

# EL MILAGRO PROJECT

### POLYMETALLIC AG-ZN-PB-AU

The El Milagro-Guadalupe (El Milagro) project is an alluvium covered polymetallic target spatially and possibly genetically related to an Eocene monzonite porphyry dyke swarm and related breccias. The project is located between the mining districts of Real de Catorce - Santa Maria de La Paz (Au, Cu, Pb, Ag, Zn) and Guadalcazar (Au, Ag, Pb, Hg). The Concepción Del Oro mining district is located 200 km to the north-northwest and hosts the Peñasquito polymetallic deposit, the fifth largest silver mine in the world and the second largest in Mexico.

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#### SUMMARY

The Milagro Project is a polymetallic sulphide target located between the mining districts of Real de Catorce - Santa Maria de La Paz (Au, Cu, Ag, Pb and Zn) and Guadalcazar, (Ag, Cu, Pb and Au) in the northern portion of the state San Luis Potosi, in north-central Mexico. El Milagro is accessed by paved road No. 57, 130 km north of the city of San Luis Potosi.

#### **HISTORY**

The concessions are covered by shallow alluvium deposits. Minor historic workings include several pits and shafts focused on easterly faults cutting sulphidic hornfelsed shales cut by monzonite porphyry dykes. In 2010 Peñoles, a major Mexican mining company ring-staked the project. Extensive geophysical surveying has been completed on the property by the owners including: airborne and ground magnetics (to define magnetic susceptibility of sub-surface geology); an electrical survey to define resistivity anomalies (intrusive contacts); induced polarization survey to define sulphide accumulation; and a gravity survey to define sub-surface intrusive bodies. A total of 14 high quality magnetic anomalies were generated. The owners have drilled 4 holes into 3 targets to date.

#### **GEOLOGY**

The district is characterized by Mesozoic sediments deposited in the Mexico Basin-Mexico Geosyncline intruded by Late Eocene to mid-Oligocene quartz-feldspar porphyry, quartz monzonite porphyry and other feldspar phyric sills, dykes and stocks and related diatreme breccias near Peñasquito. The basin sediments are shallow water shales underlain by limestone beds that have the potential to host manto-style sulphide replacements of the carbonate strata similar to Peñasquito.

#### ALTERATION/MINERALIZATION

The shale/limestone package at El Milagro has the potential to host semi-massive to massive sulphide replacements in limestone beds as

## **PROJECT**

Peñasquito 200K NW

**Mexico Basin** 

**NNW** mine lineament

14 targets defined

1<sup>st</sup> hole hit sulphides

**Strong hornfelsing** 

**Multiphase intrusion** 

**Multiple vein events** 

**Buried by alluvium** 

**Excellent access** 

**Nearby services** 

well as cross-cutting chimney style, steeply dipping fracture and breccia zones infilled with sulphides. The first hole at El Milagro (EMS-001) was drilled easterly through 50 feet of alluvium and intersected a large sulphide system for several hundred metres including hydrothermal vein breccias with sphalerite, galena and traces of bornite-chalcopyrite in phyllic (quartz-sericite-pyrite) and propylitic (chlorite-epidote-pyrite) hydrothermal alteration; and dry fractures with pyrite-chlorite-chalcopyrite. Several vein generations include: pink iron carbonate; milky quartz; pyrite-epidote-chlorite; pyrite-magnetite; pyrite-chalcopyrite-bornite; and gypsum veins. Locally garnet, pink iron carbonate, milky quartz and patchy pervasive magnetite with sulphides occurs. Major faults seen in core terminate intrusive phases and mineralization locally. At least five intrusive phases were seen in drill core. The higher grades on surface in limited outcrop include sheeted sulphidic veins and stringers as well as narrow phyllic altered sulphidic hydrothermal breccias in east-west dextral faults exploited by monzonite porphyry dykes

#### PROPERTY MAPS AND HIGHLIGHTED RESULTS

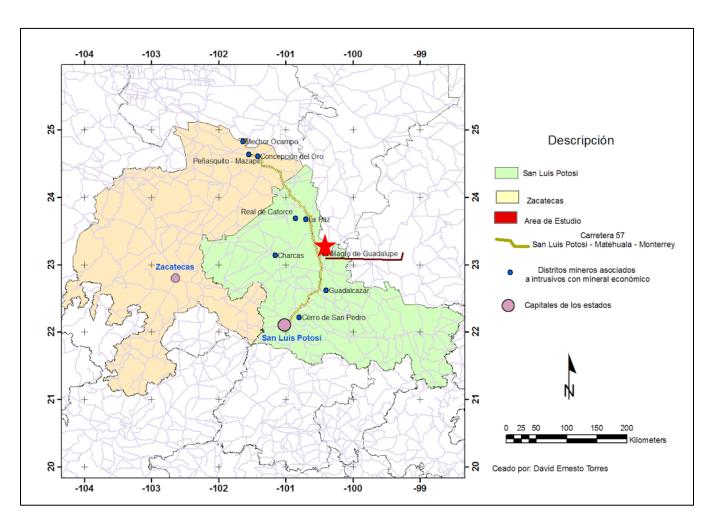


Figure 1: Regional map showing the location of El Milagro Project relative to Penasquito (200km NNW)

Peñasquito is completely covered by alluvium and was discovered by detailed induced polarization (IP) defining a chargeability high; ground magnetic surveys (8 x 4 km magnetic high) centered on partially

outcropping diatreme breccia (measuring 1000 x 800 m) at the intersection of major structural trends; and a gravity survey defining distinct lows (= diatremes) with coincident gold, silver, zinc, lead, mercury, copper, lead anomalism. The first hole drilled by the owners (Hole EMS-001, from 184 to 718m) was pyritic/hornfelsed sediments cut by various porphyry intrusive phases with vein types including: magnetite-pyrite-chalcopyrite-bornite and quartz-sericite-pyrite-sphalerite-manganese and garnet-iron carb-pyrite to name a few.

#### RECOMMENDATIONS

A regional data review; detailed geological mapping and rock sampling of limited rock exposures; a review of current drill holes in context of available data and in context of the buried Peñasquito discovery. Peñasquito was originally targeted by Kennecott for copper/skarn CRD potential. Further work by various companies defined two diatremes (gravity low, proximal magnetic high) exploiting an E-W flexure in a sediments filling a synclinal valley beneath alluvium. Base of alluvium geological mapping and geochemical sampling in hundreds of rotary air blast holes (RAB) discovered the Peñasquito deposit.

The author has no direct or indirect interest in the property and is solely acting as an agent.



Figure 2: Limited exposures near historic workings-sheeted sulphide veins in monzonite porphyry dyke