









Laboratorio Pangea.

It is part of the infrastructure of Compañía Minera Pangea, a subsidiary company of the Canadian group McEwen Mining and is a reliable supplier with great experience.

Compañía Minera Pangea S.A. de C.V. is a Stock Corpora on that operates in Mexico and legally incorporated in accordance with the United Mexican States Law.

Fiscal domicile and corporate office:

Blvd. Antonio Rosales 855 Ote. Altos 12 Col. Morelos, CP. 81460 Guamúchil, Sinaloa.

At Compañía Minera Pangea we share corporate values. Our commitment begins with our collaborators and contractors to strengthen our compe veness and performance, create decent employment, improve our communi es and contribute to the development of our region.

Laboratorio Pangea started its opera ons in 2002. For years our laboratory has focused on performing its analyzes with a high-end quality approach and delivery mes. Therefore, as a customer, you remain our highest priority.

Confirming our strong commitment with our customers, Pangea Laboratory achieved its accredita on in July, 2021.







QUALITY POLICY

Laboratorio Pangea is committed to provide analysis services for the mining industry, that generates high assurance standards for our customers, by the continuous quality improvement through internal evaluation programs of our processes as well as to maintain permanent training of our staff and eventually generate products or services that comply with the requirements of the Mexican Official Standard MNX-EC-17025-IMNC-2018.

AWARDS

At Laboratorio Pangea, we are committed to quality, for this reason we are constantly participating in international recognized ring tests. Furthermore, we have recently been accredited by the Mexican Accreditation Entity (EMA) in the ISO / IEC 17025: 2017 / NMX-EC-IMNC17025-2018 general requirements for the competence of calibration and testing laboratories.

CONTINUOUS IMPROVEMENT

We have acredited the methods:

- Determination of gold in ore by foundry with atomic absorption termination
- Determination of gold in ore by foundry with gravimetric termination.

We are working on the accreditation of the following methods:

- AR-ICP: agua regia digestion ICP termination.
- 4ACID-ICP: Digestion 4 acids ICP termination.
- Commitment date for the accreditation of said methods: March 2024.





ACREDITA

COMPAÑÍA MINERA PANGEA, S.A. DE C. V.

BLVD. ANTONIO ROSALES, No. 855, INT. ALTOS 12, MORELOS, C.P. 81460, SALVADOR ALVARADO, SINALOA, MÉXICO

Como Laboratorio de Ensayo

De acuerdo a los requisitos establecidos en la norma NMX-EC-17025-IMNC-2018 (ISO/IEC 17025:2017), para las actividades de evaluación de la conformidad en:

Química*

Acreditación No: Q-1395-219/21 Vigente a partir del: 2021/07/22

El cumplimiento de los requisitos de la Norma NMX-EC-17025-IMNC-2018 (ISO/IEC 17025:2017) par parte de un laboratorio significa que el laboratorio cumple tanta los requisitos de competencia técnica como los requisitos del sistema de gestión necesarlos para que pueda entregar de forma consistente resultados técnicamente válidos. Los requisitos del sistema de gestión de la Norma NMX-EC-17025-IMNC-2018 (ISO/IEC 17025:2017) están escritos en un lenguaje que corresponde con las operaciones de un laboratorio y satisfacen los principios de la Norma ISO 9001:2015 "Sistemas de Gestión de la Calidad- Requisitas" y además son afines a sus regulsitos pertinentes."

María Isabel López Martinez Directora Ejecutiva





*En el alcance establecido en el anexo técnico correspondiente 21LP0901.

Siempre que se presente este documento como evidencia de screditación, deberá ester acompañado, del anexo técnico.

Para verificar el estatus de la vigencia de este certificado, consultar la página de ema:

FOR-LAB-011-01

The scope for testing is in accordance with:

•Test: Determination of gold in ore by foundry with atomic absorption termination (PC-030) and Determination of gold in ore by foundry with gravimetric termination (PC-035). Internal methods.









We suggest the following basic tips to help ensure your samples reach the lab safely and to avoid processing delays and possible additional sorting charges:

- Clearly identify samples with a unique identification number using waterproof ink on sample bags and / or labels on sample bags.
- Pack all samples safely and place them in their shipping containers appropriately (for example: bags, buckets, or boxes).
- Sealed plastic bags are best for shipping pulps.
- Fill out an analysis application form (you may request it at laboratory@mcewenmining.com) as fully as possible and send it with each batch of samples.
- Clearly identify all shipping containers with your contact information and destination address.
- Place hard copies of the test application form and a sample list in the first shipping container and add an e e-mail of the destination laboratory (the Pangea laboratory receiving location).
- This is not an exhaustive list, if you require any further information or discuss your project requirements, please feel free to contact us with any questions. We are looking forward to helping you.



SAMPLE PREPARATION

CODE	SERVICE DESCRIPTION	PRIC	E (USD)
PESA-01	Weight item as received	\$	1.50
PREP-250	Crushing (<5Kg) up to pass= 70% mesh #10 (2mm), crazing (250 g) and pulverized up to =85 % (74 μ m).	\$	9.35
TRIT-01	Crushing (<5Kg) up to pass = 70% mesh #10 (2 mm).	\$	3.40
PULV-500	500 grams pulverized = 85% mesh #200	\$	4.60
PULV-750	750 grams pulverized	\$	6.10
PULV-1000	1000 grams pulverized = 85% mesh #200	\$	7.60
TRCU-01	Crushing up to pass = 70% mesh 2mm and crazing (<5 Kg)	\$	4.45
HUM-01	% Moisture Determination*	\$	3.50
GS	Specific Gravity Determination on pulverized mineral	\$	15.25





Sample preparation is one of the most important stages in the analytical process. Once the samples are in Laboratorio PANGEA, we will ensure the composition is adequate in order to achieve a representative by-product for analysis.

As part of the quality assurance in sample preparation, we continually carry out particle size verification tests in crushing and pulverized mineral to accomplish an optimal chemical analysis.



METALIC SCREENING (Au-SCR)

The metallic screening procedure is recommended for samples containing coarse gold. It provides more accurate results.

GOLD AND SILVER ANALYSIS

CODE	SERVICE DESCRIPTION	LCM	PRICE
Au-FAAA30	Au Fire (mineral) Assay-AA 30 g sample weight	<0.05 ppm	\$ 18.10
Au-FAAA50	Au Fire (mineral) Assay-AA 50 g sample weight	<0.03 ppm	\$ 20.60
Au-FAICP30	Au Fire (mineral) Assay-ICP-OES 30 g sample weight	<0.05 ppm	\$ 18.30
Au-FAICP50	Au Fire (mineral)Assay-ICP-OES 50 g sample weight	<0.03 ppm	\$ 20.70
Au-FAGRA30	Au Fire (mineral) Assay-Gravimetric 30 g sample weight	<0.20 ppm	\$ 22.40
Au-FAGRA50	Au Fire (mineral) Assay-Gravimetric 50 g sample weight	<0.20 ppm	\$ 25.40
Au-CFAGRA	Au Fire (carbon) Assay-Gravimetric 2 g sample weight	<3.0 ppm	\$ 25.00
Au-EFAGRA	Au Fire (slag) Assay-Gravimetric	<1.20 ppm	\$ 22.00
Au-FAGRAC	Au fire (concentrated) Assay-Gravimetric	<0.006 %	\$ 109.50
Ag-CFAGRA	Ag Fire (carbon) Assay-Gravimetric 2 g sample weight	<3.0 ppm	\$ 25.00
Ag-FAGRA30	Ag Fire (mineral) Assay-Gravimetric 30 g sample weight	<10.0 ppm	\$ 24.70
Ag-FAGRA50	Ag Fire (mineral) Assay-Gravimetric 50 g sample weight	<10.0 ppm	\$ 28.00
Ag-EFAGRA	Ag Fire (slag) Assay-Gravimetric	<1.20 ppm	\$ 27.00
Ag-FAGRAC	Ag fire (concentrated) Assay-Gravimetric	<0.30 %	\$ 55.20
Au, Ag-MFAGRA	Au, Ag Fire Assay (doré) -gravimetric		\$ 121.50
Au-SCR	Au Fire Assay-Metallic Screen *Test method approved by EMA (Mexican Accreditant	<0.05 ppm tion Entity).	\$ 78.00

AQUA REGIA PARTIAL MINERAL DIGESTION ANALYTE & LCM (ppm) CODE PRICE/SAMPLE **SERVICE DESCRIPTION** La <2.50 <2.50 Co <2.50 Ρ <62.5 ΤI <5.00 Ag Cr <2.50 Mg <2.50 <0.006 % <62.5 <2.50 Pb Aqua Regia Mineral Digestion <5.00 Completion ICP-OES. \$ 12.80 ARICP <5.00 Cu <5.00 Mn < 2.50 S <0.006% W 0.4 g sample <0.025 % <0.012% <2.50 <5.0 <12.5 Fe Мо Sb Zn

Ni

Sc

< 2.50

< 2.50

<2.50

Ga

<2.50

Cd

AQUA REGIA PARTIAL CARBON DIGESTION												
CODE	SERVICE DESCRIPTION				ANALY ⁻	TE & LC	M (ppm)					PRICE/SAMPLE
ARICP-C Com		Ag	<1.00	Co	<1.00	La	<1.00	Р	<25.0	Τl	<2.00	
	Aqua Regia Mineral Digestion	As	<1.00	Cr	<1.00	Mg	<0.002%	Pb	<25.0	V	<1.00	
	Completion ICP-OES.	Bi	<2.00	Cu	<2.00	Mn	<1.00	S	<0.002 %	W	<2.00	\$ 19.15
	1.0 g sample	Ca	0.01%	Fe	<0.005%	Мо	<1.00	Sb	<2.0	Zn	<5.00	
		Cd	<1.00	Ga	<1.00	Ni	<1.00	Sc	<1.0			

AQUA REGIA PARTIAL CONCENTRATED DIGESTION												
CODE	SERVICE DESCRIPTION				ANALY	TE & LC	M (ppm)					PRICE/SAMPLE
		Ag	<5.00	Co	<5.00	La	<5.0	P	<50.0	TI	<10.0	
	Aqua Regia Mineral Digestion	As	<5.00	Cr	<5.00	Mg	<0.012%	Pb	<50.0	V	<5.00	
ARICP-C	Completion ICP-OES. 0.2 g sample	Bi	<10.0	Cu	<10.0	Mn	<5.0	S	<0.012%	W	<10.0	\$ 49.50
		Ca	<0.02%	Fe	<0.024%	Мо	<5.0	Sb	<10.0	Zn	<25.0	
		Cd	<5.00	Ga	<5.00	Ni	<5.0	Sc	<5.00			





Aqua Regia Digestion

It is a useful tool for various types of deposits involving gold, silver and base metals lodged in Sulphur and Carbonate minerals.

SODIUM CYANIDE LEACHING PROCESS

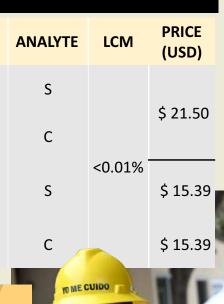
CODE	SERVICE DESCRIPTION	ANALYTE	LCM ppm	PRICE (USD)
	Leaching of mineral with Cyanide, finish atomic absorption 12.5 g sample	Au	<0.20	
AACN		Ag	<0.50	\$ 12.25
		Cu	<60.0	

INDUCTION FURNACE/IR

CODE	SERVICE DESCRIPTION
S,C-IR	Carbon & Sulpur Total by induction furnace/IR. 0.1 g sample
S-IR	Sulpur Total by induction furnace/IR 0.1 g sample
C-IR	Carb Total by induction furnace/IR. 0.1 g sample

CARBON AND SULPHUR

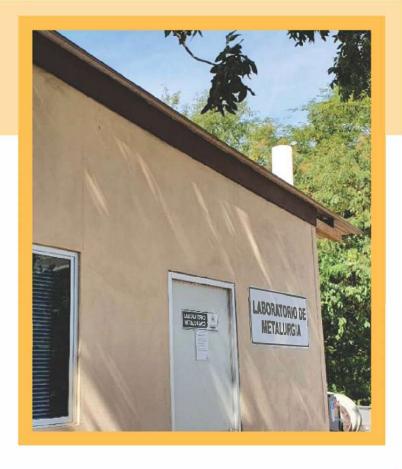
The analysis of these elements may provide the customer with important information on mineralogy, environment and metallurgy prior, during and after their project.





METALLURGICAL TESTING

CODE	SERVICE DESCRIPTION	PRICE (USD)
MT-PB	Mineral Bottle Testing (Cyanidation) 1-10 Kg	\$ 800.00*
MT-PC1	Column Testing (60 kg) 6" x 6.55'	\$ 4,200.00*
MT-PC2	Column Testing (170 kg) 10" x 6.55'	\$ 6,500.00*
MT-PREP	Sample Preparation at different particle size	\$ - *
MT-GRVA	Assessed Granulometric Analysis 10 Kg Sample	\$ 550.00*



* The prices corresponding to the metallurgical tests shown here are according to the standard procedures of our laboratory, the prices vary according to the metallurgical parameters required by the customer. Therefore to obtain an official price please ask for a price quote with the desired parameters.



Metallurgical Testing

With the ability to adapt to special indications that the customer requires for the handling and analysis of the samples.