

SolGold plc  
("SolGold" or the "Company")

## Large New Copper-Gold-Silver-Molybdenum Porphyry System Discovered in the Cisne-Loja Project

The Board of SolGold (LSE & TSX code: SOLG) is pleased to provide an update from the Company's regional exploration activities from its Cisne Loja Project in southern Ecuador, held by wholly owned subsidiary Green Rock Resources S.A.

### Highlights

- **New mineralised outcrops discovered at the Celen Prospect indicate a large new copper gold rich polymetallic porphyry system – 100% owned by SolGold.**
- **Extensive outcrops of porphyry style quartz-magnetite-chalcopyrite veining along with disseminated magnetite-chalcopyrite.**
- **Consistently rich copper, gold, silver and molybdenum mineralisation is present in outcrop over a large area 2km by 1km.**
- **Strong magnetic anomalism in mineralised zones. Magnetics identifies additional targets.**
- **Significantly, the porphyry style veins have 1:1 values of copper, gold with proportionate silver and molybdenum diagnostic of a strong Andean porphyry copper gold system.**
- **Proximal fracture hosted mineralisation is rich in diagnostic copper oxide and carbonate minerals, neotocite, malachite and azurite returning extremely high copper values.**
- **Significant rock chip mineralisation including:**
  - **R03001325 4.32% Cu, 4.51g/t Au, 20.8g/t Ag, 9.99ppm Mo**
  - **R03001342 .90% Cu, 0.21g/t Au, >100g/t Ag, 76.1ppm Mo**
  - **R03001304 2.54% Cu, 3.04g/t Au, 15.4g/t Ag, 185.5ppm Mo**
  - **R03001347 2.52% Cu, 3.11g/t Au, 12.5g/t Ag, 13.4ppm Mo**
  - **R03001303 2.46% Cu, 0.10g/t Au, 54.5g/t Ag, 54.9ppm Mo**
- **60/72 (83%) of samples >0.6% Cu and 0.6g/t Au.**
- **Initial gridded copper-gold soil anomalies confirms Celen as an extensive mineralised porphyry target**
- **Centre of the Celen Prospect is located 7km from SolGold's mineralised Cuenca Loma gold-silver epithermal prospect, representing a mineralised gold and silver epithermal vein field.**

Commenting on the results, Jason Ward, SolGold's Exploration & Country Manager said:

**"The recent discovery of this large copper gold target at Celen, which outcrops over an area of 2km x 1km and exhibits all of the geochemical and geophysical hallmarks of a large porphyry system, underscores the prospectivity and unexplored nature of the area and brings the number of SolGold priority projects from 12 to 13. The Celen copper gold target is located just 5km south of an epithermal gold field we discovered at Cisne Loja which outcrops over an area of 2.5km x 1.5 km, and we are optimistic about the discovery of both gold and copper ore bodies at Cisne Loja."**



## Introduction

Ecuador is located on the copper-gold rich and under-explored northern section of the Andean Copper Belt. The well explored southern portion is renowned as the production base for nearly half of the world's copper (**Figure 1**). SolGold's strategy to become a tier 1 copper and gold producer through systematic exploration continues to yield exciting results. Follow up exploration has focussed on 13 priority projects identified across SolGold's 75 granted regional concessions.

With 13 priority projects now recognised, ongoing exploration by SolGold technical teams is focussed on advancing these priority projects with a view to progress to drill testing as soon as possible. SolGold's high success rate has been achieved by operating multiple field teams comprising 42 Ecuadorean geologists in regional exploration, led by highly experienced national geologists and applying the exploration discovery and appraisal blueprint developed over the last 4 years at Alpala.

## Further Information

### Cisne 2C

*Coherent area of copper mineralisation over 1km x 2km*

Continued mapping and sampling by Green Rock Resources field teams at the Cisne Loja Project across three granted tenements (El Cisne 2A,2B,2C) covering 2km<sup>2</sup> has located outcrops with strong porphyry style copper, gold, silver and molybdenum mineralisation in the Celen prospect located in the El Cisne 2C concession. (**Figure 2 & 3**). Porphyry style mineralised outcrops occur in an extensive 2km by 1km area indicating a large poly metallic mineralised system located less than 7km south from the previously identified gold-silver epithermal field in El Cisne 2A.

The copper mineralization is best developed within magnetite-chalcopyrite porphyry veins in quartz diorite and microdiorite units with associated disseminated chalcopyrite mineralisation (**Figures 4 & 5**). Zones of high grade copper and gold mineralisation are also developed proximal to the porphyry style veins with fractures containing diagnostic copper oxide and carbonate minerals, neotocite, malachite and azurite.

### *Diagnostic magnetic signatures*

Strongly anomalous magnetic signatures characterise the copper mineralisation, and additional target areas west of Cuenca Loja and between Celen and Cueva Loja are still to be sampled (**Figure 2**)

Outcrops are characterised by pervasive magnetite mineralisation to 3% of the rock with associated chlorite and epidote alteration. The main orientation of veins and fractures are north east trending with a secondary north west trending structural orientation. Weathered mineralised intrusive units are present in volcanic units to the north of the main zone of mineralisation containing quartz-hematite-goethite veining. There are numerous tourmaline breccias outcropping south of the mineralised zone (**Figure 5**)

Of the 72 rock chip samples taken at the Celen prospect, 60 samples (83%) have returned grades greater than 0.6% Cueq with the average molybdenum results for all 72 samples of 51.95ppm Mo (**Figure 3, Table 1**). Best rock chip results from recent sampling include;

- R03001325 4.32% Cu, 4.51g/t Au, 20.8g/t Ag, 9.99ppm Mo
- R03001342 3.90% Cu, 0.21g/t Au, >100g/t Ag, 76.1ppm Mo



- R03001304 2.54% Cu, 3.04g/t Au, 15.4g/t Ag, 185.5ppm Mo
- R03001347 2.52% Cu, 3.11g/t Au, 12.5g/t Ag, 13.4ppm Mo
- R03001303 2.46% Cu, 0.10g/t Au, 54.5g/t Ag, 54.9ppm Mo
- R03001330 1.99% Cu, 2.38g/t Au, 28.1g/t Ag, 8.69ppm Mo
- R03001333 1.77% Cu, 0.12g/t Au, 35.9g/t Ag, 5.1ppm Mo
- R03001328 1.63% Cu, 1.44g/t Au, 12.75g/t Ag, 31.3ppm Mo

Previously announced rock chip sample results include;

- R03001218 5.28% Cu, 0.66 g/t Au, 91.4 g/t Ag
- R03001221 5.08% Cu, 1.10 g/t Au, 25.8 g/t Ag
- R03001204 4.92% Cu, 3.90 g/t Au, 55.7 g/t Ag
- R03001215 3.65% Cu, 0.02 g/t Au, 95.5 g/t Ag
- R03001214 3.43% Cu, 0.09 g/t Au, 73.8 g/t Ag
- R03001206 2.06% Cu, 0.24 g/t Au, 28.7 g/t Ag
- R03001211 1.63% Cu, 0.30 g/t Au, 39.8 g/t Ag
- R03001213 1.45% Cu, 0.02 g/t Au, 36.6 g/t Ag
- R03001207 1.39% Cu, 0.15 g/t Au, 24.6 g/t Ag
- R03001217 1.33% Cu, 0.08 g/t Au, 27.6 g/t Ag
- R03001218 5.28% Cu, 0.66 g/t Au, 91.4 g/t Ag
- R03001221 5.08% Cu, 1.10 g/t Au, 25.8 g/t Ag
- R03001204 4.92% Cu, 3.90 g/t Au, 55.7 g/t Ag
- R03001215 3.65% Cu, 0.02 g/t Au, 95.5 g/t Ag
- R03001214 3.43% Cu, 0.09 g/t Au, 73.8 g/t Ag

Initial gridded soil anomalies confirm the extensive mineralised area identified by mapping and rock chip sampling. Large coherent copper and gold soil anomalies show a positive correlation to identified mineralisation and delineate additional areas for follow up exploration (**Figure 6 & 7**). The copper anomaly comprises extremely high copper in soil values up to 0.1% Cu. Soil anomalies remain open to the north and south and the gridded soil program will be extended to define the surface limits of the Celen porphyry target.

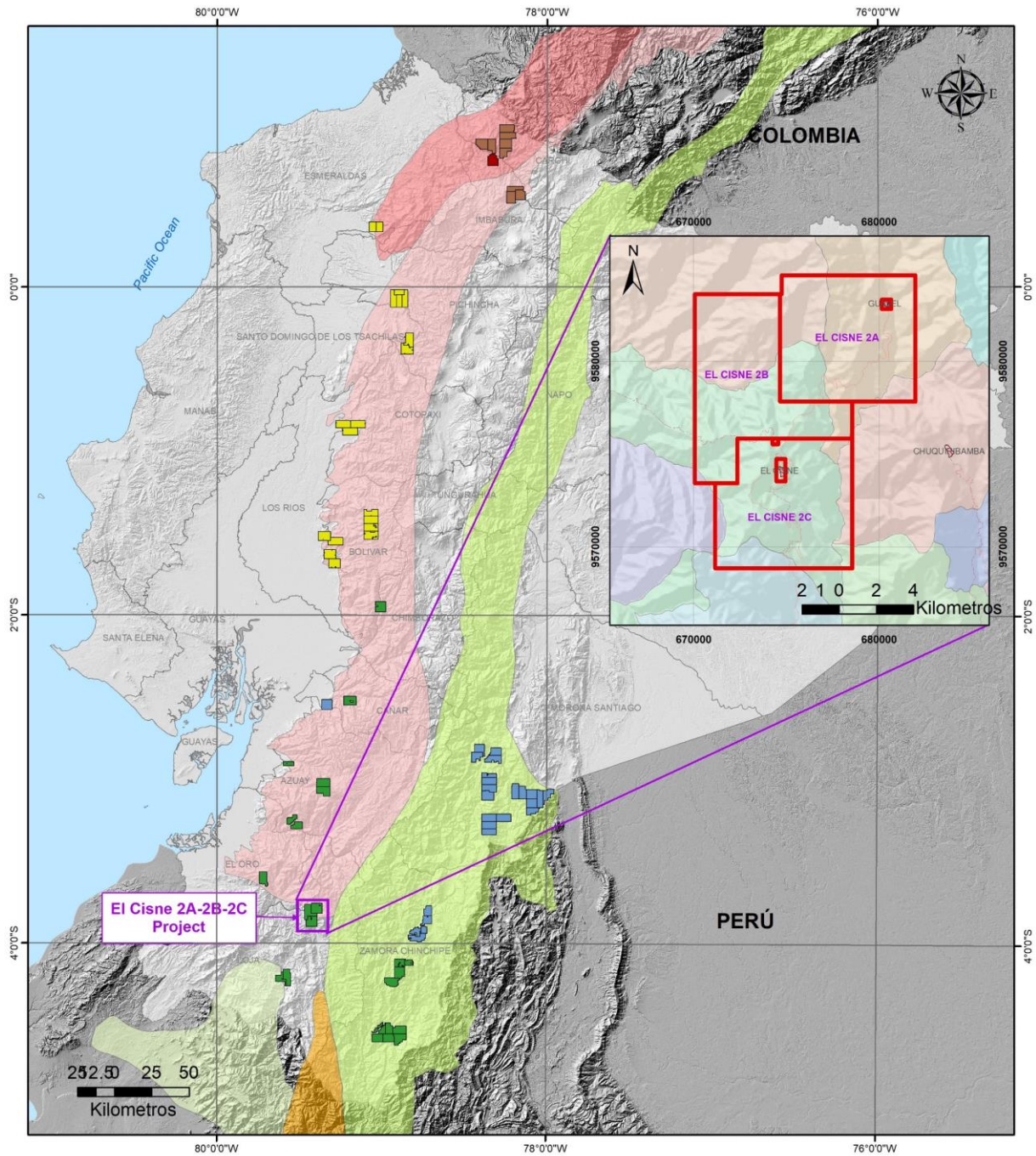
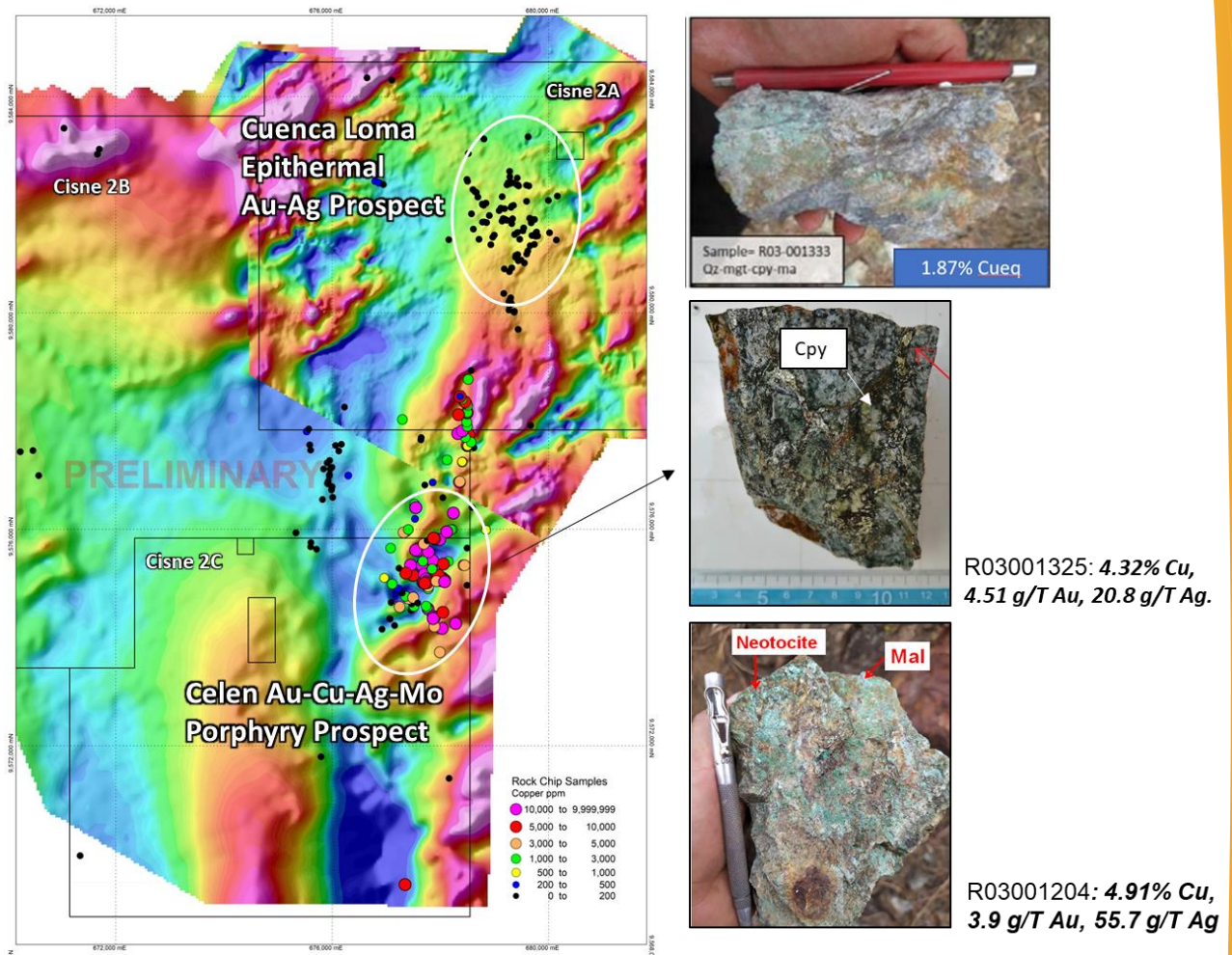


Figure 1: Location plan of the Cisne Loja Project in southern Ecuador.



**Figure 2: Copper results in rock chips over aeromagnetic RTP data.**

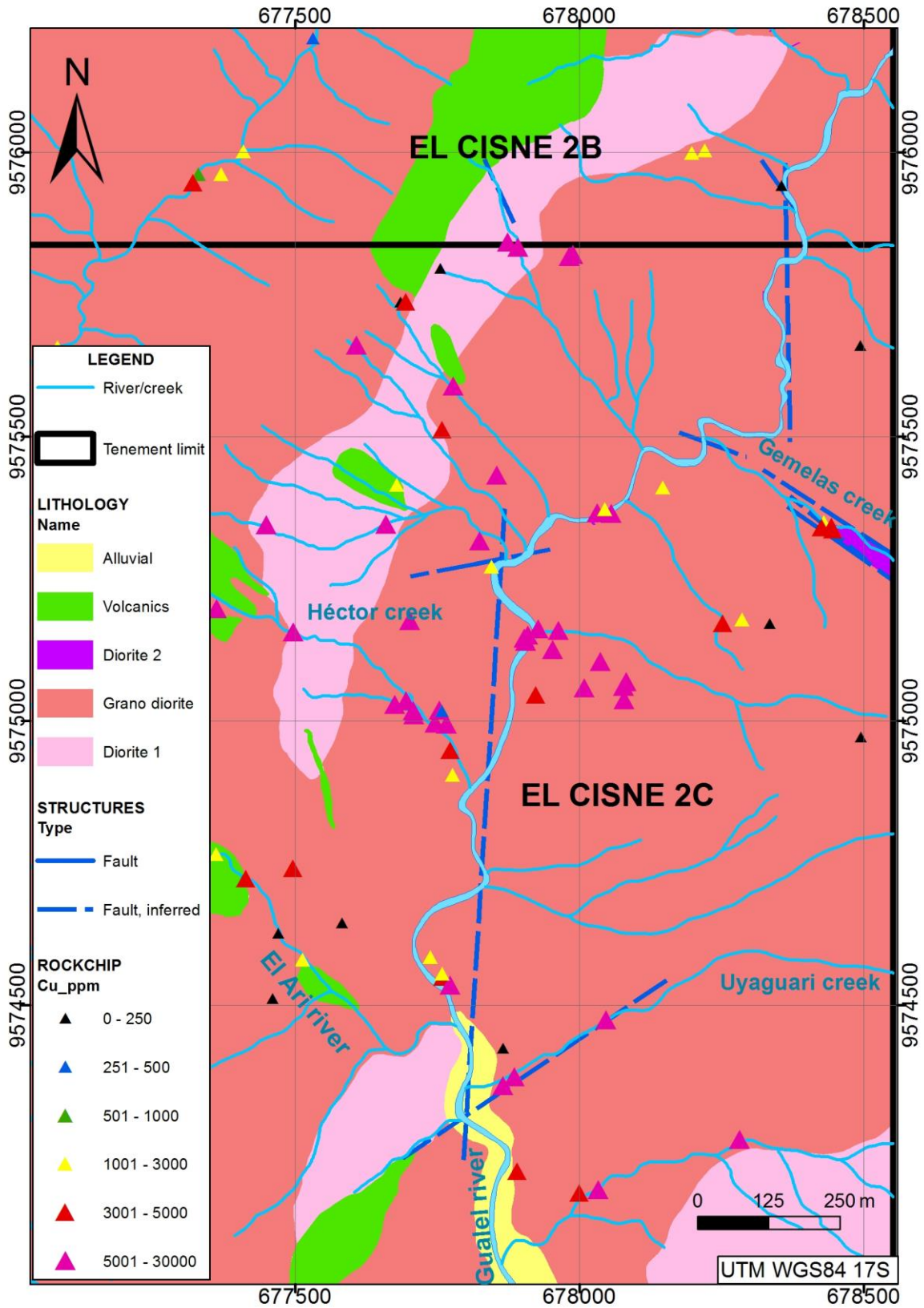
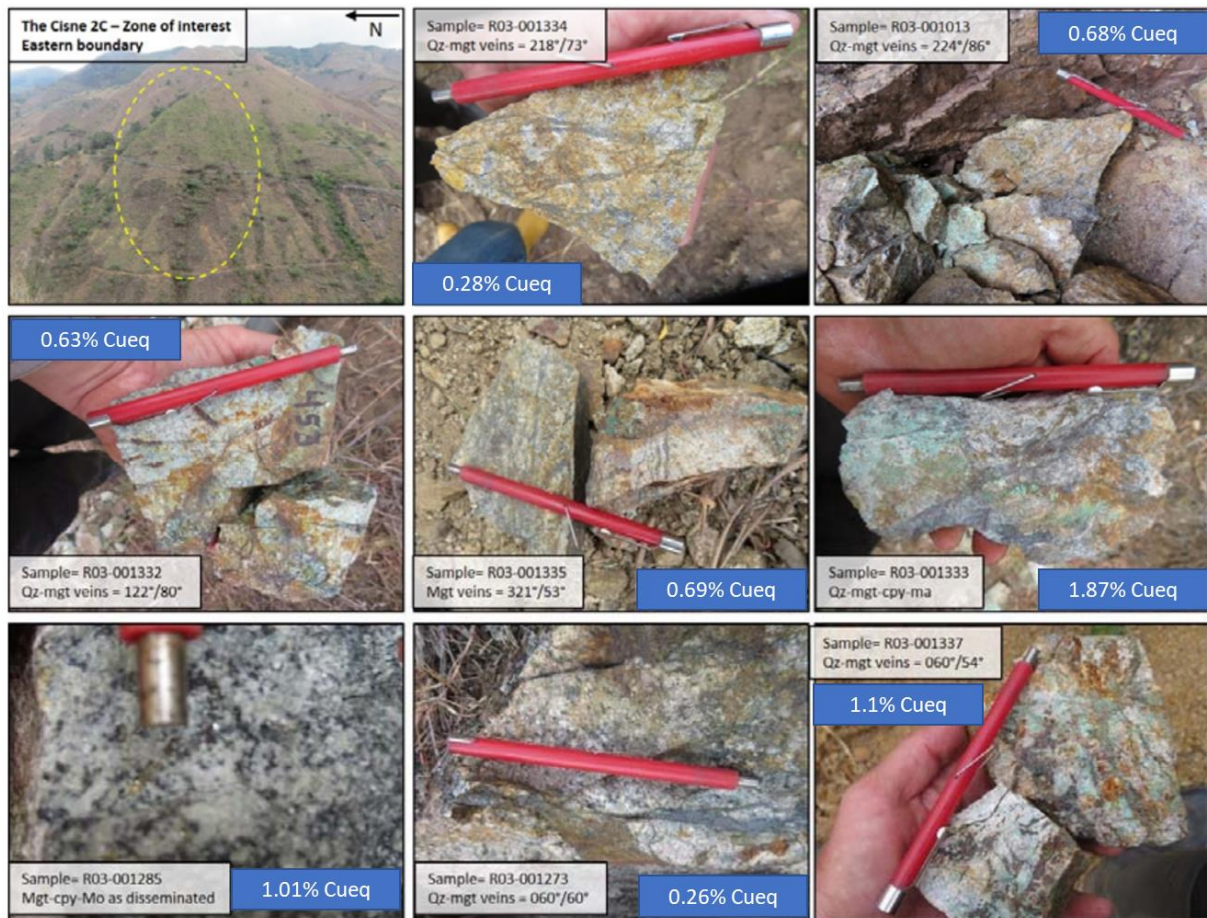
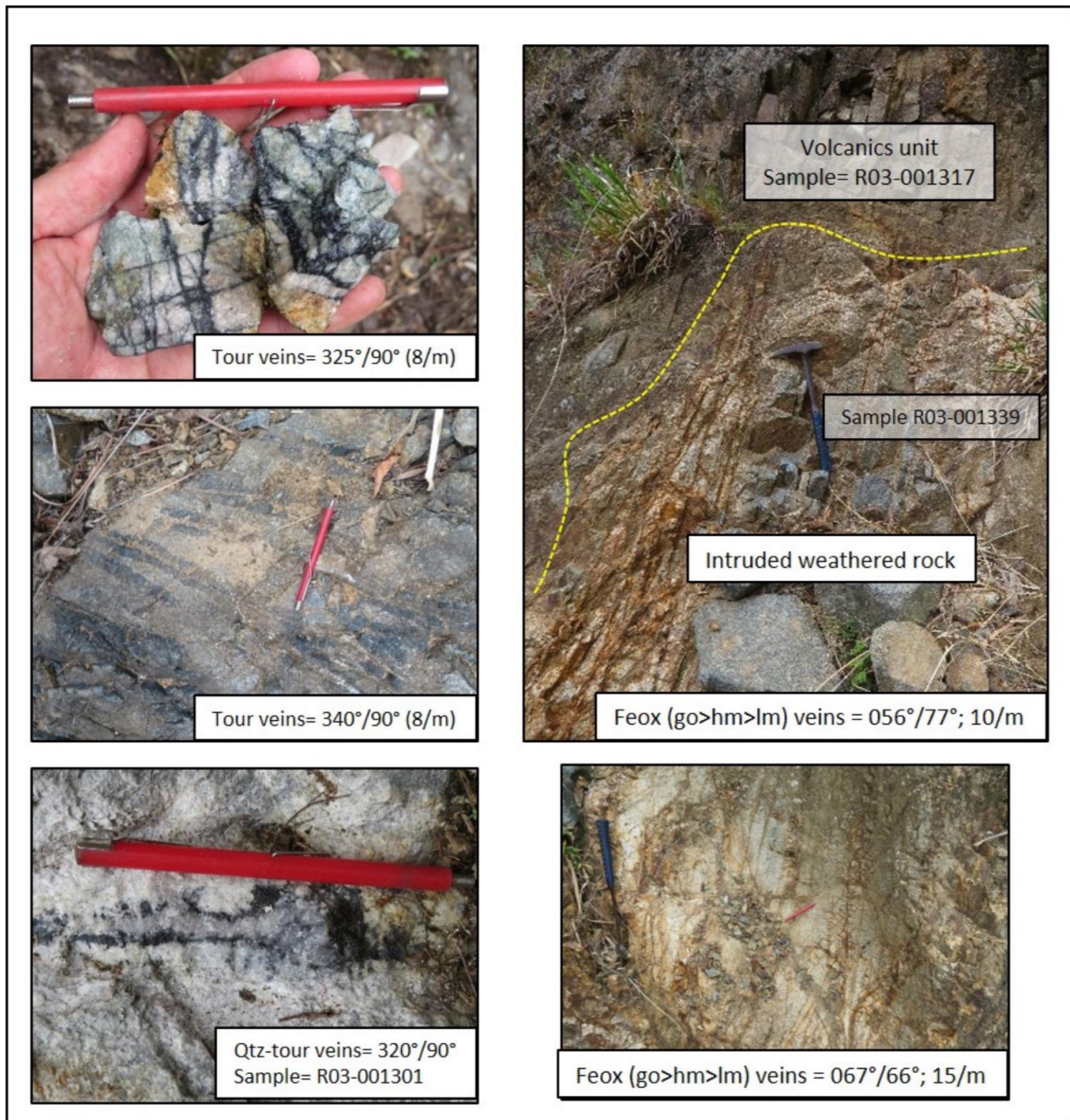


Figure 3: Celen geology with copper rock chip values.



**Figure 4:** Rock chip samples from the Celen Prospect



**Figure 5:** Celen prospect rock chip samples of peripheral intrusive units and tourmaline breccias .



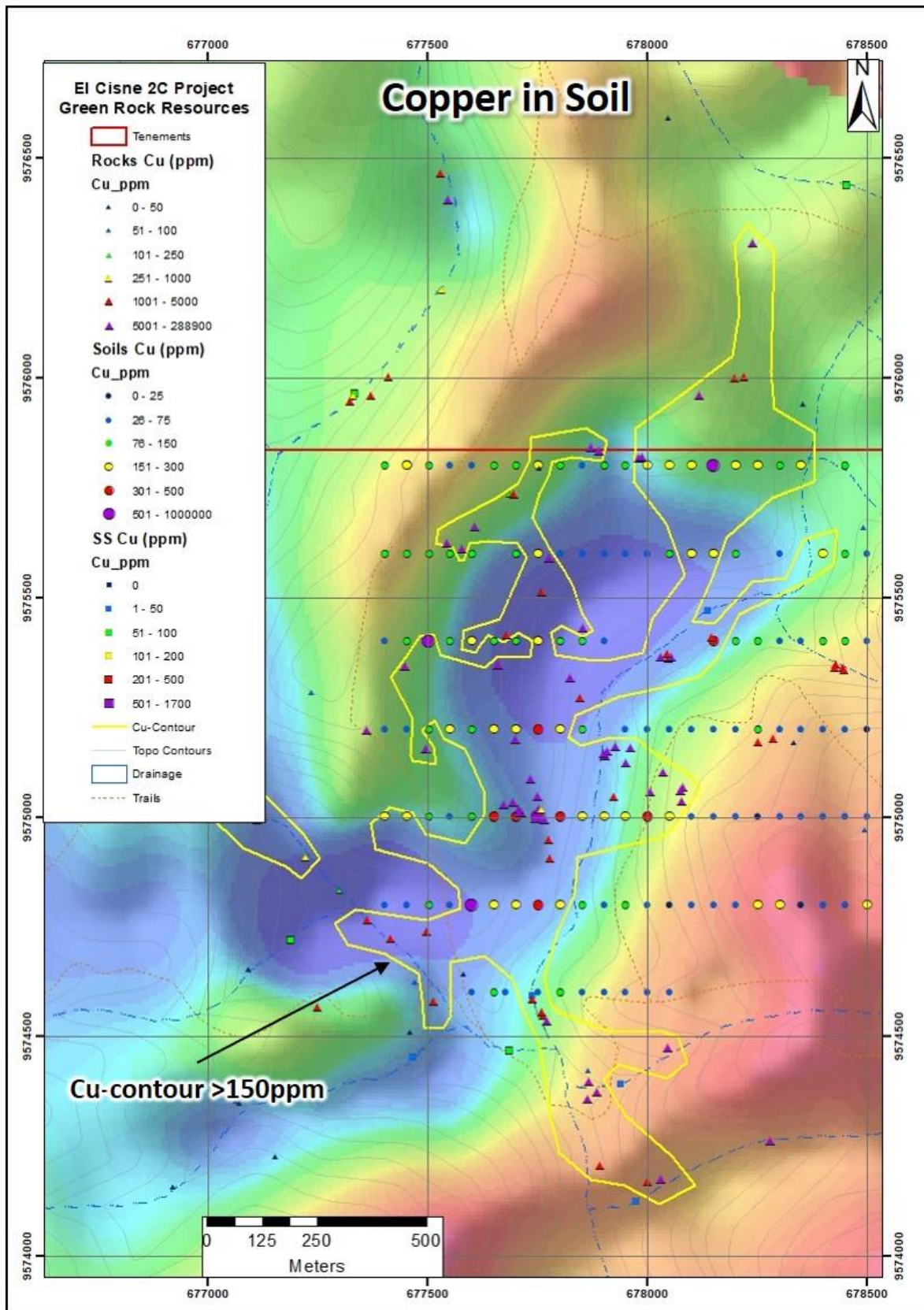


Figure 6: Copper in soil values with copper geochemical anomaly and RTP magnetic data

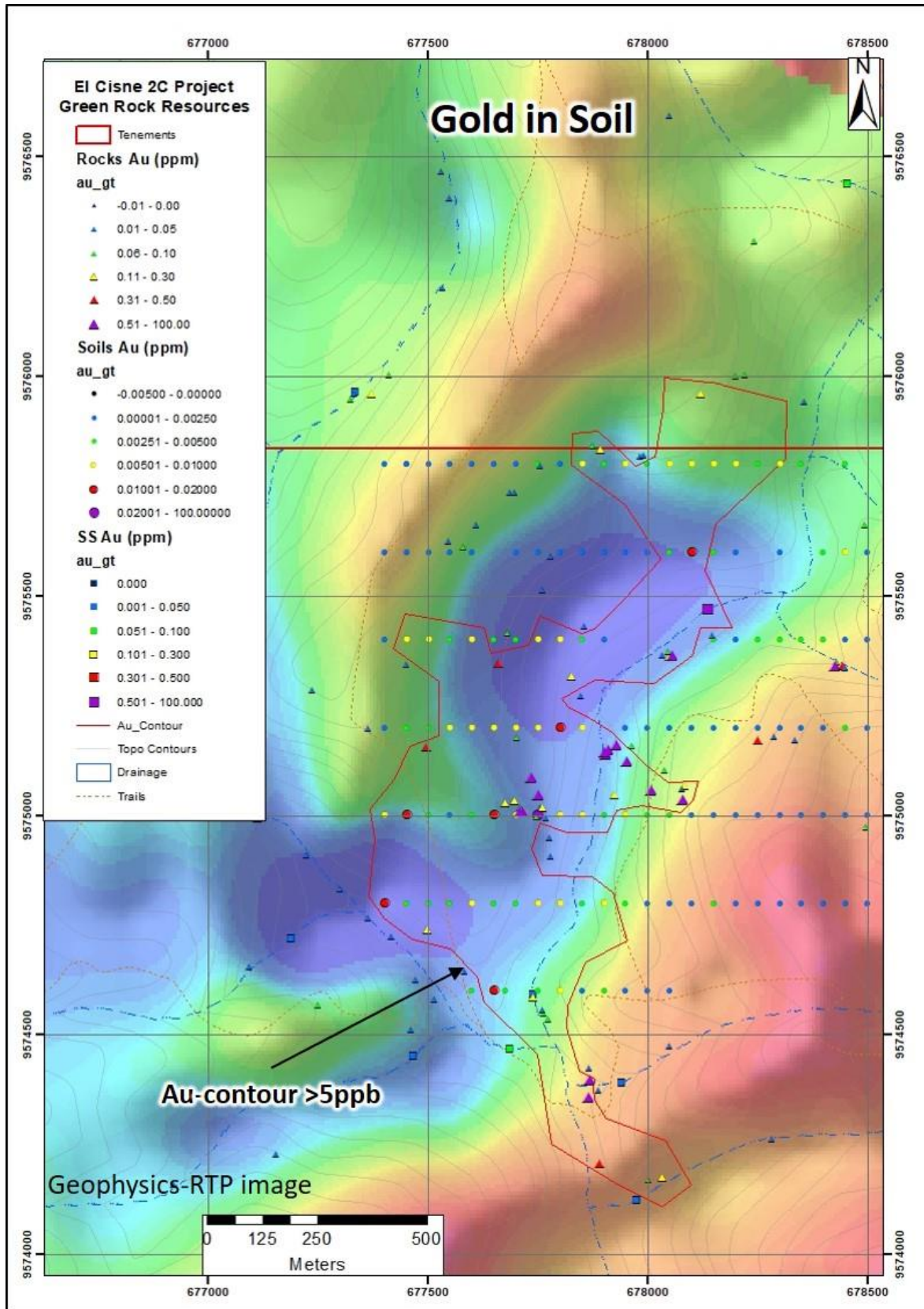


Figure 7: Gold in soil values with gold geochemical anomaly and RTP magnetic data

Sample ID	Easting	Northing	RL	Cu_ppm	Au_ppm	Ag_ppm	Mo_ppm
R03001218	677734	9575087	1830	52790	0,661	91,4	165
R03001221	677751	9575045	1803	50820	1,1	25,8	69,9
R03001204	677712	9575009	1803	49180	3,9	55,7	86
R03001325	677867	9574396	1686	43220	4,51	20,8	9,99
R03001342	678118	9575961	2014	39010	0,212	100	76,1
R03001215	677543	9575623	2052	36530	0,025	95,5	542
R03001214	677578	9575610	2027	34330	0,098	73,8	75,6
R03001224	677777	9575588	1893	28240	0,026	60,1	18,8
R03001224	677777	9575588	1893	28240	0,026	60,1	18,8
R03001223	677854	9575431	1724	28120	0,019	61,3	41,7
R03001304	678406	9577825	2109	25420	3,04	15,4	185,5
R03001347	678078	9575036	1899	25220	3,11	12,5	13,4
R03001303	678323	9577776	2131	24580	0,103	54,5	54,9
R03001282	678240	9576306	1954	22330	0,092	96	431
R03001206	677674	9575028	1843	20610	0,243	28,7	31,6
R03001330	678008	9575057	1824	19880	2,38	28,1	8,69
R03001333	678081	9575068	1896	17700	0,116	35,9	5,1
R03001328	677865	9574357	1700	16300	1,44	12,75	31,3
R03001211	677659	9575345	1919	16270	0,304	39,8	11,95
R03001296	678500	9577553	2063	16230	0,263	100	214
R03001213	677448	9575344	2012	14500	0,028	36,6	38,8
R03001207	677694	9575034	1821	13910	0,154	24,6	6,19
R03001217	677701	9575175	1858	13330	0,084	27,6	14,55
R03000313	677908	9575150	1726	12150	1.535	11,3	3,51
R03000312	677905	9575139	1726	10670	0,839	11,55	10,6
R03000314	677902	9575144	1726	8900	0,758	6,61	6,65
R03001209	677496	9575155	1947	7840	0,32	7,69	12,5
R03001012	677765	9574993	1764	7250	0,038	2,64	15,1
R03001205	677707	9575017	1817	6820	0,064	6,02	1,93
R03001335	678077	9575060	1886	6710	0,024	5,41	1,61
R03001016	677927	9575161	1707	6590	0,944	3,5	5
R03001015	677952	9575124	1742	6370	1,9	21,8	2,14
R03001208	677824	9575316	1760	6270	0,186	5,38	34,4
R03001348	678055	9575364	1795	6120	0,548	6,98	2,63
R03001212	677607	9575660	2022	6100	0,031	10,65	34,6
R03001216	677361	9575196	2011	6050	0,028	9,89	18,75
R03001013	677745	9574995	1760	5890	0,097	5,11	145,5
R03001332	678036	9575103	1825	5700	0,071	11,35	1,66



R03001222	677753	9575018	1788	5590	0,05	2,73	6,64
R03001337	677708	9575010	1824	5550	0,608	8,9	92,9
R03001329	678046	9574473	1776	5410	0,05	21,9	1,5
R03001338	677962	9575158	1754	5300	0,054	24,7	69,6
R03001285	678426	9575339	1867	4710	0,602	8,41	20,2
R03001340	677923	9575045	1761	3400	0,213	0,62	1,15

**Table 1:** Significant results table



## 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:

Information in this report relating to the exploration results is based on data 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  
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## ABOUT SOLGOLD

SolGold is a leading exploration company focussed on the discovery and definition of world-class copper and gold deposits. In 2018 SolGold's management team was recognised by the "Mines and Money" Forum as an example of excellence in the industry, and continues to strive to deliver objectives efficiently and in the interests of shareholders. SolGold is the largest and most active concession holder in Ecuador and is aggressively exploring the length and breadth of this highly prospective and gold-rich section of the Andean Copper Belt.

The Company operates with transparency and in accordance with international best practices. SolGold is committed to delivering value to its shareholders, while simultaneously providing economic and social benefits to impacted communities, fostering a healthy and safe workplace and minimizing the environmental impact.

### ***Dedicated stakeholders***

SolGold employs a staff of over 560 and at least 98% are Ecuadorean. This is expected to grow as the operations at Alpala, and in Ecuador generally, expand. SolGold focusses its operations to be safe, reliable and environmentally responsible and maintains close relationships with its local communities. SolGold has engaged an increasingly skilled and experienced team of geoscientists using state of the art geophysical and geochemical modelling applied to an extensive data base to enable the delivery of ore grade intersections from nearly every drill hole at Alpala. SolGold has 86 geologists, of which 11% are female, on the ground in Ecuador looking for copper and gold.

### **About Cascabel and Alpala**

The Alpala deposit is the main target in the Cascabel concession, located on the northern section of the heavily endowed Andean Copper Belt, the entirety of which is renowned as the base for nearly half of the world's copper production. The project area hosts mineralisation of Eocene age, the same age as numerous Tier 1 deposits along the Andean Copper Belt in Chile and Peru to the south. The project base is located at Rocafuerte within the Cascabel concession in northern Ecuador, an approximately three hour drive on sealed highway north of Quito, close to water, power supply and Pacific ports (**Figure 1**).

Having fulfilled its earn-in requirements, SolGold is a registered shareholder with an unencumbered legal and beneficial 85% interest in ENSA (Exploraciones Novomining S.A.) which holds 100% of the Cascabel concession covering approximately 50km<sup>2</sup>. The junior equity owner in ENSA is required to repay 15% of costs since SolGold's earn in was completed, from 90% of its share of distribution of earnings or dividends from ENSA or the Cascabel concession. It is also required to contribute to development or be diluted, and if its interest falls below 10%, it shall reduce to a 0.5% NSR royalty which SolGold may acquire for US\$3.5m.

Over 226,328m of diamond drilling has been completed on the project. With numerous rigs currently active on the project, SolGold produces up to approximately 10,000m of core every month. The Cascabel drill program is currently focussed on extending and upgrading the status of the Alpala Resource, as well as further drill testing of the rapidly evolving Aguinaga prospect. Drill testing of the Trivinio target has commenced, whilst the numerous other untested targets, namely at Moran, Cristal, Tandayama-America and Chinambicito, are flagged for drill testing as overall program demands allow.

The November 2018 Alpala MRE update, dated 15 November 2018, was estimated from 68,173 assays. Drill core samples were obtained from total of 133,576m of drilling comprising 128 diamond drill holes,



including 75 drill holes comprising, 34 daughter holes, 8 redrills, and 11 over-runs, and represents full assay data from holes 1-67 and partial assay data received from holes 68 to 75. In contrast, the Dec 2017 Maiden MRE was estimated from 26,814 assays obtained from 53,616m of drilling comprising 45 drill holes, including 10 daughter holes and 5 redrills.

The November 2018 Alpala updated Mineral Resource Estimate (MRE) totals a current:

- 2,050 Mt @ 0.60% CuEq (at 0.2% CuEq cut-off) in the Indicated category, and 900 Mt @ 0.35% CuEq (at 0.2% CuEq cut-off) in the Inferred category.
- Contained metal content of 8.4 Mt Cu and 19.4 Moz Au in the Indicated category.
- Contained metal content of 2.5 Mt Cu and 3.8 Moz Au in the Inferred category.

Investors should consult the technical report dated 3 January 2019 for a detailed account of the assumptions on which the estimates were based as well as any known legal, political, environmental and other risks that could materially affect the development of the resources.

### ***Getting Alpala advanced towards development***

The resource at the Alpala deposit boasts a high grade core which, in the event of the construction of a mine, is targeted to facilitate early cashflows and an accelerated payback of initial capital. SolGold is currently investigating development and financing options available to the company for the development of Cascabel on reaching feasibility.

The results of the PEA were published on 20 May 2019, highlighting the following key aspects:

- Net 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.
- 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.
- Pre-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.
- Payback Period on initial start-up capital – Range from 3.5 to 3.8 years after commencement of production depending on production rate scenario.
- Preferred Mining Method – Underground low-cost mass mining using Block Cave methods applied over several caves designed on two vertically extensive Lifts.

Full results and all details of the PEA are available in the Company's market release of 20 May 2019.

### **SolGold's regional push**

SolGold is using its successful and cost efficient blueprint established at Alpala, and Cascabel generally, to explore for additional world class copper and gold projects across Ecuador. SolGold is the largest and most active concessionaire in Ecuador.

The Company wholly owns four other subsidiaries active throughout the country that are now focussed on thirteen high priority gold and copper resource targets, several of which the Company believes have the potential, subject to resource definition and feasibility, to be developed in close succession or even on a more accelerated basis from Alpala.

SolGold is listed on the London Stock Exchange and Toronto Stock Exchange (LSE/TSX: SOLG). SolGold is listed on the London Stock Exchange and Toronto Stock Exchange (LSE/TSX: SOLG). The Company has on issue a total of 1,846,321,033 fully-paid ordinary shares; 139,012,000 share options exercisable at 60p and 21,250,000 share options exercisable at 40p.





**Figure 1:** Location of Cascabel project in Imbabura Province, northern Ecuador, highlighting the significant capital advantages held by the project, with proximity to ports, road infrastructure, hydro-electric power stations and the trans-continental power grid.

See [www.solgold.com.au](http://www.solgold.com.au) for more information. Follow us on twitter @SolGold\_plc

#### CAUTIONARY NOTICE

News releases, presentations and public commentary made by SolGold plc (the "Company") and its Officers may contain certain statements and expressions of belief, expectation or opinion which are forward looking statements, and which relate, inter alia, to interpretations of exploration results to date and the Company's proposed strategy, plans and objectives or to the expectations or intentions of the Company's Directors. Such forward-looking and interpretative statements involve known and unknown risks, uncertainties and other important factors beyond the control of the Company that could cause the actual performance or achievements of the Company to be materially different from such interpretations and forward-looking statements.

Accordingly, the reader should not rely on any interpretations or forward-looking statements; and save as required by the exchange rules of the TSX and LSE or by applicable laws, the Company does not accept any obligation to disseminate any updates or revisions to such interpretations or forward-looking statements. The Company may reinterpret results to date as the status of its assets and projects changes with time expenditure, metals prices and other affecting circumstances.

This release may contain "forward-looking information" within the meaning of applicable Canadian securities legislation. Forward-looking information includes, but is not limited to, statements regarding the Company's plans for developing its properties. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved".

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to: transaction risks; general business, economic, competitive, political and social uncertainties; future prices of mineral prices; accidents, labour disputes and shortages and other risks of the mining industry. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws.

The Company and its officers do not endorse, or reject or otherwise comment on the conclusions, interpretations or views expressed in press articles or third-party analysis, and where possible aims to circulate all available material on its website.



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:

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

Source: after MinEx Consulting, May 2017

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

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

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

<sup>4</sup> Source: <https://www.ivanhoemines.com/projects/kamoa-kakula-project/>

<sup>5</sup> Source:

[http://www.newcrest.com.au/media/resource\\_reserves/2016/December\\_2016\\_Resources\\_and\\_Reserves\\_Statement.pdf](http://www.newcrest.com.au/media/resource_reserves/2016/December_2016_Resources_and_Reserves_Statement.pdf)

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

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

<sup>8</sup> Source: [https://mrdata.usgs.gov/sedau/show-sedau.php?rec\\_id=103](https://mrdata.usgs.gov/sedau/show-sedau.php?rec_id=103)

<sup>9</sup> Source: [http://www.chinadaily.com.cn/business/2017-03/29/content\\_28719822.htm](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 Category	Resource Category	Tonnage (Mt)	Grade		Contained Metal			
			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:** Alcala 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 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 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.*