

GOLDPLATA: big plans

John Chadwick talks with Michel and Georges Juilland, cofounders of Auplata and Goldplata, about how their respective projects in Latin America are progressing

Created in 2004, Auplata (*IM*, December 2006), is attempting to bring the gold mining industry of Guyane (French Guiana) into the industrial age. This French department produces somewhere over 3 t of gold annually, but has the potential for much more. The Juilland brothers have plans for more operations in Guyane, through Goldplata Resources Guyane. At present they are negotiating with Auplata the acquisition of the Dorlin project and are looking at other interesting prospects. This will bring much needed employment and development of the mining sector. At the request of President Sarkozy a special mining committee has been named to develop a new mining charter (schema minier), which should have its preliminary recommendations ready by the end of the year. This will clarify which areas are available for mining and exploration and allow all the different companies, local and international, interested in mining in France and its overseas departments, like Guyane, to make progress with confidence.

Having established this production base, the brothers are now moving to revitalise some of the family's many assets on the South American continent. The Juilland family owns Goldplata

Mining International in Panama, which currently owns 28% of Auplata. It also wholly-owns Goldplata Resources, which controls Goldplata Colombia and its three worldclass copper-gold porphyries of Titiribi, Murindo and Acandi. It also owns 94% of Goldplata Peru, which has the Suckuytambo/El Diablo (Cusco/Arequipa area), Condorama (Puno area) projects in southern Peru, which show considerable silver, gold and base metal potential. These are well known mining districts which have seen intermittent operations since colonial times.

The Guyane challenge

Guyane has substantial geological potential for primary gold, on a scale comparable to West Africa, and at the same time offers an attractive and protective legal framework. Guyane is on the eastern side of the Guiana shield, which covers an area of over 1,500,000 km² from the east of Colombia to the northeast of Brazil. In addition to Guyane, it also covers Brazil, Suriname, Guyana and part of Venezuela. It is a two-billion year old geological formation which is the oldest and most stable in South America.

The region was once attached to the coast of West Africa, forming part of the Gondwana supercontinent, and was gradually split off as the

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Atlantic Ocean opened up. As a result, most of the Guyanese subsoil closely resembles that found in West Africa (and Ghana in particular). Guyane's gold mineralisation potential is therefore similar to that of the West-African craton, as the two land masses were attached before the Jurassic era. Most of the West African gold deposits have been mined to considerable depth, whereas those in Guyane have barely scratched the surface. They are completely open at depth. The deepest shaft sunk there was only down to 60 m.

Auplata's Dieu Merci mine is in northwest Guyane, 90 km from Cayenne (the capital). The concessions cover 136.5 km² and the current operating capacity is 700 t/d (17,500 t/month). Resources (to no international standard) include 5 t of gold estimated in tailings and a 1998 study that demonstrated the presence of 2.5 t of gold over 8 ha at 3.9 g/t Au to a depth of less than 5 m. There is thought to be potential of 21 t of gold over 67 ha.

To the south, 230 km from Cayenne, lies Auplata's Yaou operation, with a capacity of 800



The Juilland mining men - Michel (sitting) and Georges (standing) with their late father in St Elie-Dieu Merci

The grandfather, Pierre Delaitre (far left) of Georges and Michel in a picture in virtually the same spot in St Elie-Dieu Merci taken 70 years previously in 1932

t/d (20,000 t/month). Some €14 million has been spent on exploration here, over 15 years and the inferred resource is 46.4 t of gold at 2.4 g/t Au.

Since Auplata can only use gravity processing (at about 35% recovery) on Dieu Merci and Yaou, the tailings retreatment potential of these two properties is increasing all the time. Juilland currently estimates it at some 200,000 oz of gold – worth over €100 million. Auplata is devoting a great deal of attention to alternatives to cyanide treatment, particularly thiosulphate. Some studies that were sponsored by Goldplata in the University of Liege, Belgium, for the Yaou tailings do not show much promise. But a report from the university states: "For the case of the laid gravimetric tailings of Dieu Merci, the data available about their total volume and gold content (higher than Yaou) indicate a definite perspective for economic gold recovery." Separate tests are currently being run by Auplata in France.

Not far away is Auplata's Dorlin operation, which presently has a non operating installed capacity of 500 t/d (7,500 t/month) mill, 190 km from Cayenne and 55 km northeast of Maripasoula. Here some €8.3 million has been spent on exploration over 15 years generating an indicated resource of 15.8 t at 1.3 g/t Au and an inferred resource of 29 t of gold at the same grade.

Guyane's gold production has more than quadrupled since the creation of Auplata – when it



was around 360 kg in the years of 2004 and 2005. By the end of the third quarter of 2006, following the start of production at Dieu Merci, output was approaching 150 kg. Then the Yaou mine came into production and by the end of the second quarter of this year, gold production was some 260 kg. In 2007, Auplata produced 867 kg of gold and posted revenues from metals (gold and silver) of €14.1 million, up 81% on 2006.

In total, Auplata has mining permits and licenses covering over 300 km². Its development and mining plans involve close collaboration with local players. Auplata's aim is to offer a sustainable alternative for the Guyanese gold-mining industry, one that respects the country's environment and protects the interests of the local population.

A highlight of 2008's second quarter was the implementation of the operational reorganisation plan announced in April. This plan led to an overhaul of the company's two operating mines, Dieu Merci and Yaou, as well as geological and extraction studies targeting improved resource planning over the coming quarters. In June

Auplata also announced plans to restore profitability via company-wide job cuts that together with the work to overhaul the mining facilities and to bring them up to standard will slash annual costs by €4 million.

Restoring operating profitability is a key goal. As Auplata is waiting for the future departmental mining guidelines to be implemented by the end of 2008, plans formulated by the French President, the company will focus its production efforts on the Dieu Merci and Yaou mines.

Peruvian precious and base metal promise

Goldplata Resources Peru's Suckuytambo, Condorama and El Diablo project tenements are 100% owned by Goldplata and consist of some 31 mining concessions totalling about 10,000 ha

in area (see figure 1). These are old mining districts, known since colonial times. Together they have produced over 100 Moz of silver.

El Diablo is in the District of Caylloma, near the town of Caylloma, approximately 145 km from Arequipa via a combination of sealed and dirt roads of varying condition.

The project is in the Andes at an elevation of about 4,000 m. Relief ranges from moderately steep to steep with incised streams and gullies commonly accommodating run-off in the area. Soils are poorly developed and vegetation is generally sparse to moderate, consisting primarily of shrubs and grasses established on exposed slopes of ridges.

El Diablo is a polymetallic vein-hosted system located in a gently folded sequence of volcanic rocks. Veins strike to the west-southwest and dip steeply to the northwest at 80-85°. El Diablo, El Angel and El Santo are the three structures of significance in the area. Quartz veins outcrop for over 200 m in the area and are between 1 and 2 m wide. These quartz veins are sulphide-rich and sulphides include pyrite, galena, sphalerite, native

silver, arsenopyrite and chalcopyrite. Stockpiles from smallscale mining also appear to contain significant Fe and Mn.

El Diablo underground project (El Diablo and El Angel) has estimated Proven reserves of 71,229 t at 3.12 g/t Au, 65.5 g/t Ag, 3.6% Pb and 4.2% Zn. Possible reserves amount to 35,776 t at 2.83 g/t Au, 64.1 g/t Ag, 3.62% Pb and 4% Zn.

Geosure Geological Consultants completed an independent geological report on Goldplata Resources Peru's projects. In that Principal, Michael Montgomery, said of El Diablo: "El Diablo represents a significant potential, not only because it is open along strike and at depth but because no one has looked at the copper potential of the deposit previously (hand specimens examined on site seemed to have high quantities of Cu minerals). These types of deposits typically have better copper and gold grades at depth. Logistically the placing of holes at El Diablo is the easiest amongst the three deposits described in this report. Given all these reasons I feel that the potential to add to the resources at El Diablo quickly and cost-effectively exists."

Access from Caylloma to Suckuytambo at 4,800 m is by dirt track of varying condition. These tracks are in poor condition in places and despite the fact that there is only about 20 km between the project and Caylloma the travel time is 1.5 to 2 hours.

The important structures are Veta Carmen- Santa Ursula which strike northwest and dip subvertically towards the southwest. This fault is interpreted to be analogous to the Chila Fault and is infilled with sulphide-rich QC veining, up to 4 m wide. And a group of parallel fractures (some veins) striking northwest and located a few dozen metres to the south of the Veta Carmen. The economic mineralisation is contained within two systems of veins – a system of seven veins striking northeast and Veta Carmen.

The northeast striking veins are Blanca, Santa Ines, San Pablo, San Pedro, Potosi, Corona, Nueva Corona. This set of veins is

where Hochschild realised more than 1 Mt of ore. These veins have strike lengths ranging between 100 to 200 m and widths ranging from 0.50 to 2.30 m. The main mineral constituents of the veins are quartz (> 80%), red and silver polybasite, pyrite, sphalerite and calcite.

Past production from Suckuytambo started in 1950 until 1991 (when it was stopped due to a dropping head grade). Between 1950 and 1966 about 80,000 t/y were produced at an average grade of approximately 435 g/t Ag and 5.3 g/t Au. Then, in the late 1970s and 1980s some 0.5 Mt of similar grade ore were mined out of the Suckuytambo and San Miguel mines.

In Montgomery's opinion, "Suckuytambo represents significant potential. The potential to identify new reserves and grow existing ones is considerable." However, he cautions against using the current in-house resource estimates on which to base operations. More work is required. Goldplata Peru is in the process of consolidating the whole Suckuytambo-San Miguel area once again, and will control over 20,000 ha of highly

prospective ground.

Condoroma deposit is in southern Peru located in the area of Ingenio, Condoroma district, province of Espinar, Cusco department, at an altitude between 4,700 and 5,000 m. The new town of Condoroma (population approximately 200) is situated near the project area (about 10 km). Goldplata has offices and accommodations in the town and has established telecommunications and internet connections available.

Caylloma is located some 75 km from the project.

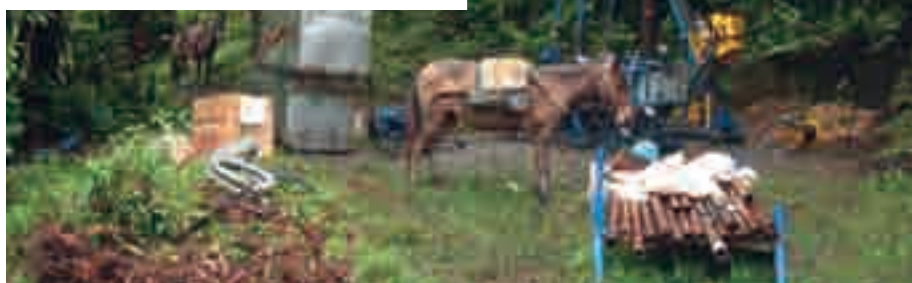
Several veins are visible within the Condoroma property though the historical mining focus was on four main vein systems – the Bonanza, Carmen, Santa Rita and Mercedes veins. The principal elements are silver with associated minor gold, and lead and zinc. The veins strike approximately 290-310° and dip 60 to 90° to the south. The northeast striking Santa Rita vein intersects the Mercedes vein in an area known as the Triangle and hosts significant sulphide mineralisation. Numerous stockwork veinlets exist within this area and sampling by previous workers has shown the veinlets to be mineralised.

Montgomery's comments were that "Condoroma shows great potential not only in respects to the definition and continued expansion of the resources associated with the primary vein system but in particular, in an area known as the Triangle. The Triangle is an area of over 40,000 m² at the confluence of the Mercedes, Carmen and Saint Rita veins. Here a stockwork has developed and manganese oxides abound. Anomalous trench results have been received from the area and it has the potential to host a large volume deposit."

Drilling underway in the mountains behind Titiribi in Colombia.



Map showing the detailed location of the Peru projects and highlighting the other project countries of Colombia and Guyane





Bell trucks are widely used at the mines in Guyane

In addition to the old Condorama mine, there is, nearby, the Cata and Cata Alto project, which has had a reserve calculation estimate of 223,000 t at 0.6 g/t Au, 120 g/t Ag, 1.49% Pb, 0.9% Cu and 1.18% Zn. There is also known to be at least 1 Mt of 1% Cu ore in this concession, close to Tintaya, which indicates a deep porphyry system.

Goldplata Colombia

Windy Knob Resources entered into a binding terms sheet with De Biera to acquire its rights and obligations to earn a 65% project interest in GoldPlata's Titiribi project in the district of Antioquia, northern Colombia. Windy Knob completed all due diligence and gained shareholder approvals for the agreement at a general meeting of shareholders in April this year. Goldplata will retain 35% of this project.

The Titiribi project consists of various concessions in excess of 3,000 ha surrounding the Titiribi township. It is an important historic gold-silver producing region with a formal mining history extending over at least 200 years. Historic production is estimated at between 3 and 5 Moz of gold and silver. At the turn of the century it was the largest gold mine in Colombia and the two companies Cia Minera Zancuro and Otra Mina were the biggest employers (around 5,000 people) in Colombia at the time. There are about 500,000 t of slag dumps (containing palladium) at the old smelter sites of Sitio Viejo (pictured) and Zavaletas.

Historically, mineralisation was mined from high-grade Au-Ag replacement-like mantos and fault-controlled veins contained within schists and continental-marine sediments. But low-grade mineralisation is widespread being found as auro-argentiferous disseminations and replacements within silici-clastic portions of the sedimentary sequences, and as porphyry-style disseminations and stockworks within hypabyssal intrusions. The cluster of porphyritic rocks underlying the Cerro Vetas, Cerro La Candela and Cerro Margarita areas

to the south and west of Titiribi townsite has received attention in recent years.

The Titiribi mining district is about 70 km (1 hour) southwest of Medellín on the northwestern margin of Colombia's Central Cordillera. The district has paved-road access to the town of Titiribi, from where numerous gravel roads traverse the area and access many of the historic mining and more recent exploration sites. Titiribi is a traditionally cultured, modern town of some 15,000 inhabitants that subsists on a mixed agricultural (coffee, sugarcane, dairy cattle) and smallscale coal mining economy. Full infrastructure is available throughout the region.

From 1993 to 1998 La Muriel Mining Corp, fully owned by Goldplata Mining International, re-opened several old workings and ran extensive geochemical and geophysical surveys which prompted a joint venture with Gold Fields, which conducted a 3,500 m drilling program that delineated an Inferred resource of 200 Mt of 0.4 g/t Au and 0.2% Cu. Gold Fields withdrew from this project at the time because of the low metal prices.

In its July 2008 quarterly report, Windy Knob stated that results from the drill program at Titiribi confirm it to be "a prospective target for large tonnage, low grade copper-gold mineralisation with significant intersections as follows: CV004 – 374.8m @ 0.41g/t Au and 0.21% Cu from 3 m
CV005 – 116.5m @ 0.54 g/t Au and 0.24% Cu from surface
CV006 – 447m @ 0.44 g/t Au and 0.16 % Cu from 3 m, including 167 m @ 0.78 g/t Au and 0.28% Cu from 283m."

The objective of the 2008 drill program at Cerro Vetas is to deliver a JORC compliant resource by the end of the year. The holes noted above were from the completed Phase 1 Diamond Drill program of 1,500m with an initial four holes drilled into the Cerro Vetas porphyry.

During the quarter Windy Knob established a Colombian based technical team and completed a heli-borne geophysical survey through an agreement with Anglo Ashanti Colombia. A remote sensing targeting review was conducted by Earthscan that has identified various targets including the Candela, Margerita and Porvenir anomalies. Candela and Porvenir are potentially bigger systems than first interpreted. Another porphyry located to the southeast of Porvenir has, potentially, been identified.

Murindo and Acandi

Local residents knew of the presence of copper and gold in the low hills north of the Murindo River, in the northeastern corner of Choco, for centuries. However, it wasn't until 1975 that INGEOMINAS, under a UN-sponsored program, undertook the first formal, investigation of the region. A comprehensive program of stream sediment sampling, followed by soil and rock sampling and preliminary mapping delineated extensive areas north of the Murindo River, very high in copper, molybdenum and, locally gold, each ranging from 1 to 5 km² in size. Very little rock was exposed.

In the mid-1990's Cyprus AMAX initiated serious exploration of the area, aided by an earthquake in the area in 1993, exposed mineralisation. A comprehensive program of geochemistry, geophysics and mapping further delineated, expanded and defined the known target areas and found a new zone south of the river, lengthening the string of mineralised zones to 15 km. Soil samples in the anomalies carried from 300 to 4,200 ppm Cu and up to 700 ppm Mo. Surface rock samples in 2 areas exceeded 1% Cu, up to 700 ppm Mo and 2.5 ppm Au, with 37 rock samples from one 800 by 1,400 m area averaging 0.94% Cu and 0.36 ppm Au.

In the flurry of takeovers of the late 1990s, Phelps Dodge ended up with Murindo and in 2001, sold the prospect to Muriel Mining. Muriel Mining then negotiated an agreement with a major mining company, which is earning a 70% interest in the property through work expenditures and a series of payments. Muriel Mining will be the operator and manage the forthcoming drilling campaign programmed to start up at the end of 2008.

The Murindo copper prospects lie at 100 to 400 m on the eastern slopes of a small group of mountains in northeastern Choco and northwestern Antioquia. They are mostly north of the town of Murindo, 165 km northwest of Medellín. There is no road access and the deposits occur in tribal areas of several indigenous groups, with whom a socialisation program has been

agreed. The area is covered in intense vegetation, and is very humid, averages 25°C heat and is subject to 3-9 m/y of precipitation. Subsistence farming, hunting and logging are principal occupations in the area.

The copper deposits lie on the western margin of the Tertiary Age Mande Batholith and west of the Murindo fault. Most of the mineralisation seen to date occurs within quartz-diorites intruded into Cretaceous and Jurassic clastic and volcanic rocks, but hydrothermal alteration, intense weathering and heavy vegetation have prevented a complete unravelling of geologic relationships.

The highest copper-molybdenum grades are found in zones of low-sulphide, potassic alteration where chalcopyrite and bornite predominate. High gold values are associated with quartz-magnetite veinlets, also in the potassic zone. Broad areas of phyllic alteration have been mapped, containing pyrite, and chalcopyrite as the principal sulphide species, with an unknown potential for supergene enrichment.

So far, none of the prospects have been drilled, but a drilling campaign is being planned for the near future in one of the areas of high potential. If results are positive, follow-up programs will ensue, hopefully leading to major investments and offer opportunities for local inhabitants to escape the crushing poverty they live in and have a chance to create a better future for their children.

Acandi is another copper-gold porphyry which is close to the border with Panama. The project area covers 40,000 ha and has been subject to several studies in the past, identifying copper porphyry targets and black sand resources. It is near the town of Acandi (population some 8,000), in the far northwest of Colombia and the southeast of Panama. The town of Acandi is accessed by air from Medellin or by boat from Turbo, Antioquia in the Gulf of Uraba. The project is also close to roads and rail links.

The project lies astride the Darien Cordillera that separates Colombia from Panama and on the Colombian side extends down to the Caribbean coast. Geographically, it is characterised by mountains of moderate height and lower coastal plains and hills in a tropical environment. General land use is mixed agriculture or forests. Fishing in the Caribbean is also a principal industry. Artisanal gold placer mining is found in the headwaters of several of the rivers within the project. It lies at altitudes between 0 and 1,800 m above sea level.

The region around Acandi has historically been an area of gold production, during colonial times. In the last half of the 20th century several general studies were made, including some sponsored by the United Nations, looking at the precious, base and ferrous metal mineralisation in the region. Several targets of potential interest were identified



The town of Titiribi in Colombia. Behind the three hills in the background lie three big anomalies being drilled by Goldplata



Titiribi smelter 1905, when it was the largest gold mine in Colombia

by these studies. Currently only small, artisanal gold placer mining is active in the region.

The regional geology consists of island arcs and accreted terranes of Upper Mesozoic to Upper Tertiary ages with both hydrothermal – porphyry related mineralisation and magmatic mineralisation. The local formations include sedimentary, intrusive, and volcanic rocks. The intrusives and volcanics grade from ultrabasic to acidic in composition. Near and along the coast are extensive alluvial and marine placer deposits of Upper Tertiary to present ages. Deposit types identified to date in the project area include copper porphyries, auriferous veins and placers, and littoral black sands. The project has the potential to contain other deposit types, including volcanogenic massive sulphides, skarns, disseminated gold, and chrome-nickel-platinum group deposits.

From the studies that have been made it is interpreted that the Acandi project has a strong potential at a grassroots level to host significant mineral resources. Goldplata has completed a regional geochemical stream sediment exploration program run by Bellhaven Copper and Gold (Panama's leading exploration company) and

determined more than a dozen targets for further exploration.

Appropriately for this issue of *International Mining* (which includes a feature on the global mining services provided by Denver-based companies) both Georges and Michel Juillard are graduates of the Colorado School of Mines in Golden. After managing the family-owned mines in Peru with his brother, Michel joined an American mining group and undertook many exploration and mine development projects in South America and Africa. Between 2001 and 2004, he was President and then Director General of Guyanor Ressources (now Euro Ressources). Between 2004 and 2008 he was Director General of Auplata and is now dedicated to starting Goldplata Resources Guyane, getting the Peruvian operations into production and is preparing to list Goldplata Mining International on the AIM market in London, projected for the first quarter 2009. Georges went on to work with major mining companies in Central America, including Rosario Resources and is now responsible for running the three exploration projects in Colombia. The brothers have also developed projects in Ghana and Central America. **IM**