling conditions were reportedly poor, with several holes failing to reach their target (Wardrop, 2009). Holes DDH-094-008 and DDH-094-008b were abandoned at 24 m and 57 m, respectively, and holes DDH-094-006 and DDH-094-011 were terminated due to rods twisting off in the holes (M3, 2012). There does not appear to have been routine downhole surveys conducted in these holes, although reportedly acid dip tests were performed on holes DDH-094-001 and DDH-094-004.

10.1.4 Drilling campaign 1996 - 1997

Barrick drilled 134 RC holes totalling 35,281 m and 19 diamond drill holes totalizing 4,558 m, entirely at Oculto. Drilling was conducted along both north-south and 155° section planes. The program included twinning of four RC holes with diamond holes to check the results of the RC drilling. Boytec Boyles Bros. was the drilling contractor, RC holes were drilled using Drillteck D40K and Ingersoll Rand TH75 machines, and hole diameters were 5 ¼ in. (13.34 cm). Holes were oriented at inclinations ranging from -47° to vertical. Most holes encountered water, which required collection of wet samples. Samples were collected every meter down the hole, and composites were collected from every five metres for PIMA analysis. For diamond drilling, a truck mounted Longyear 44 rig was used. The holes were collared as HQ and reduced at 200 m downhole to NQ. Downhole surveys were done either with a Reflex Maxibor or simply with acid dip tests. Acid tests were conducted every 50 m downhole, while Maxibor readings were made every ten meters.



# 10.1.5 Drilling campaign 1998

Barrick drilled 24 RC holes totalizing 7,547 m. Drilling was conducted along both north-south and 155° section planes. Boytec Boyles Bros. was the drilling contractor, RC holes were drilled using Drillteck D40K and Ingersoll Rand TH75 machines, and hole diameters were 5 ¼ in. (13.34 cm).

# 10.1.6 Drilling campaign 1999

Barrick drilled 5 DDH holes totalizing 1,330 m, entirely at Oculto. Drilling was conducted along both north-south and 155° section planes. A truck mounted Longyear 44 rig was used.

# **10.1.7** Drilling campaign **2003**

Pacific Rim, on behalf of SSRI, drilled 3,443.2 m in 26 holes, 20 reverse circulation holes and 6 diamond drill holes primarily on the Oculto area, as well as at Corderos, Alpaca and Pedernales targets. Drilling contractor was Patagonia Drill Mining Services (Patagonia). Most of the holes were inclined along north direction. Only 10 reverse circulation holes have been included in this mineral resource estimation, as the rest the rest were drilled in the previous mentioned target. Survey methods used was not provided.

# 10.1.8 Drilling campaign 2005

Ten reverse circulation drill holes totalling 1,772 m were drilled by Pacific Rim/SSRI, five of them targeted Oculto and the other five the Alpaca target. The holes were drilled contracting Patagonia. All holes were inclined ranging from -60 to -70 degrees, with south direction for the Oculto deposit and west direction for the Alpaca target.

#### 10.1.9 Drilling campaign 2007

Pacific Rim/SSRI drilled 54 diamond holes, totalizing 10,324 meters. Drilling was carried out by Major Drilling. Eight of these holes, the LC and PN series, were not drilled at Oculto. The balance was drilled along the north-south oriented section planes, at inclinations ranging from vertical to -45°. The inclined holes were directed both north and south. Four of the Oculto holes provided sample material for metallurgical testing.

Drill collars were surveyed by differential GPS, with downhole surveys taken at 50 m intervals. The downhole survey instrument type was not reported in the documentation provided, but as both azimuth and dip information were recorded, the author infers that an instrument such as the Maxibor was used.

Eight holes were reportedly abandoned or terminated due to difficult drilling conditions.



# 10.1.10 Drilling campaign 2008

A total of 7,911 m of HQ diamond drilling was completed at Oculto in 52 holes by Pacific Rim/SSRI in 2009, with Major Drilling as the contractor. All but two holes were drilled along the north-south section orientation. These two, DDH-08-067 and DDH-08-067A, were oriented at azimuth 335° (i.e., the 155° section planes). Three holes, the KP series, were drilled for geotechnical purposes. The rest of the holes were intended for resource definition at Oculto. Collar locations for holes DDH-08-063 to DDH-08-071 were surveyed by differential GPS. The balance, DDH-08-072 to DDH-08-108, was surveyed by compass and tape from existing collars. Even though, AbraSilver re-measured every hole with differential GPS, updating collar coordinates during 2020 drilling campaign, as all holes were properly marked in the field. Downhole surveys were collected at 50 m intervals, again presumably with a Maxibor or similar instrument.

# 10.1.11 Drilling campaign 2012

Pacific Rim/SSRI drilled 19 holes, totalizing 1,679 m on the Fantasma, Laderas, Cerro Viejo, and Pedernales prospects. The work was conducted under contract by CAP S.A. Since these holes were not drilled at Oculto and do not affect the Mineral Resource estimate, they are not discussed in detail.

# 10.1.12 Drilling campaign 2017

AbraSilver drilled 28 diamond holes at Diablillos in 2017, totalizing 3,149 meters, all on the Fantasma target area. Fantasma is a satellite body of silver-rich epithermal mineralization located under a thin cover of top soil, approximately 800 m west of Oculto. BHP Utah drilled a single RC hole on the prospect in 1990. Barrick excavated six trenches but the sampling results from them has been lost. In 2011, SSRI cleaned out and re-sampled the trenches, and the following year, drilled four diamond holes (see Table 10-1). These holes intersected mineralization, but the drilling was not extensive enough to permit an estimate of Mineral Resources for Fantasma. The 2017 drilling program was successful in expanding and confirming the extent and tenor of the silver mineralization and forms the basis of the estimate described in RPA's Technical Report, 2018.

#### 10.1.13 Drilling campaign 2019

AbraSilver drilled 2 diamond holes at Diablillos in 2019, totalizing 844 meters. All on the Oculto area. After Tate's visit to Diablillos, a new focus on the project was given. These two holes were designed with this new perspective of deposits, following the main idea of vertical feeders for the gold and silver mineralization with horizontal levels of enrichment. After these two holes, drilling and exploration at the project ceased in December 2019.



#### 10.1.14 Drilling campaign 2020

AbraSilver drilled 34 diamond holes at Diablillos in 2020, totalizing 9,200 meters. Two of them at Laderas target, three of them at Oculto Northeast extension and the rest at the Oculto area. All of them, designed on the new conceptual basis of the deposit, were oriented in north-south vertical section, dipping between 60° to 65°. Almost all holes intercepted economic mineralization. The first five holes were executed by drilling contractor FORACO, the rest, with HIDROTEC PERFORACIONES. Core size of all holes was HQ diameter. Collar locations were surveyed using differential GPS with RTK system, and the collar orientations were determined with a compass. Downhole surveys were conducted at intervals of 20 meters from collar to end of hole, using GYRO CHAMP tool.

# 10.1.15 Drilling campaign 2021

AbraSilver drilled 69 diamond holes at Diablillos in 2021, totalizing 16,136 meters. Two of them at Corderos, three at Fantasma, one at Jasperoide, two at Laderas, two at Pedernales and two at the valley anomalie. The rest at the Oculto area. All of them were oriented in north-south vertical section, dipping between 60° to 65°. Almost all of the hole's intercepted economic mineralization. All holes were drilled by drilling contractor HIDROTEC PERFORACIONES. Core size for all holes was HQ diameter. Collar locations were surveyed using differential GPS with RTK system, and the collar orientations were determined with a compass. Downhole surveys were conducted at intervals of 20 meters from collar to end of hole, using GYRO CHAMP tool.

# 10.1.16 Drilling campaign 2022

AbraSilver drilled 40 diamond holes at Diablillos in 2022, totalizing 10,491.2 meters. Five of them for geotechnical, five of them as condemnation and one at JAC target, which was the discovery hole. The rest at the Oculto area. All of them were oriented in north-south vertical section, dipping between 60° to 85°. Almost all hole intercepted economic mineralization. All holes were drilled by drilling contractor HIDROTEC PERFORACIONES. Core size for all holes was HQ diameter. Collar locations were surveyed using differential GPS with RTK system, and the collar orientations were determined with a compass. Downhole surveys were conducted at intervals of 20 meters from collar to end of hole, using GYRO CHAMP tool.

The author revised core samples and methodologies of collaring, surveying, logging, sampling and chain of custody for drilling campaigns from 2017 to 2022.

In author's opinion, the drilling conducted by AbraSilver was completed in an appropriate manner consistent with common industry practice.

At the moment of writing this report, Phase III drilling is in progress.



### **10.2** Discussion about coordinate system

In September 2017, AbraSilver had acquired a photo stereo satellite surveying from PhotoSat, World View-3 type, with an accuracy of 20 cm for each pixel, with more than ten thousand of ground control points. A DTM was produced from this image, with extreme precision. In parallel, a re-survey of historical collars was completed by an external topographer, to align collar elevation, northing, and easting of existing holes to the new image and eliminate possible discrepancies coming from different geodesic systems used by previous operators.

Some conclusions of the re-survey are listed below:

- The 2017 drill collar coordinates provided by AbraSilver are assumed to have heights above the WGS84 Ellipsoid. These were converted to heights above the EGM2008 Geoid to compare the elevations.
- The 38, 2017 drill collar coordinates are an average of 16 cm below the PhotoSat survey. After lowering the PhotoSat survey by 16 cm the standard deviation of the elevation differences of the 38, 2017 drill collars is now 10 cm.
- The 2006 drill collar coordinates which were labelled as being in Argentina Zone 3 / POSGAR94 projection are in Argentina Zone 3 / Campo Inchauspe projection. The 2006 drill collar coordinates provided by AbraSilver are assumed to have heights above the International 1924 Ellipsoid. These were converted to heights above the EGM2008 Geoid to compare the elevations.
- The 195, 2006 drill collar coordinates are an average of 12 cm above the PhotoSat survey. After raising the PhotoSat survey by 12 cm the standard deviation of the elevation differences of the 195, 2006 drill collars is now 20cm.
- All 233 drill collars are an average of 8 cm above the PhotoSat survey. After raising the PhotoSat survey by 8 cm the standard deviation of the elevation differences of all 233 drill collars is now 22cm.

In the author's opinion, this process appeared to work well in Easting and Northing, and for elevations. In addition, the author noted during the site visits that the recent and historical collars were well marked, with PVC caps and/or cement monuments. There is virtually no vegetation over the deposit, so the drill pads, roads, and collars are relatively easy to find. Check surveys, if required, should be comparatively easy to carry out.

## **10.3** Discussion about historical drilling

In the author's opinion, due to the change of operator from one year to other, information is presented in different manners and languages. Drilling procedures for drilling campaigns 1996-1997-1998 is been clarified due to internal documentation from Barrick Explorations



Argentina S.A., where drilling procedures applied at those drilling campaign appears performed under the common industry standards.

Although, drilling campaigns of 2003 and 2005 do not present much information about drilling procedures and sampling methodology, pulps and reject have been checked by and independent sampling check performed by the author during July, 2021, founding no discrepancies or bias in gold or silver grades between the original samples and the reassayed ones. (Internal report to AbraSilver, L. Peralta, 2021).

For the rest of the historical drilling campaign (Pre 2008), there are no obvious flaws with the drilling data, and virtually all the early undocumented drilling at Oculto was carried out by the major companies as Barrick and BHP.

Nevertheless, most of the drilling at Oculto was completed by Pacific Rim for SSRI and its documentation indicates that work was performed in a reasonable fashion consistent with common industry standards. Since AbraSilver took over the project, the information and procedures are well documented, therefore, the author considers the drilling carried out to date acceptable for Mineral Resource estimate.



# 11 SAMPLE PREPARATION, ANALYSES AND SECURITY

The following section is largely taken from RPA (2018), MP (2021) and MP PEA (2022). Information on the sample preparation and analysis procedures used prior to AbraSilver acquisition of the project and was taken from an internal Technical Report to SSRI prepared by M3 (2011), and from MDA (2001). Also, internal historical reports have been used as Ristorcelli (1997) and Barrick Exploraciones SA (1998).

## 11.1 Pre-1996

The core and chip logging, sampling, and analytical protocols used for holes drilled prior to 1996 were not documented in the information provided to the author.

## 11.1.1 RC Drilling

Cuttings from every meter were collected and stored for logging and archiving.

## **11.1.2** Diamond drilling

Core was logged on site for lithology, alteration, mineralogy, and geotechnical data and then marked by the logging geologist for sampling. Sample intervals ranged from 0.5 m to 1.5 m in length but were typically one meter, with breaks for lithology or structural features.

Samples comprised half-cores, cut by using a diamond saw, with the remaining half placed in the boxes for storage. The core and photograph archive are reportedly stored in Salta. In 2017, cores were transported to site and re-conditioned in new wooden boxes whenever need it.

## 11.1.3 Analyses

According to historical report done by Ristorcelli (1997), original samples were sent to SGS Lab and during 1997, a check sampling was performed in order to validate the database up to that date. Both rejects and pulps were sent to Chemex Labs for check analysis. The pulp sample results were 4.5% for gold in the SGS analysis and 2.9% higher for silver.

11.2 1996 – 1999 (Barrick)

## 11.2.1 RC Drilling

Cuttings from every meter were collected and stored for logging and archiving. Composite samples of every five metres of cuttings were collected and submitted for PIMA scans.

Dry samples were split at the drill with a cyclone, with one quarter sent for analysis and the remainder stored at site. Most holes encountered water, which required wet sampling.



Initially, wet cuttings were split using a wet splitter, however, this was found to be unsatisfactory owing to the inadequate volume of sample material collected. Barrick personnel considered the samples to be inadequate if less than 25% of the total recovered cuttings were collected or if total recovery was less than 50%. From hole RC-096-022 onward, if the split volume was too low, the entire volume of cuttings was sent to the laboratory, where they were split after drying.

#### 11.2.2 Diamond drilling

Core was logged on site for lithology, alteration, mineralogy, and geotechnical data and then marked by the logging geologist for sampling. Sample intervals ranged from 0.5 m to 1.5 m in length but were typically one meter, with breaks for lithology or structural features. The marked core was photographed and sent for sampling. Samples comprised half-cores, cutting by a diamond saw, with the remaining half placed in the boxes for storage. The core and photograph archive are reportedly stored in Salta. In 2017, cores were transported to site and re-conditioned in new wooden boxes if required.

## 11.2.3 Analyses

Bondar Clegg Ltda. in Coquimbo, Chile ("Bondar Clegg") analysed samples from drill holes RC-96-001 through RC-97-53 for gold and silver. Samples from RC-97-54 through RC-97-122 were analysed for gold and silver by SGS, Minerals Division, in Santiago, Chile ("SGS Santiago"). The 1998 samples, RC-98-123 through RC-98-146 continued to be analysed by SGS, but in their laboratory in Mendoza, Argentina. Barrick's quality control program uncovered problems with the precision of results from the Mendoza analyses and the majority of the 1998 samples were re-analysed by SGS, Santiago.

At the laboratory, samples were dried at a maximum of 60°C, crushed to 90% passing through a Tyler 10 mesh screen, and split down to a 1,000 g sub-sample. The entire 1,000 g sample was pulverized to 95% passing a Tyler 150 mesh sieve. The pulp was riffled down to a 250 g aliquot for assay. The remaining 750 g of pulp material was returned to Barrick.

Gold and silver analyses were generally by fire assay ("FA") with a gravimetric finish, with partial analyses done by ICP Atomic Emission Spectroscopy ("ICP-AES"). It is not known what accreditations were held by Bondar Clegg or SGS in the period in question, however, in author's opinion these laboratories were, and still are, recognized in the industry as legitimate and reputable analytical firms. Bondar Clegg has since been acquired by ALS Chemex in Mendoza, Argentina ("ALS Chemex"), which has ISO 9001:2000 certification.

## 11.2.4 Metallurgical sampling

Holes DDH-097-012 to DDH-097-016, inclusive, were sampled in their entirety and sent to Lakefield Research Chile S. A. ("Lakefield") in Santiago, Chile, for metallurgical testing.



11.3 2007 – 2008 (Pacific RIM for Silver Standards Resources)

## 11.3.1 Logging

During 2007, a total of 54 diamond drillholes were done, totalizing 10,324.3 meters and 2,272.4 of trenches. In 2008, 52 diamond drillholes were drilled, totalizing 7,970.95 meters.

For both drilling campaign core was transported by truck to the logging facility on site where it was washed and photographed. Digital images were uploaded daily to the on-site computer.

Core was logged for recovery and RQD. Artificial breaks in the core caused by drilling or handling were ignored for the RQD determinations. Veined sections were lightly tapped with a hammer and, if remained unbroken, they were included as intact intervals for RQD measurement.

Logging was conducted for lithology, structure, alteration, and mineralogy, and the data transcribed onto spreadsheets for entry into a Gemcom database.

The logging geologist marked the core for sampling. Sample intervals were limited to a minimum of 0.5 m and a maximum of 2.0 m with breaks for lithology and mineralization. An attempt was made to constrain the samples to 1.5 m lengths and extend them to the 2.0 meter maximum only where contacts were encountered.

#### 11.3.2 Sampling

Samples were split using a manual blade splitter, with one half retained for archiving and one half sent for assay. The samples were placed in plastic bags, sealed with plastic straps, and then stored within a locked area in the logging facility prior to shipment. Samples remained under the supervision of the project geologist while in storage. Individual sample bags were placed in woven nylon rice bags for shipment by truck to ALS Chemex in Mendoza.

The remaining core was cross stacked in chronological order, then shipped to the SSRI warehouse in Salta. In 2017, cores were transported to site and re-conditioned in new wooden boxes if required.

## **11.3.3** Sample preparation and analyses

Upon arrival at the ALS Chemex laboratory, the core samples were logged into the database system, placed into a stainless-steel tray, and dried for approximately four to eight hours, depending on moisture content. Samples were processed through primary and secondary crushers to at least 70% passing a 2 mm (Tyler 10 mesh) screen. Standard crushing practice also included repeatedly cleaning the equipment prior to, during, and after each sample



batch using coarse quartz material, and air cleaning the crushers after each sample. The crushed material was then riffle-split down to approximately 250 g to 500 g, depending on the requested analysis, and the remaining coarse reject material was returned to Pacific Rim for storage and possible future use.

The 250 g to 500 g sub-sample material was processed in a disk pulveriser to 85% passing a 75  $\mu$ m (Tyler 200 mesh) screen. A 250 g aliquot was collected and sent for analysis. All samples were initially analysed by ICP mass spectroscopy ("ICP-MS") for 48 elements, after digestion in nitric, perchloric, and hydrofluoric acids.

Gold analyses by FA on a 30 g aliquot with an atomic absorption finish ("AA") were performed on samples between 0.005 g/t Au and 10 g/t Au. For assays above 10 g/t Au, FA with a gravimetric finish was employed. Silver samples with ICP-MS assays greater than 200 g/t Ag were also re-run by FA with a gravimetric finish.

## 11.4 2017-2022 (AbraSilver Resource Corp.)

## 11.4.1 Logging

The core was delivered daily to the logging area located at the camp. AbraSilver geologists inspected and re-aligned the core, photographed each box, and measured the recovery and RQD. Logging was conducted for lithology, alteration, and mineralogy. All information logged was captured in spreadsheets for import into a GeoInfo database.

#### 11.4.2 Sampling

Sampling was conducted at one and half meter intervals in weakly mineralized zones, reducing to one metre where mineralization was more intense. Breaks were also introduced at obvious contacts. The core was split using a core diamond saw, with one half taken for assay and the other placed back in the box for storage.

The samples were bagged and placed into larger rice bags, along with assay QA/QC materials, then shipped to SGS Argentina SA in Salta ("SGS Salta"). Each shipment was accompanied by a manifest listing the contents of the rice bags and instructions for the laboratory. A copy of the manifest was retained at site, and another sent to AbraSilver main office in Buenos Aires. An additional separate copy was sent to the laboratory.

The core and samples were continuously in the custody of AbraSilver personnel or authorized designates. The site is very remote and for the duration of the program was under full-time supervision by AbraSilver staff.



#### 11.4.3 Sample preparation and analyses

Samples received at SGS Salta were forwarded to the SGS sample preparation facility at San Juan. The samples were dried at 100°C, then passed through a jaw crusher to 90% passing a -10-mesh screen. A 250 g split was processed in a ring and puck pulveriser to 95% passing - 140 mesh. The pulverized material was then sent to the SGS laboratory in Lima, Peru.

All samples were analysed for a suite of 40 elements by ICP-AES following four acid digestions. All samples were analysed for gold by Fire Assay with Atomic Absorption Spectrophotometry finish ("FAA-AAS"), using a 50 g aliquot. Samples grading more the 200 g/t Ag in the ICP-AES were re-assayed by AAS.

## **11.5** Quality assurance/Quality control

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

Accuracy is assessed by a review of assays of certified reference materials ("CRMs"), and by check assaying at outside accredited laboratories. Assay precision is assessed by reprocessing duplicate samples from each stage of the analytical process from the primary stage of sample splitting, through sample preparation stages of crushing/splitting, pulverizing/splitting, and assaying.

## 11.5.1 Pre-AbraSilver QA/QC

The QA/QC programs conducted since the beginning of the project have been reported by AMC Consultants Pty Ltd. ("AMC"), M3 (2011), Wardrop (2009), RPA (2018), MP (2021) and MP PEA (2022). All this these reports refer to internal third-party studies, as Bruce Goad (1994), Ristorcelli (1997), Barrick (1998). Therefore, the author has summarized the provided information.

## 1993 Drilling Campaign

BHP-Utah implemented a protocol for a field duplicate to be taken at the ten percentage of the total population. Also, a selection of high-grade pulp sample was sent to Canada



(Chemez Lab, Vancouver). Original and duplicate reject sample were assayed at SGS Chile Ltd.

March 18th, 1994, the entire 1993 drilling campaign was revised by Bruce Goad from Inukshuk Exploration Inc., producing an internal report summarizing logging, sampling and assaying protocols. Also, the report includes original certificates for each hole and a comparative table for duplicates. In author's opinion, the sampling and analytical work for this program appear to have been conducted in an appropriate fashion, using methods commonly in use in the industry. Assaying was done using conventional, industry standard methods, and by well-known independent commercial laboratories.

## 1996 – 1999 Drilling Campaign

Barrick initially implemented a protocol for a field duplicate to be taken once every ten samples, and for selected samples to be re-assayed at a secondary laboratory. In 1998, a revised set of procedures for the RC drilling were implemented based upon recommendations by Smee and Associates Consulting Ltd. These procedures were as follows:

- Every 20 m, a field duplicate was collected, assigned a new sample number, and inserted into the sample stream.
- One standard and one blank were inserted every 40<sup>th</sup> samples.

The standard material was obtained from Barrick's Pascua Project in Chile, while the blank comprised gneiss from a bulk material supplier. Five samples of the blank material were sent to each of three laboratories to confirm that it was not mineralized.

## 2007 – 2008 Drilling Campaign

Assay QA/QC protocols were established by Pacific Rim, working on behalf of SSRI. One control sample, consisting of one of either a blank, standard, or field duplicate, was inserted every 20th sample. Check assays at a secondary laboratory, Assayers Canada in Vancouver, were also conducted at a rate of no less than one in twenty.

A total of 6,561 duplicates or repeats, representing 11.54% of the database compiled during the period, were collected up to 2007. A further 600 duplicates of 7.23% of the database, were taken during 2007 and 2008. Also, during 2007 and 2008, 952 standards and blanks were inserted into the sample stream, representing 11.47% of the database accumulated in that period.

Wardrop (2009) reported that, in 2009, C. Vallat reviewed the assay 2007-08 QA/QC data for SSRI. No concerns or issues were reported from this review, and the database was declared suitable for use in Mineral Resource estimation.



#### 11.6 Discussion of pre-AbraSilver assays QA/QC

In author's opinion, the sampling and analytical work for the programs between 1996 and 2008 appear to have been conducted in an appropriate fashion, using methods commonly in use in the industry. Assaying was done using conventional, industry standard methods, and by well-known independent commercial laboratories. The number and orientation of the drill holes, and the sampling methods employed are such that the samples should be representative of the mineralization at Oculto. Cuttings, core, and samples were handled solely by operator personnel or their contractors and kept in a reasonably secure setting. The site is remote and was attended continuously during the drilling and sampling operations, so the chance of tampering is very low.

The author notes that a manual blade splitter has been used for much of the sampling. These devices, if used properly, can perform satisfactorily, however, a diamond saw is superior in producing unbiased samples. Consequently, the author recommends that for future drilling programs, a diamond saw splitter be acquired and employed.

The author concludes that the QA/QC protocols applied for most of the drilling at Oculto meets a reasonable minimum standard. There are no reports of any concern with assay accuracy or precision. The insertion rate for control samples appears to have been adequate, however, detailed reports of QA/QC results should be produced in future, as the information is spread in different internal documents, most of them in paper. It is recommended that these reports be located, if possible, and kept as reference for future technical reports and audits.

In the author's opinion, the sampling and analytical work on Oculto is acceptable for use in Mineral Resource estimation.



## 11.7 AbraSilver QA/QC

## 2017 to 2021

AbraSilver assay QA/QC protocols included insertion of blanks, standards (two types), and core duplicates into the sample stream. Blanks were inserted at a rate of approximately one for every 25 samples, and core duplicates were taken approximately once every 25 samples.

Two standards, from a batch dating back to the 2012 drilling, were inserted at a rate of one in 25 samples. This standard, PM 1122 SR-I & STRT-04, were commercial reference material prepared by WCM Minerals, of Burnaby, BC, Canada, and SMEE & Associates Consulting Ltd., of North Vancouver, B.C., Canada respectively.

The specifications of the standard are listed in Table 11-1.

CERTIFIED REFERENCE MATERIAL									
		PM-1122			STRT-04				
ELEMENT	Au	Ag	Cu	Au	Ag	Cu			
UNIT	[g/t]	[g/t]	[g/t]	[g/t]	[g/t]	[g/t]			
Expected Value	1.37	168	6,500	0.861	26.8	24,740			
Two Standard deviation	0.08	11.2	162	0.026	2.8	480			

Table 11-1: Certified reference materials (CRM).

A total of 926 blanks, representing 5.9%, 450 standards (2.9%), 750 core duplicates (4.8%) and 74 reject duplicates were submitted during the program. From a total of 15,750 samples taken, the overall QA/QC samples represent 13.52% of the total population of samples taken during the drilling program. Only 4 samples were detected with no description, representing no significant quantity. Industry best practice recommends at least 10% of the total population.

A summary of the QA/QC can be found in Table 11-2.

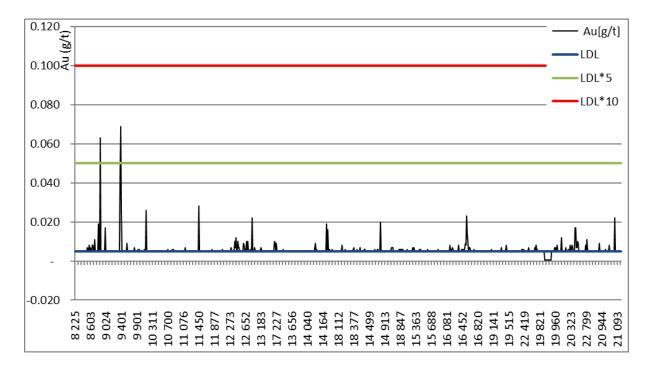
Table 11-2: Summary of AbraSilver QA/QC counting.

Sample Type	Count	Percentage	STRT-04	PM 1122 (SR-I)	Core	Reject	Pulp
Number of samples	15,750	100%					
Original	13,620	87%					
Blank	926	5.9%					
CRM	450	2.9%	262	188			
Duplicate	750	4.8%			676	74	0
Validation	4	0%					



Lower detection limits for the ICP-AES analyses were 0.5 g/t Ag and 5.0 ppb Au. AbraSilver protocol for definition of a blank's failure is ten times the detection limit. No blanks returned values that met this definition, while two blank sample returned a gold value greater than five times the detection limit and one blank sample returned a silver value greater than five times the detection limit.

The gold performance and silver performance in blanks can be seen in Figure 11-1 and Figure 11-2.



*Figure 11-1: Internal reference material, blank, gold performance.* 

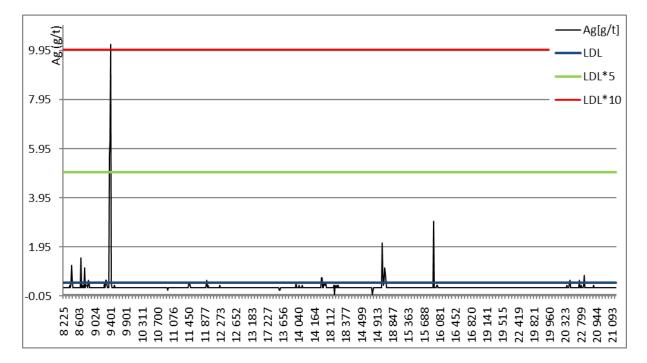


Figure 11-2: Internal reference material, blank, silver performance.

AbraSilver defines a reference material ("CRM") failure as a value that differs from the recommended value by more than 5% which represent approximately three times the standard deviation.

Four standards returned values outside of this 5% error limit for CRM STRT-04, three for gold and one for silver. In addition, for CRM PM11, none of the standards returned values outside of this 5% error limit.

The gold performance and silver performance for the CRM STRT-04 can be seen in Figure 11-3 and Figure 11-4 for the other CRM, in Figure 11-5 and Figure 11-6.

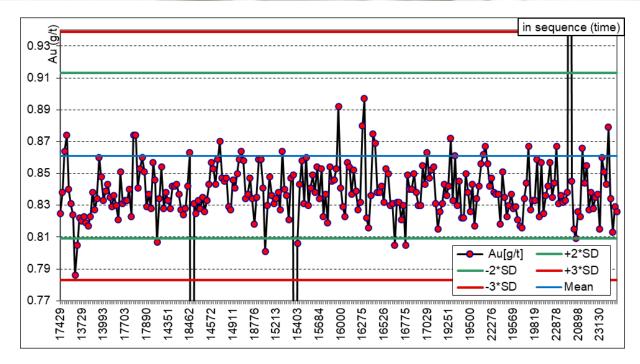


Figure 11-3: Certified reference material STRT-04, gold performance.

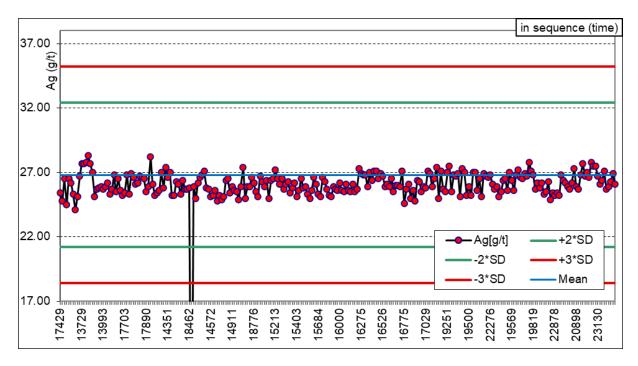


Figure 11-4: Certified reference material STRT-04, silver performance.

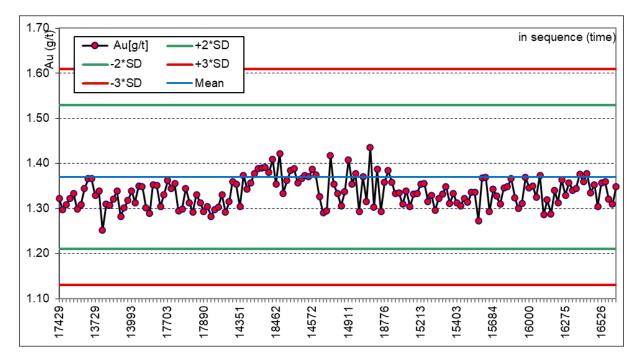


Figure 11-5 Certified reference material PM 1122, gold performance.

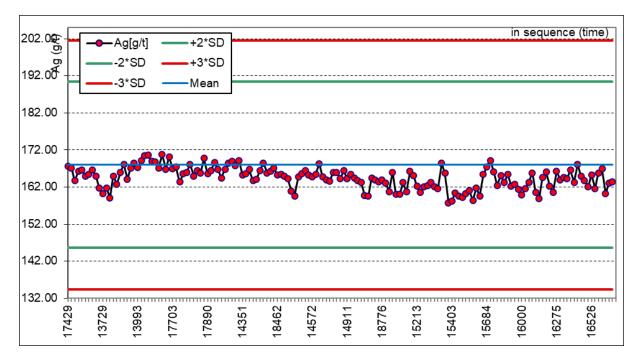


Figure 11-6: Certified reference material PM 1122, silver performancec

Core duplicates were obtained from splitting half cores into two separate samples equivalent to 1/4 core, each one bagged and labelled separately. Core duplicates reflect all levels of errors from its first splitting to analytical error. These features are evidenced in Figure 11-7 and Figure 11-8 which show the moderate to high variability. The core duplicates were observed to agree quite closely with the original assays for gold and silver.

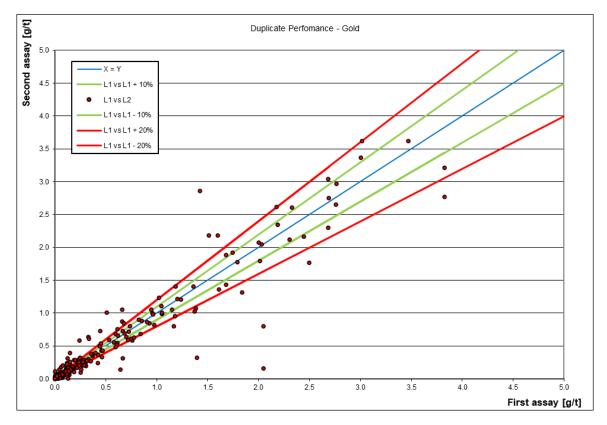


Figure 11-7: RMA Scattergram for duplicate performance of gold.

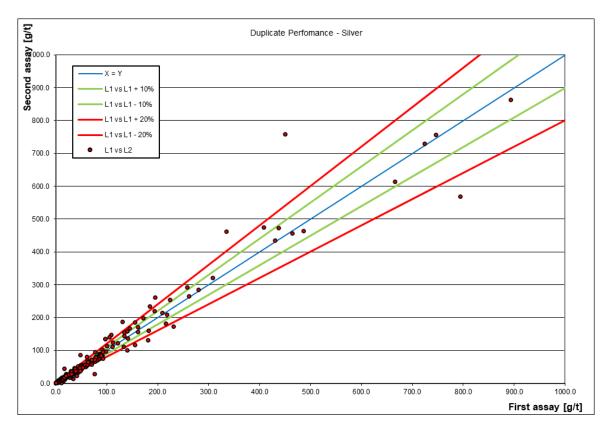


Figure 11-8: RMA Scattergram for duplicate performance of silver.



#### 2021 to 2022

Due to certain problem with CRM supplier and mostly due to the complexity of finding a reference material with oxidised matrix over the entire range of mineralization with gold and silver present at the project, AbraSilver decided to generate their own internal reference material.

Three types of internal refence material (IRM) were generated in order to compromise from high grade to low grade mineralization. IRM were generated based on 50 kilos of reject coming the laboratories (SGS), once their own samples were assayed. Sent to SGS Lab to be processed in a disk pulveriser to 85% passing a 75  $\mu$ m (Tyler 200 mesh) screen. Then, the total 50 kilos were homogenized and divided in 500 individual sachets of a 100-gr aliquot. A total of thirty samples were sent to certified laboratories in order to execute the corresponding round robin. Ten samples were sent to ALS Chemex, other ten samples to Alex Stewart Assayers and the rest ten to SGS Lab. Once the assays were received, the corresponding statistical analysis was performed to define the expected value and the twostandard deviation for future use.

As mentioned before in period 2017-2021, the same protocol of insertion for the three types of control samples were continued and included insertion of blanks, standards (one of the three types), and core duplicates into the sample stream. IRM were inserted at a rate of one for every 25 samples, blanks were inserted at a rate of approximately one for every 25 samples, and core duplicates were taken approximately once every 25 samples. CRM still in use in a combination of two IRM by one CRM.

The specifications of the standard are listed in Table 11-3.

CERTIFIED REFERENCE MATERIAL										
	STR	STRT-04 ASDBL_Au-Ag_H01 ASDBL_Au-Ag_M0					ASDBL_A	u-Ag_L01		
ELEMENT	Au	Ag	Au	Ag	Au	Ag	Au	Ag		
UNIT	[g/t]	[g/t]	[g/t]	[g/t]	[g/t]	[g/t]	[g/t]	[g/t]		
Expected Value	0.861	26.8	3197	358	962	109	436.4	38.7		
Two Standard deviation	0.026	2.8	60.18	5.5	34	3.8	20.67	1.935		

Table 11-3: Certified reference materials.

During the 2021-2022 program, a total of 959 blank samples were submitted, which represents 7.24%. A total of 219 STRT-04 standards representing 2.18%, 76 H01 (1.2%), 83 M01 (1.25%) and 98 L01 (1.35%). Also, a total of 701 core duplicates and 1 rejected duplicate (5.51%). For a total of 14,633 samples taken, the general QA/QC samples represent 16.51% % of the total population of samples taken during the drilling program. Industry best practices recommend at least 10% of the total population.



A summary of the QA/QC program can be visualized in Table 11-4.

Sample Type	Count	Percentage	STRT-04	Core	Reject	Pulp
Number of samples	14,633	100%				
Original	12,948	89%				
Blank	959	7.2%				
CRM	219	2.2%	473			
H01	76	1.2%				
M01	83	1.3%				
L01	98	1.4%				
Duplicate	706	5.5%		705	1	0
Validation	7	1%		705	1	0

Table 11-4: Summary of AbraSilver QA/QC counting.

Lower detection limits for the ICP-AES analyses were 0.5 g/t Ag and 5.0 ppb Au. AbraSilver protocol for definition of a blank's failure is ten times the detection limit. No blanks returned values that met this definition, while two blank sample returned a gold value greater than five times the detection limit and two blank sample returned a silver value greater than ten times the detection limit.

The gold performance and silver performance in blanks can be seen in Figure 11-9 and Figure 11-10.

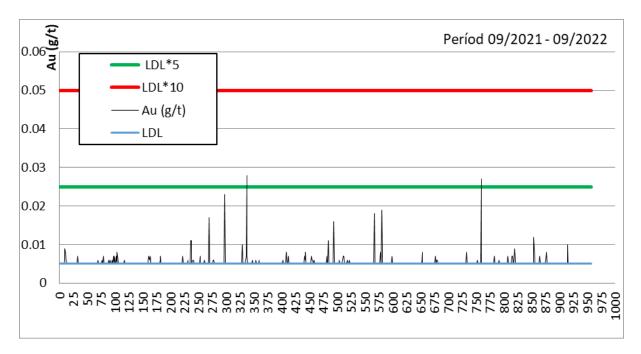


Figure 11-9: Internal reference material, blank, gold performance.

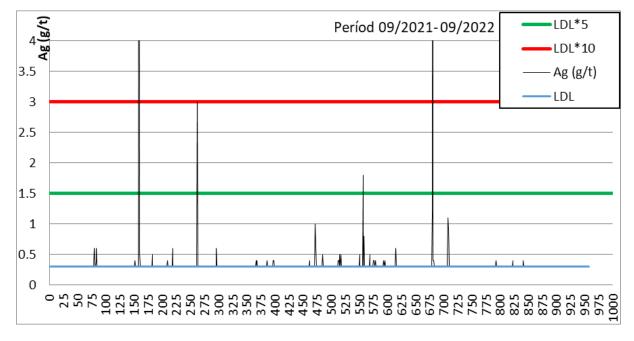


Figure 11-10: Internal reference material, blank, silver performance.

AbraSilver defines a reference material ("IRM") failure as a value that differs from the recommended value by more than 5%, which is approximately three times the standard deviation.

For the analysis of CRM STRT-04, one standard returned a value outside this 5% error limit in Gold, and no standards exceeded the limit in silver. The gold and silver performance for CRM STRT-04 can be seen in Figure 11-11 and Figure 11-12.

For the analysis of IRM H01, two standards returned a value outside this 5% error limit in gold, and seven standards exceeded the lower limit in silver.

For the analysis of IRM M01, only one standard exceeded the limit for gold and none for silver. And finally, for the analysis of IRM L01, only one exceeded the limit value for gold and none for silver.

The gold and silver performance for IRM H01, M01 and L01 can be seen in Figure 11-13 to Figure 11-18.

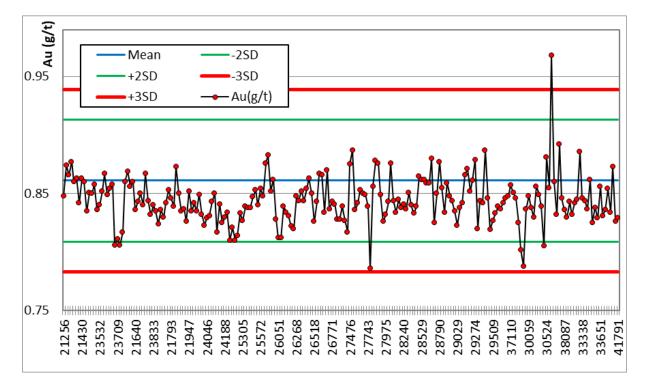


Figure 11-11: Certified reference material STRT-04, gold performance.

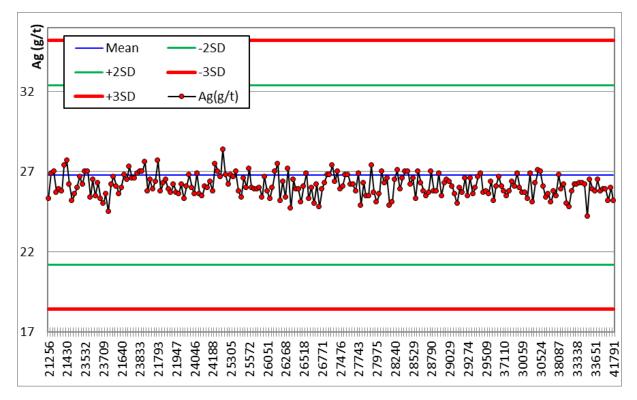


Figure 11-12: Certified reference material STRT-04, silver performance.

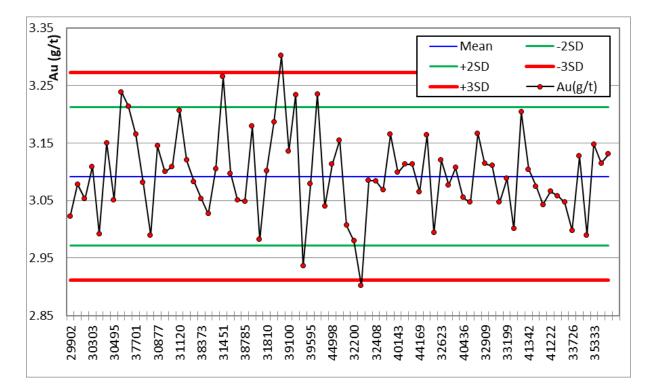
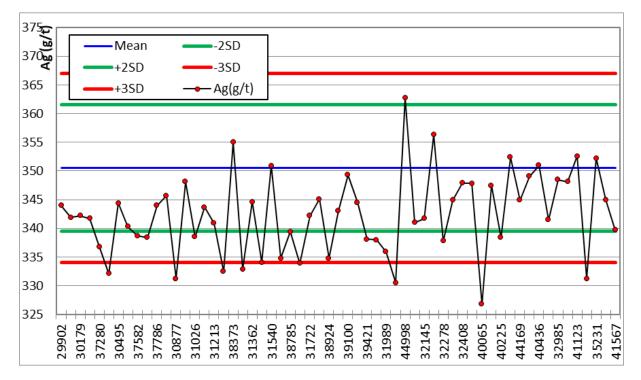


Figure 11-13: Internal reference material H01, gold performance.



#### Figure 11-14: Internal reference material H01, silver performance.

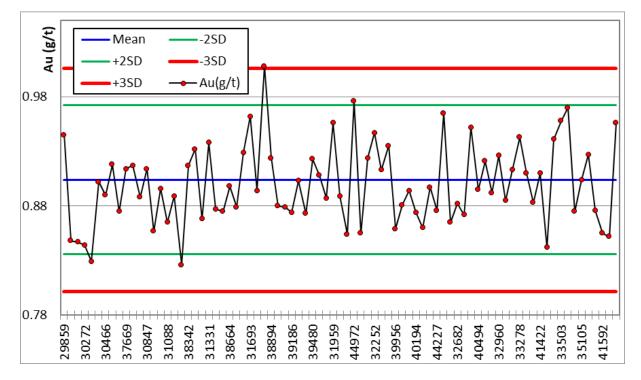


Figure 11-15: Internal reference material M01, gold performance.

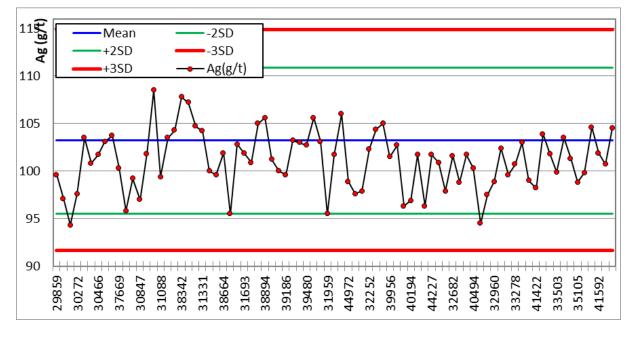


Figure 11-16: Internal reference material M01, silver performance.

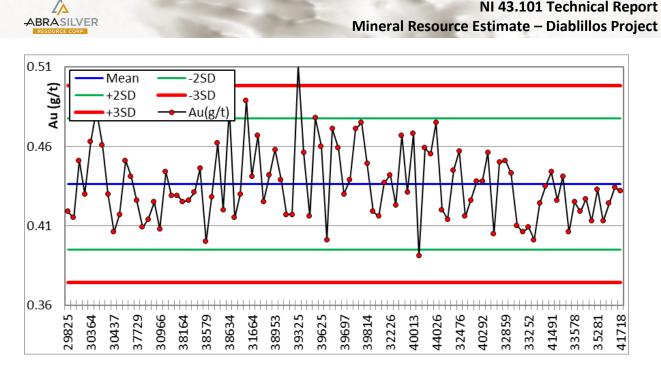
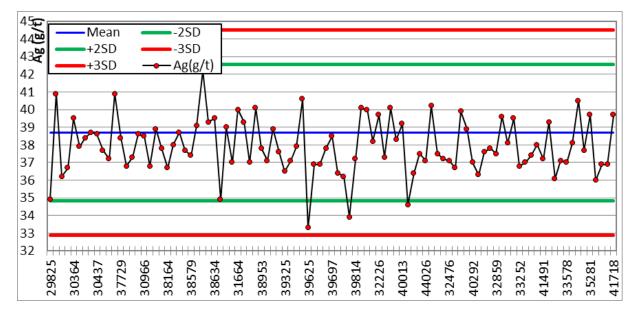


Figure 11-17: Internal reference material L01, gold performance.



*Figure 11-18: Internal reference material L01, silver performance.* 

Core duplicates were obtained by dividing half the core into two separate 1/4 core equivalent samples, each bagged and labelled separately. Core duplicates reflect all error levels from its first split to analytical error. These features are evidenced in Figure 11-19 and Figure 11-20 showing moderate to high variability.

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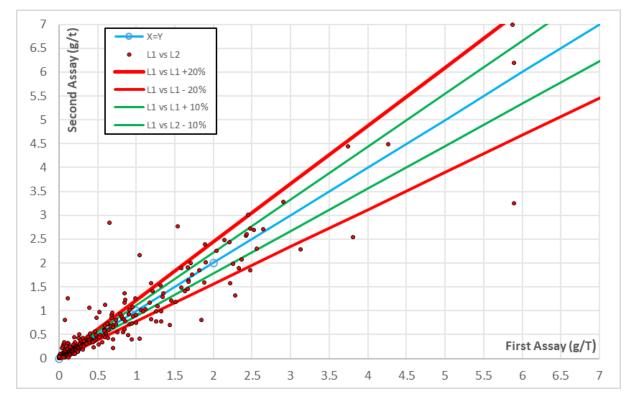


Figure 11-19: RMA Scattergram for duplicate performance of gold.

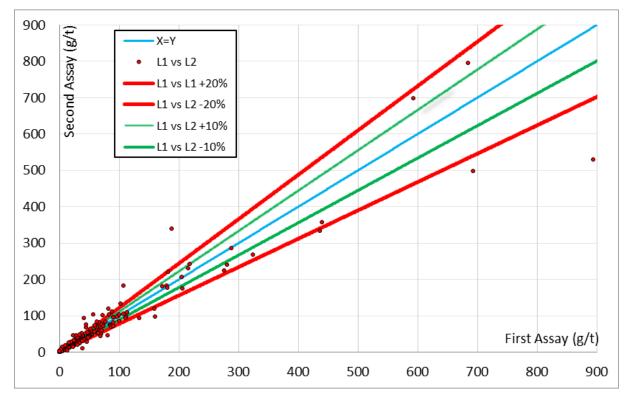


Figure 11-20: RMA Scattergram for duplicate performance of silver.



Based on this review and data analysis, the author concludes that the gold and silver accuracy during the 2017-2022 drilling exploration campaigns were acceptable. Blank samples were assayed and most of them yielded values either below the detection limits or below the five times detection limit line, therefore, no obvious gold and silver cross contamination was identified during sample preparation at laboratory. The RMA scattergram plots for gold and silver shows good fit between the check assays and the original assays, although, a few outliers have been observed due to high variability in the style of mineralization of the deposit.

The author has concluded that the assay QA/QC protocols implemented by AbraSilver were consistent with industry best practice. No concerns were evident with the assay QA/QC analyses.



# **12 DATA VERIFICATION**

Mr. Peralta was commissioned to complete a Mineral Resource Estimate ("MRE") for AbraSilver Resources Corp' Diablillos Project in Salta, Argentina ("AbraSilver"). Part of the scope of work was a drill hole database audit including review of:

- Collar locations.
- Downhole surveys.
- Assays.
- Coincident samples.
- Twin holes.
- Bulk Density.

The revision also included checking 10% back to source data entry for collar location, survey, assay, density, and comparison analysis in the case of the assay. The purpose is to try to detect some bias in different drilling campaigns, drilling types and analytical methods.

Also, this review includes a set of re-sampled intervals of historical pulp and recent cores, pulps and rejects, sent to a separate lab from the main used by the company so as to verify the quality assurance and quality control.

## **12.1 Collar review**

## 12.1.1 Collar location

The review is based on 457 drillholes with a total depth of 104,831.98 meters. (Table 12-1), the average of drilling is 220 meters with a maximum of 339 meters, indicating that drillholes are not very deep and deposits have been explored at shallow levels. There are 201 holes corresponding to drilling of reverse circulation air ("RC") with a total of 47,136 meters drilled and 256 holes drilled with diamond ("DDH") with a total of 57,752 meters drilled.

Drilling campaigns expressed by year can be visualized inTable 12-1.



Drilling Campaing	Type of Hole	Number of Holes	Meters Drilled	Average Meters Drilled	Min Metters Drilled	Max Metters Drilled
1987	RC	13	378	29	14	31
1990	RC	23	3 260	142	71	250
1993	DDH	5	1 002	200	146	254
1994	DDH	12	2 016	168	25	255
1996	RC	32	8 540	266	113	400
1997	RC	94	24 651	262	49	413
1997	DDH	15	3 514	234	31	380
1998	RC	24	7 547	314	220	370
1999	DDH	5	1 330	266	191	450
2003	RC	10	1 716	171	84	282
2005	RC	5	1 044	209	150	252
2007	DDH	46	9 804	213	31	365
2008	DDH	48	6 941	144	40	355
2012	DDH	3	353	117	106	125
2019	DDH	2	844	422	380	464
2020	DDH	33	9 144	271	50	610
2021	DDH	56	14 217	253	50	451
2022	DDH	31	8 532	275	101	401
Subtotal	RC	201	47136	199	100	285
Subtotal	DDH	256	57696	229	105	371
Grand to	otal	457	104832.0	220	103	339

Table 12-1: Drill campaign summary by year.

Please note that values for 2022 are representative of drilling performed until July 2022. While further drilling has been completed as Phase III, as this date was considered as the cut-off date for the purposes of the MRE and this Technical Report.

12.1.2 Check 10% back to source data.

As the MRE was only executed for the Oculto target, the coordinates consider only holes inside the Oculto Area, identified by the "Area" field in the collar table, and tagged as Oculto. Additionally, an outline surrounding Oculto area was drawn to cross check all holes in this area.

This check includes details of the topographic survey of 457 drillholes corresponding to 72% of total collars. The remaining 28% are drillholes outside the area of this MRE.

None of the drillholes reviewed presented differences between the original log and the collar survey coordinates contained in the database.



12.1.3 No transcribed coordinates.

All the drillings were presented with valid coordinates. None of the holes had an absence of collar survey or final depth.

12.1.4 Max depth versus sampling and logging tables.

The author carried out a review of the different drilling tables, not finding any discrepancy between the listed maximum depth and the sampling or logging tables.

Table 12-2 shows the number of records per logging table. Table 12-3 shows the comparison of the maximum depth versus sampling table, listed per year. Please note that:

- The drillholes have been selectively sampled, and not all have been sampled until the end of the hole or continuously.
- Not all drillholes have a log until the end of depth.
- Some drillholes have unlogged intervals.
- 91% of total meters drilled have been sampled.

Tables	Number of Holes	Number of records
Collars	457	457
Surveys	457	6650
Assays	457	92988
Lithology	457	5191
Alteration	457	10251
Geotech	457	62711
SG	127	6136

Table 12-2: Number of records per logging table.

Table 12-3: Drill campaign summary by year.

Drilling Campaing	Number of Holes	Meters Drilled	Sum of Max Depth to	Sum of Length Interval
1987	13	378.2	378.20	217.90
1990	23	3260.0	3260.00	3107.00
1993	5	1002.4	1002.40	933.50
1994	12	2015.8	2015.75	1867.07
1996	32	8540.0	8540.00	8542.00
1997	109	28164.6	28164.60	27389.85
1998	24	7547.0	7547.00	7536.00
1999	5	1329.6	1329.64	1239.31
2003	10	1716.0	1716.00	1703.00
2005	5	1044.0	1044.00	1044.00
2007	46	9804.3	9804.30	7060.80
2008	48	6940.7	6940.65	5131.75
2012	3	353.0	353.00	351.00
2019	2	843.6	843.60	837.70
2020	33	9143.8	9143.80	8465.05
2021	56	14216.9	14216.90	13313.89
2022	31	8532.2	8532.20	7885.80
Grand total	457	104832.0	104832	96626



**12.1.5** Identify collars > 2m above or below topography.

Table 12-4 shows a comparison of the drillhole elevation with respect to the topographic surface. Less than 1% of the drillholes show a difference greater than 2 meters with respect to the topography, and a 95.9% show a difference of less than 2m.

Where the discrepancy is greater than 2m, it is suggested to project the drillhole to topography and consider an Inferred classification.

Type of Difference	N. Holes	% Holes	Mean Absolute Difference (m)	Max. Absolute Difference (m)
2m out topo	2	0.4%	2.92	3.76
Above topo >2m	189	41.4%	0.42	1.37
Below topo >2m	249	54.5%	0.27	1.67
On topo	17	3.7%	0.00	0.00
Total	457	100%	1	2

#### Table 12-4: Summary of collars > 2m above or below topography

#### **12.2** Downhole Surveys

#### **12.2.1** Downhole Surveys station analysis

For the revision of the survey table, drillholes without downhole survey have been excluded from the final database. The depth, dip and azimuth columns have been used for all drillholes that have been selected inside the previously discussed area. Details of survey station, listed by year are shown in Table 12-5.

The author highlights the following from the review:

- All azimuth values are between 0 and 360.
- All dips are between -90 to -35 degrees.
- 5% of drillholes have 1 station point of downhole survey.
- 37% of drillholes have 2 station points of downhole survey.
- 58% of drillholes have more than 2 station points of downhole.
- No duplicated values are presented in the data used for the MRE.

Drillholes with a single measurement and greater depth than 100m are not considered for a Measured categorization.



Drilling	Number of	Number of		Number of holes	
Campaing	Holes	records	1 Downhole survey	2 Downhole survey	>2 Downhole survey
1987	13	26	0	13	0
1990	23	50	0	23	0
1993	5	10	0	5	0
1994	12	24	0	12	0
1996	32	373	1	24	7
1997	109	1683	1	67	41
1998	24	1235	0	13	11
1999	5	293	2	0	3
2003	10	10	10	0	0
2005	5	5	5	0	0
2007	46	228	2	1	43
2008	48	172	2	13	33
2012	3	145	0	0	3
2019	2	87	0	0	2
2020	33	273	0	0	33
2021	56	869	0	0	56
2022	31	1024	0	0	31
Grand total	457	6507	23	171	263
Porcentage			5%	37%	58%

Table 12-5: Summary of collars > 2m above or below topography

#### 12.2.2 Kink Analysis

Kink analysis was performed over the 457 drillholes selected to be used in the MRE.

Kink analysis evaluates drillholes per year that have not passed the deviation analysis of survey points. This is when azimuth is greater than 10 degrees, the dip limit is greater than 10 degrees or the angle of the drillhole is greater than 10 degrees.

A total of 32 drillhole survey point measurements has a deviation greater than 10 degrees. These 32 deviations represent less than 1% over the 6310 points of observation.

After a detailed review and verification against the original certificate for each drillhole that have not passed the kink analysis, the conclusion is not to exclude any of the previous holes. The error in all cases was due to mistyping at the moment of entering into the database or vertical holes with misinterpretations in the kink analysis. All errors were corrected.

#### 12.2.3 Assess any corrections applied

No global correction is suggested as most data in the downhole survey table is accurate and presents no meaningful deviation. The exception was the centesimal place corrections.



It is suggested that holes with only one point station should not categorize resources at a higher confidence than inferred. Except from those historical holes that have been validated with modern campaign, and geological and alteration profile fits with recent models. In those cases, confidence in hole trace is high.

As rounding issues are considered low, no correction should be applied for an MRE. It is however suggested to reload original record measurements into the database.

## 12.3 Assays

## 12.3.1 Check back to source data

The project has changed ownership and database systems throughout the last 35 years. Largely due to this reason some of the historical data is incomplete in terms of flagging in the database, certified reference materials, blanks, and duplicates. However, the modern era of the project, spanning the last twenty years, has used exploration methodologies in line with industry best practices.

The check back to source analysis has been carried out considering the 2019 to 2022 drilling campaigns. For the remainder of the campaigns, gold and silver values have been verified using independent sampling of pulp and cores of the historical drillholes.

The author has compiled 8 certificates checking 2.84% back to source data. This comprised 700 samples out of a total of 24,673. Details are listed in Table 12-6.

Results from the source analysis validation note the following conclusions:

- The assay table includes 24,673 records of which 24,673 have gold values including 6,577 with zero value.
- Zero records are null values.
- No negatives or non-numeric values were identified.
- The detection limit was replaced with a half of the value, however, during the check back to source no data was detected below the detection limit.

The author has observed that there is no duplicate sample code.



Certificated compiled	Hole Id	Drilling Campaign	Number of records
GQ2000037	DDH-19-002	2019	67
GQ2001620	DDH-20-013	2020	156
GQ2001718	DDH-20-013	2020	106
GQ2102498	DDH-21-050	2021	48
GQ2203683	DDH-22-031	2022	72
GQ2203586	DDH-22-031	2022	95
GQ2203682	DDH-22-031	2022	82
GQ2201939	DDH-22-010	2022	74
Grand Total			700

Table 12-6: Check back to source certificate compiling.

## **12.3.2** Overlapping intervals and length of samples

No overlapping samples were detected during the process of auditing the database.

No typing error in the intervals were identified.

## **12.3.3** Coincident samples

No coincident samples were detected.

#### **12.3.4** Comparison analysis of different types of data

No comparisons have been made for this report as it was done in the previous NI 43.101 report made by Mining Plus, MP (2021). Even though, the conclusions of that analysis are quoted below.

- The comparison of RC vs DDH was performed within a limited area including the main mineralization. Results indicate that the sample results from RC drilling closely match those from diamond drilling and no bias is evident.
- The comparison of the 2008 and 2020 drilling campaigns is shown certain differences, mainly with the 2020 drilling campaign. This was attributed to the intercept of economic mineralization with significant values, causing mean, upper, and lower quartiles to be higher than the 2008 drilling campaign. It was thus concluded this was not evidence of bias.

#### **12.3.5** Twinned Drill Holes

No analysis for twin holes has been made for this report as it was done in the previous NI 43.101 report made by Mining Plus, MP (2021). Even though, the conclusions of that analysis are not conclusive, the author recommends a detailed analysis in order to verify if a bias exists between RC and DDH drilling.



## 12.4 Independent sampling check

The next section has been taken from the previous NI 43.101 Technical report made by Mining Plus (2022), dated January 13<sup>th</sup>, 2022.

An independent sampling check was performed to validate historical drilling campaigns and confirm gold and silver mineralization. Results from these samples corresponded with the general range of grades that had been reported during previous exploration.

Sample preparation protocols and assaying technique were done under modern techniques in line with the best practices of the mining and exploration industry. In the cases of re-sampling pulps, the whole sachet of 100 gr was sent to the laboratory, samples were collected randomly at intervals from a minimum of five samples, as shown in Table 12-7.

Core samples were collected and sent to a secondary laboratory. Only the last two campaigns were selected to be re-assayed, as previous exploration had been verified as mentioned in RPA's Technical Report, dated April 16, 2018.

The intention of this re-sampling was to verify accuracy and precision of the principal laboratory used by AbraSilver and the sampling methodology of AbraSilver exploration staff. The total number of re sampled cores per year can be seen in Table 12-8.

All samples were sent to Alex Stewart Assayers ("ASA"), located in Mendoza as a secondary laboratory. It is important to mention that AbraSilver uses SGS Lab ("SGS"), with a preparation laboratory in San Juan and analytic laboratory in Lima, Peru.

Once samples were assayed by ASA, they were separated into two populations, pulps, and cores. For each population, a set of statistical analysis was performed to validate the population and detect bias. RMA scatter plots were constructed for the studied elements. The RMA method offers an unbiased fit for two sets of pair values (original samples and check samples) that are considered independent from each other. Relative ("RD") versus Mobil Average ("MA") plots were built also.

Descriptive statistics for pulp duplicates are shown in Table 12-9, separately for both gold and silver. The same is shown for core duplicates in Table 12-10.

In Figure 12-1 to Figure 12-4, RMA scattergram plots demonstrate the performance of gold and silver assays at first and secondary laboratories for both pulp and core samples.

Based on this review and data analysis, the author concludes that the gold and silver accuracy for the total of samples is acceptable. It is important to mention, that silver accuracy should be carefully assessed due to fact that if not digested at the laboratory with multi acid techniques, misinterpretation of the results may occur. An internal memo from AbraSilver is recommended to be written, outlining a detailed procedure of sample



preparation, digestion, and analytic assaying methodology. This should be used for every exploration campaign.

No obvious Au and Ag cross contamination was identified during laboratory sample preparation.

The RMA plots for gold and silver, after excluding a few outliers, indicates a good fit between the check assays and the original assays.

The author also tried to evaluate the possible significance of sampling error. RD vs MA plots were prepared for gold and silver and compared against the duplicate samples. This test resulted in very low percentage of bias for gold (4,02%) and similar low percentages of bias for silver (7,1%) considering pulp duplicates.

Precision determination for gold in core duplicates is 19% and 4% for silver which is considered acceptable despite being higher than 10%. This conclusion was reached considering the likely nugget nature of gold causing inhomogeneity in samples. Most of the failures were actually very close to the failure lines. Based on this the author inferred there was no significant sampling error during the drilling campaigns.

Drilling Campaing	Number of Holes	Total Record	Number of Holes re sampled	Number of samples	% Samples re sampled per campaing
1987	13	132			
1990	23	3330			
1993	5	909			
1994	12	1531			
1996	32	8412	2	21	0.25%
1997	109	27068	4	46	0.17%
1998	24	7536	1	14	0.19%
1999	5	1135			
2003	10	1492			
2005	5	989	1	22	2.22%
2007	46	4617	9	84	1.82%
2008	48	3468	3	26	0.75%
2012	3	387	1	5	1.29%
2017	0	1865			
2019	2	749			
2020	33	6787	3	25	0.37%
2021 (Phase I)	21	4462	1	7	0.16%
2021 (Phase I)	35	6184	35	220	3.56%
2022	31	6490	12	81	1.25%
Grand Total	457	87543	72	551	0.63%

Table 12-7: Summary of samples per campaign versus samples re assayed, for pulps.



Drilling Campaing	Number of Holes	Total Record	Number of Holes re sampled	Number of samples	% Samples re sampled per campaing
2019	2	749			
2020	33	6787	1	11	0.16%
2021 (Phase I)	21	4462	3	31	0.69%
Grand Total	56	11998	4	42	0.35%

Table 12-8: Summary of samples per campaign versus samples re assayed, for cores.

Table 12-9: Descriptive statistics for pulp's population, separately for gold and silver.

	PULPS DUPLIC	ATE - DESCRIPTI	VE STATISTICS	PULPS DUPLICATE - DESCRIPTIVE STATISTICS		
ELEMENT	Au L1	Au L2	BIAS	Ag L1	Ag L2	BIAS
UNIT	(ppm)	(ppm)		(ppm)	(ppm)	
Mean	1.12	1.16	4.0%	161.9	173.5	7.2%
Median	0.44	0.45	1.8%	34.3	38.7	12.8%
Std. Dev.	1.73	1.79	3.6%	402.7	435.3	8.1%
Kurtosis	10.56	10.69	1.2%	26.0	25.0	-4.0%
Skewness	2.86	2.87	0.4%	4.8	4.7	-1.6%
Minimum	0.00	0.01		0.5	0.9	
Maximum	12.12	12.59		3 210.7	3 303.2	
Mode	0.00	0.01		26.8	21.1	
Frequency	0.22	0.22		49.8	53.8	
Number of Samples	243	243		251.0	251.0	

Table 12-10: Descriptive statistics for pulp's population, separately for gold and silver.

	CORE DUPLICATE - DESCRIPTIVE STATISTICS			CORE DUPLICATE - DESCRIPTIVE STATISTICS		
ELEMENT	Au L1	Au L2	BIAS	Ag L1	Ag L2	BIAS
UNIT	(ppm)	(ppm)		(ppm)	(ppm)	
Mean	0.56	0.56	0.0%	37.3	38.7	3.7%
Median	0.04	0.04	0.0%	34.3	38.7	12.8%
Std. Dev.	1.41	1.42	0.7%	124.8	119.2	-4.5%
Kurtosis	20.98	21.37	1.9%	195.3	183.9	-5.8%
Skewness	4.23	4.27	0.9%	12.9	12.4	-3.7%
Minimum	0.01	0.01		0.3	1.0	
Maximum	10.11	10.16		1 968.0	1 861.8	
Mode	0.01	0.01		0.3	1.0	
Frequency	2.51	2.51		0.5	0.5	
Number of Samples	300	300		300.0	300.0	

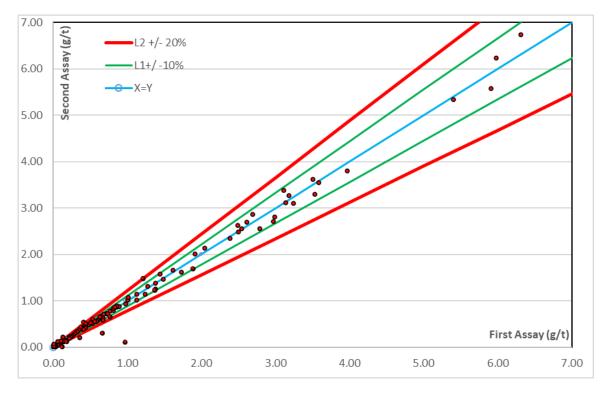


Figure 12-1: RMA scattergram plot for pulps population, for gold assays.

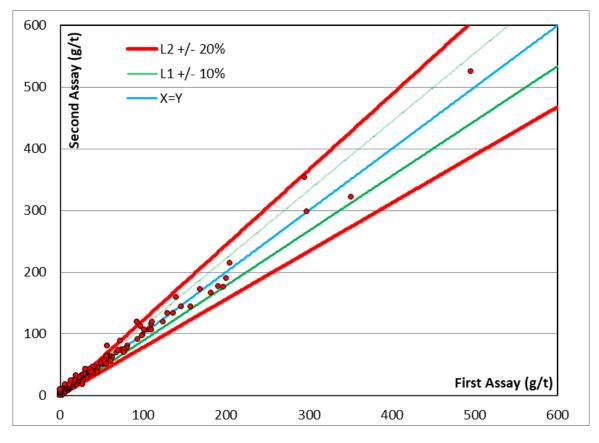


Figure 12-2: RMA scattergram plot for pulps population, for silver assays.

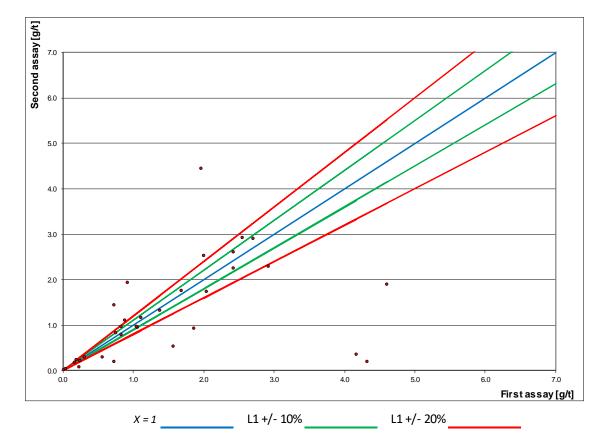
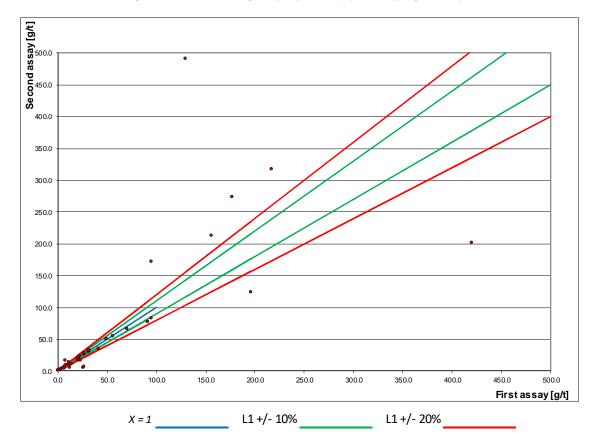


Figure 12-3: RMA scattergram plot for core population, for gold assays.



*Figure 12-4: RMA scattergram plot for core population, for silver assays.* 



# 12.5 Mr. Peralta (QP) Site Visits

Mr. Peralta visited Diablillos from April 11th to April 20th, from June 3rd to June 9th and from September 10th to September 18th 2022 and conducted a general site inspection, including drill collars, cores, logging facility, logging procedures and camp. Core from several drill holes were reviewed and compared to the logs. Collar locations were confirmed by handheld GPS.

In the author's opinion, the site was found to be as described in the Technical Reports, the facilities were well-maintained, and the core storage was orderly.

In the second visit of the author, from June 3rd 2022 to June 9th 2022, it was conducted an inspection of surface geology at the Oculto and near-term targets, and the prospects discussed in Section 9. Several cores were reviewed from the Oculto deposit and compared to logs. Additionally, collar locations were confirmed for recent drilling at Oculto. Vertical cross sections and plans views with detailed geology, alteration and interpretation were discussed with AbraSilver geologists. Further discussions included future exploration targets and near-term objectives.

In the author's opinion, the site continued to be as described in the Technical Reports, with well-maintained facilities and orderly core storage.

# 12.6 Discussion

In Mr. Peralta's opinion, the database is reasonably free from errors and suitable for the use in the estimation of Mineral Resources.



# 13 MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical test work has been carried out in a range of different laboratories between 1996 and 2021. The initial test work was completed to determine the amenability of the mineralization to cyanide leaching techniques. This initial study phase showed that the silver and gold could be leached from ground samples, however at coarser crush sizes such as those used for heap leaching, the precious metal extractions were noted to decrease.

The additional phases of testing further progressed with the cyanide leaching testing and also studied alternative processing routes including gravity recovery and flotation. Cyanide leaching again showed good extractions for ground samples, with lower extractions from heap leach testing.

### 13.1 BARRICK 1996 - 1998

The initial testing organized by Barrick was carried out in November 1996 at Lakefield Research Ontario and reported by Lakefield in April 2007. Eleven RC chip samples from a current drilling campaign were sent for bottle roll cyanide testing. Head grades ranged from 0.60g/t Au to 24.5g/t Au and 12g/t Ag to 2806g/t Ag. Target grind sizes were 80% to 90% -75 microns, but three repeat tests were carried out at coarser grinds.

Gold extractions ranged from 70% to 99% and silver from 50% to 99%. Lakefield noted that there was an acceptable correlation between head grade and silver extraction, but not for gold, the reason being that the extractions from the 3 highest grade samples were low (75% - 80%). In the three repeat tests at coarser grinds, extractions stayed the same in two samples and dropped slightly in one.

A second phase of testing was organized in 2007 and consisted of 28 five-kilogram samples of RC chips along with five 20 kg samples of material of an undisclosed nature also submitted to Lakefield Research in Ontario, for metallurgical testing. The samples embraced a very wide range of grades, from a low of 0.3 g/t Au and 10 g/t Ag to a high of 10 g/t Au and 3,700 g/t Ag. Average grades were over 2g/t Au and 300 g/t Ag.

Test work included bottle roll tests at various grind sizes to simulate both conventional and heap leaching, agglomeration testing, and Standard Bond Ball Mill Grindability tests. From the results of this study, Lakefield drew the following conclusions:

- The tested samples were amenable to agglomeration, with an estimated cement requirement of up to 15 kg/t of feed.
- The cyanidation tests indicated that all samples were amenable to cyanidation with variable but generally good extractions, fast leach times, and cyanide consumption in the range of 1 kg/t to 4 kg/t.



- Extractions for gold were typically in the range of 80% to 85% within a range of 45% to 95%. Average silver extraction was 82% and ranged from 57% to 98%.
- Bond Ball Mill Index (BWI) determinations yielded a range of values between 11.0 kWh/t to 17.7 kWh/t.

Seven samples of RC chips were subject to X-ray diffraction (XRD) and electron microprobe studies to determine ore and gangue mineralogy and to assess their possible effects on metallurgical recovery (Brosnahan, 1997). The study concluded the following:

- Gangue mineralogy should not significantly hamper cyanidation.
- Gold occurs as metallic grains 3  $\mu$  to 4  $\mu$  in size, indicating a need for very fine grinding.
- Gold occurs in association with softer sulphate and iron oxide minerals, which should be more easily ground than quartz.
- Silver minerals were coarser in size, and consisted of acanthite, chlorargyrite, and iodargyrite, all of which were recoverable by cyanidation.

In 1998, Barrick submitted diamond core samples to Lakefield Research Santiago, for bottle roll and column cyanidation tests to determine the amenability of Oculto mineralization to heap leaching. The test material comprised of three samples of high, medium, and low grades labelled Roja (Red), Verde (Green), and Azul (Blue). Roja averaged 2.34 g/t Au and 929 g/t Ag, Verde 1.44 g/t Au and 251 g/t Ag, and Azul 0.86 g/t Au and 90.2 g/t Ag. In the context of the present resource model for Oculto, all three of these samples are higher than the average resource grade with "Azul" being closest. The test work consisted of the following:

- Bottle roll cyanidation tests at grind sizes of 40%, 60%, and 80% -200 mesh
- An extended leach time bottle roll test on material of -10 mesh
- Column leach tests on samples of sizes -3", -1/2", -3/4", and -3/8"

The conclusions drawn by Lakefield from this test work were as follows:

- Extraction for gold and silver was good at primary grind sizes of 60% and 80% -200 mesh, but poor otherwise.
- The extractions for normal grind sizes on "Azul" averaged 77% for gold and 80% for silver.
- The test results suggested that the sample material was not appropriate for heap leaching and this supported the earlier conclusions from Lakefield Ontario.
- More test work was recommended to study cyanide leaching and the Merrill-Crowe process with grind sizes between 50% and 80% -200 mesh.



### 13.2 SILVER STANDARD RESOURCES 2008 - 2009

Five composite core samples were submitted to Process Research Associates Ltd. (PRA), of Richmond, British Columbia, Canada for metallurgical studies in May 2008. Laboratory test work was conducted in two phases consisting of gravity, whole ore cyanidation, comminution tests, column leach tests, and froth flotation studies. Additional analytical work was carried out by IPL Laboratory, also of Richmond, British Columbia, and the program was supervised by F. Wright Consulting Inc. (Wright). The results of the first phase of this work were described in a report by Wright (2008), which concluded the following:

- Sulphide contents ranged from 0.2% to 2.7%, which was considerably lower than the total sulphur, probably due to oxidation.
- Gold and silver grades, of the five samples submitted for testing, did not match the reported average resource grades, in particular the silver grades where 3 of the composites assayed more than 400g/t Ag. It was recommended that sampling for future test work be configured to match the expected resource average grades and geology.
- Bond Ball Mill Work Index testing indicated a variable ore hardness of between 12.6 kWh/t to 19.1 kWh/t. Further comminution studies were recommended.
- Bottle roll cyanidation test work yielded extractions in the range of 69% to 91% for gold and 73% to 94% for silver. Extractions on ground samples were observed to be relatively insensitive to particle size as coarser fractions showed up to 78% recovery for gold and 83% for silver. Two CIL tests did not indicate any improvement in extraction.
- Bottle roll precious metal extractions on coarse sizes crushed to various sizes below 10mm were considerably lower. However, column leach studies were recommended to evaluate the heap leaching potential for lower grade material.
- Flotation and gravity did not appear to significantly impact or improve overall extractions. It was recommended that no further test work be done on flotation, however, gravity work should continue depending on the resource grade distribution.
- Test work conducted with laboratory local municipal water did not yield significant processing concerns. Further studies, using site water with locked cycle procedures were recommended.
- Additional testing was recommended which would include collection of samples more representative of the deposit as a whole, evaluation of site engineering constraints, permitting requirements, and other factors that would impact process economics. It was also recommended that the next phase of work focus on cyanidation for both tank and heap leach options and should include tests for treatment of the pregnant leachate solution (PLS).



Following the initial test results, PRA conducted a second phase of test work, based upon the recommendations from the first phase (Wright, 2009). The program comprised a comprehensive leaching variability study consisting of 48-hour bottle roll tests of 53 samples of Oculto mineralization, locked cycle bottle roll testing using site water, and a preliminary heap leaching evaluation involving two column leach tests.

The samples were generally 7.5m intercepts from 16 different diamond core holes from the 2007 Silver Standard drilling program. While the drill holes had multiple intercepts, none were contiguous and so the representativity of the intercept within the broader zone of mineralization was unknown.

The variability study was carried out on ground samples with a target size of 80% - 75 microns. Most samples were close to this value. Gold head grades ranged from virtually zero (silver-only samples) to 6.6g/t Au and averaged 1g/t Au. Silver head grades ranged from 16g/t Ag to over 2600g/t Au and averaged 200g/t Ag. Once again, average values were higher than contemporary resource grades however approximately two thirds of them could be considered reasonably close to overall grades.

The variability program yielded a range of extractions with averages of 88% for gold and 74% for silver after 48 hours of leaching. After 24 hours of leaching average gold extraction was 84% and silver was 78%. This tendency for silver extraction to slightly drop with time had also been seen in the some earlier individual results. With reagent consumption also increasing with time, it appeared that there was little economic benefit in leaching for more than 24 hours.

It is worth noting that relatively high cyanide concentrations of 2g/L NaCN were used and maintained in the variability testing. At this level of addition, NaCN consumption averaged 2.9 kg/tonne after 48 hours, however considerably lower consumptions may be assumed in an industrial situation. It was also noted that in many tests most of the initial cyanide addition was consumed in the first two hours, and with an absence of copper in the samples, it was anticipated that the cyanide was being consumed by iron and/or sulphur.

Silver was observed to leach more rapidly than gold, generally reaching maximum dissolution within 24 hours. The majority of the soluble gold was extracted within 24 hours, although for some, typically higher grade, samples the dissolved gold concentrations continued to increase beyond 48 hours. For this reason, further gravity studies were recommended to determine if leach retention time could be reduced for higher grade material, with potential for reduction of leach circuit operating and capital costs.

The locked cycle test was conducted with site water on a single sample with six cycles of zinc precipitation. No adverse effects were noted, however, a small number of the variability samples showed poor settling and filtering performance with higher observed viscosity.



Additional work was recommended including detailed solid-liquid separation testing, as well as a review to identify process responses to various rock types throughout the deposit.

Two scoping level column leach tests were conducted, one with a high-grade sample containing 1.27 g/t Au and 589 g/t Ag, the other on a low-grade sample, which assayed 0.28 g/t Au and 36.3 g/t Ag. Extractions for the high-grade sample were 65% for gold and 63% for silver, while for the low-grade sample recoveries were 56% for gold and 37% for silver. Wright (2009) concluded that tank leaching offered a significant recovery advantage over heap leaching, however, the ultimate decision regarding the process would depend upon capital and operating cost parameters.

# 13.3 AETHON MINERALS 2019

As part of a technical due diligence, Aethon minerals selected and sent 8 intercepts from old diamond drill core for cyanide leach testing at ALS Metallurgy, Kamloops, BC, Canada. Four intercepts were from campaigns in 1997 and 1999, two from 2007 and two from 2008. Once sample had a high copper value and was to be tested by flotation as well as cyanidation.

Average head grades were 3.75g/t Au and 445g/t Ag with ranges of 0.37g/t Au – 11.90g/t Au and 17g/Ag to 1600g/t Ag. The samples had significantly higher average lime consumptions (2.8kg/tonne) than other campaigns which may have resulted from being stored for such a long time. Sodium cyanide consumption averaged 2.2kg/tonne.

The copper sample gave very poor gold and silver extractions as well as high cyanide consumption. Flotation using fairly standard conditions gave high copper and reasonable gold and silver recoveries at a high 18% mass pull but copper grade was only 2.5% Cu in the concentrate. Cleaning to a saleable concentrate grade would inevitably reduce metal recoveries substantially.

Bottle roll cyanide leach extractions on the other seven intercepts were high and averaged 87% for gold and 91% for silver after 24 hours.

Given the grades and ages of the samples, this program did not add a great deal to the prior knowledge.

### 13.4 ABRASILVER 2021

AbraSilver commissioned an additional metallurgical program at ALS Metallurgy Kamloops on 56 intercepts with quarter-core from 26 diamond drill holes completed during their 2019 and 2020 drilling programs which included all mineralized intercepts above a notional cutoff grade. The program included detailed comminution and settling testwork as well as cyanide leaching and subsequent analysis and treatment of leach solutions. As of the effective date of this Technical Report, the program has not been completed nor evaluated.



## **13.5 DISCUSSION**

For the purposes of this Technical Report, it is reasonable to assume that the gold and silver at Oculto could be recovered using conventional precious metal processes commonly used in the mining industry. Although limited in scope, the test work conducted to date suggests that reasonable recoveries can be achieved using sodium cyanide leaching of slurries ground to between 75 and 200 microns with moderate reagent consumptions. The silver to gold ratios apparent in the majority of samples would suggest that following the leaching process, the precious metals should be recovered by a Merrill Crowe zinc precipitation process rather than CIP or CIL.

During the previous works, precious metal extraction curves were generated from the results of the metallurgical test work conducted in 2009. The curves for the mill were derived from regression lines drawn on diagrams of extraction versus head grades. The resulting equations are given below and the curves illustrated in Figure 13-1 and Figure 13-2.

Gold:

$R_{Au} =$	$R_{Max} \cdot (73.831 \cdot Au)$
=	1 + (73.831  x Au)

= Maximum Gold Recovery = 87.95%

Where:

R<sub>Max</sub> Au

Silver:

$$R_{Ag} = \frac{R_{Max} \cdot (0.03975 \cdot Ag)}{1 + (0.03975 \cdot Ag)}$$

= Gold Grade (g/t)

Where:	<b>R</b> <sub>Max</sub>	= Maximum Silver Recovery = 95.73%
	Ag	= Silver Grade (g/t)



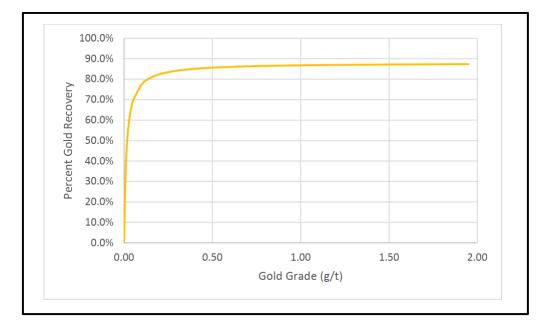


Figure 13-1: Mill gold recovery curve

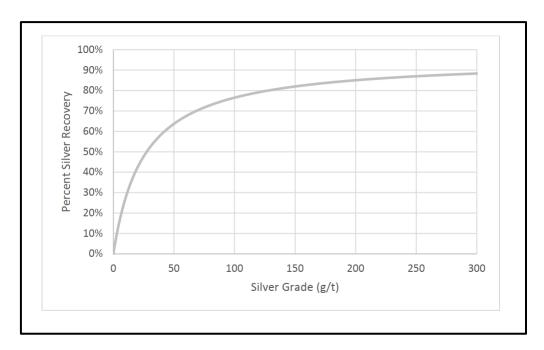


Figure 13-2: Mill silver recovery curve



Previous Technical Reports described a concept whereby lower grades would be stockpiled and treated in campaigns at higher throughput rates, while higher grade ore would be treated at lower throughputs and finer grind sizes.

With the current increase in Measured and Indicated Resources to a significantly higher number and the inclusion of a significant shallow component within the overall resources, it is probable that a simple conventional circuit will be a preferred approach. This will be evaluated in more detail when the results of the current metallurgical test program become available.

The current metallurgical test program should provide sufficient clarification of metallurgical parameters to allow a conceptual circuit to be designed to PFS level. Further test programs will still be required to confirm the circuit and develop specific design parameters for individual sections and to prove the concept on new drill core samples. It is probable that this will involve drilling large diameter core samples into defined geometallurgical zones and intended specifically for metallurgical testing and evaluation of the response of those zones.

# **14 MINERAL RESOURCE ESTIMATES**

# 14.1 Summary

Mr. Luis Rodrigo Peralta, FAusIMM, CP(Geo), Senior Geologist and independent external consultant for AbraSilver, is responsible for the updated Mineral Resource Estimate ("MRE") reported in Section 14 of the Report for the Oculto deposit of Diablillos Property. Fantasma Deposit was not part of this MRE, and no revision has been carried out on this deposit, so Mr. Peralta cannot express any opinion on it. He however suggests a revision and update with the new exploration works and economic parameters that are being developed in the project.

The previous Mineral Resource Estimate dated August 28, 2021 was reported in the NI 43-101 technical report and the last PEA that AbraSilver presented on January 13<sup>th</sup>, 2022 prepared by Mining Plus ("MP"), with drill holes dating from 1987 to 2021, with a database cut-off of May 1<sup>st</sup> of 2021.

All holes not drilled by AbraSilver will be referred as historical drillholes on forward. AbraSilver Resource Corp. ("AbraSilver") has drilled more recent diamond drill holes between 2019 to 2022 with a total of 173 drill holes with 39,819 m drilled (the drill hole database with a cut-off date of July 30th of 2022).

The MRE has been based on a subset of the drilling data detailed in Section 10 of the Technical Report. Drill holes located outside of Oculto block model limit and drill holes without assay results data have been excluded from the MRE. The subset of drilling data includes 457 drill holes between diamond and reverse circulation drill holes (335 as historical drillholes, and 122 as AbraSilver drillholes) totalling 104,888.5 meters of drilling.

Verification of drill data is summarised in Section 12 of the Technical Report. Mr. Peralta is satisfied that drill data was collected in alignment with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Mineral Exploration Best Practice Guidelines (CIM, 2018) and Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (CIM, 2019), and that it is suitable for use in the mineral resource estimation.

Oculto is a complex high sulphidation epithermal silver-gold deposit with strong supergene overprinting. The principal controls to alteration and mineralization are predominantly structural with a mixed influence imparted by lithology. The combination of this structural and alteration control has generated a steeply dipping and shallowly dipping zone control that has been considered in the new resource estimate. The estimation domains were defined using a combination of alteration domains with lithology domains, defining a subset of mixed domains for each lithology with each alteration suit.



Based on the drill hole database and new 3D Model of lithology + alteration domains, a single block model was generated in MS MinePlan mining software. A statistical study of the gold and silver grade distribution and behaviour over each domain has been undertaken to inform grade interpolation in the block model. Gold and Silver grades were estimated using Ordinary Kriging ("OK") and bias was reviewed using an Inverse Distance ("ID2"). Drill hole intervals have been composited to a length of 1 m, which is the most common sample length used in logging over mineralized and waste zones. Grade capping has been applied to composited grade intervals on a case-by-case basis within each domain.

A new SG model has been built applied to the block model, based on measurements from 6,485 core samples. Bulk density was assigned to the block model as averages of each lithology domain and alteration domain, with oxidation / sulphide zone subset. The average bulk density is 1.82 t/m<sup>3</sup> for cover material, 2.32 t/m<sup>3</sup> for mineral material and 2.23 t/m<sup>3</sup> for waste material.

Mr. Peralta ("QP") has undertaken; a visual comparison of block model sections against drill traces; a review of comparison statistics; and undertaken check estimates, and as such he is satisfied that the MRE is consistent with the CIM best practice guidelines (CIM, 2019).

The MRE for Oculto deposit, with an effective date of 31<sup>st</sup> October 2022, it has been constrained by optimised pit shell and is reported at a cut-off grade of 35 g/t AgEq. The MRE has been categorized in accordance with the CIM Definition Standards (CIM, 2014) and comprises a Measured, Indicated and Inferred Mineral Resource as summarised in Table 14-1.

 Table 14-1: Mineral Resource Estimate for the Diablillos Deposit by mineral zone and classification - As of October 31th,

 2022

Zone	Category	Tonnage (000 t)	SG t/m <sup>3</sup>	Ag (g/t)	Au (g/t)	Contained Ag (000 oz Ag)	Contained Au (000 oz Au)
	Measured	18092	2.30	101	0.85	58655	495.8
Oxides	Indicated	30226	2.33	49	0.71	47502	688.1
Oxides	Measured & Indicated	48318	2.32	68	0.76	106156	1183.9
	Inferred	2090	2.36	31	0.50	2085	33.3
Me	Measured	1244	2.53	50	1.21	1979	48.5
Transitian	Indicated	1752	2.61	22	1.13	1235	63.8
Transition	Measured & Indicated	2996	2.58	33	1.17	3214	112.7
	Inferred	127	2.60	7	0.80	29	3.3
	Measured	19336	2.31	98	0.88	60634	544.4
Oxides +	Indicated	31978	2.34	47	0.73	48737	751.9
Transition	Measured & Indicated	51314	2.33	66	0.79	109370	1296.6
	Inferred	2216	2.38	30	0.51	2114	36.5

Notes for Mineral Resource Estimate:

- 1. Mineral Resources are not Mineral Reserves and have not demonstrated economic viability.
- The Mineral Resource is reported inside a conceptual Whittle open pit shell derived using US \$25.00/oz Ag price, US \$1750/oz Au price, 73.5% process recovery for Ag, and 86% process recovery for Au. The constraining open pit optimization parameters used were \$3.00/t mining cost, \$24.45/t processing cost, \$2.90/t G&A cost, and average 54-degree open pit slopes.
- 3. The formula for calculating AgEq is as follows: Silver Eq Oz = Silver Oz + Gold Oz x (Gold Price/Silver Price) x (Gold Recovery/Silver Recovery).
- 4. The MRE has been categorized in accordance with the CIM Definition Standards (CIM, 2014).
- 5. All figures are rounded to reflect the relative accuracy of the estimates. Minor discrepancies may occur due to rounding to appropriate significant figures.
- 6. The Mineral Resource was estimated by Mr. Peralta, B.Sc., FAusIMM CP(Geo), Independent Qualified Person under NI 43-101.
- 7. The Mineral Resource is sub-horizontal with sub-vertical feeders and a reasonable prospect for eventual economic extraction by open pit methods.
- 8. A cut-off grade of 35 gt AgEq was used for the Mineral Resource.
- 9. The Mineral Resource models used Ordinary Kriging grade estimation within a three-dimensional block model and mineralized zones defined by wireframed solids, which are a combination of lithology and alteration domains. Constrained by a Whittle open pit shell. The 1m composite grades were capped where appropriate.
- 10. All tonnages reported are dry metric tonnes and ounces of contained gold are troy ounces.
- 11. In-situ bulk density were assigned to each model domain, according samples averages of each lithology domain, separated by alteration zones and subset by oxidation, as detailed in section 14.
- 12. Mining recovery and dilution factors have not been applied to the Mineral Resource estimates.
- 13. Mr. Peralta is not aware of any environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues that could materially affect the potential development of the Mineral Resource.
- 14. Totals may not agree due to rounding.



# 14.2 Drill Data

The MRE has been based on a subset of the drill hole database reported in Section 10 of the Technical Report. Drill holes outside the Oculto Deposit, and drill holes without assay results have been excluded from the MRE. The subset of drilling data includes 457 drill holes, which consist of 256 diamond drill holes ("DDH") with 57,752m and 201 reverse circulation drill holes ("RC") with 47,136m, totalling 104,832 meters of drilling.

Drill holes used in the MRE have been summarized in Table 14-2 and Table 14-3 shows a summary of the holes excluded. Figure 14-1 and Figure 14-2 shows the limit of the holes used in the resource estimation by type of drilling and by company.

Drilling Campaing	Type of Hole	Number of Holes	Meters Drilled	Average Meters Drilled	Min Metters Drilled	Max Metters Drilled
1987	RC	13	378	29	14	31
1990	RC	23	3 260	142	71	250
1993	DDH	5	1 002	200	146	254
1994	DDH	12	2 016	168	25	255
1996	RC	32	8 540	266	113	400
1997	RC	94	24 651	262	49	413
1997	DDH	15	3 514	234	31	380
1998	RC	24	7 547	314	220	370
1999	DDH	5	1 330	266	191	450
2003	RC	10	1 716	171	84	282
2005	RC	5	1 044	209	150	252
2007	DDH	46	9 804	213	31	365
2008	DDH	48	6 941	144	40	355
2012	DDH	3	353	117	106	125
2019	DDH	2	844	422	380	464
2020	DDH	33	9 144	271	50	610
2021	DDH	56	14 217	253	50	451
2022	DDH	31	8 532	275	101	401
Subtotal	RC	201	47136	199	100	285
Subtotal	DDH	256	57696	229	105	371
Grand to	otal	457	104832.0	220	103	339

Table 14-2: Summary of a subset of the Drill Holes used in the resource estimate.



Zone / Holes	N° Holes	Reason
Alpaca	12	
Cerro Blanco	8	
Cerro Viejo Este	10	
Cerro Viejo Oeste	2	
Corderos	24	
Fantasma	44	Outside Oculto zone
Jasperoide	9	Outside Oculto zone
Laderas	5	
Northern Arc Valley Fill	3	
Pedernales Norte	32	
Pedernales Sur	9	
Yolanda	7	
Oculto zone	8	Outside of block limit
Oculto zone	14	Necessia
Geotech holes	5	No assays.
Total Excluded		192

Table 14-3: Drill Holes summary excluded of the resource estimate.



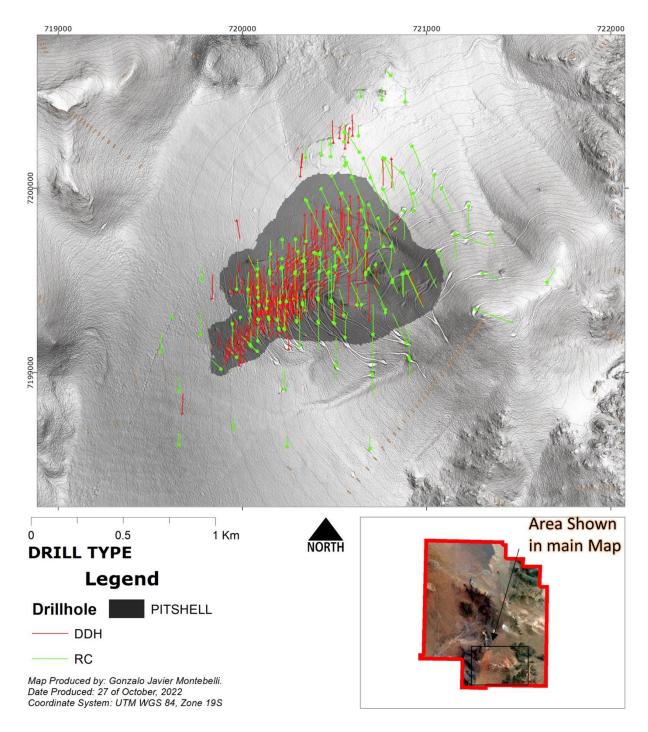


Figure 14-1: Plan view of the location of drill holes used in the estimation of resources coloured by type of drilling.



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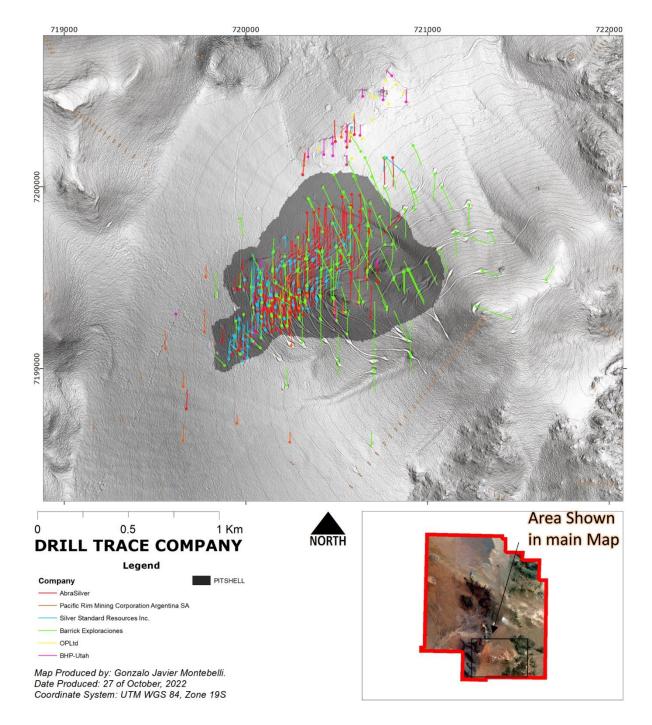


Figure 14-2: Plan view of drill hole collars used in the estimation of resources colored by Company.



# 14.3 Geological Model

The Oculto deposit is an epithermal silver-gold deposit with complex mineralization that has and strong alteration and structural - stratigraphic control, the structures (main direction with N 45°E and cross direction with N 85°E) are steeply dipping feeders where the mineralizing fluids migrated laterally by permeable horizons mainly in the contact zone between the volcanic rock and the metasedimentary rock. Oculto is strongly oxidized down to depths in the order of 300 m to 400 m, below the oxide zone the mineralization is grading to a transitional zone (Oxides and Sulphides), the limit of the sulphide zone is very well known where most of the drilling occur in the Oculto deposit, even though, laterally, this limit tent to be extrapolated due to the lack of drilling.

A high-grade zone of silver measuring approximately 20 m thick occurs at a depth of between 100 and 120 m below surface and is believed to be a supergene enrichment zone. A broadly horizontal zone of higher-grade gold mineralization occurs at or near the contact between the volcanic rock and the basement contact (metasedimentary rock or the granitic). This zone is approximately 30 m thick and, in places, correlates well with an erosive capping over the basement, which it has been overburden by the volcanic rocks later.

Interpretation of the shapes of the mineralized bodies used to be very difficult due to the lack of consistent logging of alteration styles and lithology between historical and recent drilling. A re logging campaign over the entire drilling campaign from 2007 & 2008 was done during the last months of 2021, in order to adjust to AbraSilver criteria's historical holes. AbraSilver in conjunction with Mr Peralta ("QP"), has developed a geological alteration and lithology model with greater precision. This covers the area with the highest density of recent drilling and a re-logging of historical drill holes from nearby drill holes. However, the uncertainty of the model outside this zone is greater and mineralization controls are based only on the geological components. Mr. Peralta ("QP") defined that the estimation domains are primarily based on a combination of alteration and lithology domains with subdomains based on the oxidization level, separating in a subset of domains the oxide with sulphide levels.

The boundary between oxidized and transition zones were constructed based on the new re-logged historical holes with recent campaigns.

The three main lithologies present in the Oculto deposit are Volcanic rocks, metasediments rocks and granitic intrusions, as described in previous section 7. As the same way, the hydrothermal alteration that affect this three host rock are argillic alteration, silica and vuggy silica alteration, also, as described previously in section 7. Respectively coded as Volcanic (1), Metasediment (2) and Granitic (3). The cover was coded as (0). Also, the



alterations were coded as Argillic (1), silica (2), vuggy silica (3). Finally, the oxidized rock to (1) and deep sulphides as (2).

This codification is shown in table 14-4.

Lithology (L)	Code	Alteration (A)	Code	Lithology + Alteration (LA)	Code	Oxide / Sulphide	(LA2)	Code						
Cover	1		0		10		Cover	10						
		Argillia (Ar)	1		21	Su	Vc+Ar+Su	211						
		Argillic (Ar)	1	Vc + Ar	21	Ox	Vc+Ar+Ox	212						
$\lambda = \langle \lambda \rangle$	2		2		22	Su	Vc+Si+Su	221						
Volc (Vc)	Z	Silica (Si)	2	Vc + Si	22	Ox	Vc+Si+Ox	222						
		Vuggy silica (Vg)	3		23	Su	Vc+Vg+Su	231						
		vuggy silica (vg)	5	Vc + Vg		Ox	Vc+Vg+Ox	232						
	3	Argillio	1	Mt + Ar	31	Su	Mt+Ar+Su	311						
		2	2	2	Argillic		31	Ox	Mt+Ar+Ox	312				
Meta sediments					2	2	2	2	2	2	Silica	2	Meta + Silica	32
(Mt)		Silica	2	Weta - Silica	52	Ox	Mt+Si+Ox	322						
			2		22	Su	Mt+Vg+Su	331						
		Vuggy silica	3	Meta + Vuggy	33	Ox	Mt+Vg+Ox	332						
			Argillic 1 Granite -	Cropito I Arg	41	Su	Gr+Ar+Su	411						
		Argillic	T	Granite + Arg	41	Ox	Gr+Ar+Ox	412						
Cronita (Cr)	4	Cilico	2	Cranita   Silica	12	Su	Gr+Si+Su	421						
Granite (Gr)	4	Silica 2 Granite	Granite + Silica	42	Ox	Gr+Si+Ox	422							
		Vuggu cilieo	3		43	Su	Gr+Vg+Su	431						
		Vuggy silica	3	Granite + Vuggy	43	Ox	Gr+Vg+Ox	432						

Table 14-4: Estimation	domains an	d coding used.
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Estimation domains are shown in Figure 14-3 and Figure 14-4.



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Figure 14-3: Vertical cross section N-S 720025, showing the lithology domains with alteration domains over imposed.

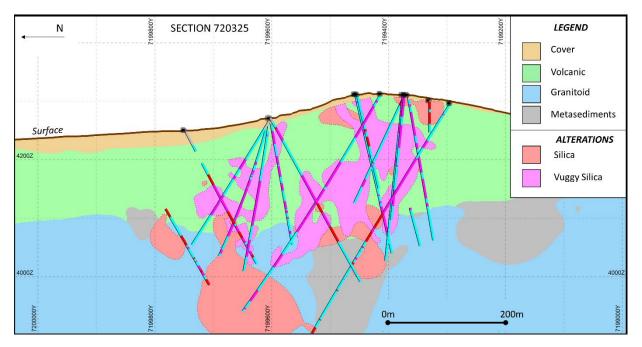


Figure 14-4: Vertical cross section N-S 720325, showing the lithology domains with alteration domains over imposed.

# 14.4 Exploratory Data Analysis

A process of examination of gold and silver assay statistics and statistical plots, grouped by modelled geologic domains, was undertaken with the goal of determining the most suitable approach to domaining the deposit as control for grade estimation. Lithology, alteration, and a combination of both domains with these two variables were reviewed.

Gold and Silver grade statistics by lithology and alteration grouping are presented in Table 14-5 and Table 14-6.



The table includes the coefficient of variation (CV = standard deviation  $\div$  mean) as a measure of grade variability. As a rule-of-thumb, CVs of composited samples should be  $\leq 2$  for typical linear estimation techniques. While CVs will be reduced slightly by compositing and treatment of the extreme high grade (top cut). Even though in certain domains the CV presented is higher than 2, this situation is explained as the CV is strictly related to the arithmetic mean, when the arithmetic mean is close to cero or cero, the CV loses meaning, since it can give very large values, which do not necessarily imply a large dispersion of data.

Statistics / Code	211	212	221	222	231	232
Valid Data	711	26799	27	5919	9	14444
Total Data	714	26821	27	5921	9	14447
Minimum	0.01	0.00	0.01	0.00	0.01	0.00
Maximum	41.61	42.40	1.07	10.36	3.00	54.71
Mean	0.14	0.08	0.06	0.14	0.78	0.62
Variance	2.50	0.22	0.04	0.24	1.25	3.29
Standard Deviation	1.58	0.47	0.20	0.49	1.12	1.81
<b>Coefficient Of Variation</b>	11.6	5.7	3.6	3.4	1.4	2.9
Code	311	312	321	322	331	332
Valid Data	3518	3705	1221	1510	20	1049
Total Data	3520	3711	1221	1510	20	1049
Minimum	0.01	0.01	0.00	0.00	0.05	0.00
Maximum	31.60	21.48	116.00	31.19	3.63	23.34
Mean	0.37	0.36	0.45	0.64	0.62	0.79
Variance	1.07	0.85	12.26	2.88	0.76	2.54
Standard Deviation	1.47	0.92	3.50	1.70	0.87	1.59
Coefficient Of Variation	8.0	2.5	7.8	2.7	1.4	2.0
Code	411	412	421	422	431	432
Valid Data	6270	6402	631	914	217	890
Total Data	6285	6410	631	914	217	890
Minimum	0.00	0.01	0.01	0.01	0.00	0.01
Maximum	41.28	90.74	27.80	10.68	26.80	29.56
Mean	0.22	0.31	0.37	0.26	1.35	1.20
Variance	1.75	2.35	2.44	0.49	12.36	6.68
Standard Deviation	1.32	1.53	1.56	0.70	3.52	2.59
Coefficient Of Variation	5.9	5.0	4.3	2.7	2.6	2.2

Table 14-5: Gold Grade statistics by Lithological and Alteration combination.



Statistics / Code	211	212	221	222	231	232
Valid Data	711	26800	27	5919	9	14427
Total Data	714	26821	27	5921	9	14447
Minimum	0.05	0.05	0.30	0.05	0.30	0.05
Maximum	652	11305	82	2267	50	13437
Mean	9.41	16.44	10.12	21.89	15.21	86.82
Variance	1384	24548	435	7108	414	117412
Standard Deviation	37.2	156.7	20.9	84.3	20.4	342.7
Coefficient Of Variation	4.0	9.5	2.1	3.9	1.3	4.0
Code	311	312	321	322	331	332
Valid Data	1759	3702	1221	1510	20	1046
Total Data	1760	3711	1221	1510	20	1049
Minimum	0.05	0.25	0.05	0.25	3.70	0.25
Maximum	893	770	327	170	28	1656
Mean	6.08	11.15	7.76	14.18	9.90	19.86
Variance	779	558	219	350	34	3801
Standard Deviation	27.9	23.6	14.8	18.7	5.8	61.7
Coefficient Of Variation	4.6	2.1	1.9	1.3	0.6	3.1
Code	411	412	421	422	431	432
Valid Data	6264	6397	631	914	217	883
Total Data	6285	6410	631	914	217	890
Minimum	0.01	0.05	0.05	0.30	0.05	0.10
Maximum	2700	1968	313	780	3245	1734
Mean	6.98	11.86	6.63	15.14	83.71	105.84
Variance	2790	2556	318	2480	71512	24409
Standard Deviation	52.82	50.55	17.84	49.80	267.42	156.23
Coefficient Of Variation	7.6	4.3	2.7	3.3	3.2	1.5

Table 14-6: Gold Grade statistics by Lithological and Alteration combination.

It was concluded that gold and silver grade domaining based on modelled geologic variables is the most representative way to define and evaluate the deposit in terms of metal content and other related variables as specific gravity, geotechnical characteristics, metallurgical characteristics, and other mining related parameters as they are related to the host rocks and the combination with a specific hydrothermal alteration. Therefore, the definition of the estimation domains was carried out based on this combination of alteration and lithology, depending on the number of samples for each domain. These domains are more adequately capturing the different populations of grades and respect the two main structural orientations of the deposit.

It is important to mention that certain domains have been merged with the closest domain in terms of geological characteristics, due to the low number of samples. Domain 221 has been merged to 222, 231 to 232, 331 to 332 and 431 to 432.



# **14.5 Treatment of Missing / Absent Samples**

Table 14-3 and Table 14-4 show the percentage of sampled intervals (within the limits of the block model) separated by the lithology domains and cover material (10 and 211 to 432 respectively). It is highlighted that most of the domains have been sampled almost 100%, ranging from 77% of the meters drilled in the lower case to 100% in the most interesting domains, presenting high sampling percentage with a total average of 88%.

Unsampled intervals occurs normally outside of the mineralized zones or unaltered host rocks. The impact of this unsampled intervals is not considered significant for mineral resource estimate. Table 14-7 shows sampling percentage versus total meter drilled by domain.

Domain	Total Drilled	Total sampled	Proporting of sampling
10	5704.63	2553.13	45%
211	917.9	818.55	89%
212	38759.78	32377.41	84%
221			
222	7955.89	7374.23	93%
231			
232	23562.28	18196.89	77%
311	1897.57	1852.04	98%
312	4480.88	4189.77	94%
321	1854.04	1814.04	98%
322	1994.35	1828.32	92%
331			
332	1649.41	1543.97	94%
411	9229	7759.64	84%
412	7035.1	7010.71	100%
421	849.6	767.57	90%
422	1077.75	1049.15	97%
431			
432	1815.13	1544.75	85%

#### Table 14-7: Sampling percentage summary by domain.

### 14.6 Compositing

The drill hole database has been coded with the estimation domains (Lith+Alt domain from 211 to 432); to achieve uniform sample support. The drill hole intervals were composed to a target length of 1 m down hole as a multiple of common raw sampling intervals while honouring the estimation domain boundary.

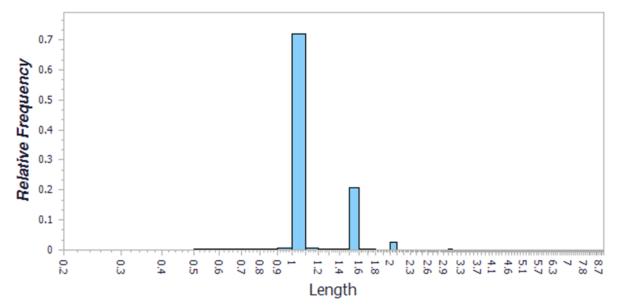


A residual retention routine has been used where residuals are added back to the next adjacent interval. Most composite intervals are 1 m, with a small number of composite intervals ranging from 1 to 1.6 m (Figure 14-5 and Figure 14-6).

Summary statistics for global population uncomposite and composite are presented in Table 14-8.

Statistics	Length					
	Uncomposited	Composited				
Valid Data	87439	105793				
Total Data	87439	105793				
Minimum	0.05	0.01				
Maximum	9	1				
Mean	1.14	1				
Variance	0.09	0				
Standard Deviation	0.29	0.02				
Coefficient Of Variation	0.26	0.02				

Table 14-8: Summary statistics, global population for uncomposite and composite data..



### Length Histogram

Figure 14-5: Uncomposited Sample Data - Samples length.

# Length Histogram

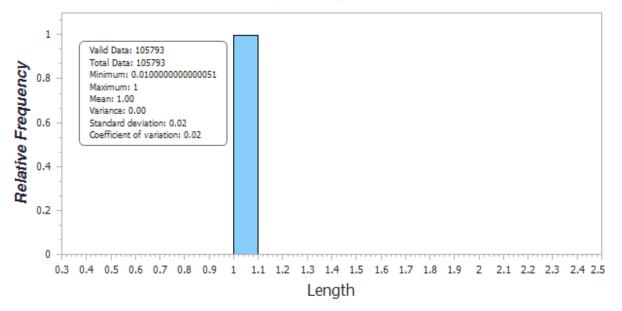


Figure 14-6: 2 m Composite Data - Sample intervals

Summary statistics for raw data weighted by length (uncomposited or raw) and composited sample intervals by estimation domains are presented in Table 14-9 and Table 14-10.

Au Domain	Number	of samples	Mean grade		Std Dev		Coeff Variation		
	Raw	Compos	Raw	Compos	Diff	Raw	Compos	Raw	Compos
211	711	871	0.14	0.11	-0.02	1.58	1.43	11.67	12.55
212	26799	29402	0.08	0.08	0.00	0.47	0.45	5.67	5.65
222	5919	6761	0.14	0.14	-0.01	0.49	0.47	3.45	3.45
232	14444	16310	0.62	0.57	-0.04	1.81	1.57	2.94	2.73
311	1759	1855	0.18	0.18	-0.01	0.73	0.71	3.99	3.99
312	3705	3798	0.36	0.37	0.01	0.92	0.92	2.55	2.50
321	1221	1281	0.45	0.46	0.01	3.50	3.43	7.80	7.48
322	1510	1641	0.64	0.64	0.00	1.70	1.65	2.66	2.59
332	1049	1025	0.79	0.82	0.03	1.59	1.64	2.01	2.00
411	6270	7214	0.22	0.21	-0.02	1.32	1.25	5.91	6.09
412	6402	6463	0.31	0.30	-0.01	1.53	1.38	4.99	4.60
421	631	660	0.37	0.33	-0.03	1.56	1.46	4.26	4.39
422	914	949	0.26	0.26	0.01	0.70	0.71	2.72	2.67
432	890	937	1.20	1.21	0.01	2.59	2.53	2.15	2.10

Table	14-9: Summarv	statistics for	each aold	domain of	<sup>:</sup> composite - Au g/t
	_ · · · · · · · · · · · · · · · · · · ·	000000000000000	each goia		00111000100 110 9/0



Ag Domain	Number of samples			Mean grade			d Dev	Coeff Variation	
Domain	Raw	Compos	Raw	Compos	Diff	Raw	Compos	Raw	Compos
211	650	826	6.98	6.32	-0.66	25.28	24.52	3.62	3.88
212	28013	32592	15.85	14.97	-0.88	139.95	130.62	8.83	8.72
222	6259	7393	22.06	21.66	-0.40	88.38	82.07	4.01	3.79
232	15561	18058	86.20	83.66	-2.54	338.15	306.48	3.92	3.66
311	1866	2054	5.51	5.26	-0.25	14.87	14.20	2.70	2.70
312	3921	4181	10.97	11.05	0.08	18.35	18.25	1.67	1.65
321	1551	1809	7.37	7.07	-0.30	13.29	12.67	1.80	1.79
322	1735	1926	14.90	14.99	0.09	19.98	19.98	1.34	1.34
332	1420	1540	18.09	18.19	0.10	44.50	20.05	2.46	1.34
411	6574	7785	6.89	6.24	-0.65	44.97	41.39	6.53	6.64
412	6817	6863	11.64	11.76	0.12	42.78	42.68	3.67	3.63
421	666	761	7.13	6.58	-0.55	17.98	16.85	2.52	2.56
422	979	1047	14.72	14.93	0.21	45.66	44.90	3.10	3.01
432	1383	1522	84.09	81.25	-2.84	148.38	142.62	1.76	1.76

Table 14-10: Summary statistics for each silver domain of composite - Ag g/t

# 14.7 Top Cutting

Top cutting, or capping of outlier grades, was determined for each estimation domain. Several steps have been undertaken to determine the requirement for top cutting and to ascertain the reliability and spatial clustering of the high-grade composites. The top cutting assessment considered the following:

- Review of the composite data to identify data that deviates from the general data distribution. This was completed by examining the cumulative distribution function.
- Comparison of the percentage of metal and data of the Coefficient of Variation ("CV") affected by top cutting.
- Visual 3D review to assess the clustering of the high-grade composite data.
- Based on the assessment, appropriate top cuts were determined for each estimation domain. The application of top cuts resulted in minor reductions in mean gold and silver grades.

Table 14-11 and Table 14-12 summarizes uncut and cut gold and silver statistics of composite for each estimation domain. Examples of top cut analysis have been provided in Figure 14-7 and Figure 14-8.



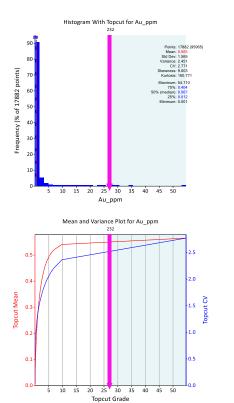
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Au Domain		ber of ples		Mean grad	e	Top-cut value	Std	Std Dev		ariation	Max Un-cut	Top cut %ile
Domain	Un-cut	Top-cut	Un-cut	Top-cut	% Diff	Funde	Un-cut	Top-cut	Un-cut	Top-cut	value	, one
211	836	2	0.11	0.07	-36.4%	5	1.46	0.33	13.43	4.99	41.61	7.2%
212	32317	12	0.07	0.07	0.0%	12	0.41	0.33	5.60	4.61	42.40	1.6%
222	7358	8	0.13	0.13	0.0%	8	0.46	0.45	3.46	3.41	10.36	30.0%
232	17882	5	0.56	0.56	0.0%	27	1.57	1.50	2.77	2.67	54.71	50.0%
311	2008	12	0.18	0.17	-5.6%	12	0.69	0.61	3.92	3.55	15.80	2.1%
312	4074	4	0.38	0.37	-2.6%	13	0.98	0.91	2.59	2.45	21.48	1.0%
321	1725	1	0.44	0.40	-9.1%	60	2.99	1.81	6.84	4.46	116.00	7.4%
322	1914	2	0.71	0.70	-1.4%	21	1.71	1.59	2.42	2.27	31.19	1.2%
332	1426	2	0.79	0.78	-1.3%	15	1.58	1.49	2.01	1.90	23.34	1.1%
411	7788	2	0.21	0.21	0.0%	27	1.26	1.20	6.03	5.81	41.28	1.0%
412	6866	2	0.31	0.30	-3.2%	31	1.37	1.11	4.41	3.68	58.32	2.3%
421	700	1	0.37	0.37	0.0%	25	1.60	1.53	4.30	4.17	27.80	1.1%
422	1035	2	0.26	0.26	0.0%	8	0.69	0.64	2.67	2.51	10.68	1.5%
432	1543	4	1.04	1.03	-1.0%	21	2.44	2.29	2.34	2.23	27.66	1.4%

Table 14-11: Top cut statistics by gold domain – Au g/t composite data.

Table 14-12: Top cut statistics by silver domain – Ag g/t composite data.

Au Domain		ber of ples		Mean grad	e	Top-cut	Top-cut Std Dev value		Coeff V	ariation	Max Un- cut value	Top cut %ile
Domain	Un-cut	Top-cut	Un-cut	Top-cut	% Diff	Value	Un-cut	Top-cut	Un-cut	Top-cut		, une
211	836	1	7.02	6.81	-3.0%	475	31.86	27.89	4.54	4.09	31.86	3.0%
212	32331	3	15.09	14.88	-1.4%	6800	143.90	130.90	9.54	8.80	11305.00	1.4%
222	7358	1	21.81	21.50	-1.4%	2497	93.50	80.81	4.29	3.76	4754.00	1.4%
232	17879	6	81.61	80.47	-1.4%	6100	264.60	262.10	3.61	3.26	11269.00	1.4%
311	2008	2	5.78	5.33	-7.8%	300	26.18	14.33	4.53	2.69	893.00	7.7%
312	4074	2	11.40	11.21	-1.7%	300	22.88	18.30	2.01	1.63	770.00	1.7%
321	1725	2	7.46	7.30	-2.1%	200	15.80	12.92	2.12	1.77	345.30	2.1%
322	1914	2	15.24	15.09	-1.0%	200	22.16	20.33	1.45	1.35	348.00	1.0%
332	1426	1	18.36	17.98	-2.1%	1125	54.41	44.00	2.96	2.45	1656.00	2.0%
411	7782	2	6.39	6.26	-2.0%	1800	47.82	41.41	7.48	6.61	2700.00	2.0%
412	6865	2	12.31	12.12	-1.5%	1250	50.67	44.33	4.11	3.66	1968.00	1.6%
421	700	1	6.86	6.75	-1.6%	240	18.93	17.37	2.76	2.57	312.80	1.5%
422	1035	2	15.41	15.17	-1.6%	650	48.87	45.40	3.17	2.99	780.30	1.5%
432	1539	2	82.52	81.27	-1.5%	1529	160.60	142.20	1.95	1.75	3245.00	1.5%



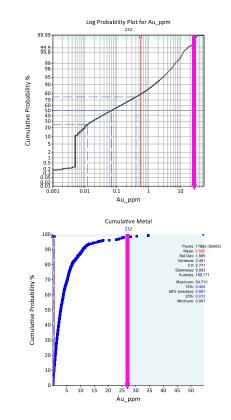


Figure 14-7: Example of the top cut analysis – Gold domain 232

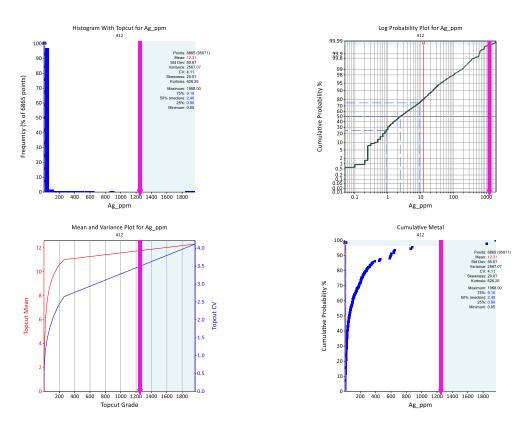


Figure 14-8: Example of the top cut analysis – Silver domain 412



## 14.8 Bulk Density Determination

A new dry bulk density model has been built based on a new set of 6027 samples taken over de drilling performed in 2019 – 2022 drilling campaigns, measured at site by AbraSilver geologist, performed by the unwrapped core method.

A discussion was conducted in the previous PEA, in which a comparison of Unwrapped Core method versus Waxed Core method concluding the next:

Comparisons between methods Waxed Core and Unwrapped Core of ALS results have shown that each method has similar results with a difference of 1%. Demonstrating that Unwrapped Core method is an acceptable method for determining in-situ bulk density.

The model is based on measurements from 6027 core samples applying Unwrapped Core method (performed by AbraSilver) to determine the in-situ bulk density, the samples were selected every 5 meters from the database for 2019 to 2021 drilling campaign and during logging for 2021 to 2022 drilling campaign.

This Unwrapped Core method is outlined below:

- 1. Dry sample is weighed in air (Mdry).
- 2. Dry sample is weighed immediately upon submersion in water (Mini).
- 3. The sample is left submerged and weighed again sometime later (Msat in water).
- 4. The sample is removed from the water and immediately weighed (Msat).

The in-situ bulk density is determined from the following formulae:

Mass of contained water (Mwater)	=	Msat - Mdry
Volume of contained water (Vwater)	=	Mwater / Density of water ( $\rho_W$ )
Volume of sample (Vsamp)	= /ρw)	Vwater + ((Mdry – Msat in water) Bulk Density = Mdry / Vsamp

Mr. Peralta ("QP") considers that the samples set selected are appropriate to determine the in-situ bulk density of the Oculto deposit. Bulk density was assigned to the block model as averages of the estimation domains subset (Table 14-13).



Table 14-13: In-situ bulk density applied.	Table 14-13:	In-situ	bulk	density	applied.
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Statistics / Code	211	212	221	222	231	232
Valid Data	67	1671	19	643	4	2094
Total Data	67	1671	19	643	4	2094
Minimum	1.57	1.50	2.16	1.63	2.25	1.60
Maximum	2.74	3.04	2.82	2.74	2.79	3.39
Variance	0.07	0.05	0.02	0.04	0.04	0.03
Standard Deviation	0.27	0.22	0.15	0.19	0.20	0.17
Coefficient Of Variation	0.12	0.10	0.07	0.08	0.08	0.07
Range	1.17	1.54	0.66	1.11	0.54	1.79
Mean	2.22	2.19	2.35	2.30	2.57	2.30
Code	311	312	321	322	331	332
Valid Data	86	147	214	98	8	233
Total Data	86	147	214	98	8	233
Minimum	2.36	1.98	2.23	1.89	2.36	1.46
Maximum	3.27	2.74	3.43	3.19	2.74	2.70
Variance	0.03	0.02	0.04	0.03	0.01	0.02
Standard Deviation	0.17	0.15	0.19	0.18	0.11	0.14
Coefficient Of Variation	0.06	0.06	0.07	0.07	0.04	0.06
Range	0.91	0.76	1.20	1.30	0.38	1.24
Mean	2.66	2.42	2.70	2.53	2.60	2.41
Code	311	312	321	322	331	332
Valid Data	380	99	37	85	15	127
Total Data	380	99	37	85	15	127
Minimum	1.76	1.80	2.42	1.94	2.04	1.84
Maximum	2.84	2.68	2.85	2.80	2.82	2.64
Variance	0.03	0.02	0.01	0.02	0.05	0.02
Standard Deviation	0.16	0.13	0.09	0.15	0.23	0.14
Coefficient Of Variation	0.06	0.06	0.03	0.06	0.09	0.06
Range	1.08	0.88	0.43	0.86	0.78	0.80
Mean	2.51	2.41	2.64	2.49	2.47	2.30

# 14.9 Variography

Traditional Variogram or Correlogram Variogram were chosen to model the- gold and silver grade continuity as they were found to give better structures. The correlogram variogram considers both the distance between sample pairs and the local means of the head and tail values. Meaning for each set of data pairs, it grabs all the head values and calculates their mean and grabs all the tail values and calculates their mean. Correlograms were used when traditional variogram were found noise.

The Snowden Supervisor and MS Sigma software were employed to generate variograms maps and traditional or correlogram variograms with a 2 or 3 structured spherical model and nugget effect; to recreate the spatial continuity and knowledge of the geology of the deposit. The nugget effect and sill contributions were derived from down-hole experimental variograms followed by final model fitting on directional variogram plots.

The traditional variogram or correlogram for the gold and silver variable were modelled for each estimation domains.



Table 14-14 and Table 14-15 show the variograms modelled. An example of variogram maps are shown in Figure 14-9 and Figure 14-10. An example of the variogram models (gold domain 232 and silver domain 232) with their respective 3D view are presented from Figure 14-11 to Figure 14-14.

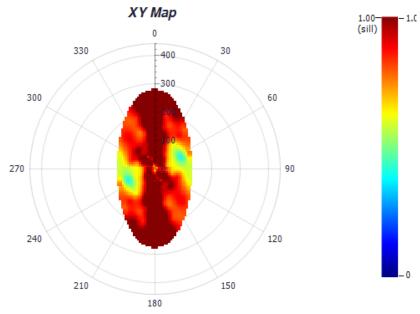
Gold domains	Y (Az)	X (Az)	Z (Az)	Dip Y	Dip X	Dip Z	A1	A2	A3
211	151.10	106.80	51.70	-24.30	57.70	-19.80	151.12	-24.31	111.87
212	214.00	125.00	101.00	-6.00	13.00	-76.00	-145.40	-5.68	166.90
222	232.80	146.20	90.60	-15.90	11.50	-70.10	-127.12	-15.95	168.00
232	220.00	133.20	93.80	-11.70	15.10	-70.70	-139.99	-11.68	164.55
311	193.30	103.30	-63.40	-0.20	-0.70	-89.30	-166.74	-0.16	-179.33
312	187.70	98.50	58.10	-6.10	7.30	-80.50	-172.27	-6.08	172.71
321	203.30	113.30	-89.30	0.20	-0.50	-89.40	-156.67	0.22	-179.48
322	207.30	118.50	75.60	-7.80	8.50	-78.40	-152.65	-7.75	171.40
332	-16.10	265.80	-0.20	59.30	-7.00	-29.70	-16.05	59.30	-166.26
411	196.80	107.40	-80.00	1.90	-15.70	-74.10	-163.17	1.93	-164.24
412	179.30	91.90	81.70	-4.50	30.50	-59.10	179.26	-4.49	149.42
421	119.30	103.40	200.80	46.50	-42.40	-8.00	119.33	46.52	-101.69
422	58.10	240.90	148.70	-26.10	-63.90	-1.10	58.13	-26.11	-91.20
432	216.60	127.10	113.80	-2.40	10.50	-79.30	-143.37	-2.41	169.52

#### Table 14-14: Variogram models used for gold domains – Summary.

Table 14-15: Variogram models used for silver domains – Summary.

Silver domains	Y (Az)	X (Az)	Z (Az)	Dip Y	Dip X	Dip Z	A1	A2	A3
211	262.50	172.60	155.20	-1.50	4.70	-85.00	-97.51	-1.47	175.27
212	214.90	126.20	101.70	-5.70	13.00	-75.80	-145.09	-5.70	166.94
222	232.30	145.70	90.40	-16.10	11.80	-69.80	-127.74	-16.11	167.69
232	220.00	133.20	93.80	-11.70	15.10	-70.70	-139.99	-11.00	164.55
311	193.30	103.30	-63.40	-0.20	-0.70	-89.30	-166.74	-0.16	-179.33
312	187.70	98.50	58.10	-6.10	7.30	-80.50	-172.27	-6.08	172.71
321	203.30	113.30	-89.30	0.20	-0.50	-89.40	-156.67	0.22	-179.48
322	207.30	118.50	75.60	-7.80	8.50	-78.40	-152.65	-7.75	171.40
332	-16.10	265.80	-0.20	59.30	-7.00	-29.70	-16.05	59.30	-166.26
411	196.80	107.40	-80.00	1.90	-15.70	-74.10	-163.17	1.93	-164.24
412	179.30	91.90	81.70	-4.50	30.50	-59.10	179.26	-4.49	149.42
421	119.30	103.40	200.80	46.50	-42.40	-8.00	119.33	46.52	-101.69
422	58.10	240.90	148.70	-26.10	-63.90	-1.10	58.13	-26.11	-91.20
432	216.70	127.10	114.20	-2.40	10.50	-79.30	-143.34	-2.36	169.48





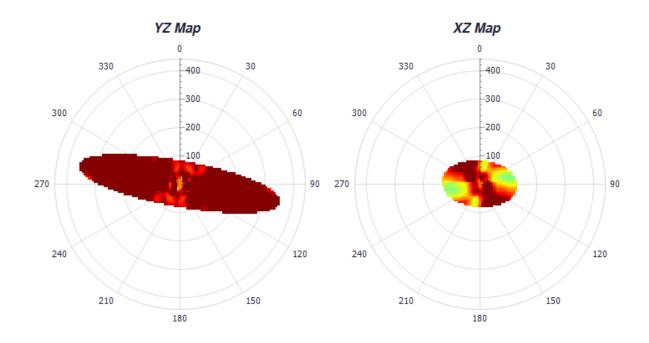
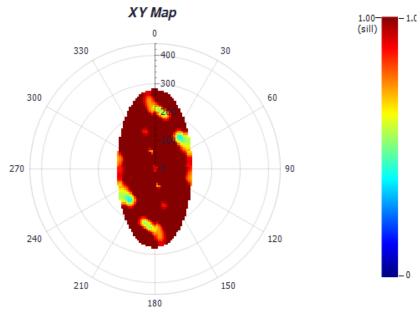


Figure 14-9: Gold domain 232 – Variogram Map.





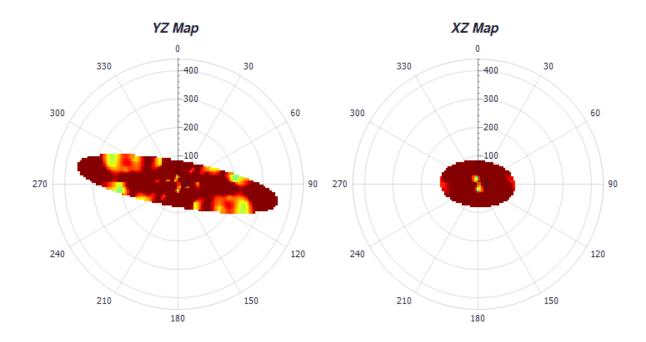
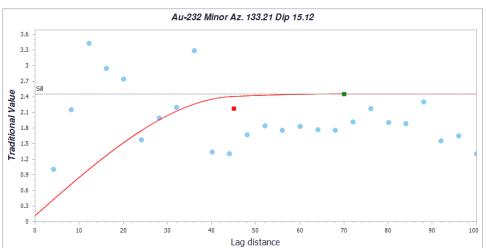


Figure 14-10: Silver 232 –Variogram Map.



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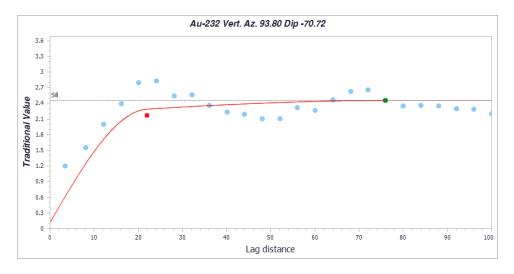
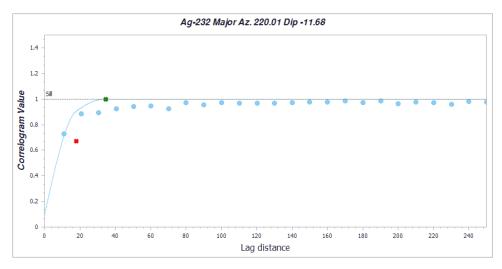
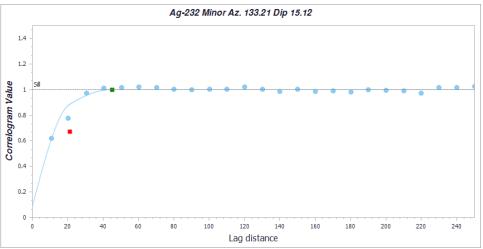


Figure 14-11: Gold domain 232 – Traditional Variogram Model for Gold



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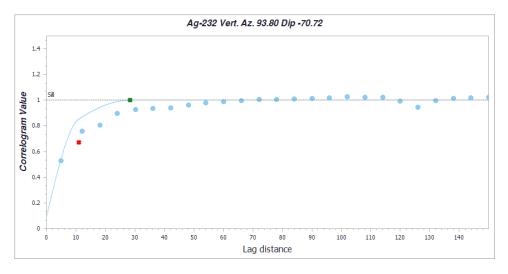


Figure 14-12: Silver domain 232 – Correlogram Variogram Model for silver



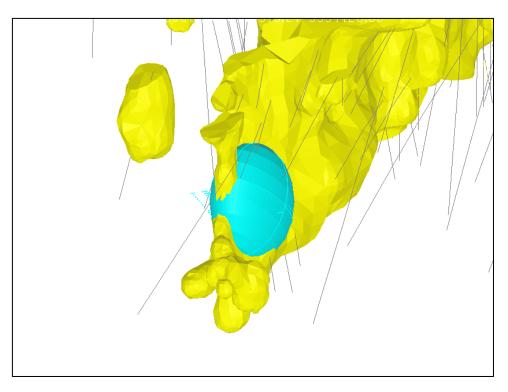


Figure 14-13: Gold domain 232 – 3D view of Traditional Variogram Model for gold.

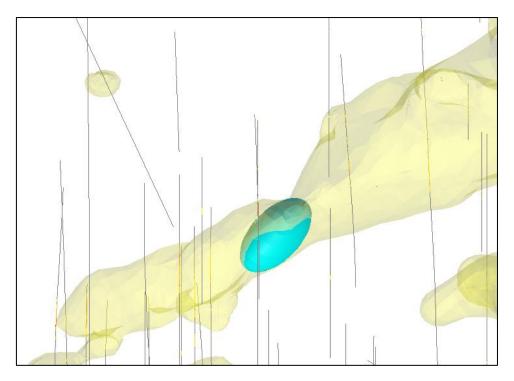


Figure 14-14: Silver domain 232 – 3D view of Correlogram Variogram Model for sivler.



## 14.10 Block Model

A three-dimensional block model was constructed for the project, covering all the interpreted mineralisation zones. This includes waste material to aid any future optimisation studies.

## **14.11** Model Construction and Parameters

MS MinePlan commercial mining software package was used, the selected block size was based on the geometry of interpreted domains, data configuration and expected mining method. A parent cell size of 10 mE x 10 mN x 5 mRL was selected with no sub-blocking. Sufficient variables were included in the block model <u>(DB-22.dat)</u> construction to enable grade estimation. No block rotation was used.

This block model is considered a mine planning version, and it was used for reporting estimated resources. The topographic surface was used to constrain the upper extent of the block model. The block model construction parameters are displayed in Table 14-16:

	х	Y	Z
Block Model Origin	718960	7198840	3900
Block Model Maximum	721310	7200410	4600
Total extent (m)	2350	1570	700
Block Size	10	10	10
Number of blocks	235	157	70

Table	14-16:	Block	model	parameters
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# **14.12** Grade Estimation

Grade estimation was performed using the Ordinary Kriging ("OK") function provided with MS MinePlan.

The block model was coded from the solids with the number of codes assigned to each estimation domains as mentioned. The average distance to composites, Kriging Variance and Estimation Pass were store in the block model for a later used in the determination of the resource classification.

### **14.13 Estimation Methods**

The sample search strategy was based upon analysis of the variogram model anisotropy, mineralisation geometry and data distribution.

The first pass range was calculated based on the ratios 2.5 : 2 : 1, of average range of sill 0.7 (close to 28m in the strike). That was obtained as the average of the major range in all



domain models of the combined mineralized domain. Mr. Peralta ("QP") considers that 30 m is a common range in precious metals in this type of deposit.

The search strategy used in the block model is described in Table 14-17 and Table 14-18, additionally the following is noted:

- For all estimated domains, no octant search was applied.
- For all estimated domains, no coordinate transformation was applied.
- A minimum of 1 composite per block was used.
- A maximum of 4 composites per drill hole were used.
- A high-grade restriction in the second and third pass was applied, restricting the number of composites to be used per block to 14 composites.
- In the case of the cover domain (10), some economic grades were presented that are part of the mineralized structure. However, that was interpreted as loose material without transport, so no estimation was performed for this domain.

					First Pass		Second Pass		Third Pass				
Gold domains	Rotation 1st	Rotation 2nd	Rotation 3rd	Nugget Effect	Major Range	Minor Range	Vertical range	Major Range	Minor Range	Vertical range	Major Range	Minor Range	Vertical range
211	151.10	106.80	51.70	0.07	28	16	27	56	32	54	70	40	68
212	214.00	125.00	101.00	0.09	25	80	20	50	160	40	63	200	50
222	232.80	146.20	90.60	0.08	16	22	22	32	44	44	40	55	55
232	220.00	133.20	93.80	0.13	35	45	22	70	90	44	88	113	55
311	193.30	103.30	-63.40	1.13	30	30	16	60	60	32	75	75	40
312	187.70	98.50	58.10	2.13	44	50	12	88	100	24	110	125	30
321	203.30	113.30	-89.30	3.13	24	36	7	48	72	14	60	90	18
322	207.30	118.50	75.60	4.13	60	30	20	120	60	40	150	75	50
332	-16.10	265.80	-0.20	5.13	28	11	7	56	22	14	70	28	18
411	196.80	107.40	-80.00	6.13	12	17	11	24	34	22	30	43	28
412	179.30	91.90	81.70	7.13	10	16	5	20	32	10	25	40	13
421	119.30	103.40	200.80	8.13	60	20	26	120	40	52	150	50	65
422	58.10	240.90	148.70	9.13	12	18	25	24	36	50	30	45	63
432	216.60	127.10	113.80	10.13	20	25	11	40	50	22	50	63	28

Table 14-17: Gold domains search parameters.



**First Pass** Second Pass **Third Pass** Rotation Rotation Rotation Silver Nugget Minor Vertical Major Minor Vertical Minor Vertical Major Maior domains 1st 2nd 3rd Effect Range Range range Range Range range Range Range range 211 262.50 172.60 155.20 0.10 20 6 40 100 50 40 80 11 14 212 214.90 126.20 101.70 0.00 30 7 20 60 14 40 75 18 50 222 232.30 145.70 90.40 0.17 18 14 40 36 28 80 45 35 100 232 220.00 133.20 93.80 0.13 53 28 18 21 11 36 42 22 45 311 193.30 103.30 -63.40 0.00 11 35 9 22 70 18 28 88 23 312 187.70 98.50 58.10 0.17 33 42 8 66 84 16 83 105 20 203.30 113.30 -89.30 0.09 8 321 11 24 22 48 16 28 60 20 322 207.30 118.50 75.60 0.08 41 50 12 82 100 24 103 125 30 332 -16.10 265.80 -0.20 0.00 8 8 10 16 16 20 20 20 25 411 196.80 107.40 -80.00 0.16 12 27 14 24 54 28 30 68 35 412 179.30 91.90 81.70 0.00 19 24 4 38 48 8 48 60 10 421 119.30 103.40 200.80 0.17 39 32 130 78 64 163 98 80 65 422 58.10 240.90 148.70 0.15 114 32 48 228 64 96 285 80 120 432 216.70 127.10 114.20 0.15 62 40 20 124 80 40 155 100 50

Table 14-18: Silver domains search parameters.

#### 14.14 Metal Risk Review

No metal risk analysis was performed to evaluate the impact of metal loss due to the capping of extreme gold and silver grades as the capping average for all estimation domain was performed simultaneously with the capping analysis. Even though, the percentage of metal loss calculated over the composite represent no more than 2 %.

### 14.15 Parent Cell size sensitivity

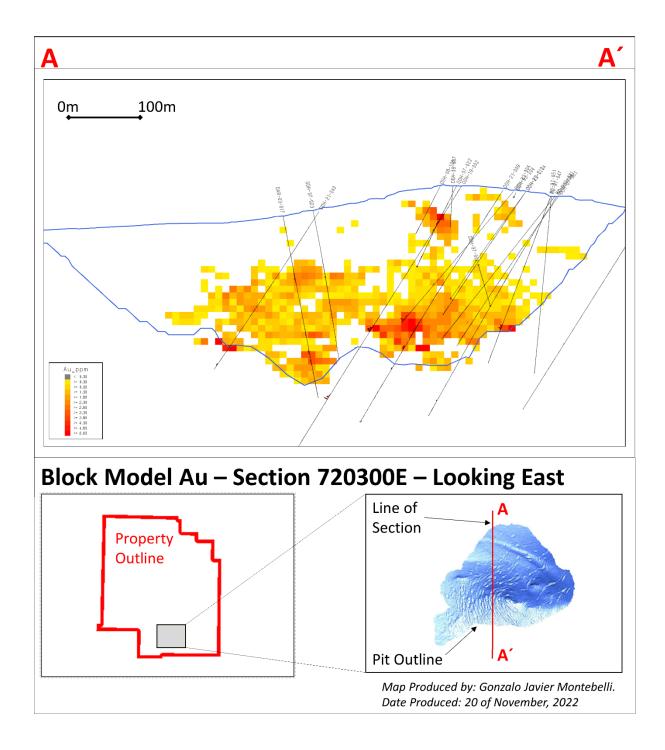
No parent cell size sensitivity was performed at this time, as it was done in the previous NI 43.101 (MP PEA 2022). The author considers that the conclusion of that analysis is correct, and it is important to mention that the dilution impact of a 10 mE x 10 mN x 10 mRL block model for resource optimization and reporting is acceptable for an open pit and is similar with other projects with similar characteristics.

### 14.16 Model Validation

### **Visual Inspection**

Block grades were compared visually to supporting drill data on section and plan maps observing a good fit with the composites; an example section of block grades and composite is included in the Figure 14-15 and Figure 14-16 only for blocks and composite within the resource pit.





*Figure 14-15: Section 720300- E with Block model 10 mE x 10 mN x 10 mRL and composite for gold.* 



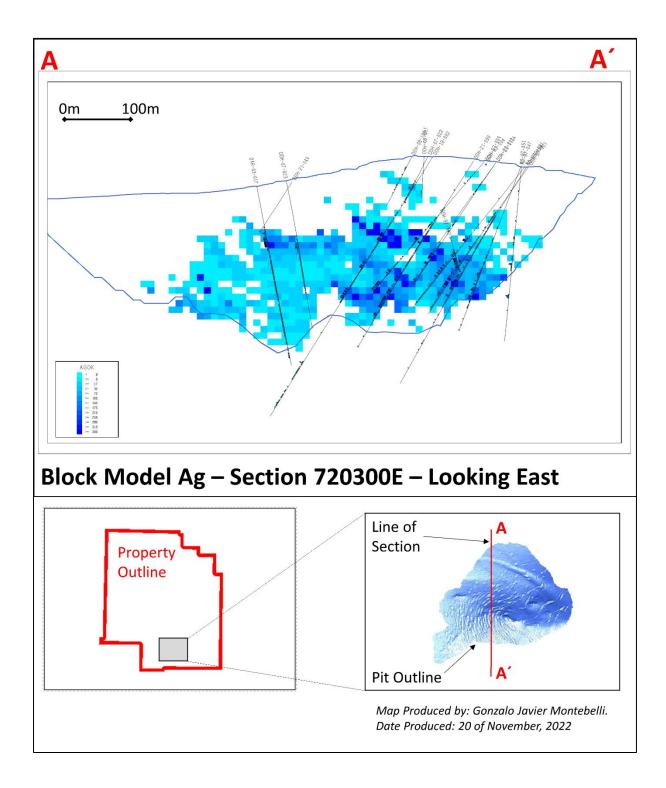


Figure 14-16: Section 720300- E with Block model 10 mE x 10 mN x 10 mRL and composite for silver.



## **Trend plots validation**

Validation trend plots or swath plots are presented to graphically display comparison of the mean grade of the estimated grades in the block model against the results. The models were divided into slices by directions (Easting, Northing and RL) and average grades were calculated for the various domains. Comparisons were made of the combined mineralised domains.

Figure 14-17 show that the grade by OK estimation is appropriately smooth as compared to the naive composite data.

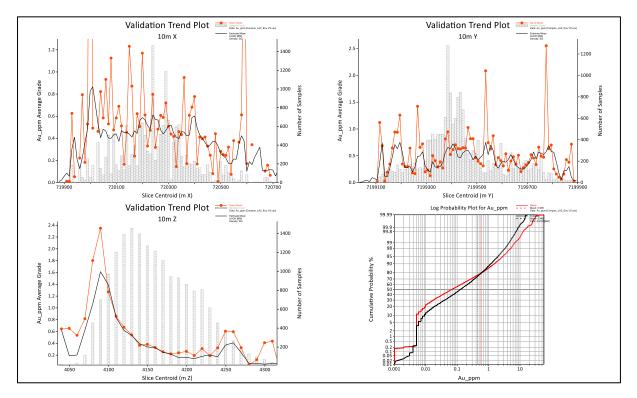


Figure 14-17: Swath Plots comparing naïve data versus estimated data. Estimates for gold in the mineralized domain 212.

## 14.17 Mineral Resource Classification and Criteria

The Mineral Resource has been categorised as a combination of Measured, Indicated and Inferred Resources that reflect less uncertainty about geological evidence, hole spacing, and data quality. Mineral Resources were classified considering the following information:

- Confidence of the geological information that was used in the Estimation.
- QA / QC results, holes with deviation measurements, historical and recent holes.
- Hole spacing.
- Estimate search passes.



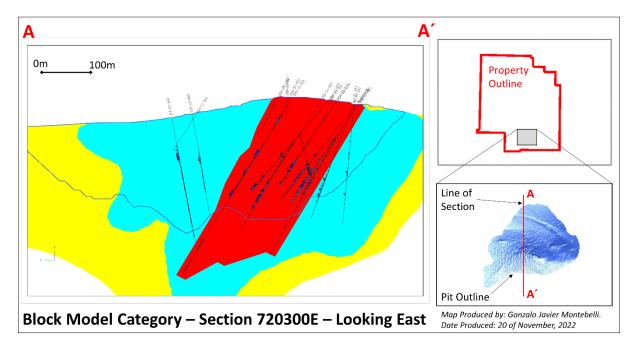
• Wireframe to restrict the estimation passes.

After visual inspection of these models, a set of solid were built in order to code the block model followed by a smoothing step to make the search pass more contiguous blocks, the resources were classified as:

- Measured: a surrounding halo of 30m over the Abrasilver holes and relog holes that contain more than 3 downhole station measurement; these blocks are well recognized by recent drilling by AbraSilver. A good proportion of historical holes have deviation measurement.
- Indicated: a surrounding halo of 70m over AbraSilver holes and relog holes that contain more than 3 downhole station measurement; these blocks are also well recognized by recent drilling by AbraSilver, but the drilling spacing normally is more than 30m.
- Inferred: a surrounding halo of 120m over the Abrasilver holes. Some mineralized areas are well recognized by Abrasilver, but the drilling spacing normally is more than 70m.
- Blocks estimated with isolated holes, well-spaced holes at depth, as well as blocks estimated beyond the end of the hole were classified as geological exploration potential (outside of wireframes) and are not included in the reported Mineral Resources.

Figure 14-18 shows the wireframe used to restrict the classification of resources in vertical cross section and Figure 14-19 shows an overall 3D view of the wireframe used in the classification.





*Figure 14-18: Vertical cross section 720300- E showing the wireframe used to categorize the block model.* 

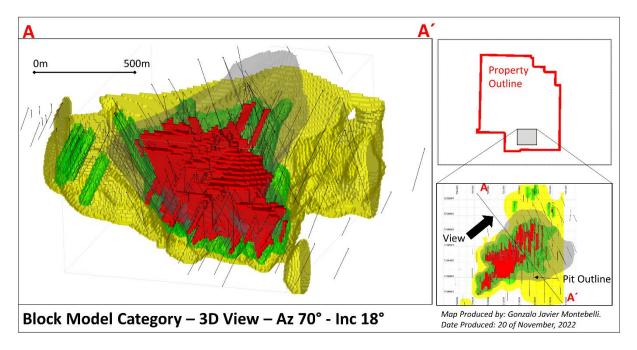


Figure 14-19: 3D view showing the wireframe used to categorize the block model.



### 14.18 Mineral Resource Statement

The Mineral Resource Estimate ("MRE") for the Diablillos Project, with an effective date of 31<sup>st</sup> October 2022, has been estimated and classified based on the CIM's Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines (CIM, 2019) and is reported in accordance with the Canadian Securities Administrators' National Instrument 43-101 ("NI 43-101").

Mineral Resources at the Diablillos Project are considered as potentially mineable by an open pit method. They are estimated based on drilling conducted prior to AbraSilver and more recent drilling by the Company between 2019 and 2022. The Mineral Resource includes an updated Resource for the Oculto deposit. The Mineral Resource is reported inside a Whittle pit shell with a reasonable cut-off grade of 35 g/t silver equivalent, based on a gold price of US\$1750/oz and silver price of US\$25/oz. Mining costs and metallurgical recovery have been taken from previous studies.

The Qualified Person ("QP") for the MRE according to the definition of NI 43-101 is Mr. Luis Rodrigo Peralta, B.Sc., FAusIMM CP (Geo), Independent Qualified Person under NI 43-101.

The following is a summary of the estimation process:

- Grades for diamond and reverse circulation drill holes (457 drill hole) were composited to 1 m.
- The estimation domains were defined using a combination of alteration and lithology domains, defining a subset domain for Gold and Silver.
- Grade capping has been applied to composited grade intervals on a case-by-case basis within each estimation domain.
- The traditional or correlogram variograms for the gold and silver variable were modelled for those estimation domains with sufficient data to be modelled.

The mineral resource was estimated with Ordinary Kriging ("OK") and bias was reviewed using an Inverse Distance squared estimate (ID2) for comparisons.

The estimation was completed using block model in MS MinePlan mining software

- The grade was estimated into parent cells with dimensions of 10 mE x 10 mN x 10 mRL.
- The bulk density applied to the block model is based on 6027 drill core samples. The average of the samples contained in each domain, have been assigned to each wireframes model and finally assigned to the block model.



• The final block model is 10 mE x 10 mN x 10 mRL for resource optimization and reporting.

The MRE comprises a Measured, Indicated and Inferred Mineral Resource as summarised in Table 14-19. The block model "DB-22.dat" was used to report with constraints fields: "ORE = 1", "P22OX = 1", and "CLASS = 1, 2 and 3" with the proportion of the model below the topographical surface.

Zone	Category	Tonnage (000 t)	SG t/m³	Ag (g/t)	Au (g/t)	Contained Ag (000 oz Ag)	Contained Au (000 oz Au)
	Measured	18092	2.30	101	0.85	58655	495.8
Ovidee	Indicated	30226	2.33	49	0.71	47502	688.1
Oxides	Measured & Indicated	48318	2.32	68	0.76	106156	1183.9
	Inferred	2090	2.36	31	0.50	2085	33.3
	Measured	1244	2.53	50	1.21	1979	48.5
Tuo uo iti o u	Indicated	1752	2.61	22	1.13	1235	63.8
Transition	Measured & Indicated	2996	2.58	33	1.17	3214	112.7
	Inferred	127	2.60	7	0.80	29	3.3
	Measured	19336	2.31	98	0.88	60634	544.4
Oxides +	Indicated	31978	2.34	47	0.73	48737	751.9
Transition	Measured & Indicated	51314	2.33	66	0.79	109370	1296.6
	Inferred	2216	2.38	30	0.51	2114	36.5

 Table 14-19: Mineral Resource Estimate for the Diablillos Deposit by mineral zone and classification - As of October 31th,

 2022.

Notes for Mineral Resource Estimate:

- 1. Mineral Resources are not Mineral Reserves and have not demonstrated economic viability.
- The Mineral Resource is reported inside a conceptual Whittle open pit shell derived using US \$25.00/oz Ag price, US \$1750/oz Au price, 73.5% process recovery for Ag, and 86% process recovery for Au. The constraining open pit optimization parameters used were \$3.00/t mining cost, \$24.45/t processing cost, \$2.90/t G&A cost, and average 54-degree open pit slopes.
- 3. The formula for calculating AgEq is as follows: Silver Eq Oz = Silver Oz + Gold Oz x (Gold Price/Silver Price) x (Gold Recovery/Silver Recovery).
- 4. The MRE has been categorized in accordance with the CIM Definition Standards (CIM, 2014).
- 5. All figures are rounded to reflect the relative accuracy of the estimates. Minor discrepancies may occur due to rounding to appropriate significant figures.
- 6. The Mineral Resource was estimated by Mr. Peralta, B.Sc., FAusIMM CP(Geo), Independent Qualified Person under NI 43-101.
- 7. The Mineral Resource is sub-horizontal with sub-vertical feeders and a reasonable prospect for eventual economic extraction by open pit methods.
- 8. A cut-off grade of 35 gt AgEq was used for the Mineral Resource.
- 9. The Mineral Resource models used Ordinary Kriging grade estimation within a three-dimensional block model and mineralized zones defined by wireframed solids, which are a combination of lithology and alteration domains. Constrained by a Whittle open pit shell. The 1m composite grades were capped where appropriate.
- 10. All tonnages reported are dry metric tonnes and ounces of contained gold are troy ounces.
- 11. In-situ bulk density were assigned to each model domain, according samples averages of each lithology domain, separated by alteration zones and subset by oxidation, as detailed in section 14.
- 12. Mining recovery and dilution factors have not been applied to the Mineral Resource estimates.
- 13. Mr. Peralta is not aware of any environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues that could materially affect the potential development of the Mineral Resource.
- 14. Totals may not agree due to rounding.



## 14.19 Reasonable prospects for eventual economic extraction requirement

An open pit optimization was conducted using the MS MinePlan Pit Optimizer module software to determine the extent of the Mineral Resource with "reasonable prospects for eventual economic extraction" by open pit mining methods to satisfy the requirement in accordance with NI 43-101 and the Mineral Resource and Mineral Reserves Best Practices Guidelines (CIM, 2019).

The oxide and transition material has reasonable prospects of economic extraction at a cutoff grade of 35 g/t equivalent silver, this cut-off grade was estimated using the metal price and optimisation parameters descriptive in Table 14-20.

OP Optimisation Parameters	Unit	Value (9,000 tpd)
Overall Pit Slope Angle - Oculto	Degrees	55
Waste Mining cost	\$ per tonne	3.00
Ore Mining cost	\$ per tonne	3.60
Incremental Mining cost	\$/10m above 4280m	0.03
Incremental Mining cost	\$/10m below 4280m	0.02
Processing cost	\$ per tonne	11.74
Energy cost	\$ per tonne	11.42
G&A cost	\$ per tonne	3.00
Mining Recovery	%	100
Mining Dilution	%	0
Gold metal price	\$/oz	1750
Silver metal price	\$/oz	50
Cut-off grade	Ageq	35
Sustainable Capital	\$ per tonne	1.00
Transport cost	\$ per tonne	0.25
Metallurgical Recovery for Gold	%	80
Metallurgical Recovery for Silver	%	75
Royalties	%	3
Block size		10 x 10 x10

Table 14-20:	Optimization	Parameters
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Metallurgical recoveries used in the Whittle analysis have been assumed as constant, assuming an 80% recovery for gold and 75% for silver. At the moment of writing this report, AbraSilver is conducting a detailed analysis over the metallurgy in order to have enough confidence in the estimation domains. Mr. Peralta agrees that for this stage of study, the confidence, and the level of information of metallurgical testing is enough; however, with the new information a detailed geo-metallurgical model could be develop.



14.20 Mineral Resource Estimate Sensitivity

Mr. Peralta ("QP") also evaluated the pit constrained Measured & Indicated Mineral Resource Estimate for Oculto at a range of cut-off grades between 10 g/t AgEq and 70 g/t AgEq, as per the Table 14-21 and Figure 14-20 and Figure 14-21.

Cutoff (Ageq)	Tonnage (000 t)	Au (g/t)	Ag (g/t)	Silver equivalent grade (g/t)
10	105215	0.44	38.4	69
20	75228	0.58	50.3	91
30	57492	0.72	61.2	112
35	51314	0.79	66.3	121
40	46206	0.85	71.3	131
50	38212	0.96	81.2	149
60	32254	1.07	90.9	166
70	27480	1.18	101.1	183

Table 14-21: Cut-Off Grade Sensitivity of Measured & Indicated Mineral Resources

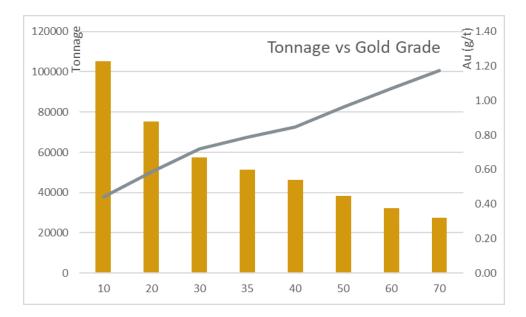


Figure 14-20: Cut-off sensitivity analysis for Measured & Indicated category, gold grade.



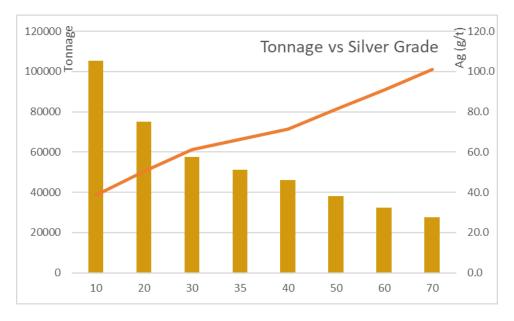


Figure 14-21: Cut-off sensitivity analysis for Measured & Indicated category, silver grade.

## 14.21 Comparison between previous Oculto Estimate

The current Oculto MRE is not directly comparable to the previous mineral resource estimate by MP (2021) due to:

- New holes in the NE pit zone intercepted new resources. This suggests that the control in this area is more stratigraphic (gold and silver). Additionally, the new holes in the shallow area (mainly for gold) in the cross direction suggests a vertical control. That yields a better definition of the mineral in this area when compared to the previous estimate.
- Likewise, these new drillholes corroborated with previously estimated mineralization that allowed classification of measured resources.
- A difference in search ellipse used for the estimate. MP used grade shell generated mathematically, that suggested a non-vertical or flat control in some areas. The current new geological model tents to group similar characteristics of lithology and alteration giving high confidence in the continuity of mineralization, particularly in the breccias bodies as Main, north and West Breccia.

Nevertheless, Mr. Peralta ("QP") compared both resources using the 2021 Pit shell as a constant volume for both models and with a cut-off grade of 35 g/t AgEq70. The result of this comparison is detailed in Table 14-22, Table 14-23 and Table 14-24.

Current Mineral Resources at Oculto under the same pit shell of 2021 and the cut-off grade have increased the tonnage (+11%) and metal content in gold (+17%) and silver (+18%) with an increase in silver grade and gold grade.



In Mr. Peralta's opinion, the cause for the change has been the new drilling that has determined new resources with economic grades (low to moderate grades) of silver in the NE zone of the pit shell resource combined with the other factors previously explained.

Zone	Category	Tonnage (000 t)	Ag (g/t)	Au (g/t)	Contained Ag (000 oz Ag)	Contained Au (000 oz Au)
Total	Measured	8235	124	0.98	32701	259
	Indicated	32958	54	0.70	57464	744
	Measured & Indicated	41193	68	0.76	90165	1002
	Inferred	2884	34	0.70	3181	66

#### Table 14-22: Previous resources estimate in 2021 by MP at cut-off 35 g/t AgEq70.

Table 14-23: Current resources estimate inside MP2021 pit shell at cut-off 35 g/t AgEq70

Zone	Category	Tonnage (000 t)	Ag (g/t)	Au (g/t)	Contained Ag (000 oz Ag)	Contained Au (000 oz Au)
	Measured	18518	101	0.88	59921	526
Total	Indicated	27372	53	0.74	46572	651
	Measured & Indicated	45890	72	0.80	106493	1177
	Inferred	884	37	0.57	1039	16

Table 14-24: Difference between Previous resources estimate 2021 and Current resources estimate inside MP pit shell atcut-off 35 g/t AgEq70

Zone	Category	Tonnage (000 t)	Ag (g/t)	Au (g/t)	Contained Ag (000 oz Ag)	Contained Au (000 oz Au)
	Measured	125%	-19%	-10%	83%	103%
Total	Indicated	-17%	-2%	6%	-19%	-12%
Total	Measured & Indicated	11%	6%	5%	18%	17%
	Inferred	-69%	8%	-19%	-67%	-75%

### 14.22 Mineral Resource Risk Assessment

Mr. Peralta ("QP") has not detected any significant risks that could impact the resources in a material way. However, the following minor risks are mentioned:

• Historical drilling does not have a log consistent with current drilling, and that generates imprecision in geological models in areas with little or no recent drilling.



- The lithology and alteration models may undergo new adjustments due to the vertical and horizontal controls that exist in the deposit and that it has not been possible to be fully modelled due to its complexity.
- The presence of copper in the transition zone needs to be reviewed in greater detail to understand its impact on metallurgical recoveries.
- Other elements such as arsenic, bismuth, and antimony, are present in the deposit and their impact should be reviewed in future metallurgical studies. There is no relationship between these elements with gold and silver, suggesting that the mineralogy of these elements is not related.
- The price of metals and variations in production costs are considered a risk inherent in any mining project due to their nature.



## **15 MINERAL RESERVE ESTIMATES**

There are no Mineral Reserves estimated for the Oculto deposit.



## **16 MINING METHODS**



## **17 RECOVERY METHODS**



## **18 PROJECT INFRASTRUCTURE**



## **19 MARKET STUDIES AND CONTRACTS**



# 20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT



## **21 CAPITAL AND OPERATING COSTS**



## **22 ECONOMIC ANALYSIS**



## **23 ADJACENT PROPERTIES**

The reports and accounts in this section were provided by AbraSilver and have not been independently verified Mr. Peralta. They are intended to provide a summary of metallic and nonmetallic projects within a radius of approximately 50 km of the Diablillos Project. To highlight the importance of this growing exploration and mining district in the Provinces of Salta and Catamarca. As such, the deposits described herein are not indicative of the mineralization at Diablillos.

The Diablillos Project is located within what has become a significant mining and exploration camp in northwestern Argentina and includes both metallic and non-metallic projects. The metallic projects, except for Incahuasi, are predominantly of Miocene age and related to intrusive events which occurred along a regional-scale north-south crustal lineament.

Most of the non-metallic projects typically occur in Quaternary aged salt pans, for which deposition is also controlled by the same north-south lineament.

## **23.1 METALLIC PROJECTS**

### 23.1.1 CONDOR YACU

The Condor Yacu property adjoins Diablillos on the southern boundary and was once part of the original Diablillos claim block. Prior to 1990, the property was explored by various parties including geological studies by a Dr. O Gonzalez from 1971 to1973, metallurgical test work carried out by S. Hochschild S.A. of Copiapo, Chile on behalf of the Banco Nacional de Desarollo ("BND") in 1975, and a magnetic survey and surface sampling by Pecomrio S.A.M. in 1981.

In 1984, the BND and the Mining Directorate of the Catamarca Province mined approximately 350 tons which were systematically sampled and analyzed. The University of Jujuy carried out some gravity-concentration test work in 1985, which was ultimately determined to be unsuccessful. Geological mapping at a scale of 1:1000 was conducted by Kleine-Hering in 1987.

Exploration in 1987 and 1988 is not well documented, however, AbraSilver geologists believe that Ophir drilled 22 RC holes on the property in 1987. During the 1990s, Cavok S.R.L obtained the property and carried out a ground magnetic survey and drilled 15 diamond drill holes in 1999 and 2000. In 2001, Cardero Resource Corp. ("Cardero") signed an agreement with Cavok S.R.L. to earn 100% share of the project. In the same year, an IP survey was carried out over the property and 396.24 m were drilled in five diamond drill holes. A further nine holes totaling 842.17 m were completed in 2002.



In 2003, Maximus Ventures Ltd. ("Maximus") signed an agreement with Cardero to acquire an 80% interest in the project. In the same year, Maximus drilled a total of 1,516.10 m in 17 diamond drill holes. Both Cardero and Maximus withdrew from the project in 2004.

The Condor Yacu prospect is located 2.75 km to the southeast of the Oculto zone and is thought by AbraSilver geologists to be closely associated with the eastern bounding Pedernales graben fault. This zone of mineralization occurs in granitoids of the Oire Formation of the Faja Eruptiva. The main Condor Yacu structure has been divided into two zones termed the Southern Outcrop and the Northern Outcrop.

Most of the exploration has been focused on the Southern Outcrop, which consists of a high sulphidation silicified breccia within the granodiorite host rocks. Near surface, the zone is over 16 m wide, narrowing with depth to less than two meters. It has been intersected in drill holes over a north-south strike of 90 m and to a vertical depth of 140 m. The drilling has intersected grades of up to 28.35 g/t Au, 147 g/t Ag, and 2.67% Cu. The Northern Outcrop is also a silicified, brecciated north-south trending structure. It is about 15 m wide on surface, narrowing to 10 m at a depth of 100 m, and is open-ended along strike. Grades are generally lower than at the Southern Outcrop, with gold generally being less than 2.0 g/t Au.

A third zone is known to exist to the east of the Northern and Southern Outcrop areas. The zone is buried below overburden, and little exploration has been conducted over it. Gold values of up to 0.34 g/t Au have been reported from float at this prospect.

### 23.1.2 RUMI CORI

Rumi Cori property also adjoins Diablillos on the southern boundary. This is an epithermal prospect consisting of several siliceous veins in granite, located two km to the south of Diablillos. Unconfirmed values of gold (0.50 g/t) and copper (0.69%) have been reported. Surficial exploration has been carried out on the prospect to date.

### 23.1.3 INCAHUASI

This project is located 41 km southeast of Diablillos. The mine was originally exploited by Jesuit missionaries and mining continued until 1954 when it ceased operating due to flooding. The deposit comprises gold in mesothermal veins of Ordovician age. The veins occur in marine sedimentary rocks of the same age and consist of meta-pelites and greywackes. The veins of have north-south trending strikes of up to a minimum of 700 m with widths varying between 0.5 m and 2.6 m. Underground development has traced the veins for a minimum down dip extension of 130 m. The mineralization occurs as free gold in quartz veins and veinlets with minor associated pyrite, arsenopyrite, and chalcopyrite. Runof-mine gold grades were reportedly 17.6 g/t Au with local bonanza grades of up to 300 g/t Au. Past production is estimated at 2,000 kg Au.



## 23.1.4 INCA VIEJO

The Inca Viejo project is located 16 km north of Diablillos. The area has been worked since Inca times, but the first systematic exploration work was carried out in 1994 and 1995 by Grupo Minera Aconcagua S.A. This work consisted of lithological, alteration, structural, and mineralization mapping; surface geochemistry; and 11,500 line-meters of Spectral Induced Polarization ("IP") on 11 sections.

Host lithologies consist of basement Palaeozoic rocks characterized by meta-sedimentary rocks of Ordovician age intruded by Silurian granite, granodiorite, and rhyodacite. These basement rocks are in turn intruded by a dacite porphyry with associated breccia pipes and bodies. Mineralization consists of porphyry-style copper and gold within the intrusives and breccias. A later unaltered andesitic porphyry intrudes the dacite porphyry. The dacite displays an altered potassic silicified core with a halo of sericitic alteration.

Minera Aconcagua drilled eight widely spaced (between 300 m and 500 m) RC holes. The best copper values were in borehole AR5 which returned an intersection of 0.70% Cu over 30 m. Borehole AR6 had an average of 0.23% Cu over 73.5 m. Surface gold values are up to 1.70 g/t Au with the central part of the system having value greater than 0.2 g/t Au over an area of 300 m by 100 m. The best gold values intersected in the drilling were in borehole AR1 which returned a value of 0.25 g/t Au over 54 m in the leach cap.

### 23.1.5 PISTOLA DE ORO

This project is located 20.5 km north-northeast of Diablillos. The project includes the Volcan and Soroche mines which were worked on a limited scale in the past before the workings collapsed. These mines are located on a polymetallic (Au-Ag-Cu-Zn-Pb) vein system in Precambrian basement rocks consisting of micaceous schists. Vein gangue mineralization is principally quartz with a minimum strike length of 650 m with a minimum down dip extension of 70 m. A sample taken in 2009 reportedly returned values of 2.21 g/t Au, 165 g/t Ag, 1.13% Cu, 5.18% Pb, and 0.55% Zn.

A second type of mineralization occurs in a hydrothermal breccia, which has an ellipsoid shape on surface with dimensions of 600 m by 300 m. It is composed of angular clasts of bleached micaceous schists varying in size from millimeter-scale to more than 20 cm in diameter. The matrix is black to dark grey and aphanitic consisting of quartz and tourmaline. The mineralization is fine-grained and consists of malachite and sphalerite. A sample taken in 2009 returned a value of 0.42 g/t Au, 7.9 g/t Ag, 0.86% Cu, 0.16% Pb, and 0.11% Zn. Results of a limited drill program carried out in the late 1990s are unknown.



## 23.1.6 VICUÑA MUERTA

The project is located 30 km to the north-northeast of Diablillos. The project consists of an unexplored porphyry complex. The geology consists of a rhyolitic porphyry intruded into Ordovician granites, granodiorites, diorites, and gabbro's. Three phases of porphyritic intrusion have been recognized and have been hydrothermally altered consisting of quartz-sericite and argillic alteration and silicification. In the 1990s a local company, La Pacha Minera, reported maximum values from surface rock chip and soil sampling of 0.29 g/t Au to 0.38 g/t Au, 145 g/t Ag to 210 g/t Ag, and 0.11% Cu to 0.35% Cu. In addition to the porphyry mineralization, satellite auriferous veins have been sampled with values of up to 7.47 g/t Au. No drilling has been done on the project.

## **23.2 NON-METALLIC PROJECTS**

There are 23 lithium projects active in the area, 2 already under production, both to be expanded, 1 under construction, 16 with feasibility approved or under advanced exploration and another 20 under early stages of exploration. The following are close to the Diablillos project area:

### 23.2.1 FENIX

The Fenix project is owned and operated by the Argentine company Minera Altiplano S.A., which is a subsidiary of Livent Corporation, formerly FMC Corporation. The project is 30 km southwest of Diablillos in the western basin of the Salar de Hombre Muerto. The operation has been producing Lithium Carbonate and Lithium Chloride in production since 1998 and has an estimated life till 2038. Currently, it will be expanded in two consecutive stages from the current 20.000 to 40.000 ton/y, based on an off-take agreement with the German car manufacturer BMW, to start delivery in 2025. Exploitation is through the pumping of brines directly from the salar (salt pan) to a fully automated selective absorption plant which extracts the lithium and returns the solution to the salar. The onsite plant derives its energy from a natural gas pipeline which is used to drive steam boilers required in the treatment process. Electrical energy is derived from five diesel powered generators. Near the mine, the company has an airstrip for transportation of employees and delivery of consumables.

### 23.2.2 KACHI

Is located 100 Km south of the Fénix project in the Catamarca province and under advanced exploration. They are currently performing test works at pilot scale with their technological partners, Lilac Solutions, at their US facilities, to validate their direct extraction process technology



#### 23.2.3 SAL DE VIDA

Sal de Vida is located in the eastern basin of the Salar de Hombre Muerto and 10 km southwest of Diablillos. Galaxy Resources Ltd merged with the Lithium producer Orocobre. The project is set for 32.000 t/y of LCE production using conventional brine extraction, evaporation, and processing. Currently they are proceeding with pilot ponds and pilot testing.

#### 23.2.4 SAL DE ORO

Galaxy Resources sold their northern properties located within the Salar del Hombre Muerto to the Korean POSCO, which is currently advancing the project. A construction camp and pilot facilities are currently under construction

#### 23.2.5 SAL DE LOS ANGELES

This project is in the Diablillos Salar to the east of Diablillos. The project is currently operated by a Joint Venture conformed by Salta Exploraciones SA and Potasio y Litio Argentina SA under the guidance of the first one. They are currently operating 7 evaporation ponds fed with brine from the artesian well. A construction camp is to be constructed within the next months, complementing the already installed one. Estimated final production rate of 15.000 t/y of LCE and 50.000 t/y of KCI.

### 23.2.6 CENTENARIO - RATONES

Lithium exploration activities have focused in the Centenario and Ratones salars, which are 25 km north of Diablillos. The property concessions are owned by the local company Eramine Sudamerica S.A. which is wholly owned by the French conglomerate Eramet. The Eramet website reports that the company has been conducting preliminary engineering studies and test work at Centenario-Ratones with the intention of ramping up to industrial-scale production. The company has already invested 200 M U\$D in attaining the construction permits, investing into a construction, airstrip and a pilot plant which is operating successfully since 2019 producing battery grade lithium carbonate through a Direct Extraction process. Currently they are finalizing a new DFS for the upstream phase only, to reach an investment decision by the end of the year, starting construction in 2022.

### 23.2.7 TINCALAYU

Borax Argentina is the principal producer of borate products in Argentina. The Tincalayu open pit mine and plant are located 26 km west of Diablillos. The borates occur in Tertiary age rocks and are related to paleo-salars.

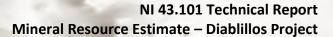


### 23.2.8 POZUELOS – PASTOS GRANDES

The Project is located on the salar de Pozuelo and is being operated by Litica, a local subsidiary of the Argentine oil and gas company Pluspetrol. They are currently setting up a pilot plant for a DLE process for future production of 25.000 t/y of LCE.

#### 23.2.9 SALAR DE PASTOS GRANDES

The Project is owned by Proyecto Pastos Grandes, a 100% owned local subsidiary of Millennial Lithium Corporation of Canada. Target is to produce 24.000 t/y of LCE with a LOM of 40 years based on conventional evaporation and processing techniques. The project obtained its EIA approvals, finalized its DFS and is currently operating a set of evaporation ponds, liming plant and obtained high purity battery grade lithium carbonate from its pilot plant.



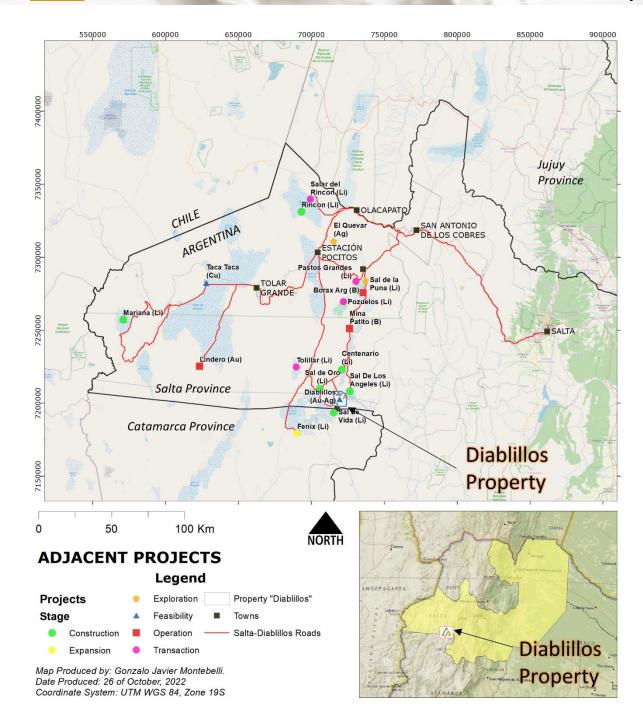


Figure 23-1: metallic & non-metallic projects



## 24 OTHER RELEVANT DATA AND INFORMATION

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



## **25 INTERPRETATION AND CONCLUSIONS**

Based on the site visit and subsequent evaluation of the Project, Mr. Peralta offers the following conclusions:

## **Geology and Mineral Resources**

- The input data was suitable for use in a Mineral Resource Estimate and the gold and silver grade estimation process was consistent with CIM mineral resource, mineral reserve estimation best practice guidelines.
- The Mineral Resources conform to CIM (2014) definitions and comply with all disclosure requirements for Mineral Resources set out in NI 43-101.
- The Mineral Resources have been estimated by Mr. Peralta (independent consultant QP).
- Diamond drilling on the Oculto prospect has resulted in discovery of additional Mineral Resources for the Project.
- The sampling and analytical work for the programs post-1995, particularly that performed by AbraSilver from 2017 up to date, appears to have been conducted in an appropriate fashion, using methods commonly in use in the industry and commercially accredited independent laboratories.
- The number and orientation of the drill holes, and the sampling methods employed are such that the samples should be representative of the mineralization at Oculto.
- The database is reasonably free from errors and suitable for use in estimation of Mineral Resources.
- For the purposes of Mineral Resource estimation, it is reasonable to assume that the gold and silver at Diablillos could be recovered using conventional processes commonly used in the industry.
- The number of bulk density determinations taken to date is sufficiently representative to generate a density model to be used for a mineral resource estimation.



- Measured and Indicated Mineral Resources are estimated to contain 51.3 million tonnes grading 66 g/t Ag and 0.79 g/t Au for a total of 109.3 million ounces of contained Ag metal and 1.29 million ounces of contained Au metal. Inferred Mineral Resources are estimated at 2.2 million tonnes grading 30 g/t Ag and 0.51 g/t Au. These estimates are reported at a 35 g/t AgEq cut-off, for oxide and transition material. These cut-off grades are considered appropriate based on currently available metallurgical test work and the assumed mining parameters and gold and silver price.
- The total strip ratio between waste and ore is 3.89.
- No significant impact of metal loss due to the capping of extreme values in the mineralized zone about 2.1% for gold and silver grade.
- The presence of copper in the transition zone needs to be reviewed in greater detail to understand its impact on metallurgical recoveries.
- Other elements such as arsenic, bismuth, and antimony, are present in the deposit and their impact should be reviewed in future metallurgical studies, there are no relationships between these elements and gold / silver, suggesting that the minerology of these elements is not related.
- A sensitivity to the parent cell size result suggests non-selective mining, being able to use relatively large equipment for a 10 x 10 x 10 block with a minimum dilution depending on the cut-off.
- Previous metallurgical studies suggest that the transitional zone will have recoveries like recoveries from the oxidation zone.
- Mr. Peralta ("QP") consider that there are no significant risks associated with the project except those associated with metal prices and production costs.

### Geotechnical

- Open pit slopes: Open pit shell slope angles have been re-designed, based on recent geotechnical drilling and modelling. Six geotechnical sectors have been defined. The average inter-ramp angle assumed for open pit shell generation was 54 degrees.
- The recent drilling presents limited geotechnical information, and new drilling should be carried out to continue with new laboratory test, which will allow some modification to the parameters previously determined.



## **26 RECOMMENDATIONS**

Mr. Peralta makes the following recommendations:

### **Geology and Mineral Resources**

- Fantasma deposit should be reviewed and updated with the new exploration works and economic parameters that are being developed.
- Include the Laderas deposit which has potential for extraction by open pit with a low strip ratio, which may slightly improve the economics of the project in the first years.
- Consistent logging of historical and recent drilling allows a robust geological model to be generated.
- Revise the new lithology and alteration models to improve those areas that have not been adequately modelled due to the complexity of the deposit.
- Additional metallurgical test work is recommended to better quantify recoveries for the different mineralization types as well as to refine the processing scope going forward. A new geo-metallurgy model should be built to define parameters for future estimation.
- The geological and alteration models at Oculto are constrained. A bigger model is suggested to be built, to add potential mineral resources.
- Further exploration should be carried out in surrounding prospects, as most of the drilling is currently concentrated in the Oculto and Fantasma Prospects.
- Improve the structural knowledge of the deposit with surface mapping of outcrops, and/or with information from oriented drill core or televiewer methods will allow to determine the physical and elastic properties of each of the geotechnical domains identified.
- In the NorthEast zone of the Oculto, definition or infill drilling (Phase III B) should be carried out, in order, to categorize into measured resource the actual inferred and indicated ones. An infill drilling campaign is estimated about 7,500 meters of DDH drilling, with an approximate cost of U\$S 3,500,000.
- Continue the ongoing drilling campaign at JAC target (Phase III A), to define new area of existence of mineral resource with economic potential. Approximate cost of U\$S 3,500,000, totaling 7,5000 meters of DDH drilling.



- A new update mineral resource estimate should be done once Phase III is finalized, as this drilling campaign could potentially impact in the global configuration of the property.
- An evaluation of the mineral resource contained in the sulphide level should be carried out, with a parallel metallurgy campaign. To quantify the contained metal.

Based on these outcomes Mr. Peralta recommends that Diablillos be moved to a Pre-Feasibility study. Which should include a re estimate for mineral resources, new metallurgy test of the new areas, update on geotechnical studies. The total amount for this next stage approximately is estimated in U\$S 1.550.000.



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## **APPENDIX**

This section is not applicable with no appendices listed.