

SolGold PLC Announces SolGold Announces Positive PEA Study Results

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BISHOPSGATE, May 20, 2019 - [SolGold plc](#) (LSE & TSX: SOLG) is pleased to announce the release of its Preliminary Economic Assessment ("PEA") for the Alpala Copper-Gold-Silver Deposit, Cascabel Project Northern Ecuador. SolGold holds an 85% registered and beneficial interest in ENSA (Exploraciones Novomining S.A.) which holds 100% of the Cascabel Project (see "ownership" below).

Key aspects and findings from this study are summarised below.

HIGHLIGHTS

NPV Present Value ("NPV") estimates range from US\$4.1Bn to US\$4.5Bn (Real, post-tax, @ 8% discount rate, US\$3.3/lb copper price, US\$1,300/oz gold price and US\$16/oz silver price) depending on production rate scenario (see below).

IRR Internal Rate of Return ("IRR") estimates range from 24.8% to 26.5% (Real, post-tax, US\$3.3/lb copper price, US\$1,300/oz gold price and US\$16/oz silver price) depending on production rate scenario (see below).

Capex production Capex estimated at approx. US\$2.4B to US\$2.8B, and total Capex including life of mine sustaining Capex of US\$10.1B to US\$10.5B depending on production rate scenario (see below).

Payback Period on initial start-up capital - Range from 3.5 to 3.8 years after commencement of production depending on production rate scenario.

Mining Method - Underground low-cost mass mining using Block Cave methods applied over several caves designed on two vertically extensive Lifts.

Production Cases mine production cases have been pre-selected and assessed as part of the PEA:

Mine Production Cases

Case	Life of Mine (years)
Case 1: 40 Mt/a	66
Case 2a: 50 Mt/a - Staged ramp-up	57
Case 2b: 50 Mt/a Fast ramp-up	55
Case 3: 60 Mt/a	49

Resources scheduled in the PEA block cave designs that account for 2.4Bt @ 0.54% CuEq ROM grade (0.36% Cu, 0.27g/t Au and 1.1g/t Ag), including:

- o 89% of the MRE#2 Indicated [Mineral Resources Ltd.](#): 1.83Bt @ 0.61% CuEq ROM (0.41% Cu, 0.31g/t Au and 1.2 g/t Ag)
- o 61% of the MRE#2 Inferred [Mineral Resources Ltd.](#): 0.55Bt @ 0.36% CuEq (0.27%Cu, 0.13g/t Au and 0.8g/t Ag)

Annual Metal Production (average for the first 25 years) - Estimated at 207,000t of copper; 438,000oz of gold and 1.4Moz of silver in concentrate per year (based on the 50Mtpa mining scenario).

Annual Metal Production (life-of-mine average) - Estimated at 150,000t of copper, 245,000oz of gold and 913,000oz of silver in concentrate per year.

High copper (28.2%), gold (22.1 g/t) and silver (65.7g/t) contents in sales concentrates.

Title; high quality of the concentrates and the relatively low arsenic contents in comparison to a number of other major producers are expected to deliver a sales premium for SolGold's concentrates.

Activities for rest of 2019 will focus on continued exploration at Alpala, a further update to the Mineral Resource Estimate (MRE#3), metallurgy and process design, tailing disposal options and incorporation of further geotechnical and hydrogeological data into the study basis.

Permitting and fiscal discussions with the Ecuadorean Government, and financial discussions with third party financiers for SolGold's share of the project costs to commence.

Title; Pre-Feasibility Study is expected to be completed in December 2019 with a Definitive Feasibility Study scheduled for completion at the end of 2020.

References to figures and tables relate to the version visible in PDF format by clicking the link below:

http://www.rns-pdf.londonstockexchange.com/rns/4799Z_1-2019-5-19.pdf

Commenting on the findings of the PEA, SolGold CEO Mr Nick Mather said: *"The SolGold Board is excited by the opportunity demonstrated for the Alpala Project, and that it continues to grow. The unusually low operating costs modelled are due to the relatively soft, fractured nature of the ore, resulting in enhanced caveability, a high degree of fragmentation in the cave and ease of crushing and millability, combined with low hydroelectric (consumption and unit) costs. The overall scale efficiencies also assist in the delivery of modelled low operating costs."*

The low start-up capex of \$2.4-\$2.8Bn, high net present value (NPV) range, of \$4.1 â€”\$4.5Bn at an 8% discount (well in excess of the global cost of capital for a project of this nature) signifies outstanding financial metrics for a project of this nature and outstanding modelled internal rates of return of 24.8-26.5% presents an outstanding value proposition for SolGold shareholders. SolGold looks forward to delivery of the same blueprint across its 12 other wholly owned projects throughout Ecuador.

The study team has been careful to separately identify start-up capital costs (\$2.4Bn - \$2.8Bn) and ongoing sustaining capital costs (\$7.5Bn - \$7.8Bn over the life of mine) and has differentiated this from operating costs.

The vertically extensive nature of the cave configurations, the high modelled resource tonnages and production rates also contribute to the high capital efficiency and returns, low mining costs, and low overall costs of the project.

Metallurgical work, which is ongoing, indicates that gold contents in the pyrite concentrate will require additional investigation to identify an efficient recovery strategy, but this represents only 13% of the contained gold in MRE#2 and less than 4% of the contained metal value in the base case. Metal values of US\$3.30/lb copper and US\$1300 gold used in the study.

Additional metallurgical work is expected to identify solutions for recovery of gold and copper in the pyrite concentrate along with a sulphuric acid product.

High copper 28.2%, gold 22.1 g/t and 65.7g/t silver contents in sales concentrates over the first 15 years are expected to attract premium values. The high quality of the concentrates and the relatively low arsenic

contents in comparison to a number of other major producers are expected to deliver a sales premium for SolGold's concentrates and relatively low tolling and refining charges.

In addition, Alpala's location contributes significantly to the low capital expenditures estimated (capex). Situated at a relatively low elevation, Alpala is near to available water and is also close to key transport at landmarks such as the port of Esmeraldas, Quito International Airport and the regional city of Ibarra, all accessible via sealed roads and highways. The capex outlined also includes an amount of 11% of start-up capex for Engineering Procurement and Construction Management. SolGold will utilise internal management as much as possible to reduce costs, improve work quality and expedite delivery by building a strong in-house team.

Over the period to the end of 2019 when SolGold aims to complete the prefeasibility study, activities will focus on exploration, a new MRE #3, metallurgy and process design, investigation of further tailing disposal options and incorporation of further geotechnical and hydrogeological data into the Prefeasibility Study basis. SolGold will also commence permitting and fiscal discussions with the Ecuadorian Government and financial discussions with third party financiers for SolGold's share of the project costs following completion of the Feasibility Study."

Summary

The PEA study was prepared by independent consultants Wood plc in the role of Lead Consultants with direct responsibility for the Minerals Processing, Materials Handling and Project Infrastructure components of the study, and the participation of SRK Consulting (UK) Limited (Resource Estimation), SRK Exploration Services Limited (Geology), Mining Plus Pty Ltd (Geotechnical, Hydrogeology and Mine Planning), Knight Piesold Ltd (Environmental and Community), and Ernst and Young (Economic Analysis).

The PEA addresses findings based on the resource as defined in MRE #2 announced November 2018, of 8.4 Mt Cu and 19.4 Moz Au in the Indicated category & 2.5 Mt Cu and 3.8 Moz Au in the Inferred category with the MRE across both Indicated and Inferred classifications equating to a current 2.95 Bt @ 0.52% CuEq (15.4 Mt CuEq) containing 10.9 Mt Cu and 23.2 Moz Au at 0.2% CuEq cut-off, 79% of which is in the Indicated category (by gold and copper metal content).

Alpala Mineral Resource statement effective 07 November 2018*

Resource Category	Tonnage (Mt)	Grade			Contained Metal		
		Cu (%)	Au (g/t)	CuEq (%)	Cu (Mt)	Au (Moz)	CuEq (Mt)
Indicated	2,050	0.41	0.29	0.60	8.4	19.4	12.2
Inferred	900	0.27	0.13	0.35	2.5	3.8	3.2

Table 1: MRE 2 Resource Table

*Notes:

1. Mr. Martin Pittuck, CEng, MIMMM, FGS, is responsible for this Mineral Resource statement and is an "independent qualified person" as such term is defined in NI 43-101
2. Mineral Resource is reported using a cut-off grade of 0.2% copper equivalent calculated using [copper grade (%)] + [gold grade (g/t) x 0.63]
3. Mineral Resource is considered to have reasonable prospects for eventual economic extraction by underground mass mining such as block caving
4. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability

5. *The statement uses the terminology, definitions and guidelines given in the CIM Standards on [Mineral Resources Ltd.](#) and Mineral Reserves (May 2014) as required by NI 43-101.*
6. *The MRE is reported on 100 percent basis.*

Additional drilling since the data cut off has not yet been modelled for MRE#3 and exploration activities on site with 10 drill rigs continues to define extensions to the mineralised envelope at Alpala, especially to the north towards Trivinio, Moran and Alpala north west at depth.

An additional MRE#3 is expected to form (along with further metallurgy, geotechnical and materials handling and storage studies) the basis for the Pre-Feasibility Study ("PFS") by the end of December 2019.

The Production Rate Scenario (see Mine Production Cases table above) proposed as the base case is Case 2b: 50 Mt/a Fast ramp-up.

Economic Summary and Sensitivity Analysis

The preliminary economic assessment is preliminary in nature, it includes inferred [Mineral Resources Ltd.](#) that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realised.

Economic Summary and Sensitivity Analysis of the Project

(100% ownership basis)

Metal Prices		40 Mt/a	50 Mt/a slow	50 Mt/a fast	60 Mt/a
Copper (\$/t)	USD/t	7,268	7,268	7,268	7,268
Gold (\$/oz)	USD/oz	1,300	1,300	1,300	1,300
Silver (\$/oz)	USD/oz	16.00	16.00	16.00	16.00
Income					
Copper revenue	\$m Real	57,698	57,692	57,682	57,687
Gold revenue	\$m Real	16,180	16,180	16,199	16,215
Silver revenue	\$m Real	322	319	318	321
Total revenue	\$m Real	74,200	74,191	74,199	74,223
Expenses					
Royalties	\$m Real	(3,835)	(3,835)	(3,836)	(3,838)
Treatment & refining charges	\$m Real	(3,561)	(3,560)	(3,557)	(3,558)
Shipping	\$m Real	(3,122)	(3,121)	(3,117)	(3,117)
Underground Mine	\$m Real	(9,607)	(9,605)	(9,604)	(9,605)
Process Plant	\$m Real	(14,602)	(14,430)	(14,333)	(14,185)
Infrastructure					

\$m Real

Economic Summary and Sensitivity Analysis of the Project

(100% ownership basis)

Metal Prices		40 Mt/a	50 Mt/a slow	50 Mt/a fast	60 Mt/a
Port Facilities	\$m Real	(534)	(520)	(508)	(494)
Other	\$m Real	(344)	(344)	(344)	(344)
EBITDA	\$m Real	37,752	37,934	38,057	38,240
Profit Share (Labour Tax)	\$m Real	(4,327)	(4,274)	(4,246)	(4,235)
Corporate Tax	\$m Real	(5,978)	(5,960)	(5,949)	(5,936)
Capex					
Pre-production Capex	\$m Real	(2,538)	(2,448)	(2,715)	(2,849)
Post-establishment Capex	\$m Real	(7,525)	(7,798)	(7,572)	(7,662)
Total Capex	\$m Real	(10,064)	(10,246)	(10,287)	(10,511)
Closure costs (Opex)	\$m Real	(80)	(80)	(80)	(80)
Cash flow					
Post-tax, undiscounted cash flow	\$m Real	17,384	17,453	17,574	17,557
Tax rate assumption	%	25%	25%	25%	25%
Post-tax NPV (discounted) (7%)	\$m Real	4,922	4,841	5,102	5,329
Post-tax NPV (discounted) (8%)	\$m Real	4,195	4,094	4,349	4,548
Post-tax NPV (discounted) (9%)	\$m Real	3,582	3,466	3,711	3,883
Post-tax IRR	%	26.5%	24.8%	25.9%	25.7%
Payback period (project commencement)	Years	8.5	8.8	8.6	8.8
Payback period (production commencement)	Years	3.5	3.8	3.6	3.8

Metal Price and Discount Rate Sensitivity Analysis

(based on 50Mt/a fast case)

NPV of Project	Copper Price (base US\$3.30 /lb)				
	-10%	-5%	0%	5%	10%

	6%	4,968	5,484	5,998	6,510	7,020
	7%	4,223	4,663	5,102	5,539	5,975
Discount Rate	8%	3,592	3,970	4,349	4,726	5,102
	9%	3,053	3,382	3,711	4,039	4,367
	10%	2,592	2,881	3,168	3,456	3,743

		Gold Price (base US\$1300/oz)				
NPV of Project		-10%	-5%	0%	5%	10%
	6%	5,614	5,806	5,998	6,190	6,381
	7%	4,763	4,932	5,102	5,271	5,440
Discount Rate	8%	4,048	4,198	4,349	4,499	4,649
	9%	3,443	3,577	3,711	3,845	3,979
	10%	2,928	3,048	3,168	3,288	3,409

TC/RC Sensitivity Analysis

(based on 50Mt/a fast case)

	TC/RC charges						
Variance	-30%	-20%	-10%	0%	10%	20%	30%
NPV US\$ M	4,485	4,439	4,394	4,349	4,303	4,258	4,212

Note: A discounted cash flow model was developed to evaluate the economics for the Project on a 100% project ownership basis.

Mine Production Scenarios

Concept level assessment of mining methods carried out as part of the PEA suggests that mining at Alpala should be conducted using low-cost underground mass mining methods such as Block Caving or Panel Caving for higher grade sections of the ore body.

Based on the November 2018 MRE #2 resource base, geological characteristics of the Alpala orebody, grade distribution, geotechnical and hydrogeological characterisation, size of the mining footprint, and other technical and economic considerations, several Block Cave mine production cases were pre-selected and assessed as part of the PEA.

These scenarios attempt to provide environmentally sound project development options aimed at optimising the economics of the project while maximising extraction of the Alpala resource.

- Case 1 - 40 Mtpa mine production rate (life-of-mine 66 years).
- Case 2a - 50 Mtpa, staged ramp-up (life-of-mine 57 years).
- Case 2b - 50 Mtpa, fast production ramp-up (life-of-mine 55 years).
- Case 3 - 60 Mtpa (life-of-mine 49 years).

Based on MRE #2 and as reported earlier in the announcement, the Indicated resource at the 0.2% CuEq

cut-off grade is approximately 2,050Mt averaging 0.60% CuEq, and the Inferred resource is approx. 900Mt @ 0.35% CuEq. Accordingly, the Resources scheduled in the PEA block cave designs corresponds to about 89% of the Indicated Mineral Resource and some 61% of the Inferred Mineral Resource.

Mineral Processing

The dominant copper mineral at Alpala is chalcopyrite (33% copper content), with lesser amounts of bornite (63% copper content). In most cases the gold is included as a particulate form in chalcopyrite, bornite or pyrite.

Metallurgical test work for the PEA was conducted based on 20 samples averaging 53kg per sample, obtained from 480m of NQ sized half core from five drillholes representing the major geological domain groups from preliminary geometallurgical models.

The testwork program for the PEA was conducted at ALS Metallurgical Laboratories in Kamloops, Canada. The laboratory program consisted of sample preparation and composite formation, comminution tests including SMC, Bond Ball Mill Work Index (BWI) and Bond Abrasion Index (AI), flotation optimisation and locked cycle tests on specified composites and rougher concentrate kinetic tests.

The copper concentrator and gold recovery circuit proposed for Alpala is based on two parallel lines with one line built for Phase 1 (ramp up to 50% nameplate capacity) and a second line to reach 100% nameplate capacity in the case of the 40 and 50Mtpa mine production scenarios. Three parallel modules are considered for the 60Mtpa scenario.

Metallurgical recoveries to the chalcopyrite copper concentrate for the first 30 years of operation are estimated to range between 93.9% and 87.1% for copper and between 85.4% (high grade) and 49.4% (low grade) for gold (50Mtpa staged ramp-up) depending on mill feed grades.

Further investigations are underway to further increase copper and gold recoveries to the copper concentrate and improve gold recoveries from the pyrite concentrate.

Infrastructure

The Alpala deposit is favourably located at low altitude (600-1,800masl), with easy access via a sealed highway from the regional capital (Ibarra) some 90km by road to the south, and in proximity to water and high voltage, predominantly hydroelectric sourced power supply. The deep-water port at Esmeraldas is located some 180 km to the west of the project site.

Unlike some other Tier 1 porphyry copper-gold deposits which are located in the high Andes in remote locations and at very high altitude, the low elevation and mild climate year-round in the Alpala area allows exploration activities and mining operations to be conducted throughout the year.

Benefiting from these natural advantages is expected to allow significantly reduced infrastructure requirements at Alpala in comparison to many of its peers.

The likely infrastructure (on-site and off-site) requirements considered in the PEA study, include the following:

- Roads and logistics
- Concentrate pipeline from the process plant to Esmeraldas port and water return pipeline
- Tailings storage facilities options and associated infrastructure
-

Surface facilities

- Underground mine infrastructure facilities
- Concentrate shipping facilities at the Esmeraldas port
- Water supply system
- Power supply system
- Communications, process control and instrumentation system
- Other Services

Marketing

Metallurgical testwork carried out to date indicates that the main product from the Cascabel project will be a high-quality copper-gold-silver concentrate with no penalty impurities and medium to high copper and gold grades plus additional silver credits, making it a desirable product for copper smelters worldwide.

Average concentrate grades over the life-of-mine are currently estimated at 26% copper, 13.2g/t gold and 49.2g/t silver. Average figures over the first 15 years of the operation are estimated at 28.2% copper, 22.1g/t gold and 65.7g/t silver. The relatively high valuable metal contents and low deleterious elements such as arsenic is expected to attract premium sales values and keep treatment and refining charges low.

Environmental and community

SolGold has conducted environmental studies in the project area using qualified practitioners for a number of years, which contributes to a defensible baseline data set. An experienced project team is leading meaningful social engagement programs to support appropriate Corporate Social Responsibility programs as part of future studies and any proposed development plans.

Current exploration activity is fully permitted and in good standing. Mine development will require the successful conclusion of an Environmental Impact Assessment and permitting from the Ministry of Environment. This is a recognised process with successful precedent in Ecuador. There are no known environmental issues that could materially impact the ability of SolGold to extract the [Mineral Resources Ltd.](#) at the Cascabel Project. Base line environmental data has been collected at Alpala for approximately four years.

Capital and operating cost estimate

Capital cost estimates for the cases assessed during the PEA range from US\$2.45B to US\$2.85B for the pre-production Capex and from US\$7.5B to US\$7.8B for the post-implementation and sustaining Capex.

The operating cost over the life of the project is estimated at between US\$25.5B and US\$25.9B depending on the production scenario. Unit C1* operating cost over the life of the project is estimated at US\$0.90/lb copper after gold and silver credits (50Mtpa, fast ramp-up). C1* Production Cost (average for the first 25 years, 50Mtpa Fast ramp-up case) - Estimated at US\$0.23 per payable pound of Cu after gold and silver credits.

The capital cost estimate has been developed in accordance with Wood's capital cost estimating procedure (PRJ-340-05) for a Conceptual study to meet the requirements of the National Instrument NI 43-101 for a Preliminary Economic Assessment (PEA) study and is consistent with "AACE International" cost estimating guidelines for a Class 5 estimate for the Process Industries.

The estimate accuracy range of +/- 35% for cost inputs is defined by the level of project definition. The accuracy of the total cost estimate has been assessed to comply with the above guidelines.

Due to the long mine life, it is not expected that significant salvage values at the end of the ultimate mining resource life will be gained.

*Note: * C1 Includes all siteoperating costs, concentrate shipping costs, smelting and refining charges,etc, but excludes royalty payments, taxes and profit share.*

Economic analysis

A discounted cash flow model was developed by Ernst & Young from the commencement date of the project to evaluate the economics for the Project on a 100% project ownership basis.

The economic modelling was done on a post-tax basis and the results indicate an after-tax Net Present Value (NPV) from US\$4.1 Bn to US\$4.5 Bn based on a copper price of US\$3.30 /lb and gold price of US\$1300 /lb at an 8% discount rate for the four scheduled cases. The projects' Internal Rate of Return (IRR) is estimated at between 24.8% and 26.5%, with payback periods after production commencement from 3.5 to 3.8 years.

The figure below shows the annual and cumulative cashflows for Case 2b: 50 Mt/a Fast ramp-up case.

Sensitivity analysis was conducted on the copper and gold prices as outlined in the range in the NPV output.

The model assumes a corporate tax rate of 25% (current Ecuadorian corporate tax rate), a profit share of 15% (Labour Tax) on earnings before tax (12% government, 3% employee), a government royalty of 5% to 8% depending on the type of mineral, and a straight-line depreciation rate of 10%.

The model also includes a sovereign adjustment levy where project contributions to government (royalties, income tax, government profit share) fall below 50% of cumulative economic project benefits - noting under the scenarios considered no sovereign adjustments are required.

The basis for the Economic Analysis is from the commencement date of the project, and therefore, it does not include sunk costs which will have been incurred prior to approval to proceed to project implementation.

Ownership

SolGold holds an 85% registered and beneficial interest in ENSA (Exploraciones Novomining S.A.) which holds 100% of the Cascabel Project. Under Ecuadorean law shareholders do not own an interest in the assets of a company and accordingly the project economics are presented on a 100% basis.

SolGold is funding the completion of a Feasibility Study and the minority 15% shareholder [Cornerstone Capital Resources Inc.](#) S.A. (CGP) in ENSA, is obliged to repay its 15% share of SolGold costs (from the time of acquiring its 85% interest) from, amongst other things, their net 15% share of the proceeds of the project. Upon completion of the Feasibility Study, CGP may then elect to contribute to the development costs and maintain at least 10% interest subject to the various provisions of the Earn - in agreement (dated April 2012) and the Term Sheet (dated February 2013 and varied in February 2014) or dilute to a 0.5% net smelter return which SolGold may acquire for \$3.5M at any time. There is also a 2% net smelter return which was granted to [Santa Barbara Resources Ltd.](#) that SolGold may acquire for a total of \$4M.

Risks and opportunities

Project risks and opportunities identified by the consulting team at this PEA stage of the Cascabel project include:

- SRK is not aware of any significant risks and uncertainties that could be expected to affect the reliability or confidence in the exploration information and Mineral Resource discussed herein.

As with all mineral projects, there is an inherent risk associated with mineral exploration. As such, there is no guarantee that additional drilling will grow the model or improve confidence in the model. SRK are confident the Mineral Resource can be further upgraded in confidence with more drilling and that there is some potential to grow the deposit model further.

- Mining Plus has identified that typical risks for a large block caving project (including seismicity, mudrush and cave performance) exist in this project. However, based on the available data, it is expected that these can be managed to acceptable levels through further study and operation strategies, which would be typical for a large block caving project of this nature.

Mining Plus has identified several opportunities to improve the project that should be studied in more detail in a pre-feasibility study. These include:

- o Campaign mining and stockpiling to expedite further the processing of higher grade
- o Mechanical ore sorting to remove uneconomic material from the mill feed
- o Production design optimisation
- o Footprint layout design optimisation
- o Materials handling optimisation
- From a mineral processing perspective Wood anticipate no obstacles being present to hinder the progressing of the project to the next phase. Recoveries and concentrate grades are representative of a copper-gold porphyry deposit of this nature with no deleterious elements reporting to the copper-gold concentrate. Wood see the following mineral processing opportunities for the project:
 - o Production of a gold rich pyrite concentrate that may be sold or processed on site to produce gold bullion, enhancing gold and to a lesser extent copper recovery.
 - o Implementation of ore sorting technology to upgrade the mill feed grade.
 - o Wood see the potential for the generation of additional revenue from the Cascabel Project. To determine what additional revenue may be generated, Wood recommended to investigate the following areas in the next phase of the project.
 - o Flotation test work to date has indicated that it is possible to produce a gold rich pyrite concentrate from the first cleaner scavenger tailings stream, which could be amenable to hydrometallurgical processing to produce gold in the form of dore and to a lesser extent copper in the form of cathode copper. Initial testwork on pyrite concentrate using the Albion Process is currently underway.
 - o Other metallurgical testwork recommended by Wood includes those to assess the potential for commercial production of molybdenum concentrate from some parts of the Alpala deposit, the potential for economic recovery of magnetite ore, and the likelihood of generating revenue (or credits) from the production of sulphuric acid during the normal smelting process.
- From an infrastructure perspective Wood anticipate no obstacles being present to hinder the progressing of the project to the next phase. During the subsequent phases there are infrastructure opportunities in areas such as TSF design where more detailed work will be required to optimise storage and reduce capital costs associated with this area.
- Knight Piesold comments indicate that there are no known environmental issues that could materially impact the ability of SolGold to extract the [Mineral Resources Ltd.](#) at the Cascabel project as currently proposed. Mine development will require the successful conclusion of an Environmental Impact Assessment and permitting from the Ministry of Environment.

- Ernst & Young have stated that the results of the analysis show the Cascabel Project to be potentially viable, warranting further study.

Conclusion and Recommendations

Based on the current mineral resource base (MRE #2) and other geological, mining, metallurgical, environmental, logistical, and financial information available for the study, this preliminary economic assessment (PEA) suggests that the Alpala copper-gold-silver deposit has the potential to support a large-scale, low-cost underground Block Cave mining operation and associated processing and project infrastructure facilities, capable of sustaining commercial production over a mine life in excess of 55 years depending on the production scenario finally adopted.

Additional information and preparatory work required for subsequent study stages include geotechnical drilling and testing, sterilisation drilling in areas currently identified for the location of infrastructure and project facilities, more advanced metallurgical testwork, additional environmental and community baseline surveys, infrastructure and logistics trade-off studies and others, much of which is currently in progress.

Based on the findings from this PEA study It is recommended that given the strong fundamentals the Cascabel Project - Alpala Deposit progresses to Pre-feasibility study stage.

Market Abuse Regulation (MAR) Disclosure

Certain information contained in this announcement would have been deemed inside information for the purposes of Article 7 of the Regulation (EU) No 596/2014 until the release of this announcement.

Qualified Person:

Technical and scientific information in this report has been reviewed by Mr Jason Ward ((CP) B.Sc. Geol.), the Chief Geologist of the Company. Mr Ward is a Fellow of the Australasian Institute of Mining and Metallurgy, holds the designation FAusIMM (CP), and has in excess of 20 years' experience in mineral exploration and is a Qualified Person for the purposes of the relevant LSE and TSX Rules. Mr Ward consents to the inclusion of the information in the form and context in which it appears.

By order of the Board

Karl Schlobohm

Company Secretary

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The Company recognises that the term "World Class" is subjective and for the purpose of the Company's projects the Company considers the drilling results at the growing Alpala Porphyry Copper Gold Deposit at its Cascabel Project to represent intersections of a "World Class" deposit. The Company considers that "World Class" deposits are rare, very large, long life, low cost, and are responsible for approximately half of total global metals production.

"World Class" deposits are generally accepted as deposits of a size and quality that create multiple expansion opportunities, and have or are likely to demonstrate robust economics that ensure development irrespective of position within the global commodity cycles, or whether or not the deposit has been fully drilled out, or a feasibility study completed.

Standards drawn from industry experts (1) Singer and Menzie, 2010; (2) Schodde, 2006; (3) Schodde and Hronsky, 2006; (4) Singer, 1995; (5) Laznicka, 2010) have characterised "World Class" deposits at prevailing commodity prices. The relevant criteria for "World Class" deposits, adjusted to current long run commodity prices, are considered to be those holding or likely to hold more than 5 million tonnes of copper and/or more than 6 million ounces of gold with a modelled net present value of greater than USD 1 Billion.

The Company and its external consultants prepared an initial mineral resource estimate at the Cascabel Project in December 2017. Results are summarised in Table B attached.

The Mineral Resource Estimate was completed from 53,616m of drilling, approximately 84% of 63,500m metres drilled as of mid-December 2017, the cut-off date for the maiden resource calculation. There remains strong potential for further growth from more recent drilling results, and continue rapid growth of the deposit.

Any development or mining potential for the project remains speculative.

Drill hole intercepts have been updated to reflect current commodity prices, using a data aggregation method, defined by copper equivalent cut-off grades and reported with up to 10m internal dilution, excluding bridging to a single sample. Copper equivalent grades are calculated using a gold conversion factor of 0.63, determined using an updated copper price of USD3.00/pound and an updated gold price of USD1300/ounce. True widths of down hole intersections are estimated to be approximately 25-70%.

On the basis of the drilling results to date and the results of the Alpala Maiden Mineral Resource Estimate, the reference to the Cascabel Project as "World Class" (or "Tier 1") is considered to be appropriate. Examples of global copper and gold discoveries since 2006 that are generally considered to be "World Class" are summarised in Table A.

References cited in the text:

1. Singer, D.A. and Menzie, W.D., 2010. *Quantitative Mineral Resource Assessments: An Integrated Approach*. Oxford University Press Inc.

2.Schodde, R., 2006. *What do we mean by a world class deposit? And why are they special.* Presentation. AMEC Conference, Perth.

3.Schodde, R and Hronsky, J.M.A, 2006. *The Role of World-Class Mines in Wealth Creation.* Special Publications of the Society of Economic Geologists Volume 12.

4.Singer, D.A., 1995, *World-class base and precious metal deposits-a quantitative analysis:* Economic Geology, v. 90, no.1, p. 88-104.

5.Laznicka, P., 2010. *Giant Metallic Deposits: Future Sources of Industrial Metal, Second Edition.* Springer-Verlag Heidelberg.

Deposit Name	Discovery Year	Major Metals	Country	Current Status	Mining Style	Inventory
LA COLOSA	2006	Au, Cu	Colombia	Feasibility - New Project	Open Pit	¹ 469Mt @ 0.95g/t Au; 14.3Moz Au
LOS SULFATOS	2007	Cu, Mo	Chile	Advanced Exploration	Underground	² 1.2Bt @ 1.46% Cu & 0.02% Mo; 17.5Mt Cu
BRUCEJACK	2008	Au	Canada	Development/Construction	Open Pit	³ 15.6Mt @ 16.1 g/t Au; 8.1Moz Au
KAMOA-KAKULA	2008	Cu, Co, Zn	Congo (DRC)	Feasibility - New Project	Open Pit & Underground	⁴ 1.3Bt @ 2.72% Cu; 36.5 Mt Cu
GOLPU	2009	Cu, Au	PNG	Feasibility - New Project	Underground	⁵ 820Mt @ 1.0% Cu, 0.70g/t Au; 8.2Mt Cu, 18.5Moz Au
COTE	2010	Au, Cu	Canada	Feasibility Study	Open Pit	⁶ 289Mt @ 0.90 g/t Au; 8.4Moz Au
HAIYU	2011	Au	China	Development/Construction	Underground	⁷ 15Moz Au
RED HILL-GOLD RUSH	2011	Au	United States	Feasibility Study	Open Pit & Underground	⁸ 47.6Mt @ 4.56 g/t Au; 7.0Moz Au
XILING	2016	Au	China	Advanced Exploration	Underground	⁹ 383Mt @ 4.52g/t Au; 55.7Moz Au

Source: after MinEx Consulting, May 2017

¹ Source: <http://www.mining-technology.com/projects/la-colosa>

² Source: <http://www.angloamerican.com/media/press-releases/2009>

³ Source: <http://www.pretivm.com/projects/brucejack/overview/>

⁴ Source: <https://www.ivanhoemines.com/projects/kamoakakula-project/>

⁵ Source: [http://www.newcrest.com.au/media/resource_reserves/2016/December_2016_Resources_and_Reserves_Statement.p](http://www.newcrest.com.au/media/resource_reserves/2016/December_2016_Resources_and_Reserves_Statement.pdf)

⁶ Source: <http://www.canadianminingjournal.com/news/gold-iamgold-files-cote-project-pea/>

⁷ Source: <http://www.zhaojin.com.cn/upload/2015-05-31/580601981.pdf>

⁸ Source: https://mrdata.usgs.gov/sedau/show-sedau.php?rec_id=103

⁹ Source: http://www.chinadaily.com.cn/business/2017-03/29/content_28719822.htm

Table A: Tier 1 global copper and gold discoveries since 2006. This table does not purport to be exhaustive exclusive or definitive.

Grade	Resource	Tonnage	Grade	Contained Metal				
Category	Category	(Mt)	Cu (%)	Au (g/t)	CuEq (%)	Cu (Mt)	Au (Moz)	CuEq (Mt)
Total >0.2% CuEq	Indicated	2,050	0.41	0.29	0.60	8.4	19.4	12.2
	Inferred	900	0.27	0.13	0.35	2.5	3.8	3.2

Table B: Alpala Mineral Resource Estimate updated effective 16 November 2018.

Notes:

- Mr. Martin Pittuck, MSc, CEng, MIMMM, is responsible for this Mineral Resource estimate and is an "independent qualified person" as such term is defined in NI 43-101.
- The Mineral Resource is reported using a cut-off grade of 0.3% copper equivalent calculated using [copper grade (%)] + [gold grade (g/t) x 0.6] based on a copper price of US\$2.8/lb and gold price of US\$1,160/oz.
- The Mineral Resource is considered to have reasonable potential for eventual economic extraction by underground mass mining such as block caving.
- [Mineral Resources Ltd.](#) are not Mineral Reserves and do not have demonstrated economic viability.
- The statement uses the terminology, definitions and guidelines given in the CIM Standards on [Mineral Resources Ltd.](#) and Mineral Reserves (May 2014).

- The MRE is reported on 100 percent basis.
- Values given in the table have been rounded, apparent calculation errors resulting from this are not considered to be material.
- The effective date for the Mineral Resource statement is 16 November 2018.

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