

Hannanmetals

A person wearing a tan hat, a grey long-sleeved shirt, and a red and blue backpack is kneeling on the rocky bank of a stream. They are holding a yellow handheld electronic device with a screen, likely a GPS or data logger. The stream is shallow and flows over rocks. The background shows more of the stream and surrounding vegetation.

**FULLY FUNDED BASIN SCALE
SEDIMENT HOSTED
COPPER | SILVER
PERU**

CORPORATE PRESENTATION
DECEMBER 2020

TSXV : HAN | OTC: HANNF



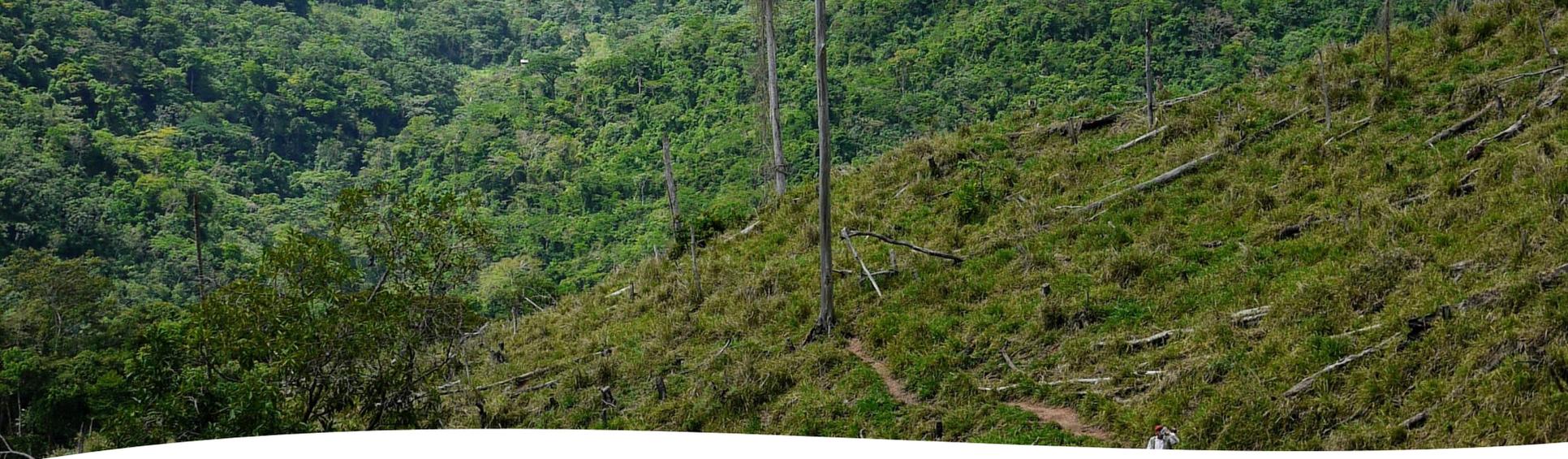
Disclaimer

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Qualified Person: The qualified person for Hannan's projects, Michael Hudson, CEO for Hannan, and a Fellow of the Australasian Institute of Mining and Metallurgy, has reviewed and verified the contents of this presentation.

Dec 2020



Key Points

- **Hannan is a first mover.** A new frontier basin-scale copper-silver district
- Early exploration results support the geological model for a **major sediment-hosted copper system**, some similarities to the Kupferschiefer/Spar Lake deposits
- Hannan recognized the exceptional potential for large copper-silver deposits in this part of Peru and has aggressively staked a commanding position over **940 square kilometres of prospective geology**
- On a basin scale, the project exhibits district wide mineralization hosted in reduced sedimentary rocks covering at least **120 kilometres of strike and 50 kilometres of width** in scattered outcrops, road cuts, and float & stream boulders
- Fully funded Option and Joint Venture Agreement with Japan Oil, Gas and Metals National Corporation ("JOGMEC"). JOGMEC has the option to earn up to a **75% beneficial interest in the San Martin Project by spending up to US\$35,000,000** to deliver to the joint venture ("JV") a feasibility study.
- Concurrently, Hannan will continue to progress exploration on its other projects

JOGMEC OPTION AND JV

JOGMEC has the option to earn up to a 75% beneficial interest in the San Martin Project by spending up to US\$35,000,000 to deliver to the joint venture ("JV") a feasibility study. The San Martin Project covers 656 square kilometres of Hannan's 940 square kilometre Peruvian holdings. Hannan will continue to progress exploration on its remaining Peruvian projects.

Highlights:

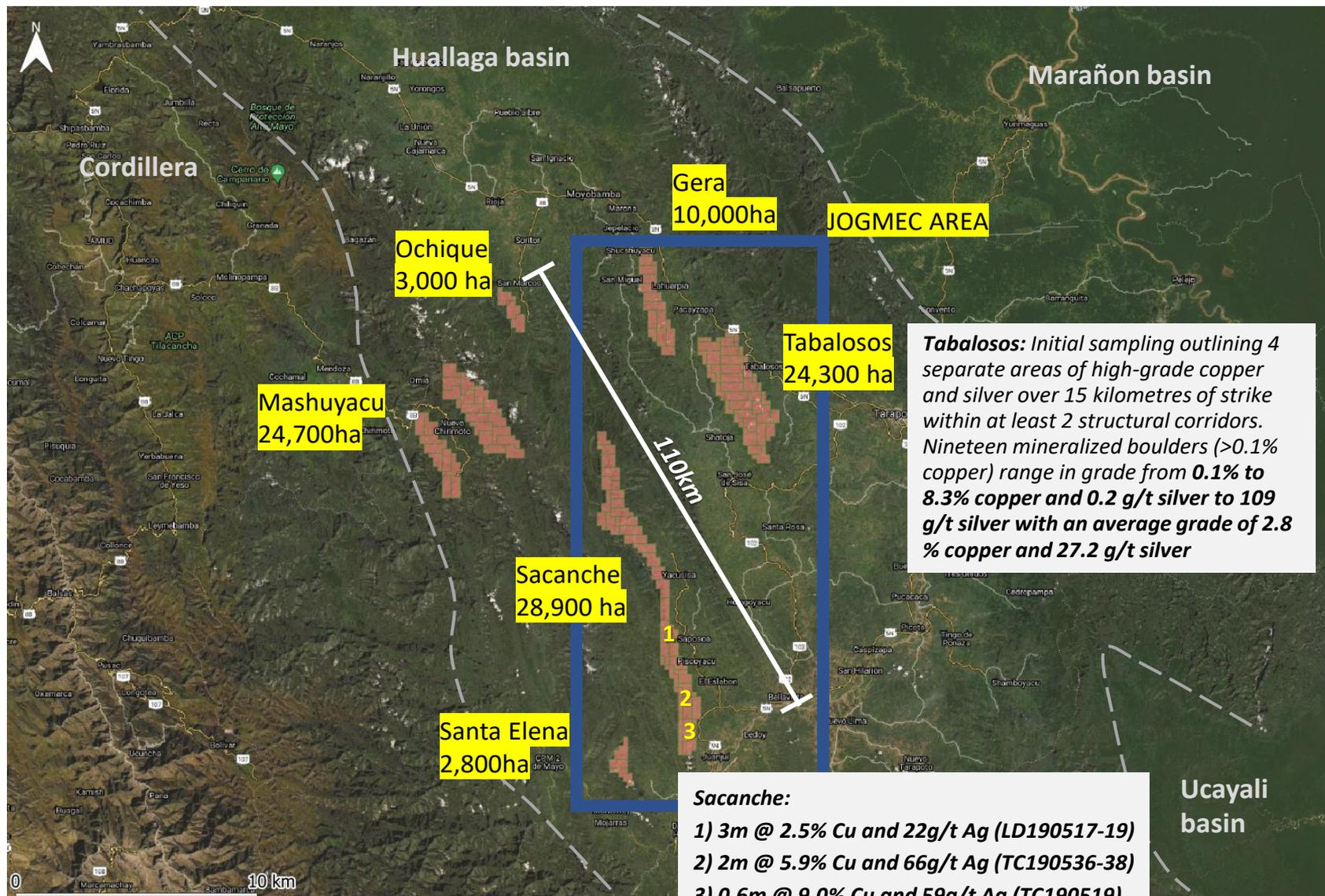
- The Agreement grants JOGMEC the option to earn an initial **51% ownership** interest by funding **US\$8,000,000 in project expenditures** at San Martin over a 4-year period, subject to acceleration at JOGMEC's discretion. JOGMEC's minimum commitment is to fund US\$1,000,000 from 01 April 2020 to 31 March 2021 and JOGMEC has agreed to reimburse Hannan for all project related costs from 01 April 2020;
- JOGMEC, at its election, can then earn:
 - **an additional 16% interest for a total 67% ownership** interest by achieving either a prefeasibility study or funding a further **US\$12,000,000 in project expenditures** in amounts of at least US\$1,000,000 per annum (for a US\$20,000,000 total expenditure); and,
 - **subject to owning a 67% interest, a further 8% interest for a total 75% ownership** interest by achieving either a feasibility study or funding a further **US\$15,000,000 in project expenditures** in amounts of at least US\$1,000,000 per annum (for a US\$35,000,000 total expenditure);
- Should JOGMEC not proceed to a prefeasibility study or spend US\$20,000,000 in total, Hannan shall have the right to purchase from JOGMEC for the sum of US\$1.00, a two percent (2%) Participating Interest, whereby Hannan Metals' Participating Interest will be increased to fifty-one percent (51%) and JOGMEC's Participating Interest will be reduced to forty-nine percent (49%);
- At the completion of a feasibility study, JOGMEC has the right to either:
 - Purchase up to an additional ten percent (10%) Participating Interest from Hannan Metals (for a total 85% maximum capped Participating Interest) at fair value as determined in accordance with internationally recognized professional standards by an agreed upon independent third-party valuator; or
 - Receive up to an additional ten percent (10%) Participating Interest from Hannan (for a total 85% maximum capped Participating Interest) in consideration of JOGMEC's agreement to fund development of the project, by loan carrying Hannan until the San Martin Project generates positive cash flow;
- After US\$35,000,000 has been spent by JOGMEC and before a feasibility study has been achieved, both parties will fund expenditures pro rata or dilute via a standard industry dilution formula;
- If the Participating Interest in the Joint Venture of any party is diluted to less than 5% then that party's Participating Interest will be automatically converted to a 2.0% net smelter royalty ("NSR"), and the other party may at any time purchase 1.0% of the 2.0% NSR for a cash payment of US\$1,000,000;
- Hannan will manage exploration at least until JOGMEC earns a 51 per cent interest, after which the majority participant interest holder will be entitled to act as the operator of the joint venture; and
- Initial exploration activities will focus on the collection of the geological, geophysical, and geochemical datasets in the JV project areas. The first phase of exploration is expected to conclude March 2021.

Key Points

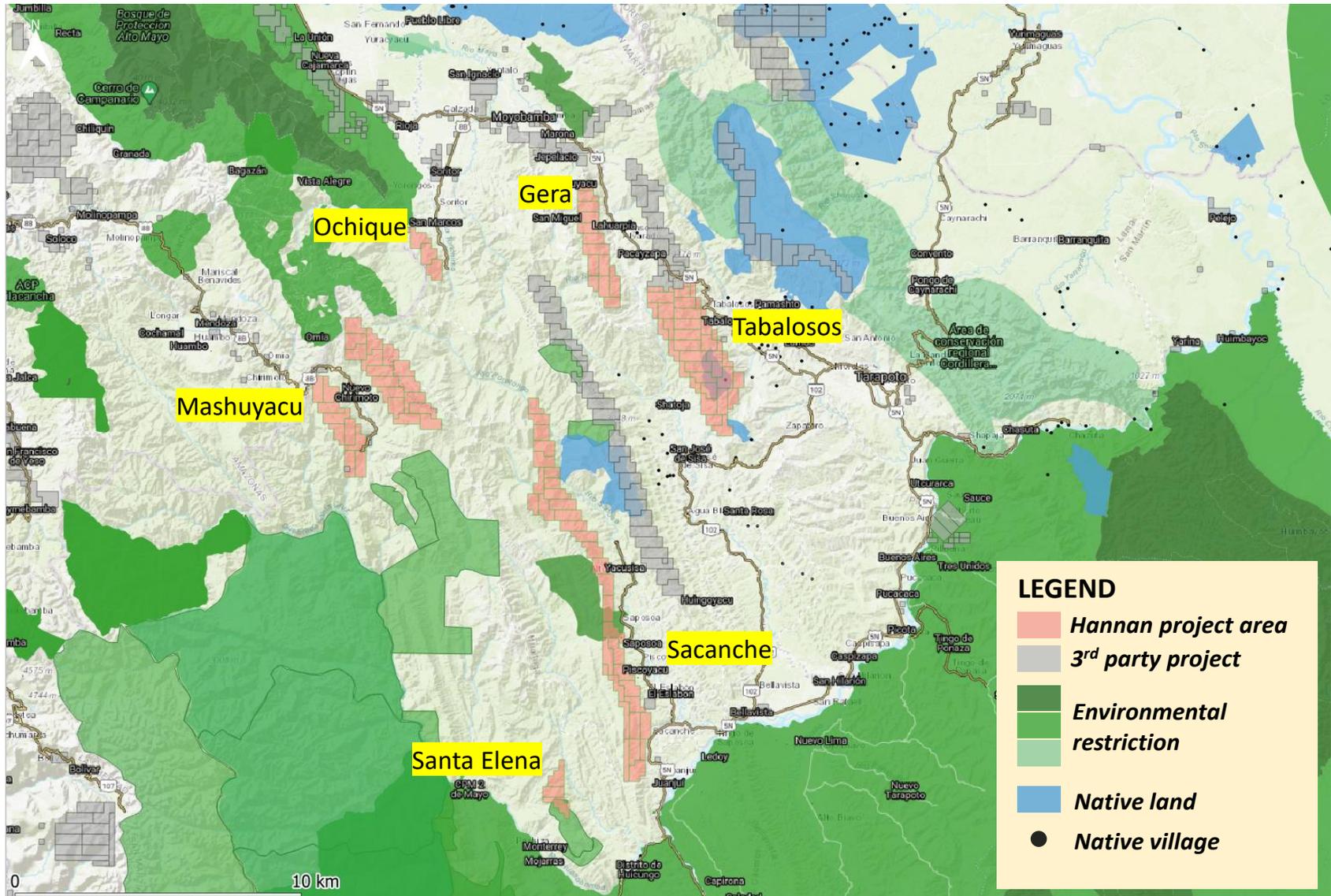


- The target areas are aligned along **linear trends** of ~ **100km strike length**
- **Two target styles identified** – structurally hosted and stratiform Cu-Ag mineralization
- Best results from **outcrop (channel samples)** – 20km apart:
 - **3m @ 2.5% Cu & 22g/t Ag** (LD190517-19)
 - **2m @ 5.9% Cu & 66g/t Ag** (TC190536-38)
 - **0.6m @ 8.7% Cu & 59g/t Ag** (TC190536-38)

An overview

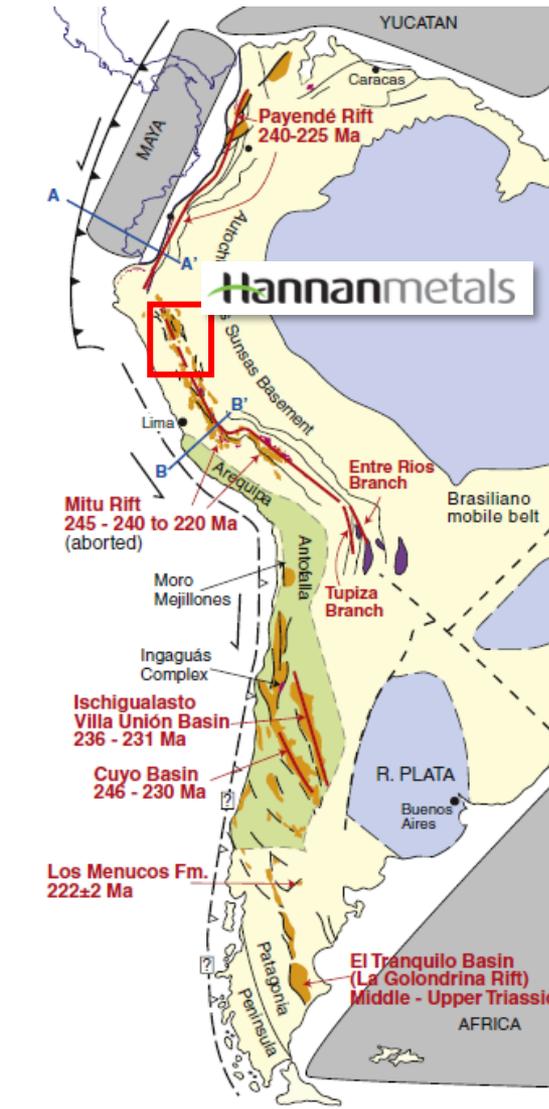


Access and restrictions



History

- Located in **North Central Peru**, in the sub-Andean zone
- Initiated during the breakup of the **Pangea supercontinent**
- **Historically mainly overlooked by the mineral industry**, but has been the focus of the hydrocarbon industry for decades. Only <2 years RTX and privateco worked in area.
- **Only three diamond drill holes** have been drilled in the project areas.
- Described as: “**One of the best surveyed thrust and fold belts in the world** (for oil and gas)”. At the **San Martin project** alone there is **2,000 kilometres of 2D seismic**



Geological setting

The Huallaga basin has been an **active depocenter** since the Triassic

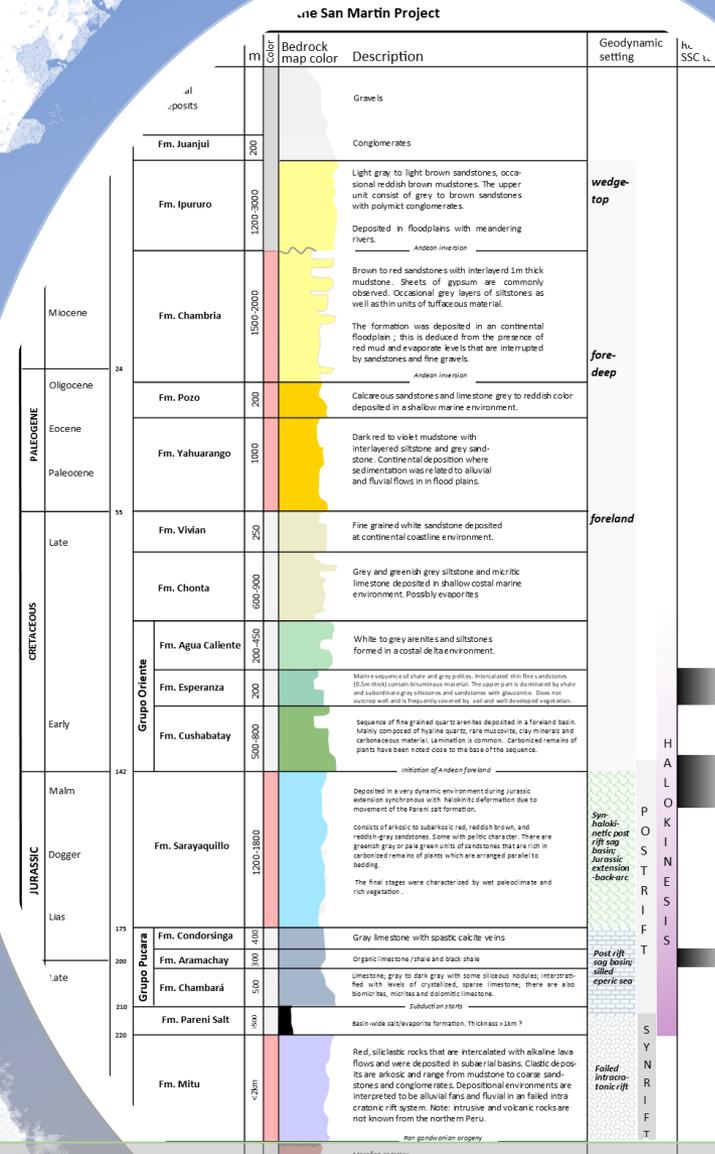
The **tectono-stratigraphic evolution** can be subdivided into three main stages:

- 1. Triassic rifting (245-220Ma)** and deposition of the Grupo Mitu, a failed rift.
- 2. Jurassic rifting (175-120Ma)** and deposition of the Sarayaquillo Fm.
- 3. Andean compression (120Ma, 25Ma, 12Ma)** and development of foreland basin

The **Mitu Group** forms the lowermost sedimentary rocks in the basin, unconformably overlying inferred crystalline basement.

The basin contain thick **widespread evaporitic strata** - the Pareni Salt Formation.

The Mitu Group is interpreted as the **metal source**

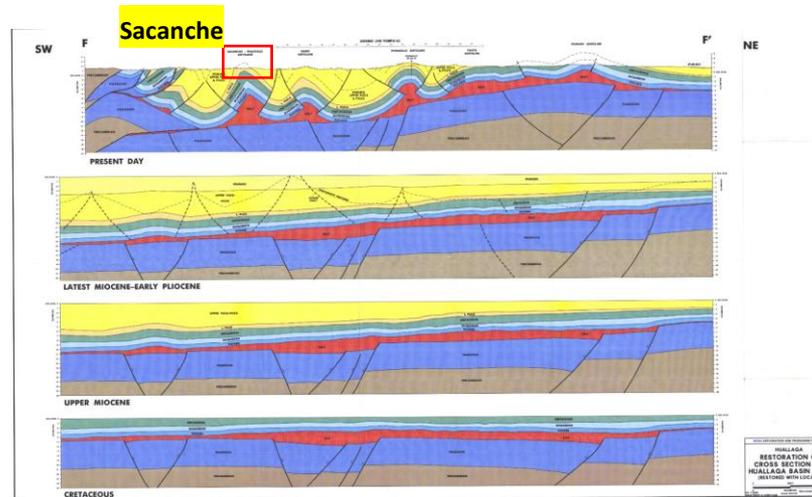


The Huallaga Basin lies within the Sub Andean thrust belt of Northern Peru.

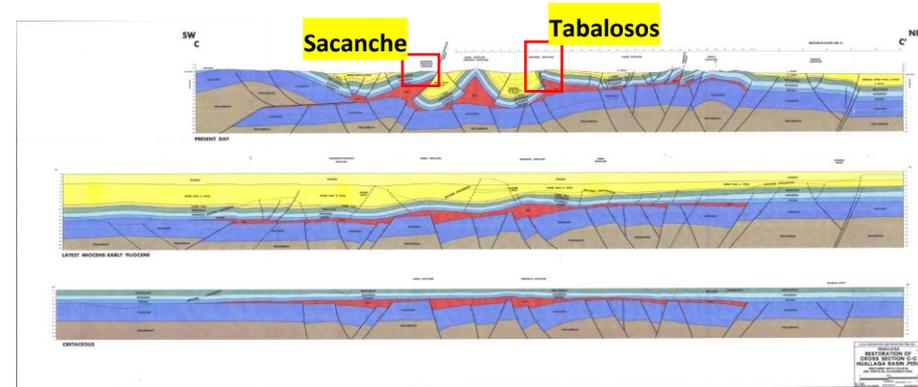
Early halokinesis overprinted by the Andean thrust and fold belt. Both **detached and basement involved compressional structures** are present. The Pareni Salt is the main detachment level.

Deformational patterns associated with salt-involved thrust are common:

Pop-up structures, symmetrical folds with steep limbs, fault propagation folds, backthrusts



Structural setting



Inverted basement structures are common along the eastern and western flanks. Seismics suggest these were originally extensional half grabens bounded by normal faults which were later reactivated as reverse faults during compression.

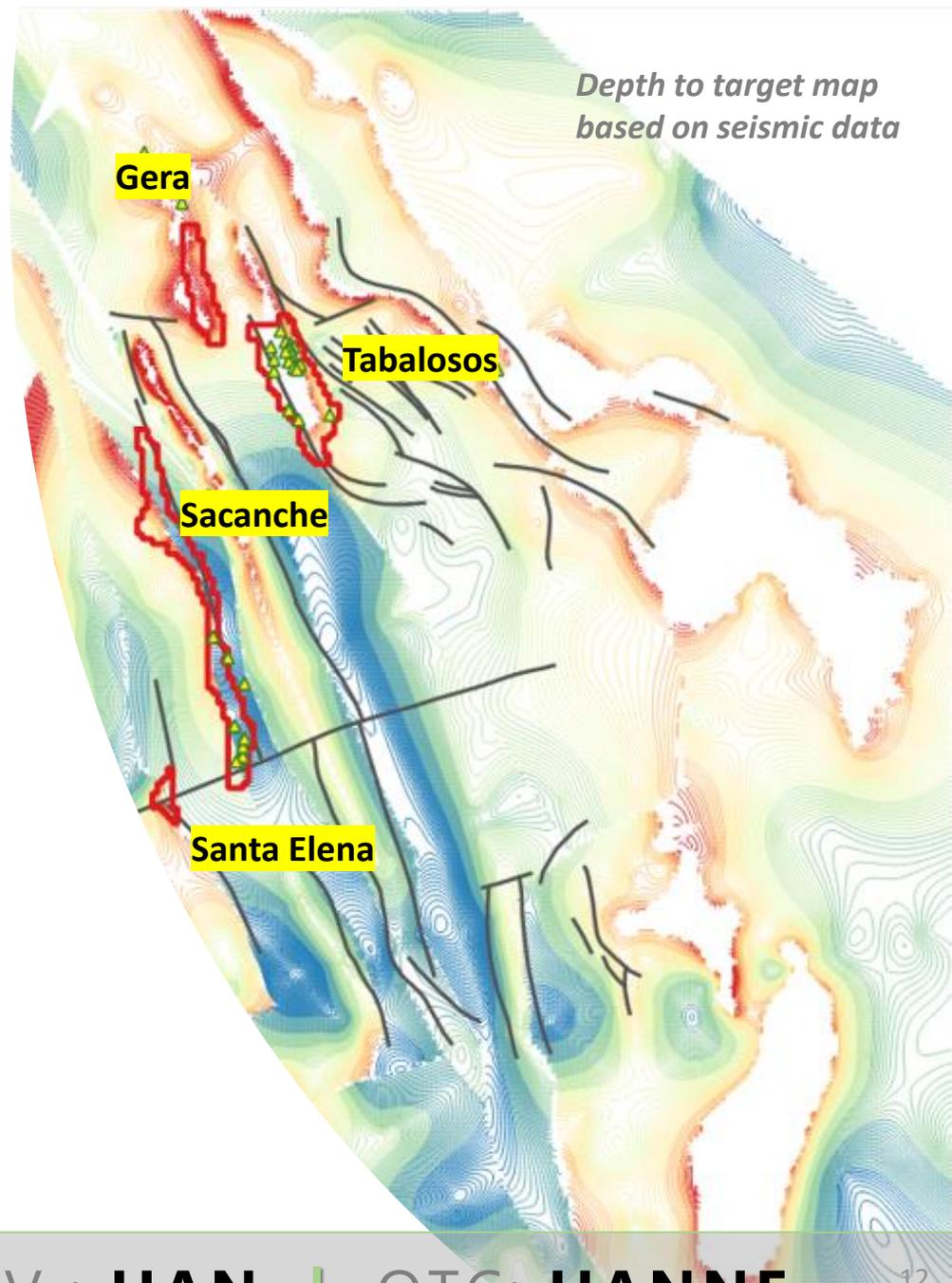
Strike slip and oblique faults

NE-SW “Huallaga River” fault zone – strike slip reactivation of older Paleozoic normal fault-oriented NE-SW

Minor tear faults common in thrust and fold belts

Thickness Variation

- Stratigraphic thickness variations are common in the Cretaceous and lower Tertiary units
- Some variations are due to depositional thickness changes associated with early salt movement (Tabalosos area and Gera). Other are due to tectonic thickening during folding. Often the original thickness variations are overprinted and modified by tectonic thickening.
- A major basement involved platform underlie the NE part of the Huallaga basin. This is associated with thinning of both Tertiary and Mesozoic strata.



Mineralization and traps

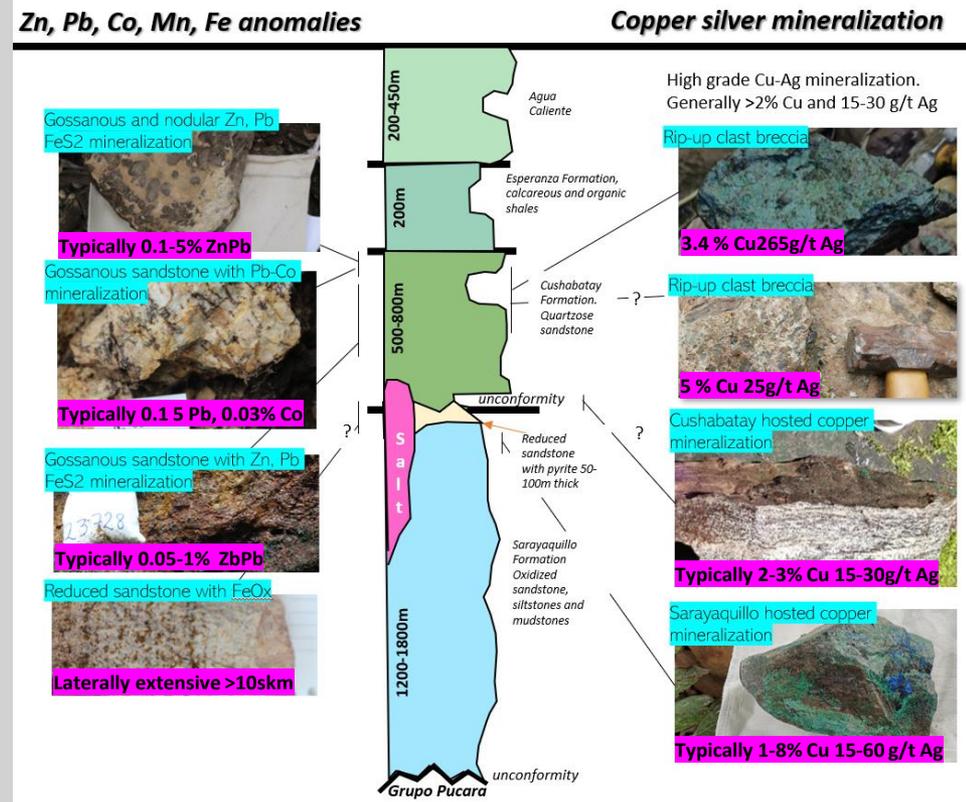
Through Peru, sediment-hosted minor copper-silver mineralization is known to develop at multiple stratigraphic levels at localized redox boundaries.

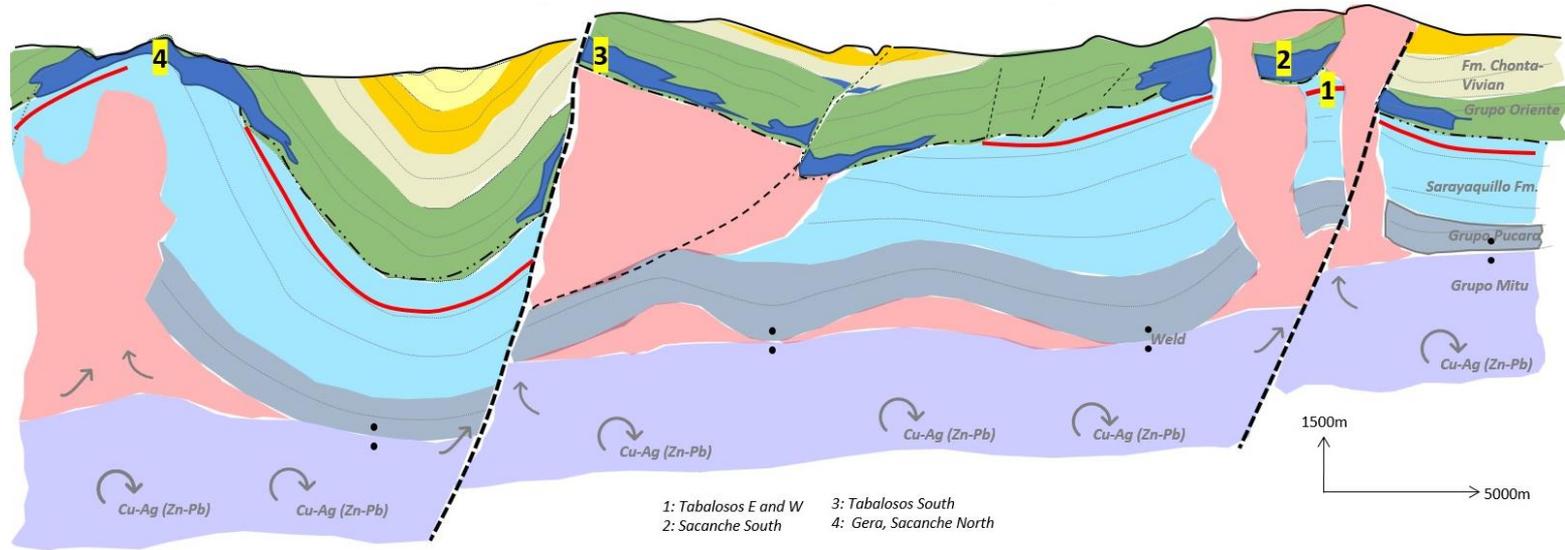
Best known examples in Peru are hosted by the Mitu: Group: Negra Huanusha (Central Peru) and Tambomachay hosted in arkosic red beds of the Kayra Formation (Lower Eocene) near Cusco,

The Huallaga Basin is unique due to preserved laterally extensive redox boundaries. These are critical for the formation for major sediment hosted copper deposits.

The two key redox boundaries are hosted within an 800 metre thick stratigraphic window:

- 1) Reduced stratabound and probably stratiform shale to siltstone with bitumen and pyrite (top of Sarayaquillo Fm)
- 2) Reduced sandstone with diagenetic pyrite (base of Cushabatay Fm and top of Sarayaquillo Fm).





1) Basin architecture (245-220Ma)

Triassic age rift sequence formed during the break-up of Pangea. Thick evaporite.

2) Source build up (210-175Ma)

Brines scavenged metals from red bed sediments and volcanoclastics in the Mitu Group.

3) Fluid transport :

Mobilization of metal-bearing oxidized brines by hydrological gradients and/or compression. Fluid focus by faults and salt diapirs linking fluid reservoirs with chemical and structural traps.

175-142 Ma: reactivation of basement faults during Jurassic extension. Initiation of salt diapirs.

142Ma: Initiation of Andean Foreland. Continued salt deformation.

24-12 Ma: Major Andean orogenic event.

4) Traps

Redox boundary and erosional unconformity

Major redox boundary in basin marked Grupo Oriente. Deposited in the foreland basin that marks Jurassic extension and initiation of Andean compression.

Chemical and physical trap – hydrocarbon reductant

Reduced facies trap of carbon matter and or pyrite

1: Tabalosos E and W
2: Sacanche South
3: Tabalosos South
4: Gera, Sacanche North

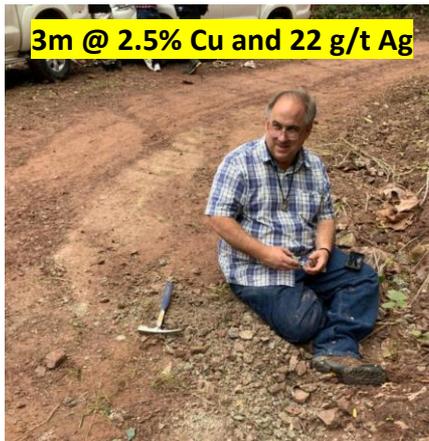
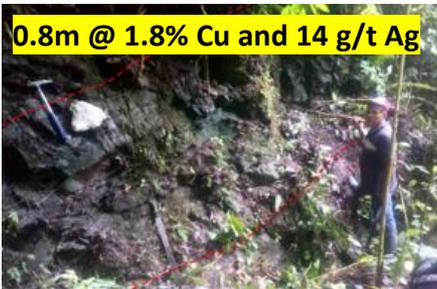
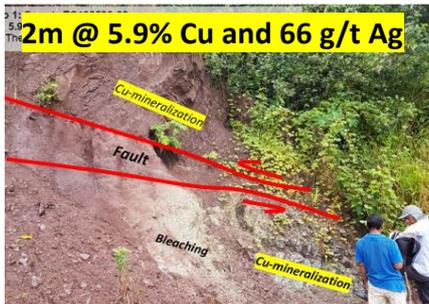
Exploration model

Hannan's work favors an orogenic sediment hosted copper deposit model.

The mineralization is interpreted to be young and contemporaneous with peak Andean orogenic events (25Ma and 12Ma).

Target rocks need to demonstrate both permeability and chemical trap characteristics.

Sacanche stratiform Cu-Ag mineralization



This style of copper silver mineralization covers samples which are hosted by reduced silty to shaley unit with strong lamination of organic material and pyrite. Stratigraphically the unit is hosted by the upper part of the Sarayaquillo Fm. Close to the contact to the Cushabatay Fm.

The style of copper mineralization appears stratigraphically consistent and is interpreted to be stratiform. The intensity and texture of the mineralization varies across different areas. The underlying control is not understood due to poor exposure.

One textural variation depends on the nature of the carbon in the samples, either amorphous within bedding or with visible bedding parallel carbonized plant fragments. Another texture depends on the alteration of the host rock which sometimes seems albitized and silicified.

Chalcocite is the dominant copper mineral.

The host rock, which varies between 0.5-5m in thickness (av. 2-5% copper), and was probably deposited as an oxidized sediment with interbedded carbon matter from plants and micro organisms. During diagenesis, the sediment was reduced by the organic material. It now acts as a very efficient trap across the basin and has been traced for over 100km.

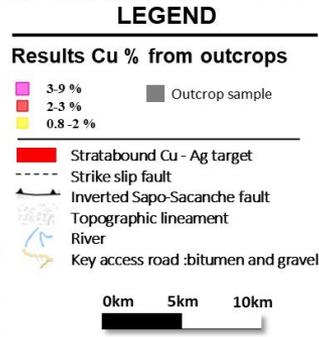
Sacanche stratiform Cu-Ag mineralization

Continuity of copper-silver mineralization at Sacanche

Surface position of copper-silver mineralization based on mapping and remote interpretation.

UNEXPLORED TREND

73 km of strike



2m 5.9% Cu and 66 g/t Ag

0.6m 8.7% Cu and 59 g/t Ag

0.6m 0.8% Cu and 12 g/t Ag

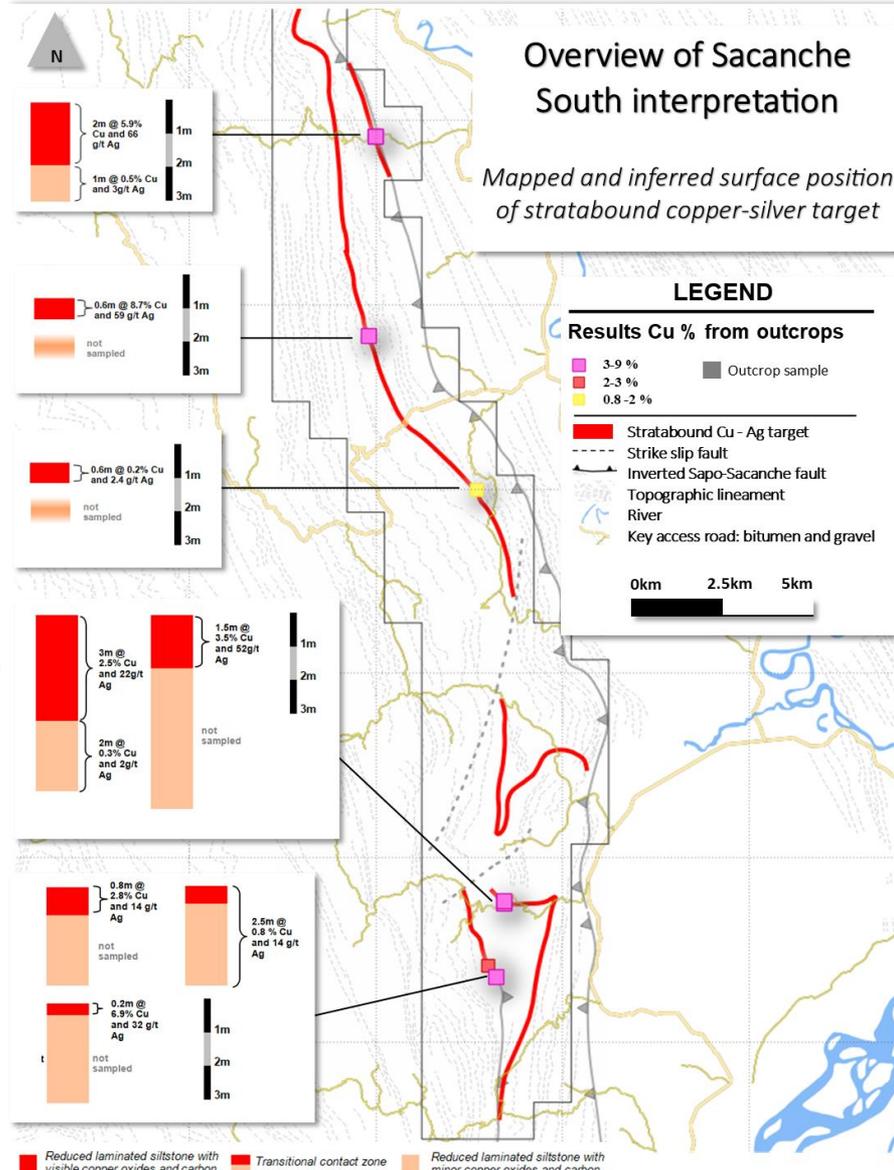
3m @ 2.8% Cu and 22 g/t Ag

0.8m @ 2.8% Cu and 14 g/t Ag

0.2m @ 6.9% Cu and 32 g/t Ag

Overview of Sacanche South interpretation

Mapped and inferred surface position of stratabound copper-silver target



Sacanche structurally hosted Cu-Ag mineralization

Numerous outcrops and boulders. The core area is **1.3km long and 600m wide** but outcrops of similar style has been found over **8km strike**.

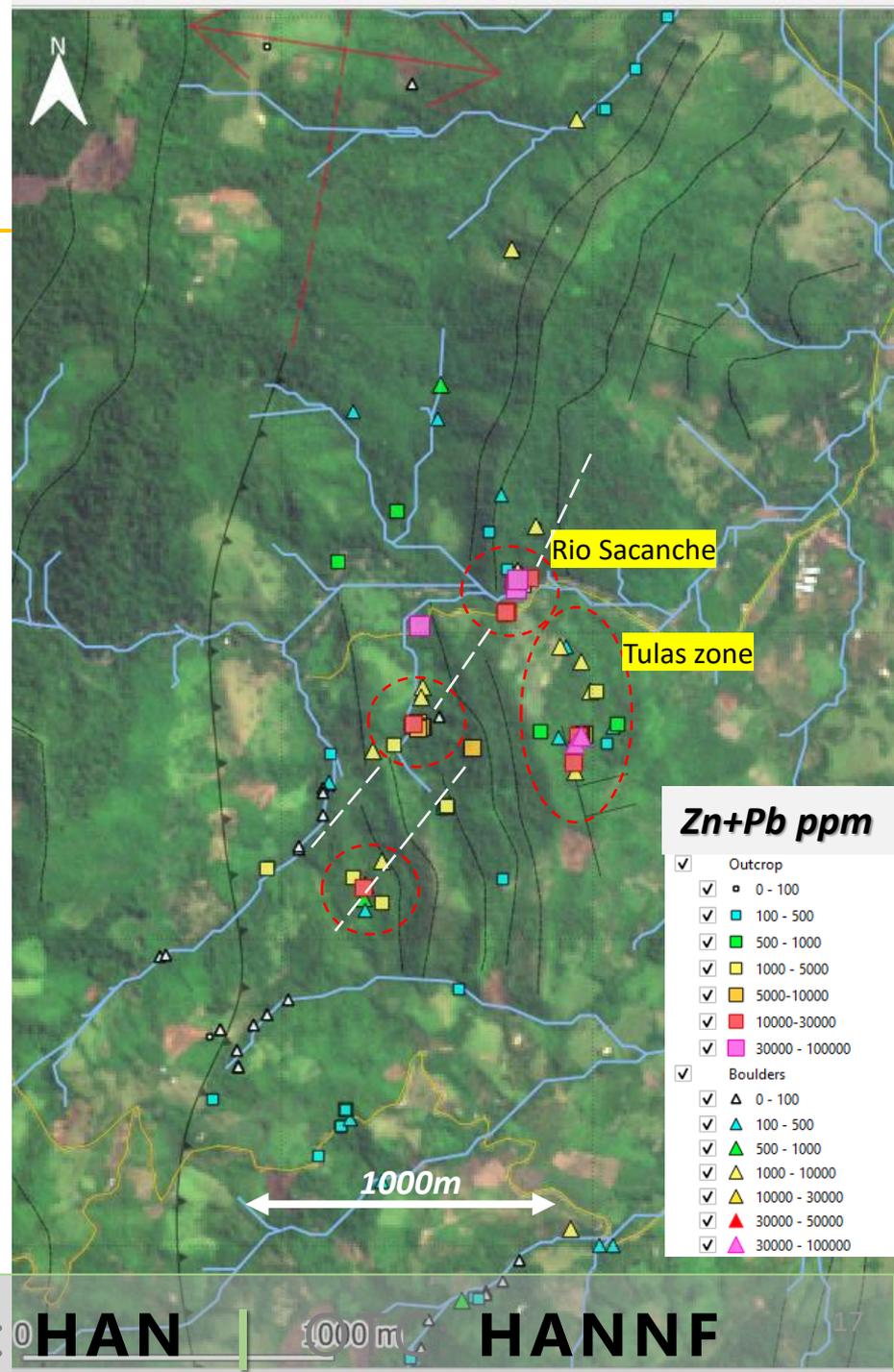
The gossans appears to be **controlled by NNE trending shear zones** which cut the host rock at low angle. The thickness of the gossans are up to **20m wide** and away from the gossanous zones they die out. The altered zone with iron oxides (after pyrite and akerite) is 80m wide at Rio Sacanche

The **host rock** is even grained quartzose sandstone with calcite and diagenetic pyrite in matrix.

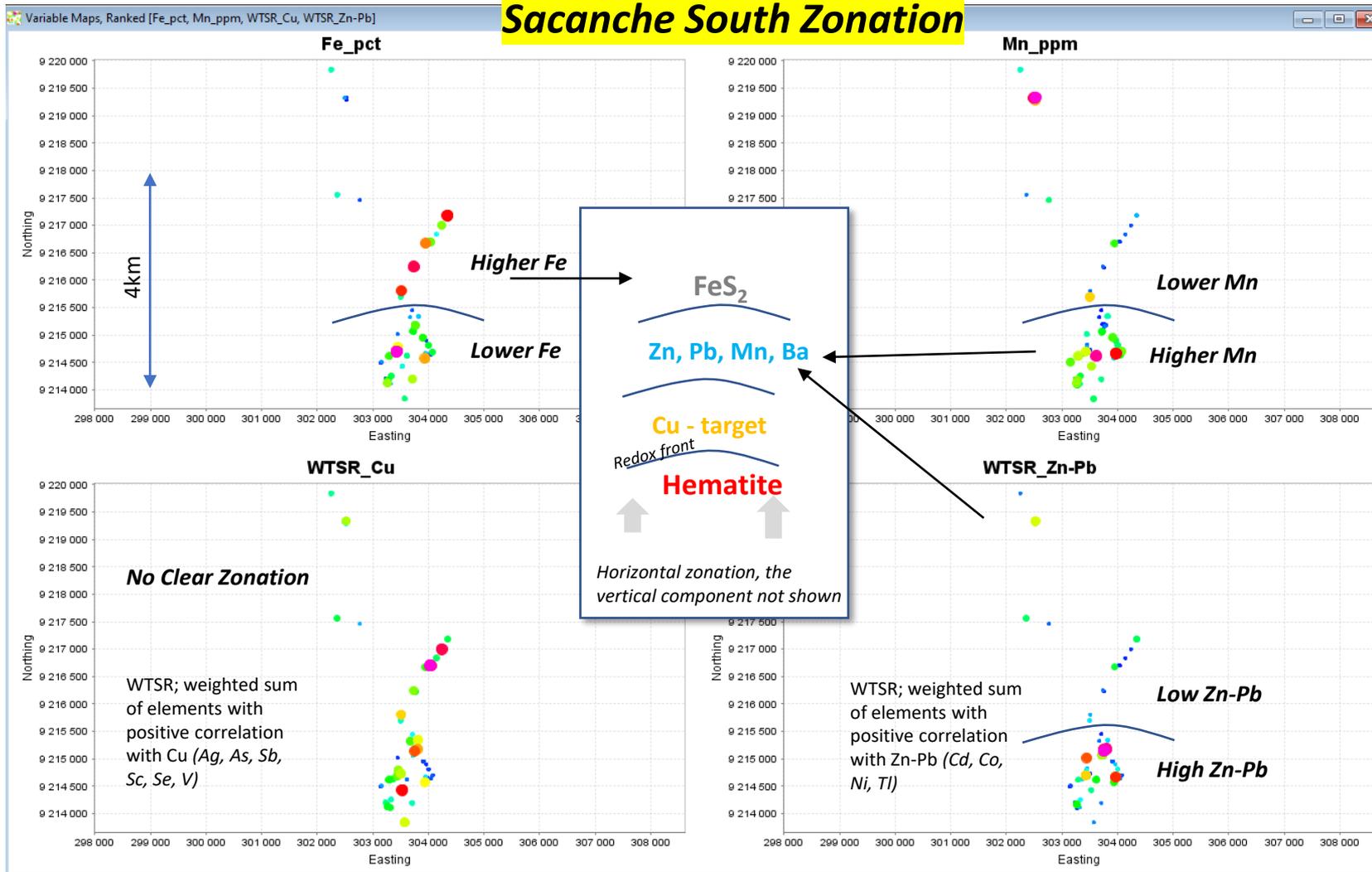
The **mineralization at "Tulas Zone"** are situated close to the contact of Cushabatay Fm and a micritic limestone, likely from the Esperanza Formation. The host rock is the sandstone of the Cushabatay Fm, but locally it has textural differences to the other zones of mineralization at Sacanche South. In parts the mineralization is characterized by rounded nodules of calcite which are replaced by a zinc mineral. No local structural control has been observed in here, but large part of the zone remains undercover and it is open in all directions.

Assay data suggest **clear spatial zonation between Fe and Mn+Zn+Pb**).

The **copper rich part of the system** may be located both horizontally and vertically below the base metal anomalous zone.



Sacanche structurally hosted Cu-Ag mineralization

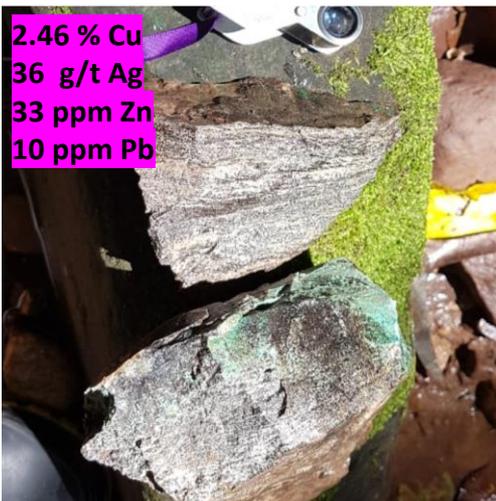


Sacanche structurally hosted Cu-Ag mineralization

All key components of a zoned Copper-Silver system



Rote Fäule alteration



Quartzose sandstone of Cushabatay Fm.



Rock panel over 10m width with 7 channels that average 1.1% Zn and 0.1% Pb

Max Zn: 2.9%	Min Zn: 0.2%	Ave Zn: 1.1%	N=7
Max Pb: 0.4%	Min Pb: 0.0%	Ave Pb: 0.1%	N=7



Calcite nodules in sandstone with Zn mineralization

Fe³⁺ / Oxidizing zone
/Rote Fäule ✓

Copper zone
/cc/bo/cpy ✓

Lead-Zinc
zone /ga ✓

Zinc zone
/sph ✓

Pyrite/ankerite
zone ✓

4.96 % Cu
25.5 g/t Ag

Sacanche South high grade Cu-Ag mineralization in a rip up clast breccia

*New discovery in Sacanche South,
stratigraphic position middle to
upper Cushabatay Fm.*

*Located over 4km of strike in boulders
and outcrop.*

Tabalosos Cu-Ag mineralization

Stratiform copper silver mineralization discovered in boulders over 30km of strike.

- The host rock, which varies between 0.5-5m in thickness, it was probably deposited as an oxidized sediment with interbedded carbon matter from plants and micro organisms.

High grade black shale mineralization discovered in small floats

Structurally hosted target with evidence of pyrobitumen as reductant to copper bearing fluids



Tabalosos Cu-Ag mineralization

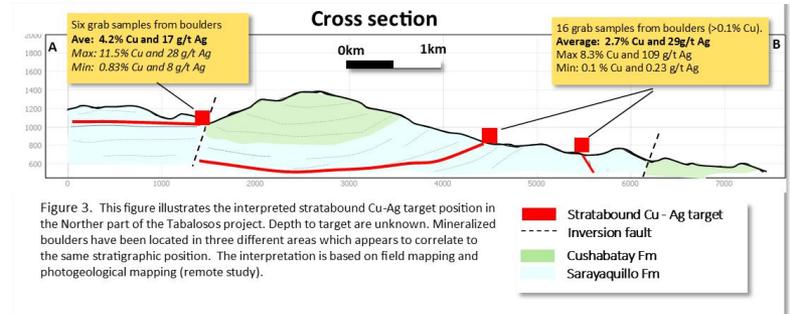
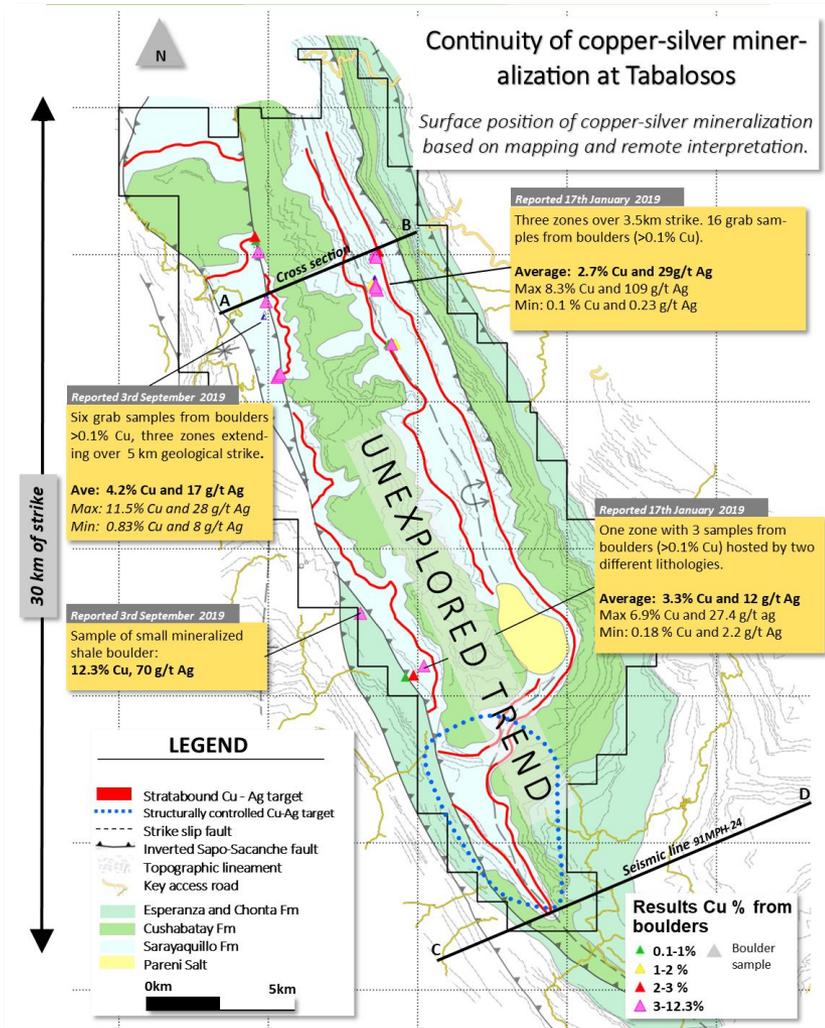


Figure 3. This figure illustrates the interpreted stratabound Cu-Ag target position in the Northern part of the Tabalosos project. Depth to target are unknown. Mineralized boulders have been located in three different areas which appears to correlate to the same stratigraphic position. The interpretation is based on field mapping and photogeological mapping (remote study).

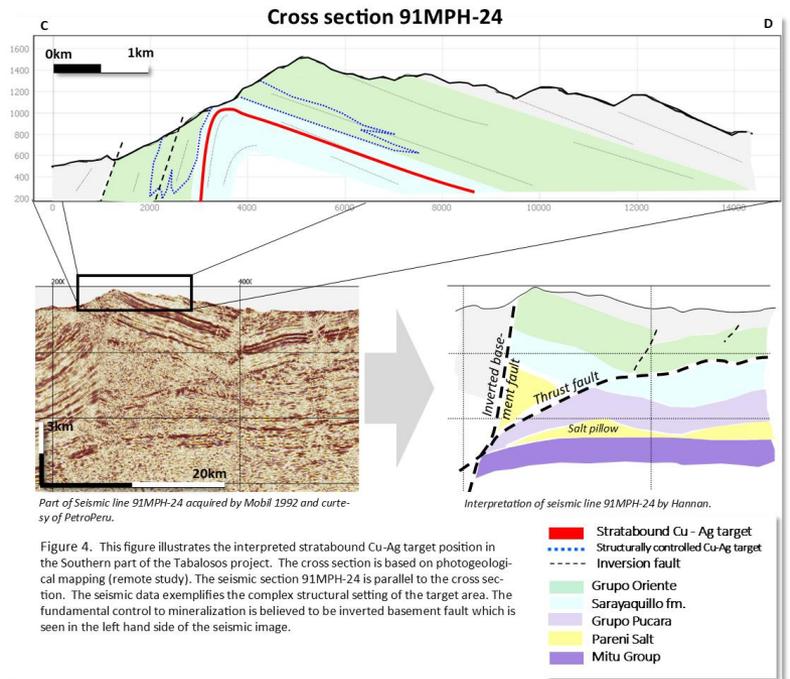
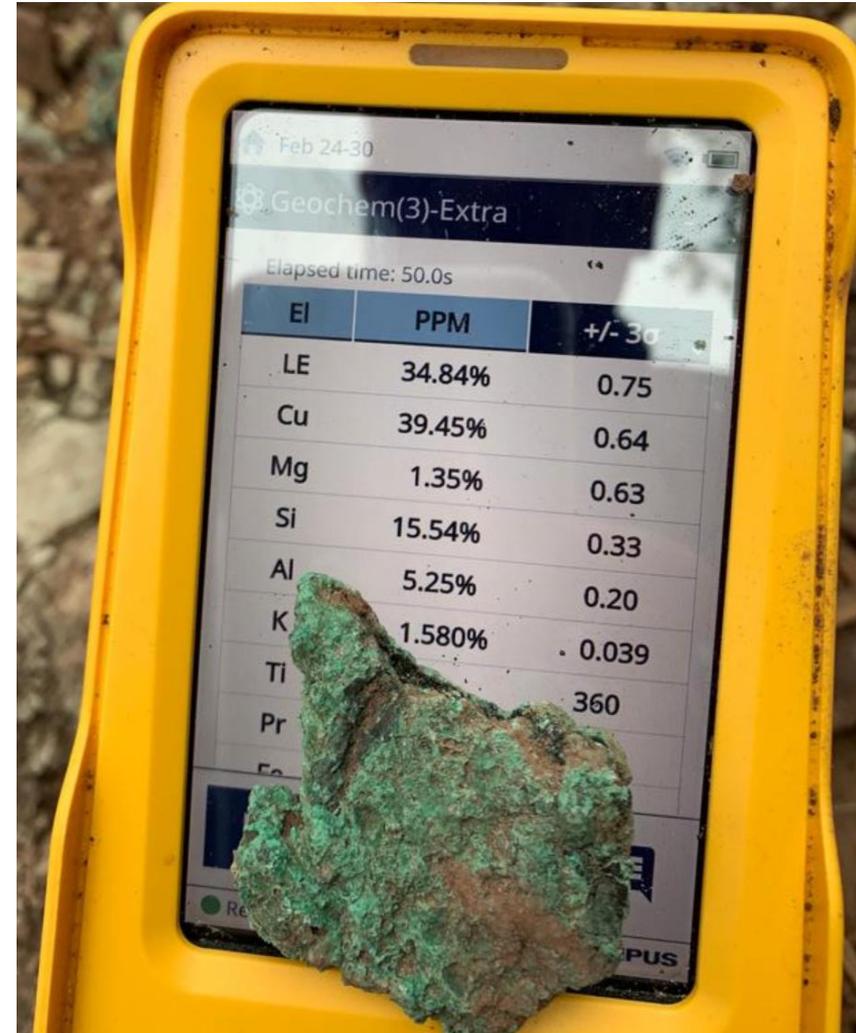


Figure 4. This figure illustrates the interpreted stratabound Cu-Ag target position in the Southern part of the Tabalosos project. The cross section is based on photogeological mapping (remote study). The seismic section 91MPH-24 is parallel to the cross section. The seismic data exemplifies the complex structural setting of the target area. The fundamental control to mineralization is believed to be inverted basement fault which is seen in the left hand side of the seismic image.

SUMMARY

- Opening up new search spaces via grassroots discovery
- Previously unexplored sediment-hosted high-grade copper-silver district identified in north-central Peru
- Similarities with sedimentary copper-silver deposits including the vast Kupferschiefer deposit in Eastern Europe, one of the largest copper districts on earth;
- Hannan recognized the exceptional potential for large copper-silver deposits in this part of Peru and has aggressively staked a commanding position over 940 sq km of prospective geology;
- Collecting data, making discoveries, creating value



Capital Structure



INSIDERS:

SHARES ON ISSUE:

FULLY DILUTED:

RECENT PRICE:

MARKET CAP:

CASH:

ENTERPRISE VALUE:

HAN

HANNF

16%

81.0 M

111.1 M

C\$0.40 (30 Nov)

C\$32.3 M

C\$2.0 M

C\$30.3 M

Options

Expiring November 14, 2021	\$0.10	861,000
Expiring November 15, 2021	\$0.10	120,000
Expiring February 1, 2022	\$0.26	50,000
Expiring January 23, 2023	\$0.25	3,545,000
Expiring May 28, 2023	\$0.28	100,000
Expiring July 21, 2023	\$0.44	250,000
Expiring August 11, 2023	\$0.455	250,000
Expiring September 4, 2023	\$0.13	250,000
Expiring October 8, 2023	\$0.365	100,000

Warrants

Expiring April 24, 2021	\$0.15	1,402,500
Expiring April 30, 2021	\$0.15	322,500
Expiring July 6, 2021	\$0.25	6,819,300
Expiring February 18, 2022	\$0.30	14,016,588
Expiring July 13, 2022	\$0.35	2,000,000



Directors & Officers



Michael Hudson (Chairman & CEO): *B.Sc. (Hons), GDipAppFin, FAusIMM, MAIG*



Lars Dahlenborg (President): *MSc.*



David Henstridge (Director): *B.Sc. (Hons), FAusIMM, MAIG, MGS Aust*



Georgina Carnegie (Director): *B.Com, AM Harvard*



Ciara Talbot (Director): *B.Sc. (Honours)*



Nick DeMare (Director): *CPA, CA*



Mariana Bermudez (Corporate Secretary)



Quinton Hennigh – Technical Adviser

Hannan is managed by a group with careers built in the exploration industry.

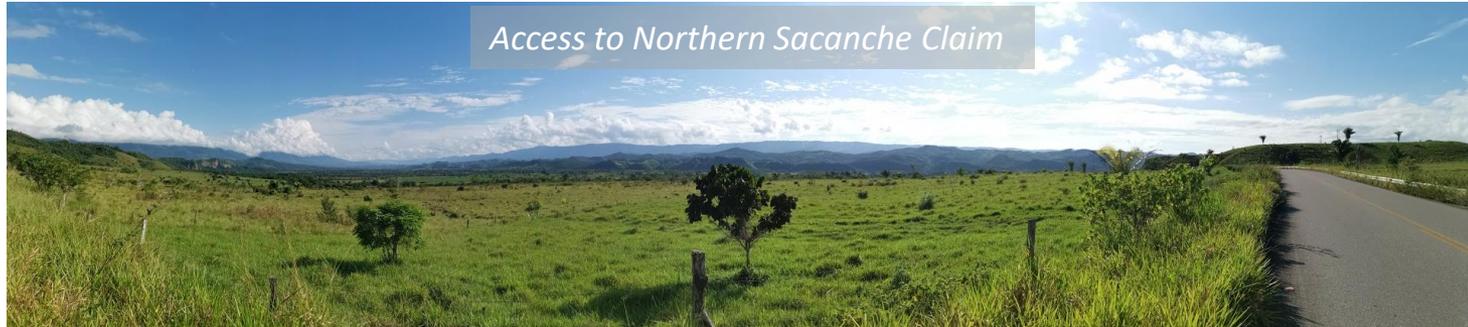
In recent years, the group has raised more than US\$100M for European and Peruvian exploration and development.

Hannan management is highly experienced with a long history of working in Peru.

Peru Copper Silver



Peru Copper Silver



Access to Northern Sacanche Claim



Access to Tabalosos West



"Quartz arenite-gossan" outcrop at Sacanche

Contact Us



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