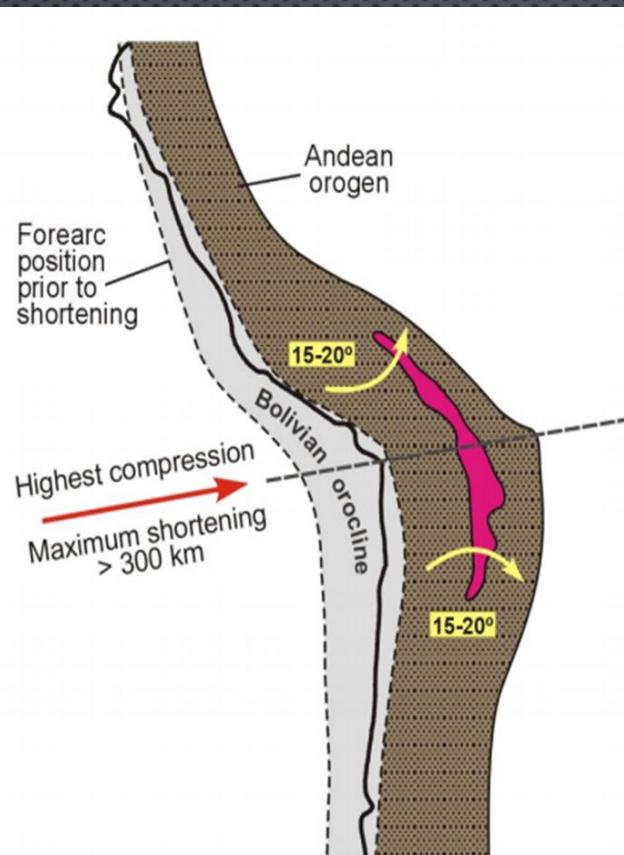
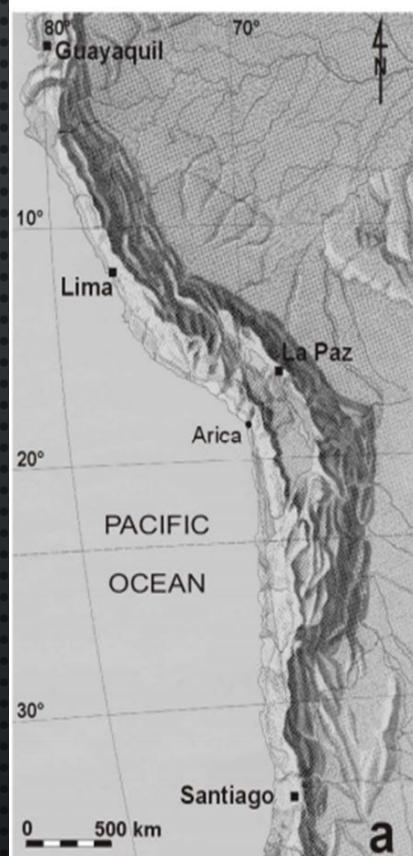
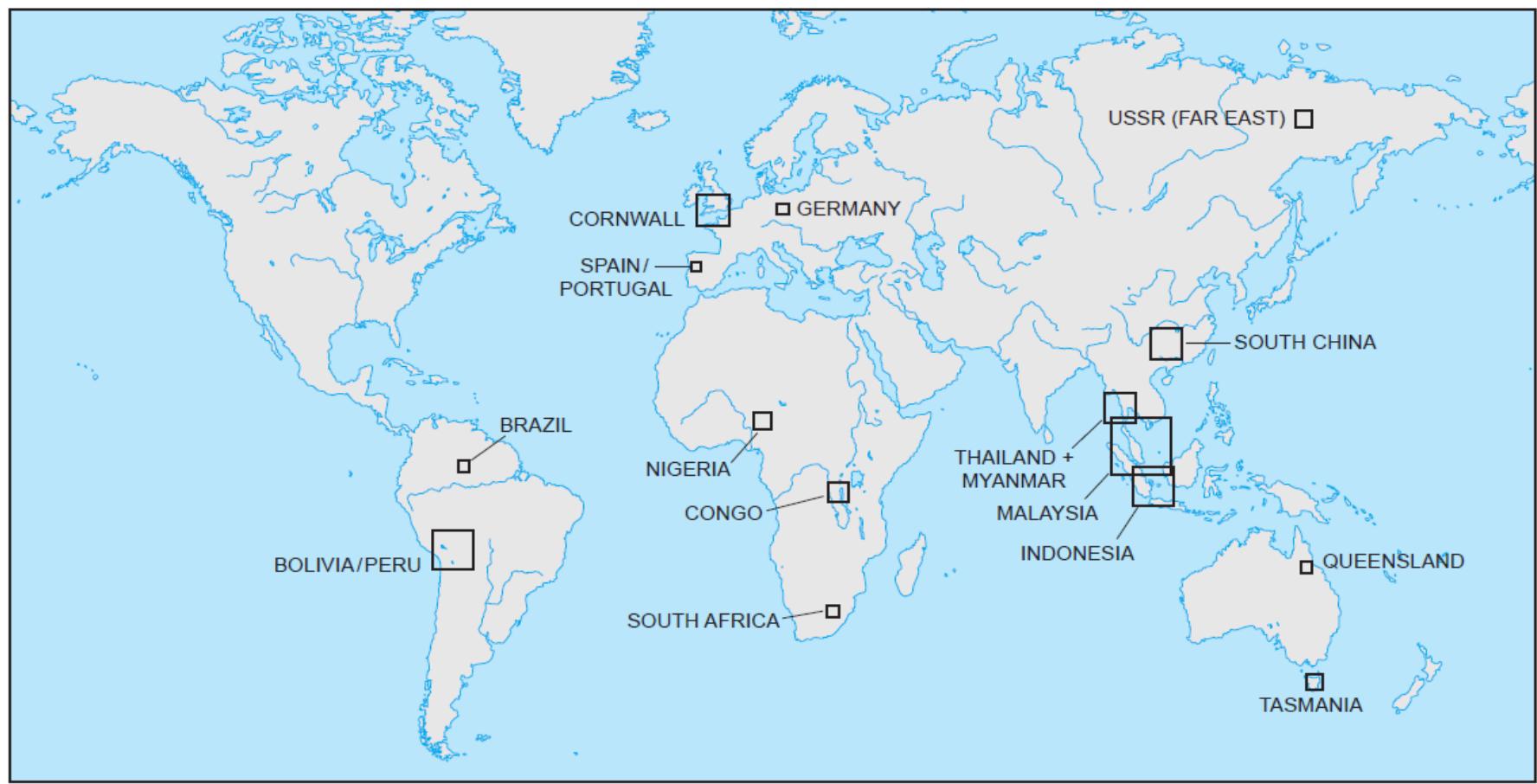


# THE BOLIVIAN TIN BELT, SOUTHAMERICA

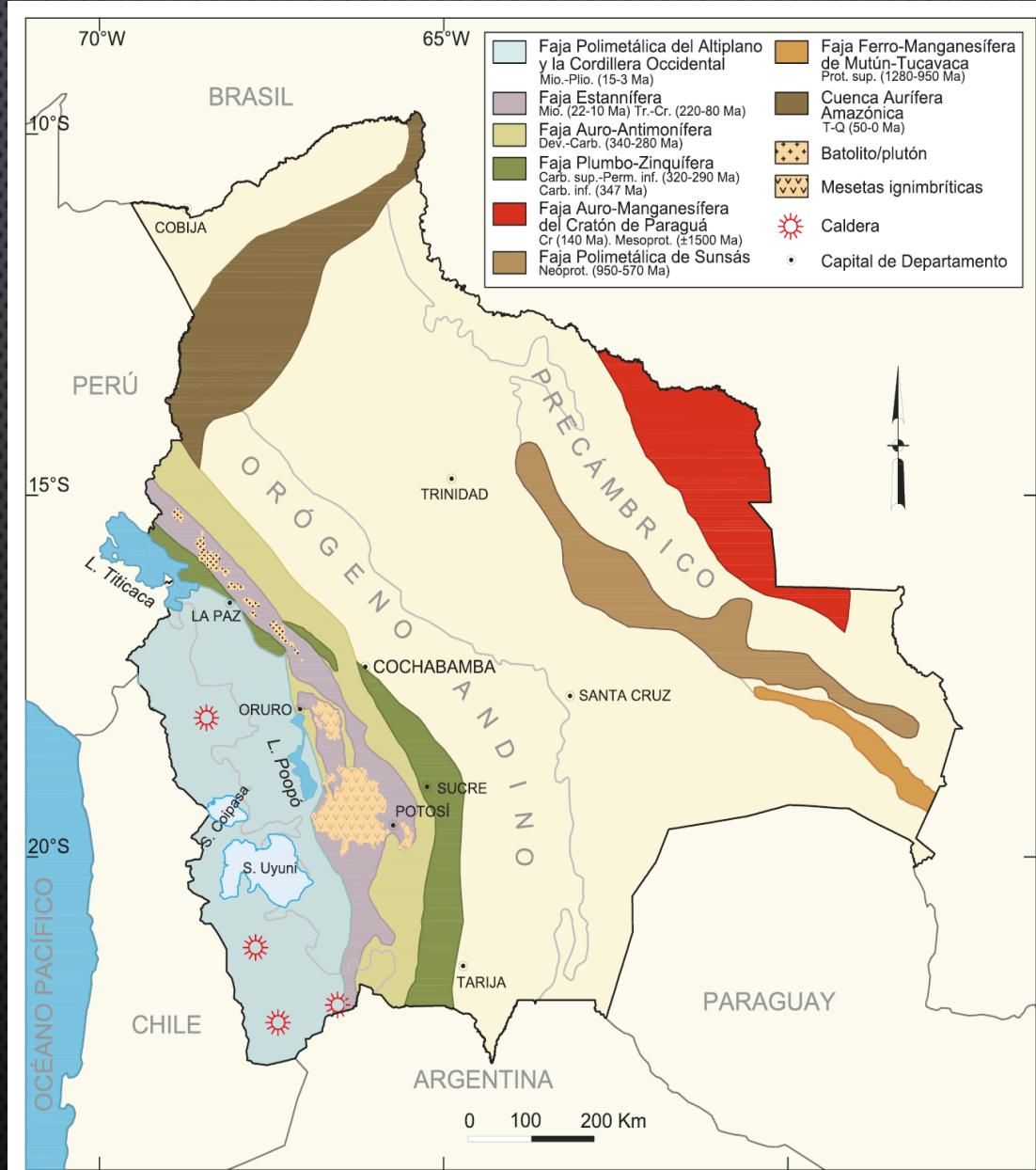


Osvaldo Arce, Ph.D., P.Geo.

# MAIN TIN PROVINCES IN THE WORLD



# METALLOGENIC BELTS IN BOLIVIA



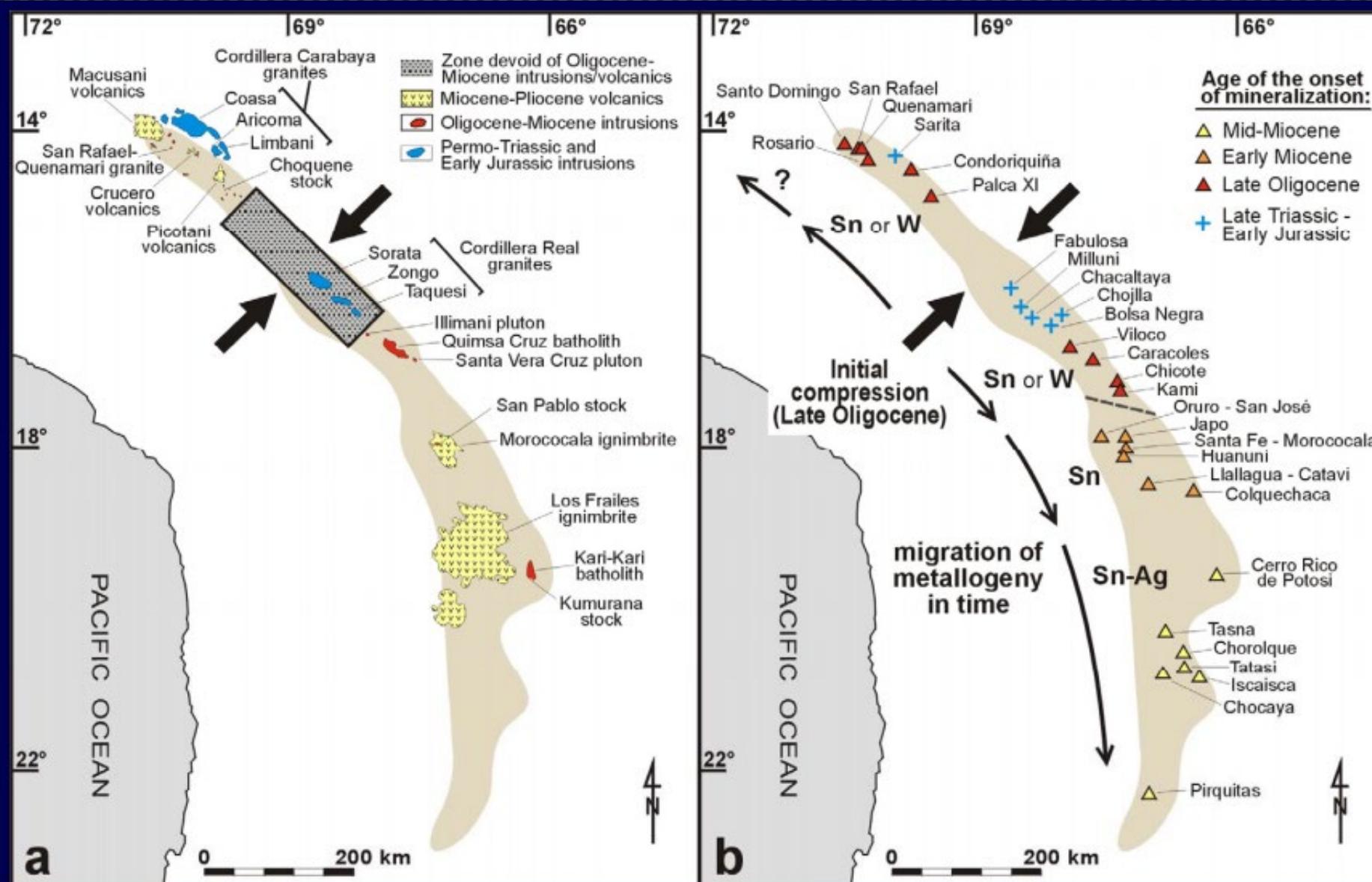
# THE BOLIVIAN TIN BELT



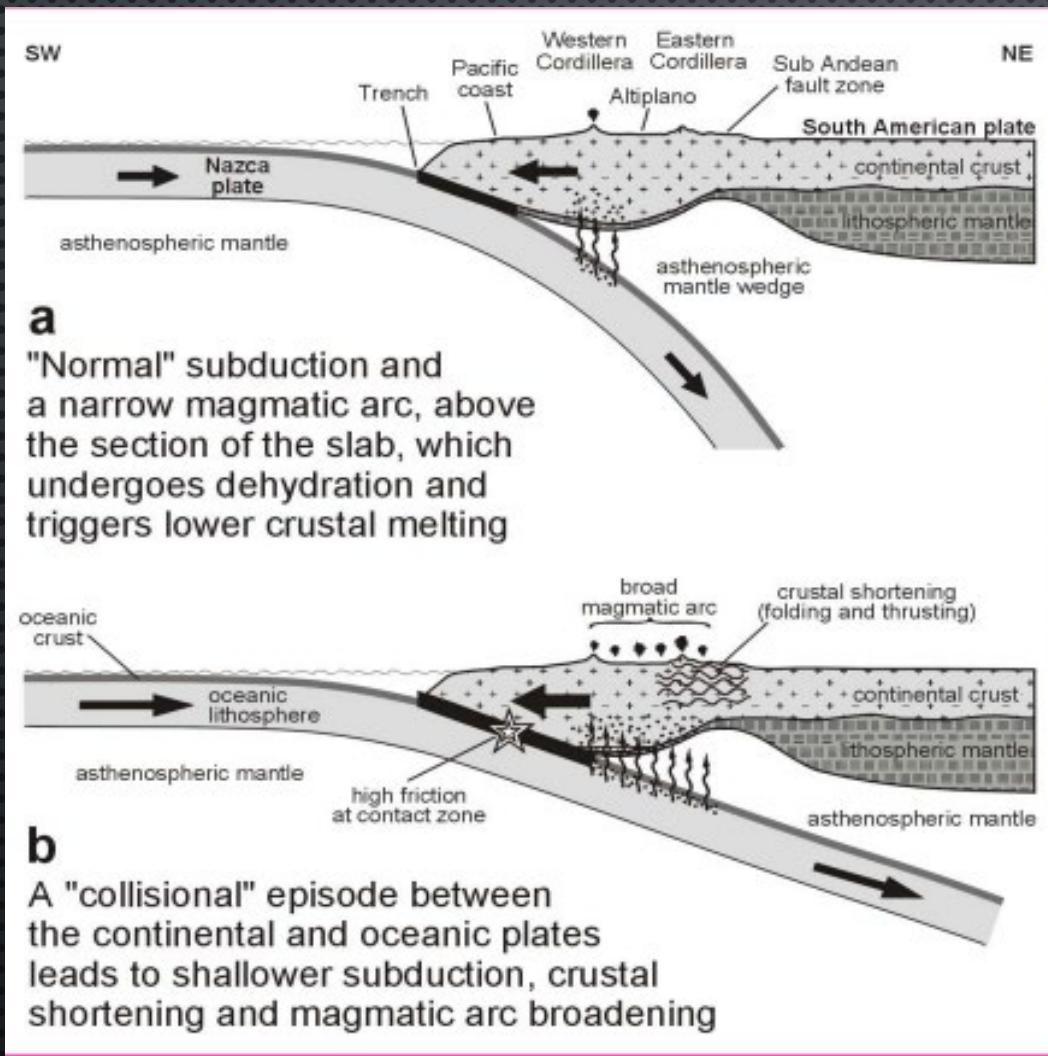
~1.000 km  
long x ~40 km  
wide

Arce, 2021

# PLATE TECTONICS, TERTIARY MAGMATISM AND METALLOGENY



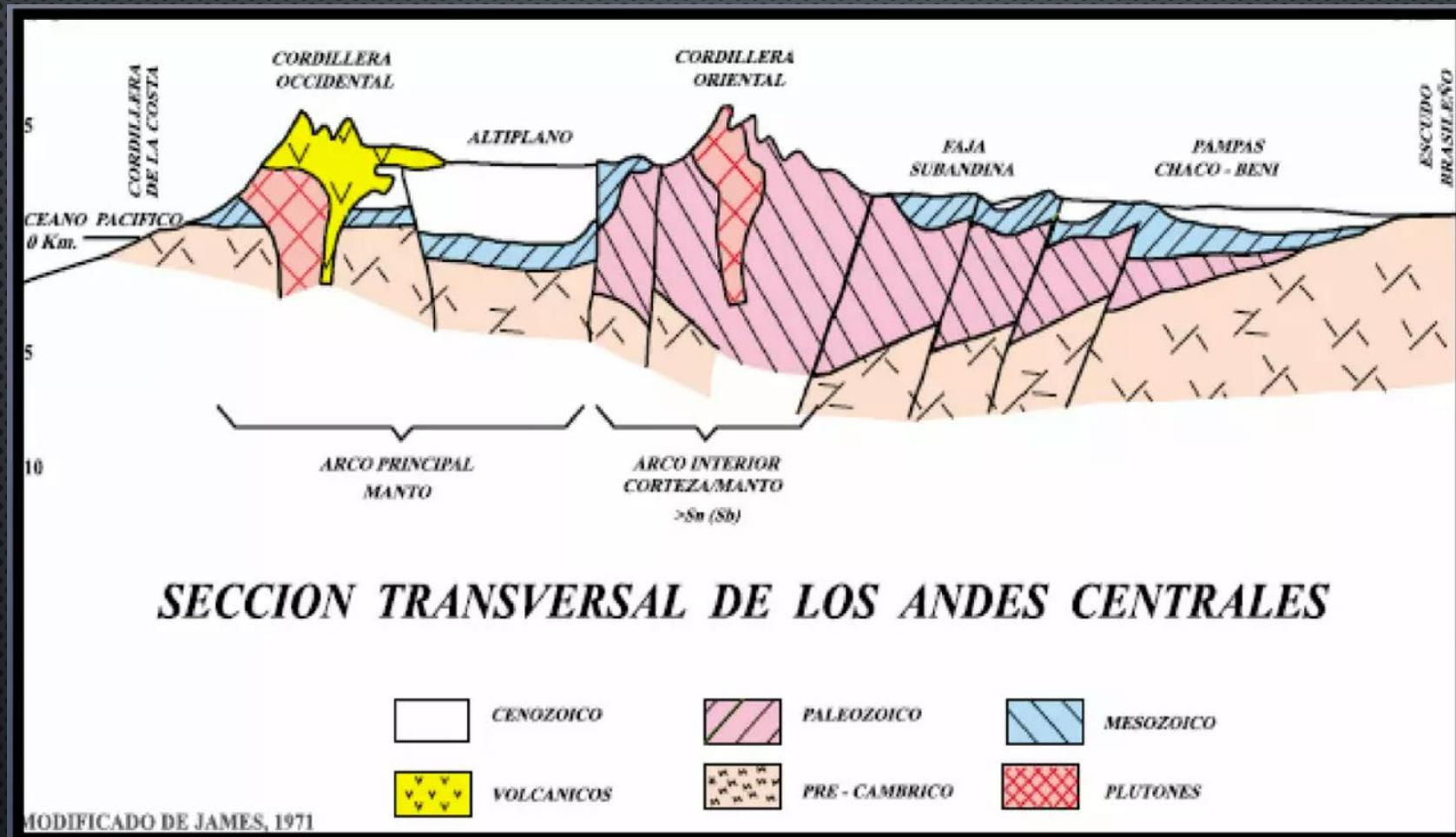
# «COLLISIONAL» MODEL FOR THE TIN METALLOGENY



Modif. from Mlynarczyk, 2005

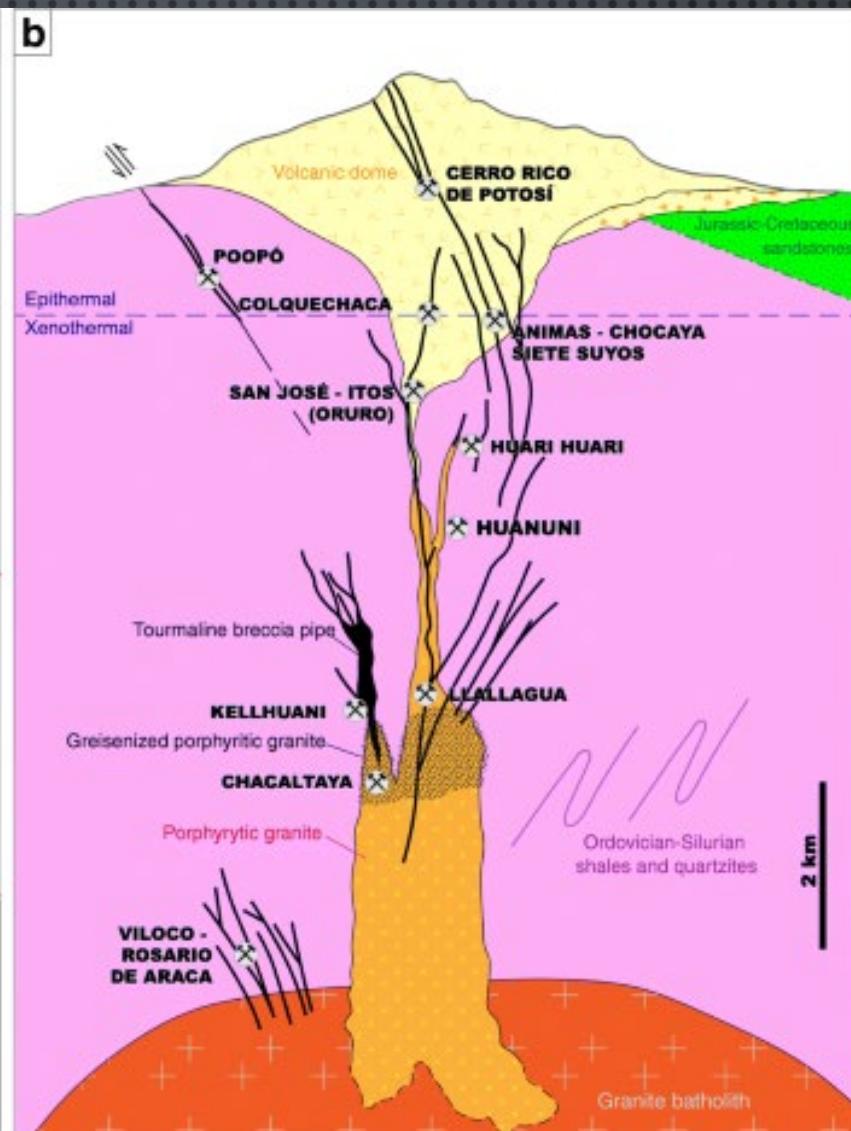
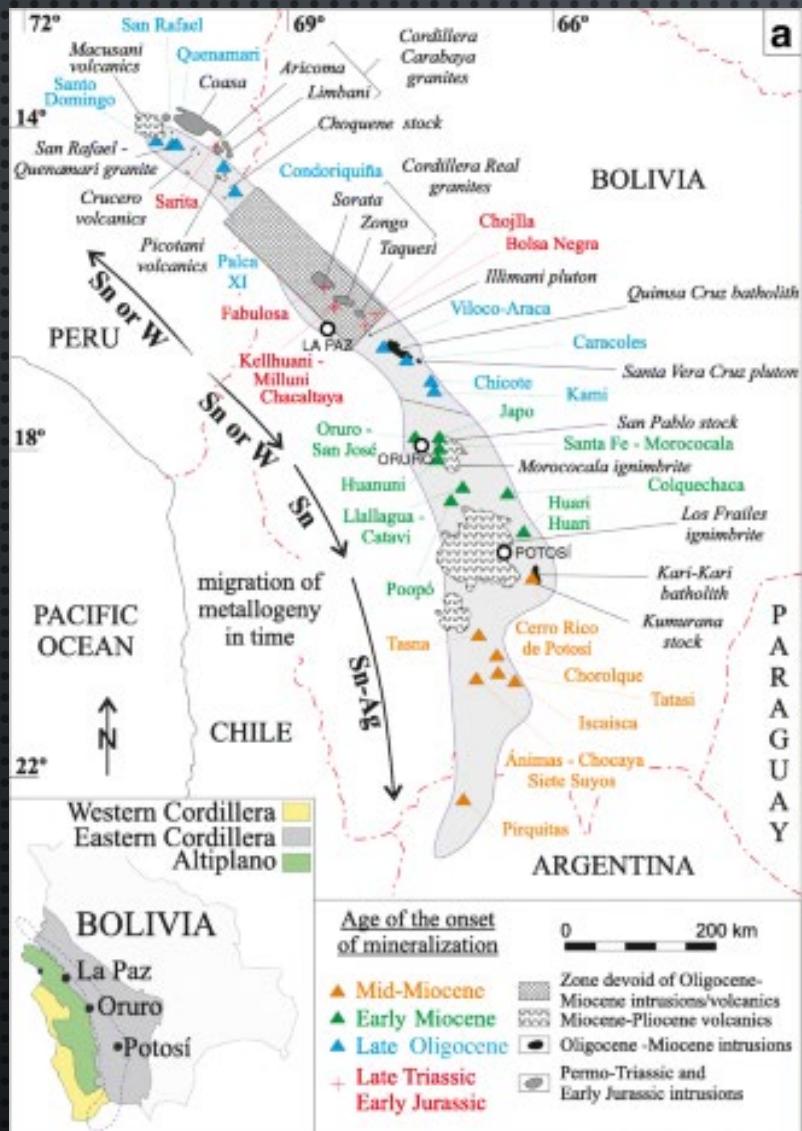
194/2023

# CROSS SECTION OF THE CENTRAL ANDES

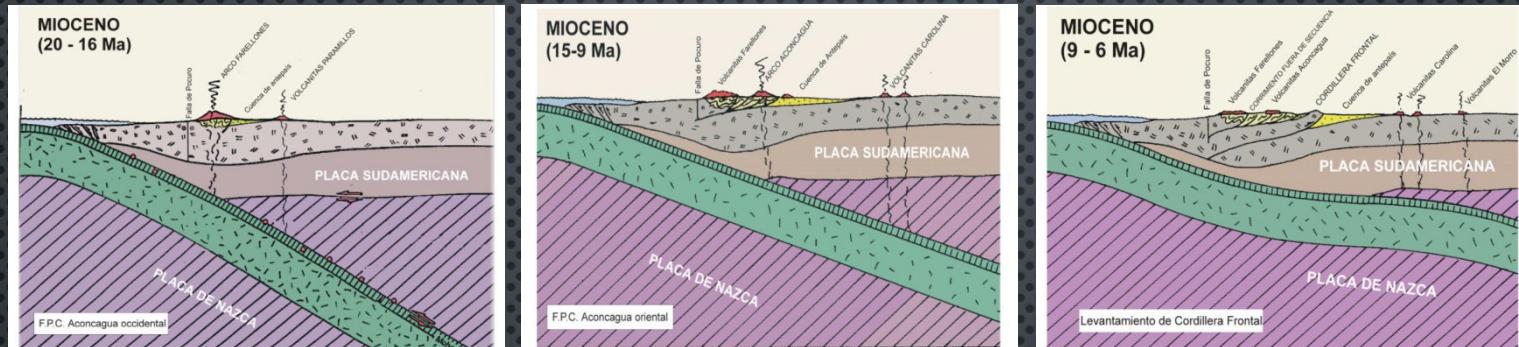


~ 80 KM OF CRUSTAL THICKNESS

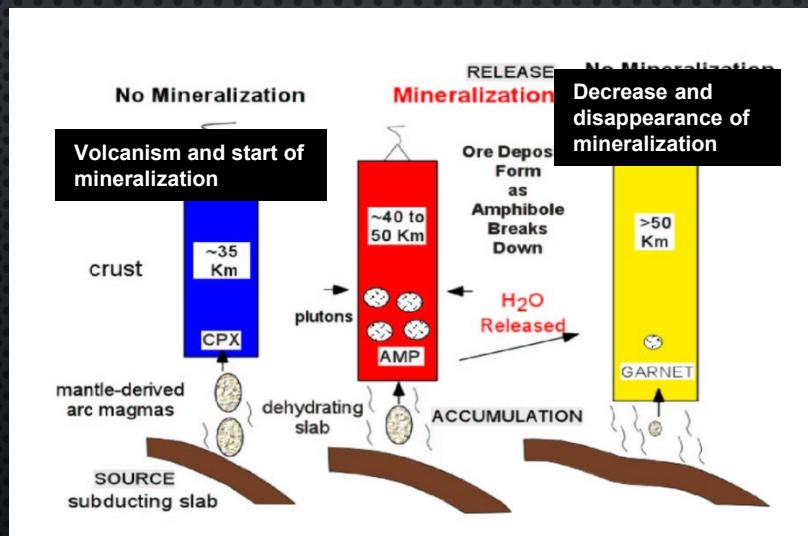
# LOCATION OF MAIN BOLIVIAN TIN DEPOSITS IN A CONCEPTUAL MODEL



# TIN BELT IN THE MIocene (20 - 6 Ma)



## Evolution of the Miocene subduction: flat-slab and Andean adakites



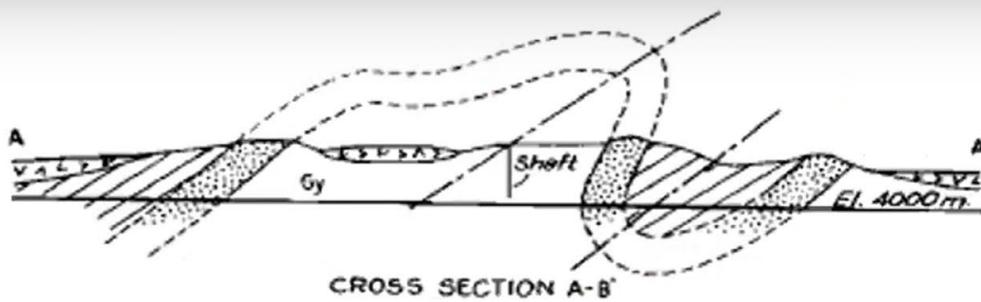
Modif. from Vallance, 2020

# Tin porphyries

- LARGE TIN ACCUMULATIONS (~1 Mt Sn IN LLALLAGUA MINE).
- LOW GRADE ≤ 0,3% Sn.
- ALMOST EXCLUSIVELY IN BOLIVIA (RARE IN CHINA, SIBERIA, AUSTRALIA, CANADÁ).
- FELSIC INTRUSIVES.
- TELESCOPING.

# Llallagua

- Disseminated, brecciated and stockwork mineralization in a very strong altered zone (quartz-sericite and quartz-tourmaline at depth).
- Veins:
  - 1) Quartz – bismuthinite – cassiterite
  - 2) Pyrrhotite – franckeite
  - 3) Stannite – sphalerite – chalcopyrite
  - 4) Sphalerite – siderite
  - 5) Sulphates, carbonates, phosphates



### LEYENDA

#### TERCIARIO

Tobas Riolíticas

Porfido Cuarcífero  
Stock Salvadorá

#### PALEOZOICO

Pizarra Pampa

Porfido Llallagua  
Areniscas, Pizarras

Grauvaca Cancañari

Falla Transversal

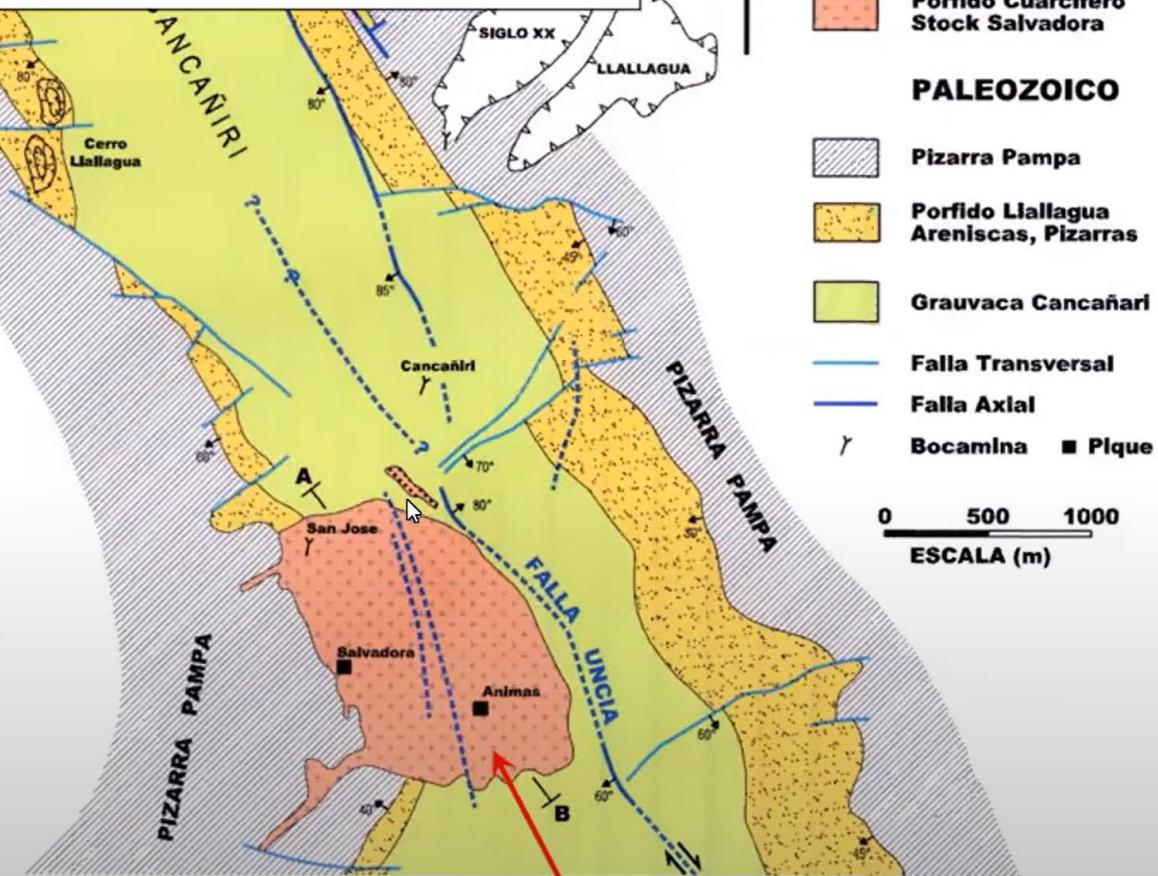
Falla Axial

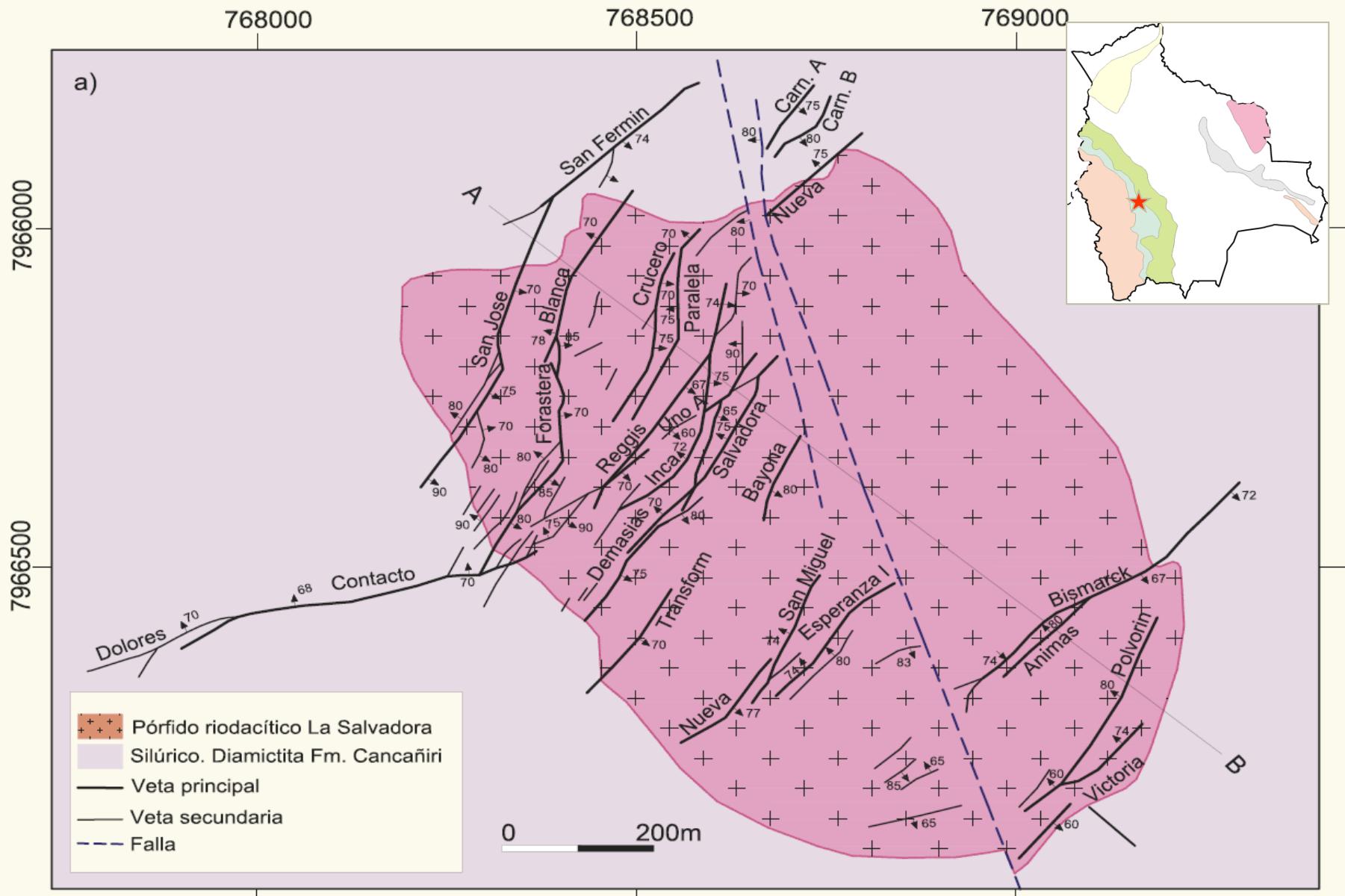
Bocamina ■ Plique

0 500 1000  
ESCALA (m)

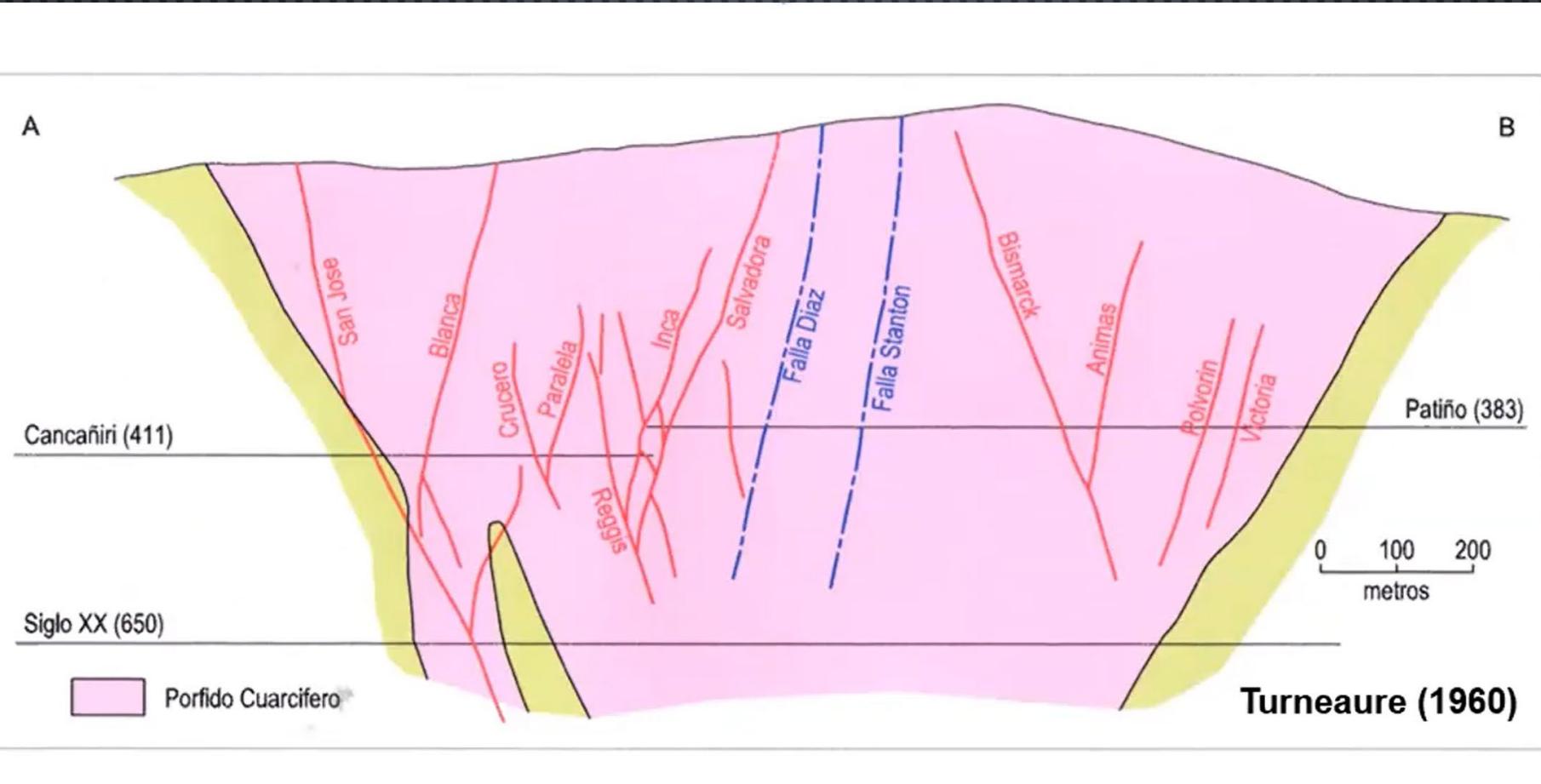
# Geología Del distrito De Llallagua

>500 Mt  
@ 0.3% Sn



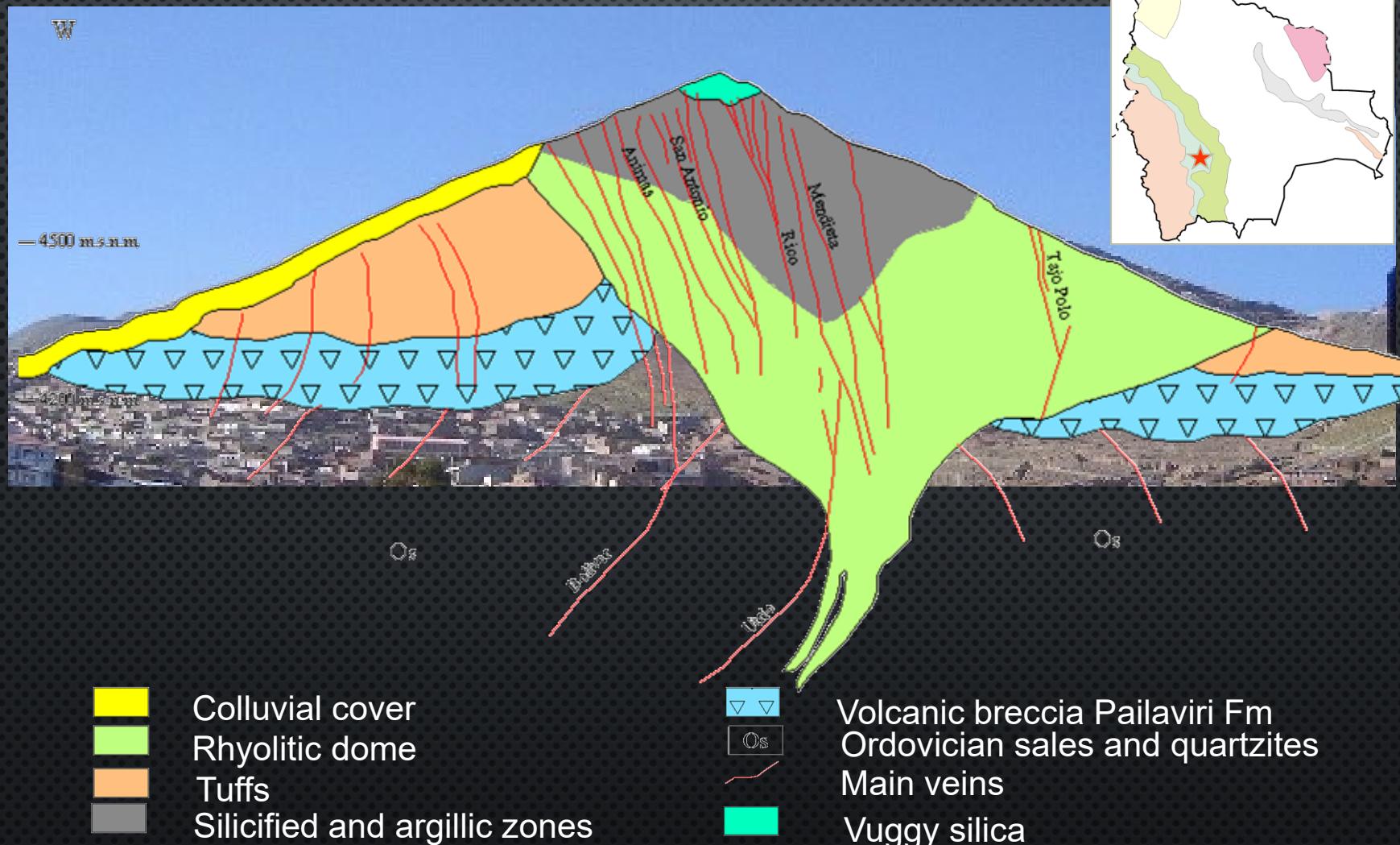


# LLALLAGUA



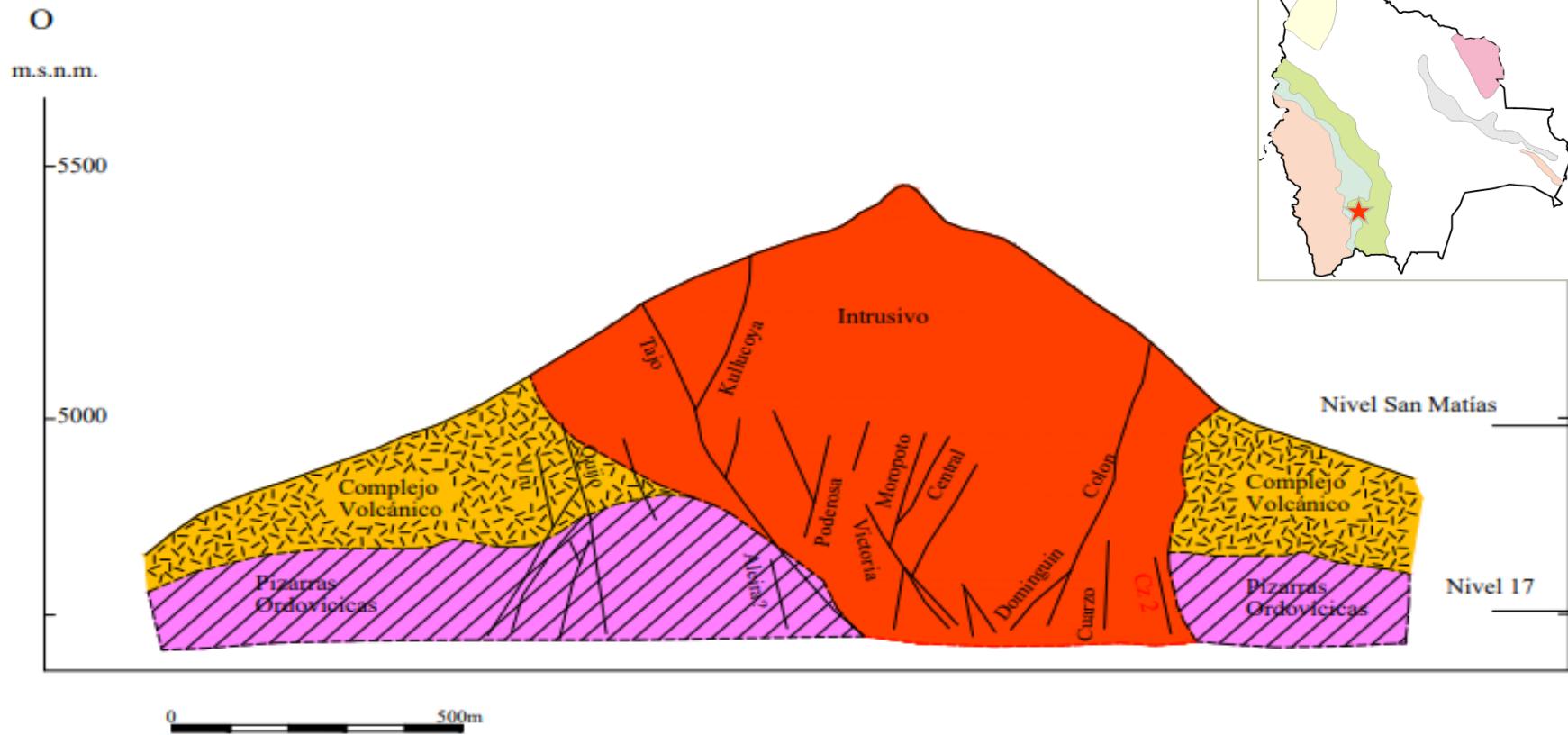
# Cerro Rico de Potosí

Over 60,000 tonnes of Ag produced, still about half in situ



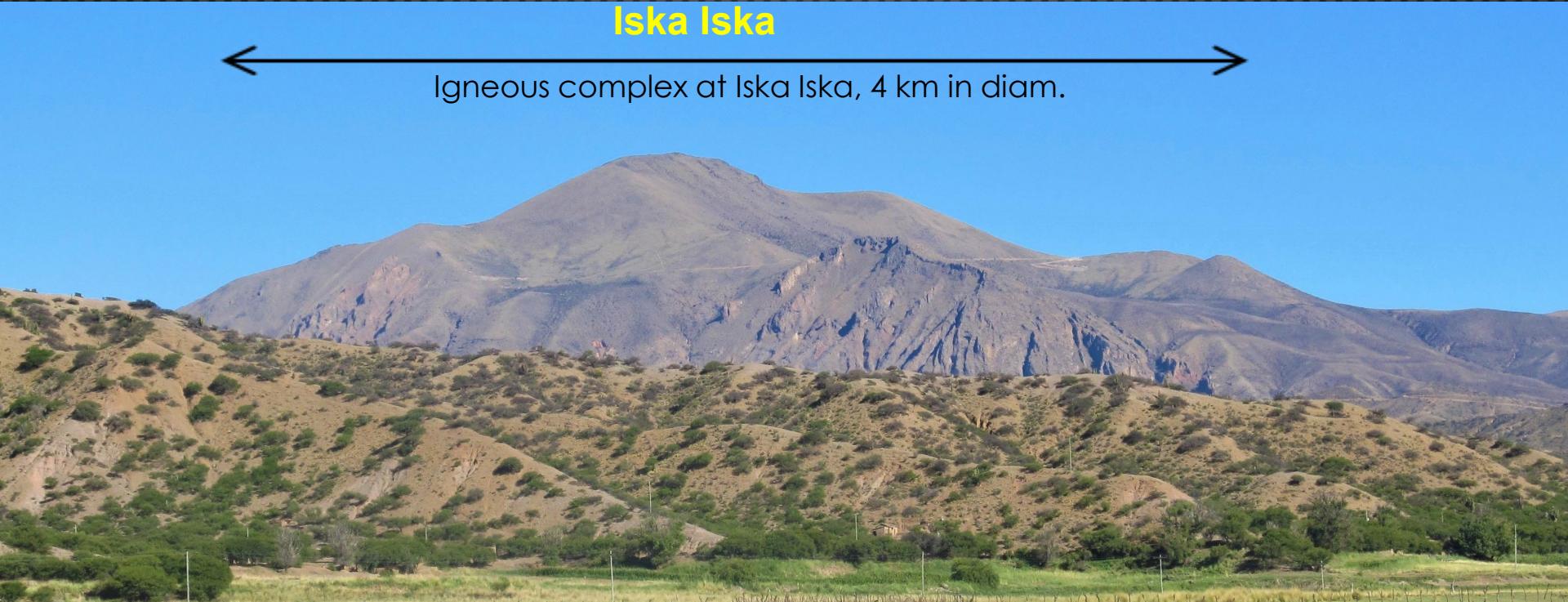
(SERGEOMIN, 2000)

# CHOROLQUE TIN PORPHYRY



Strongly altered (quartz-sericite and quartz-tourmaline) quartz porphyry dacitic stock, intrusion breccia with polymetallic mineralization including tin porphyry (Sn, W, Bi, Cu, Ag, Au) in subvertical veins.

# DISCOVERY OF A MAJOR TIN - POLYMETALLIC SYSTEM IN SOUTHERN BOLIVIA BY ELORO RESOURCES LTD.



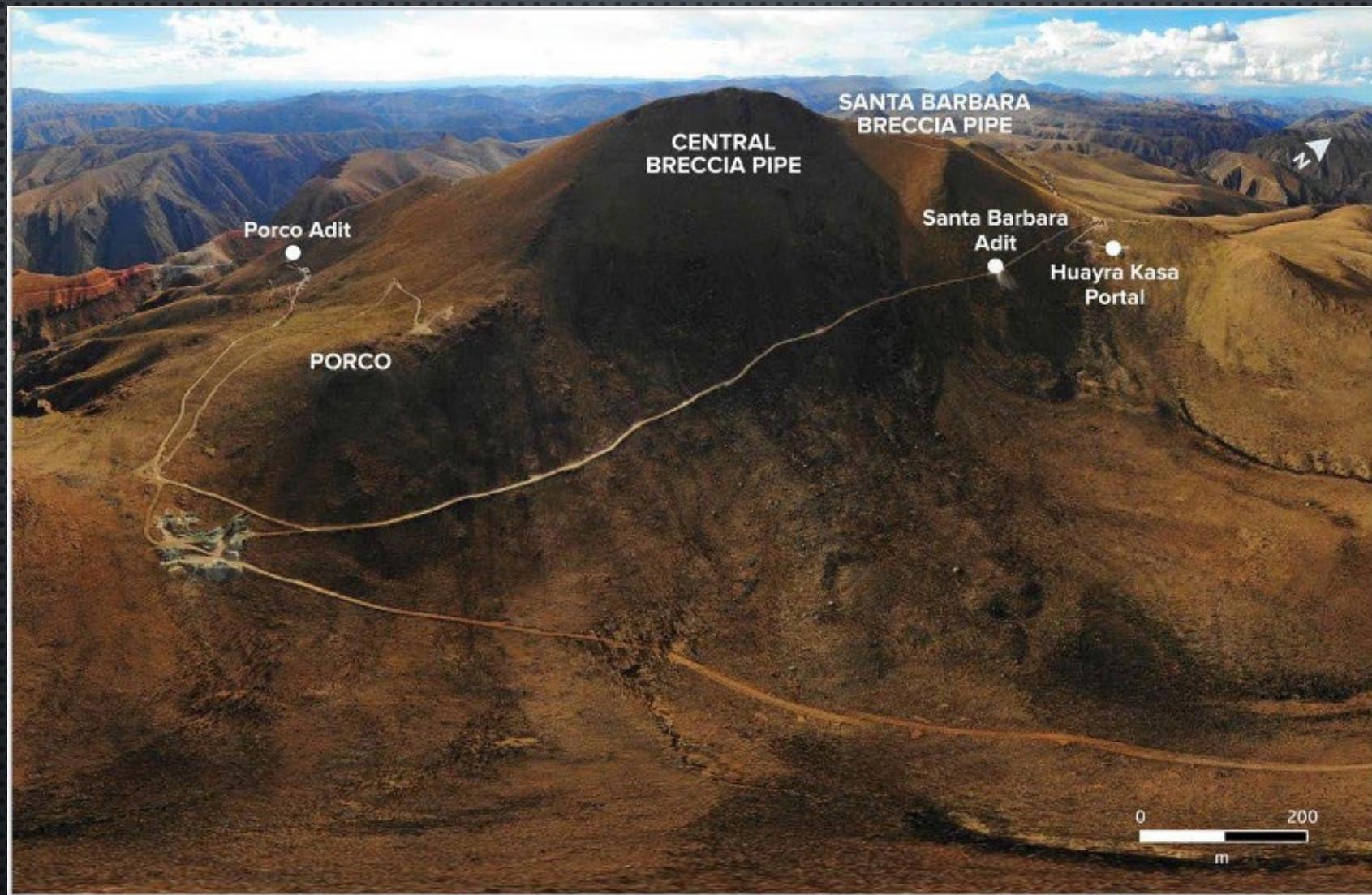
**MRE. Eloro Resources Announces Initial Inferred Mineral Resource Estimate of 670 million tonnes containing 1.15 Billion In-situ Ounces Silver Equivalent.**

- Total in situ metal estimated to be 298 million ounces Ag, 4.09 million tonnes Zn, 1.74 million tonnes Pb and 130,000 tonnes Sn totalling 1.15 billion ounces silver equivalent

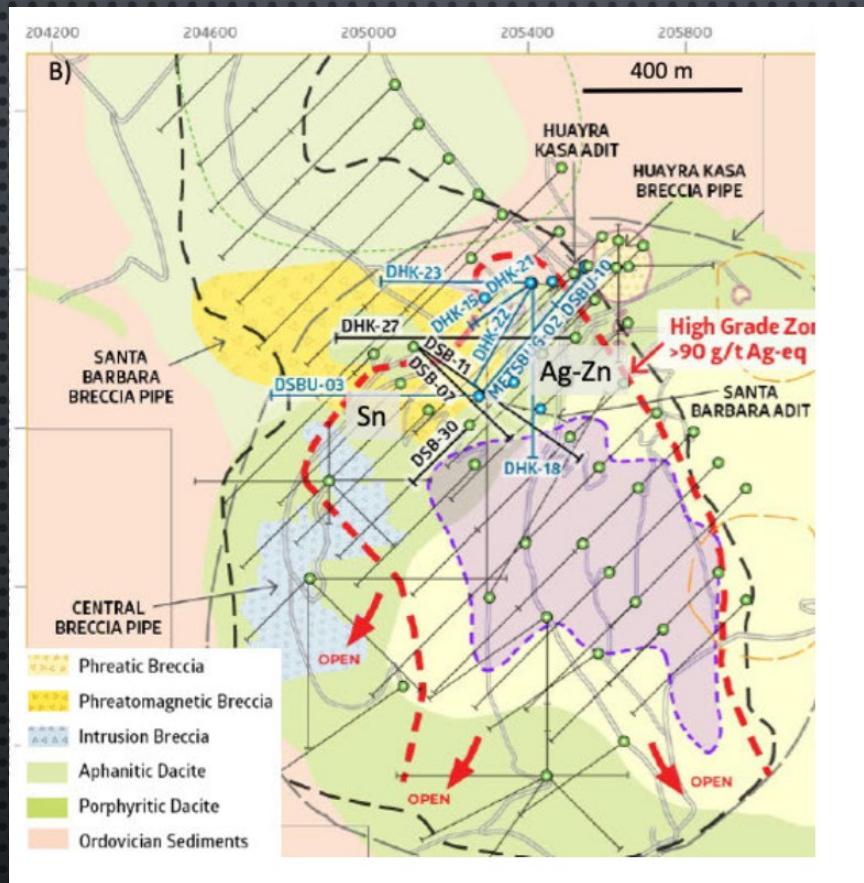
# DISCOVERY OF A MAJOR TIN - POLYMETALLIC SYSTEM IN BOLIVIA BY ELORO RESOURCES LTD.



# ISKA ISKA DEPOSIT, SOUTHERN BOLIVIA



# ISKA ISKA

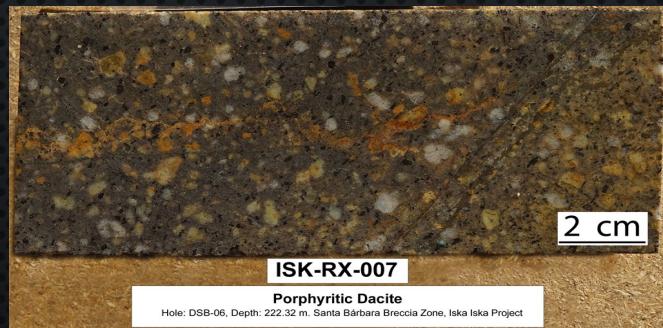
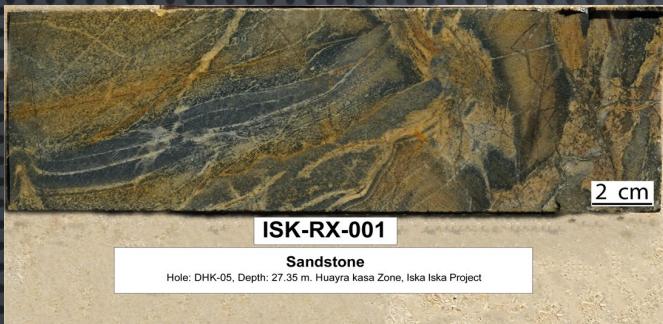


## **Collapse-resurgent caldera polymetallic (porphyry-xenothermal-epitermal) system in granodiorite stock, dacitic domes, breccia pipes emplaced in Ordovician basement.**

**Dimension: 1.6km x 1.8km x 1km vertical extent**

12/4/2023

# MAIN ROCK TYPES



## 12 MAIN RECENT DRILLHOLE INTERCEPTS

Date	Drillhole No.	Interval (m)	Grade (g AgEq/t)	Grade x Length	Ag (g/t)	Sn (%)	Zn (%)	Pb (%)
20-Sep-22	DSB-30	441.21	150.47	66,389	9.45	0.07	1.53	0.88
31-Jan-23	DHK-27	325.48	202.43	65,886	69.80	0.12	1.21	0.49
21-Jul-22	DSBU-10	349.03	188.64	65,842	44.75	0.14	1.05	0.76
28-Jul-21	DHK-18	300.75	169.81	51,071	18.37	0.05	2.14	0.67
1-Mar-22	DSBU-03	373.40	129.08	48,198	12.46	0.22	0.29	0.22
23-Feb-22	METSBUG-02	303.05	146.81	44,492	40.16	0.13	0.51	0.41
26-Jan-21	DHK-15	257.50	159.13	40,977	29.53	0.06	1.45	0.58
28-Sep-21	DHK-21	194.14	198.85	38,604	36.53	0.10	1.63	1.20
28-Sep-21	DHK-22	201.81	118.71	23,957	3.70	0.05	1.51	0.41
26-May-21	DSB-07	178.58	136.02	23,610	8.55	0.06	1.01	0.48
2-Nov-21	DHK-23	188.46	119.05	22,436	38.71	0.02	0.88	0.51
28-Jul-21	DSB-11	137.34	135.68	18,634	40.27	0.14	0.01	0.48

# RECURSOS MINERALES INFERIDOS

