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# NI 43-101 Technical Report

## The Gaban Gold Property

### Puno, Peru

Lat/Long WGS 84 -70.3705/-13.4632

Prepared by: David Seers – MGeol (Hons) AusIMM (CP)

Effective Date: August 27th, 2019



#### Document Control Information

 <b>HELIO RESOURCE CORP.</b>	<b>The Gaban Gold Property Puno, Peru</b>		<b>REVISION</b>	
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03					
04					

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## 1 EXECUTIVE SUMMARY

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Helio Resource Corp. (Helio) is a Canadian based junior exploration company, listed on the TSX Venture Exchange with the ticker “HRC”. On Wednesday May 15<sup>th</sup>, 2019, Helio announced the signing of a Letter of Intent (LOI) with Palamina Corp to acquire the Gaban Gold Project and the Tinka Iron Oxide Gold project, both located in Peru. Subsequent to this announcement, Mining Plus was engaged by Helio to prepare a Technical Report aligned to National Instrument 43-101 (NI 43-101) for Gaban (the “Property”).

The Property consists of 28 concessions extending over approximately 18,700 hectares. Twenty-two (22) of the concessions are granted the other six are concession applications. The author is not aware of any reason why concession applications will not be granted. Property concessions form two distinct blocks; the Main Block (concessions and applications) and the Southern Block (applications only).

Concessions and concession applications are held by two entities;

- Palamina S.A.C. (Palamina S.A.C. is wholly owned by Palamina Corp), and;
- Jaime Flavio Alejandro Castro Mendivil Berger.

Palamina S.A.C. has entered in to agreements to acquire the concessions held by the other entities. According to the terms set out in the LOI, Palamina and Mr. Berger have entered into agreements to transfer the concessions in Mr. Berger's name to Palamina.

Mr Seers (QP), senior exploration geologist in full-time employment with Mining Plus and wholly independent of Helio and Palamina, is responsible for all sections of this Technical Report. Mr Seers visited the Property between June 5<sup>th</sup> and 10<sup>th</sup>, 2019 and took seven independent samples for verification purposes.

The Property is located in high jungle on the western edge of the Amazon basin. The town of San Gaban lies within the Property limits and serves as a logistical base for exploration teams. The national road network of Peru connects San Gaban to major towns including Cusco, Juliaca and Puerto Maldonado from where it is possible to fly or drive to Lima. Prospects within the Property are accessed on foot via drainages between the months of March and September. Densely vegetated slopes complicate access away from drainages and limit rock exposure.

Artisanal miners recover alluvial gold from drainages transecting the Property using dredges and sluice boxes. Stream sediment sampling by Palamina confirmed that the Picitiri, Yanamayo and San Jose drainages contain Au and follow-up outcrop sampling identified three outcropping auriferous shear zones (Picitiri, Yanamayo and San Jose). Mr Seers (QP) highlights

that concession applications account for approximately 66% of the Property area and have not been explored.

The Picitiri, Yanamayo and San Jose shears are hosted in sheared sediments at elevated positions and, according to regional geological maps, in close proximity to a large intrusion. Airborne magnetic and radiometric surveys were flown over the Main Block; magnetic data demonstrates that the three shear zones are associated with a consistent magnetic (TMI) low proximal to the intrusion. Yanamayo is spatially related to a sinistral fault, as interpreted from magnetic data. A second and smaller TMI low with interpreted sinistral movement is recognised within the Property and has not been explored. The Southern Block is not covered by airborne surveys and could contain further TMI lows. Mr Seers considers that such areas would be prospective.

According to regional geological maps, the Southern Block (not visited by Mr Seers) has similar geology to the Main Block. Projections of the Picitiri and San Jose shears over topography (SRTM) suggest that they could extend in to the Southern Block.

Partially exposed by a landslide, the Picitiri shear has been most extensively explored. The Picitiri shear is zoned into a locally graphitic core with horsetail quartz veining and tight sub vertical foliation flanked by a sericite/chlorite siltstone and quartz veinlets (<3 mm) orientated approximately parallel to foliation in the core. Foliation is less frequent and more horizontal with increasing distance from the core. Narrow pinch and swell veins form inconsistently within foliation for approximately 30 m either side of the core.

Having reviewed all available information and visited the Property to review geology and take independent samples, Mr Seers (QP) concludes the following:

- Exploration of the Property has identified auriferous shear zones that are the likely source of alluvial Au recovered by artisanal miners
- Outcrop at the Property is limited and techniques such as stream sediment sampling, ridge and spur soil sampling, and airborne geophysics are likely to be the most effective methods for exploring areas of the Property that have not yet been evaluated
- Auriferous shear zones at the Property are spatially related to an intrusion and proximal TMI low. This TMI low is prospective and could contain further auriferous shear zones. A second and smaller TMI low is identified within the Property and is considered prospective. The Southern Block is not covered by airborne magnetic survey and could contain further TMI lows

- Exploration concessions account for approximately 66% of the Property area and have not been explored. Exploration concessions are recorded in the GEOCATMIN cadastre and there is no known reason why they will not eventually be granted
- Projection of the Picitiri and San Jose shear zones over topography (SRTM) suggests that they could continue in to the Southern Block and regional mapping indicates that geology is similar to the Main Block
- According to regional geological maps, auriferous shear zones at the Property and the (third party) Olleachea deposit are hosted in sediments of the same age and are proximal to large intrusions. Although intrusions are not mineralised, the rheological contrast between intrusions and sediments during shearing might be an important factor for Au deposition. The identification of intrusions that predate mineralisation could help guide exploration. Potential intrusions are not obvious in magnetic or radiometric data although numerous intrusions, not recorded on regional geological maps, are observed in the field
- Exploration to date has been prospective in nature; further systematic work is required before the economic potential of the Property can be considered.

Accordingly, Mr Seers (QP) recommends that the Property be explored further to determine:

- The extent of identified shear zones
- The continuity of mineralisation within shear zones and,
- If other shear zones are present in areas of the Property not yet explored.

Mr Seers (QP) recommends the following; estimated time and costs are presented in Table 1-1.

1. Enter in to legally binding agreements with land owners for permission to access their land.
2. Prospecting and stream sediment sampling in areas of the Property that have not been explored. The potential for agglomeration of fine gold should be investigated and consideration should be given to sampling coarser sediment fractions. Dependent on positive stream sediment sampling in the Southern Block, airborne surveys should be extended over the area, the cost of airborne surveys is not considered in Table 1-1.
3. Ridge and spur sampling should be completed over the Property but prioritised over TMI lows. Soils formed on ridges and spurs are closer to source compared to those on steep slopes. An orientation survey over projections of identified shears should be

undertaken to identify their geochemical signature(s). Samples should be spaced at 20 m intervals (horizontal distance) along ridges and spurs.

4. Trenching and channel sampling across the Picitiri, Yanamayo and San Jose shears. Parallel trenches across shears zone should extend along the projected strike of shear zones. Channel samples should be taken using a circular saw. One (1) meter channel samples are recommend in the central graphitic and sericite/chlorite zones and 2.5 m channel samples in zones with foliation parallel veining. SOPs should be developed for the purposes of Quality Assurance and Quality Control samples (blank, duplicates and CRMs) should be in included.

*Table 1-1: Estimated time and cost of Recommended Exploration Programs*

#	Name	Time	Sample Count	USD \$
1	Prospecting and Stream Sediment Sampling (Concession Applications)	28 days	200	\$ 50,000
2	Ridge and Spur	60 days	1000	\$ 150,000
3	Trenching and Channel Sampling			
3.1	Picitiri	15 days	150	\$ 25,000
3.2	Yanamayo	15 days	150	\$ 25,000
3.3	San Jose	15 days	150	\$ 25,000
				\$ 275,000

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## 2 INTRODUCTION

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Helio Resource Corp. engaged Mining Plus to prepare a Technical Report aligned to National Instrument 43-101 (NI 43-101) for the Gaban Gold Property in the Puno Region of Peru.

Helio Resource Corp. (Helio) is a Canadian based junior exploration company, listed on the TSX Venture Exchange with the ticker “HRC”.

On Wednesday May 15<sup>th</sup>, 2019, Helio announced (News Release 1) the signing of a Letter of Intent (LOI) with Palamina Corp to acquire the Gaban gold project and the Tinka Iron Oxide Copper Gold project, both located in Peru. Terms of the acquisition include:

- Immediately upon receipt of TSXV approval of the acquisition, Helio would issue Palamina Corp. with 5 million shares
- Within 24 months of receipt of TSXV approval, Helio would issue Palamina Corp. with a further 5 million shares either through disinterested shareholder approval for such issuance or via the issuance of no greater than 19.9% of any future share issuance made by the Company
- Palamina will retain a 2% Net Smelter Return (NSR) royalty on each property. Helio will have the right to purchase 50% of each royalty by making a cash payment of \$1,000,000 to Palamina at any time prior to the commencement of commercial production. All shares issued will be subject to a 4 month plus one day hold period from the date of issuance
- Helio will make an Advance Royalty Payment (ARP) of \$25,000 to Palamina on the first and second anniversaries of closing the Transaction. The ARP will double every two years until such time that Helio has either completed a total of 5,000m of drilling or has abandoned the properties
- Upon closing of the Transaction, Palamina has the right to nominate one Director to the Board of Helio and can nominate a second Director to stand for election at Helio’s next annual general meeting

Mining Plus assigned Mr. David Seers to prepare the Technical Report and to visit the Gaban Gold Property to take independent samples. David is a Qualified Person (QP) as defined in the Companion Policy 43-101CP to National Instrument 43-101. David visited the Gaban Gold Property (Property) between June 5<sup>th</sup> and June 10<sup>th</sup>, 2019; whilst at the Property David visited significant outcrops and took seven independent samples. These samples confirmed the presence of Au in quartz veins in the Picitiri shear zone.

Information contained in this Technical Report has been taken from the following sources:

- GEOCATMIN web-portal (<http://geocatmin.ingemmet.gob.pe/geocatmin/>) made available by the Instituto Geológico Minero y Metalúrgico “INGEMMET”, part of Peru’s Ministry of Energy and Mines
- Helio Resource Corp. website (<http://www.helioresource.com/s/Home.asp>)
- Palamina Corp. website (<https://www.palamina.com/>)
- Data tables compiled by Palamina Corp
- Assay certificates
- Discussions between David Seers and Palamina staff
- Independent sampling and notes taken by David Seers (QP).

Mr David Seers (QP) is responsible for all sections of the Technical Report.

### **Units of Measure**

The metric system has been used throughout this report and all currency is in US dollars (US\$), and referenced as ‘\$’, unless otherwise stated.

### **Effective Date**

The effective date of this report is August 27<sup>th</sup>, 2019.

### 3 RELIANCE ON OTHER EXPERTS

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Mr David Seers (QP), a full-time employee of Mining Plus Peru S.A.C. (Mining Plus), prepared all sections of this report.

Neither Mining Plus nor David Seers is qualified to provide comment on legal issues associated with the Project included in Section 4 of this report. Inclusion of these aspects was based on information provided by Palamina S.A.C. and has not been independently verified by Mining Plus.

Mr Seers (QP) has relied on the following information:

- Legal opinion on the current status of the Property concessions (Legal 1)
- Details of agreements between Palamina S.A.C and third parties to transfer concession titles Palamina S.A.C. This information was discussed via email between David Seers (QP) and Andrew Thomson (CEO of Palamina Corp.) (Email 1).

## 4 PROPERTY, DESCRIPTION AND LOCATION

The Property consists of 27 concessions and concession applications extending over approximately 18,500 hectares. Twenty-two (22) of the concessions (15,400 hectares) have been granted the other five concessions (3,100 hectares) have been applied for and title has not been granted (Table 4-1).

Concessions and concession applications are held by two entities; Palamina S.A.C. (Palamina S.A.C. is wholly owned by Palamina Corp), and Jaime Flavio Alejandro Castro Mendivil Berger. Palamina S.A.C has entered in to agreements to acquire the concessions held by the other entities. According to the terms set out in the LOI, Palamina will transfer ownership of the Property concessions and concession applications to Helio.

Concessions applications held in the name of Palamina S.A.C. have been successfully lodged and are recorded with INGEMMET and can be viewed via GEOCATMIN. Mr Seers (QP) is not aware of any reason why these concessions will not eventually granted to Palamina S.A.C.

Table 4-1: Gaban - List of Property Concessions

#	Code	Concession Name	Listed Title Holder	Area Hectares	Date Lodged	Status
1	10036217	GABAN 2	PALAMINA S.A.C.	500	02/01/2017	Title Granted
2	10036317	GABAN 3	JAIME FLAVIO ALEJANDRO CASTRO MENDIVIL BERGER	600	02/01/2017	Title Granted
3	80009605	MINERA SAN GABAN*	ERASMO DAVID MENDOZA MAMANI	300	28/09/2005	Title Granted
4	80011207	AURIFERA SAN GABAN	MINERA MONTEVERDE E.I.R.L.	700	01/08/2007	Title Granted
5	10036517	GABAN 5	PALAMINA S.A.C.	800	02/01/2017	Title Granted
6	10036917	GABAN 7	JAIME FLAVIO ALEJANDRO CASTRO MENDIVIL BERGER	1000	02/01/2017	Title Granted
7	10083818	GABAN 18	PALAMINA S.A.C.	1000	26/03/2018	Title Granted
8	010036117A	GABAN 8	JAIME FLAVIO ALEJANDRO CASTRO MENDIVIL BERGER	100	02/01/2017	Title Granted
9	10036117	GABAN 1	JAIME FLAVIO ALEJANDRO CASTRO MENDIVIL BERGER	500	02/01/2017	Title Granted
10	10224217	GABAN 11	PALAMINA S.A.C.	400	31/10/2017	Title Granted
11	010036117B	GABAN 9	JAIME FLAVIO ALEJANDRO CASTRO MENDIVIL BERGER	100	02/01/2017	Title Granted
12	10230718	GABAN 26	PALAMINA S.A.C.	1000	10/05/2018	Title Granted
13	10083218	GABAN 12	PALAMINA S.A.C.	1000	26/03/2018	Title Granted
14	10036417	GABAN 4	JAIME FLAVIO ALEJANDRO CASTRO MENDIVIL BERGER	800	02/01/2017	Application
15	10036817	GABAN 6	PALAMINA S.A.C.	1000	02/01/2017	Application
16	10230818	GABAN 25	PALAMINA S.A.C.	1000	10/05/2018	Title Granted
17	10230918	GABAN 23	PALAMINA S.A.C.	1000	10/05/2018	Title Granted
18	10230618	GABAN 24	PALAMINA S.A.C.	1000	10/05/2018	Title Granted
19	10224117	GABAN 10	PALAMINA S.A.C.	300	31/10/2017	Title Granted

#	Code	Concession Name	Listed Title Holder	Area Hectares	Date Lodged	Status
20	10083318	GABAN 13	PALAMINA S.A.C.	1000	26/03/2018	Title Granted
21	10083518	GABAN 15	PALAMINA S.A.C.	1000	26/03/2018	Title Granted
22	10083418	GABAN 14	PALAMINA S.A.C.	1000	26/03/2018	Application
23	10083618	GABAN 16	PALAMINA S.A.C.	1000	26/03/2018	Title Granted
24	10083718	GABAN 17	PALAMINA S.A.C.	1000	26/03/2018	Title Granted
25	80005009	MINA ALEGRE M M 2009	RUBEN MAMANI MENDOZA	100	15/05/2009	Title Granted
26	10209918	GABAN 21	PALAMINA S.A.C.	100	02/05/2018	Application
27	10248519	GABAN 28	PALAMINA S.A.C.	200	01/08/2019	Application
28	010119619	GABAN 27	PALAMINA S.A.C.	200	02/05/2019	Application
<b>Count</b>		<b>28</b>	<b>Total Hectares</b>	<b>18700</b>		

\* Public records (SUNARP) indicate that Minera San Gaban was transferred from Erasmo David Mendoza Mamani to Palamina S.A.C. on February 9<sup>th</sup>, 2018. This transfer is not reflected in GEOCATMIN.

Figure 4-1 shows the Property concessions and third party concessions. The Main Block extends northwest to southeast and contains internal concessions held by third parties. The Southern Block is isolated from the Main Block.



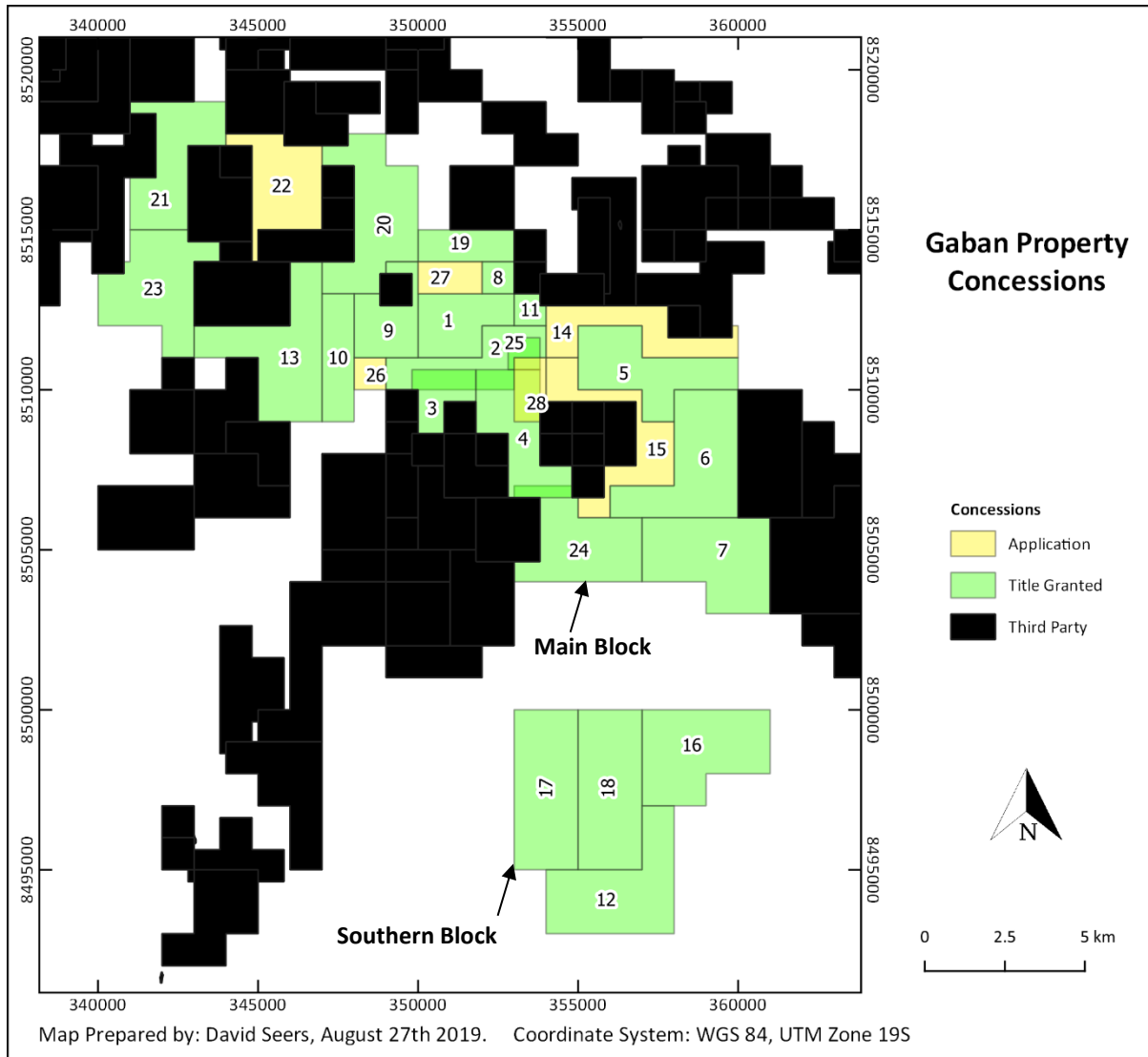


Figure 4-1: Gaban - Property Concessions (For details refer to Table 4.1)

Pursuant to article 39 of the General Mining Law, titleholders of mining concessions should pay an Annual Maintenance Fee (*derecho de vigencia*). The Annual Maintenance Fee is due on June 30<sup>th</sup> of each year and is paid one year in advance and is calculated at a rate of US \$3.00/ha. Failure to pay the Annual Maintenance Fee for two consecutive years causes the termination (*caducidad*) of the mining concession. However, according to article 59 of the General Mining Law, payment for one year may be delayed without penalty and the mining concessions remain in good standing. The outstanding payment for the past year can be paid on the following June 30<sup>th</sup>.

The Property is primarily located in the Puno region of southern Peru, and largely within the San Gaban district of Puno. The north-western extreme of the Property extends in to the Camanti district of Cusco, the southern extreme of the Property extends in to the Ayapata district of Puno (Figure 4-2).

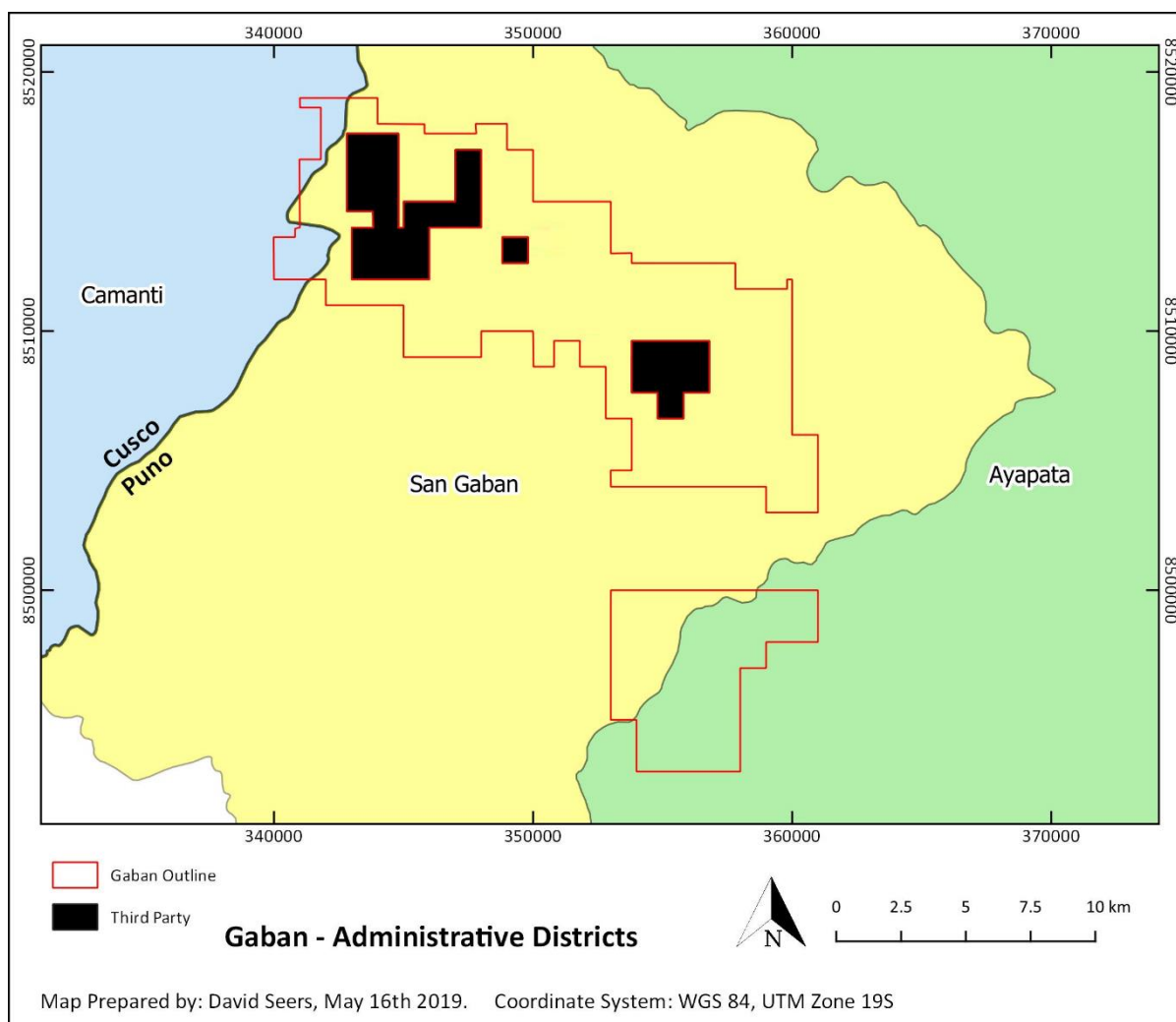


Figure 4-2: Gaban - Administrative Districts

The approximate centre of the Property, in the UTM WGS 84 and Lat/Long WGS 84 reference systems, is given in Table 4-2.

Table 4-2: Gaban - Approximate Centre of the Property

Reference System	East/Longitude	North/Latitude
UTM WGS 84 (Zone 19S)	351642	8511209
Lat/Long WGS 84	-70.3705	-13.4632

According to the terms of the agreement announced between Helio and Palamina On Wednesday May 15<sup>th</sup>, 2019, (News Release 1) the Property would be subject to the following encumbrances:

- Immediately upon receipt of TSXV approval of the acquisition, Helio would issue Palamina Corp. with 5 million shares

- Within 24 months of receipt of TSXV approval, Helio would issue Palamina Corp. with a further 5 million shares either through disinterested shareholder approval for such issuance or via the issuance of no greater than 19.9% of any future share issuance made by the Company
- Palamina will retain a 2% Net Smelter Return (NSR) royalty on each property. Helio will have the right to purchase 50% of each royalty by making a cash payment of \$1,000,000 to Palamina at any time prior to the commencement of commercial production. All shares issued will be subject to a 4 month plus one day hold period from the date of issuance
- Helio will make an Advance Royalty Payment (ARP) of \$25,000 to Palamina on the first and second anniversaries of closing the Transaction. The ARP will double every two years until such time that Helio has either completed a total of 5,000m of drilling or has abandoned the properties
- Upon closing of the Transaction, Palamina has the right to nominate one Director to the Board of Helio and can nominate a second Director to stand for election at Helio's next annual general meeting.

Palamina S.A.C. has entered into agreements to acquire concessions from third parties (Jaime Flavio Alejandro Castro, Mendivil Berger, and Mineral Monteverde E.I.R.L.) (Refer to Table 4-1). Under the terms of these agreements, Palamina S.A.C. will pay the third parties a cash sum for the transfer of each concession to Palamina S.A.C., and the third party will retain a 1% NSR.

A mining concession does not grant the titleholder right of access. Right of access must be negotiated between the land owner(s) and concession holder. Palamina has good relations with local communities and landowners but has not yet negotiated legally binding rights of access. Palamina has conducted an investigation into land ownership in the area of the Property and has not identified private landowners in the main target areas identified to date. Palamina has also undertaken multiple field programs supported by local workers and has not met any opposition to their presence.

There are no known environmental liabilities within the Property.

The program of exploration recommended by Mr Seers (QP) in Section 26 of this Technical Report includes trenching that is subject to the submission of a "Ficha Technica Ambiental" (FTA). An FTA allows for a limited amount of trenching (and or drilling) and should be approved within 10 days. Mr Seers (QP) is not aware of any other factors that might impede the recommended exploration program presented in this Technical Report.

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

The Property sits between 3200 and 550 m above sea level on the eastern slopes of the Andes on the western edge of the Amazon Basin. Steep and densely vegetated slopes flank deep incised valleys and outcrop is largely limited to river channels (Figure 5-1).

From Lima, it is possible to fly to either Cusco, Puerto Maldonado or Juliaca and drive to the town of San Gaban using the National Road Network (Figure 5-2); National Highway 348 transects the property. Prospects within the Property are accessed on foot via drainages.

Approximate travel times from Lima to San Gaban via Cusco, Puerto Maldonado and Juliaca are summarised in Table 5.1.



Figure 5-1: Photographs of the Gaban Gold Property

Table 5-1: Gaban - Approximate Travel Times

Route	Section	Mode	Time	Section	Mode	Time
1	Lima to Cusco	Flying	1.5 hours	Cusco to San Gaban	Driving	7 Hours
2	Lima to Puerto Maldonado	Flying	1.75 hours	Puerto Maldonado to San Gaban	Driving	4.5 hours
3	Lima to Juliaca	Flying	1.5 hours	Juliaca to San Gaban	Driving	5 hours

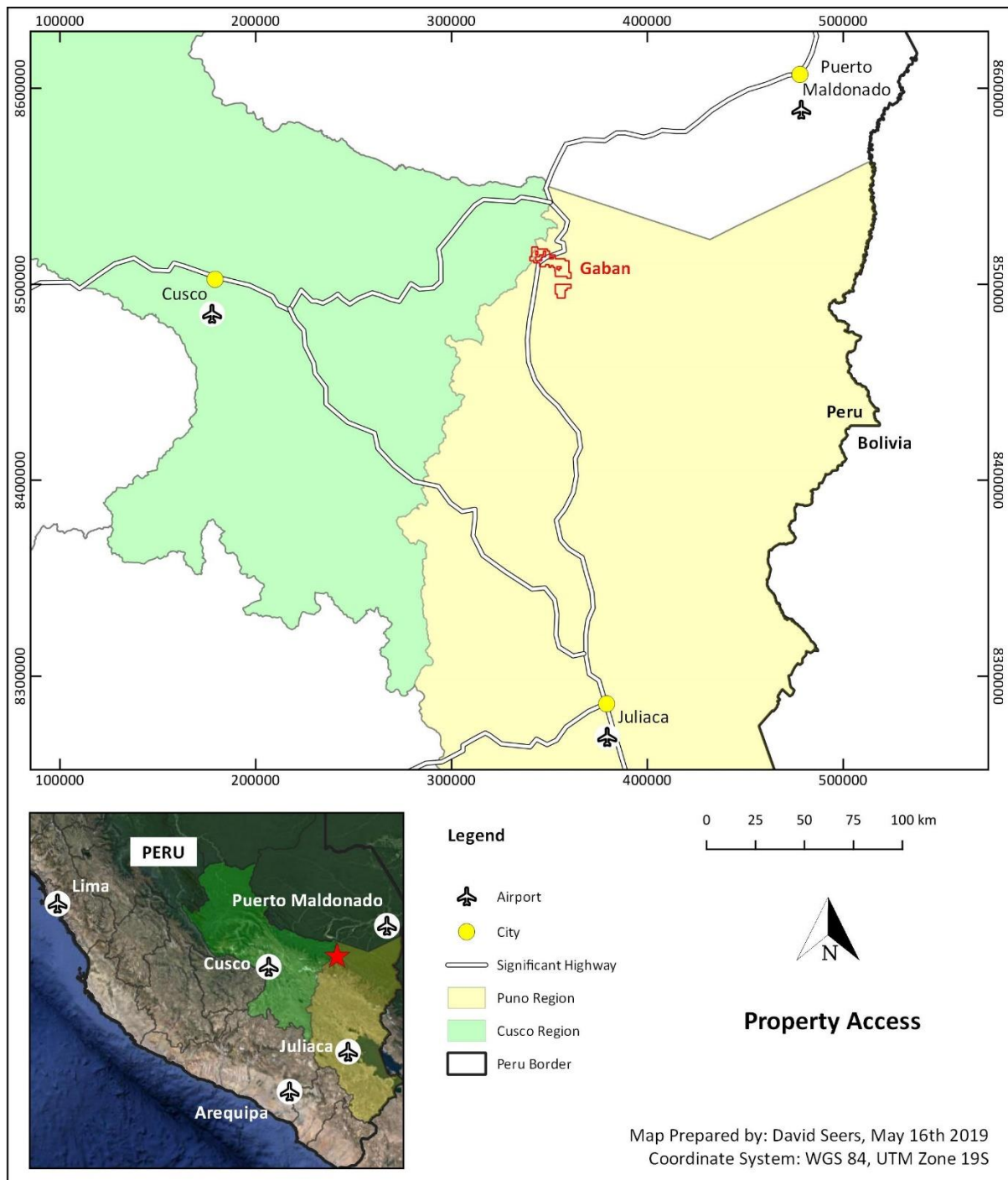


Figure 5-2: Gaban - Access

Cusco, Puerto Maldonado and Juliaca have significant populations and are established mining centres. San Gaban has a population of approximately 5000 and has basic services, including a medical post, police station and schools.

Exploration at the Property is most effective during the dry season typically between March and September.



Private individuals have granted verbal permission for Palamina to explore in large parts of the Main Block. Other areas of the Property are not included in these verbal agreements.

Abundant surface waters flow through the property and various hydroelectric power plants are under construction along the San Gaban River upstream of the town of San Gaban (Figure 5-3).

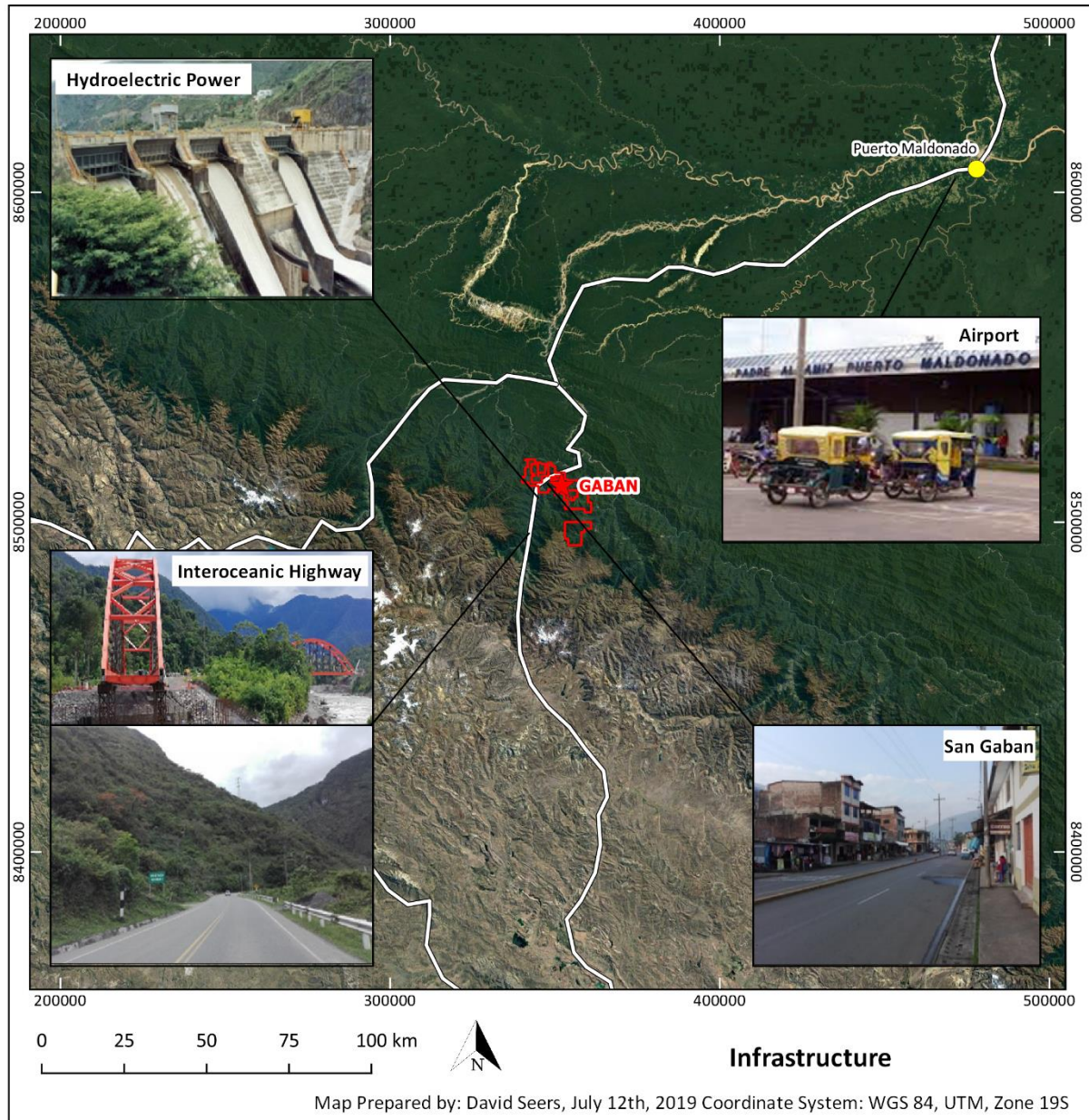


Figure 5-3: Infrastructure

Gaban is an early stage project and it has not been subject to engineering studies to evaluate potential sites for mining infrastructure (i.e. camp, processing plant, tailings storage). During his visit of the Property, Mr Seers (QP) noted sites that he considers are potentially suitable for mining infrastructure and the terrain is such that there are many potential areas where a

tailings facility could be established. Mining personnel could potentially be sourced from San Gaban, Juliaca and Puerto Malonado.

## 6 HISTORY

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Documented exploration history of the Property is limited; the following History has been created based on cadastral records taken from GEOCATMIN:

In 2005, Erasmo David Mendoza Mamani was the first to claim a concession in the area of the Property. Subsequently (2007), Minera Monteverde E.I.R.L claimed the adjacent concession “Aurifera San Gaban”. Artisanal miners have recovered alluvial and hard rock gold from these concessions.

Palamina began acquiring established concessions and claiming new concessions in the area of the Property in January 2017. Jamie Flavio Alejandro Castro Mendivil Berger, Legal Representative of Palamina claimed a further seven concessions (on behalf of Palamina) (five have been granted two remains in process) adjacent to those already established.

Palamina was the first to use prospective exploration in area of the Property. A program of stream sediment sampling identified drainages anomalous in gold and follow-up prospecting, mapping and outcrop sampling identified gold in outcrop hosted in sheared sediments. Palamina has generated 64 stream sediment samples, 37 selective samples and 131 non-selective samples and has identified three auriferous shear zones in outcrop.

In late 2018, an airborne magnetic and radiometric survey was flown over the Main Block. The Southern Block has not been explored.



## 7 GEOLOGICAL SETTING AND MINERALISATION

### 7.1 Regional Geology

The Instituto Geológico Minero y Metalúrgico (INGEMMET), part of Peru's Ministry of Energy and Mines, publish regional geological maps at 1:100k with accompanying bulletins that describe the regional geology of Peru. INGEMMET also publish geological maps at 1:50k scale for some areas of Peru.

The Property lies within the areas covered by:

- 1:100k map sheet 27V "Mapa Geologico del Cuadrangulo de Masuco"
- 1:100k map sheet 28V "Mapa Geologico del Cuadrangulo de Ayapata"
- Boletín 81-A – Geología de los Cuadrángulos de Puerto Luz, Colorado, Laberinto, Puerto Maldonado, Quincemil, Masuco, Astillero y Tambopata. Hojas 26-u, 26-x, 26-y, 27-u, 27-v, 27-x, 27-y
- Boletín 90-A – Boletín de Corani (28-U) y Ayapata 28-V)

Based on the sources listed above, Mr Seers (QP) summarises key geological features:

Neoproterozoic basement and flat-lying Devonian, Silurian and Ordovician sediment and meta-sediments are exposed in the eastern foothills of the Andes Cordillera. Permian intrusions interrupt the basement and metasedimentary sequence. Further east, younger sediments have been deposited in the Amazon Basin.

Three principle structural orientations are mapped:

- Andean trend (NW-SE to NNW-SSW)
- NE-SW faulting antithetic to the Andean trend
- N-S Extensional faulting interrupts Permian intrusions

The Property lies within metallogenic belt "I" recognised for hosting Au deposits. Metallogenic belt "I" extends west-northwest parallel to the Andean trend in metasedimentary rocks of Devonian, Silurian and Ordovician age.

As described by Haeberlin, Moritz and Fontbote (2002), the Property lies within Eastern Andean Cordillera (EAC) that extends from southern Peru to northern Argentina. Haeberlin, Moritz and Fontbote (2002), describe the EAC as having common characteristics with the giant eastern Australian goldfields, such as Bendigo – Ballarat and Charters Towers and that

despite a large number of recorded Au occurrences, EAC is poorly studied and represents an attractive target for mineral exploration.

Haeberlin, Moritz and Fontbote (2002) state that the EAC hosts a number of Au + Sb deposits including Ananea and Santo Domingo in southern eastern Peru, these deposits and others are considered by Haeberlin, Moritz and Fontbote and others to be the source a significant placer gold deposits in Peru's Madre de Dios region. Haeberlin, Moritz and Fontbote (2002) state that approximately 400,000 Oz Au are produced from the Madre de Dios placers annually. Mr Seers (QP) has not reviewed the Madre de Dios placer deposits and he has not independently confirmed estimated annual gold production from them.

According to Haeberlin, Moritz and Fontbote (2002), orogenic deposits in the EAC are typically hosted in turbidite sequences that have undergone low to mid greenschist grade metamorphism. Deposit geometries vary and can include, saddle reefs, veins concordant with bedding, stockworks and disseminated zones. Alteration is typically represented by discrete and narrow aureoles of sericite and chlorite. Au+Sb mineralisation is often spatially related to carbonaceous shale or chloritic mylonite. Higher gold grades are often associated with crackle breccia and blue-grey microcrystalline quartz veins.

Mr Seers (QP) notes that the Property is hosted in what has been termed the Puno Orogenic Gold Belt, part of the EAC in southeastern Peru. The POGB has been the focus of increased mineral exploration interest from established miners and junior explorers in recent years and a Definitive Feasibility Study was published for the Ollachea deposit (hosted in the POGB) in 2012 (Minera IRL).

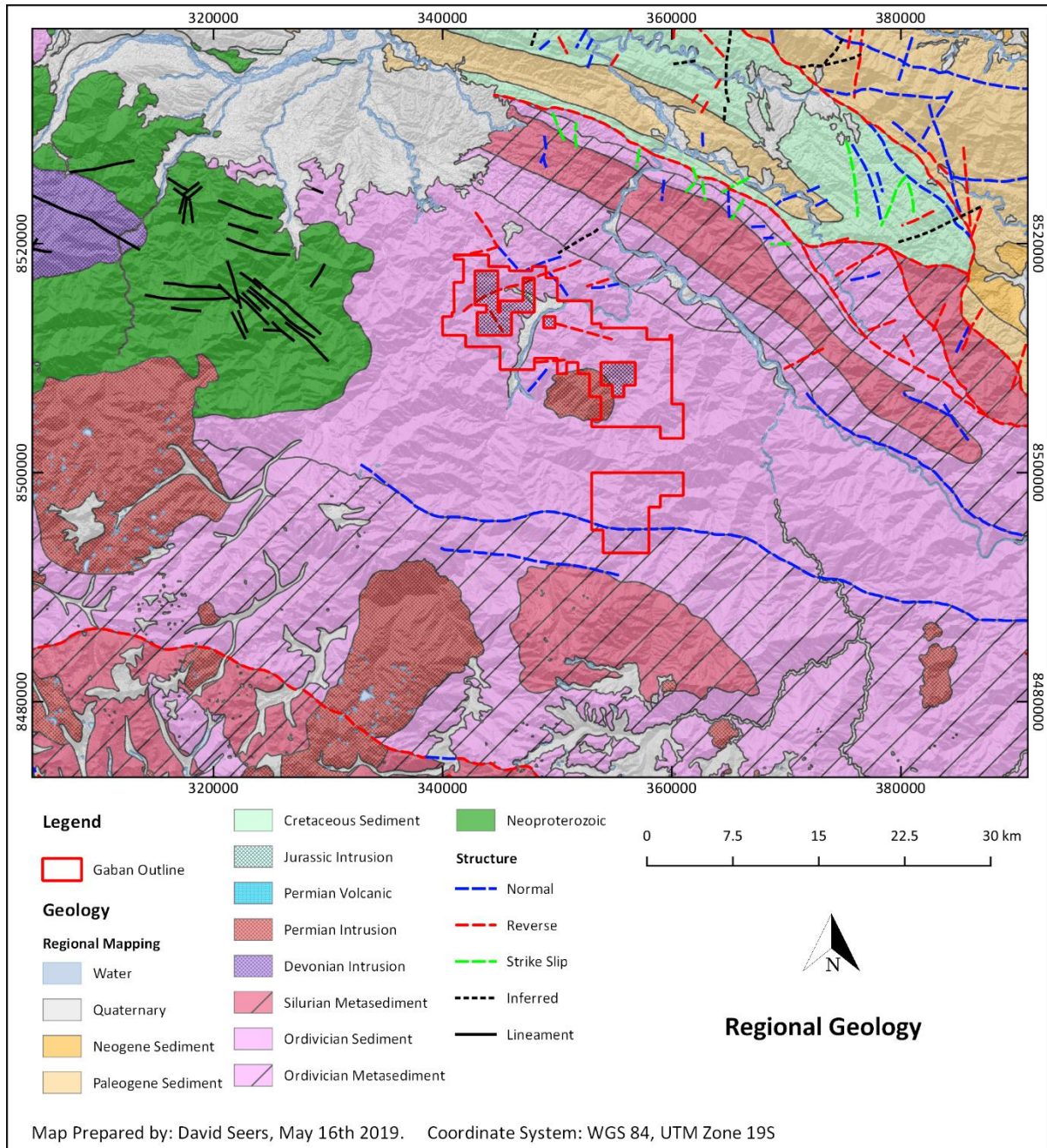


Figure 7-1: Regional Geology

## 7.2 Local Geology

There is very limited outcrop in the area surrounding the Property, based on boulders observed in the San Gaban River and tributaries; Mr Seers (QP) notes the following:

- Rounded boulders in drainages include; siltstone, quartzite, quartz vein material, hornfels, plagiophytic and porphyritic intrusions and fine grained intermediate intrusions
- White quartz veining is often observed with intermediate intrusions
- Numerous intrusive bodies of varied composition outcrop in drainages, these bodies are not recorded on regional geological maps
- Metamorphic grade is low (i.e. prehnite-pumpellyite/greenschist) but increases locally

## 7.3 Property Geology

Outcrop is restricted to watercourses and zones exposed by landslides.

Interdigitated fine-grained sedimentary units including siltstone and lesser shale are the main underlying rock units, sedimentary sequences are locally interrupted by intermediate sills. Zones of mafic and weakly magnetic intrusions are recorded at lower elevations but are not spatially defined (i.e. it has not been determined if they are a plug, sill or dyke). Sedimentary units are variably metamorphosed. Zones of contact metamorphosed sediments are recorded at lower elevations (Figure 7-2).

Sedimentary units typically strike in a northwest orientation and dip at shallow angles (<45°) to the northeast and southwest. Sub vertical fracturing, normal to the strike and dip of sedimentary units is frequently observed.

Zones of shearing in sediments are characterised by close spaced and steep foliation. Shear zones at the Property are largely covered, Mr Seers (QP) noted the following zonation at the Picitiri shear:

- Moderately graphite rich core with white quartz veining. Quartz veins horsetail and cut across foliation, margins of quartz veins are often iron stained
- Zones of subparallel 2-3 mm quartz veins can form in fractures flanking the core of shear zones roughly aligned to foliation in the graphitic core. Sediments in these zones can be enriched in sericite/chlorite and have increased superficial iron oxides
- Beyond sericite/chlorite zones, narrow quartz veins form within the foliation of sediments for several tens of meters



- Sulphides and boxwork structures after sulphide are not widely distributed but disseminated pyrite and arsenopyrite are observed in each of the identified zones (i.e. graphitic core, flanking sericite/chlorite zone and foliation parallel quartz veins).
- Sub vertical fractures normal to the strike and dip of sedimentary units can be enriched in iron and manganese oxides



Figure 7-2: Photographs of Local Geology

Various shear zones are recorded at the Property, the Picitiri, Yanamayo and San Jose shears in the Main Block have been the focus of most exploration and have been visited by Mr Seers (Figure 7-3).

Exploration to date indicates that auriferous mineralisation in shear zones is related to discontinuous quartz veins aligned parallel to foliation, disseminated pyrite and arsenopyrite is recognised in sheared host rock. Vein distribution within shear zones has not been defined.



Figure 7-3: Named Auriferous Shear Zones

A conceptual cross-section is proposed for the Property (Figure 7-4).

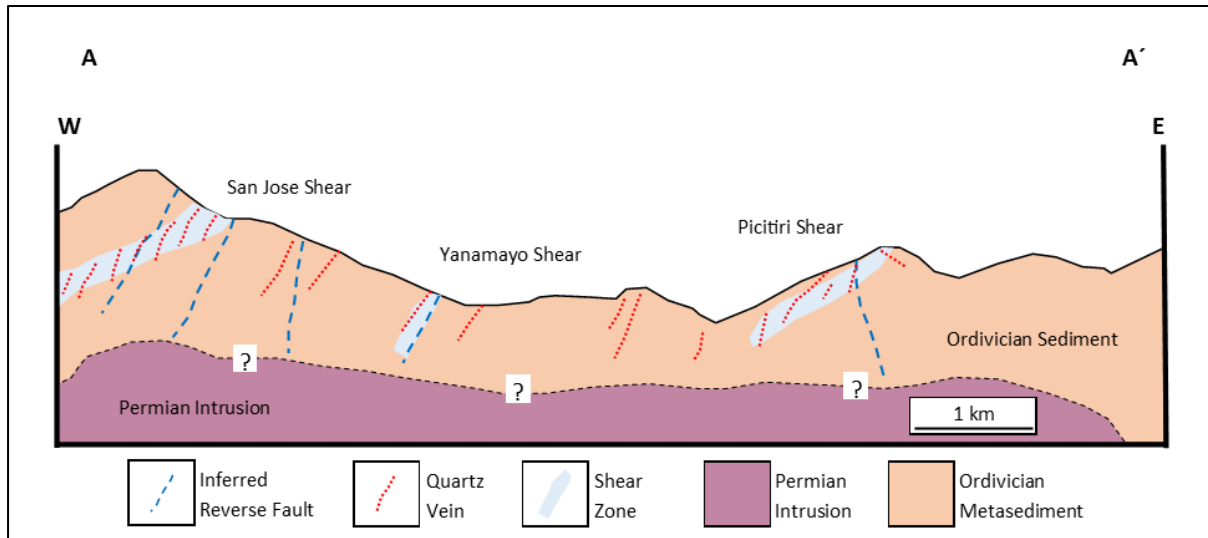


Figure 7-4: Local Geology - Conceptual Cross Section

### Picitiri Shear

A landslide close to the peak of a hill has exposed the Picitiri shear; artisanal miners have recovered Au from debris material and have developed numerous small workings in the flanks of the shear (Figure 7-5).

Foliation in the area of the shear trends approximately northwest and dips to the southwest at approximately 60°, zones of most intense shearing have a near vertical foliation.

The core of the Picitiri shear is locally graphitic and hosts horsetail quartz veining with oxidised margins; the core of Picitiri shear has been observed over 2 m but could extend further under cover. Zones of chloritized siltstone with sub-parallel quartz veinlets (<3 mm) flank the core of the shear (Figure 7-6). An 8 cm ribbon vein, typical of shear-hosted deposits was recovered from landslide debris and sampled by Mr Seers.

Artisanal mining efforts, vein sampling and panning of crushed debris from the landslide demonstrate that the Picitiri shear is auriferous at surface. Systematic exploration is required to determine if Au is confined to quartz veins or if sheared sediments are also mineralised.

The Picitiri Shear is up to 75 m wide and has been traced over 250 m along strike and remains open to the north-northwest and south-southeast. Artisanal workings demonstrates that veining extends up to ten meters below surface. Continuity of mineralisation in the shear zone has not been demonstrated.



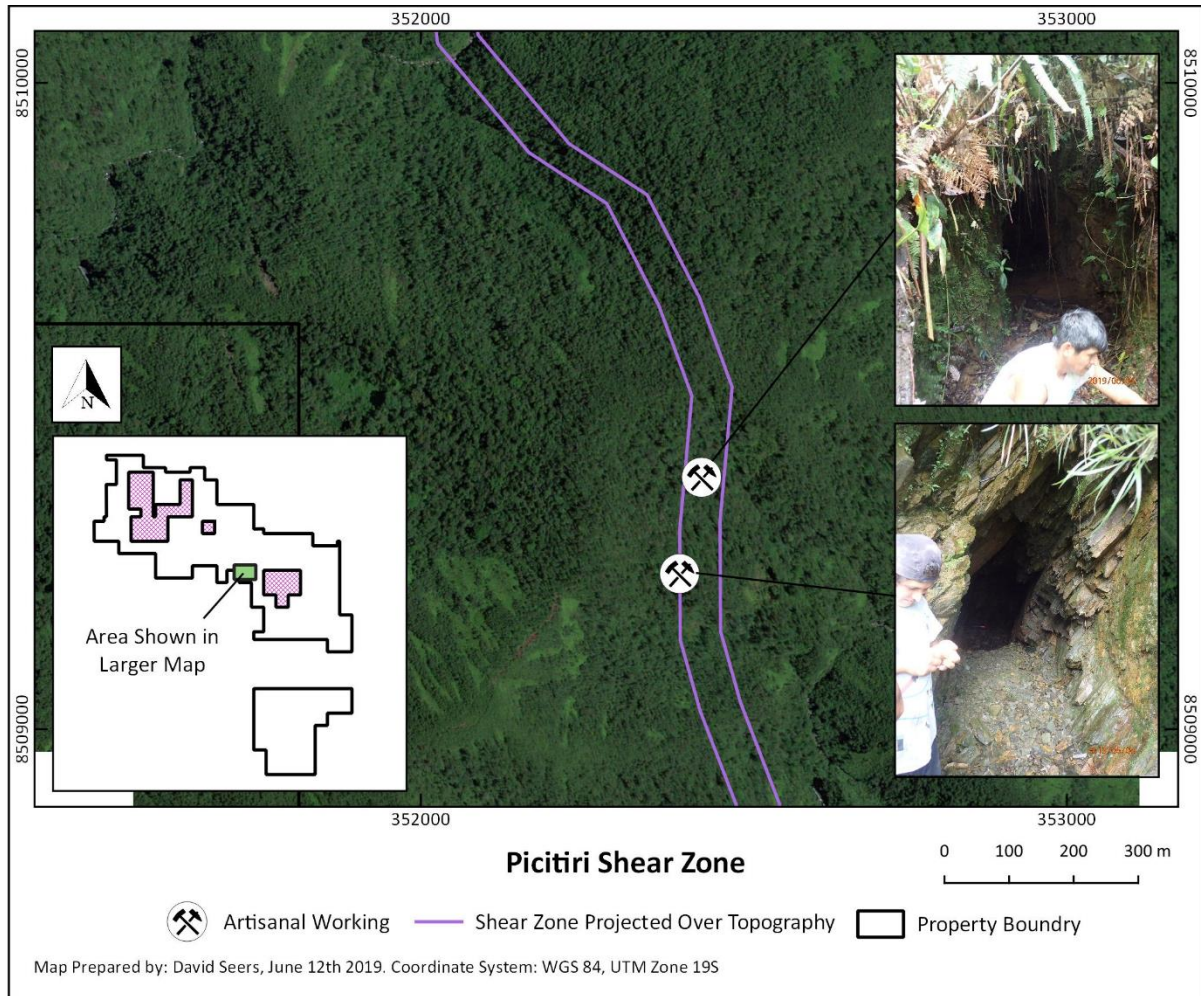


Figure 7-5: Picitiri Shear Zone





Figure 7-6: Photographs of the Picitiri Shear Zone

### Yanamayo Shear

The Yanamayo shear is exposed at the base of a waterfall and strikes northwest and dips southwest at approximately 44° (Figure 7-7).

The Yanamayo shear is moderately silicified and chloritized and very locally graphitic.

Two principal quartz veins are recorded. The largest vein bifurcates and is up to 50 cm wide and is hosted in a fracture orientated normal to foliation, the vein is intensely fractured and locally vuggy and has strongly superficial iron oxides and supergene argillisation at vein margins (Figure 7-8). The other vein is approximately parallel to foliation and up to 5 cm wide. Sulphides or boxwork were not observed in the shear zone but cubic arsenopyrite is present in siltstone.

The Yanamayo Shear is up to 40 m wide and has been traced over 150 m along strike and remains open to the north-northwest and south-southeast. Extension of shearing to depth and continuity of mineralisation in the shear zone has not been demonstrated.

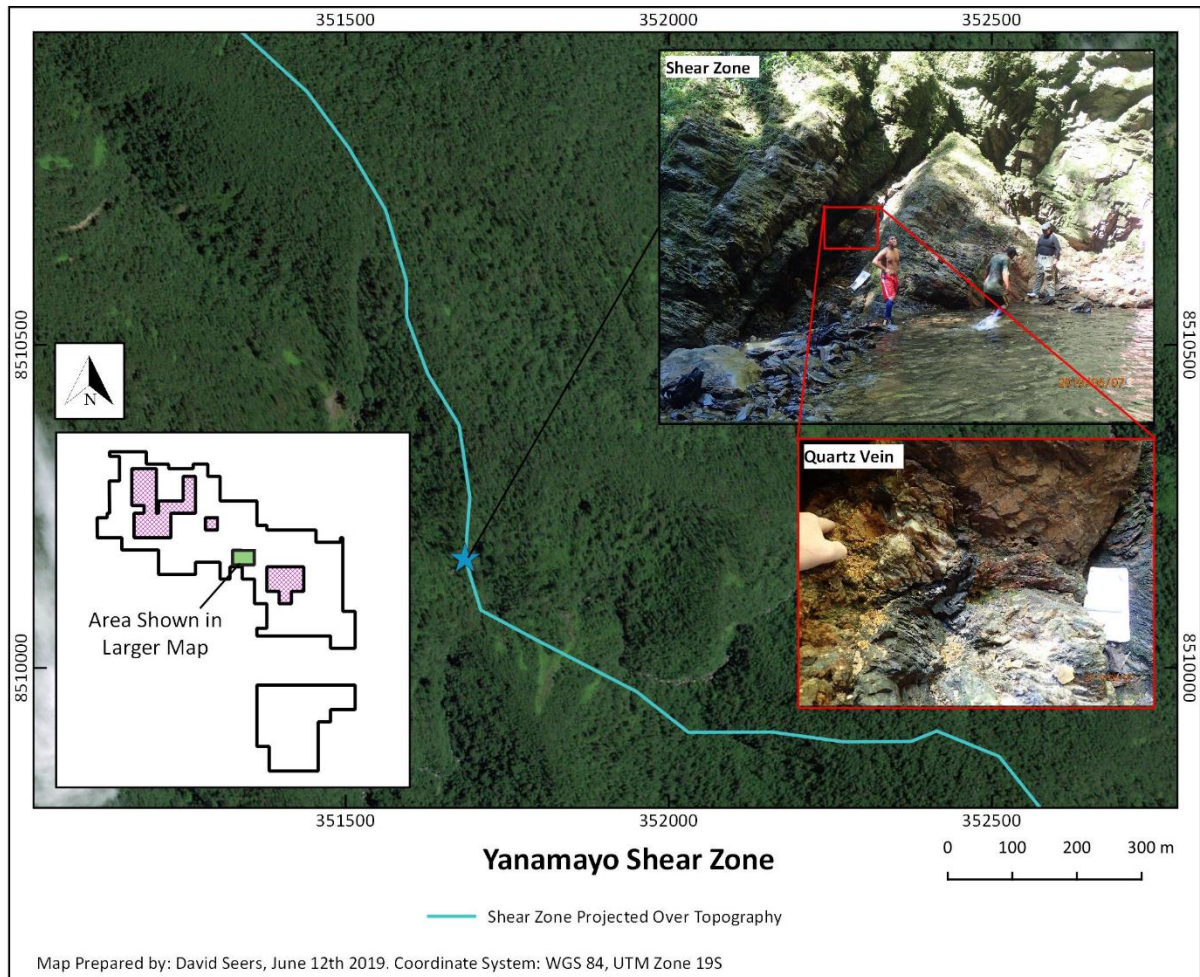


Figure 7-7: Yanamayo shear zone





Figure 7-8: Photographs of the Yanamayo shear zone

## San Jose Shear

The San Jose Shear trends approximately northwest and dips southeast at approximately 50°. A landslide has covered the shear since Palamina last visited the area. Strong superficial iron oxides are very evident in siltstone in the area of the shear (Figure 7-9).

There is a significant amount of iron and manganese oxide fill in fractures normal to foliation (Figure 7-10).

The San Jose Shear is up to 100 m wide and has been traced over 3000 m along strike and remains open to the north-northwest and south-southeast. Extension of shearing to depth and continuity of mineralisation in the shear zone has not been demonstrated.

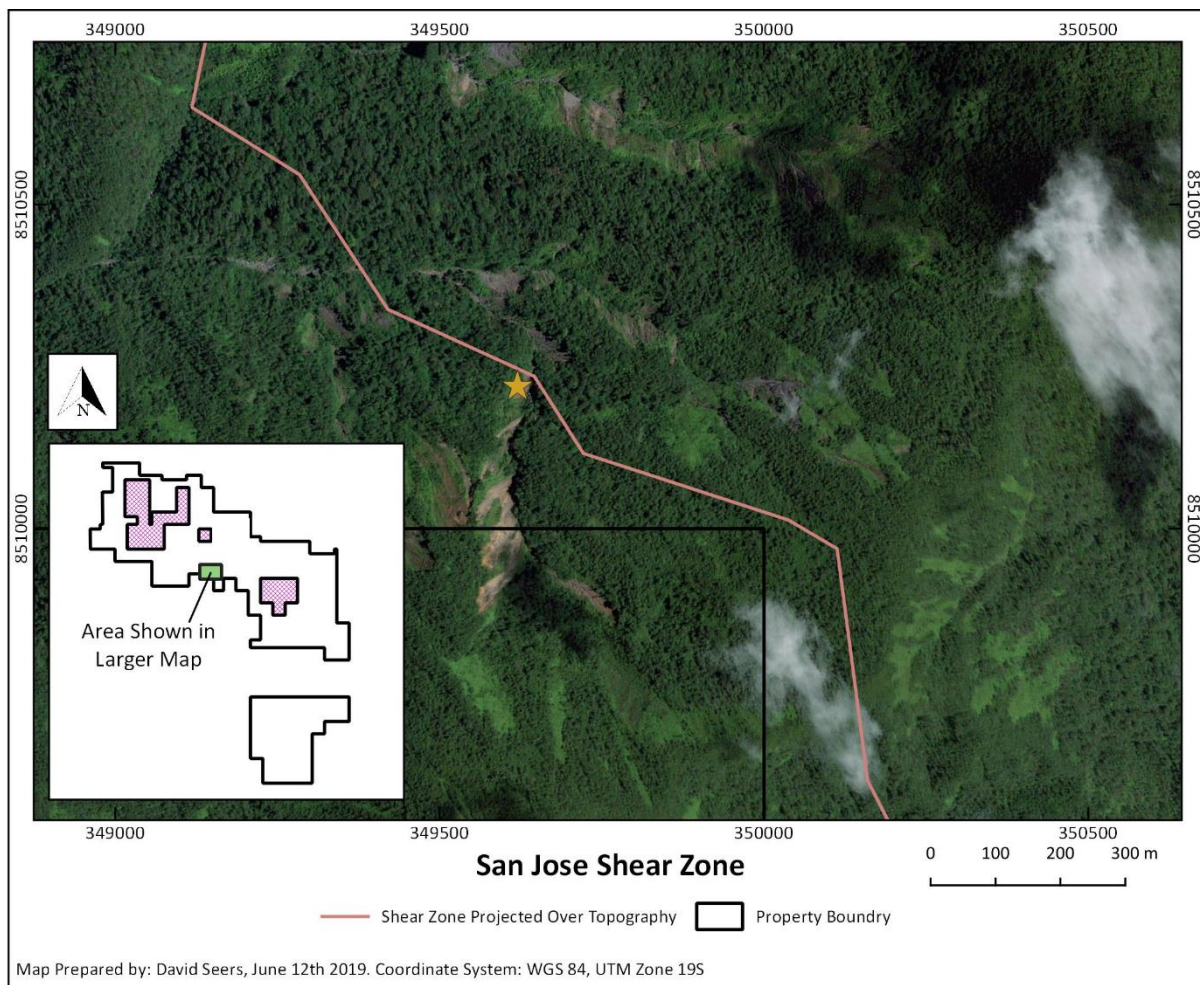


Figure 7-9: San Jose Shear



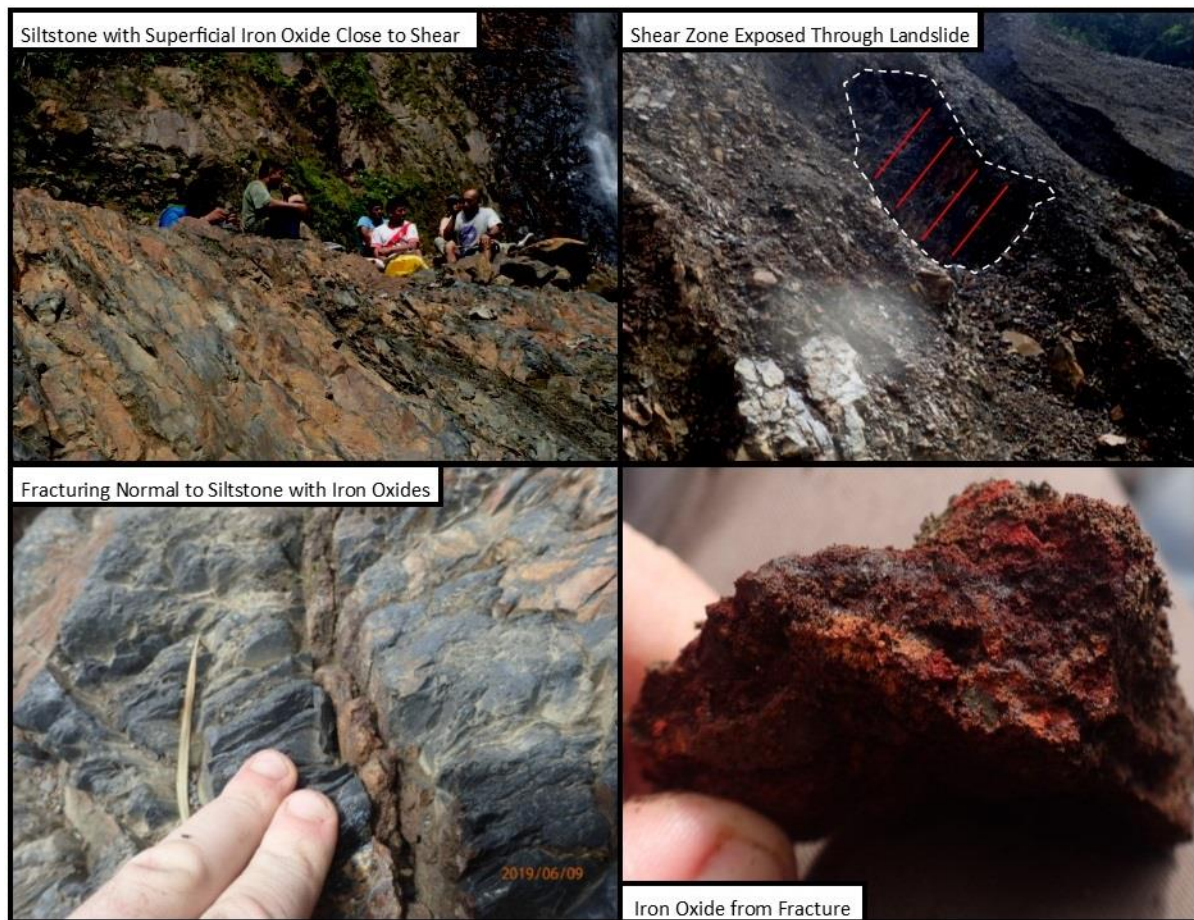


Figure 7-10: Photographs from the San Jose Shear

## 8 DEPOSIT TYPES

Exploration at the Property has been focused on the identification of orogenic (shear hosted) Au mineralisation; three auriferous shear zones have been identified to date.

Orogenic deposits are a recognised and understood class of mineral deposit and are a major global source of gold, they are an attractive exploration target as they can contain high-grades and can extend vertically for over 1 km. There are numerous examples of orogenic deposits that host in excess of 10 Moz Au such as Hollinger-McIntyre, Dome, Sigma-Lamaque and Norseman. Mr Seers (QP) notes that the examples of orogenic deposits given is not necessarily indicative of mineralisation on the Gaban Property.

Orogenic gold deposits often form in clusters and are mined as both open-pit lower-grade high-tonnage and higher-grade lower-tonnage underground mines. Clusters of orogenic deposits frequently align along regionally significant structures.

Groves et al (1998) define Orogenic gold deposits as follows:

*“Orogenic gold deposits are associated with regionally metamorphosed terranes of all ages. They form at convergent plate margins and are built by gold-bearing quartz veins, often with very simple mineralogy. They are characterised by a relatively high temperature and pressure of ore deposition, which distinguishes them from a number of other types of gold deposits. Their fluids are also characteristic by increased CO<sub>2</sub> content. In general, however, there is no good single definition of these deposits.”*

Orogenic Au deposits are associated with greenschist to amphibolite grade metamorphism (Figure 8-1). Au is often concentrated in quartz lodes formed in brittle structures and can be associated with other elements such as Sb at shallower formation depths and As, Te and W at deeper formation depths.

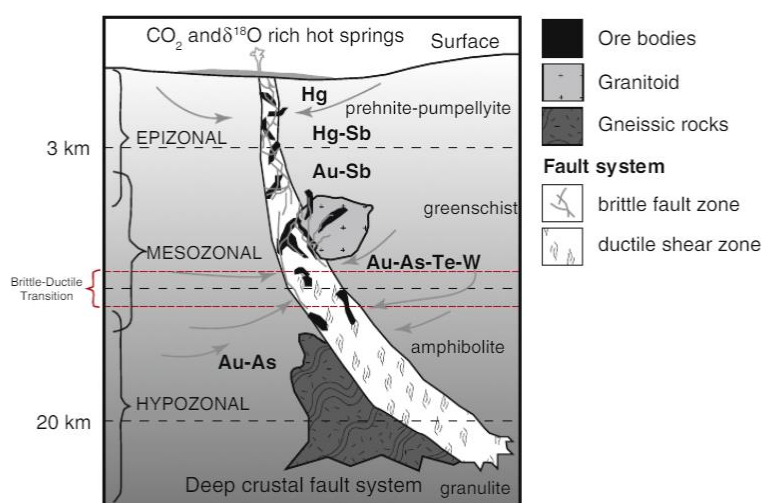


Figure 8-1: Typical cross-section of an orogenic system

## 9 EXPLORATION

Helio has not explored the Property.

Palamina generated all exploration data discussed here and there is no recorded history of systematic sampling at the Property prior to Palamina's involvement. Artisanal miners recover alluvial gold from drainages transecting the Property using small dredges and sluice boxes (Figure 9-1) this activity has been used to guide exploration.



*Figure 9-1: Photo of a dredge from the Picitiri river flowing through the Property*

Palamina commenced systematic exploration of granted concessions in 2017; the work has been centred in the Main Block of the Property and in particular the Picitiri, Yanamayo and San Jose drainages (Figure 9-2) and includes:

- Prospecting is largely restricted to the Picitiri, Yanamayo and San Jose drainages and areas exposed by landslides. Prospecting has identified three auriferous shear zones known as Picitiri, Yanamayo and San Jose
- Stream Sediment sampling; 64 Stream Sediment Samples (SSS) have been taken from the Picitiri, Yanamayo and San Jose drainages, which feed in the San Gaban River. SSS are sieved and the minus 60 mesh (<250 µm) is analysed for Au only
- Selective (37) and non-selective (131) rock sampling; selective rock samples are punctual samples including float and outcrop; non-selective rock samples include chip-channel (hammer and chisel) and panel samples. All rock samples have been submitted for multi-element ICP and Fire Assay (Au) analysis



- Combined airborne magnetic and radiometric survey; the survey is based on northeast-southwest orientated lines spaced at 125, 250 and 500 m. Magnetic data identifies west northwest structures probably related to bedding and late sinistral faulting trending approximately east northeast.

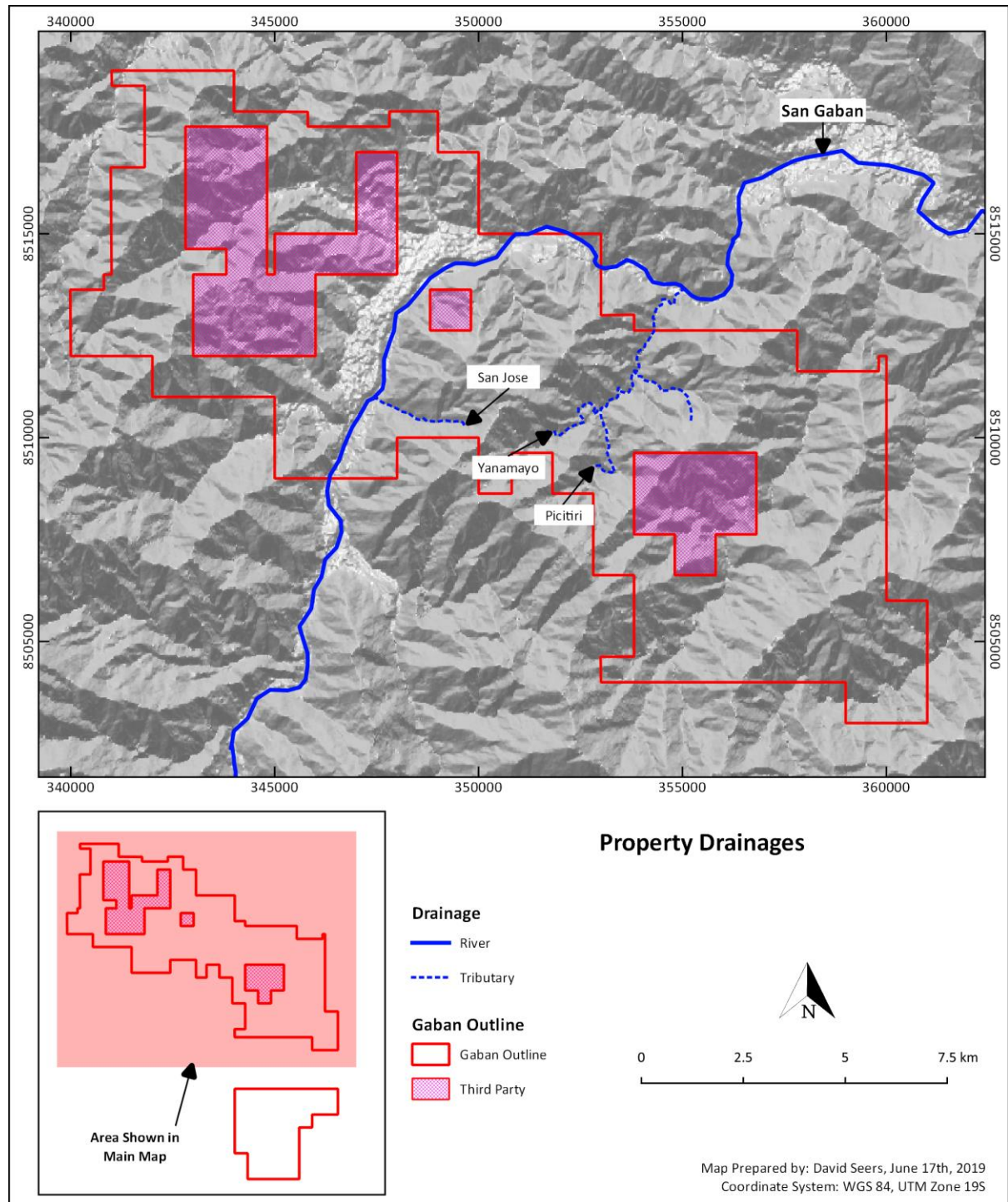


Figure 9-2: Property Drainages



## 9.1 Prospecting

Concession applications have not been explored, three auriferous shear zones with quartz veining in fine-grained sediments have been identified, these shear zones are known as Picitiri, Yanamayo and San Jose (Figure 9-3). The Picitiri, Yanamayo and San Jose shears occupy elevated positions and according to regional mapping (not observed in the field) are spatially related to a Permian intrusion.

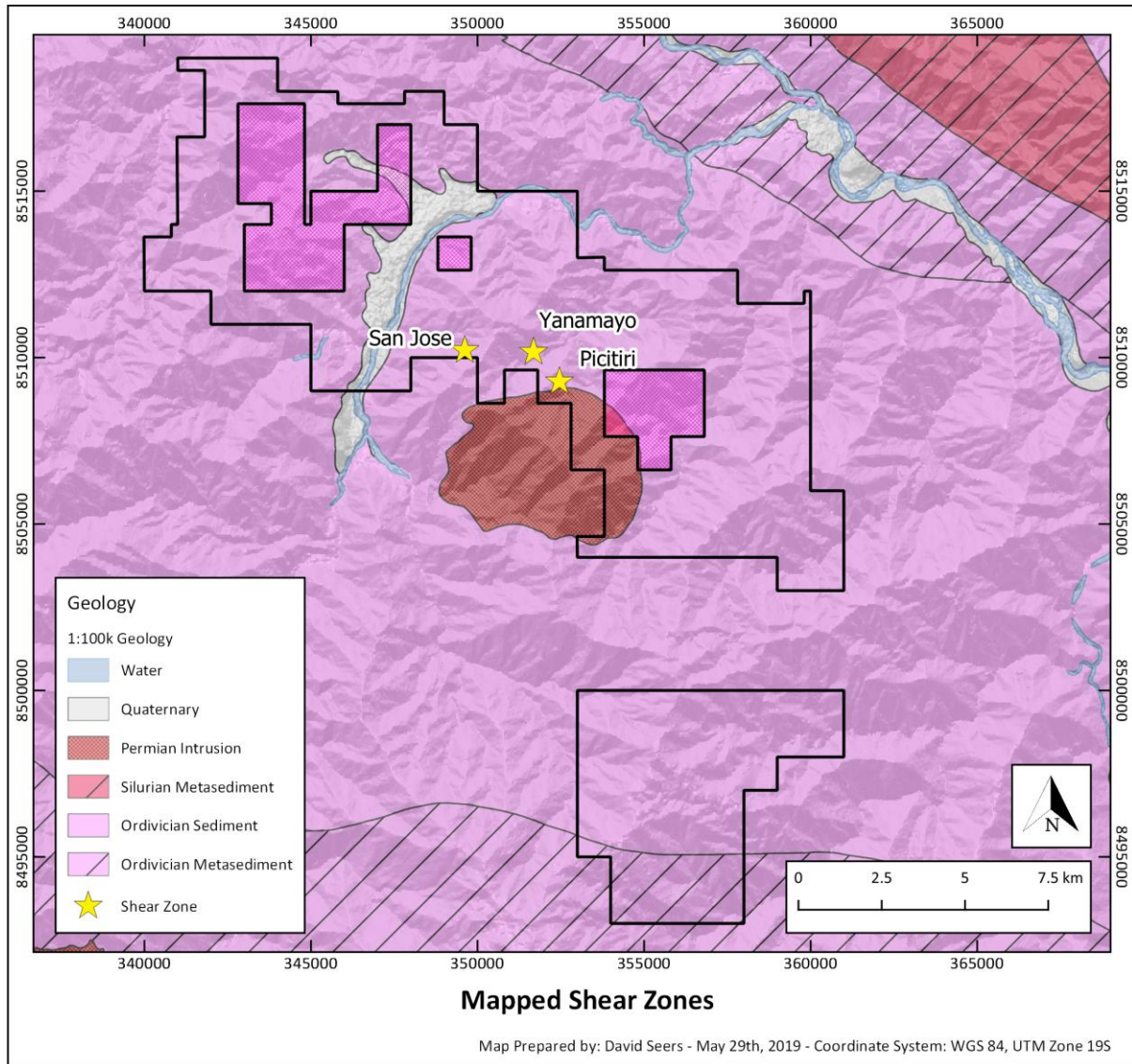


Figure 9-3: Mapped Shear Zones

## 9.2 Sampling

Stream sediment and rock samples have been concentrated in the Picitiri, Yanamayo and San Jose drainages which are easy to access from the San Gaban River (Figure 9-2 and Figure 9-4: Sample Distribution).

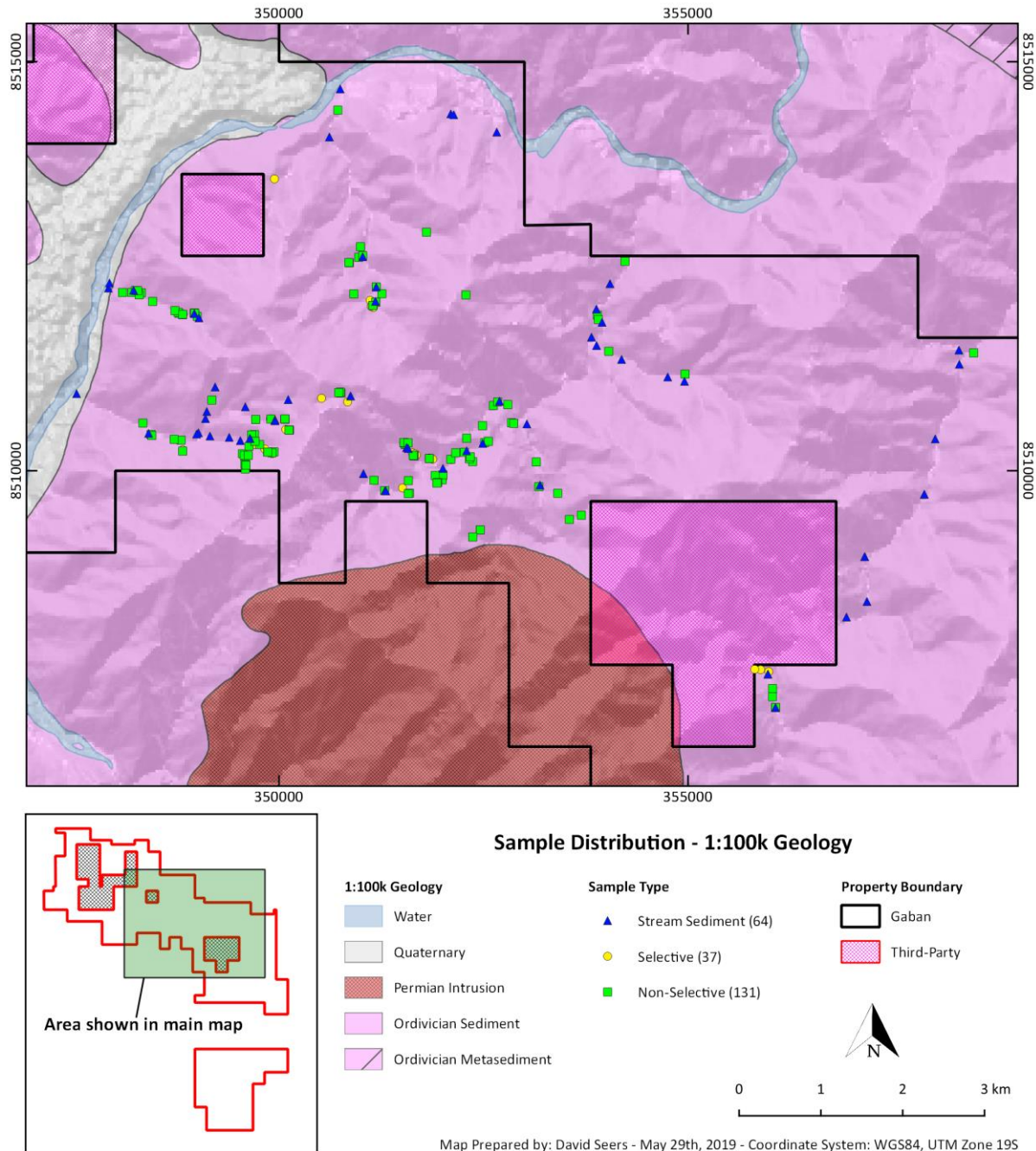


Figure 9-4: Sample Distribution

SSS has been summarised in Table 9.1 and Figure 9-5, details are provide in Table 9-2. Of the 14 stream sediment samples that assayed above the lower detectable limit for Au (0.005 ppm), eight are from the Picitiri and Yanamayo drainages. Sample 1021 assayed 4.137 ppm Au and samples 1046 assayed 1.374 ppm Au.

Table 9-1: Summary of Stream Sediment Sampling

Stream Sediment	
Sample Count	64
Count BD*	50
Mean (Au ppm)	0.11
Maximum (Au ppm)	4.14

\*BD = Assay Below Detectable Limits

Table 9-2: Stream Sediment Sampling (Palamina) - Assay Data

Sample	East	North	Sample Type	Au ppm	Sample	East	North	Sample Type	Au ppm
1001	351560	8510285	SS	0.015	1047	349527	8510369	SS	BD
1002	352004	8510030	SS	0.046	1048	349391	8510409	SS	BD
1003	352293	8510244	SS	0.014	1049	349156	8510425	SS	BD
1004	352490	8510336	SS	0.475	1051	349015	8510465	SS	BD
1007	353820	8511635	SS	BD	1052	348965	8511922	SS	0.006
1009	353191	8509826	SS	0.067	1053	349021	8511870	SS	BD
1010	353030	8510573	SS	0.396	1054	356070	8507106	SS	BD
1011	354957	8511095	SS	BD	1055	355977	8507514	SS	BD
1012	354752	8511147	SS	BD	1056	355977	8507514	SS	0.01
1013	354188	8511362	SS	BD	1064	356937	8508212	SS	BD
1014	351179	8512072	SS	BD	1065	357188	8508402	SS	BD
1015	351189	8512247	SS	BD	1066	357160	8508951	SS	BD
1017	351023	8512618	SS	BD	1067	357160	8508951	SS	BD
1021	350616	8514082	SS	4.137	1068	357889	8509713	SS	BD
1022	350748	8514669	SS	BD	1070	357889	8509713	SS	BD
1025	352662	8514141	SS	BD	1071	358022	8510390	SS	BD
1026	352100	8514364	SS	BD	1072	358317	8511303	SS	BD
1027	352136	8514353	SS	BD	1073	358312	8511476	SS	BD
1028	352695	8510851	SS	BD	1075	349645	8510396	SS	BD
1031	353880	8511977	SS	0.052	1076	349645	8510396	SS	BD
1033	353882	8511532	SS	BD	1078	349951	8510622	SS	BD
1034	353949	8511816	SS	BD	1079	349951	8510622	SS	BD
1035	354046	8512288	SS	BD	1080	349950	8510613	SS	BD
1037	347525	8510944	SS	0.007	1081	349950	8510613	SS	BD
1038	348406	8510458	SS	BD	1082	350875	8510915	SS	BD
1039	347914	8512234	SS	BD	1083	350875	8510915	SS	BD
1040	347927	8512297	SS	0.008	1084	349219	8511025	SS	BD
1041	348222	8512208	SS	BD	1085	349117	8510725	SS	BD
1043	351297	8509758	SS	0.117	1087	349101	8510639	SS	BD
1044	351305	8509755	SS	BD	1088	348993	8510449	SS	BD
1045	351032	8509965	SS	BD	1089	349588	8510783	SS	BD
1046	351579	8510273	SS	1.374	1090	350112	8510871	SS	BD

BD = Below Detectable Limits (Au BD = 0.005 ppm)



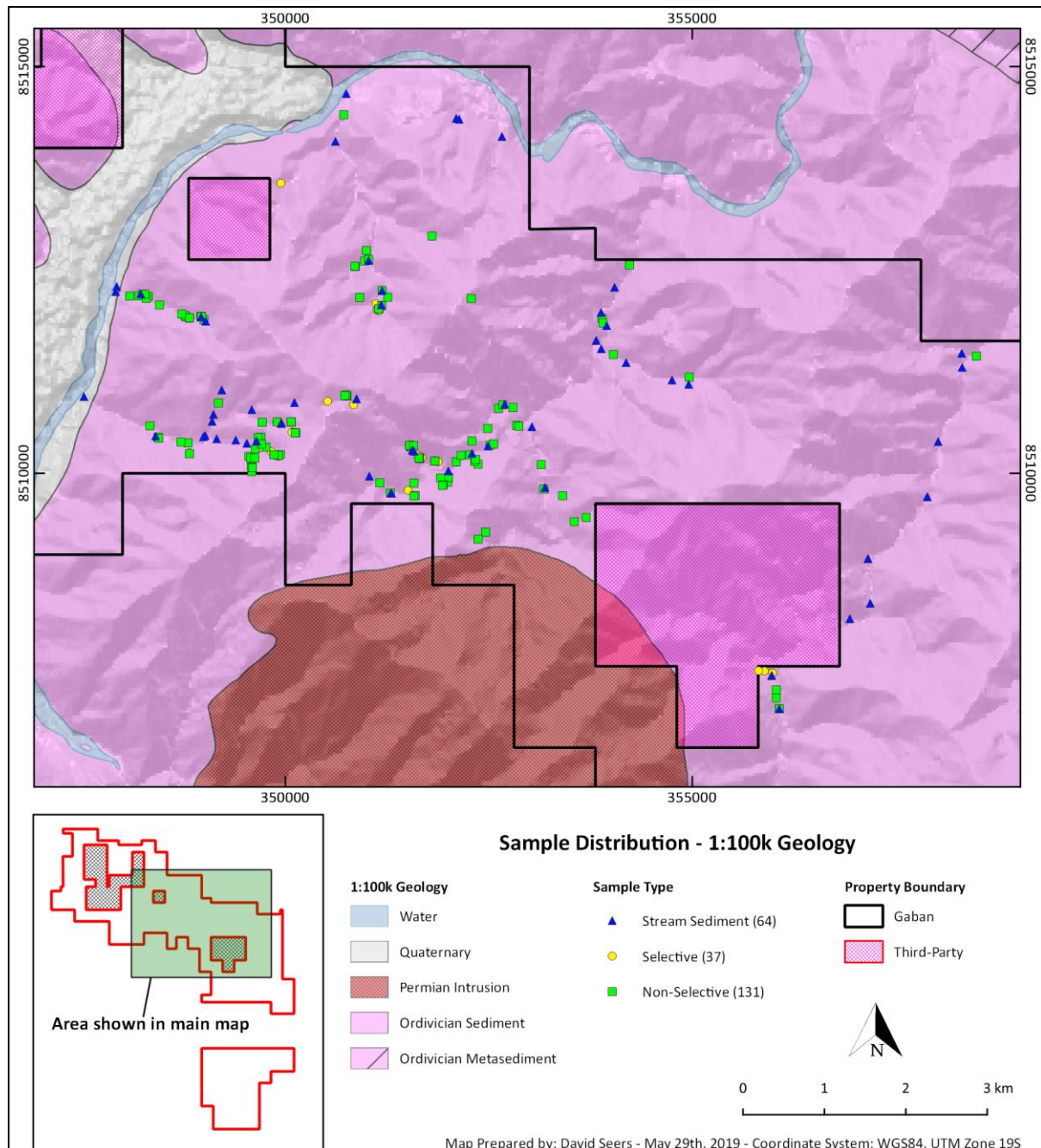


Figure 9-5: Stream Sediment Sampling – Distribution and Au Assays (Most Anomalous Drainage includes Upper Picitiri and Yanamayo)

One hundred and sixty eight (168) rock samples were taken, including 37 selective and 131 non-selective samples. Analysis of select elements for selective and non-selective samples are summarised in Table 9-3 and Table 9-4 respectively, detail is provided in Table 9-5 and Table 9-6.

Table 9-3: Selective Sampling - Summary Details

Selective	Au ppm	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm
Sample Count	37	37	37	37	37	37	37
Count BD*	33	14	14	0	3	27	0
Mean	0.01	0.43	23.35	43.81	54.79	9.2	117.48
Maximum	0.01	1.1	117	192	668	17	1611

\*BD = Assay Below Detectable Limits

Table 9-4: Non-selective Sampling - Summary Details

Non-Selective	Au ppm	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm
Sample Count	131	131	131	131	131	131	131
Count BD*	84	78	31	0	7	89	0
Mean	0.2	0.41	160.6	60.72	41.02	16.33	156.04
Maximum	6.569	1.3	5488	301	1466	202	3476

\*BD = Assay Below Detectable Limits

Table 9-5: Selective Sampling - Select Assays:

Sample	East	North	Lithology	Au ppm	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm
456	351981	8509907	Shale	0.01	BD	12	58.3	15	6	80.1
465	351563	8510327	Silt	BD	BD	18	36.3	13	BD	31.2
681	351154	8511996	Silt	BD	BD	6	14.9	17	BD	54.8
683	351128	8512011	Silt	BD	0.4	10	55.4	99	BD	58.9
686	351154	8512052	Silt	BD	0.2	47	11.8	23	BD	56.7
688	351114	8512085	Silt	BD	BD	17	40.8	12	BD	34.4
695	348828	8511911	Silt	0.006	1	8	123	56	BD	76.5
696	348822	8511915	Intrusion	BD	0.2	12	28.3	19	5	147
698	348822	8511910	Silt	BD	0.5	17	85.1	BD	BD	135
701	348810	8511914	Intrusion	BD	0.4	50	99	19	BD	123
702	348803	8511922	Intrusion	BD	BD	15	15.1	7	BD	33
707	348270	8512196	Silt	BD	BD	51	24.3	20	BD	43.9
708	348265	8512195	Silt	BD	0.2	BD	10.2	7	BD	16.7
712	351510	8509790	Silt	BD	1.1	BD	21.1	314	BD	41.8
718	351630	8510220	Silt	BD	0.7	117	49.6	54	BD	31.9
719	351665	8510208	Silt	BD	0.3	5	22.7	24	BD	33.1
720	351675	8510190	Silt	BD	0.4	BD	20.7	8	BD	14
721	351679	8510192	Silt	BD	BD	BD	35.5	29	BD	66.5
723	351835	8510155	Silt	0.009	0.3	12	30.7	28	BD	168
726	351878	8510142	Silt	0.006	BD	BD	41.7	25	BD	95
737	349624	8510188	Silt	BD	BD	29	29.5	18	5	96.6
743	349944	8513568	Silt	BD	0.2	13	38.2	120	BD	97.5
779	355987	8507545	Silt	BD	0.4	BD	24.5	17	BD	85.9
780	355888	8507569	Intrusion	BD	BD	5	14.5	9	5	72.1
781	355816	8507573	Silt	BD	0.4	7	135	668	BD	1611
792	350083	8510506	Silt	BD	0.4	BD	3.8	5	BD	14.6
794	349895	8510635	Silt	BD	0.2	9	118	54	17	97.4
806	350754	8510950	Intrusion	BD	0.3	BD	6.9	8	BD	29.2

Sample	East	North	Lithology	Au ppm	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm
808	350751	8510962	Intrusion	BD	0.3	BD	29.7	17	8	28.9
810	350839	8510842	Silt	BD	0.4	BD	22.8	12	8	29.5
813	348822	8510245	Silt	BD	BD	BD	11.5	18	BD	11
814	348822	8510255	Intrusion	BD	0.5	BD	52.6	35	13	236
818	349712	8510321	Silt	BD	BD	8	46.4	53	BD	143
823	349917	8510210	Silt	BD	0.6	11	192	BD	13	261
824	349827	8510266	Silt	BD	0.5	BD	37.1	BD	12	44.7
830	350520	8510886	Silt	BD	BD	BD	12.5	24	BD	68
832	352100	8510137	Intrusion	BD	BD	58	21.6	16	BD	78.9

BD = Below Detectable Limits (Au BD = <0.005 ppm – Ag BD = <0.2 ppm – As BD = <3 ppm – Cu BD = <0.5 ppm – Pb BD = <2 ppm – Sb BD = <5 ppm – Zn BD = <0.5 ppm)

Table 9-6: Non-Selective Sampling - Assay Details

Sample	East	North	Lithology	Au ppm	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm
184	352285	8512149	Limo	BD	BD	4	32.1	16	BD	100.6
455	351999	8509938	Shale	0.008	BD	9	51.6	12	BD	250
457	351995	8509889	Shale	BD	BD	6	4.2	BD	BD	6.9
458	352004	8509951	Shale	0.008	0.3	14	59.6	9	BD	162
459	352294	8510399	Shale	BD	BD	12	94.3	19	BD	55
460	352367	8510112	Silt	BD	BD	5	301	7	BD	226
461	352327	8510146	Silt	0.011	BD	62	229	45	BD	30.2
462	352265	8510226	Silt	BD	BD	5	20.5	12	BD	51.2
463	352338	8510171	Silt	0.006	0.9	51	251	30	BD	133
466	351542	8510321	Silt	0.037	0.3	5488	51.2	62	BD	18.4
467	351539	8510327	Silt	BD	BD	12	37.9	49	BD	265
468	353145	8510108	Silt	BD	BD	5	12.5	15	BD	81.5
469	353177	8509807	Silt	0.013	BD	5	24.1	49	BD	51
471	354964	8511182	Silt	BD	BD	9	27.1	5	BD	77.2
472	354032	8511460	Silt	BD	BD	16	28.3	20	BD	92.7
473	351183	8512063	Intrusion	BD	0.4	15	70.2	15	8	90.3
474	351183	8512061	Intrusion	0.013	BD	7	137	49	6	249
475	351189	8512247	Intrusion	BD	BD	12	11.9	60	BD	213
476	350995	8512739	Silt	BD	BD	16	30	6	BD	98.1
478	350719	8514409	Silt	BD	BD	5	4.5	6	BD	21.2
480	352515	8510345	Silt	0.025	0.4	7	68.1	18	BD	74.4
481	352560	8510359	Silt	0.018	0.5	29	36.4	27	BD	104
482	352487	8510551	Silt	0.016	BD	4	23.6	14	BD	106
483	352620	8510798	Silt	0.012	BD	4	26.5	25	BD	139
484	352673	8510842	Silt	0.012	BD	5	28.2	20	BD	114
490	354230	8512560	Silt	0.006	BD	5	26	16	BD	63.1
500	352797	8510809	Silt	0.007	BD	17	29.3	21	BD	136
560	352842	8510587	Silt	BD	BD	BD	29.2	59	BD	114
561	352870	8510580	Silt	BD	BD	17	31.3	8	BD	106
564	353891	8511903	Silt	BD	BD	7	56.3	18	BD	308
565	353903	8511849	Silt	0.07	BD	7	40.5	9	BD	119
566	348435	8510443	Silt	BD	BD	19	93.3	31	BD	148
568	348444	8510431	Intrusion	BD	BD	34	56.1	4	BD	256
569	348086	8512179	Silt	0.008	BD	13	141	23	BD	54.3
570	348200	8512180	Silt	0.009	BD	65	195	38	9	253
571	348245	8512204	Silt	0.013	0.3	1252	59.1	41	BD	113
585	350860	8512542	Shale	BD	BD	BD	24.4	47	BD	67.7
586	350854	8512546	Shale	BD	BD	6	35	22	BD	13.1

Sample	East	North	Lithology	Au ppm	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm
587	350975	8512609	Shale	BD	BD	8	19.7	60	BD	50.8
588	351023	8512631	Silt	BD	BD	BD	15.2	67	6	96.7
591	351803	8512917	Shale	BD	BD	BD	30.9	110	BD	106
592	348803	8510375	Shale	BD	BD	BD	23.1	60	BD	49
593	348718	8510384	Shale	BD	0.2	33	54.2	17	BD	166
595	348336	8510583	Shale	BD	BD	20	92.9	23	8	180
596	349552	8510209	Shale	BD	0.2	63	111	17	7	187
597	349634	8510300	Shale	0.008	0.4	23	116	37	7	140
598	351291	8509758	Shale	BD	0.2	11	25.9	30	6	92.3
599	351162	8509884	Intrusion	BD	0.4	7	14.9	5	6	31.9
600	351581	8509880	Shale	BD	0.3	BD	11.4	61	BD	17.3
676	351528	8510343	Shale	0.039	0.6	37	153	26	7	202
677	351528	8510346	Shale	0.009	0.4	BD	31.1	57	BD	124
678	351577	8510341	Shale	0.014	BD	BD	56.5	54	BD	166
679	351258	8512165	Silt	BD	0.3	BD	81.7	70	BD	45.2
680	350914	8512163	Intrusion	0.041	BD	5	284	40	9	81
684	351145	8512020	Silt	BD	BD	12	28.3	39	BD	37.1
685	351147	8512020	Silt	BD	0.2	49	65.5	67	8	86.5
694	348318	8512176	Intrusion	BD	0.2	410	74.1	16	BD	253
699	348822	8511910	Intrusion	BD	BD	3	54.6	16	BD	60.4
700	348821	8511909	Silt	BD	BD	6	69.8	16	BD	225
703	348777	8511924	Intrusion	BD	BD	52	42.8	15	BD	519
704	348766	8511937	Silt	BD	BD	78	22.6	4	BD	144
705	348456	8512070	Intrusion	BD	BD	40	74.3	BD	BD	234
713	351650	8510181	Silt	0.057	0.2	197	69.7	46	11	55.8
714	351652	8510182	Silt	BD	0.3	77	73.9	35	BD	81.4
716	351643	8510187	Silt	0.009	BD	14	48.7	15	BD	223
717	351642	8510187	Silt	0.008	0.4	BD	53.7	47	5	168
724	351837	8510150	Intrusion	0.007	BD	3	104	12	BD	126
725	351837	8510150	Intrusion	BD	BD	36	31.6	5	BD	178
727	349588	8510021	Silt	BD	BD	11	50.7	21	BD	94.2
728	349582	8510086	Silt	0.022	1.3	5395	161	87	BD	125
729	349596	8510068	Silt	0.009	0.3	14	112	58	5	96.1
731	349597	8510068	Intrusion	BD	BD	5	37.6	BD	BD	115
732	348964	8511927	Silt	0.011	BD	15	70.1	30	BD	72.4
733	349588	8510181	Silt	0.006	BD	21	69.6	28	5	149
734	349590	8510177	Intrusion	BD	BD	29	124	10	7	363
735	349575	8510189	Silt	BD	0.3	139	93.5	9	BD	816
736	349624	8510188	Silt	0.006	0.3	BD	66.3	54	BD	214
739	348965	8511927	Intrusions	BD	0.3	55	43.1	22	BD	196
740	348728	8511958	Silt	0.012	BD	6	124	25	BD	161
741	348291	8512151	Intrusion	BD	BD	590	53.8	BD	BD	266
742	348271	8512202	Silt	BD	0.3	BD	44.3	38	BD	126
744	349000	8511887	Silt	0.009	0.5	15	50.9	104	BD	118
745	348967	8511929	Intrusion	BD	BD	45	55.2	40	BD	248
747	348968	8511929	Silt	0.008	0.4	33	52.1	19	BD	125
748	348969	8511927	Silt	0.006	0.2	47	34	6	BD	98.3
773	348823	8511913	Silt	BD	BD	42	85.4	29	BD	333
775	356070	8507106	Silt	0.029	0.6	BD	41.1	17	10	115
776	356070	8507106	Intrusion	BD	0.4	BD	12.1	9	9	116
777	356032	8507237	Silt	BD	0.4	BD	34.9	12	BD	113
778	356034	8507337	Silt	0.008	BD	BD	19.3	5	11	59.3
788	358492	8511441	Intrusion	BD	BD	8	42.5	17	BD	119
789	350128	8510498	Silt	BD	0.7	8	38.3	92	BD	63.9
790	350128	8510499	Silt	BD	0.2	BD	25	12	9	169

Sample	East	North	Lithology	Au ppm	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm
791	350122	8510497	Silt	BD	BD	13	35.2	10	9	76.7
795	349901	8510633	Silt	BD	BD	9	68	12	9	90.6
796	349716	8510627	Intrusion	BD	0.3	31	57.7	BD	8	286
797	349715	8510627	Silt	BD	BD	6	126	11	7	375
798	350072	8510633	Silt	BD	BD	BD	20.8	21	BD	48.5
799	350072	8510632	Silt	BD	BD	12	75.7	35	16	106
800	350072	8510631	Silt	BD	0.4	14	45	15	BD	59
801	350073	8510630	Silt	0.006	BD	8	55.1	26	7	58
802	350073	8510634	Silt	BD	BD	64	66.2	17	BD	68.9
804	350755	8510950	Intrusion	0.006	BD	BD	27.5	BD	6	120
805	350757	8510950	Intrusion	BD	BD	BD	22.2	BD	8	84.3
807	350750	8510962	Intrusion	0.006	0.3	BD	36.6	10	6	66.5
809	350730	8510955	Intrusion	BD	0.4	19	100	7	BD	139
811	348822	8510240	Silt	BD	0.3	6	32.3	27	7	111
815	349686	8510418	Silt	BD	0.4	8	20.8	13	10	221
816	349700	8510443	Silt	BD	0.4	22	46.1	11	10	69.7
817	349665	8510439	Silt	BD	BD	BD	36.2	74	8	61.2
819	349860	8510229	Intrusion	BD	0.5	BD	41.7	29	BD	171
820	349938	8510232	Intrusion	BD	0.5	44	121	6	BD	147
821	349914	8510219	Silt	BD	0.5	15	124	33	BD	62.9
825	349763	8510321	Silt	0.007	0.6	90	50	29	12	48.3
826	349862	8510228	Intrusion	BD	0.6	BD	62	9	6	143
827	349706	8510361	Silt	BD	0.3	6	34	38	10	347
828	349707	8510360	Intrusion	BD	1.3	BD	66.5	1466	BD	3476
829	349179	8510865	Silt	BD	BD	BD	18.4	15	BD	62.3
833	352100	8510140	Intrusion	BD	BD	7	58.5	15	13	83.4
834	352160	8510220	Silt	BD	0.4	BD	54.3	30	6	75.8
2255	351595	8509726	Silt	BD	BD	3	12.8	7	BD	30.9
2256	351580	8509720	Silt	BD	BD	9	25.5	11	BD	48.1
2258	351909	8509942	Silt	BD	BD	BD	5.7	7	BD	30.8
2259	351940	8509857	Silt	BD	BD	BD	16.5	7	BD	44
2260	351930	8509850	Silt	BD	BD	BD	25.4	6	BD	5.9
3108	353550	8509405	Silt	0.24	BD	44	35.9	39	BD	9.3
3109	353697	8509456	Silt	0.113	BD	4	73.7	46	BD	25.6
3110	353407	8509725	Silt	BD	0.2	BD	52.9	18	BD	41
3283	352460	8509277	Shale	0.496	BD	616	52	42	202	75.4
3284	352460	8509277	Gouge	1.339	0.2	91	121	40	72	179
3286	352368	8509190	Shale	6.569	0.3	8	77.3	167	95	134

BD = Below Detectable Limits (Au BD = 0.005 ppm – Ag BD = 0.2 ppm – As BD = 3 ppm – Cu BD = 0.5 ppm – Pb BD = 2 ppm – Sb BD = 5 ppm – Zn BD = 0.5 ppm)

Grade distribution of all rock samples (selective and non-selective) plotted by the main lithology units recorded in sample descriptions demonstrates that fine-grained sediments (shale and siltstone) are more mineralised than intrusive units.

Table 9-7: Box Plot Summary Statistics by Lithology

Lithology	Sample Count	Count > 0.005	Au ppm Maximum	Au ppm Mean
Shale	21	9	6.569	0.79
Silt	108	36	0.24	0.023
Intrusion	37	5	0.041	0.014

\*Mean calculation is only based on samples assaying above lower detection limits (0.005 ppm)



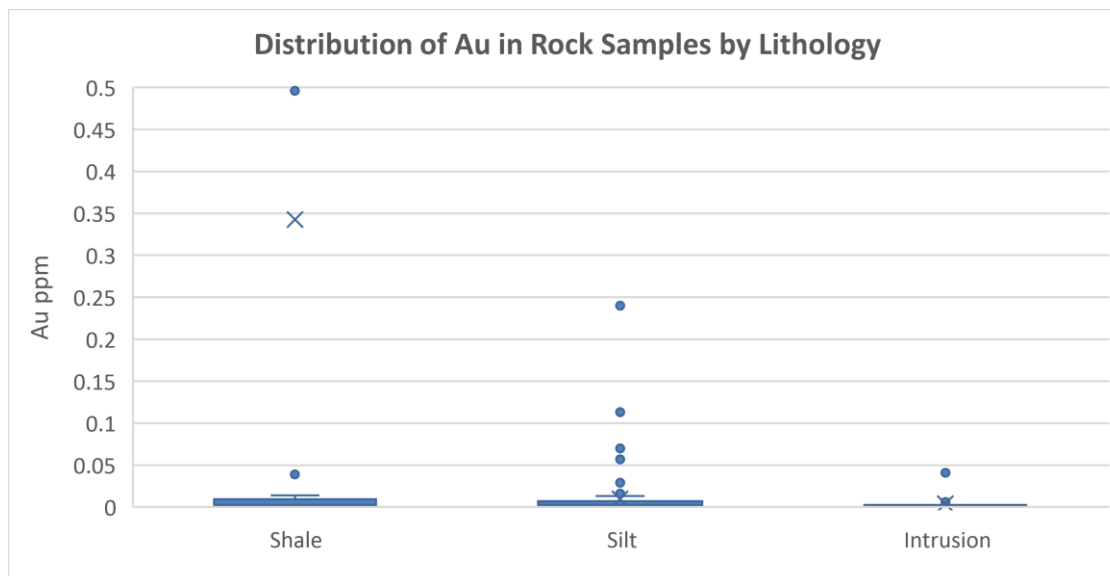


Figure 9-6: Box Plot - Rock Samples and Au Assay (Note: not all shale analysis visible).

A correlation matrix was used to identify the strength of inter relationships between pairs of elements using rock sample geochemistry, the correlation matrix shows that Sb is most strongly correlated with Au (0.498), Au is very weakly correlated with As and Ag (Appendix 4).

Selective rock sampling generated four Au assays above minimum detection limits (0.005 ppm); three of these samples are from Picitiri (Figure 9-7). Seven selective rock samples assayed above minimum detection limits for Sb (5 ppm) (Figure 9-8); three of these samples were taken along strike of the Yanamayo shear. The four most anomalous Sb assays were taken from the San Jose shear.

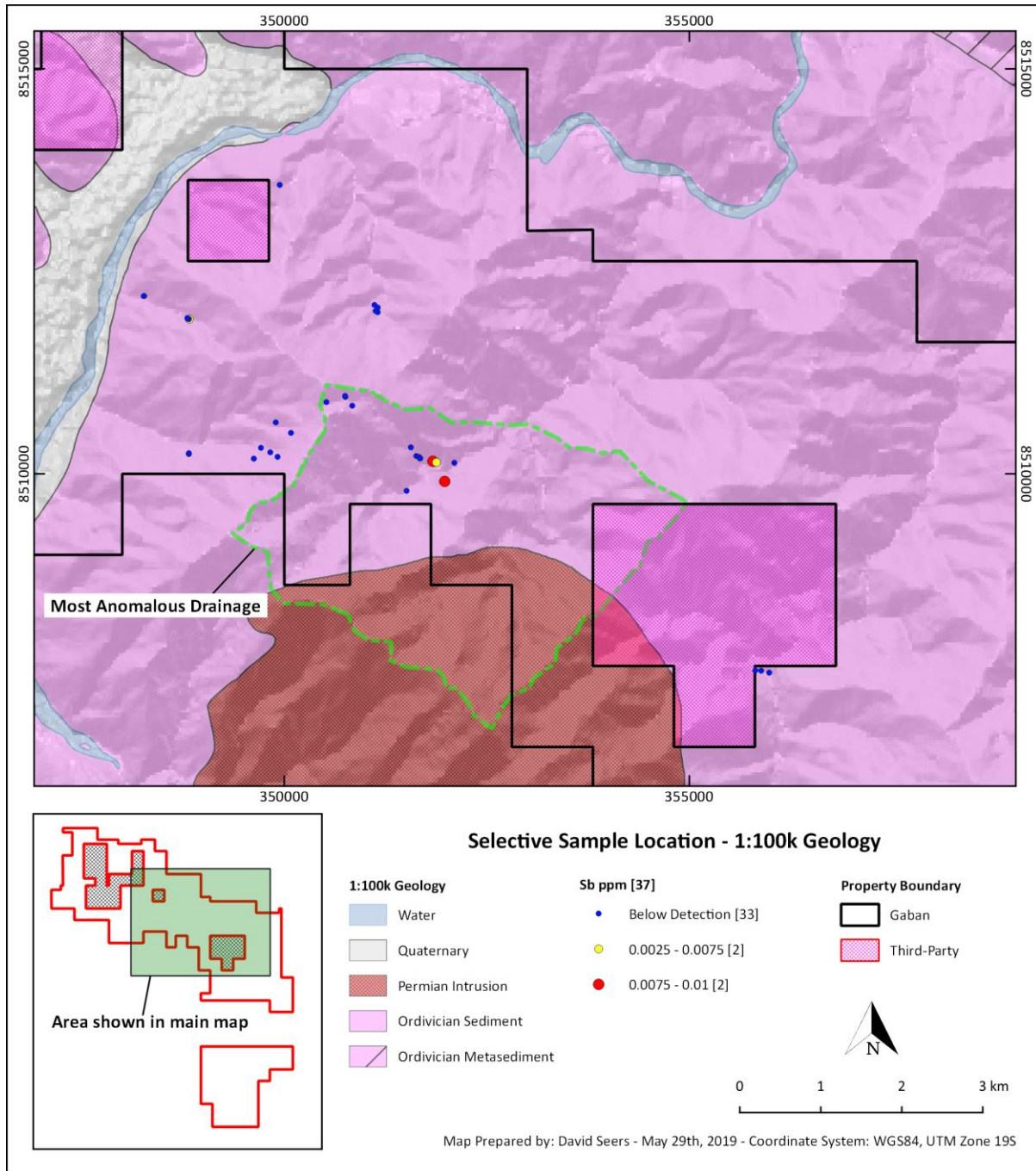


Figure 9-7: Selective Rock Samples - Distribution and Au Assay

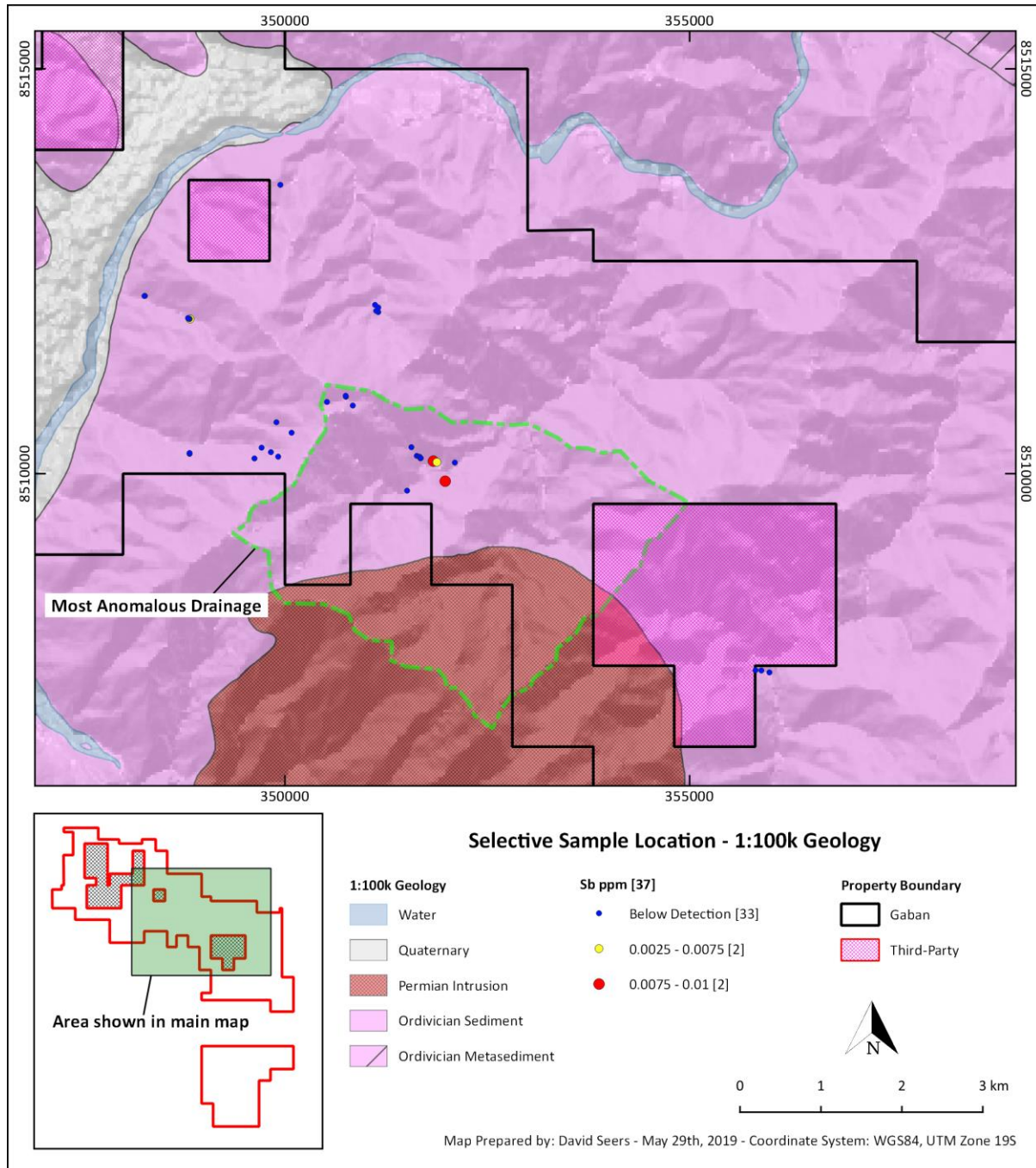


Figure 9-8: Selective Rock Sampling - Distribution and Sb Assays

Forty-seven (47) non-selective samples assayed above minimum detection limits for Au (0.005 ppm) (Figure 9-9). Non-selective samples are summarised in Table 9-5 and given in detail in Appendix 3.

Table 9-8: Non-selective sample - Assay Summary

Non-Selective	Au ppm	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm
Sample Count	131	131	131	131	131	131	131
Count BD	84	78	31	0	7	89	0
Mean	0.2	0.41	160.6	60.72	41.02	16.33	156.04
Maximum	6.569	1.3	5488	301	1466	202	3476

Three of the most anomalous samples are non-selective chip channel samples taken from across quartz veins and fault gouge in the Picitiri shear zone (Table 9-9). Thirty-nine (39) non-selective samples assayed above minimum detection limits for Sb (Figure 9-10). Samples most anomalous in Sb were taken from the Picitiri shear zone.

*Table 9-9: Select Chip Channel Samples*

Sample	East	North	Lithology	Shear Zone	Width (m)	Au ppm	Sb ppm	Ag ppm	As ppm
3286	352368	8509190	Shale	Picitiri	0.15	6.569	95	0.3	8
3284	352460	8509277	Gouge	Picitiri	1.00	1.339	72	0.2	91
3108	353550	8509405	Silt	-	0.10	0.24	BD	BD	44
3109	353697	8509456	Silt	Picitiri	0.10	0.113	BD	BD	4

BD = Assay Below Detectable Limits



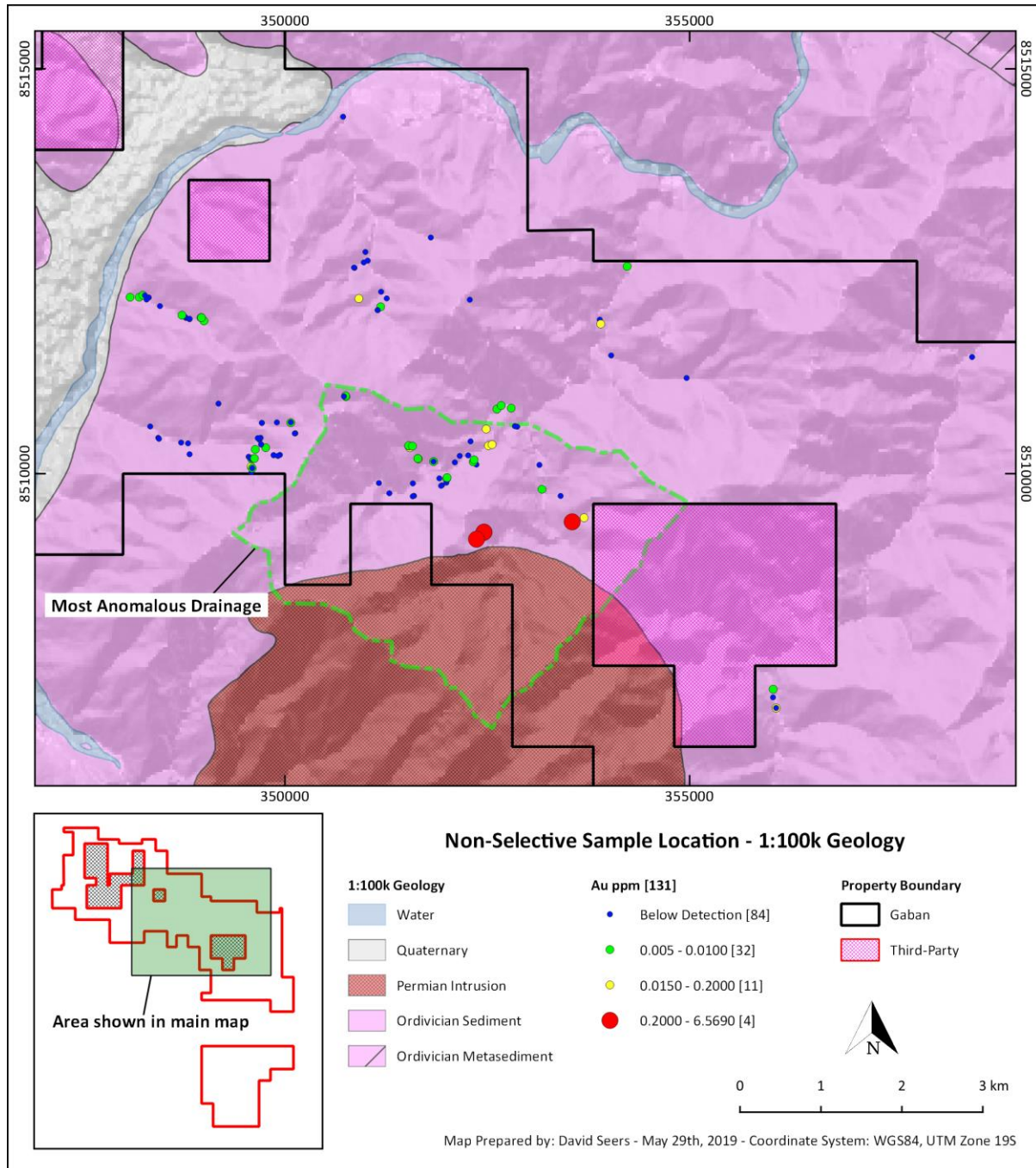


Figure 9-9: Non-Selective Samples - Distribution and Au Assay

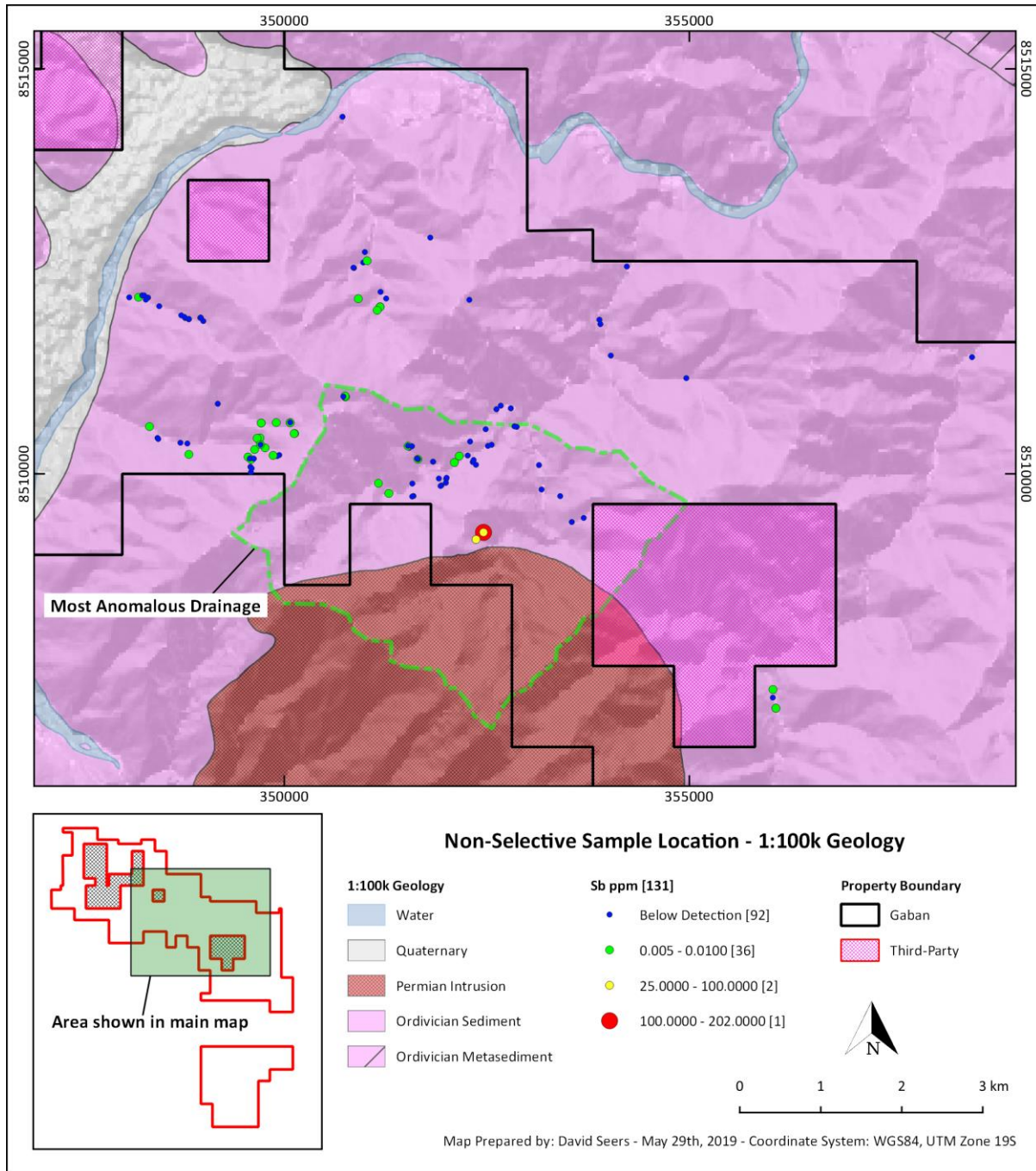


Figure 9-10: Non-Selective Samples - Distribution and Sb Assay



### 9.3 Airborne Geophysics

Combined airborne magnetic and radiometric surveys have been flown over the Main Block and includes concessions and concession applications; the Southern Block is not covered by airborne Geophysics.

Mr Seers QP has seen maps of the processed survey data (but for reasons of confidentiality, he has not been privy to the written report) from which he makes the following comments:

- Reduced To Pole (RTP) Total Magnetic Intensity (TMI) data indicates a zone of low TMI in the central portion of the surveyed area. The Picitiri, Yanamayo and San Jose shear zones are encapsulated within the area of low TMI (Figure 9-11)
- A west northwest trend is apparent on the RTP TMI and first vertical derivative maps, this trend reflects the strike of sedimentary lithologies and sills
- A series of east-west to east northeast sinistral faults are interpreted
- The surveying contractor has identified two suggested exploration targets. These targets trend approximately parallel to the general strike of sedimentary lithologies and extend over the area of reduced TMI. The Picitiri shear zone lies within one of the suggested exploration targets
- The Th/K plot of radiometric data show higher Th/K ratios approximately coincident with high TMI.

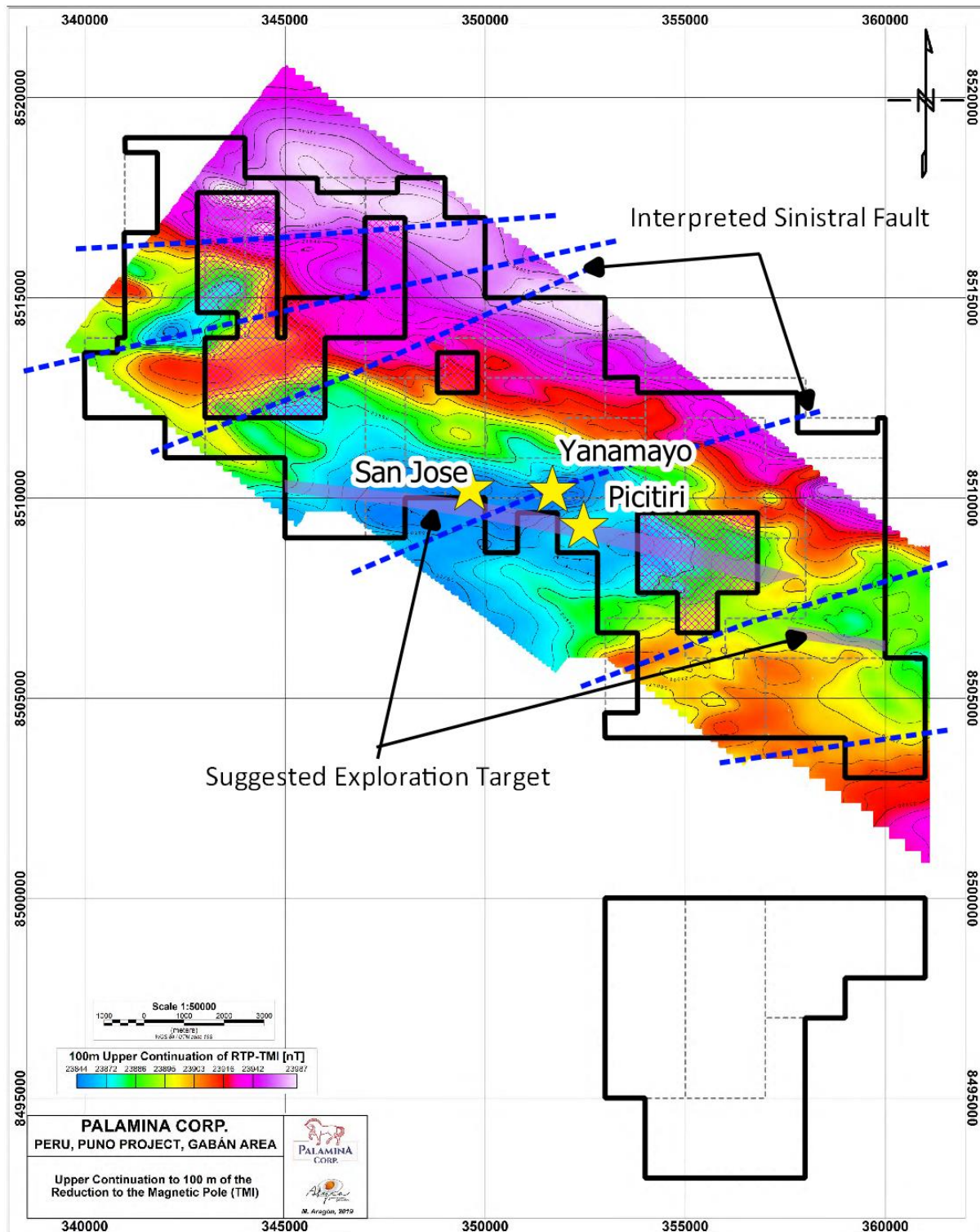


Figure 9-11: RTP TMI - Interpretation Shown with Shear Zones

## 10 DRILLING

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Helio has not undertaken any drilling at the Property.

Mr Seers (QP) is not aware of any historical drilling undertaken at the Property and he did not witness any evidence of drilling during his site visit.

## 11 SAMPLE PREPARATION, ANALYSES AND SECURITY

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### 11.1 Field Sampling

Written Standard Operating Procedures (SOPs) detailing Palamina's sampling methodology have not been seen by Mr Seers (QP). To understand the sampling procedures used at the Property, Mr Seers discussed methodologies with members of the Palamina field team who accompanied him during his site visit.

Palamina collected two types of samples at the Property stream sediment and, rock samples the methodology for each is described below.

#### ***Stream Sediment Sampling***

- Geologists in the field identify sampling points. It was commented that at times it was difficult to find sites with sufficient fine sediment deposition to generate a sample
- Sample details, including; location, time, date, depth of sample and width of drainage channel are recorded and the sample point is given a unique identification code
- A shovel is used to lift stream sediments in to a stacked sieve and organic material (leaves, roots etc...) is removed manually. Large stones and pebbles are hand cleaned over the sieve to capture fine sediments before being removed from the sieve
- The stacked sieve is agitated so as stream sediment passes through the sieve and is classified by particle size. The 60 mesh (250 µm) sediment fraction is separated and placed in a cotton bag for sampling other fractions are discarded. Sieving continues until approximately 50g of the minus 60 mesh fraction is recovered. Samples are placed in a cotton bag with drawstring and labelled with a unique number and bags are tied shut.
- Sieves are cleaned with a brush and water after each sample.

#### ***Rock Sampling***

Rock samples include, float, outcrop, panel and chip channel samples are taken using the following steps:

- A geologist identifies a rock of interest for sampling
- The geologist describes the sample and when appropriate recorded its interval (length/width)

- The geologists of field technician use a hammer and chisel break rock from the sample interval. In the case of non-selective sampling, effort is made to evenly sample across the entire interval
- Rock is placed in a plastic bag with a unique number and sealed using cable ties.

Palamina systematically include Quality Control (QC) samples with field samples sent for analysis; approximately 15% of samples analysed by Palamina are QC samples, including:

- Blank – material with low (below detectable limits) concentrations of elements of economic interest. Blanks are used to detect cross contamination during the sample preparation process
- Standard – material with certified ranges for elements of economic interest. Standards are used to gauge the precision and accuracy of laboratory analysis.
- Field Duplicate – Samples taken in the field over the same interval as another sample. Field duplicates are used to gauge variability of elemental concentration in the field.

Analysis of QC sample performance by Palamina (Palamina 1) reports that:

- All blank samples assayed below detectable limits for Au (e.g. <0.005 ppm)
- All standards assayed within expected ranges for Au
- All original and duplicate sample pairs assayed below detectable limits for Au (e.g. <0.005 ppm)

## 11.2 Laboratory Sample Preparation and Analyses

The Certimin laboratory has been used to analyse all samples. Certimin is an established laboratory and has “ISO 9001 Certification for Physicochemical preparation and testing for geochemical, metallurgical and environmental samples.”

Certimin is wholly independent of Palamina and Helio.

Palamina staff deliver samples to the Certimin preparation laboratory in Juliaca, after samples are prepared Certimin transport samples to their laboratory in Lima for analysis.

With regards to sample preparation, the Certimin website (<http://www.certimin.pe/en/>) states the following:

*“Sample preparation is of great importance for obtaining reliable information that is relevant for the project; therefore it requires strict compliance with technical*

*requirements to ensure a homogeneous sub-sample and a representative sample with the right size for the execution of chemical analysis (pulp) as well as to dispose of rejects.”*

*“In this context, CERTIMIN has designed and built facilities exclusively for the mechanical preparation of geochemical exploration samples. Furthermore, CERTIMIN has implemented several technological mechanisms for data collection and quality control in each stage of the preparation process. The Mechanical Preparation Sample circuit consists of multiple operation lines including drying, crushing, cracking and pulverization and has the capacity to prepare more than 1,500 samples per day.”*

Stream sediment samples are analysed for Au via fire assay and analysed using Atomic Absorption Spectroscopy (AAS). Certimin report that their minimum detectable limit for Au by AAS is 0.005 ppm.

Rock samples are analysed for Au via fire assay with an AAS finish and, multi-element (36 element) Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES) after an aqua regia (HNO<sub>3</sub>+3 HCl) digest. ICP-OES analysis includes Ag, As, Cu, Pb, Sb and Zn.

Stream sediment samples are prepared by Certimin as follows:

- Oven dried at 60°C
- Sieved through 180 µm screen
- Quartered (riffle splitter) and pulverised to 85% passing 75 µm (Micron) screen

Rock samples are prepared by Certimin as follows:

- Oven dried at 60°C
- Crushed to 90% passing 2 mm screen
- Quartered (riffle splitter) and pulverised to 85% passing 75 µm (Micron) screen

Samples sent for ICP-OES analysis undergo a multi acid digest prior to analysis.

Fire Assay AAS analysis is based on a 50 g charge.

### **Sample Security**

Palamina field teams collect their samples and personally deliver them to Certimin’s preparation laboratory in Juliaca.



### 11.3 Opinion of the QP with regards to sample preparation, security and analytical procedures

Mr Seers (QP) notes the following with regards to sample methodology, preparation, security and analytical procedures:

- Sampling methodology is adequate for prospecting purposes. There is potential for agglomeration of fine gold and sampling of the minus 60-mesh fraction only could ignore agglomerated gold. Potential for agglomeration should be investigated and if appropriate, coarser fractions should be sampled.
- SOPs should be introduced ahead of any follow-up exploration in areas of interest
- QC samples used are suitable for monitoring laboratory performance for the current stage of exploration. Monitoring of QC samples should be routine and on-going
- The rate at which QC samples are added to field samples is adequate for the current stage of exploration
- The analytical methods used to determine assay values are appropriate
- Samples remain in the direct custody of the sampler until delivery to the analytical laboratory; sample security is adequate.

## 12 DATA VERIFICATION

David Seers (QP) undertook the following steps to verify data presented in the Technical Report:

- Independently sourced concession information via the GEOCATMIN website (<http://geocatmin.ingemmet.gob.pe/geocatmin/>)
- Visual check of PDF laboratory certificates to verify the 20 highest Au assays reported by the laboratory against those recorded in the sample database
- Visited the Picitiri, Yanamayo and San Jose shear zones and took independent samples, summarised in Table 12-1 and Figure 12-1 (full assay details are provided in Appendix 2).

Table 12-1: Independent Sampling (Sample taken by Mr Seers)

Sample	East	North	Area	Type	Description	Au ppm	Ag ppm	As ppm	Sb ppm	Cu ppm	Pb ppm	Zn ppb
13241	352462	8509279	Picitiri	Float	8 cm Ribbon quartz vein from landslide debris	0.223	<0.2	27	<5	33.8	45	40.6
13242	352462	8509279	Picitiri	Channel	50 cm Chip channel across core of shear zone with quartz veining	0.117	<0.2	420	<5	58.9	64	84.8
13243	352400	8509241	Picitiri	Grab	2-6 cm foliation parallel quartz vein at edge of shear zone	0.037	<0.2	17	6	68.7	137	104
13244	351705	8510157	Yanamayo	Channel	Chip channel across 50 cm quartz vein normal to foliation	<0.005	0.3	565	7	54.4	136	96.8
13245	351705	8510157	Yanamayo	Grab	Quartz veining and siltstone with arsenopyrite	<0.005	0.6	190	<5	33.4	35	48.7
13246	349620	8510219	San Jose	Grab	Iron and manganese oxide fill in jointing across foliation	<0.005	<0.2	7	19	452	98	496
13247	349620	8510219	San Jose	Grab	Foliated siltstone	<0.005	0.4	6	6	36.9	29	114

Mr Seers (QP) is satisfied that the data presented in this Technical Report is adequate for purpose, i.e. the identification of auriferous shear zones at the Property.

Analysis of independent samples confirmed the presence of Au in quartz veins in the Picitiri shear. Au analysis of independent samples from the Yanamayo and San Jose shear zones (sample numbers 13244 to 13247) assayed below minimum detectable limits (<0.005 ppm), indicating that these samples did not contain Au.

## Independent Samples—Samples Taken by Mr Seers QP

### Picitiri Shear



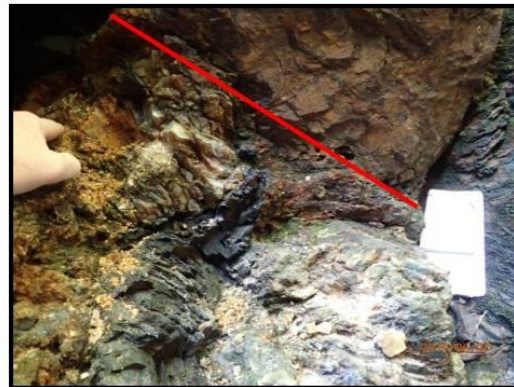
**Left:** Sample 13241—0.223 ppm Au  
Float—Ribbon Quartz Vein

**Right:** Sample 13242—0.117 ppm Au  
Chip Channel— Graphitic shear core with quartz veining

**Below Left:** Sample 13243—0.037 ppm Au  
Grab— Foliation parallel quartz vein



### Yanamayo Shear



**Above:** Sample 13244—<0.005 ppm Au

Channel—Quartz vein hosted in fracture normal to foliation (50 cm)

**Left:** Sample 13245—<0.005 ppm Au

Grab—Quartz veining and siltstone with arsenopyrite



### San Jose Shear

**Below:** Sample 13246—<0.005 ppm Au

Grab — Iron and manganese oxide fill in joints across foliation in siltstone

**Below:** Sample 13247—<0.005 ppm Au  
Siltstone



Figure 12-1: Photographs of Independent Samples

## 13 MINERAL PROCESSING AND METALLURGICAL TESTING

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No mineral processing or metallurgical testing has been carried out for the Property.

## 14 MINERAL RESOURCE ESTIMATES

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Exploration at the Property is insufficient to support the estimation of a mineral resource in accordance with NI 43-101.

## 23 ADJACENT PROPERTIES

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Mr Seers (QP) is not aware of any significant mining operations within 20 km of the Property.

Minera IRL's Olleachea deposit is an orogenic style shear hosted gold deposit within 25 km of the Southern Block of the Property. Mineral IRL highlight that gold mineralisation occurs in structurally deformed sheared sediments in close proximity to intrusive bodies (<https://www.minera-irl.com/ollachea-2-2/>).

Mr Seers (QP) has not visited Olleachea and has been unable to verify the characteristics of Olleachea, further, Mr Seers highlights that mineralisation at Olleachea is not necessarily indicative of mineralisation at the Gaban Gold Property.

Mr Seers (QP) notes that Fresnillo Peru S.A.C and Palamina S.A.C hold or have applied for multiple concessions to the southeast of the Property (Figure 23-1).



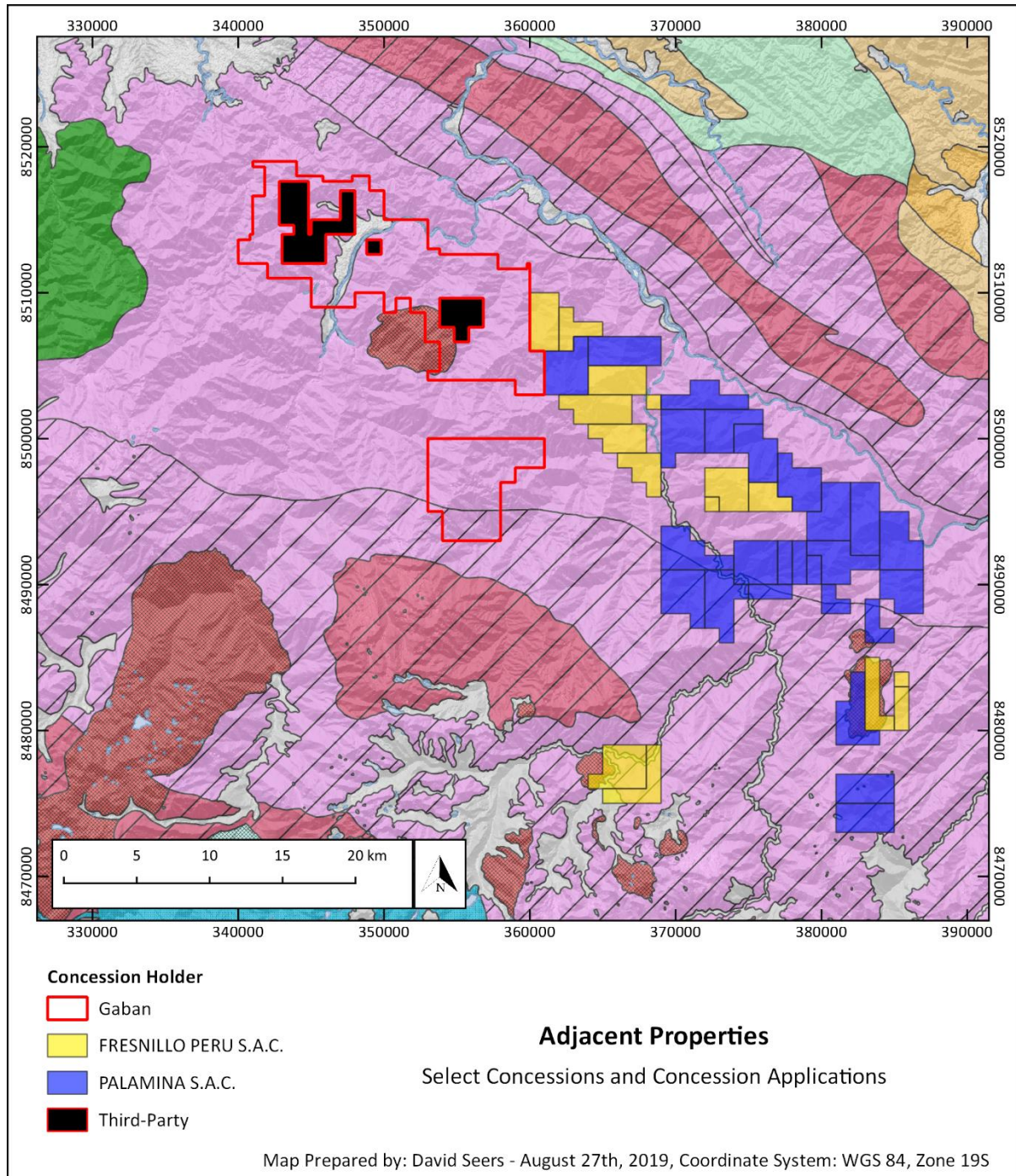


Figure 23-1: Adjacent Properties - Source: GEOCATMIN August 27<sup>th</sup>, 2019



## 24 OTHER RELEVANT DATA AND INFORMATION

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Mr Seers (QP) believes all information relevant to the accurate understanding of the Property is included within this Technical Report.

## 25 INTERPRETATION AND CONCLUSIONS

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The Property is densely vegetated with limited outcrop. Notwithstanding this, three auriferous shear zones (Picitiri, Yanamayo and San Jose) have been identified by prospecting and following stream sediment Au anomalies upstream.

Chemical analysis of rock has identified that quartz veining in sheared fine-grained sediment (siltstone and shale) can punctually host up to 6.569 ppm Au and that Sb is most correlated with Au in shear zones. Based on visual observations, Mr Seers considers that the chemical signature of shear zones in soil and laterite will likely include As, Fe and Mn.

The Picitiri shear, exposed by a landslide, has been most extensively explored and zonation is recognised; a locally graphitic core with horsetail quartz veining and steep and tight foliation is flanked by a chloritized siltstone and sub-parallel quartz veinlets <3 mm. Further from the core, foliation is shallower and less frequent, narrow pinch and swell veins form sporadically aligned to foliation. Pinch and swell veins within foliation extend laterally for approximately 60 m, approximately 30 m either side of the core.

Auriferous shear zones occur at relatively high elevations close to the southern edge of the main concession block. RTP TMI data shows that these shear zones are situated in a zone of low TMI which extends to other areas of the Property. Additionally the Yanamayo shear is located close to an interpreted sinistral fault. Another area with the same magnetic signature as Yanamayo (i.e. TMI low and interpreted sinistral fault) is recorded in magnetic survey data, has not been investigated, and is a good exploration target. The Southern Block was not part of the survey and further TMI lows could exist within them.

Projecting shear zones over SRTM topography, suggests that Picitiri and San Jose shears could continue in to the Southern Block and regional mapping (1:100k) indicates that the geology in the Southern Block is similar to the Main Block and is prospective.

Mr Seers (QP) concludes the following:

- Exploration of the Property has identified auriferous shear zones that are the likely source of alluvial Au recovered by artisanal miners
- Outcrop at the Property is limited and techniques such as stream sediment and ridge and spur sampling and, airborne geophysics are likely to be the most effective methods for exploring areas of the Property that have not yet been evaluated
- Auriferous shear zones at the Property are spatially related to an intrusion and proximal TMI low. This TMI low is prospective and could contain further auriferous shear zones. A second and smaller TMI low is identified within the Property and is

considered prospective. The Southern Block is not covered by airborne magnetic survey and could contain further TMI lows

- Approximately 66% of the Property has not been explored, including the entirety of the Southern Block. Projection of the Picitiri and San Jose shear zones over topography (SRTM) suggests that these shear zones could continue in to the Southern Block and regional mapping indicates that geology is similar to the Main Block
- Exploration concession applications account for approximately 17% of the Property area and have not been explored. Exploration concessions are recorded in the GEOCATMIN cadastre and there is no known reason why they will not eventually be granted
- Projection of the Picitiri and San Jose shear zones over topography (SRTM) suggests that they could continue in to the Southern Block and regional mapping indicates that geology is similar to the Main Block
- According to regional geological maps, auriferous shear zones at the Property and the (third party) Olleachea deposit are hosted in sediments of the same age and are proximal to large intrusions. Although intrusions are not mineralised, the rheological contrast between intrusions and sediments during shearing might be an important factor for Au deposition. The identification of intrusions that predate mineralisation could help guide exploration. Potential intrusions are not obvious in magnetic or radiometric data although numerous intrusions, not recorded on regional geological maps, are observed in the field
- Exploration to date has been prospective in nature; further systematic work is required before the economic potential of the Property can be considered
- Mr Seers (QP) considers that the exploration data generated at the Property to date has been appropriately generated and considers it reliable and that it does not represent significant risks of uncertainty. Mr Seers (QP) highlights that further exploration data is required before the potential economic viability of the project can be evaluated.

## 26 RECOMMENDATIONS

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Mr Seers QP recommends that the Property be explored further to determine:

- The extent of identified shear zones
- The continuity of mineralisation within shear zones and,
- If other shear zones are present in areas of the Property not yet explored.

Mr Seers (QP) recommends the following:

1. Enter in to legally binding agreements with land owners for permission to access their land
2. Prospecting and stream sediment sampling in areas of the Property that have not been explored, this should include concession applications when they are granted. Stream sediment sample 1021 assayed over 4 ppm Au and indicates the potential for agglomeration of fine-grained Au particles in stream sediment should be investigated and consideration given to sampling coarser sediment fractions. Dependent on positive stream sediment sampling in the Southern Block, consideration should be given to extending airborne surveys over the Southern Block
3. Ridge and spur sampling should be completed over the Property but prioritised over magnetic (TMI) lows and the projection of shear zones over topography (Figure 26-1). Soils formed on ridges and spurs are transported less than those on steep slopes are. An orientation survey over the projections identified shears should be completed to identify their geochemical signature. Samples should be taken at 20 m intervals (horizontal distance)
4. Trenching and channel sampling across the Picitiri, Yanamayo and San Jose shear zones. Parallel trenches across shears zone should extend upslope and downslope of the main exposure. Channel samples should be taken using a circular saw. One (1) meter channel samples are recommend in the central graphitic and chloritized zones and 2.5 m channel samples in zones with foliation parallel veining. SOPs should be developed for the purposes of Quality Assurance and Quality Control samples (blank, duplicates and CRMs) should be in included.



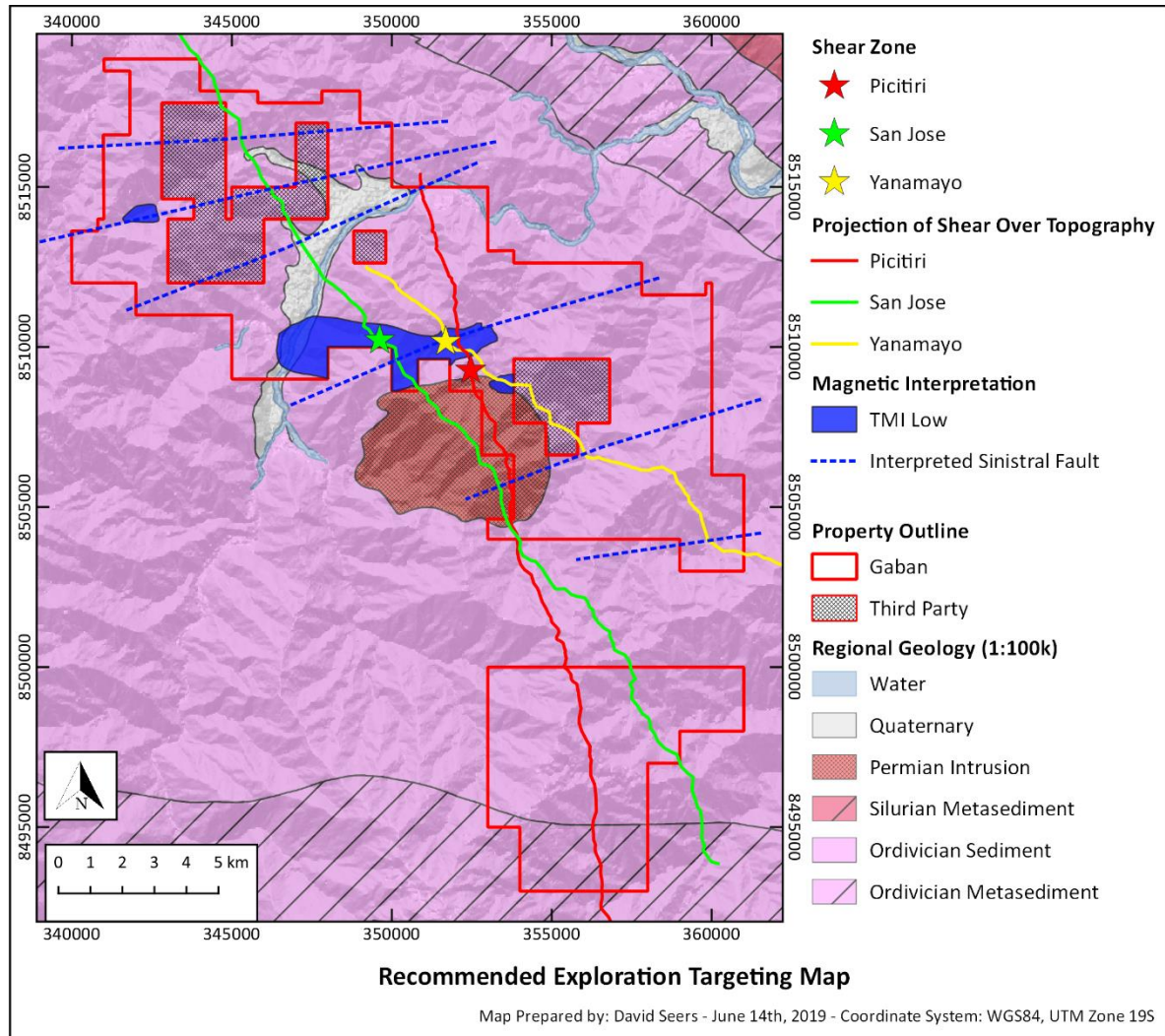


Figure 26-1: Recommended Exploration Targeting Map

Time and cost estimates for each program are summarised in Table 26-1. Time and costs estimates are based on the experience of Palamina:

Table 26-1: Time and Cost Estimate for Recommended Exploration Programs

#	Name	Time	Sample Count	USD \$
1	Prospecting and Stream Sediment Sampling (Concession Applications)	28 days	200	\$ 50,000
2	Ridge and Spur	60 days	1000	\$ 150,000
3	Trenching and Channel Sampling			
3.1	Picitiri	15 days	150	\$ 25,000
3.2	Yanamayo	15 days	150	\$ 25,000
3.3	San Jose	15 days	150	\$ 25,000
				\$ 275,000

## REFERENCES

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The following references were used when compiling the Technical Report:

### News Release

News Release 1 – Helio Resource Corp. (May 15<sup>th</sup>, 2019) “Helio to Raise a Minimum of \$600,000, Acquire Two Projects in Peru, Shares for Debt Settlement and Provides Tanzania Update”

### Map Sheets

INGEMMET 1 (Updated 1996) Map Sheet 27V “Mapa Geologico del Cuadrangulo de Masuco”, 1:100k scale

INGEMMET 2 (Updated 2002) Map Sheet 28V “Mapa Geologico del Cuadrangulo de Ayapata”, 1:100k scale

### Boletín

Boletín 81-A – Geología de los Cuadrángulos de Puerto Luz, Colorado, Laberinto, Puerto Maldonado, Quincemil, Masuco, Astillero y Tambopata. Hojas 26-u, 26-x, 26-y, 27-u, 27-v, 27-x, 27-y

Boletín 90-A – Boletín de Corani (28-U) y Ayapata 28-V)

### Internet

Minera IRL (<https://www.minera-irl.com/ollachea-2-2/>).

GEOCATMIN (<http://geocatmin.ingemmet.gob.pe/geocatmin/>)

### Published Reports/Papers

Haberlin, Moritz, Fontbote (2002) - Paleozoic orogenic gold deposits in the eastern Central Andes and its foreland, South America

Minera Kuri Kulla S.A. (Subsidiaria de Minera IRL Ltd) (2012) - Ollachea Gold Project, PERU NI 43-101 Technical Report on Feasibility Study

### Legal Opinion

Legal 1 – Letter from Rubio Leguia and Normand addressed to Helio Resource Corp. and dated July 18th 2019.

### Email

Email 1 – Andrew Thomson to David Seers, “A few questions following the TSX letter” August 3<sup>rd</sup>, 2019.

Palamina Internal Report

Palamina 1 – Internal Report “CONTROL DE CALIDAD (QA-QC) DE MUESTRAS GEOQUIMICA (Au+ICP)” by Y. Valdicieso and E Dueñas Dated August 2019.

## APPENDICES


### Appendix 1: Correlation Matrix Palamina Geochemistry

	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	K	La	Mg	Mn	Mo	Nb	Ni	P	Pb	S	Sb	Sc	Sn	Sr	Ti	Tl	V	W	Y	Zn	Zr	
Au	1.000																																			
Ag	0.012	1.000																																		
Al	0.003	0.013	1.000																																	
As	-0.002	0.270	-0.057	1.000																																
Ba	0.072	0.058	0.142	-0.019	1.000																															
Be	-0.000	0.004	0.118	-0.023	0.141	1.000																														
Bi	-0.003	0.127	0.038	-0.008	0.042	-0.008	1.000																													
Ca	-0.036	0.002	0.376	-0.032	-0.187	-0.027	-0.001	1.000																												
Cd	-0.015	0.427	0.107	0.253	0.229	0.030	0.068	0.069	1.000																											
Co	-0.055	0.129	0.410	0.053	0.287	0.275	0.067	0.163	0.116	1.000																										
Cr	0.096	0.021	0.313	-0.017	-0.447	-0.102	-0.076	0.389	0.004	0.100	1.000																									
Cu	0.054	0.211	0.144	0.117	0.371	0.158	0.150	-0.027	0.193	0.328	-0.190	1.000																								
Fe	0.050	0.025	0.656	-0.008	0.240	0.449	0.091	0.131	0.089	0.385	-0.028	0.539	1.000																							
Ga	-0.043	0.057	0.792	-0.067	0.104	0.092	-0.050	0.370	0.097	0.394	0.380	0.040	0.417	1.000																						
K	0.019	0.001	-0.052	0.011	0.694	0.030	0.046	-0.205	0.082	0.050	-0.564	0.195	0.128	-0.148	1.000																					
La	-0.009	-0.103	0.428	-0.052	0.413	0.275	-0.028	0.053	0.039	0.599	-0.045	0.298	0.433	0.313	0.191	1.000																				
Mg	-0.044	0.043	0.852	-0.027	-0.039	0.073	0.029	0.592	0.100	0.336	0.577	0.045	0.489	0.687	-0.183	0.303	1.000																			
Mn	-0.064	0.003	0.513	-0.061	0.168	0.132	-0.014	0.339	0.079	0.663	0.103	0.010	0.351	0.453	0.001	0.443	0.396	1.000																		
Mo	0.033	0.132	-0.004	0.102	0.442	0.187	0.071	-0.150	0.018	0.059	-0.393	0.555	0.280	-0.110	0.312	0.183	-0.112	-0.159	1.000																	
Nb	-0.050	0.243	0.135	-0.074	0.191	-0.006	-0.010	0.126	0.264	0.018	0.131	-0.120	-0.081	0.232	0.204	-0.037	0.186	-0.007	-0.206	1.000																
Ni	-0.016	0.122	0.671	0.046	0.131	0.193	0.050	0.489	0.088	0.511	0.537	0.237	0.444	0.599	-0.052	0.370	0.838	0.379	-0.003	0.187	1.000															
P	-0.045	0.019	0.518	-0.041	-0.007	0.646	0.038	0.450	0.177	0.359	0.197	0.140	0.610	0.383	-0.140	0.322	0.563	0.381	-0.030	0.101	0.475	1.000														
Pb	0.075	0.441	0.058	0.023	0.168	-0.001	-0.010	0.034	0.775	0.044	0.020	0.073	-0.001	0.105	0.057	0.061	0.052	0.080	-0.048	0.275	0.017	0.091	1.000													
S	-0.022	0.257	-0.107	0.284	0.094	-0.106	0.305	-0.049	0.200	0.107	-0.113	0.457	0.066	-0.177	0.136	-0.097	-0.065	-0.132	0.090	0.050	0.116	-0.103	0.041	1.000												
Sc	0.498	-0.025	-0.053	0.040	0.069	0.006	0.003	-0.039	-0.027	-0.005	0.098	0.063	-0.002	-0.022	-0.018	0.040	-0.073	-0.041	0.045	-0.055	-0.015	-0.054	0.018	-0.047	1.000											
Sb	-0.053	0.005	0.873	-0.051	-0.135	0.054	-0.018	0.526	0.036	0.348	0.569	0.010	0.508	0.739	-0.365	0.289	0.869	0.488	-0.158	0.113	0.633	0.538	0.005	-0.152	-0.039	1.000										
Sn	-0.017	0.081	0.219	-0.025	-0.030	0.001	-0.012	0.141	0.158	0.022	0.123	-0.064	0.079	0.256	-0.048	0.030	0.180	0.105	-0.098	0.097	0.080	0.065	0.255	-0.058	-0.006	0.243	1.000									
Sr	-0.039	0.033	0.240	-0.045	0.191	0.016	-0.017	0.387	0.092	0.059	0.117	-0.047	0.059	0.229	-0.107	0.082	0.288	0.192	-0.097	0.190	0.191	0.247	0.141	-0.020	-0.040	0.280	0.089	1.000								
Ti	-0.029	0.171	0.482	-0.045	0.144	0.078	-0.024	0.322	0.220	0.228	0.449	0.011	0.171	0.483	0.034	0.063	0.620	0.179	-0.115	0.477	0.635	0.282	0.202	-0.090	-0.014	0.427	0.162	0.165	1.000							
Tl	-0.013	0.080	-0.080	-0.019	-0.063	-0.010	-0.009	-0.008	-0.019	-0.022	0.080	-0.092	-0.119	0.004	-0.023	-0.066	-0.002	-0.058	-0.074	0.068	0.048	-0.030	-0.031	-0.049	-0.020	-0.047	-0.019	-0.021	0.101	1.000						
V	-0.051	0.031	0.876	-0.042	-0.027	0.082	-0.029	0.512	0.134	0.343	0.508	0.151	0.558	0.751	-0.244	0.308	0.878	0.422	0.026	0.185	0.686	0.561	0.075	-0.146	-0.053	0.924	0.219	0.283	0.540	-0.029	1.000					
W	-0.007	0.021	0.008	-0.011	0.123	0.029	-0.006	-0.022	0.068	0.014	-0.077	0.004	0.058	-0.050	0.145	0.081	-0.003	-0.019	0.037	0.046	0.003	-0.014	-0.020	0.046	-0.017	-0.034	-0.012	-0.022	-0.014	-0.009	-0.029	1.000				
Y	0.051	-0.075	0.518	-0.020	0.431	0.285	0.043	0.137	0.083	0.467	-0.001	0.330	0.469	0.403	0.147	0.795	0.421	0.363	0.280	-0.023	0.461	0.421	0.080	-0.097	0.171	0.355	0.019	0.122	0.189	-0.065	0.419	0.025	1.000			
Zn	-0.006	0.338	0.255	-0.025	0.238	0.251	0.014	0.093	0.755	0.200	0.019	0.155	0.248	0.241	0.067	0.212	0.225	0.204	0.012	0.249	0.198	0.342	0.901	-0.012	-0.020	0.171	0.263	0.188	0.265	-0.041	0.251	0.004	0.270	1.000		
Zr	-0.035	0.239	0.455	0.008	0.237	0.120	-0.020	0.189	0.125	0.264	0.316	0.135	0.290	0.447	0.117	0.192	0.537	0.168	0.100	0.350	0.592	0.294	0.168	-0.080	-0.017	0.365	0.169	0.185	0.803	0.069	0.478	-0.013	0.290	0.252	1.000	


Legend
Poor Correlation
Weak Correlation
Moderate Correlation
Stronger Correlation



Appendix 2: Independent Sampling Assay Certificates



LABORATORIO DE ENSAYO ACREDITADO POR EL  
ORGANISMO PERUANO DE ACREDITACIÓN INACAL - DA  
CON REGISTRO N° LE 022



Página 1 de 8

### INFORME DE ENSAYO N° JUN0110.R19

<b>Solicitante :</b>	MINING PLUS PERU S.A.C
<b>Dirección :</b>	Av. Jose Pardo N° 513, Interior 702 Miraflores, Lima
<b>Solicitado por :</b>	David Seers
<b>Referencia :</b>	CARTA MINING PLUS 002/19
<b>Proyecto / Prospecto :</b>	-
<b>Tipo(s) de Muestra(s) :</b>	Exploración Geoquímica
<b>Estado de la Muestra :</b>	01 Saco con muestras tipo Roca.
<b>Número de muestras :</b>	7
<b>Fecha de Recepción :</b>	Lunes, 10 de Junio de 2019
<b>Lugar de Recepción :</b>	Juliaca, Puno
<b>Fecha de Ejecución de Ensayo :</b>	2019-06-10 al 2019-06-17
<b>Fecha de reporte :</b>	Lunes, 17 de Junio de 2019

Los resultados corresponden al ensayo solicitado en la(s) muestra(s) recibida(s)

Los ensayos han sido realizados en:

**CERTIMIN S.A.**  
 Av. Las Vegas 845.  
 San Juan de Miraflores - Lima.  
 Perú.  
 Teléfonos: (51-1) 205-5656.  
 Fax: (51-1) 205-5656.  
 Correo Electronico: certimin@certimin.pe

**SANTOS OROYA ROJAS**  
**Gerente de Laboratorios**  
 Lima, 17 de Junio de 2019

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"EL USO INDEBIDO DE ESTE INFORME DE ENSAYO CONSTITUYE DELITO SANCIONADO CONFORME A LA LEY, POR LA AUTORIDAD COMPETENTE"



Registra 871E-022

LABORATORIO DE ENSAYO ACREDITADO POR EL ORGANISMO PERUANO  
DE ACREDITACIÓN INACAL - DA CON REGISTRO N° LE 022

**INFORME DE ENSAYO**  
**N° JUN0110.R19**  
**17-Jun.-2019**



## RESULTADOS

Muestras			Elementos													
N°	Código de Servicio	Elemento	Unidad	Límite Inferior	Límite Superior	00153	00153	00153	00153	00153	00153	00153	00153	00153	00153	00153
						Ag	Au	00107	00153	Al*	As*	Ba*	Ba*	Ba*	Ba*	Fe*
						Ppm	Ppm	Ppm	Ppm	%	Ppm	Ppm	Ppm	Ppm	Ppm	%
						100	10	10	10000	15	3	1	10000	10000	1	15
1	13241					<0.2	0.223		725	3.89	27	725	1.4	<5	<0.01	1.81
2	13242					<0.2	0.117		1082	7.13	420	1082	1.8	<5	<0.01	2.27
3	13243					<0.2	0.037		969	5.92	17	969	2.4	<5	<0.01	6.90
4	13244					0.3	<0.005		524	4.05	865	524	3.2	<5	0.48	2.81
5	13245					0.6	<0.005		90	0.58	980	90	<0.5	<5	0.04	1.56
6	13246					<0.2	<0.005		345	4.93	7	345	7.1	<5	<0.01	>15
7	13247					0.4	<0.005		1119	10.58	6	1119	3.0	<5	0.38	3.72

[C, W, V, Ti] Los elementos Ba, Cr, Sn, Ti, W, Zr parcialmente disueltos en minerales refractarios.

(\*) Los métodos indicados no han sido acreditados por el INACAL-DA

EL USO INDEBIDO DE ESTE INFORME DE ENSAYO CONSTITUYE DELITO SANCIONADO CONFORME A LA LEY, POR LA AUTORIDAD COMPETENTE.



Registra 871E-022

LABORATORIO DE ENSAYO ACREDITADO POR EL ORGANISMO PERUANO  
DE ACREDITACIÓN INACAL - DA CON REGISTRO N° LE 022

## INFORME DE ENSAYO N° JUN0110.R19 17-Jun.-2019



Muestras		Elementos													
Nº	Código de Servicio Elemento Unidad Límite Inferior Límite Superior	G0153 Ca+ ppm 10000	G0153 K+ % 0.01 15	G0153 La+ ppm 0.5 10000	G0153 Mg+ % 0.01 15	G0153 Mn+ ppm 2 10000	G0153 Mo+ ppm 1 10000	G0153 Na+ % 0.01 15	G0153 Nb+ ppm 1 10000	G0153 Ni+ ppm 1 10000	G0153 P+ % 0.01 15	G0153 Pb ppm 2 10000	G0153 S+ % 0.01 10	G0153 Sb+ ppm 5 10000	G0153 Se+ ppm 0.5 10000
1	13241	13	1.47	121	0.12	49	8	0.11	2	18	0.02	45	0.01	<5	7.5
2	13242	19	2.03	316	0.54	252	11	0.14	7	86	0.03	64	0.02	<5	15.4
3	13243	20	1.87	160	0.52	311	5	0.18	3	37	0.06	137	0.03	6	11.1
4	13244	18	1.01	137	0.20	120	5	0.20	<1	22	0.02	136	0.11	7	7.2
5	13245	<30	0.15	7.9	0.08	54	4	0.04	<1	28	0.02	35	0.56	<5	1.4
6	13246	23	0.84	186	0.17	273	96	0.30	<1	116	0.41	98	0.29	19	5.1
7	13247	32	2.68	56.9	1.20	437	8	0.69	4	29	0.02	29	0.07	6	21.3

EL USO INCORRECTO DE ESTE INFORME DE ENSAYO CONSTITUYE DELITO SANCIONADO CONFORME A LA LEY, POR LA AUTORIDAD COMPETENTE.

LABORATORIO DE ENSAYO ACREDITADO POR EL ORGANISMO PERUANO  
DE ACREDITACIÓN INACAL - DA CON REGISTRO N° LE 022

## INFORME DE ENSAYO N° JUN0110R19 17-Jun.-2019



Muestras		Elementos									
N°	Código de Servicio Elemento Unidad Límite Inferior Límite Superior	G0153 Sn Ppm 10 10000	G0153 Sr Ppm 0.5 5000	G0153 Ti % 0.01 15	G0153 Ti* Ppm 2 10000	G0153 V Ppm 2 10000	G0153 W Ppm 10 10000	G0153 Y* Ppm 0.5 10000	G0153 Zn Ppm 0.5 10000	G0153 Zr* Ppm 0.5 10000	
1	13241	<10	27.0	0.14	<2	58	<10	10.7	40.6	20.4	
2	13242	<10	31.0	0.41	<2	230	<10	20.6	84.8	37.1	
3	13243	<10	30.9	0.20	<2	99	<10	9.1	104	27.6	
4	13244	<10	50.5	0.07	<2	67	<10	4.6	96.8	13.7	
5	13245	<10	7.2	0.02	<2	9	<10	2.8	48.7	2.5	
6	13246	<10	21.0	0.08	<2	181	<10	17.3	496	33.3	
7	13247	<10	143	0.30	<2	216	<10	21.8	114	67.6	

EL USO INCORRECTO DE ESTE INFORME DE ENSAYO CONSTITUYE DELITO SANCIONADO CONFORME A LA LEY, POR LA AUTORIDAD COMPETENTE.