# 2012 SEG Student Chapter Mexico UNAM El Aguila Mine



Group photo of field trip participants and staff at the El Aguila deposit.







#### Itinerary

First Day (Tuesday September 6, 2012):
12:00 hrs Departure. Parking Institute of Geology
12:00 to 19:00 hrs Transfer to the City of Oaxaca
19:00 to 19:30 hrs at Hotel Installation
19:30-20:30 hrs Comments about the type of mineral deposit
Dinner 20:30 hrs.
Second Day (Friday September 7, 2012):
6:15 to 9:00 hrs Transfer to the Eagle (Breakfast on board the vehicle).
9:00 to 19:00 hrs Stay in the Exploration and Explotation Project The Eagle.
19:00 to 21:30 hrs Transfer to the city of Oaxaca.
22:00 hrs Dinner
Third Day (Saturday September 8, 2012):
Free morning in Oaxaca.
12:00 to 19:00 Transfer to Mexico City.
19:00 Return to Mexico City. Parking Institute of Geology.



Location map of areas visited during El Aguila (the Eagle) field excursion

## FIELD TRIP PARTICIPANTS

## STUDENT PARTICIPANTS

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## Geological Summary of El Aguila (the Eagle)

The El Aguila Project, located 120 kilometers southeast of the capital city of Oaxaca, Mexico, is a significant, newly discovered high-grade gold and silver system. The property has yielded several exceptional gold and silver surface samples, including a 36 grams-perton (g/t) gold sample and a 3,100 g/t silver sample. \*

The first drill hole initiated from the area of these surface samples resulted in the discovery of 16 meters of mineralization at 6.56 g/t of gold. Subsequent drilling identified a shallow, sub-horizontal mineralized zone (manto) with an inferred grade of 7.43 g/t of gold and 63 g/t of silver. The Company believes the discovery can be mined via an economical, shallow open pit.

Management believes this limited, early work on one very small portion of the property is an encouraging indicator, as there are numerous additional areas along this important structural corridor where high-grade surface samples exist, such as Turkey Hill (up to 20.9 g/t of gold), Cerro Colorado (up to 18.9 g/t of gold) and Andesite Hill, where the highestgrade surface samples of both gold (35.2 g/t) & silver (3,170 g/t) occur.

The gold and silver mineralization at the El Aguila Project is of classic low-sulfidation, epithermal character. These types of deposits form some of the richest, most sought-after deposits in the world.

## Property

El Aguila Project is owned and operated by Golden Trump Resources, S.A. de C.V. (GTR) and Don David Gold, S.A. de C.V. (DDG), wholly-owned subsidiaries of GORO.

El Aguila Project is located in an old mining district with limited historical production. The Project now consists of numerous vein deposits of gold/silver/copper/lead/zinc mineralization. GORO has installed a flotation plant, the El Aguila mill, to process the minerals extracted from development and mining. The El Aguila mining district was discovered in the early 1880s and was developed on oxidized outcroppings by following mineralization along the structures.

In December 2011 GORO contracted Vazquez, Sierra & Garcia, S.C. from Mexico City to conduct a title opinion of their mining rights. Subsequent to that opinion GORO received title to an additional concession. Including all concessions, GORO owns mining rights that cover 60,912.23 hectares (150,516.8 acres) including 23 contiguous mining concessions that comprise the El Aguila–El Rey structural corridor and 2 contiguous mining concessions that comprise the Solaga project. The duration of the mineral rights concessions is 50 years, renewable for similar time periods.

#### Geology

The El Aguila Project mining district is located in the south-eastern part of the physiographic province of Sierra Madre del Sur in Oaxaca State, within the south-eastern part of a 16+ km-long NW70<sup>0</sup>SE trending mineralized belt that includes other areas of interest such as La Arista, Baja, El Aire, Las Margaritas, Alta Gracia, and El Rey. Most of the district's lithologic formations consist of volcanic rocks of rhyolite, dacite, and andesitic composition, including tuffs and ignimbrites of Miocene age (15 – 17 Ma according to J. W. Hedenquist).

The El Aguila Project regional geology is dominated by volcanic rocks that vary in composition from rhyolitic to andesitic in flows, tuffs, agglomerates, and ignimbrites. Some intrusive rocks in dikes and small stocks of granitic to grano-dioritic composition crop out within the area and have been intercepted in drill holes. A Cretaceous sedimentary lithic sequence, composed of fine-grained sandstones intercalated with shales, siltstones, and calcareous rocks, has been identified in outcrops on the central part of the El Aguila Project area surrounding the Cerro Colorado peak and in drill hole intercepts. The intrusive rocks appear to have caused structural conditions favorable for subsequent deposition of mineralization along dikes, faults and breccia zones, as well as replacement and skarn deposits into favorable contact zones with the sedimentary sequence. The regional geologic setting at El Aguila Project consists of a structurally complex system. Numerous geologic structures have been identified on satellite images and aerial photographs. These structures were later verified during field investigations and grouped to define probable regional systems. The most significant regional structures within the El Aguila Project area include numerous lineaments, systems and faults, such as the Río Grande system, El Aire, Quiatoni, Switchback, and El Higo lineaments, the El Aguila, El Aire, Baja, and La Arista veins, the Salina Blanca and Vista Hermosa systems, and the Crestón, La Escondida, Cerro Colorado, and El Chacal fault zones.

### Mineralization

The El Aguila Project mineralization occurs as structurally-controlled epithermal deposits in veins and stockwork zones consisting of concentrations of sulfides containing gold, silver, lead, copper, and zinc, associated with gangue minerals such as quartz, calcite, and other minor elements.

Weathering of the El Aguila Project mineralization has caused oxidization and shallow secondary enrichment zones containing sulfosalts (cerargyrite, pyrargyrite, stephanite) and carbonates (cerussite, hydrozincite, hemimorphite), sulfates (anglesite, willemite), and iron oxides (hematite, limonite, etc.) that may reach depths of up to 150 m from the outcroppings. Primary sulfide mineralization within the mineralized structures, containing pyrite, galena, sphalerite, argentite, some chalcopyrite, and other silver sulfosalts associated with quartz and calcite as gangue minerals, are found at depth.

Similar geologic characteristics are present in other mining districts within the region, such as Fortuna Silver's San José mine where mineralization has been reported at depths greater than 600 m.

The main mineral deposits and targets identified by GORO within the El Aguila – El Rey area are the

following:

La Arista vein deposit including splays and parallel veins;

Baja vein deposit including splays and parallel veins;

El Aguila manto deposit;

El Aire vein deposit;

Alta Gracia vein deposits;

La Escondida vein deposit;

Cerro Colorado alteration zone;

El Chacal Red Zone;

Salina Blanca Zone;

Vista Hermosa Zone; Salina Blanca alteration zone; and El Rey vein deposit.

## **GEOLOGICAL SETTING**

The El Aguila Project is located in the physiographic sub-province of Tierras Altas de Oaxaca, which is part of the Sierra Madre del Sur physiographic province, in the southeastern part of México.

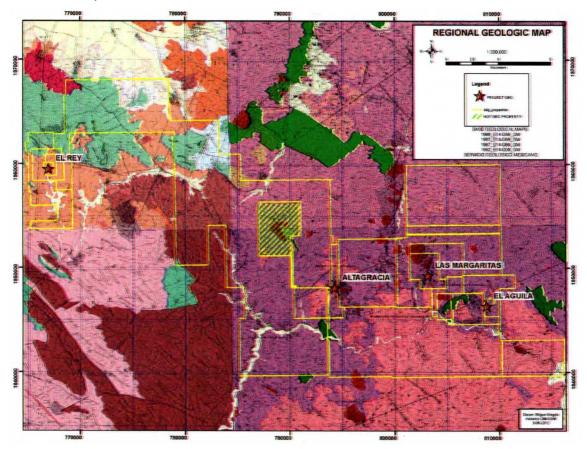


Figure 1 Shows the El Aguila Project Regional Geologic Map taken from a Servicio Geológico Mexicano 1:50,000 scale geology map. "caldera."

The El Aguila Project is located in an old mining district which had been inactive since about the 1950s, until GORO initiated geologic recognizance in search of precious metals deposits. The El Aguila Project includes mineral deposits situated along a 16-km NW–SE mineralized trend which is enclosed by volcanic, sedimentary, igneous, and metamorphic

rocks ranging in age from Miocene to Cretaceous. The mineralized structures appear to be associated with a structural system and to a volcanic "caldera." Figure 1.

#### **Regional Geology and Structural**

The regional geologic setting at El Aguila Project is dominated by volcanic rocks that vary in composition from rhyolitic to andesitic in flows, tuffs, agglomerates, and ignimbrites. Some intrusive rocks in dikes and small stocks of granitic to grano-dioritic composition crop out within the area and have been intercepted in drill holes. Also, a Cretaceous sedimentary lithic sequence, composed of fine-grained sandstones intercalated with shales, siltstones, and calcareous rocks have been identified in outcrops in the central part of the El Aguila area surrounding the Cerro Colorado peak and in drill hole intercepts. The intrusive rocks appear to have caused structural conditions favorable for subsequent emplacement of mineralization along dikes, faults and breccia zones, as well as formation of replacement and skarn deposits in favorable contact zones within the sedimentary sequence.

#### Structural

The El Aguila Project area is enclosed by a structurally complex system. Numerous geologic structures have been identified on satellite images and aerial photographs. These structures were later verified during field investigations, including possible evidences of movements and inter-relations between the different structures.

The identified structures were grouped to define probable regional systems. The most significant regional structures within the El Aguila Project area include the following lineaments, systems and faults:

 Río Grande System. This system was identified along the valley of the Río Grande River in the southern part of the area. It is composed by a series of sub-parallel faults which occurs oriented ENE - WSW with an associated secondary system of perpendicular fractures with NW-SE orientation.

• El Aire Lineament. It occurs as strong quartz vein (El Aire vein) along the El Aire creek and adjacent to the San José de Gracia to La Arista mine road. Its strike is N25°W and it cuts through andesite and rhyolite rocks. At the La Arista mine area this lineament changes orientation to the north, and at this point it appears to be intersecting two other lineaments, Quiatoni and El Higo.

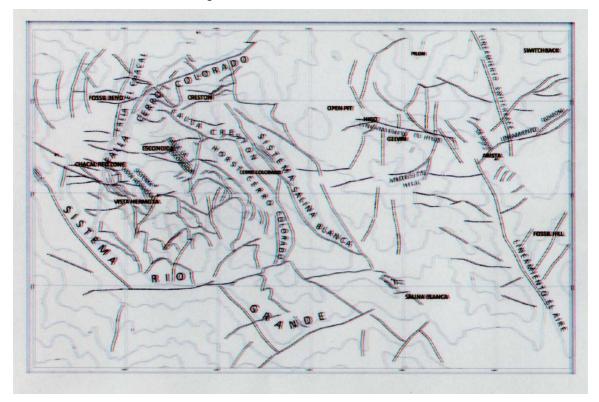


Figure 2 Shows the Regional Structural Map.

 Quiatoni Lineament. It is oriented to the N60°E and it is located at the eastern side of the La Arista mine. It cuts through andesites and a lithic agglomerate tuff unit. A drill hole intercepting an ore shoot of the La Arista mine appears to be related to this structure. Other sub-parallel structures have been identified to the north of the Quiatoni structure which appears to indicate a strong and wide structural system.

 Switchback Lineament. It occurs as a sub-parallel structure to the El Aire Lineament with orientation to the N17°W. It is enclosed by pyroclastic acid volcanic rocks and rhyolites that constitute part of the El Pilón dome. This lineament was verified in drill hole 108030 which intercepted a significant fault zone. This structure appears to be related to a felsic dike located on the road that leads to the village of Romadito.

• El Higo Lineament. It occurs along the El Higo creek with orientation of N78°W and it is projected from the La Arista to the El Aguila mines. Its outcroppings show quartz veins and veinlets along fractures within the lineament system.

La Arista Vein. It consists of a quartz vein outcropping along the La Arista ridge. It strikes N45°W dipping 70° to the NE. The vein outcrop shows quartz veins of 5 cm to 40 cm in thickness and it represents the outcroppings of the La Arista vein, which has been drill identified to a depth of about 300 m and about 500 m along strike with thickness that varies from about 3 m to 5 m with high grade mineralization in underground development.

Salina Blanca System. It consists of an structural system located on the north-eastern side of the Cerro Colorado peak, which strikes N39°W. It appears to show evidences of lateral and vertical movement. It is composed of two parallel side faults with sub-parallel structures in between the side faults. Strong silicification and stockwork zones with quartz veins and disseminated oxidation have been observed associated to the system.

Crestón Fault. Its outcrop appears to show a sub-vertical structure with "en echelon" configuration. Its SE extension by the Cerro Colorado area strikes N32°W, while its NW extension occurs with a N66°W orientation. Quartz veins with intense silicification occur associated with the structure at the contact with sedimentary rocks. This structure in association with the La Escondida, Vista Hermosa, and Salina Blanca systems surrounding the Cerro Colorado peak, appear to have originated the Cerro Colorado uplift, generating a horst configuration.

La Escondida Fault. This fault occurs on the western side of the Cerro Colorado peak. It consists of a normal fault oriented N40°W and dipping to the SW. At the La Escondida mine area, this fault is associated with a quartz vein and a rhyolitic dike. Base metals mineralization is also present within the structure.

Vista Hermosa System. This system consists of a group of sub-parallel normal faults with an average strike of N40°W dipping to the SW. It is considered as part of the "en echelon" systems of El Crestón and La Escondida in the southwestern side of the Cerro Colorado peak. This system shows evidences of vertical movement and contains quartz veining with associated mineralization.

Cerro Colorado Fault. It consists of a normal fault occurring around the western and north-western sides of the Cerro Colorado peak with curved orientation from N7°E, N30°E, and N70°E. Quartz veins and mineralization occur associated with the fault zone in the area nominated Red Zone.

El Chacal Fault. It occurs on the northern side of the El Chacal creek with an orientation of N25°E. It shows evidences of lateral movement. This fault appears to have been displaced by the La Escondida and Vista Hermosa structural systems. Figure 2.

#### Local Geology

Regional geologic studies by SGM in 2003 included compilations of historical mine developments of the State of Oaxaca including the following mining districts and mineralized zones:

Mining Districts:

San José de Gracia, including the following:

- Historical mines
- o El Aire
- o El Higo I
- o El Higo II
- o El Aguila
- o Las Avispas
- Mineralized zones:
- o San José
- o La Guajolota
- o El Pilón, and
- o Veta Tanilo
- o Alta Gracia
- o Las Margaritas
- o El Rey

In 2003, GTR initiated exploration drilling in the El Aguila and El Aire areas. The La Arista vein was discovered in 2008, during the investigations of the El Aire vein, and subsequent drilling into the La Arista vein intercepted the Baja vein. GORO's detailed exploration investigations have been focused on the El Aguila – La Arista area. This area includes the El Aguila deposit, the La Arista vein, the Baja vein, and El Aire vein. Other mineralized zones have been recognized with preliminary drilling, such as La Escondida, El Rey, Alta Gracia, etc.

**El Aguila Deposit.** It is located at about 4.5 km by dirt road from San José de Gracia. This deposit consists of a hydrothermal flat quartz vein dipping 30° and striking SW70°NE. It is enclosed by volcanic rocks at elevations of between 1,075 m to 1,150 m. GORO developed and mined the flat-lying accessible portion of the vein by open pit methods,

while projection of the vein to depth may be accessible from underground. Estimated tonnes and grade of the mined out portion of the El Aguila vein is about 345,000 tonnes at an average grade of 4.4 g/tonne Au; 43 g/tonne Ag. The overlying waste was used for construction of the Company's tailings facility. The El Aguila vein consists of sugary quartz occurring in a volcanic hydrothermal breccia, which is composed of large blocks of volcanic rocks and tuffs. The enclosing rock appears to transition from the volcanic breccia to a porphyry rhyolite, which is highly silicified and intruded by quartz veinlets generating a stockwork with strong oxidation after pyrite and marcasite. Some of the fragments contained within the breccia zone are un-silicified, including fragments of basement sedimentary rocks. SGM carried out fluid inclusion investigations on some quartz vein samples resulting in formation temperatures of 160°C to 200°C, which may represent, according to Hedenquist (see references), formation at depths of about 200 m. Figure 3.

La Arista Deposit. The La Arista vein deposit consists of multiple parallel veins and splays of varying length and width associated with the predominant vein and is located at about half the distance between San José de Gracia and El Aguila mine. It was discovered by GORO during exploration studies of the El Aire vein area. La Arista Deposit consists of a system of sub-parallel veins with variable orientations between N66°W and N10°W. The main vein is oriented at N30°W and dips 70° to the NW. The La Arista vein is enclosed in strongly silicified rhyolite breccia and includes stockwork zones that occur associated with the vein. The vein's outcropping occurs in an area located between two dome structures, Cerro Pilón composed of rhyolites to the NW, and Andesite Hill comprising andesites to the west. Strong silicification and oxidation in breccia and stockwork zones occur associated with the vein's structure.

Drill holes in the area have intercepted dikes and intrusive fluidal rhyolites and andesites within the volcanic breccia, which also includes Cretaceous Black Breccia fragments. Underground exploration of the La Arista vein has developed about 250 m of ore grade mineralization along strike on multiple levels. The La Arista vein was first investigated by cross cutting at the 2 Level (at 872 masl), where it occurs as a narrow vein (35 cm to 40 cm). This is an indication that the vein was emplaced below the current surface, where only a narrow silicification zone is the outcropping expression of the vein. At the 4 Level the vein has a 5.5 m true width. Through December 2011, the La Arista underground exploration and development has produced about 167,806 tonnes of mineralized material

averaging 3.45 g/t Au; 446 g/t Ag; 0.46 percent Cu; 1.28 percent Pb; and 2.74 percent Zn. Figure 3.

**El Aire Deposit.** The El Aire vein deposit is located at about 100 m west of the La Arista vein. The El Aire vein consists of an outcropping structure located at about half the distance between San José de Gracia and the El Aguila mine, along the road and El Aire creek. It strikes to the N25°W and it is enclosed mainly by andesites with some rhyolites occurring to the East of the vein towards the La Arista deposit. The El Aire structure appears to be intercepted by two other regional structures, the Quiatoni and the El Higo structures. According to Hedenquist (see references) the El Aire vein has been intersected for over 400 m along strike.

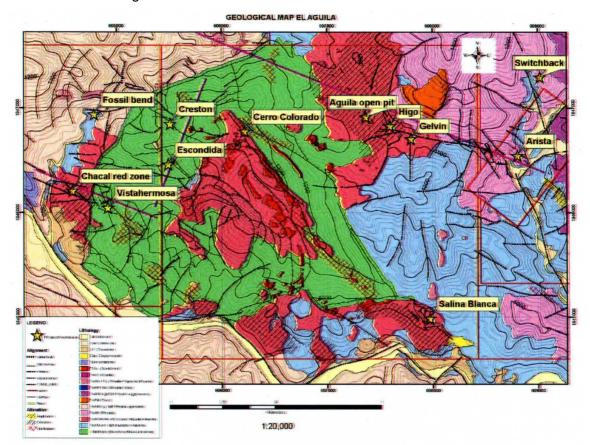


Figure 3 Shows the El Aguila project geologic-structural map and areas of interest.

**Baja Deposit.** The Baja deposit was discovered during the exploration drilling program of the La Arista vein. It occurs as 1.0 m to 1.5+ m wide mineralized structure containing generally high-grade silver mineralization, including proustite (Ag3AsS3), pyrargyrite

(Ag3SbS3) and other silver minerals within fractures and opened spaces in crustified deposits. It too has numerous splays and parallel veins of varying lengths and widths. The Baja vein is oriented to the NW 50°SE dipping from 70° to vertical. The Baja vein has been developed to date, by underground workings from the mine's Level 6 to the Level 7 with development along strike of about 70 meters.

## Mineralization

The mineral assemblages of the El Aguila Project deposits are typical of epithermal vein deposits with ahigh content of gold, silver, and base metals.

The El Aguila mining district mineralization consists of concentrations of sulfides containing gold, silver, lead, copper, and zinc, associated with gangue minerals, such as quartz, calcite, and other minor elements.

Weathering of the El Aguila mineralization has caused limited oxidization due to the younger age of the mineral deposition with sub-surface emplacement. The major oxidation observed within the area is at the El Aguila vein deposit which occurred as a flat vein at shallow depth and which contains sulfosalts (cerargyrite, pyrirgyrite, stephanite) and carbonates (cerussite, hydrozincite, hemimorphite), sulphates (anglesite, willemite), and iron oxides (hematite, limonite, etc.). Primary sulfide mineralization occurs down to depth from a shallow transition zone within the mineralized structures containing pyrite, galena, sphalerite, argentite, some chalcopyrite, and other silver sulfosalts associated with quartz and calcite as gangue minerals.

The deepest area of mineralization in the El Aguila Project area is known from drill intercepts to a depth of about 600 m from the outcroppings. The mineralized structures remain open to depth and along strike.

## Main Mineral Deposits

The main El Aguila Project mineral deposits are the following:

El Aguila vein deposit

La Arista vein deposit

Baja vein deposit El Aire vein deposit

Most mining activity at El Aguila Project area has been developed along the El Aguila vein deposit by exploration and development of a shallow open pit operation from which oxidized and transition zone mineralization within a flat-lying vein ("manto") deposit was extracted. Additional exploration is programmed to follow the lateral extensions of the vein deposit and the extension at depth that may have acted as a feeder vein.

Most underground mining activity in the El Aguila Project area has been developed for investigation of drill intercepts at the La Arista-Baja vein system deposits. These deposits have been accessed by an underground system of ramps, cross-cuts, raises and boreholes. The La Arista vein has been investigated by drifting up to about 250 m on 10 mine levels at an 18-m vertical interval. A high-grade ore shoot has been developed along the La Arista vein which contains most of the Mineral Resources estimated for the Project. Drill intercepts appear to indicate continuity of the ore shoot to depth, and the probable existence of additional ore shoots along the vein's strike.

## **DEPOSIT TYPES**

The mineral deposits of El Aguila Gold Project consist of structurally-controlled concentrations of gold/silver/lead/zinc/copper and other secondary minerals, occurring along a NW-SE Mineral Belt (El Aguila Belt). These deposits may occur enclosed by fault or breccia zones at interceptions of regional structures. These mineral concentrations represent typical epithermal deposits. GORO's regional exploration efforts have resulted in identification of a 16-km Mineralized Regional Belt (potentially 55 km) (El Aguila Mineral Belt), which consists of a NW-SE structural trend containing numerous mineralized zones, historical mine workings, and outcropping mineralized structures enclosed by silicified and brecciated zones with strong oxidation within volcanic breccias. The mineralized zones occur associated with occasional dikes and intrusives of fluidal rhyolites and andesites.

The El Aguila Belt includes the El Aguila and La Arista areas within the SE part of the Regional Belt. Other areas of interest include Cerro Colorado, Crestón, La Escondida, Margaritas, Chacal Red Zone, Fossil Bend, Vista Hermosa, and Alta Gracia, within the NW

part of the Belt. The El Rey project where an historic mine operated and GORO has drilled some of their highest gold intercepts occurs along that same strike 30 km NW of Alta Gracia. These deposits appear to represent epithermal systems with mineral concentrations along previous faults, breccia zones and geologic contacts. GORO's detailed exploration investigations, including geologic mapping, geochemical sampling, and drilling have been focused on four vein deposits within the El Aguila Belt due to their access and location along the Belt.

The El Aguila vein deposit, which consists of a flat lying ("manto") mineralized structure recognized at the elevations of 1,075 m to 1,150 m. This structure was explored and developed by open pit mining methods.

The La Arista vein occurring along the northern side of a breccia zone at the intersection of three regional structures, El Aire, El Higo, and Quiatoni. The La Arista vein is emplaced in the hanging wall of the La Arista mineralized structure.

The Baja vein is located in the footwall to the west of the La Arista vein. It occurs subparallel and adjacent to the La Arista vein

The El Aire vein occurs within a N–S trend with a tendency to intercept the Arista Baja vein to the North. It is located at approximately 100 m to the west of La Arista vein.

The El Aguila – La Arista mineral deposits consist of epithermal systems enclosed by volcanic rocks of the Sierra Madre del Sur, which have been dated as 15-17 million years (Ma) in age. Major epithermal systems within the NW portion of Mexican Sierra Madre Occidental have been related to older volcanic rocks (>24 Ma), while other deposits in the Sierra Madre Occidental have been dated at >40 Ma. Based on date determinations, the El Aguila epithermal deposits appear to be some of the younger epithermal deposits in México, which were deposited within volcanic rocks and these show generally weak alteration zones on current outcroppings. For instance the La Arista vein shows 35 cm to 40 cm thickness at the mine level 2 and it widens to 5.5 m at the mine level 4 (approximately -60 m), while its outcropping shows silicification and quartz veinlets with sparse economic mineralization.

According to J. W. Hedenquist (see references) some drill holes, including ODD-108001 and ODD-7093 have intercepted hornfels, which might have been uplifted by associated porphyry dikes. This material represents Cretaceous sedimentary rocks from the Black Breccia basement.

Mineral assemblage at the El Aguila to La Arista-Baja deposits are typical of epithermal deposits. The mineralization consists of pyrite, sphalerite, galena, chalcopyrite, gold, argentite and other silver sulfosalts associated with quartz and calcite as gangue minerals.

Shallow oxidation of the sulfides makes up the mineral concentrations in the upper parts of the deposits, and the minerals consist of sulfosalts (ceragyrite, pyrargyrite, stephanite) carbonates (cerussite, hydrozincite, hemimorphite), sulfates (anglesite, willemite), and iron oxides, hematite, limonite, etc.

Channel sampling of about a dozen trenches on the La Arista – El Aire veins outcroppings (J.W. Hedenquist, see references) resulted in the following assay ranges:

Gold < 10 ppb to 0.9 g/t Silver < 178 g/t, most in the 10's g/t Arsenic <= 240 ppm, most 10's ppm Antimony <= 729 ppm, most < 10 ppm Barium <= 1080 ppm, most 100's ppm Cadmium <= 18 ppm Copper <= 367 ppm Lead <= 6890 ppm Zinc <= 2650 ppm Molybdenum <= 42 ppm.

The most important mineralization within the El Aguila – La Arista mining district consists of vein deposits and mineral concentrations within breccia zones.

The mineralization in oxides consists of hematite, limonite and other iron oxides as well as lead carbonates as cerussite and sulphates as anglesite, and it includes zinc oxides. Silver, gold, and lead represent the main economic minerals within the oxidized and transition zones at the El Aguila - La Arista deposits. The mineralization in the primary sulfides zone consists of pyrite, sphalerite, galena, chalcopyrite, proustite and pyrargyrite (both also called Ruby Silver), tetrahedrite, silver, and gold.

All information is provided in the Technical Report Golden Resource Corporation 2012.

#### **Geological Sites Visited**

#### Mexico-Oaxaca Federal Highway

It is located at km 56 of the Tehuacan-Oaxaca Highway 135, a sequence of sandstones, shales and conglomerates of Matzitzi Formation (Pennsylvanian-Permian) reports the existence of well-preserved plant fragments. Part of the flora of this unit was described by Silva-Pineda (1970) and includes the genus Pecopteris ferns, lepidodendrales (Lepidodendron, Sigillaria) pteridospermales (Neuropteris) and esfenópsidos (Calamites), fossils were collected. Failure was also watched Oaxaca Fault. The Oaxaca Fault, described as a Cenozoic fault system that limits the Zapotec terranes and Cuicateco terranes, this fault has had multiple reactivations and behaviors during the Middle Jurassic to Early Cretaceous fault behaved as right side during the Laramide Orogeny behaved as reverse fault, then changing to a system which generated extensive basin half graben, is seen as a failure of long life, with a preferential orientation NNW.

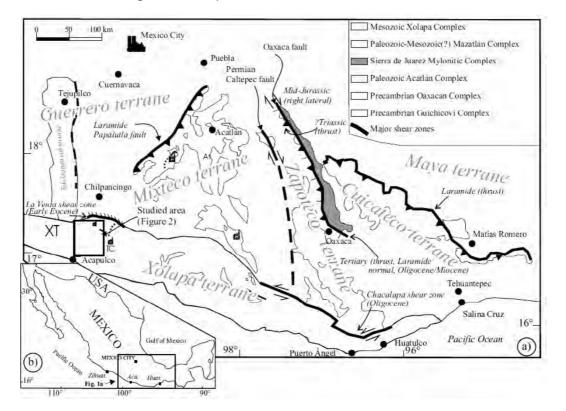


Figure 4 Shows terranes of southern Mexico. Sedlock, R.L., Ortega Gutierrez, F. and Speed R.C. 1993.



Figure 5 Shows plant fragments.



Figure 6 Shows a sequence of sandstones, shales and conglomerates of Matzitzi Formation (Pennsylvanian-Permian).



Figure 7 Shows plant fragments.



Figure 8 Shows Sedimentary structures of Matzitzi Formation.



Figure 9 Shows the Oaxaca fault.

## **El Aguila Project**

El Aguila Project is a gold and silver removable through an open pit. The type of ore is low sulphidation and epithermal, so that their removal does not involve high costs. The project's objective is to reach a total of 70,000 ounces of gold from the pit pull the first two years of production, then reach 200,000 by the third year. Gold Resource Corporation began commercial production of El Aguila on July 1, 2010. El Aguila is an operation of Gold Resource Corporation through subsidiary Don David Gold SA de CV.



Figure 10. In drilling hole area.



Figure 11 Shows El Aguila open pit.

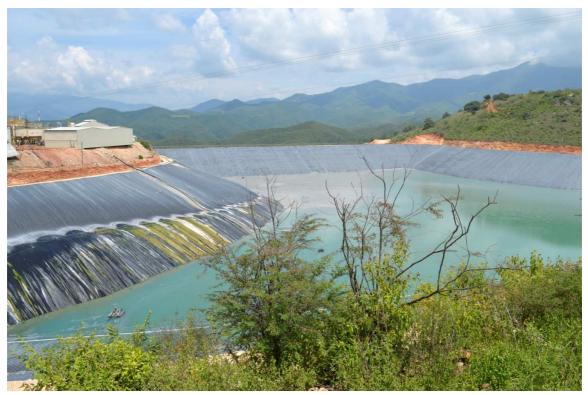


Figure 12 Shows tailings dam.



Figure 13 Drilling cores with quartz veins and pyrite



Figure 14 Veins with quartz, pyrite, galena, sphalerite and chalcopyrite



Figure 15 All participants in the student chapter of the ramp from the underground mine.



Figure 16 Watching mineralized structures inside the mine.



Figure 17 Beneficiation plant.

### Acknowledges

El Aguila Project staff are specially thanked for the kind gesture of giving us the opportunity of this Field Trip. All El Aguila Project personnel involved during the Field Trip are also thanked for their time and consideration during the explanations and discussions. Also we would like to thank Institute of Geology UNAM (our academic advisor Dr. Antoni Camprubi) for the coordination and guidance of this 2<sup>nd</sup> Field Trip. Finally we thanked the SEG for trusting these funds to Student Chapter Mexico UNAM.

