



Mining 101: The Basics for Every Translator and Interpreter



Sadot Márquez
& Pedro Valdez

OUR Presenters

Sadot Márquez is a Peruvian certified professional translator and interpreter and one of the founders of **TISOL**, a linguistic services hub and provider of world-class mining and heavy-industry companies operating in Peru and the Latin American region. He has more than 15 years of experience in technical translation and interpreting in mining, oil and gas, construction, and other related fields.

Pedro Valdez is one of the founders of **TISOL**, and his professional journey started more than 15 years ago when he was recruited as translator for one of the oldest and largest polymetallic mines in Peru, the Cerro de Pasco Mine. Since then, he has been employed in a series of progressively senior roles for several mining projects in Central and South America. He currently serves as head of investor relations for Minera IRL Limited, a public company that operates two gold projects in Peru.

BEAUTY IS IN THE EYE OF THE BEHOLDER



1. Mining Claim / Petition / Concession

Protesto / Petitorio / Concesión

2. Deposit

Yacimiento / Depósito

3. Ore Body / Mineralized Lode

Cuerpo Mineralizado / Veta

4. Copper-bearing / Silver-bearing

Cuprífero / Argentífero

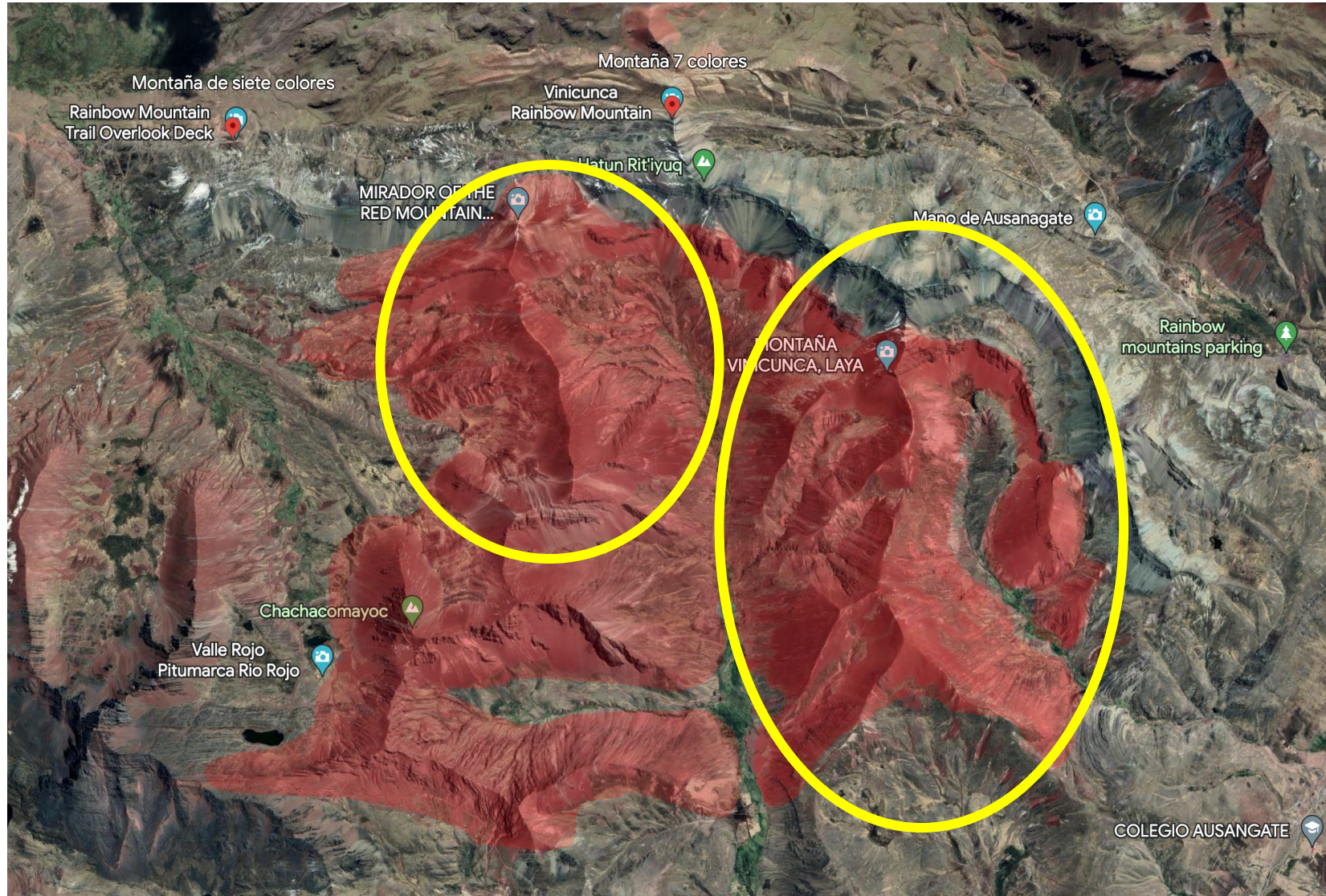
5. Veins / Veinlets

Vetas / Vetillas / Vetilleo

6. Grade (high & low)

Alta Ley / Baja Ley

THE EXPLORATION BEGINS



1. Host rock

Roca de Caja / Roca Encajonante

2. Sedimentary rock hosted mineralization

... alojada en rocas sedimentarias

3. Bedding / Mineralized beds

Estratificación / Capas mineralizadas

4. Prospecting along strike

Prospección a lo largo del rumbo

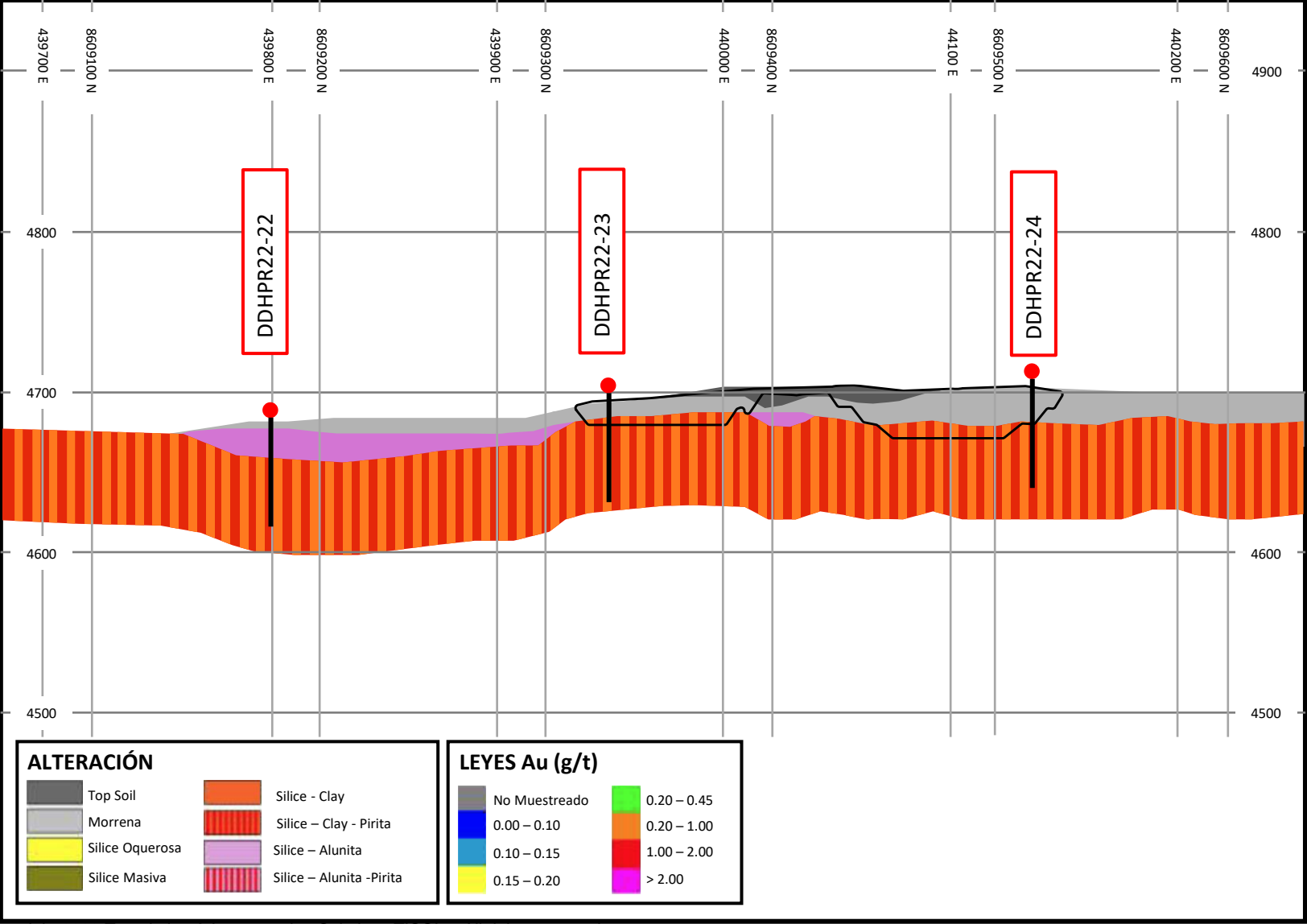
5. Test pits / Trenching

Calicatas / Cateos o Zanjas

6. Grassroots exploration / Greenfield

Exploración básica / Greenfield

ECONOMIC GEOLOGY



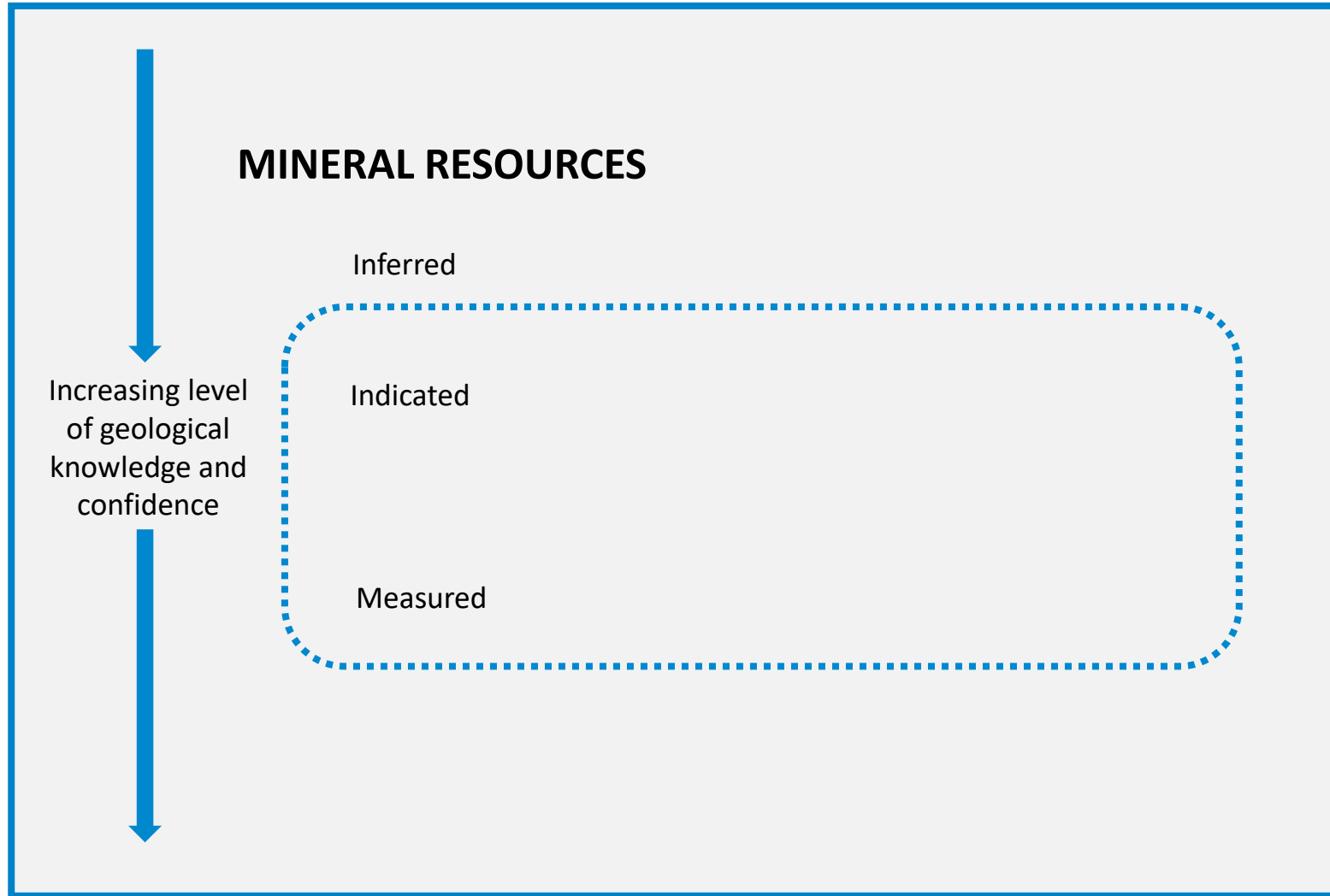
1. DDH & RC / Drillholes & Boreholes

Taladros y Sondajes / Perforación
Diamantina y de Circulación Reversa

2. Drill pattern

Malla de Perforación

REPORTING GUIDELINES AND STANDARDS



1. CP / QP

Persona Competente / Calificada

2. Upgrade / Convert

Elevar / Convertir

DEVELOPMENT & Construction

Preliminary Economic Assessment

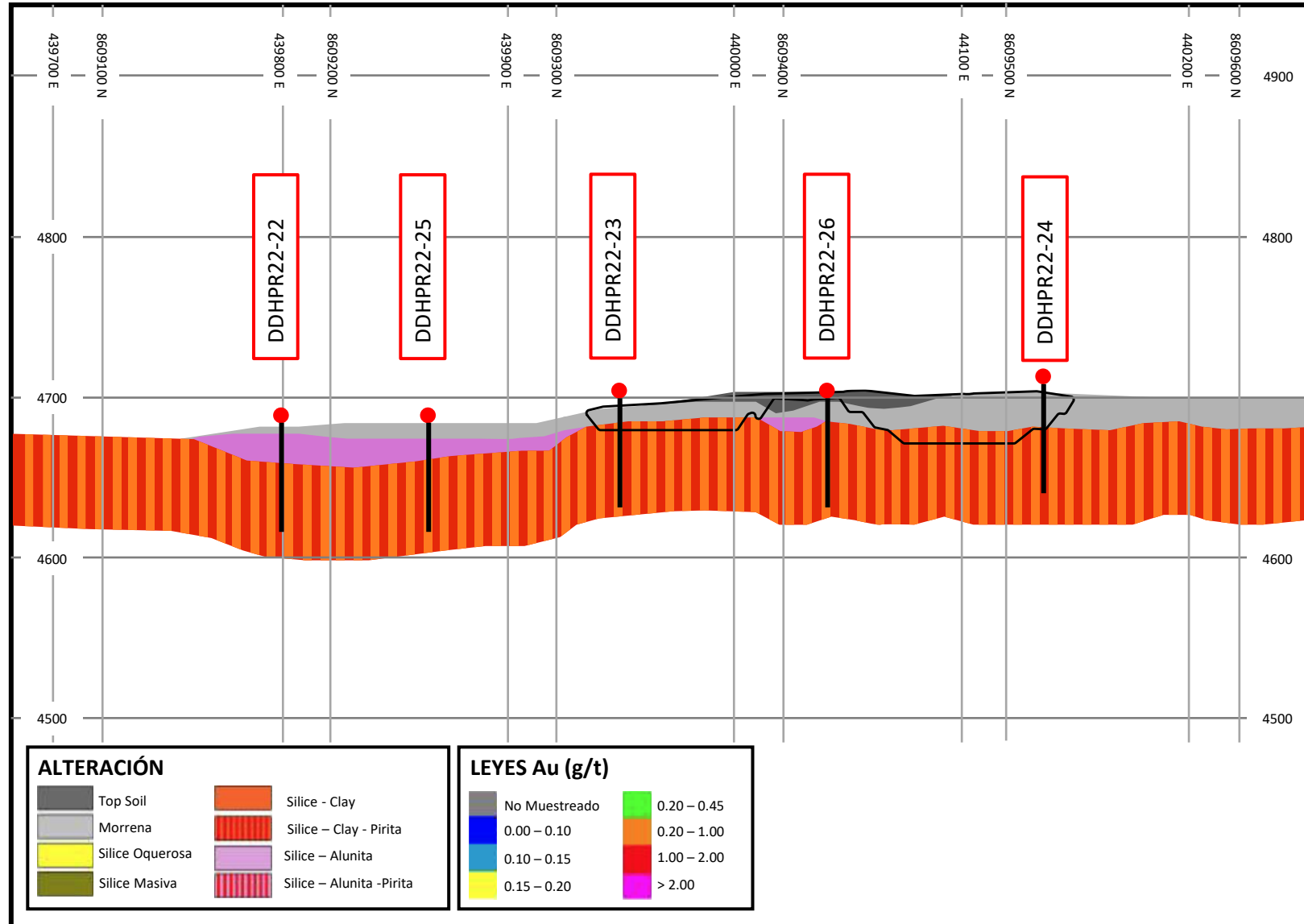
Evaluación Económica Preliminar

- Early-stage study of the potential viability of a mineral project, including only a mineral resource estimate. AKA **Scoping Study**.

Estudio Conceptual



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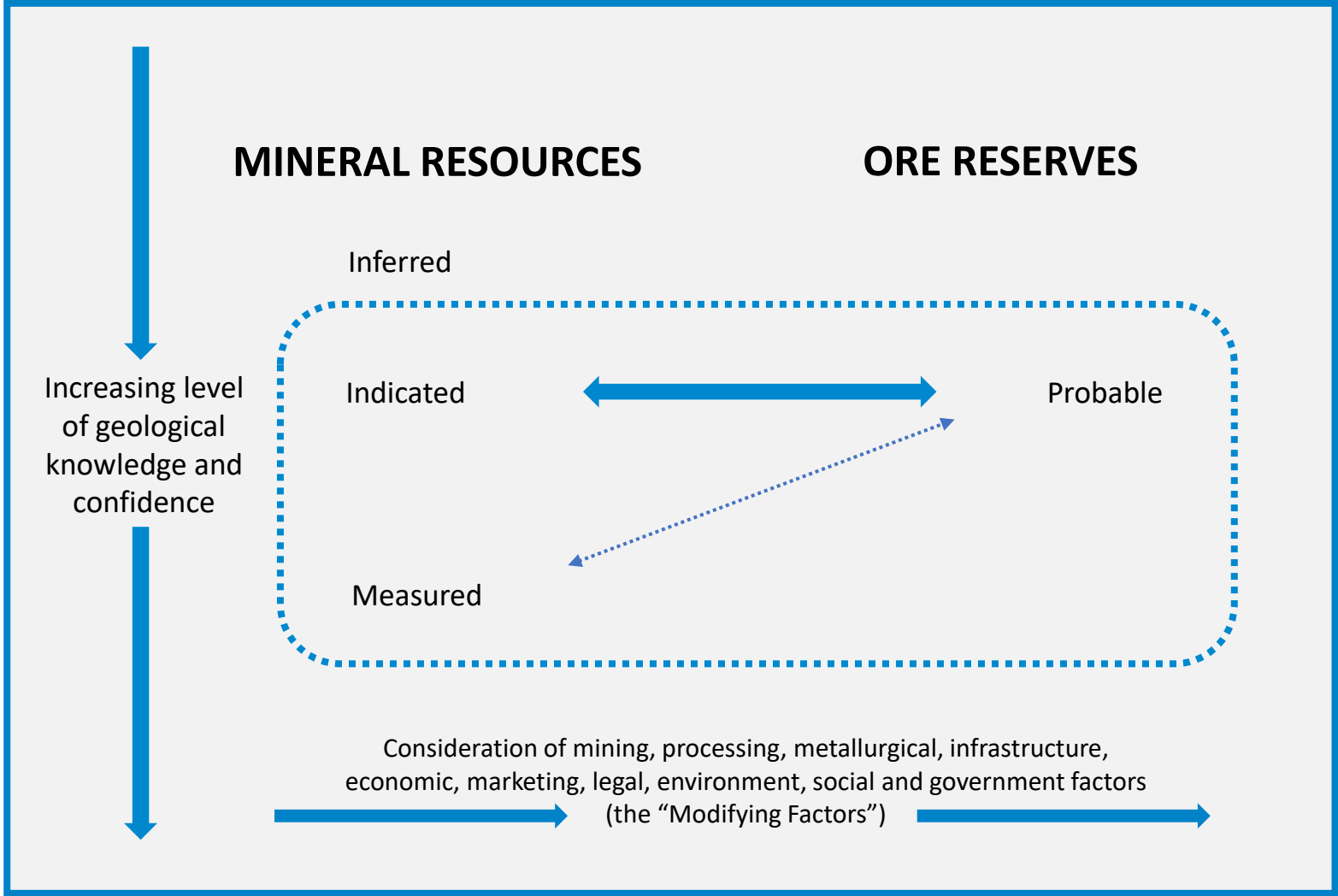
3. Dip & Down-dip / Strike

Buzamiento y buzamiento hacia abajo

4. Width / Thickness

Ancho / Potencia

REPORTING GUIDELINES AND STANDARDS



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2. Upgrade / Convert

Elevar / Convertir

3. Cut-off grade / Head grade

Ley de Corte / Ley de Cabeza

4. LOM / LOA

Vida de Mina / Vida de Activo

DEVELOPMENT & Construction

Preliminary Economic Assessment

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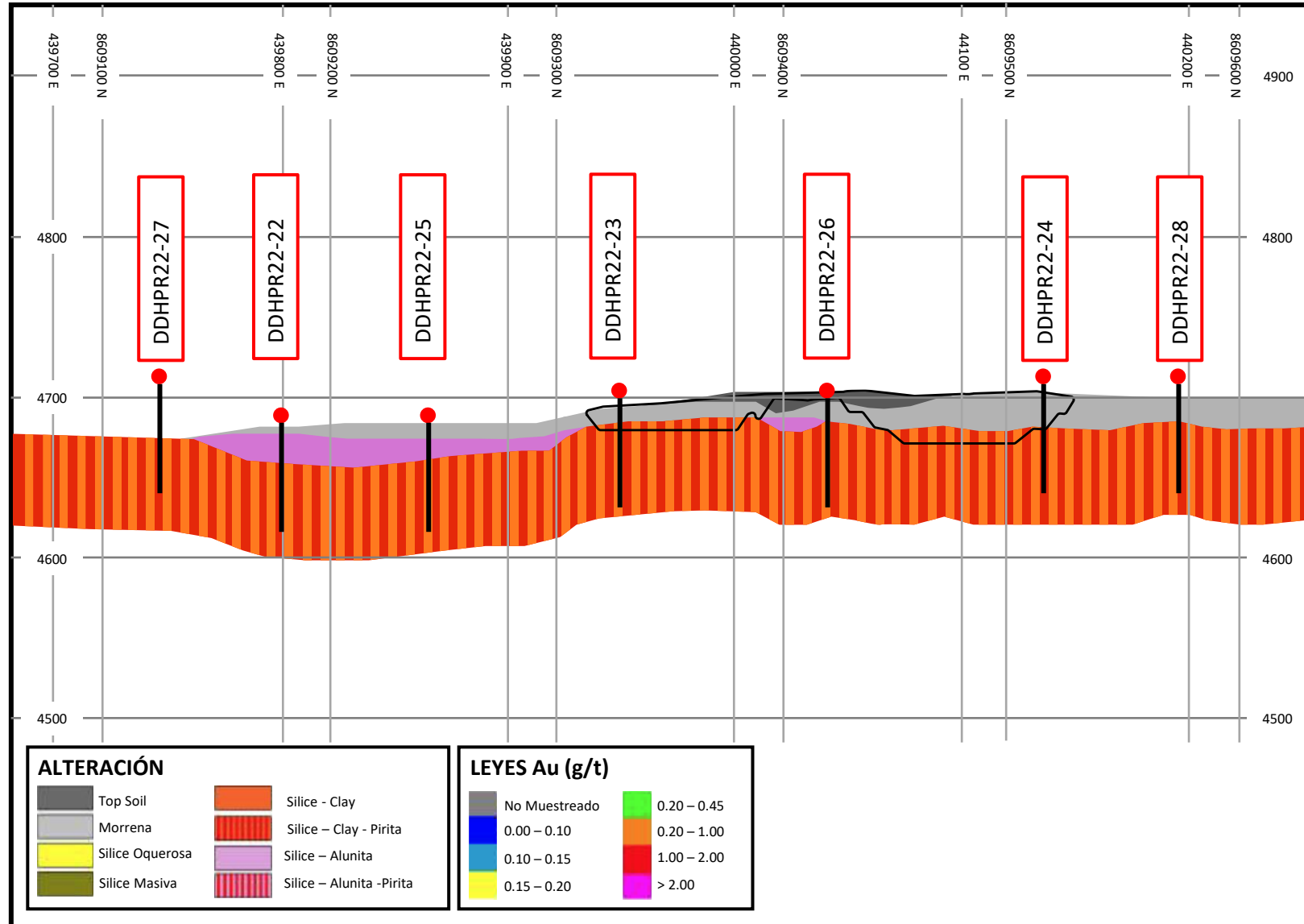
Pre-feasibility study

Estudio de Prefactibilidad

- A comprehensive study of a range of options for the viability of a mineral project, including a mineral resource, and possibly ore reserves estimate.



ECONOMIC GEOLOGY



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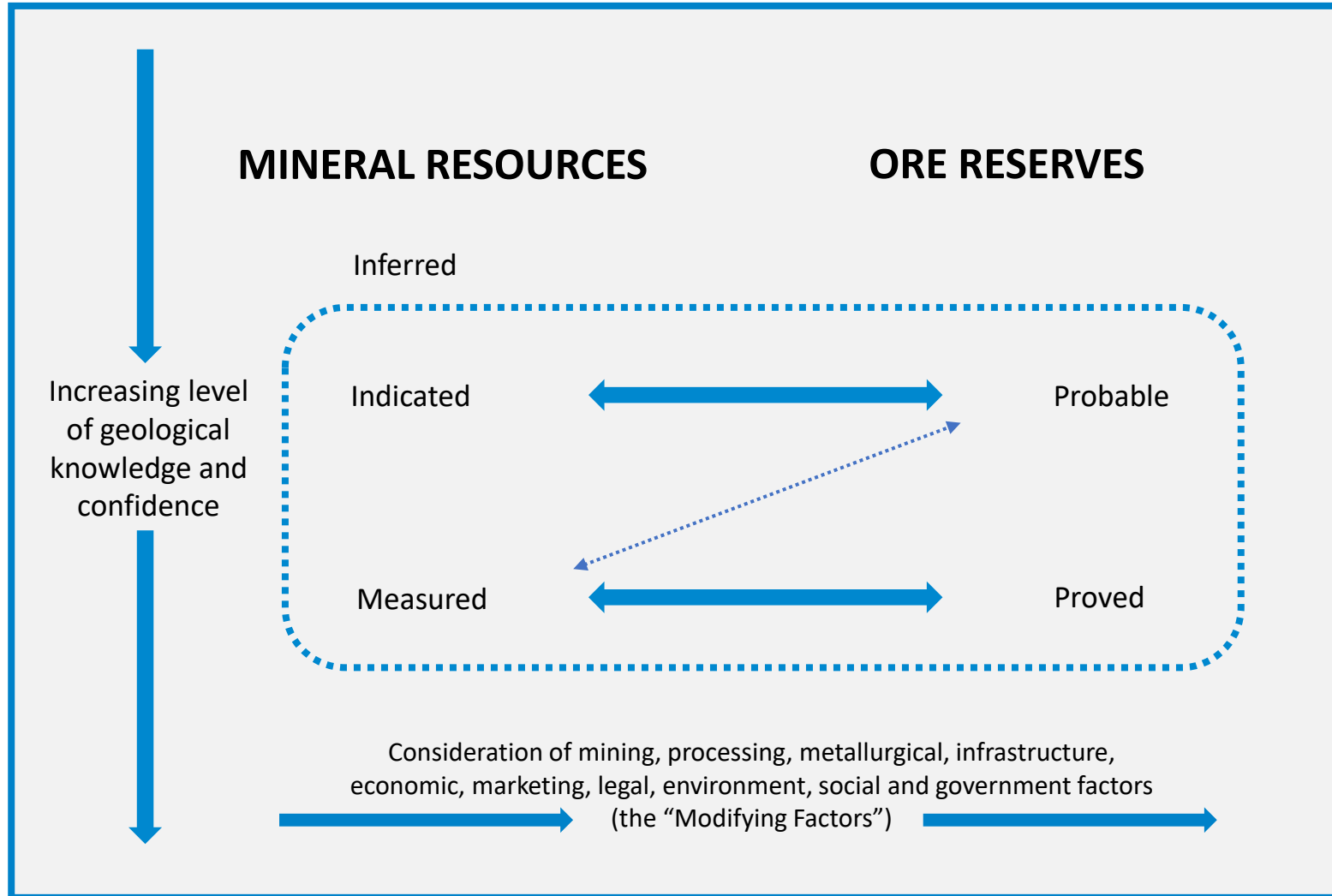
5. Core / Core shed

Testigo / Testigoteca

6. Split Samples

Muestras cuarteadas

REPORTING GUIDELINES AND STANDARDS



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5. Stope shapes

Diseños de tajeos

6. Strip ratio

Ratio de desbroce

DEVELOPMENT & Construction

Preliminary Economic Assessment

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Estudio Conceptual

Pre-feasibility study

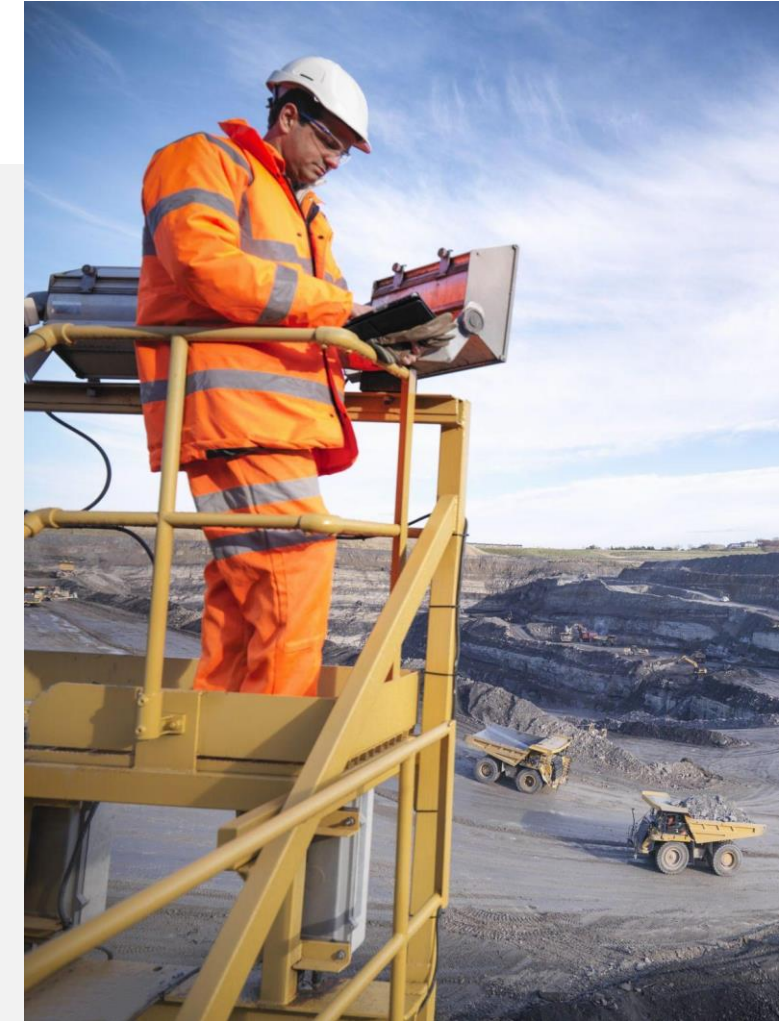
Estudio de Prefactibilidad

- A comprehensive study of a range of options for the viability of a mineral project, including a mineral resource, and possibly ore reserves estimate.

Feasibility study (basic engineering)

Estudio de Factibilidad

- In-depth study on many of the topics covered in prefeasibility studies, including both mineral resource and ore reserve estimates.



DEVELOPMENT & Construction

Feasibility Study – Some aspects included

- Sizing and capacity of the mine and plant.
- Mining method (OP or UG) Tajo Abierto / Subterránea
- Reserves (Economically mineable resource)
- Mine Plan (Development / Construction – Mining – Production)
- Equipment / Infrastructure
- CAPEX Costo de inversión
- OPEX Costos de operación
- Cash Flow.
- Permitting / Legal affairs (concession, water & energy use, property limits, etc.)
- Social license
- Royalties and other payments
- LOM (Life of Mine) Vida de mina



DEVELOPMENT & Construction

- Implementation of infrastructure for:

- **Treatment & Processing**
- **Support**
- **Power generation**
- **Transportation**

- **Administrative areas:** office, camp site, medical center, fire station / emergency crew

Posta médica /
Centro de salud



Equipo de
respuesta a
emergencias

- Occurs in parallel with stripping

Desbroce

DEVELOPMENT & Construction

Construction

❑ **Treatment / Processing:** Crushing Plant, Grinding, Leaching, Filtering, Thickener, Conveyor Belt, etc.



DEVELOPMENT & Construction

Construction

❑ **Ancillary:** Workshops, warehouses, fuel stations / farms, bays, magazine.

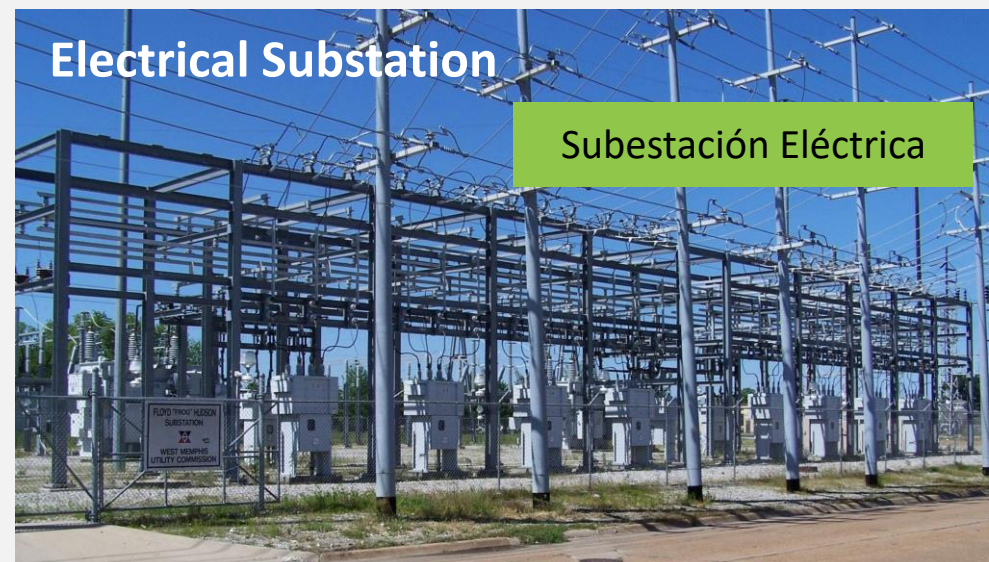


DEVELOPMENT & Construction

Construction

Alta tensión

❑ **Power generation & Supply** (High-voltage power lines, power plants).



DEVELOPMENT & Construction

Construction

❑ **Transportation:** (roads, highways, railways, ports, helipads, etc.)



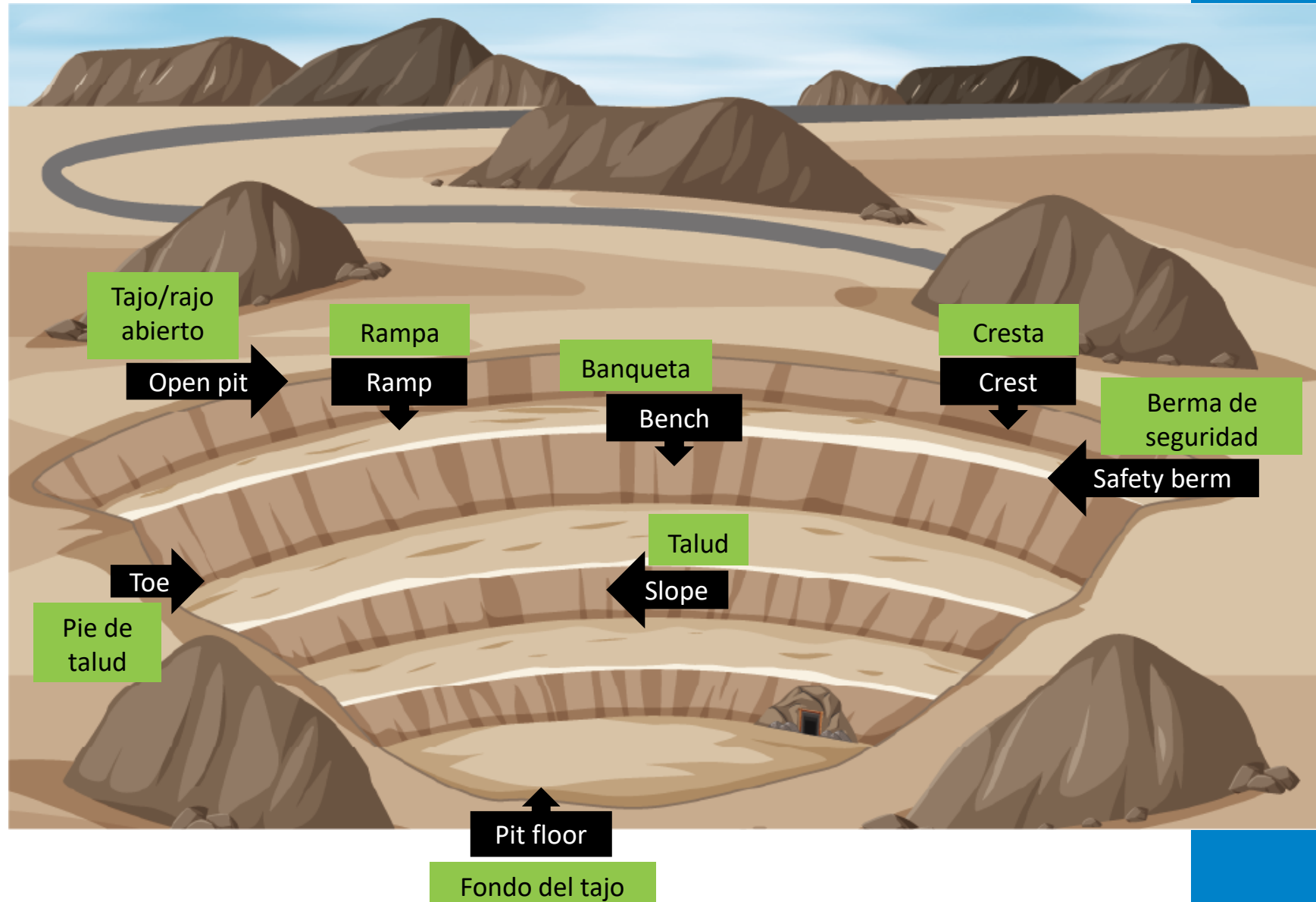
DEVELOPMENT & Construction

Construction

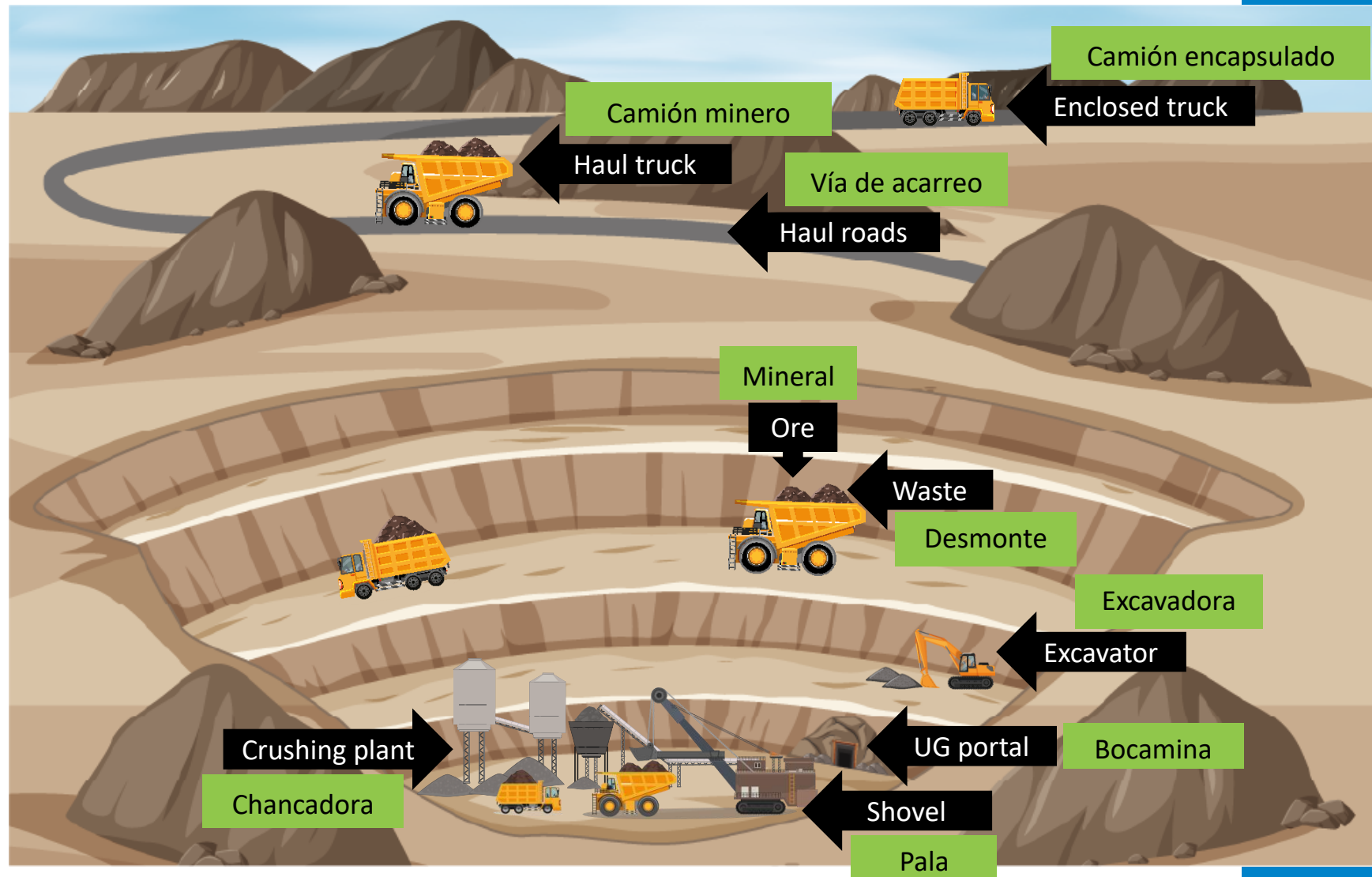
❑ **Other facilities** (camp sites, mess rooms / canteens , office areas, medical center, etc.)



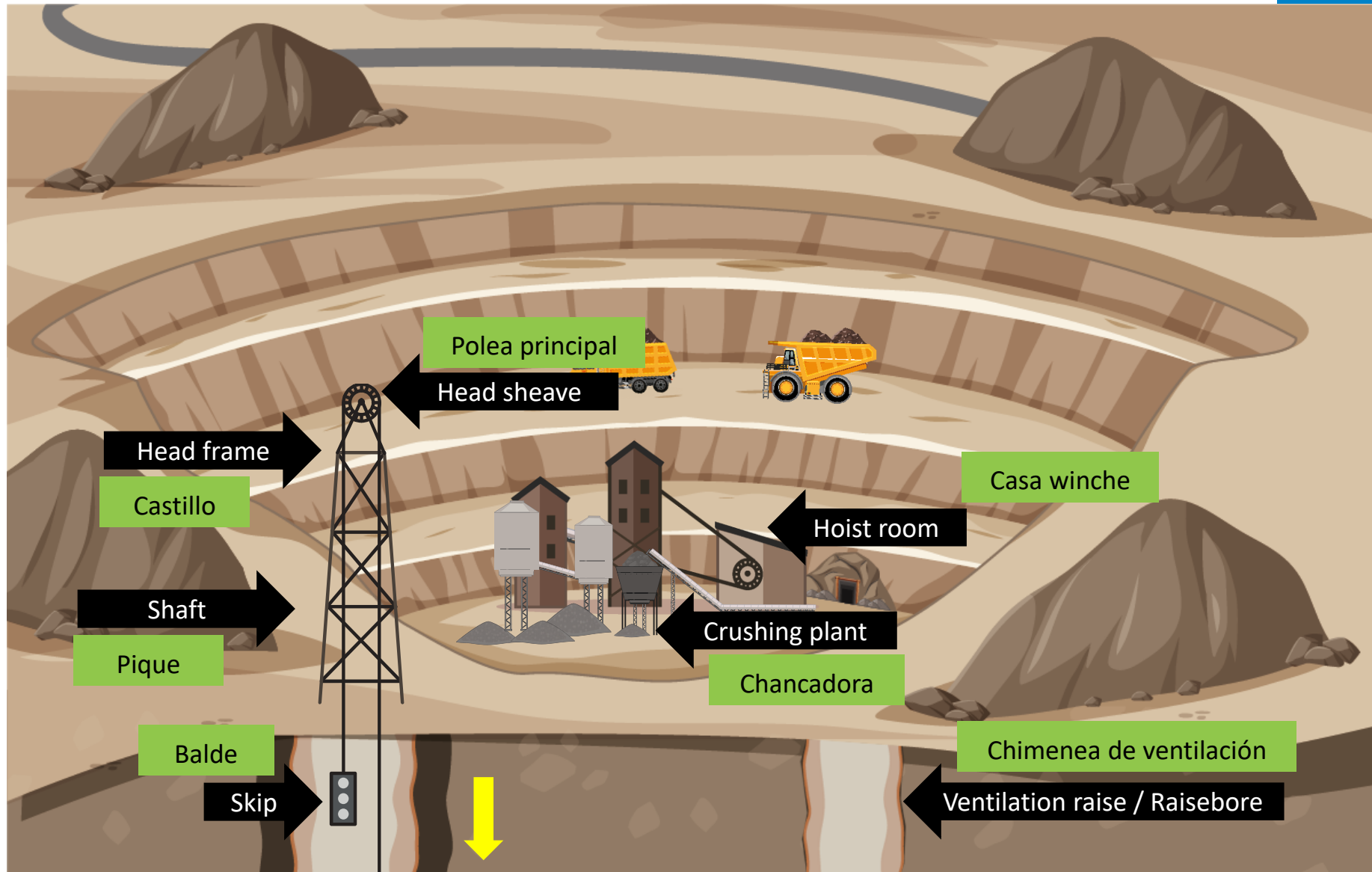
OPEN Pit mine



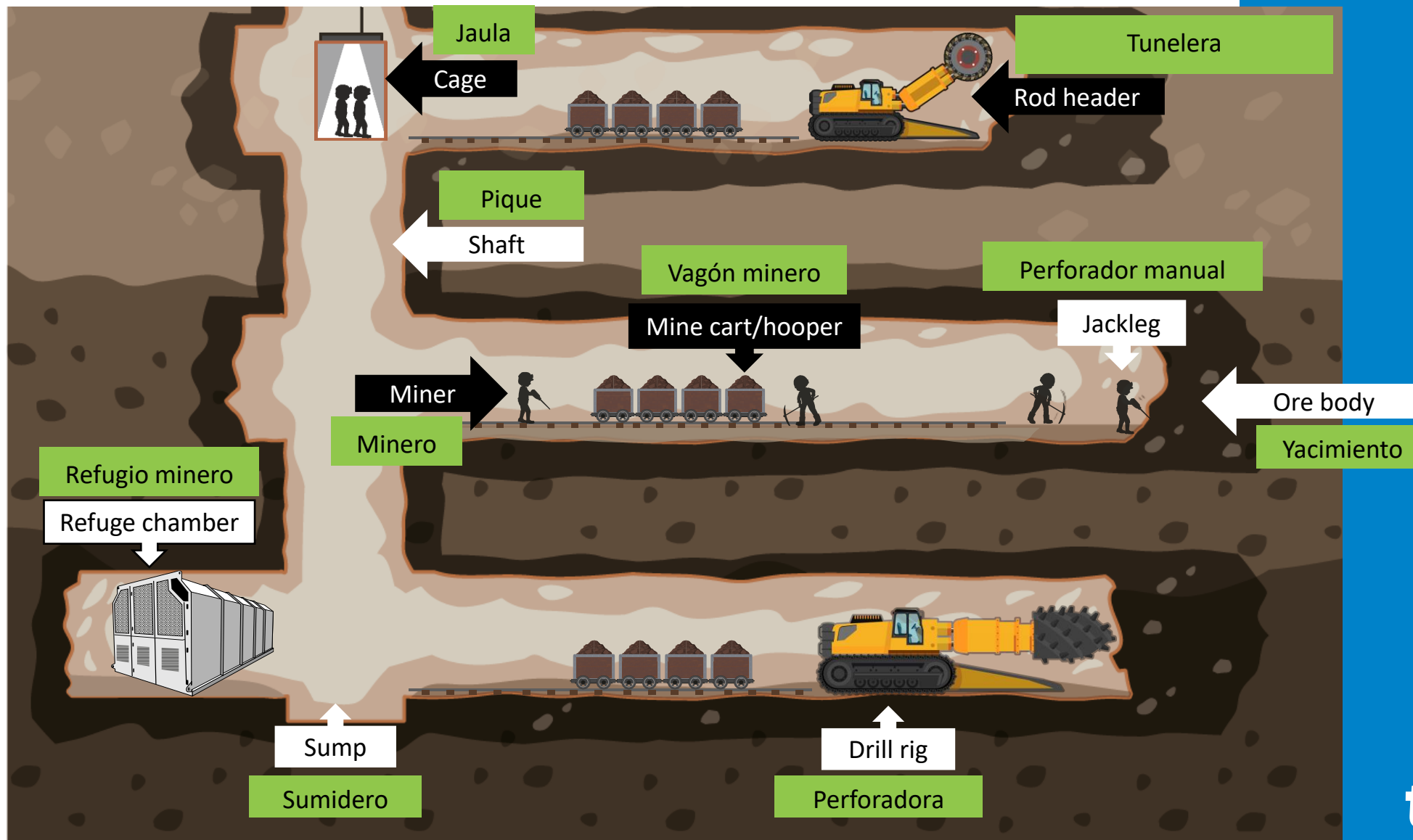
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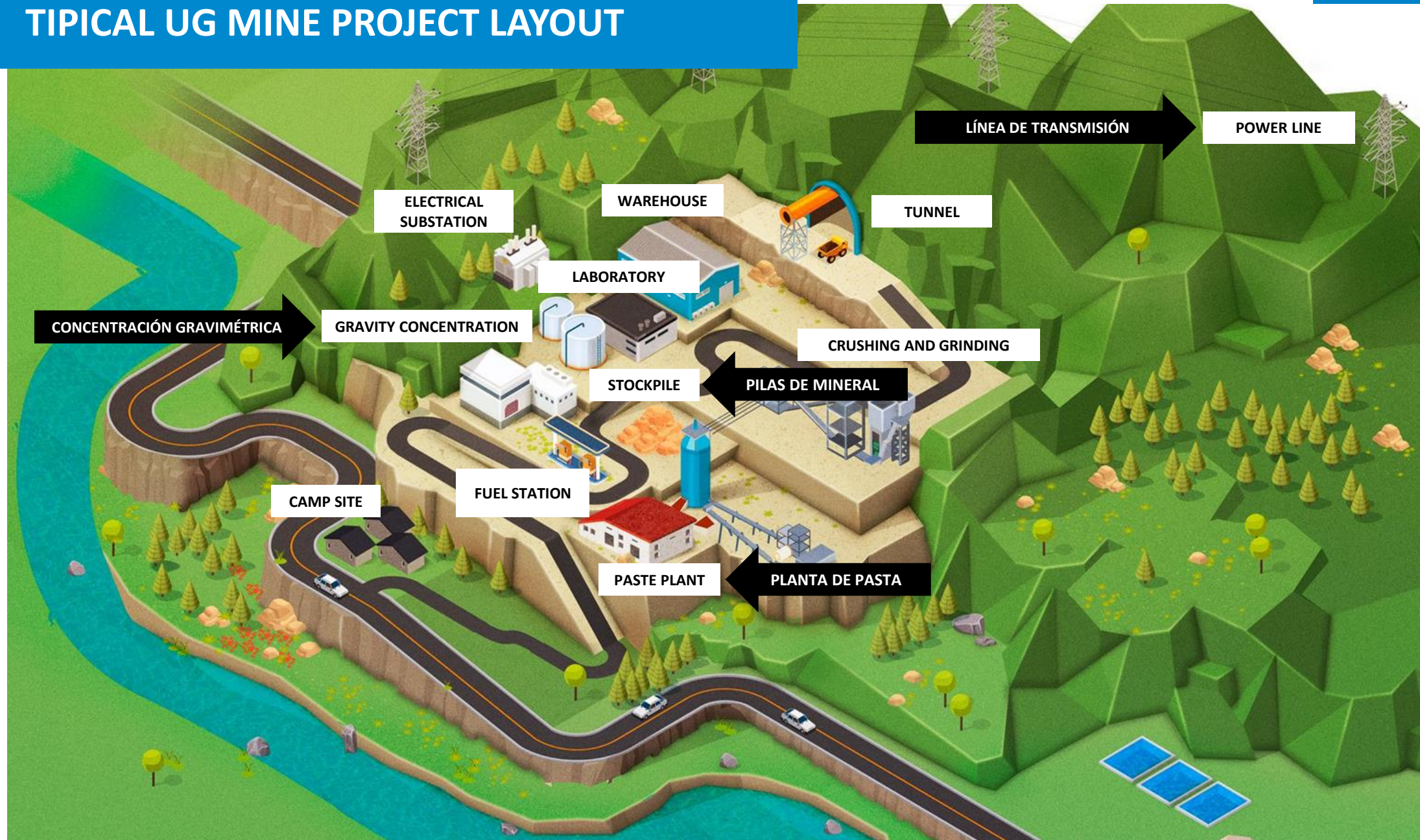
UNDERGROUND Mine



UNDERGROUND Mine



TIPICAL UG MINE PROJECT LAYOUT



OUR JOURNEY



Technical meetings with Mines
Rescue consultants



Presentations to head office



Visiting an open pit
@ 4,800 masl!

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Testing new technologies for
UG mining



Assisting the local professionals during
a HSEC audit



Interpreting during a
Tailings conference

OUR JOURNEY



Inspecting UG mining equipment and infrastructure @ 1,000 m below the ground. The deeper we go, the hotter it gets.



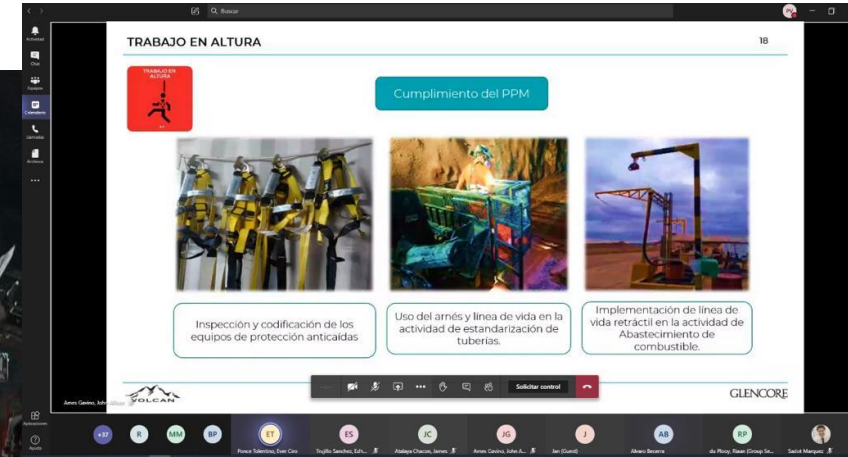
Before entering a mineshaft and go underground



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UG Mine Shaft / elevator to the deeps of the ground



Hybrid sessions to discuss incident events and prepare information



THANK YOU!



Translation & Interpretation Solutions

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