

# GLOBAL BUSINESS REPORTS

INDUSTRY EXPLORATIONS



## COLOMBIA EXTRACTIVE INDUSTRIES

2014



*Economy | Metals and Mining | Oil and Gas | Finance | Services*

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## Dear readers,

Upon landing at Bogota's El Dorado International Airport weary travelers are immediately cognizant of the two Colombias. My first impression was made through a sleek, efficient, modern airport that quite frankly outclassed my departure destination of Los Angeles International Airport. The airport is representative of a Colombia that surprises uninitiated visitors, like myself at the time, by the sheer progress the country has made in the last decade and a half. While some of its Latin American neighbors have tacked towards protectionist policies that have deterred international investment, Colombia, once a risky Latin American destination for foreign capital, appears to have gained an upper hand over neighboring jurisdictions.

Through the oversized windows in the international terminal the traveler's attention is drawn to a smaller, decrepit terminal building that now only handles domestic flights. The paint is peeling, the sidewalk looks deserted and the lettering is fading from the signs. The sleek, h-shaped terminal surrounds this building, as if the airport's planners desired for the old terminal to simply be swallowed up by the much more impressive new building. Nevertheless, the old terminal stubbornly remains and, consequently, the interior gates of the new terminal appear to sit incomplete and its potential underutilized.

Colombia's extractive industries face a similar story at present. A marked turnaround in the country's security situation has enabled Colombians to once again control their future, and thus far few can argue that progress has been made. Investment dollars from abroad, like the terminal that welcomes international business travelers, have sprung up quickly and have outdone many expectations. However, the vestiges of the old Colombia – characterized by dysfunction, inefficiency and insecurity – remain. Their days appear numbered, but like the old terminal building they remain stubbornly present in the form of a dragged out peace process with insurgent groups, unclear regulatory processes and oftentimes unnecessarily tenuous community relations.

With these challenges creeping back into the consciousness of Colombians and foreign stakeholders alike, plus difficult international market conditions, some fear the extractive's locomotora para el desarrollo has stalled. While this is certainly the case for some in these industries, the insights expressed in these pages also tell a different story. Despite issues, whether related directly to Colombia or external, the extractive industries are persevering.

Through our research one overarching theme is strikingly apparent: Colombia is not a country for the undetermined. Those who are convoluted in their focus will not thrive. Colombia is for those who are hands-on and determined: as Paul Dias of Minatura conveyed in our interview with him, "successful mining companies in the next decade will need active boards that get out from behind their desks and gather intelligence on the ground."

The new Colombia wants to arrive at its full potential and there are Colombians and foreigners alike who can make it happen. They are willing to come out from behind their desks in order to advance their aspirations and the country's stated aspirations simultaneously. The question is: when and how will the old Colombia leave for good?

**Andrew Mason, Alice Pascoletti,  
Caroline Stern, Chloe Dusser,  
Joseph Hincks, Ramzy Bamieh  
and Josie Perez**

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This research has been conducted by Caroline Stern, Chloe Dusser, Alice Pascoletti, Ramzy Bamieh, Joseph Hincks, Josie Perez, Andrew Mason, Katie Bromley, Alexander Corbell and Harry Thompson  
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## Freedom and Order: An Introduction to Colombia and its Extractive Industries

“Colombia is a country that had been sleeping for 20 years. During those decades we have lived in this country, but we have not had a country because of our internal problems. While the rest of the world was hard at work, it was considered too unsafe and impossible to develop large projects here. In the last 10 years this has changed. For the first time in my memory we look at the future as better than the past. I personally believe business will come to Colombia. What other countries in Latin America have taken 20 years to accomplish we will have to accomplish in five years if we want to be on the same level as other countries. If Colombian companies wanted to take advantage of the opportunity in front of us companies such as Global Motor should have started to think differently five years ago. In the past, all the companies in our kind of business were trying to maintain a low profile because large, high profile companies were seen to have had too much overhead costs with safety etc. Now this is changing.”

- Fredy Jacob Florez, Gerente,  
Global Motor



# An Introduction to Colombia

A brief overview of the country and economy



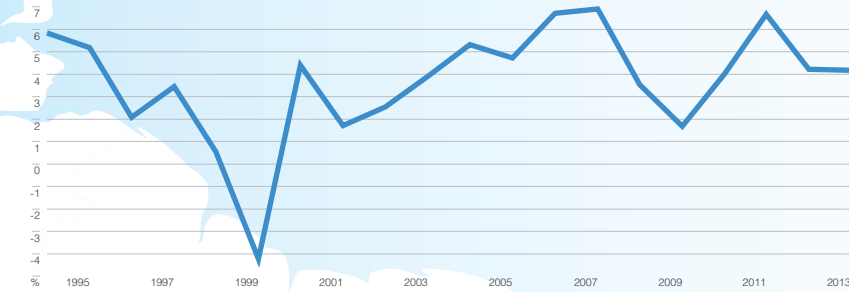
The previous slogan aimed at promoting Colombia was “the only risk is wanting to stay.” There was an element of positivity to this slogan; a justifiable hope that the country’s vast biodiversity – it ranks third in the world for number of living species and first for bird species – and its vibrant culture would enthrall and enthrall visitors. Yet there was also an admission of the country’s reputation. The long-running conflict between Marxist guerrilla groups – the best known of which is the Revolutionary Armed Force of Colombia (FARC) – and the government and rightwing paramilitary groups has dragged on since the 1960s, discouraging not only tourism but also investment. Indeed, some commentators have described Colombia as engaged in civil war, albeit one of low intensity rather than one of explosive destruction, a constant tragic background rather than a single defined event.

Colombia’s new tourism slogan, “Magical Realism,” makes no such attempt to address this issue. Yet this still tells us much about views and the scale of the problem: namely, that it is no longer at the forefront of tourist and investor perceptions of the country. The conflict is, unfortunately, far from over and violence and kidnappings continue (five policemen were killed by FARC guerrillas as recently as February 17th this year). At the same time, however, peace talks continue and, although not free from problems, appear to have made more progress than any previous attempt. Homicide rates have fallen to below half their 2002 level, and reported kidnappings fell from 2,122 in 2003 to just 305 in 2012. Unemployment is down, foreign direct investment is up and Colombia as a whole is unmistakably moving in the right direction. The reasons behind investors’ renewed interest in Colombia are greater than

just its increased security. After years of trailing Argentina in regional economic standings, this year Colombia claimed to have overtaken it as Latin America’s third largest economy (after Brazil and Mexico). While this is open to debate – it depends on the methodology and exchange rates used – there is little doubt that even if the announcement is premature it will soon be certain: Colombia’s economy grew by 4.2% in both 2012 and 2013 and is predicted to rise above 4.5% in 2014, according to the Economist Intelligence Unit; Argentina’s economy grew by 1.9% and 3.5% in the same period, and is forecast to contract by 0.6% in 2014. Furthermore, Colombia can boast of inflation rates that sat at just 2.2% in 2013, unemployment rates that have seen an almost constant decline since a 1999 peak, a slight budget surplus, and foreign direct investment that has risen

## GDP GROWTH RATE

Source: World Bank



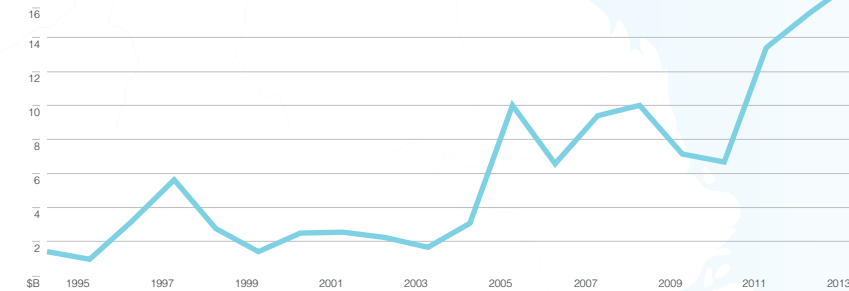
# 4.2%

GDP GROWTH RATE  
2013

Source: CIA World Factbook

## FOREIGN DIRECT INVESTMENT (NET INFLOWS)

Source: World Bank



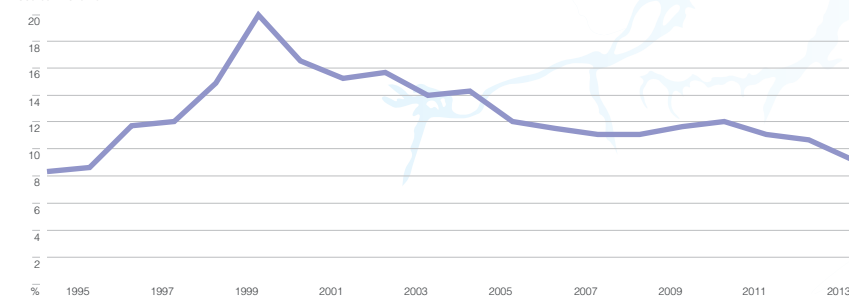
# \$17 BILLION

FOREIGN DIRECT INVESTMENT  
(BoP, US dollars - 2013)

Source: World Bank

## UNEMPLOYMENT RATE

Source: World Bank



# 9.7%

UNEMPLOYMENT RATE  
2013

Source: CIA World Factbook

from an average of \$3 billion a year in the 1990s to \$17 billion last year. When Spanish conquistadors first arrived in Colombia in the early 16th century, they heard stories of a fabulously wealthy king who covered himself in gold leaf and threw vast quantities of gold and precious stones into a sacred lake. They called this king El Dorado (the gilded one): a name that has since become famous in myths of hidden treasure. For a long time, Colombia squandered its legendary former wealth, its richness of natural resources, and the goodwill of its people with continued political and opportunistic violence. Today, the slogan “Magical Realism” seem apt: a new reality of relative stability, peace and economic growth may indeed seem unreal after decades of being perceived as Latin America’s troubled member. Yet there is little magic involved. Colombia is simply reclaiming its true potential. •

## POPULATION AND WORKFORCE INFORMATION

Source: Various



- Unemployment Rate 2013: **9.7%**
- Poverty Line 2012: **32.7%**
- Labor Force 2013: **23,750,000**
- Population 2013: **45,745,783**

## COLOMBIA AT A GLANCE

Source: CIA World Factbook

- Population:** 45,745,783 (July 2013 est.)
- Capital:** Bogotá
- Head of Government:** President Juan Manuel Santos Calderon
- Currency:** Peso (COP)
- GDP:** \$369.2 billion (2013 estimate)
- GDP per Capita:** \$11,000 (2013 estimate)
- Growth Rate:** 4.2% (2013 estimate)
- Economic sector breakdown:** agriculture: 6.6%, industry: 37.8%, services: 55.6% (2013 estimate)
- Exports:** \$58.7 billion (2013): petroleum, coal, emeralds, coffee, nickel, cut flowers, bananas, apparel
- Imports:** \$53.5 billion (2013): industrial equipment, transportation equipment, consumer goods, chemicals, paper products, fuels, electricity
- Major Trade Partners:** US, China, Mexico, Spain, Brazil

# \$369.2 billion

GDP  
(current US dollars 2013 estimate)

Source: CIA World Factbook



# Amilkar Acosta Medina

Minister of Mines and Energy  
**COLOMBIA**



According to President Santos, mining is considered one of the five locomotives of development for Colombia. On the other hand, many leaders in the mining community believe they have received mixed messages from the Ministry of Mines and Energy and the Ministry of Environment. What is the plan to improve communication between these two ministries?

At the moment, the President has given precise instructions that mining policy should go hand in hand with environmental policy in a manner that creates a situation in which public policy with regards to mining has the participation of the Ministry of Environment. The Ministry of Mines and Energy is orientated to bring into consideration the subject of environment for developing mining in such a way that has not existed before in this country. In this moment of development for the industry, the exercise of control, monitoring and supervision of mining activity is part of the Ministry of Mines and Energy, while we are also taking into consideration the environmental component of mining.

**Guerrilla groups such as the FARC and ELN are using Colombia's informal mining sector as a way to fund their illicit activities. How much is the government worried about these activities as the Santos government attempts to negotiate with these groups?**

It is necessary to separate informal mining or traditional mining, which has a long history in Colombia, from the nexus of criminality. For informal or traditional miners, the government is working towards a process of formalization for its legalization. However, for those miners that have entered into the nexus of criminality, there is no tolerance for this activity. We are treating those miners who associate with guerrilla groups differently. We have advanced in developing the mechanisms for this formalization with the cooperation of big players in the mining industry because many of these informal miners are conducting their activities in areas entitled to large companies. This has been the conflict between companies and the informal miners in these areas, but now

there is an opportunity for partnership between large-scale mining and informal mining whereby large companies can contribute to the process of formalization of the small-scale mining sector.

**One of our interviewees stated, "This is the moment for Colombia to take advantage of the mining sector's great potential." In your view, what challenges are hindering this potential and what are your main objectives before the upcoming elections?**

We are in the last quarter of the recession cycle for the mining and energy industries because of adverse international circumstances; the European Union is in recession and the United States is slowly recovering. This influences emerging economies, such as Colombia, that had been realizing their growth. Demand and prices for raw materials have slowed. In these circumstances we have to redouble our efforts to continue to attract new investment and retain the investments that we already have. The country is preparing for when we enter a new boom because we recognize mining markets are cyclical. These cycles are ones of sowing and harvest, and I believe this is the moment to invest in Colombia, to sow now and harvest the rewards later. It is the hour to invest in mining because Colombia has prepared to take advantage of the situation when the new boom comes.

We will not experience in the mining and hydrocarbons industry what happened to Colombia with the coffee industry. For many years we hoped that the prices of coffee would improve, but did not attract investment [in these down times], and when the boom came we did not produce enough coffee for export. In this sense, the government is making a great effort to not only ensure investors do not go away, but also continue to attract investment. We are optimistic that Colombia is still an investment destination. This is proven by the fact that, while in the last year there has been a drop in the influx of foreign direct investment in Latin America, Colombia has maintained a similar investment level to last year. This is an encouraging sign for the future. •

# Geological Wealth

The extractive industries in Colombia

Over the last decade, Colombia has undergone a transformative age that has vastly enhanced the long-term prospects of the country's mining and oil and gas sectors. As the administration of former-president Alvaro Uribe aggressively improved the country's security situation between 2002 and 2010, majors and juniors alike demonstrated unprecedented interest in the country in the hope they could capitalize on the exciting geological potential of the "Last Andean Frontier."

According to Colombia's National Administrative Department of Statistics, foreign direct investment in the mining sector grew at an average rate of 5% per year between 2005 and 2010. Buoyed by the potential of the industry and the optimism derived from high mineral prices and easy financing, Colombia was already the darling of investors on the TSX when Uribe's defense minister and successor, Juan Manuel Santos, took the reigns of the country in 2010. In an effort to capitalize on this momentum, Santos identified the extractive industries (mining and hydrocarbons) as one of five "locomotives for economic development."

In December 2012, the symbolic goal of one million barrels per day was attained, and 2013 marks the 10 year anniversary of the establishment of the Agencia Nacional de Hidrocarburos (ANH), the organization credited with rejuvenating the Colombian oil and gas sector. Now the focus turns to maintaining that level of production in the face of aging oil fields and socio-environmental obstacles.

As Santos's first term reaches its twilight (he is up for reelection in May) the mining sector has faced a number of challenges, both internally and externally, that have slowed the country's once robust locomotive. Many proposed gold projects are stalled either by regulatory hurdles or internal financing issues, while Colombia's second largest

source of export revenue, thermal coal, saw a 4% decline in production in 2013. Of course, a major factor in this slow development is the uncertain outlook of global markets; gold prices hover around \$650/oz below their record highs, and cheap gas in the United States is reducing the medium-term demand outlook for Colombian coal as well as of its oil and gas. In 2012, foreign direct investment in Colombia's mining sector declined 5.5% compared to 2011. The situation is not improving; during the first seven months of 2013, investment in mining and aggregates fell by 3.1% compared to the first seven months of 2012. "We are in the last quarter of the recession cycle for the mining and energy industries because of adverse international circumstances. This influences emerging economies, such as Colombia. The country is preparing for the next boom because we recognize mining markets are cyclical," said Amilkar Acosta Medina, Minister of Mines and Energy in an interview.

Fluctuating around the million barrel per day mark, the Colombian oil and gas is also at a crucial point. Ageing oil fields, limited reserves found in small deposits and a familiar host of social and environmental obstacles are current concerns. However, the game-changer in the coming years may well come from the results of exploration from unconventional and offshore resources. If such exploration proves fruitful, the funds and motivation to solve the other issues should be available and Colombia can move on to the next stage as a significant player in the world of oil and gas.

The initial burst of enthusiasm that greeted Colombia's improved security environment is over, and now players are coming to grips with the all of the problems associated with an immature market with emerging legislation and a population un used to the extractive industries. Coupled with a dearth of international finance and faltering commodity prices it is time for legislators and private players alike to consolidate and associate together to build the sound foundations necessary for sustainable harmonious growth. •

## COLOMBIA'S NATURAL RESOURCE PRODUCTION

Source: World Bank

COMMODITY		2011
<b>METALS</b>		
Copper, mine output, Cu content	kg	4,042
Gold		55,908
Iron and steel:		
Iron ore and concentrate	tmt	174
Pig iron	do.	295
Steel, crude	do.	1,290
Semimanufactures, hot-rolled	do.	1,500
Nickel:		
Mine output, Ni content		70,000
Ferronickel, Ni content		37,817
Platinum	kg	1,231
Silver	do.	24,045

## INDUSTRIAL MINERALS

Cement, hydraulic	tmt	10,777
Gemstones, emerald	tc	3,402
Salt:		
Marine		139,810
Rock		290,000
Stone and sand, limestone for cement		13,000
Sulfur, native (from ore)		58,073

## MINERAL FUELS AND RELATED MATERIALS

Coal	tmt	85,803
Gas, natural, gross	mcm	11,000
Petroleum:		
Crude	t42	334,100
Refinery products:		
Gasoline:		
Aviation	do.	100
Motor (extra)	do.	2,200
Motor (regular)	do.	35,000
Jet fuel	do.	8,400
Kerosene	do.	170
Medium distillate fuel oil	do.	36,000
Natural gas liquids (propane)	do.	7,400
Residual fuel oil (black oil)	do.	22,000
Asphalt	do.	1,300
Total	do	112,750

tmt: thousand metric tons  
tc: thousand carats  
mcm: million cubic meters  
t42: thousand 42-gallon barrels



## Daniel Linsker & Oliver Wack

DL: VP - Global Client Services  
OW: Analyst Americas  
**CONTROL RISKS**



Risk is one of the topics at the forefront of every conversation on Colombia. To what extent are you focused on oil and gas, and what type of services do you provide the sector?

**DL:** In Colombia, a large share of Control Risk's revenue comes from oil and gas and mining; both face similar issues. For the oil and gas sector here, we provide everything from very basic pre-entry studies to extremely detailed risk-management planning and implementation. In the last licensing round, we did a lot of work helping companies actually benchmark different prospects by analyzing the security risks of the various properties earmarked by their geologists. Ultimately security risk can be modeled as a fixed cost for oil and gas companies, which makes it manageable.

The name Colombia has long been synonymous with risk. Have you seen this perception change from the outside world?

**DL:** Although security remains a big challenge in the country, local risks – community relations and environmental licensing – are probably more relevant. In the past, the security situation meant social activism

and community unrest was very low key, but now they are coming to the forefront as companies enter new areas. This has taken seasoned Colombian investors by surprise. Colombia's infrastructure issues also affect the security situation. EcoPetrol has started purchasing oil at the end of pipelines rather than the beginning, passing on transport risks to producers.

**How much do the high security risks in Colombia's southern border regions coincide with oil and gas activity?**

**DL:** Obviously oil and gas is a very attractive target for some of Colombia's armed groups, although there has been a slight change in the way they interact with the sector. In the past, armed groups would wait for companies to start operating before extorting them, but international regulations now mean the large majority of companies do not give in to extortion demands, so the FARC has begun kidnapping geologists and vulnerable employees. Many of these groups have also set up legitimate businesses, and their extortion can now take the form of, for instance, 'strongly urging' businesses to use services or hotels the group controls.

**What is your advice to companies when asked to pay for these overpriced services?**

**OW:** One of the strongest pieces of advice Control Risks repeats to its clients is for their risk management strategies to cascade down to their subcontractors. Our recommendation is to vet contractors as carefully as possible and have very transparent policies.

**DL:** Oil and gas companies used to keep most services in-house, but now the people in the field who are most exposed to security incidents or extortion are subcontractors. Ten or 15 years ago, companies in Colombia might have found ways to accommodate extorted demands, but now they are very much aware of the long-term legal and reputational risks which this entails. Global experience says the minute you give in to an extortion demand, you will forever be extorted.

**Kidnappings have increased slightly in recent years, what is the solution for companies when faced by one?**

**DL:** Prevention is always the best cure, although there is no completely failsafe

way to operate in some areas. In certain places, the community will be your first line of defense. There, you just need an advanced community relations program and strong journey management.

**OW:** Kidnappings these days are often very well planned operations, involving the infiltration of communities. Good local relations can alert an oil and gas company to this, especially in very rural areas.

**Has complacency led to some companies no longer taking the security steps they would have in the past, including consulting groups like Control Risks?**

**DL:** The improved situation has made it harder for risk managers to make the case for precautions, and some companies have stopped taking the security measures they would have previously. It is easier to spend money on security and community affairs once the cash is flowing; some companies will refuse to take the same measures for their preliminary work. It is a challenge in this era of businesses where, across the board, company managers are demanding that more be done with less.

**Much credit was given to the Uribe government for improving Colombia's security situation. How have you found the transition to the Santos government?**

**DL:** The foundations for improving the security situation probably started even before Uribe with the previous failed peace process. We realized, then was not the time to talk, although I think now is. The improvements at one point looked exponential, but they started to level off toward the end of Uribe's administration. The FARC has adapted and Colombia is a very large country with difficult terrain. There are issues with army morale – they feel less empowered than they did under Uribe, and the peace process is sending them a conflicting message.

**OW:** The advances under Uribe were not sustainable in the long term. Santos may have lowered army morale, but I think his peace talks have a real chance of concluding successfully, which would make a dramatic change. We do not envisage a non-violent paradise; extortion would probably continue, but attacks against infrastructure and kidnappings should diminish. •

## Michael Keough & Felipe Andrade

MK: General Manager  
**DOWNING TEAL**  
FA: General Manager  
**ESTRATEGIA HUMANA**



**How do the manpower issues in Colombia compare with other South American countries?**

**MK:** The governments in South America's main mining markets are all very cognizant of the manpower challenges the mining sector is going to face in the coming decades. For example, Chile has estimated that they will need 45,000 more mining jobs over the next few years for projects on the books today. In Peru, the estimation is that 150,000 people will be needed over the next five years, 30% of whom are technical professionals. Colombia has no such projections, which is understandable because of the long period of violence this country faced and the fact the industry is still being defined institutionally.

**What could accelerate the institutional direction necessary to have a thriving mining industry in Colombia?**

**FA:** There is currently no government or private body thinking from a broad perspective what the needs of the mining industry will be in terms of manpower. This impacts all kinds of institutions such as universities, government, and the miners. Only four or five universities

have any experience in training people for work in the mining industry, while there are few programs for semi-skilled workers. The Ministry of Mines and Ministry of Environment currently are in conflict with each other; each local minister of environment will have his or her own way of thinking and approaching the mining industry.

**MK:** Many companies are taking the view that we are in the midst of a five to ten year birthing period for Colombia to define mining outside of the traditional areas such as Cerrejon. If mining truly is a locomotive of growth then the government ministries all need to get on the same page with one another. Colombia deserves a huge amount of credit; Colombia is a different country from 25, or even 10 years ago. The country is trying to close a 30-year development gap in five years, which is quite a difficult challenge. The economics of minerals alone will drive Colombia towards mining; it is just a matter of time.

**What are some of the issues surrounding the existence of the informal or illegal mines in Colombia and what will help these groups cooperate with the government?**

**FA:** Colombia has a problem in that no one owns this land where mining can take place: the government could lay a claim, but it could belong to a former paramilitary group, or a local community. Fifty percent of the gold mining in Colombia is illegal, which creates a huge problem for the government because the government has to have complete control of these areas to release titles. Permits are not going to be issued to a paramilitary group! So these groups have even less of a reason to cooperate with the government.

**We have seen skill shortages globally in recent years. Are the major players in Colombia having issues sourcing skilled talent?**

**MK:** At the moment, the only thing big mining and big oil need to do in this country is run an ad and a thousand people will come knocking on the door for jobs. However, this will change as internally the locomotive of mining, the locomotive of infrastructure and the locomotive of oil all take off. At the same time, you

are bound to see the similar demand increase in other Latin American countries such as Peru, Mexico, Chile and Ecuador. Chilean companies are already looking at Colombian university graduates from the class of 2017 to address their challenges, but in Colombia there is no medium term plan. The challenge is the measurement does not exist and the institutional certainties do not exist yet, so companies in Colombia cannot plan for the future.

**Colombia has seen wages increase dramatically across the economy in the last five years. What are the implications of this for the mining industry, especially for experienced workers?**

**FA:** The wages in Colombia are almost twice that than they are in Mexico. Colombia is very expensive right now and the labor regulation is very complex and restrictive. For small companies this could create a very large challenge. For each peso a company pays in wages, the real cost is almost 1.50 pesos once payments to the government are taken into account.

**While mining companies in Colombia may be taking a five to 10 year view on the Colombian market, what needs to occur to kick start Colombia's next phase of development and/or ensure the market does not stall?**

**MK:** Colombia has to develop. World-class companies have invested hundreds of millions if not billions of dollars in Colombia because the potential is so huge and companies cannot even explore some of the most promising areas!

**FA:** If the peace talks with the guerrillas work, then mining will be very positively affected. But for these guerrillas a key cornerstone of the talks will be stopping mining in the land they control. We will not see the violence we once did, but if the government cannot develop a framework to bring lasting peace and incorporate informal mining, then the industry's development will be hindered. •





## Colombia's Hydrocarbons: Continuing an Impressive Decade

"I admire the people of Colombia in that they have the capacity and are accustomed to solving complicated problems. Colombia is performing well and I am confident that the country will continue to improve going forward. Within six years, Colombia was able to double its oil production and reach one million barrels per day, a feat that no other country in the world has achieved. While issues remain, Colombia is working to solve them in a way that is equitable to the people and to the environment. In 2012 when Andes Energia was looking where to invest next, we could have chosen other countries, like Peru, but we are very happy that we chose to purchase assets here in Colombia."

- Alejandro Jotayan, CEO,  
Andes Energia plc



# Maintaining the Million

## Colombia's oil and gas industry

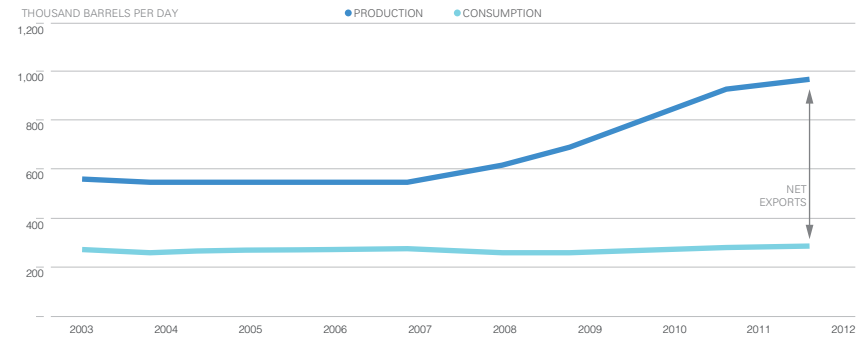
2013 marks the 10 year anniversary of the establishment of the Agencia Nacional de Hidrocarburos (ANH), the organization credited with rejuvenating the Colombian oil and gas sector. Taking advantage of the improved security situation achieved through 'Plan Colombia', the US funded offensive against rebels and drug trafficking, the ANH-led restructuring of the oil and gas sector has brought the attention of the international investment community back to Colombia. "International investors started hearing very good things about Colombia from around 2007; people have noted the changes in the country, with its improved security and stable contracts," says Cristian Ducara, general manager of Trayectoria Oil and Gas. The ANH marked an impressive decade, seeing Colombia finally reaching the long awaited one million barrels per day (boepd) milestone in December 2012. Now the focus turns to maintaining that level of production in the face of aging oil fields and socio-environmental obstacles. From a geological perspective, Colombia may not have the huge reserves of neighboring Venezuela, but as more of the nation has been freed of conflict and properly explored, numerous smaller deposits have been found which contribute to significant production. "Discoveries of heavy oil in the Llanos have completely flipped the country's future from importer to exporter, and this is a trend which will presumably extend into the medium-term. I think the oil boom was related to a certain extent to the improved security situation in the country – although the Caño Limón boom of the 1980s was able to occur amidst great instability. Nevertheless, it

is great to be able to enjoy the strengthened conditions of today," says Alberto Cisneros Lavaller, CEO and president of Venezuelan based firm Global Business Consultants. After the major discoveries of the late 80s, such as Caño Limón, the Colombian government along with the national oil company, Ecopetrol, sought to strengthen its position in the growing sector. The subsequent restructuring of the sector to unduly favor Ecopetrol, coupled with the deteriorating security situation, led to Colombia being widely neglected by investors throughout the 90s. Still without a new discovery of significance, the birth of the ANH in 2003 saw the focus shift to the creation of an attractive fiscal regime encouraging smaller juniors to enter the market, and it was these pioneering explorers who established many of the biggest producing assets we see in Colombia today. The bidding round (ronda) of 2012, through heightened qualification criteria, marked another shift in the Colombian oil and gas sector back to a focus on larger E&Ps. "If you consider the development of the United States oil industry, especially shale, you see that the big companies are not responsible for what it is today, but rather it was the entrepreneurs who went out there with money and a new idea. Colombia seems to be forgetting this and seems to only be encouraging the big players," says Stephen Newton, CEO of Southern Cross Energy. Despite the concern of many in the industry, the bidding round saw ExxonMobil, Shell, ConocoPhillips and Anadarko move into the Colombian market. "While Colombia did well and

was successful, the sector today is not growing as it was. Interest from junior players has withered for two reasons. The first is the problem with licensing, permits and the overall challenges of doing oil business here. The second is that the government may be becoming a bit complacent. The government feels that it made the country attractive and that this perception will continue forever," suggested Álvaro José Rodríguez, partner of natural resources at law firm Posse Herrera Ruiz. Meanwhile, E&P firms need to find enough support on the ground along the whole value chain. Margarita Villate, executive director of Campetrol, a chamber grouping the oilfield services sector, also gave her opinion on the areas where the government must improve: "We need clarity in the regulatory framework for new activities such as non-conventionals and offshore development. We continue to need security. Environmental licensing delays are time-consuming and very costly for our members. We have a hindrance in infrastructure development, which causes higher logistical costs, and we need financial support for small and medium-sized companies so they can acquire technology and develop their R&D departments". The Colombian government may be hoping a shift to the bigger players with strong corporate social responsibility records will help to solve growing social and environmental problems across the country. Nevertheless, particularly in terms of production, they need only look at the main players in the market today to see what can happen when smaller firms are given the right support and backing. •

### COLOMBIA OIL PRODUCTION AND CONSUMPTION

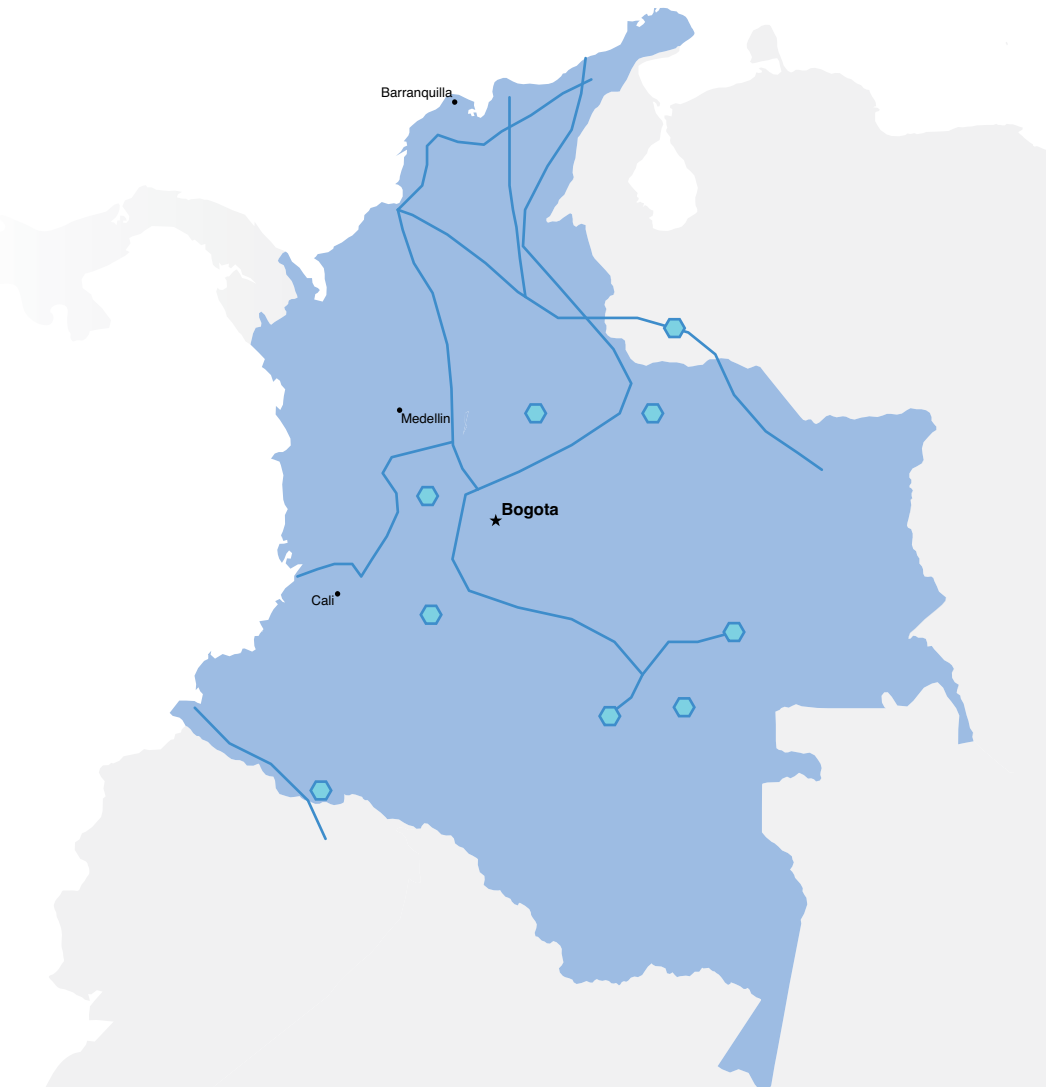
Source: World Bank



### MAIN OIL AND GAS FIELDS AND PIPELINES

Source: various

Oil/Gas field  
Pipeline



### CRUDE OIL PROVEN RESERVES

Source: CIA World Factbook

COUNTRY	BBL
1 Venezuela	297,600,000,000
2 Saudi Arabia	267,900,000,000
3 Canada	173,100,000,000
4 Iran	154,600,000,000
5 Iraq	141,400,000,000
6 Kuwait	104,000,000,000
7 United Arab Emirates	97,800,000,000
8 Russia	80,000,000,000
9 Libya	48,010,000,000
10 Nigeria	37,200,000,000
11 Kazakhstan	30,000,000,000
12 Qatar	25,380,000,000
13 United States	20,680,000,000
14 China	17,300,000,000
15 Brazil	13,150,000,000
16 Algeria	12,200,000,000
17 Angola	10,470,000,000
18 Mexico	10,260,000,000
19 Ecuador	8,240,000,000
20 Azerbaijan	7,000,000,000
21 European Union	5,568,000,000
22 Oman	5,500,000,000
23 India	5,476,000,000
24 Norway	5,366,000,000
25 Egypt	4,400,000,000
26 Vietnam	4,400,000,000
27 Indonesia	4,030,000,000
28 Malaysia	4,000,000,000
29 South Sudan	3,750,000,000
30 United Kingdom	3,122,000,000
31 Yemen	3,000,000,000
32 Argentina	2,805,000,000
33 Syria	2,500,000,000
34 Uganda	2,500,000,000
<b>35 Colombia</b>	<b>2,200,000,000</b>

## Stephen Newton

CEO  
SOUTHERN CROSS ENERGY



**Please provide a brief overview of Southern Cross Energy and the services you provide?**

Southern Cross Energy is in the business of identifying prospects and subsequently looking for investors that might be interested in these prospects. We are normally approached by people who might have assets that are underfunded or distressed, meaning that they acquired these assets thinking it would be easy to raise money but have found that this is not the case at the moment. We also offer a more technical arm where we offer such services as engineering and geology consultancy.

**What kind of demand have you been seeing for these underfunded and distressed assets?**

With the failure of the stock markets, particularly the Canadian exchanges, to provide the funding, we have been seeing that private equity wants to come in and buy these distressed, undervalued assets. They have an exit strategy,

usually with a 5-year timetable. Their objective is to take these companies up the value add curve and once they reach a plateau, sell them, or put them on the market. What we have been seeing is the classic case of the pendulum swinging too far with companies that were once worth \$40 a share now being worth \$6 a share and these are still very significant companies. Many companies were overvalued and now we believe they are significantly undervalued, creating a lot of opportunity.

**Colombia has traditionally been a haven for smaller companies. Do you see this trend continuing, especially as we start to see the emergence of unconventional and offshore?**

If you consider the development of the United States oil industry, especially shale, you see that the big companies are not responsible for what it is today, but rather it was the entrepreneurs who went out there with money and a new idea. Colombia seems to be forgetting this and seems to only be encouraging the big players. There are indeed issues with respect to fracking and unconventional, but I think the government is being far too restrictive, ignoring the fact these smaller companies were the pioneers responsible for Colombia's recent oil and gas boom.

**What are some of the concerns that you hear from your investors?**

One of the most important things that investors are looking for is people who understand the location and can identify problem areas or can highlight the risks so that investors can enter a project fully aware of the situation. Many times risk is equated to higher cost. These companies do not want to put people at risk and need to carry out operations in a certain way that sometimes increases cost. Instead of traveling by road, you might have to go by helicopter. If you contract a logistics company to move a drilling rig, there maybe a risk that the truck will get damaged because of the location and you will be charged accordingly. But it is important to realize that these risks do not apply to the whole country as there is significant regional variation.

**The perception of Colombia is synonymous with issues of communities and security. Do you believe that these issues are still significant today?**

Issues of communities and security are still present. Unfortunately the situation surrounding security has deteriorated recently with an increase in the number of pipeline attacks. I have to wonder with the current negotiations in Havana if FARC is exercising muscle here to put more pressure on arriving at a solution there. I believe that many, though not all, of the community issues are driven by the FARC. I feel that the communities' discontent is aggravated so as to create problems for the government in times of negotiations, pushing the government to make a deal that is less than ideal. A number of companies do a good job in socializing the projects that they are working on to the communities. They explain what is going to happen so that there no surprises; however, others do not. When this happens, dynamite is going off and people are drilling holes, the communities do not understand what is taking place. With regard to royalty distribution, the government did not think this through. The idea is that the money should benefit the country as a whole and that communities with oil and gas will still get a piece and can apply for more if they complete the paperwork; however, some are getting far less and suffering from lack of infrastructure. They will use the slightest excuse to put up obstacles to the oil and gas companies so as to attract the government's attention to in turn improve their condition, in the form of schools, hospitals, drainage and so forth.

**What is the final message that you would like to communicate about Southern Cross Energy to the international oil and gas investment community?**

If there are investors that are considering Colombia, we have a very interesting portfolio of projects. We believe that the valuations are either fair or less than fair and there is still great opportunity to move into this country. •

## Leading the Push

An overview of the main players

### Ecopetrol

Colombia's state owned oil company continues to dominate the market producing 754,000 boepd which equates to a 70% share of total production. Continued strong production and a healthy portfolio of exploration assets positions Ecopetrol well for the future. After finds at the Pastinaca, Cusuco and CPO-11 blocks earlier this year, Ecopetrol also announced a third discovery at CPO-10, this time at the Guainiz-1 well. Ecopetrol's share price, however, has seen better days. The highs of COP\$5,700 experienced at the end of 2012 and beginning of 2013 saw a sharp decline, down to COP\$3,800 in Q2 this year. The summer, however, saw their share price stabilize at around COP\$4,350.

**61.82**  
billion kWh

ELECTRICITY - PRODUCTION  
2011

Source: CIA World Factbook

Service companies around Colombia have had to step up their health, safety and environmental practices in order to meet the new standards set by Ecopetrol. Many see this as raising the standards of the sector as a whole. "Ecopetrol requires significant certification for companies it works with. ICG has just completed the one and a half year process to achieve that certification which will allow us to work with Ecopetrol. I fully agree with the level of certification required by Ecopetrol as it

raises our level as a service company and allows us to show our commitment to becoming an Ecopetrol service provider," explains Eduardo Enrique Rivodó Z. president of Industrial Consulting Group (ICG).

### Pacific Rubiales Energy

TSX listed Pacific Rubiales was born out of the exodus of oil experts from Chavez' Venezuela. Pacific Rubiales maintains its position as the largest independent production company in Colombia. 2012 saw Pacific build their light oil assets base in Colombia by acquiring two mid-size players; PertoMagdalena Energy and C&C Energy. This is in addition to international expansion in Brazil, Peru, Guyana and Papua New Guinea. Q2 gross production was 156,099 boepd (net production was 127,555 boepd), an increase of approximately 2,100 boepd compared to the first quarter of this year.

"The company will continue with its focus on conventional onshore activities with low costs. It will also emphasize resource activities in areas with light oil, potentially offshore in countries like Guyana, Brazil, and Peru. It is expected that the company's current production will double in four years; as such we are looking to expand our activities in different geological basins that will give us new opportunities in new countries. We will need reserves and resources to drive future growth, so it is important, at this time, to access these resources," a spokesperson for Pacific Rubiales told us.

### Petrominerales

Canadian based E&P company Petrominerales holds multiple properties across the Llanos Basin, in addition to single blocks in the Putumayo and Upper Magdalena basins. Production from Colombia in 2013 stands at around 24,000 boepd from a significant reserve

base. "If we can modestly grow production this year, and have industry average or better success rates on our exploration program, Petrominerales can certainly grow reserves, grow production, and provide proof of concept on the two exciting resource opportunities that we have. To put the exploration program in perspective, we have 60 million barrels of original oil in place. We typically recover about half of that, so 30 million barrels of un-risked reserve potential. If we can be one in three, that is 10 million barrels, and that is before we take into account any heavy oil or the tight oil resource in Brazil," says Corey Rutten, the company's president and CEO.

### Gran Tierra Energy Colombia (GTEC)

The Putumayo Basin's biggest producer and biggest landholder should be especially praised for overcoming the difficulties of operating in an area still feeling the social and security effects of guerilla occupancy. The Canadian based firm has continued to exceed expectations despite pipeline interruption and social re-

**45.35**  
billion kWh

ELECTRICITY - CONSUMPTION  
2010

Source: CIA World Factbook

sistance to oil and gas activity. "For the first two quarters of 2013, GTEC has had record production levels despite pipeline interruptions, through using alternative crude oil transportation measures. Our primary production area is the Putumayo Basin, where we have stabilized gross production at around 27,000 boepd. We are confident that for the remainder of 2013, we can meet or exceed production guidelines released at the beginning of the year," explains Duncan Nightingale, Gran Tierra's President.



# Corey Ruttan

President and CEO  
**PETROMINERALES LTD**



We recently met with John Wright at Petrobank, can you tell us about the relationship between Petrobank, Petrobakken (Lightstream) and Petrominerales?

In the late 90's, John and I worked at Pac'alta Resources Ltd. in Ecuador. The company grew from no production to over 4000 bep/d in a very short period of time. Unfortunately Pac'alta was subject to a hostile takeover. In 2000, we recapitalized Petrobank, we went back to the acquirer of Pac'alta and repurchased our old Colombian subsidiary which became Petrobank Latin American business unit and ultimately Petrominerales. In 2006, we did an IPO of Petrominerales, at that point I was CFO for all three companies. In 2010, I became 100% dedicated to Petrominerales.

In 2002, Petrominerales had two incremental production contracts in partnership with EcoPetrol. We had built up about 1,500 bep/d of production and were fortunate enough to be operating on the ground when the new fiscal and land tenure regime was introduced. We saw that as a huge opportunity. We focussed on the Llanos basin and ac-

quired 2 million acres of land at no up-front cost. We had some phenomenal exploration success and the company has grown considerably since then. In 2010, Petrominerales was completely spun out from Petrobank. Petrominerales was initially focussed on Colombia but we added Peru in 2009 and Brazil at the end of 2012. There is no way a company would be able to replicate this suite of assets today.

**What are the benefits of operating the companies at three separate entities in the current fiscal environment?**

When you start to combine multiple assets into one package you usually end up receiving a discount relative to the true value of the assets. Some investors might love heavy oil in Canada but not follow overseas exploration and vice-versa. This allowed shareholders to do their own portfolio management and invest directly in the business that appealed most to them. From an operational perspective, Petrominerales has always had a separate operating team; the only commonalities were at the corporate level, so the transition was quite smooth.

**Some interviewees have told us that the security situation in Colombia is worsening. Does this pose problems for you and is there a risk of investors conflating security risks with political risk?**

Early on we had to tell people over and over again that there is a big difference between security risk and political risk. Colombia is the longest standing democracy in Latin America, sanctity of contracts is absolutely ingrained and they have never retroactively changed a contract. However, there are security challenges that need to be managed. When Alberta started to mess around with the fiscal regime here, I think Canadians began to understand the difference between political and security risk. During the FARC, or Revolutionary Armed Forces of Colombia, peace negotiations and leading up to the elections in 2014, there has certainly been an increase in security incidents. But we feel that this can continue to be managed effectively. Petrominerales

is fortunate in that we are operating for the most part in the central Llanos basin, which is easier to manage from a security perspective than other areas.

**Petrominerales has worked closely with the governments in Peru and Brazil; how do you gauge the political risk in these countries relative to Colombia?**

The political will to have independent oil companies operating in Peru and Brazil is probably the highest it has ever been. There is a bidding round happening in Brazil right now, which exemplifies the desire to diversify from having only Petrobras developing the industry. Brazil has a complex regulatory environment but we have got an experienced team that can navigate that. There has been oil and gas activity for the last 80 years in Brazil and 1.5 billion barrels of oil have been produced in the basin in which we are operating. We are trying to bring Western Canadian know-how, practices, and quality of services to the country and are looking forward to our first phase of investment in Brazil starting later this year.

The regulatory burden in Peru is reasonably high. The timelines are long and that will create a bit of an impediment to having rapid growth of the sort we have seen in Colombia. In Peru, the biggest challenge is access. It is a very costly place in which to operate because of the logistics involved in accessing locations by river or helicopter. We are very focussed on bringing the cost levels down and efficiently navigating the regulatory regime. We have made a 53API light oil discovery that is 8km from a road, and 60 km from a barging point, so I think that can be very economic.

**Petrominerales is listed in Bogota as well as on the TSX, what are main benefits to being dual listed?**

All of our current production and 80% of our staff are in Colombia, so we wanted to make it easier for Colombian's to be able to invest in our stock. Today around 20% of our shareholders are Colombian, and I think that justifies the dual listing. •

The future looks bright for this growing power in Colombia's oil and gas sector. Nightingale points out that the lingering security issue is not the biggest obstacle to growth. "In addition to our production, GTEC has an excellent portfolio of exploration lands and is well positioned for sustainable future growth. However our ability to grow is partly dependent upon cooperation with the Colombian oil and gas regulatory authorities and in particular the Ministry of Environment's permitting arm ANLA, which is responsible for providing the permits that are necessary to facilitate exploration drilling and the development permits required to develop new discoveries," says Nightingale.

### Equión Energía

A joint venture between Ecopetrol (51%) and Talisman Energy (49%), Equión Energía was formed in 2010 from British Petroleum's (BP) Colombian assets. "Equión is, in many ways,

the same company it was under BP. In fact, it is even still registered in the UK and therefore a British company. Equión maintains the same high HSE standards it had under BP and much of the workforce remains since the take-over. In the last three years we have tried to make the company more flexible, which is necessary with our size and the developments in the market. We strive to take the best from all parties involved, from our history with BP, from Ecopetrol and Talisman, and from the culture we have developed ourselves," explained María Victoria Riaño Salgar, Equión's president. Two of the assets inherited from BP, RC4 and RC5, are offshore. Along with

unconventional resources, the offshore sector represents a beacon of hope for increasing Colombia's reserves. "Our offshore blocks RC4 and RC5, won in the 2008 Ronda, have huge potential, as does the Colombian offshore sector in general; for gas in shallow water and potentially liquids in the deep-water blocks. Offshore development will take time, as Colombia does not currently have the infrastructure or equipment available. It will come eventually and the ANH are revising exploration timelines on these blocks to account for this," continues Riaño. Equión currently produces around 27,000 boepd. •

**1.29**  
billion kWh

ELECTRICITY - EXPORTS  
2011  
Source: CIA World Factbook

**8.22**  
billion kWh

ELECTRICITY - IMPORTS  
2010  
Source: CIA World Factbook

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## Duncan Nightingale

President  
**GRAN TIERRA ENERGY  
COLOMBIA LTD**

**Gran Tierra has significant production levels, but what stands out most is the strong portfolio of projects that Gran Tierra maintains. What can we expect from Gran Tierra in 2013?**

For the first two quarters of 2013 Gran Tierra Energy Colombia Ltd. (GTEC) has had record production levels despite pipeline interruptions, through using alternative crude oil transportation measures. Our primary production area is the Putumayo Basin, where we have stabilized gross production at around 27,000 boepd. We are confident that for the remainder of 2013, we can meet or exceed production guidelines released at the beginning of the year. Within our considerable acreage in Putumayo we have two major producing assets in addition to other smaller producing assets, all of which are performing extremely well, especially our Costayaco and Moqueta fields. GTEC is currently the largest producer, largest landholder and largest reserve holder in the Putumayo Basin. In addition to our production GTEC has an excellent portfolio of exploration lands and is well positioned for sustainable future growth. However our ability to grow is partly dependant upon cooperation with the Colombian oil and gas

regulatory authorities and in particular the Ministry of Environment's permitting arm ANLA, which is responsible for providing the permits that are necessary to facilitate exploration drilling and the development permits required to develop new discoveries.

**Many in the market complain of slow and cumbersome environmental permitting procedures. What has been Gran Tierra's experience of environmental permitting and how much of a problem is it for the sector as a whole?**

I believe ANLA is giving its best efforts to improve the permitting process but it is far from quick and efficient. Slow permitting processes are slowing many of the exploration companies from drilling wells in a timely manner and in many cases this is causing a delay to companies meeting their contractual work commitments on time, thereby necessitating companies to apply to the ANH for contract extensions. Delays in exploration drilling and development of new discoveries is impacting reserves replacement, and therefore slowing production growth. Environmental permitting has become a bottleneck in the system and is becoming a very serious problem. The average time needed to permit an exploration well at the moment is approximately 18 months, which is totally unacceptable, and it could be longer if you have certain communities present within the area of operation. Companies can mitigate some of the risks of delay with good planning, communication and relationships, or by providing studies and detailed expert environmental impact studies and impact mitigation studies in a timely manner. However, GTEC believes that it goes above and beyond the requirements of ANLA by providing very detailed reports and inviting ANLA for site visits and conducting its operations to a very high environmentally sensitive standard, but despite its best efforts the permitting procedure is still taking an inordinate amount of time. As a result of these delays we are seeing companies beginning to divert some of their capital investment dollars to other countries where they can drill wells more easily. This year Gran Tierra had a significant discovery in Peru, which may compete for capital dollars currently earmarked for Colombia.

**Do you at least see signs of improvement within the environmental permitting procedure?**

I can say categorically that I do not see any significant signs of improvement in the environmental permitting procedure. We often see government publications stating that refinements are being made to the environmental permitting process but these do not translate into a significant speeding up of the permitting process for companies. We did begin to see some improvements in the process in 2011 but, at least for Gran Tierra, 2012 and so far in 2013 has seen the process get progressively worse. Where the average time to secure a permit in 2011 was previously 10 to 12 months, the average now is 18 months.

**Colombia reached its landmark one million boepd mark late last year. How can it sustain or increase that level?**

Colombia in 2012 produced approximately 345 million barrels of oil equivalent and the government hoped to achieve the one million boepd landmark. In December 2012 the Colombia managed to achieve that goal but I have doubts about how sustainable it can be. Colombia has the expertise and the resources in order to sustain or even increase the proposed growth targets, but in 2012 exploration wells discovered approximately 150 million barrels, that represents a 200 million barrel shortfall to replace reserves that have been produced. At current production levels Colombia is burning through its reserves in the form of production faster than it is replacing it. According to the ANH data, in 2012 there were 132 exploration wells drilled in Colombia, which resulted in the 150 million barrels of reserves found. Basic logic suggests at current rates of discovery and taking the mean field size being discovered that the operators need to drill more wells to replace the reserves being produced and definitely many more exploration wells if the desired growth targets stand a chance of being achieved.

**The Putumayo Basin is still known for some lingering security concerns. What experiences have Gran Tierra had in this regard?**

Gran Tierra has an extremely strong and effective community and social responsi-

bility program, which allows us to have a very good relationship with the communities in our area of operation. This provides a certain level of operational stability, however there are continuing security issues in the Putumayo Basin. Gran Tierra, like many of the producers in Putumayo, enjoys a very good relationship with the police and the military. Such a relationship also helps a great deal in preventing attacks to our drilling rigs and facilities. From 2008 to 2011, there were approximately 8 to 12 significant pipeline attacks on the OTA pipeline, while in 2012 there were more than 30. This dramatic increase led to Gran Tierra having to defer some of its crude, either by not producing it or transporting it by truck. The situation has not improved since but equally it has not gotten worse. Thankfully throughout this period Gran Tierra, through its alternative crude oil transportation routes has been able to maintain a reliable level of production for the benefit of its investors and demonstrate increasing production levels and transportation reliability.

**Colombia has long been synonymous with security issues. How savvy do you find investors on the very regional and generally improving situation in Colombia?**

Investor perception of Colombia varies, the investors, bankers and analysts tend to take a high level view. There is no way they can know the specific details of every company so the whole of Colombia and the oil and gas operators are often lumped in one pot, which is very unfortunate due to the differences between the areas of operation within Colombia. Many of the regions that companies operate within have many different operational challenges, which provides challenges to the analysts when assigning values to companies and making comparisons of the value between companies. Gran Tierra for example has shown significant growth and reliability of production despite the crude oil transportation challenges; however we are still compared to other producers in Colombia who have not shown the same level of significant positive growth. •

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Colombia's Development

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## The Future

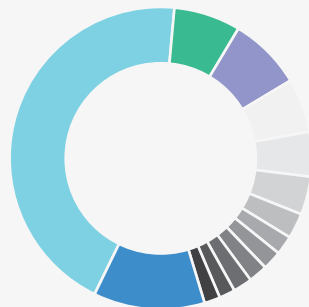
### Unconventional and offshore resources

Without a major new conventional discovery in over 20 years, the oil and gas sector in Colombia is depending on the potential that lies with its unconventional and offshore resources for the longer term. 2012 saw the likes of ExxonMobil, Shell and ConocoPhillips confirm their interest in Colombia's shale evolution. Colombia has yet to prove the full extent of unconventional reserves, but investment from such big players has given a great deal of confidence to the market. "Colombia has huge potential for the production of shale oil and gas," says Rivodó of ICG. "In fact, I believe it holds the 5th largest shale reserves in the world. Companies like ExxonMobil would not come to Colombia for 2,000 or 3,000 boepd. 10 years ago we did not have the technology to identify and extract shale deposits, but now we do and this represents a huge opportunity for Colombia."

Unexplored geology, however, is not the only question mark hanging over the huge potential that shale is promising. If Colombia is to maintain its strict stance on environmental permitting, then it need only look to the political and social resistance to shale extraction methods we have seen in the US, Canada and Australia, among many other places around the world. The Colombian authorities will have to solve these issues in the coming years if significant unconventional reserves are found; the future growth of their oil and gas sector may hang in the balance. "New reservoirs will hopefully be found, and many of those will contain unconventional resources. There is really no alternative, because remaining a net oil exporter is very important for the economy," suggests Emilio Azout, country manager of leading oil and gas software developer Paradigm.

### COLOMBIA OIL EXPORTS BY DESTINATION

Source: National Department of Statistics



United States	44%
China	7%
Spain	8%
Panama	6%
Netherlands	5%
Chile	4%
Aruba	3%
United Kingdom	2%
Peru	2%
India	2%
Dutch Caribbean	2%
Turkey	1%
Venezuela	2%
Others	12%

Offshore production, meanwhile, may take longer to materialize, but most agree the potential is huge for the South American nation straddling both the Caribbean and Pacific. This year, Anadarko, in partnership with Ecopetrol, have contracted CGG to acquire and process 5,500km<sup>2</sup> of 3D seismic, the most extensive in the country's history. "I think there is good offshore potential in Colombia, and the sector will come to comprise a significant amount of Jason CGG's work here," says Jorge Aranguren, manager at Jason CGG. "Companies such as Equión, Petrobras, Ecopetrol and Anadarko have many offshore blocks. Jason CGG has been conducting feasibility and inversion studies with excellent success – not in terms of oil reserves, because many of them are gas, but in helping the companies decide whether to continue development."

## Eduardo Enrique Rivodó Z.

President  
**INDUSTRIAL CONSULTING GROUP (ICG)**



### Please provide a brief introduction to Industrial Consulting Group (ICG).

ICG, founded in 2009, is a consulting company focused on assisting with pre-commissioning, commissioning, start-up and optimization of oil and gas production facilities in Colombia. We review and conduct testing on control, data acquisition and other systems in order to ensure a smooth transition from engineering, procurement and construction to full production of oil and gas facilities. Colombia, until very recently, had very small production levels in comparison to other countries in the region like Venezuela or Mexico; for this reason it has not developed the level of expertise and investment required for high quality services like those ICG offers. With recent increases in production, we are now seeing the level of quality in Colombia rise and ICG is playing an important role in that process. For our clients such as Pacific Rubiales, using ICG increases the speed and quality of transition, allowing them to begin production quicker.

**ICG is now also working with VETRA, who are in partnership with Exxon-**

### Mobil for unconventional resources. Do you see a lot of potential for the extraction of shale oil and gas here in Colombia?

Colombia has huge potential for the production of shale oil and gas, in fact I believe it holds the 5th largest shale reserves in the world. Companies like ExxonMobil would not come to Colombia for 2,000 or 3,000 boepd. 10 years ago we did not have the technology to identify and extract shale deposits, but now we do and this represents a huge opportunity for Colombia. ICG provides services in both unconventional and conventional resources. Colombia also still holds huge potential in conventional resources also, specifically along the Orinoco River in the Llanos Basin.

### What is the role of ICG's Houston and Toronto offices?

Maintaining a small representation office in Houston allows you to reach the whole world of oil and gas from one city. From Houston we are able to source a variety of American products. By keeping up with the latest technology in Houston we are able to provide solutions to our clients in which small changes in technology can significantly increase and optimize production. ICG's director of strategic planning is based in Toronto and runs our Canadian office. We also have the intention to list on the TSX, an exchange which is ideal for small companies in the resource sector. Currently the cost of listing is too high for a company of our size but we hope in three or four years to be in a position to capitalize on the funding opportunities the TSX offers. We are currently conducting road shows in the US and Canada to raise finance towards this eventual goal, but this is a challenging process, which we expect to see the benefits from in early 2014.

### Ecopetrol is, of course, the largest producer here in Colombia. Are they a potential target for ICG?

Ecopetrol is the primary producer in Colombia and for that reason ICG fully intends to make Ecopetrol its client. However Ecopetrol requires significant certification from companies it works with, ICG has just completed the one and a half year process to achieve that

certification which will allow us to work with Ecopetrol. These certifications also put ICG in a good position to work with many of the new players moving into the Colombian unconventional hydrocarbon market. We intend to attack the market aggressively in the next six months in order to have a very successful 2014.

### If we return two years from now, where will we find ICG?

We have set out a five year plan to be active in five countries; most likely in Guatemala, Belize, Brazil, Papua New Guinea and Peru in addition to Colombia. We will be four times bigger than we are today, in terms of employees and activities. In Colombia we also hope to be working in unconventional with VETRA and ExxonMobil, depending on the length of the environmental permitting process.

### Do you have a final message for the our readers?

I am originally Venezuelan but I am extremely happy to be in Colombia. The country has opened its doors to us and we feel privileged to work here. When we are in Colombia's Llanos Basin, we feel at home. It is the same Llanos as Venezuela, the same environment, the same people. We would like to contribute to the development of Colombia. We are establishing a maintenance, logistics and training facility in Puerto Gaitán, among the big producers of the Llanos Basin. Our focus will be to provide training for Colombian technicians working with heavy oil in the Llanos Basin, giving Colombia the best chance to take this opportunity to improve its human talent and increase production. •





## A Unique Country: Challenges and Opportunities in Colombia's Hydrocarbon Industry

“From a business perspective, the main challenges [facing companies in the oil and gas sector] are community relations and environmental permits to carry on exploration activities. Further, companies may face difficulties to transport oil because of significant infrastructure limitations in the country. From the fiscal standpoint, they need advice on applicable treatment to their investments in acquisition of rights, and in exploration and exploitation phases, to ensure proper capitalization and amortization policies. They also need advice in duly management of special exchange control rules.”

- Publio Perilla, Executive Director,  
EY (formerly Ernst & Young)



# The Bottleneck

## Environmental permitting in Colombia

Companies have complained about permitting delays across the board in the areas of seismic exploration, well creation and field development. Orlando Cabrales, former president of the ANH, told Bloomberg News that with an increase in the number of companies seeking permits for exploration and production, wait times have doubled in some instances. Even state-owned Ecopetrol saw delays in environmental permits during 2012. Such delays have led to the fear that Colombia will continue to fail to breach its current seven year limit on oil reserves, and stagnation and decline are two words which observers have become accustomed to reading.

Oil is Colombia's number one export; however Colombian production is currently out-performing the discovery of new reserves, lowering the reserves-to-production ratio (RPR). The fact that 75% of basins in Colombia remain underdeveloped, a large amount of which have not even seen seismic acquisition, highlights the regulatory inertia. Tyler Rimbey, VP business development of Platino Energy, says: "Environmental permits for drilling can take from six months to over a year, which is why world scale finds have not been made in Colombia in the last two years," a statement that sums up the level of frustration across the industry. "Colombia in 2012 produced approximately 345 million barrels of oil equivalent but I have doubts about how sustainable it can be," says Nightingale of Gran Tierra. "Colombia has the expertise and the resources in order to sustain or even increase the proposed growth targets, but in 2012 exploration wells discovered approximately 150



Image: Oleoducto de Colombia SA

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The government has recently been getting much tougher on environmental issues. When preparing the environment impact assessment they are asking for more information on hydrogeology, geotechnical issues, and other related fields. When we get these requests sometimes our first reaction is that these are not necessary, that this is not a big deal. The government just wants these as a term of reference and you have to put those in reports. It is expensive, but we have to do it. With the delays, we just try prepare our clients with the studies they need and participate in the ongoing discussions. Currently we have a proposal that we have been waiting for two years for approval.



- Santiago Correa,  
former Environmental &  
Sustainability Manager,  
Ausenco

”

million barrels, that represents a 200 million barrel shortfall to replace reserves that have been produced. According to the ANH data, in 2012 there were 132 exploration wells drilled in Colombia, which resulted in the 150 million barrels of reserves found. Basic logic suggests, at current rates of discovery and taking the mean field size being discovered, that the operators need to drill more wells to replace the reserves being produced and definitely many more exploration wells if the desired growth targets stand a chance of being achieved.”

The Autoridad Nacional de Licencias Ambientales (ANLA), Colombia's environmental regulator, may be just three years old but it is under huge pressure to tackle the delays which are holding back progression of the whole industry. Many suggest that the recent restructuring of the permitting process is to blame for delays. In return the government would suggest that the restructuring was a necessary reaction to increased demand and the delays are simply a consequence of that. "At the beginning of the recent oil boom, it was much easier for the companies present in the market," says Nelson Navarrete, president and CEO of Petroamerica Oil, who have moved successfully into commercial production in 2013. "There were attractive fiscal terms, as we see today, but in addition there was excess capacity in the pipeline network. At that stage, the environmental permitting process was much like anywhere else in the world, and there were few complaints. However, as the market grew and many new companies entered, the authorities had to restructure the environmental permitting process and with

that restructuring came the delays we hear so much about today. In reality, however, the time taken for environmental permitting in Colombia is much less than that of the US or Canada for example.”

If ANLA is to succeed, it needs to identify the main issues affecting the speed of permitting, which many suggest may be due to staffing shortfalls at the regulatory authority. "Of course more can be done to improve the environmental permitting process. The government should consider appointing more people to ANLA and the Ministry of Environment, which is overworked and unable to process all the applications. This is delaying Colombia from reaching the levels of production it expects. I am 99% sure solving these problems would result in a dramatic improvement," says Omar Leal Quiroz, president of OMEGA Energy Colombia.

"The exploration timeline at our Buenavista field," he continues, "depends on when we receive our environmental license. We applied for it a year and a half ago and it is taking longer than expected. With the new rules, we had to do public consultations. The permitting process has been very tough because there has been local conflict against the company acquiring the seismic for our neighbour, which has caused problems for us too. There is a lot of contamination in the region, and with little knowledge of our environmentally responsible plans, the public fears the same from us. Perhaps to gain votes, local politicians create a lot of publicity about matters they do not understand. OMEGA Energy has plans to drill a large number of wells at Buenavista as soon as the license is granted.” •

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## Omar Leal Quiroz

President  
**OMEGA ENERGY COLOMBIA**



### Please introduce Omega Energy?

We started as a service company called PEI, offering rental equipment and parts. Then we moved into workovers, drilling and well testing services. In 1999, we started putting in the wells, facilities and operations for assets belonging to small companies coming into Colombia. OMEGA Energy was created in 2000 with the intention to enter exploration and production. We had some input into the changes to E&P contracts in Colombia, and studied potential projects around the country before they came in. Investors – mostly foreign – carried us to begin with. We reduced our participation in projects every time we made a discovery, and ended up with involvement in more than 20 blocks. In 2009, OMEGA Energy decided to concentrate on the Buenavista, La Punta, Llanos 21, Midas and Paloma assets, meanwhile fully selling off most of the rest of the properties. Last year we bought Lukoil Overseas' Colombian assets, which have good production potential, and created the new company Nikoil Energy. We already have a team in the Condor block starting production and in Marina 1 block, in partnership with Ecopetrol, which owns 30%.

### At Buenavista you discovered shallow heavy oil. What is the timeline for further exploration there?

The exploration timeline at Buenavista depends on when we receive our environmental license. We applied for it a year and a half ago and it is taking longer than expected. With the new rules, we had to do public consultations. The permitting process has been very tough. There is a lot of contamination in the region, and with little knowledge of our environmentally responsible plans the public fears the same from us. The government should consider appointing more people to ANLA and the Ministry of Environment, which is overworked and unable to process all the applications. This is delaying Colombia from reaching the levels of production it expects. I am 99% sure solving these problems would result in a dramatic improvement.

### Did you participate in La Ronda, and what further opportunities would you like to pursue?

OMEGA Energy participated in La Ronda, but was second in most of its bids. However, we are in negotiations with two big producing companies for sale in Colombia – you may see developments in the next two or three months. We are working with the UBS Bank for the finance necessary to acquire these companies. We have been very successful in past financial deals, securing a bond with the Bank of New York last year, paying every month without delay and complying with all our obligations, thereby inspiring other institutions' confidence in us. We have now signed an agreement for a \$300 million, which we hope to put in the market in September.

### OMEGA Energy now has projects in Paraguay and Nigeria, and plans in Trinidad. Is your international portfolio likely to grow?

OMEGA Energy has identified some markets it wants to enter, the main one being Paraguay, where there is big potential in unconventional, perhaps five times that of Colombia. We have just received approval for the first stage of a prospecting contract on our first block there and have agreements for two more. Paraguay is virtually unexplored and it offers good investment conditions; our assets will con-

tain both conventional and unconventional resources. Our goal is to reach 100,000 boepd in ten years; international efforts will help in this. In Nigeria we hope to start production in the next two or three months, and OMEGA Energy is considering opportunities in Central America, Suriname, Barbados and Trinidad. We want to partner with Staatsolie, Suriname's state oil company, and are happy to review the opportunity to work in any other partnership.

### Your group also includes the companies Petroleum Equipment International and Pegasus Blending. How do these come into the equation?

Our group has service and oil and gas companies. PEI does not really exist anymore; Nikoil is the new entity that took it in its entirety. OMEGA Energy is the headquarters. Pegasus Blending is catered to take gas from various places and separate the liquids, leaving dry gas for power generation. It has two projects already and hopes to keep growing. The idea is to expand Pegasus Blending to many countries and we are looking for investors to join it. The separation process has environmental advantages, and although there may be others doing it, here we are certainly the only ones with carbon credit approval.

### If we return in 2015, how will OMEGA Energy be different from today, and what will be the main talking points?

Unfortunately, last year the ANH designated most of the areas that could be Type 1 as Type 2. As a result, they did not receive offers for these areas, and this is something they need to think about for the next round. However, they did manage to sign a number of contracts, including for unconventional resources – which, while in their infancy, have huge potential. I am very worried about exploration in Colombia and how the country can maintain its production levels – no big discoveries have been made in the last 20 years or so. The big potential for conventional oil is still in the foothills, which is why we think Condor is so promising. We are looking at three structures, each of which could contain between 50 million and 500 million barrels. In 2015, I hope OMEGA Energy will be producing around 20,000 boepd, mostly from Buenavista. •



# Freedom to Produce, Freedom to Protest

Community relations in Colombia

Community related issues are, perhaps, the only problems concerning Colombia's oil and gas industry greater than those associated with environmental permitting. "Many communities will completely refuse to accept oil and gas activities in their area," says William Augusto Franco Castellanos, general manager of Colombian firm Meridian Consulting. "Other communities are the opposite; they demand a lot of the oil and gas companies before any operations can begin." Environmental and community issues are not exclusive of one another; the permitting procedure incorporates community consultation, which puts a lot of power in the hands of the communities. As the first on the ground seismic companies have become accustomed to dealing directly with communities at the early exploration stage, the top seismic firms making it a key selling point of their service offering.

"SAExploration's strong engagement with local people can aid in the environmental permitting process," explains Arturo Méndez, vice president of SAExploration in Colombia, "but in many cases you simply cannot please everyone. We may have an area of 400km<sup>2</sup> to cover, for example, but 100km<sup>2</sup> is owned by one person who flatly says no to any oil and gas activity. In those situations it becomes very difficult, even when the majority of local people agree to the exploration program. In addition, the community element does not only play a part before exploration activity but also during and even after."

Previously named South American Exploration (SAE), the company has rebranded as SAExploration since their expansion beyond the continent and listing on the NASDAQ. Their strong record with com-



Image: Talisman

munities has played a big part in their success in Colombia, still their biggest market, where they have served clients such as Pacific Rubiales, Talisman, Pluspetrol, Shell and Lewis Energy. "SAExploration has extremely good relations with the local communities in Colombia, which is very significant for our clients as it allows us to solve a lot of the problems for them during the exploration stages," continues Méndez. Historically, protests were suppressed by a mixture of heavy-handed policing

and, often, paramilitary intervention. Today, most Colombian paramilitaries have been demobilized, and government forces have tightened their control over oil-rich basins across the country. The Colombian government has also taken measures to reduce violent policing and hold the military accountable for human-rights abuses. These generally positive developments may have led to a growth of vocal discontent in communities frustrated by resource exploitation in their back yards.

“

In regard to the biggest challenges to E&Ps I would say communities, communities, communities. However the problem is not the communities, the problem is the lack of a clear legal framework to govern community consultations. It is like knowing when a game starts but not knowing the rules or when it will end. I should also mention that this issue for the oil and gas sector is less complex than that of the mining sector, and both are less complex than in the infrastructure sector. Many of these issues come down to failures of the national governing bodies, however the ANH, in comparison to other authorities, seems to be a first class institution.



- Carlos Umaña Trujillo, Managing Partner, Brigard & Urrutia Abogados

”

"In the past, the security situation meant social activism and community unrest was very low key, but now they are coming to the forefront as companies enter new areas. This has taken seasoned Colombian investors by surprise," says Daniel Linsker, VP at risk management firm Control Risks.

The last few years provide many examples of tension between oil companies and locals, although the trigger for these disputes varies widely from case to case. Labor disputes are a growing problem across the country's oil producing regions, but direct civil action from local peoples often revolves around environmental concerns and disagreements over the distribution of royalties earned from oil extraction.

Previously, proceeds from oil production were distributed through local municipalities and departments. This system, however, led to the widespread misappropriation of funds by local authorities, prompting the central government to make radical changes.

In a move which many describe as swinging the pendulum too far the other way, the distribution of oil royalties has been centralized with an intention to see funds benefit the whole country rather than just oil-producing provinces. Communities are now required to submit formal and comprehensive proposals for development projects that require funding from oil revenues. It is fair to say that the majority of these communities are ill prepared to organize such proposals in the formal manner required.

With access to funds reduced, communities feel they have little choice but to target oil and gas companies active in their region to pressure, albeit indirectly, the central government. "Part of the reason we have community issues is because of the unfair distribution of funds by the government, but the easiest target for community frustrations remains the oil and gas company in their backyard," says Nightingale.

Companies feel the demands being placed on them are tasks that should be fulfilled by local and central government. This seemingly endless cycle spins atop the backdrop of poverty and extreme economic divide which still grips a South American nation struggling to emerge from its troubled past.

While the companies have clear objectives and the government clear responsibilities, it is the communities who clearly hold the power. For Colombia to reach its ambitious hydrocarbon production targets in the coming years, it will have to have the oil region communities on board. •

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## Arturo Mendez & Raul Roland

AM: Vice President, Colombia Operations  
RR: Manager, HSE  
**SAEXPLORATION**



AM

SAE is now active in a number of markets around the world. How important is Colombia for the company currently?

**AM:** SAE was established in Colombia in 2008 when we were growing at about 10-12% per year and currently Colombia is the most important market in our South American operations due to the level of oil and gas activity in the country. In Colombia, we work with most of the major players; Pluspetrol, Talisman, Pacific Rubiales, Shell, Lewis Energy and we are currently in the bidding process for Ecopetrol. In the last two years, we have conducted the majority of the work available for Pacific Rubiales. Where in Peru and Bolivia we dominate the market, in Colombia we maintain about a 15% market share.

If I were to ask the big E&Ps in Colombia about SAE, what would their perception of the company be?

**AM:** I believe the key elements of SAE are people and service. SAE has the most experienced staff, not just in Colombia but across the region. SAE has extremely good relations with the local communities in Colombia, which

is very significant for our clients as it allows us to solve a lot of the problems for them during the exploration stages.

There is a lot of talk in Colombia about unconventional and offshore oil and gas. Has SAE seen much growth in these sectors?

**AM:** There is a lot of talk about unconventional oil and gas, but we are yet to see that materialize into real business. Colombia is a little slow in adopting new technologies.

Environmental permitting in Colombia is creating a bottleneck for crucial exploration activity. How is this problem affecting business for SAE?

**AM:** Environmental permitting is a really big problem for SAE and the whole market. SAE won programs in February and March 2012 but we are only just finishing them now in August 2013 due to environmental permitting delays. We are told to expect a wait of four to six months when in reality it is more like 12 to 18 months. We have seen no significant signs that the environmental permitting process is improving.

**RR:** With environmental permits, Colombia has a ministry for social protection and a ministry for the environment. There are also autonomous regions that have the country divided in various zones, each zone is autonomous in terms of environmental permitting, and each has its own way of qualifying and evaluating the documentation used for an environmental permission, around 6-8 months are need for this kind of permit. I have not seen any effective movement to try to standardize or equalize the processes across these regions.

How many people would you normally employ for a seismic crew, how many would be from the local community and do you have to invest heavily in training?

**AM:** SAE would usually employ between 1000 and 1300 people for a seismic crew and on average 60% would derive from the local community. More often than not, there are not enough people in the local community. In most regions the local people make up the unskilled section of the workforce but

increasingly, in areas like Llanos or Casanare, we can find a skilled local workforce too. In every project we have to invest heavily in training to ensure the standard of our work is where we want it to be. Training however not only benefits the quality of our work but also provides the local people with skills they will be able to use for the rest of their lives, which is of great value.

2013 saw SAE become a public company by listing on the Nasdaq exchange. What were the key factors behind this decision?

**AM:** When SAE was established, the name stood for South American Exploration, representing the initial intentions. However, due to requests from our clients to expand outside the region, we became a global company. So the name remained SAE but this now stands for Safety, Acquisition, Experience. Two years ago the decision was made to take the firm public and it has taken that period to fulfill all the requirements for the listing. When a company goes public it must maintain a high level of transparency and ethics, this reassures our larger partners and clients, so we have had a very good reaction from the market so far. We expect our shareholder base to come primarily from the US and Canada.

When we come back in 2015 how will SAE be different to what we see today?

**AM:** SAE expects to continue growing at the strong levels you have seen in recent years and you may see a wide variety of services being offered. In Colombia, we are waiting to see how the market develops. We have always seen great potential in Colombia but the social challenges need to be overcome. Outside of Colombia we would have moved strongly into the Brazilian market but I believe Colombia will remain our strongest market in the region for many years. •



Image: B2 Gold

## Monumental Backwardness Moving Forward

Infrastructure constraints for Colombia's industry

Reducing environmental and social obstacles to hydrocarbon exploration and production along with the development of unconventional and offshore resources could see Colombia experience huge production increases in the coming years. However, these projections are being met with mixed feelings as the industry comes to the realisation that Colombia's already struggling infrastructure will be playing catch up to anticipated production levels.

In addition to the transportation of hydrocarbons, those moving large equipment are among the worst affected. "Over the longer term, the real challenge facing the country is that of infrastructure – transportation costs are very high, and moving equipment around the country is ridiculously ex-

pensive, making it difficult to conduct short term projects. As an example, a rig move which would cost \$150,000 in North America costs a million dollars for the same distance," explains Warren Levy, chairman and CEO of Estrella International Energy, now the biggest rig holder in Colombia after its acquisition of San Antonio International Colombia this year.

Given the difficult topography, lack of infrastructure and still precarious security situation in Colombia, it is little surprise helicopters are of great utility to Colombia's extractive sectors. Bogota-based Vertical de Aviación has seen demand for its services rise over the last few years and sees the trend continuing in the near future. In addition to its 10 helicopters in Colombia, out of a total of 25 worldwide, the com-



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pany has four additional Russian-made helicopters on order to meet increasing demand. "Our helicopters have a great cargo capacity and oil companies need equipment which moves greater amounts of weight in the least possible time to reduce expenses and the only helicopter that can do that is the Mi-8 MTV-1/ Mi-171 series; our helicopters have a 4 tons capacity and today, drills are designed to weigh approximately 4 mt," explains Admiral Mauricio Soto, executive vice president of Vertical de Aviacion. Current Colombian President, Juan Manuel Santos, has pledged to invest \$100 billion to improve infrastructure over the coming decade. At least half of these funds are forecast to come from the private sector. Where and how this money will be spent is still unclear, but the oil and gas and mining sectors will be keeping a close eye on the developments. "As you stretch your operations into the countryside and start using departmental or municipal unpaved roads or face the need to build new access roads, your costs and exposure to so-

cial opposition increase substantially. Both public and private sector need to work and invest together in creating appropriate infrastructure," comments Marcela Vaca Torres, general director of GeoPark. Undoubtedly the most significant infrastructure project for the oil and gas sector is the 975km Bicentennial Pipeline, the longest and largest in the nation's history. Stage one, near completion, will cover 230km through Colombia's most productive oil fields in the Llanos Basin from Araguaney to Banadía. From Banadía the 30-42 inch diameter pipeline will hug the Venezuelan border, winding through the Lower Magdalena Basin, then west to the port of Coveñas on the Caribbean coast. The project is a significant undertaking and certainly a step in the right direction but is still some way short of satisfying the sector's demand. Pipelines are the most efficient and cheapest way to transport oil, but rebel groups remain a significant force in many areas of the country and pipelines have long represented a prime

target for their attacks. According to the Colombian government, there were about 31 attacks against pipelines in 2010, and 84 attacks in 2011, and 117 in 2012. This rising trend has continued into 2013. "There have been a lot of discussions about pipelines and river transport, but not nearly enough about roads," suggests Warren Levy of Estrella International Energy Services. "The river transport system works very well in Peru, and reasonably well in Brazil and the system connecting it with Argentina and Paraguay sees very heavy traffic. There are parts of the world where it is much more effective than road transport, but it took Peru 15 years to figure out how to effectively move rigs along the river and there are still problems doing it. Most conventional oilfields really require road access. Colombia badly needs major investments in highways, particularly from the ports to Bogotá, and from there to the main fields. This is the missing piece in the puzzle to bring the country up from a million barrels per day to two million; everything else will sort itself out naturally." Colombia's rivers represent a realistic medium for oil and equipment transport; one large river barge can move the same amount of cargo as 75 articulated trucks. The Magdalena river stretches from the inland plains near the capital, through the oil fields of the Llanos and Lower Magdalena Basins to the port of Barranquilla on the Caribbean coast. The river is navigable by 25,000 barrel barges for 435km from the coast, upstream 4,000 barrel barges can reach as far inland as Barrancabermeja in the heart of oil country and home to Ecopetrol's refining and port facility. The government is said to have been in discussions with HydroChina over channelizing and dredging from Barrancabermeja to La Dorada, just 113km from Bogotá. Developments along the Magdalena could increase river traffic by five times and a number of logistics companies are already moving on the opportunity. Grupo Coremar seeks to establish a river port on the stretch between Barrancabermeja and La Dorada, transporting crude to its new oil and gas business cluster and port facility in



In the early 2000s, Colombia saw low levels of oil production, down to about 300,000 boepd, due to both political and logistical challenges. In subsequent years, we saw huge increases in the levels of foreign investment in Colombia's hydrocarbon sector, partly because of the contrasting developments in the political climate of Colombia and Venezuela. Now, production has risen to approximately 1,000,000 boepd fairly quickly, creating logistical challenges for transportation of hydrocarbons to market; this is compounded by Colombia's difficult terrain. The current system of pipelines is limited, leaving costly and inefficient road transport as the only option for many producers.

- Luis Eduardo Mendoza,  
General Manager,  
Big River Fota Naviera S.A.S.,  
Alianza Group SA



Barranquilla. While Alianza Group's Big River project will utilise large 25,000 barrel barges from their river port in La Gloria to their Atlantic oil terminals, storage and port facility, also in Barranquilla. The Caribbean port city of Barranquilla's position on the Magdalena River should see it grow as an oil export hub with the increase of river traffic, but the harbour's restricted depth will limit it reaching its full potential. Meanwhile the deep-water harbour of Cartagena is accessible from the Magdalena at Calamar via the Canal del Dique. However, entrance to Cartagena bay is only accessible through the Pasacaballos, just 6 feet in depth, limiting traffic to small barges. Some sympathy can be given to a government who has been struggling with political turmoil and violence, which have become synonymous with the nation's image. "Until now we have not invested in infrastructure because we have had other priorities, such as waging an internal conflict," explained Luis Fernando Andrade, director of the national infrastructure agency, ANI.



Image: Gran Tierra

However, now is the time to push forward with infrastructural improvements, be it road, rail, river or pipeline. With an economy growing at over 4% and foreign capital pouring in, funding these projects should not be a problem. Rather, it is ensuring they are built on time, to budget and with high quality. The legacy of President Álvaro Uribe was crushing the FARC guerrillas and opening up large swathes of land for oil exploration. President Santos's legacy may be helping move that oil efficiently. •

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## Nelson Navarrete

President and CEO  
PETROAMERICA OIL CORP.

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**When GBR met with Petroamerica Oil Corp. in 2011 you outlined your plans for 2012 as, focusing on the reserve potential at Los Ocarros block, development of Balay and the delineating of your assets. It seems you followed that path exactly, how has the shift of focus to production changed Petroamerica?**

When we spoke to GBR last, we were a pure exploration company with one key asset, the Las Macaras field in the Los Ocarros block. In 2012 we delineated our assets and began developing Las Macaras field, producing just 200-300 boepd early in the year but raising that to 4,000 boepd by the end of 2012. This development now means we have the cash flow to be fully financed from production for 2013. Petroamerica's capital program for 2013 is approximately \$70 million, so we have no need to go to the market for additional funds.

Production has taken Petroamerica to the next stage as a company, where we will now have new challenges and opportunities. We are now categorized as a junior production company in Colombia and we still have a very strong portfolio of exploration assets. Petroamerica has

an extensive drill program for the coming year and expect to reach 7,000 to 10,000 boepd production within 18 months. It is now vital that we start thinking beyond that period, assets in the Llanos basin are prolific but once reaching peak production their decline is rapid. We are looking to diversify our portfolio into other basins, which were too high risk for us previously but now present a good opportunity to extend the life of our reserve base. We will most likely be looking for partnerships in Putumayo Basin or even the eastern Llanos Basin for heavy oil.

**Petroamerica's current asset base has a strong pipeline of assets at different stages of production. Even the Los Ocarros block has a number of other promising fields, what are your hopes for the future of this block and your interests in the area?**

We finalized construction of permanent facilities at Los Ocarros in June 2013 with the operating company Parex Resources Inc. The production facility at Los Ocarros is able to handle 15,000 boepd and 25,000 barrels of water per day, meaning a total fluid capacity of 40,000 barrels per day. The field is now producing 10,500 to 11,000 boepd, and we are in the process of defining the optimum maximum production per day. At Los Ocarros we intend to drill several development wells in 2013, which could see production rising in the near future. We have already completed a water disposal well, which is very important given the nature of production in the Llanos Basin.

In addition we have made two additional discoveries, west of Los Ocarros and on different contracts. The first, La Casona in the El Eden block, where we have a 40% working interest and our partner is also Parex. La Casona is light oil and we expect to be online by the end of Q3 2013, we will also be building a facility and expect long-term production. The problem at La Casona is the associated gas, we have decided to extract the gas and use it for power generation in El Eden and Los Ocarros blocks. The second, Curara is in the El Portón block, where we have a 25% working interest alongside our partner CEPESA. Thus far we have tested just one of the reservoirs and our

intention is to continue long-term testing. We also have La Guira, in the same trend as Las Maracas, which has a high probability of success. Development at La Guira should be straight-forward as it will share facilities with Las Maracas. Finally we have a 50% working interest in Llanos 10 block, for which we expect environmental permits to come through in September, we will be looking to spot the well by December.

**The bicentennial pipeline, currently under construction, will wind between your current blocks in the Llanos Basin. How will this impact your operations and profitability?**

The construction of the bicentennial pipeline in close proximity to our blocks is very positive for Petroamerica. In March 2013 we began to commercialize our production, after initially selling it to Parex, and we had gained access to the Orensa pipeline to transport our oil. The development of the bicentennial pipeline will give us additional options when completed, as some of the participating companies will have excess capacity. The bicentennial pipeline is not just good for Petroamerica but for all producing companies in its vicinity.

**Production costs in Colombia are high. How much difference will additional pipelines make to the total cost of production for Petroamerica and across the industry in Colombia?**

Petroamerica's operating netbacks for Q1 2013 was \$79 per barrel, which is huge, one of the biggest in the world I believe. We sell our crude based on Brent, our royalties are at 8% and our operating costs are very low, \$3 per barrel. While transportation costs work out to about \$18 per barrel because we still truck the oil some distance. Changing that would make a huge difference. Also, light oil will be given priority at the pipeline because it will be used as a diluent for the heavier crudes in the region. This is a great advantage to Petroamerica and other light oil producers. Due to the topography, logistics are very expensive in Colombia, but in general the small scale of oil production in Colombia means that the industry does not benefit from the economies of scale seen in bigger producing regions. •

## Warren Levy

Chairman & CEO  
ESTRELLA INTERNATIONAL  
ENERGY SERVICES

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**Estrella is active in seven countries. How important is the Colombian market to the company?**

In the short term Estrella sees Colombia as a key market, and has invested heavily here, although there are some difficulties facing the operators due to environmental permitting problems. I think it is a question of overcoming this difficult period, and that the permits will eventually flow and the process will become more systematic. Over the longer term, the real challenge facing the country is that of infrastructure – transportation costs are very high, and moving equipment around the country is ridiculously expensive, making it difficult if not impossible to conduct short term projects. As an example, a rig move which would cost \$150,000 in North America costs a million dollars here for the same distance.

**Are you seeing any early signs of attempts to improve the infrastructure situation? Does the portability of your rigs give you a competitive advantage under the current conditions?**

Colombia badly needs major investments in highways, particularly from the ports to Bogota, and from there to the

main fields. This is the missing piece in the puzzle to bring the country up from a million barrels per day to two million; everything else will sort itself out naturally. Estrella's rigs' portability does give it a competitive advantage in Colombia.

**How has Estrella had to adapt its international expertise to the Colombian market, and how will the country's specific characteristics affect its future development?**

The biggest difference Unlike Argentina or Peru, where most of the oil has been developed in the same areas for the last 60 years, is that Colombia has had a lot of growth in new areas. The industry has to deal with community and social responsibility issues. Estrella does not address these issues directly but is still indirectly affected by them. For a fairly limited operating footprint there can be a wide breadth of technical challenges in Colombia, from very deep tectonically-stressed foothills to shallow heavy oil. A rig may be suitable to one or two regions, but not the whole country. Some modernization in the market is going to be needed, particularly in the development of the Llanos, where the wet low lying lands will necessitate pad drilling.

**Estrella has announced the acquisition of San Antonio Internacional Colombia (SAIC). Could you provide an overview of this company prior to the acquisition?**

SAIC has 26 rigs – the most of any company in Colombia – cementing and coiled tubing services, and involvement in some integrated projects. For a long time it was the biggest rig operator in the country and a clear leader. Estrella likes SAIC for many reasons, particularly its technical capabilities, size and experience. We feel our international capabilities and advanced technology can help it take the next step. SAIC has about a 10% market share; collectively we will be around 15%.

SAIC and Estrella have complementary project management abilities and, although SAIC's cementing and coiled tubing services are new, still fairly small-scale and limited to Colombia, there is the potential to grow them in a bundled form throughout the region from 2014 or

2015. In South America it generally takes about a year to launch a service in a new country.

**How much more M&A activity do you expect throughout the rest of the market?**

I expect much more M&A over the next six months to a year; valuations are low enough, with a lot of small Canadian public companies not currently viable on a standalone basis. Normally the first entrants into M&A activity are private equity groups, followed by hedge funds and public markets. Private equity is now stepping into a lot of different parts of the market.

**If we return in 2015, where will we find Estrella, and what will be the key topics of conversation?**

Our stated goal is to become the provider of reference in South America – not necessarily the biggest, but certainly the one that others look to as a benchmark for success. This brings a drive for high quality equipment, personnel, service and safety. Estrella is proud of its commitment to safety and over the last couple of years has been able to move into a leadership position. Over time we also expect to continue to modernize our rig fleet. I also expect continued geographic expansion. Mexico, Venezuela and Brazil are the only big oil and gas markets in Latin America we are not currently present in, and I would expect us to be in at least two of them a couple of years from now. Colombia needs consolidation in both the E&P and service markets – there are too many companies and the terms small service companies can achieve financing on are aggressive, with a risk tolerance that may not fully factor in the cyclical nature of the market. The lack of capital in the Canadian market today will drive some of this consolidation, as, ultimately, will logistical and practical efficiencies. Colombia's vibrant banking sector has been a wonderful source of growth, but if oil prices fall to lower levels, many small companies will likely disappear. In summary, we expect 2015 to see fewer players in the market, with Estrella having a clear leadership position in a broad range of services across the majority of Latin America. •



## Admiral Mauricio Soto

Executive Vice President  
**VERTICAL DE AVIACIÓN**



I would like to start the interview with a brief summary of Vertical de Aviación for our readers.

Vertical de Aviación was founded 31 years ago to provide services to the government, energy and petroleum sectors in Colombia with a helicopter and airplanes fleet; today we are the country's fourth largest air transportation company. Vertical de Aviación was the first company to import heavy equipment helicopters from Russia and today we exclusively fly the Mil Bureau Mi-8 MTV-1 and Mi-171 series helicopter. This type of equipment has proved to be a very good choice in a country with high mountains, inefficient roads and security problems. Investment in petroleum takes expensive, difficult to replace equipment, so the oil companies prefer to move their cargo by air means.

**Do companies move personnel by helicopter?**

Executives are moved by plane to the fields; helicopters move cargo and support personnel. For example, Vertical de Aviación had an important participation in the construction of the Colombian oil

pipeline. Within the petroleum sector we are qualified to work with almost all oil companies; we comply with all the requirements of the international oil and gas organization, thus allowing us to compete in this complex market. These companies look for security and we, in the last 3 years, have flown more than 75,000 hours without an accident. We are contractors for the Colombian government, the petroleum sector and we are international contractors for the US Department of Defense and State Department. Vertical de Aviación is one of the ten international companies audited and authorized to work with these US government organizations in Afghanistan, and the only CARB certified Company for Mi series helicopters in the world.

**Currently, which are your main contracts, the government or the oil companies?**

We have contracts with the government supporting the military sector in eradicating cocaine fields; we also provide support to the military forces in logistic transportation. We work with the petroleum sector as well, with short-term contracts, carrying drills to the fields and then back; there are no long-term contracts anymore because today there is more exploration than exploitation in the sector with small companies in the market which prefer to use our helicopters due to the important savings they have in time, security and the guarantee to have the equipment immediately. This works as well for the energy sector, transporting towers where there is no other way to install those than using a helicopter.

**Why are your helicopters better than others for oil exploration?**

Our helicopters have a great cargo capacity and oil companies need equipment which moves greater amounts of weight in the least possible time to reduce expenses and the only helicopter that can do that is the Mi-8 MTV-1/ Mi-171 series. These helicopters have a 4 tons capacity and today, drills are designed to weigh approximately 4 tons.

**Is there competition in the market with other companies? How is the**

**competition within the petroleum sector, and how are you differentiated from your competitors?**

First, petroleum companies look at your audits from international organizations; then they see how is your company in aspects such as security, capacity and experience. Then, there is the experience of our pilots flying in mountains and in complex security areas. Their experience is invaluable when we have to deal with difficult places. Although petroleum companies coordinate with the government to have security in the zones where there will be investment, personnel and cargo, there is always a need for experienced contractors in the field, and that's what we are and provide.

**Two of the government's key priorities are infrastructure and security. If the government achieves these priorities, how would this affect the petroleum companies' demand for your services?**

The government decided to increase security and increase foreign investment in order to increase production in the mining and oil sectors; these were the 3 great pillars. The fourth was to improve infrastructure, which has not been accomplished. With these priorities in mind, we have adjusted our planning to participate with the government supporting the oil sector and mining. Additionally, to comply with the sector's demands, we are in a process of renewing our fleet so we purchased four helicopters this past year. We have 25 helicopters and three airplanes throughout the world: 10 helicopters Mi-8MTV1/ Mi-171 series are in Colombia, and the planes are in Afghanistan. We have just one type of helicopter, the Russian Mi-8MTV1/ Mi-171 series; this is good because it reduces maintenance, spare parts and training costs. •

## Marcela Vaca Torres

General Manager  
**GEO PARK**



Please provide a brief introduction to GeoPark.

GeoPark's has been a history of rapid growth. It commenced in 2002 with the purchase of oil and gas assets in Argentina and Chile. Those assets included three operated assets in Argentina and a non-operated working interest in the Fell block in Chile, which at the time was operated by ENAP. GeoPark later obtained operation and 100% interest in this block. In 2006, the IFC, a member of the World Bank Group, became one of our shareholders, and we listed our common shares on the AIM of the London Stock Exchange. Five additional blocks were awarded in Chile in 2008, 2009 and 2011, as we established partnerships with Pluspetrol, Wintershall, Methanex and IFC. In 2010, we formed a strategic partnership with LGI, a Korean conglomerate, to jointly acquire and develop upstream oil and gas projects in South America. GeoPark looked persistently into different options in Colombia, finally engaging in negotiations with Winchester Oil and Gas, La Luna and Hupecol and acquiring three companies in the first quarter of 2012. Geopark's growth strat-

egy was acquiring a balanced portfolio in Colombia, with production and a lot of exploratory upside. Some of this came from Hupecol's La Cuerva, which had steady production of 2,200 boed of light crude; Winchester, meanwhile, gave access to various different blocks with good exploration potential, the best being Llanos 34, which was basically unexplored at the time.

Since then, we have faced many interesting challenges: integrating different teams and cultures, getting to know and work with new partners (Parex, P1 and Pacific) at the same time that we conducted operations and attracted seasoned professionals in different areas. We also promote young and enthusiastic employees who are willing to grow into different areas. We are now at approximately 100 people.

**How important is Colombia now within your pan-Latin American portfolio?**

Colombia is very important, today accounting for at least 40% of the company's EBITDA and reserves; we have ten blocks, of which we operate four, all in Casanare. Colombia is producing enough revenue for our continued growth and the company has access to additional funding which will allow us to grow also in Brazil, where we have recently acquired 10% of the country's major gas field, Manatí, and been awarded seven blocks in the latest bidding round. Our portfolio in Chile continues to grow too, and is now equally balanced between gas and crude.

**These high expectations come from your excellent success rate to date. What is the secret behind this?**

GeoPark has achieved success mainly through its team and culture. Management, professionals and field operational teams have an unusual mix of experience and a strong performance-driven culture. As an operator, GeoPark has the ability to make decisions fast and execute timely and economically in every area: drilling, production, transportation and marketing of oil and gas. As consolidator, GeoPark has the experience to assemble the right asset mix, with the right partners at the right price. People, culture, exploration

skills and commitment to our operation in Colombia, have been the key to allow uninterrupted drilling and production activities for the last year, at the same time as we brought Llanos 34 from no production to nearly 130,000 boed in the face of road, facilities, social, permitting and marketing challenges.

**Infrastructure is a big barrier to economic growth in Colombia. How much does it come into your thinking when you investigate new basins?**

The lack of appropriate infrastructure (roads, ports and pipelines) as well as delays in environmental permitting in Colombia, jeopardizes investments and therefore the country's ability to accelerate exploration and increase its reserves. Both public and private sector need to work and invest together in creating appropriate infrastructure. GeoPark maintains nearly 200 kms of unpaved roads and is deeply committed in contributing to development of local infrastructure.

**Security is unfortunately still an issue in Colombia. Do potential risks come into your assessment of new basins?**

Security risks are relevant when looking into certain basins. GeoPark recognizes there is government support in the more challenging areas, and there is good cooperation between the companies operating there. In these areas, there has been a history of institutional abandonment and a long industry presence without a corresponding increase in living standards. The geography and lack of infrastructure certainly do not help. However, I believe that basins as Putumayo and Caguán will soon develop further and improve its operational conditions.

**If we return in two years' time, where will we find GeoPark?**

We will probably have closed more acquisitions in the next two years and increase our current production and reserves. We may begin to invest in the midstream system as a mechanism to guarantee evacuation of our crudes. GeoPark prefers to operate, but we are also good non-operating partners. •



## A Place Like Home: Expelled PDVSA staff become a integral part of Colombia's hydrocarbon growth

Simultaneous political shifts in neighboring Venezuela and Colombia have lead to vastly differing fortunes for the two South American nations' oil and gas industries.

BOGOTÁ, COLOMBIA – “I don't have any problems firing everyone I need to fire,” declared Venezuelan President Hugo Chavez in 2002, during his sanctimonious mission to rid the oil-rich nation of corruption. Within months almost 20,000 petroleum engineers, geologists and managers had been forcibly removed from Petróleos de Venezuela, S.A. (PDVSA) the state oil company. Within a few years Venezuela had tumbled from its position as the world's fifth largest oil producer to a relatively unassuming 11th place. Meanwhile, in neighboring Colombia, 2002 saw the appointment of President Álvaro Uribe. Under Uribe's political slogan “firm hand, big heart” he ordained the US-backed military offensive against rebel groups which had kept the country in the grips of civil war since 1964. In what was widely considered to be a great victory for the nation, Uribe's tactics brought huge areas of the country back under the control of the government, simultaneously opening them up for oil and gas exploration.

These two independent political shifts in neighboring northern South American nations were to have unforeseen consequences, largely for Colombia and its small oil and gas industry. Venezuela's exodus of highly skilled petroleum exploration and production expertise saw workers spread around the world, from the US to Saudi Arabia to Nigeria, but for many, the opportunities lie just next door. Colombian hydrocarbon production in 2005 sat at approximately 500,000 barrels per day (boepd): in December 2012 Colombia reached a landmark 1 million boepd, a staggering increase by anyone's standards. Coupled with the Colombian government's success against rebel groups, the transfer of human capital from Venezuela has undoubtedly been a key factor in the industry's success.

“Colombia has absolutely benefited from Venezuelan human capital on every level. In 2003, the expulsion of all executives from the Venezuelan state oil company definitely resulted in the export of expertise to Colombia. Pacific Rubiales was the icon of Venezuelan human capital, becoming the largest private producer in Colombia and capitalizing on Venezuela's experience in heavy oil. Pacific Rubiales has enjoyed a rate of success more than double the country's average of around 30%: it is a great success story,” explains Dr. Alberto Cisneros Lavaller, CEO and president of Venezuelan-based Global Business Consultants.

As Cisneros states, Colombia's largest private producer Pacific Rubiales Energy Corp., second in production only to state oil company Ecopetrol, is the prime example of this transfer of expertise. “The top management of PDVSA is now the top management of Pacific Rubiales,” said Ronald Pantin, the chief executive and founder of the company and a former high executive at PDVSA. “All the people we brought from Venezuela have more than 25 years of experience, so people with a huge knowledge of all this geology.” While Venezuelans may be exercising huge control within the Colombian oil and gas sector, their benefit to the nation as a whole is undeniable, Pacific Rubiales, for example, employs more than 12,000 workers, directly and indirectly. Venezuelan influence is across the board for oil and gas. Not only have exploration and production companies grown and benefited from the imported expertise but Venezuelan entrepreneurs have helped build Colombia's hydrocarbon service sector. Colombia has welcomed Venezuelan expertise with open arms and those Venezuelans are committed to their adopted country's growth.

“I am originally Venezuelan but I am ex-

tremely happy to be in Colombia, the country has opened its doors to us and we feel privileged to work here. When we are in Colombia's Llanos Basin, we feel at home, it is the same Llanos as Venezuela, the same environment the same people. We would like to contribute to the development of Colombia, we are establishing a maintenance, logistics and training facility in Puerto Gaitán, among the big producers of the Llanos Basin. Our focus will be to provide training for Colombian technicians working with heavy oil in the Llanos Basin, giving Colombia the best chance to take this opportunity to improve its human talent and increase production,” declared Ing. Eduardo Enrique Rivodó, the Venezuelan founder and CEO of Industrial Consulting Group, experts in commissioning and start-up of hydrocarbon wells and facilities. It should be noted that the spirit and business acumen of the Colombian people has been the single most important factor in the growth of their hydrocarbon industry and their economy as a whole. It is also that business acumen and welcoming nature that has allowed for Colombia to create an environment in which their expelled cousins can find opportunities while simultaneously aiding economic growth.

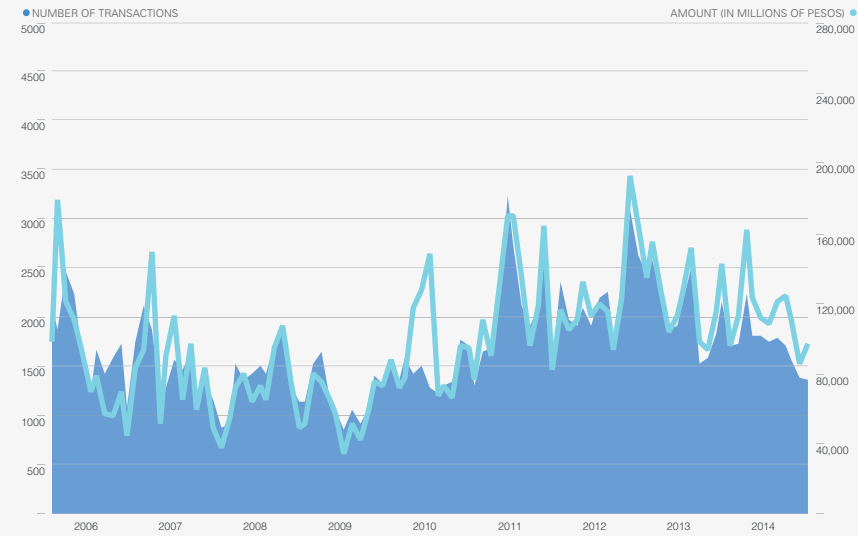
10 years on, given the demise of Venezuela's hydrocarbon industry and the passing of the iconic leader Hugo Chavez, a new question stands. What would happen to foreign investment in Colombian oil and gas if the situation in, vastly more oil rich, Venezuela were to reverse?

“I can only speculate, but Venezuela has certain problems and is therefore quite likely to open up more strongly. It would be very difficult to completely reverse the process that has taken Venezuelan experts to work all around the world. It is likely, however, that improved investment conditions in Venezuela would attract foreign capital, know-how and specialized human resources. It is likely that companies, rather than particular individuals, would then flow back to Caracas to invest, be it from Colombia, Argentina or Saudi Arabia,” suggests Dr. Lavaller of Global Business Consultants.

Even if such a reverse were to happen Colombia's hydrocarbon industry would without doubt be in a better position than they were 10 years ago having grown production, established local expertise and educational programs. •

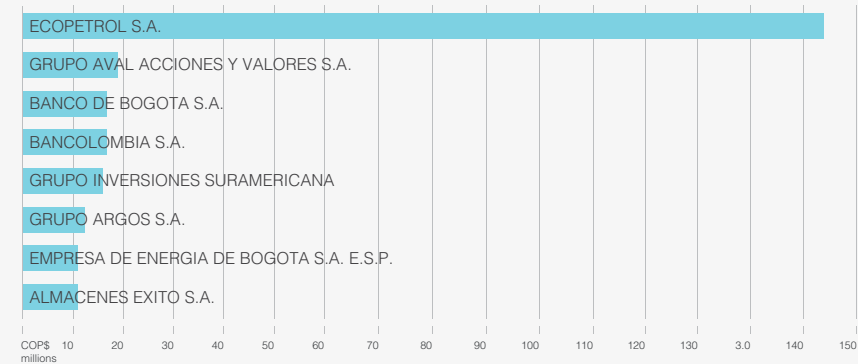
## BOLSA DE VALORES DAILY AVERAGE VOLUME AND DAILY AVERAGE NUMBER OF TRANSACTIONS

Source: BVC



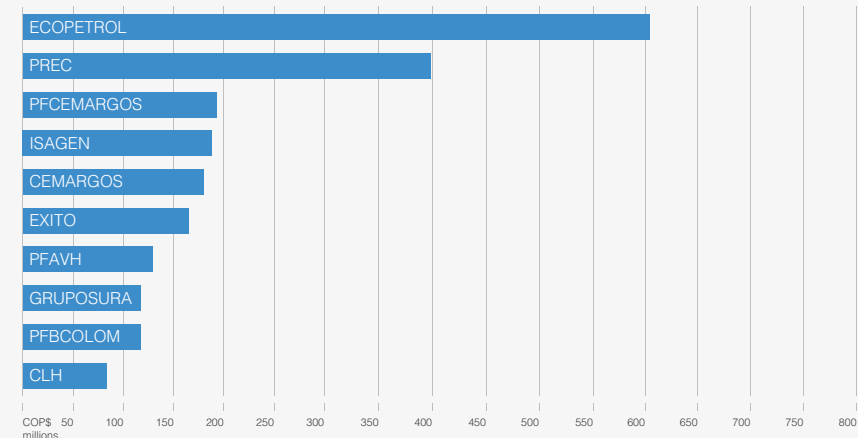
## ISSUERS WITH LARGEST STOCK EXCHANGE CAPITALIZATIONS

Source: BVC



## MOST TRADED STOCKS OF THE YEAR (IN COP MILLIONS)

Source: BVC



## Paying for Progress

Financing Colombia's oil and gas projects

“

Financing varies with the type of company. A large, national company like Ecopetrol is able to get financing from local investors but international companies, which are not permitted to finance directly in the country, channel their money from the home office to local branches, which are regulated separately. A lot of investment is made available to the oil and gas sector from the international community. For example, there are many Canadian companies here in Colombia that receive their financing from their parent companies.

- Hector Palomino, Associate, Deloitte

”

Oil and gas companies active in Colombia have traditionally looked to raise capital abroad. Colombian investors are not used to the volatility and risk associated with the oil and gas sector and the banking sector is still to develop the expertise and the advanced financing mechanics we see present in more mature resource based economies. It is difficult to remedy this quickly, however the Colombian government has implemented some innovative strategies to make financing easier for foreign companies. —>



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**Building relationships,  
creating value.**



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"In the early 1990s, when the government was putting a renewed focus on the oil and gas sector, they realized that this was going to be a multi-million dollar industry," explained Carlos Miguel Chaparro, partner and oil and gas tax leader at PwC. "With Colombia's small currency market, they understood that the foreign exchange market would be in a state of chaos if companies were regularly bringing in cash to the country to fund their operations. To protect the foreign exchange market, the government restricted the E&P companies from borrowing outside of the country and making cross border loans. Consequently, most of the project finance that I have seen in Colombia is done locally, as borrowing within the country is not an issue. But 95% of the companies fund their operations in a different way as the government has created a window for tax purposes. If a client has a branch in Colombia, the parent company in Calgary, for example, would borrow in the home country to fund the branch's operations. The parent company would then send the money to the Colombian branch as equity because you cannot push down debt. At the same time, this parent company is continuing to pay interest to the bank in Canada where the loan was taken out. What the Colombian government has done is allowed interest to be pushed down for tax purposes only. This is an interesting development for project finance because companies are able to push down this expense; however, the restriction on cross-border loans from a central banking perspective will probably remain."

Meanwhile, as the traditional capital markets, such as the TSX, continue to struggle through this period of slow financing, there lies an opportunity for Colombia's own stock exchange, the Bolsa de Valores (BVC), to supplement such funding. "We still believe that there is opportunity for capital raisings in the Colombian market for this industry, especially for companies that are further established with predictable cash flows as opposed to venture companies," says Juan Pablo Córdoba Garcés, president of the BVC. "We have made a lot of headway with the four oil and gas companies that are currently listed. These listings have given investors, analysts and brokers the opportunity to get involved in an industry that was relatively small five years ago. A lot of progress has been made in terms of financial knowledge within the oil and gas sector; we better understand the drivers of this field and how to analyze these companies. There is more to be done, but we have made significant progress." Pacific Rubiales Energy, Petrominerales and Canacol Energy have taken the step to dual-list; they join national oil company Ecopetrol to make up about 40% of the index in Colombia. If these pioneering companies continue to find success on the Colombian exchange, we are sure to see more firms list on the BVC and Colombian investors gaining confidence in the oil and gas sector. •

## Carlos Miguel Chaparro

Mining & Tax Leader, Colombia  
PwC



**Please provide us with an introduction to PwC and the services that you provide in Colombia?**

PwC has been in Colombia for 60 years and the main areas of practice we offer include audit, advisory, outsourcing, tax and legal, and human talent. We also offer what we call a value chain proposition in which we provide investors with the right solutions from the beginning as they are looking into establishing operations in Colombia, to running the business and then exiting. Within the energy practice, we have an energy country leader, a mining leader, and an oil and gas and mining tax leader. I perform the latter two functions and have been doing so for the last eight years. The oil and gas industry is very significant to PwC's operations in Colombia and we have invested a great deal to make sure we have aligned our practice and services to the current economic situation in Colombia.

**How would you describe the market for the services that you offer?**

The market is very competitive not only across the big four, but also across law firms as well. Many law firms have es-

tablished their own tax practices just as we offer in-house legal services. The market is very intense and the people that work in these fields are very knowledgeable. Having said that, PwC has a very strong presence in the oil and gas sector; our market share represents 30-40%. On the audit side, we have a strong client base and on the advisory side we are very successful in project management and business restructuring with the big players. In the tax and legal area we also have a strong presence, with over 60 clients across the industry, from E&P's to service providers.

**What are the biggest challenges that new entrants to the market face?**

What companies do care about is rule changing because, with any long-term investment, it is difficult to establish a business model that will change in two years when a new tax law is passed. I believe that one of the key rules that Colombia lacks, which other countries offer, are grandfather rules; meaning that you will retain the tax benefit that you enjoyed when you first came to the country, irrespective of the tax law changing, thereby offering a form of protection to investors.

**How do companies typically fund their oil and gas operations in Colombia? Is local project finance becoming more popular?**

While project finance has traditionally not had a strong presence, we see that this is changing. In the early 1990s, when the government was putting a renewed focus on the oil and gas sector, they realized that this was going to be a multi-million dollar industry. With Colombia's small currency market, they understood that the foreign exchange market would be in a state of chaos if companies were regularly bringing in cash to the country to fund their operations. To protect the foreign exchange market, the government restricted the E&P companies from borrowing outside the country and making cross border loans. Consequently, most of the project finance that I have seen in Colombia is done locally as borrowing within the country is not an issue. But 95% of the companies fund their operations in a different way as the

government has created a window for tax purposes. If a client has a branch in Colombia, the parent company in Calgary, for example, would borrow in the home country to fund the branch's operations. The parent company would then send the money to the Colombian branch as equity because you cannot push down debt. At the same time, this parent company is continuing to pay interest to the bank in Canada where the loan was taken out. What the Colombian government has done is allowed interest to be pushed down for tax purposes only. This is an interesting development for project finance because companies are able to push down this expense; however, the restriction on cross-border loans from a central banking perspective will probably remain. Another benefit that companies have here in Colombia is that they can repatriate money at any point as long as it meets reporting requirements. This is significant because while in many countries injecting equity is never an issue, taking it out can be. And so, we see that while borrowing debt can present a challenge, companies can benefit on the equity side of things.

**If we come back in 2015, where will we find PwC?**

We see that we need to keep building on our momentum and what we are mindful of is that the government is making changes on three fronts that would affect our clients; the tax free network, free trade agreements and investment protection agreements. We expect that these changes will encourage more companies to do business here in Colombia and we plan to be prepared for when they arrive. •





## Revving Up or Out of Steam: Colombia's Mining Locomotive Chugs Uphill

“Colombia is very undeveloped; there is a great deal of exploration potential in this country that gives companies the opportunity to have an impact in the development of the sector. Colombia has a lot of things to offer, with port access on both the Atlantic and Pacific coasts being a major bonus. There are internal infrastructure challenges, but the geographic location of Colombia is a huge advantage that no other country has. These points of transportation make Colombia a very strategic hub for any company that may want to start a base of operations not only domestically, but also regionally.”

- Olga Fernandez de Soto, Executive Director, Canada-Colombia Chamber of Commerce



# Unclogging the Backlog

Colombia's mining industry

Delays in permitting and confused regulations are a miner's greatest bane in Colombia. In 2012, the government established the National Mining Agency (ANM) under the authority of the Ministry of Mines and Energy to sift through a backlog of some 19,000 mining applications. Although about

95% of these applications were subsequently rejected, this did not deter companies from expressing interests in the country. When the window for new applications reopened in June 2013, after a two-year hiatus to sort through the backlog, the ANM received some 2,200 applications for new mining licenses on the first day. "Getting the ANM up and running has been a challenge not only from an infrastructure point of view, but also in dealing with the backlog of applications. We are working to establish a baseline for the industry that is more on par with other more established mining jurisdictions. This requires stronger processes. We are working on enforcing these and improving inter-institutional coordination, but this takes time," said Carolina Rojas Hayes, promotions manager of the ANM.

While unclogging the bureaucratic bottleneck at the ANM has made significant progress, the principle criticism amongst industry leaders is a lack of coordination between the different government stakeholders in mining.

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Colombia is very undeveloped; there is a great deal of exploration potential in this country that gives companies the opportunity to have an impact in the development of the sector. Colombia has a lot of things to offer, with port access on both the Atlantic and Pacific coasts being a major bonus. There are internal infrastructure challenges, but the geographic location of Colombia is a huge advantage that no other country has. These points of transportation make Colombia a very strategic hub for any company that may want to start a base of operations not only domestically, but also regionally.

- Jerry Jones, President and CEO, Duralite Diamond Drills

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Colombia has major potential for its mining future. The government is talking about \$22 billion in investment over the coming years, but there are some obstacles to overcome before we can realize this. The government needs to make the licensing process more straightforward. We cannot convince companies to invest in new projects and products if they do not have the freedom or release from the government for exploration and exploitation. There are many restrictions on investment in Colombia in this regard, but we are hopeful for this to change as the government responds to them.

- Ricardo Gil, Gerente Division, Rexroth

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"The major mining companies generally have health, safety and environment standards, but there is a lack of essential dialogue between mines and communities... Mining is both capital and labor intensive, whereas oil is primarily capital intensive and jobs tend to be very technical. Therefore mining has a greater impact on communities because it creates more local employment. One of the key principles that Equitable Origin has is an analysis of the complete lifecycle of a project. Companies need to recognize there can be substantial benefits to the community if you analyze the impact of the entire lifecycle of the project. This can allow there to be a sustainable plan in place after the mine site has finished production.

- Stephen Newton, CEO, Equitable Origin

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Despite President Santos's directive for mining to be a part of the country's national development, mining companies are receiving mixed signals from government agencies as they seek to go from titleholders to developers. Chief among these mixed messages is the Ministry of Environment's decision to exclude 21 million hectares, approximately 25% of Colombia's territory, from extractive industry activity. On a similar note, the Ministry of Environment has also forbid mining in the páramo ecosystems of Colombia, yet the exact parameters of what constitutes a páramo, generally defined as a high altitude tropical ecosystem above the timberline, are not clearly delineated. For many mines in the promising Santander department, this has led to an indefinite delay in the environmental approval process.

In addition to the lack of clarity from national agencies, the presence of regional and local governments with differing agendas only further complicates the country's regulatory dynamics. As companies try to navigate the opaque

development paths at the national and departmental level, the cliché that all politics is local certainly holds true in Colombia. AngloGold Ashanti's La Colosa project has met a myriad of on-the-ground opposition, which has effectively stalled the project. Meanwhile other projects that have not met such widespread opposition, such as Continental's Búritca project or Minatura's alluvial production, have received the required permits. "When a mining company is coming to Colombia they should understand that they are guests in this country. Extraction activity directly affects local communities, and therefore foreign companies must have a clear understanding of the rules and regulations. The mayor is normally the chief of the community and holds keys to facilitating all the processes for the mining companies," said David Arce, president of Arce Rojas Consultants, a legal-based consulting firm. For a country that has come back from the brink of failed state status and become a thriving economy in a generation, it is understandable how min-

## GLOBAL NICKEL PRODUCTION AND RESERVES (in mt)

Source: USGS

COUNTRY	2011 PRODUCTION	2012 PRODUCTION	RESERVES
Australia	215,000	230,000	20,000,000
Botswana	26,000	26,000	490,000
Brazil	109,000	140,000	7,500,000
Canada	220,000	220,000	3,300,000
China	89,800	91,000	3,000,000
<b>Colombia</b>	<b>76,000</b>	<b>80,000</b>	<b>1,100,000</b>
Cuba	71,000	72,000	5,500,000
Dominican Republic	21,700	24,000	970,000
Indonesia	290,000	320,000	3,900,000
Madagascar	5,900	22,000	1,600,000
New Caledonia	131,000	140,000	12,000,000
Philippines	270,000	330,000	1,100,000
Russia	267,000	270,000	6,100,000
South Africa	44,000	42,000	3,700,000
Other countries	103,000	120,000	4,600,000
<b>TOTAL</b>	<b>1,940,000</b>	<b>2,100,000</b>	<b>75,000,000</b>

ing regulation had taken a backseat to more pressing matters. Now, Colombia is experiencing the growing pains of regulating a complex industry. "We are at the stage where the different ministries are still figuring out how the gears fit together. What we are currently missing is someone to lead and

coordinate all these ministries who see each other as colleagues and cannot direct one another around. There has been progress in the last three years, but there needs to be a bit more consistency from the government," said Mark Moseley-Williams, president and COO of Continental Gold. •

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## Carolina Rojas Hayes Soto

Director of Investment Promotion  
**AGENCIA NACIONAL DE MINERIA (National Mining Agency)**



Please provide us with a brief overview of the progress ANM has made in the past 18 months as it has sought to replace Ingeominas as the mining title authority of Colombia?

Since 2012, when the ANM was officially launched, there has been a great deal of progress in strengthening the mining institution with both changes in the structure and innovation in mining procedures. This is why the Agency was structured with three vice presidencies, each one in charge of the main tasks of the renewed authority, including one in charge of granting contracts, one in charge of auditing mining title's obligations and one in charge of promoting and developing the industry. We establish contact with investors and deal with issues regarding sustainable development of the mining sector, as well as helping small and medium scale miners. Over the past 18 months, one of our biggest challenges was to solve an inherited backlog of 19,000 mining title requests, some of which dated back to the 1960s. Between February 2011, when title registration was closed, and July of this year, we were able to resolve 90% of these applications. We reopened the

window for applications last July 2nd with a new system for registering title requests that offers more transparency to the process.

Another big project has been to audit all of the currently existing mining titles, approximately 9,700 of them. For the first time in many years, the national government was able to revise every title and understand how and where concessionaries were complying—or not complying—with the requirements. This is part of our goal of achieving best practice standards across the industry.

**Stakeholders in the mining industry have spoken about the opportunity the ANM provides to get Colombia's mining legislation correct; what influence do these stakeholders have in developing the policies that govern the sector?**

The agency has a very good relationship both with mining associations that represent most mining titles and with the private sector. Our goal is to keep the best interests of the country in mind by responsibly increasing production of minerals. We must ensure that royalty structures are competitive but also enforced to ensure that communities see and enjoy the benefits of the industry.

**There is a large informal mining sector that has developed in Colombia, especially with the rise in gold prices over the past several years. Is there a plan to bring these miners within the formalized processes the government is setting out?**

Informal mining is one of the biggest challenges we have to deal with moving forward. There is a department at the Ministry in charge of the formalization process and we are in the process of institutionalizing standards for contracts between big title owners and informal miners that own small titles so that they can share the responsibilities and profits of mining in Colombia. It is difficult to ignore the fact that families often depend upon mining incomes, even when informally established, so the goal is to educate them about the correct procedures and work with them to achieve full compliance. We want small title owners to benefit from the knowledge bigger companies have through contracts to

develop their properties in tandem with these companies.

We must also make a distinction between illegal and informal mining. Informal miners have existed for a very long time. If they can prove that they have had running operations in a designated area, we will work on helping them. Illegal miners are also present and often operate in conjunction with rebel groups, putting them under the purview of the police and Ministry of Defense.

**How do you plan to avoid another bottleneck in applications as you reopen the register to new ones?**

We have established a 180-day timeline to resolve applications and are trying to stick to this. We were prepared for a much larger bottleneck than the 2,000 applications we received the first day. The declining price in minerals and strengthening of our institutional procedures and legal requirements has led to a more careful consideration of applications before submission. We would rather have fewer applications that follow our code than many which are not up to par.

**Is the Santos administration delivering on its promise to develop the industry? Why should companies put increasingly limited resources into Colombia?**

People tend to underestimate the work that has gone into reforming the industry from a government perspective. Getting the ANM up and running has been a challenge not only from an infrastructure point of view, but also in dealing with the backlog of applications. We are working to establish a baseline for the industry that is more on par with other more established mining jurisdictions. This requires stronger processes. We are working on enforcing these and improving inter-institutional coordination, but this takes time.

Colombia as a whole has a great deal of potential. Most of our land remains unexplored, and falling along the same geological lines as Chile and Peru means that we can expect similar statistics to those places. There is also a government that is open and willing to do things properly to make projects come to fruition. •

## David Arce Rojas

President  
**ARCE ROJAS CONSULTORES**



**What differentiates Arce Rojas from other consultancies or law firms in the mining and oil and gas industries?**

Arce Rojas was born as a law firm 16 years ago, but today we are more than this. We provide legal advice to mining, oil and gas, transportation and infrastructure industries. Within our team, we have many engineers who help companies understand how to adjust a project to Colombian standards. Arce Rojas can manage very well companies' interactions with local communities and authorities. We provide our clients with solutions and help them to establish their business in Colombia, incorporating international branches, and managing corporate issues with Colombian government agencies etc. The unique feature of Arce Rojas in contrasts with other law firms is that we provide solutions to our clients in the field, including ports, building infrastructure and exploration. We are the only law company in Colombia to receive ISO 900 accreditation in the process of acquiring and managing the superficial rights and the components of as the legal background and the cadastral information of the premises.

**Do you agree with the following assessment 'the most important person in the mayor' when a company is trying to develop an extraction project'?**

When a mining company is coming to Colombia they should understand that they are guests in this country. Extraction activity directly affects local communities, and therefore foreign companies must have a clear understanding of the rules and regulations. The mayor is normally the chief of the community and holds keys to facilitating all the processes for the mining companies. Therefore, I absolutely agree with this statement.

People in the mining and oil and gas industries can be very pretentious and arrogant and have little respect for local community or nature. But it is the locals who know the land and the nature. Mining companies need to respect the people and the local environment. For example, this year there were over 300 strikes in Colombia because there is very poor management of those relations.

**When president Santos announced that extraction industries were locomotives of development in the country, some people in the industry said that mining became a particular target for NGOs in Colombia. In your view, what is the influence of NGOs in community relations in Colombia?**

In Colombia there are many NGOs dealing with different issues such as human rights, environment and wildlife protection. Like in any country, there are good NGOs and there are bad NGOs. These organizations have interest in the country's problem and can provide support. Social responsibility is a serious problem in Colombia because many problems need to be addressed, while the government does not have the financial means to help with that.


One of the main concerns in the mining industry in Colombia is the discrepancy between the national government and local authorities, especially in the environmental domain. How much discrepancy do you see between the laws made in Bogota and their enforcement?

There is not that much discrepancy, because the government is able to explain properly to the companies all the requirements. However, in relation to environmental licenses there are two persistent problems. There is a real problem with regards to how long this process takes, due to the fact that many applications are submitted at the same time the government does not have enough staff and expertise to deal with all of them at once. •

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## Hans B Kulp

General Manager  
**EXSA COLOMBIA**



### EXSA has a strong presence in Peru; what lay behind the decision to enter the Colombian market?

EXSA does have a very strong presence in Peru; 2014 will mark 60 years of operations there. Over the past two years, we made a strategic decision to diversify from just Peru and acquired companies in Brazil and Panama. Last year, we decided to invest in Colombia as well; it looks to have a strong future with the various investments in mining and energy infrastructure that are underway at the moment. The initial investment was motivated by our regional expansion plans and to build up our market share for explosives in Latin America, and Colombia proved a very interesting market for this purpose.

### As compared to your other regional operations, what comments can you make on the Colombian market as a business jurisdiction?

Colombia has a very specific situation. The government here controls the vast majority of the explosion production and sales market; there is space for other players, but the competition is scarce. This means that the focus here remains

more on providing technological and support services to potential clients. The government monopoly, legal and financial restrictions put in place limit our client base to the larger, more established coalmines. Considering the presence of smaller mining houses and their inability to comply with such stringent regulations, Colombia is a promising but difficult environment in which to operate. Therefore the real challenge is to improve the efficiency in this specific industry and facilitate the process of legalizing the operations.

### What sort of contribution can EXSA make to the Colombian economy and mining sector in the coming years?

For the next three years, we are focused on creating a major agreement with the government for a production site that will likely be located along the northern part of Colombia's coast. We plan to invest around \$7 to \$10 million dollars in ensuring that our facility and its capacity are up to par with the demand that a number of projects coming online in that region will require. This should both allow us to compete very reasonably in the market and open it up significantly to improved planned delivery systems, state-of-the-art equipment and higher safety standards.

### As you plan to invest in Colombia, how much of this will be focused on production and how much will be focused on expanding your service offering?

The better part of our investment will go to equipment and technology to improve our service offering. There are still some restrictions in Colombia for dynamite use and production, which comes from a history of security concerns. We have developed new forms of dynamite that are very much like an emulsion and are not as dangerous as they used to be, making them safer and more efficient to underground operations.

### The past year has not been the best for the mining industry across the globe; why should companies put increasingly limited resources into a country like Colombia?

The potential for growth here is perhaps not what the government forecast

for this year, but we must remember that Colombia faced severe delays in its development because of security concerns, which lasted a good 20 to 30 years. It is only in the past decade that things have been looking up. We are running behind, but we have a proactive government now. Chile did not suffer the same setbacks we did, and their industry is thriving; we hope we can follow suit. Dredging the Rio Magdalena will improve things here. The real vehicle for growth will not just be mining, but all of the infrastructure projects being undertaken to improve accessibility and functionality around the country.

### Looking at the sector in particular and your business, you mentioned the early plants were set for coal companies. Is coal still the future or is there demand elsewhere?

In general, coal is here to stay. The prices are low compared to a few years ago, but at the end of the day, the whole infrastructure and long term contracts will allow coal companies to keep producing. The mining locomotive is now just a smaller train. It is working but it is not pushing ahead as it was projected yet. It is not going to stop; it's just floating and the initial growth from 70-80 million mt to 140 million mt in three four years that was predicted is not going to happen. With some good management and some reasonable prices, Colombia will have about 100-110 million mt of coal in the best case, but no huge increase in production. That locomotive for coal is very slow. The same for bigger gold mines like AngloGold Ashanti, etc. We see a reduction of the gold price now and for 2014 and 2015 they are reducing their budget by 50 million per year. Those are one of the show off projects with the potential to see open pit gold mine with nice reserves in Tolima, and this is probably going to start in 2017 or 2018. This will delay our business plan a little bit. Looking at coal in the long term in Colombia, it is important to note coal is supposed to overtake oil by 2020 as the most used field source in the world. •

## Mark Moseley-Williams

President and COO  
**CONTINENTAL GOLD**



### What do you see as the major milestones for Continental Gold since our report on Colombia in 2011?

Continental Gold has continued to aggressively drill at our Buriticá resource and we have significantly grown this resource over the last three and half years. We expect a resource update by early 2014. The external markets are a lot more challenging now than they were three years ago. Colombia is largely a greenfield exploration market and the exploration budgets are usually the first thing to be cut when markets slow down. Although the market is tough, there are still several projects that are being advanced, albeit at different rates, and as our CEO Ari Sussman said in Global Business Report's 2011 story, Continental Gold is still on track to building the first modern gold producer in Colombia. In March 2013, we also integrated thirteen separate exploration licenses into a single, 30-year exploitation license.

### Your prefeasibility study (PFS) for Buriticá is due out in 2015. What are some of your expectations for the PFS and how will it move Continental forward?

Our prefeasibility study will be the first

economic study done on Buriticá and will be the catalyst for a construction decision and financing so we are hoping for very robust results: i.e. very strong cash flow with a good rate of return. For a good PFS we need a solid measured and indicated resource, so we are in the process of converting inferred resources to measured and indicated resources. Along with this, we are advancing the engineering and design work for the mine and are working on submitting our final environmental license by the end of 2013. We expect this will take about a year or so for the local environmental authorities to review. Ideally, by early 2015, we want to have our PFS completed and an approved environmental license amendment in hand.

### How has Continental maintained a strong financial position and managed to keep raising capital despite the difficulties most companies on the TSX are currently facing?

Continental raised \$86 million at 9.55 per common share in December 2012. We have since been affected by the downturn, but we have always been of the idea that a junior mining company needs to have a strong cash position because downturns do happen. As of August 2013, we had a cash position of about \$130 million, expect to finish the year with \$120 million and our preliminary 2014 budget plan will leave us with a worst-case scenario of \$60 million in cash at the end of 2014.

### As Continental feels some of the effects of the downturn, how can you balance the need to create short-term value with Continental's long-term interests to shareholders?

The market determines so much of short-term value; I believe the way we can continue to deliver value is to keep advancing the Buriticá project. World class, high-grade assets like Buriticá will generate value over time. It is a bit of a cliché but grade is king. Especially when there is a downturn in a market, high-grade mines can afford taking a hit versus low-grade mines. No matter what happens to gold price, a high-grade project can deliver value.

### Are the gold juniors in Colombia who are currently struggling suffering

from a problem of not having high enough grades to attract the interests of investors or is it more a matter of country risk?

If you look at the profile of the projects in Colombia to date, many of them are lower grade deposits. There are some good examples of producers turning a profit with lower grade deposits, however, it is difficult for a junior to attract interest and develop mines with lower grades in this market.

Although Colombia has had mining for many years and has an established base metal industry, it can still be considered new to precious metal mining. The government sees the potential of the mining industry. That is why President Santos gave the clear directive for mining to be a locomotive for development. However taking a locomotive that has been sitting idle for fifty years and getting it greased up and running again at full steam takes a long time. Mining, unlike some other industries, requires the coordination of many government ministries, beyond just the Ministry of Mines and Energy and the Ministry of the Environment. We are at the stage where the different ministries are figuring out how the gears fit together. We have seen real progress in the last three years as we have worked with the various ministries in moving Buriticá forward which included successfully amending our environmental license.

### In your view is the Colombian mining industry stalled as others in the industry have said

In my view, we are moving full steam ahead. Our experience with the Colombian mining industry has been positive. We successfully amended our environmental license in 2012 in a five month period and continue to enjoy a positive working relationship with various Colombian ministries as we move towards building the first modern gold mine in the country. The reality is that mining takes a long time and this is a normal progression. Some companies that are idling right now are facing the market realities, while others have stepped out because their projects are simply not feasible. That is part of the risk of the junior mining industry. There are companies that are struggling and have stalled, but the groundwork is being put in place and this takes time. •



## Claudia Jiménez Jaramillo

Director  
**SECTOR DE LA MINERIA DE GRAN ESCALA (Association of Large-Scale Mines)**



### What are the objectives of Sector de la Minería de Grana Escala?

In 2010 a group of mining companies decided to create their own association, Sector de la Minería de Gran Escala to focus on the needs of the industry and yield on the very optimistic and high expectations of growth that prevailed in Colombia at the time. Sector de la Minería de Gran Escala is comprised of the 13 largest mining companies, which represent 95% of total Colombian coal exports and most part of the legally produced gold. The main idea behind creating this association was to combat some of the operational challenges and improve Colombian mining industry, as well as give these companies a public voice.

### Have the large mining companies been affected as harshly as smaller companies by the downturn in the global mining market?

The slowdown of the industry was felt by the majority of the companies around the world, but the big difference to the industry comes from countries themselves and how they handle the situation. The most important challenge

for Colombia is to keep good conditions for attracting mining investments. New institutions are being built in order to assist foreign investment and in the future they will play a key role in supporting the growth of the mining sector.

### In terms of Colombia's institutional development, many cite the ANH as a model for the evolving ANM. Do think it is possible to compare ANH with the creation of ANM?

ANH and ANM are entirely different organizations. ANH has been around for 10 years and governs the oil sector in a way similar to that of organizations in France and the UK. ANH has a lot of good experience, while ANM was born only a year ago and it took more than eight months to kick-start this organization.

Colombia has been experiencing an oil boom since 2008, but the same cannot be said about mining. What we have in mining is great expectations: firstly because Colombia is a more stable country, secondly, because our economy has been managed better. Thirdly, we have a huge known potential. In 2010, we only knew about 48% of the geological composition of the country's territory, today we know 53%.

### Colombia's mining sector received close to \$ 2.5 billion in Foreign Direct Investment (FDI) in 2012; how much of that came from or to the members of Minería Gran Escala? How do you see the FDI change in the near future?

During the last four years, mining was pushing the Colombian economy. But unfortunately, in 2013 there has been a negative growth in exports, lower contribution of mining to GDP, lower employment and a decrease in investment and royalties. The reason is that international prices have decreased and there are challenges in Colombia. Mostly because Colombia has not clarified the role of mining in the country, there is much discord in the country. For example, the president says mining is a "locomotive of development," but there is obviously tension that exists between the Ministry of Environment and the Ministry of Mines and Energy. On top of this, local politics are playing a huge

role in determining whether or not the government's directives are enforced.

### One of our interviewees commented that the 'mayor is the most important person in advancing a mining project'. Do you agree with this statement?

Even if mayors do not have the function of approving or prohibiting a particular economic activity, it is impossible to have a successful mining project if there is no harmony between the mining company and the mayor. Political and environment harmony is crucial. If the local authorities do not support the project, it will not progress. Mining companies have to do a good job in explaining in detail the nature of the project, as it is often the case that Colombians simply do not understand the mining industry. The initial reaction of the public is very negative towards mining activity, but this is because they do not know about the benefits such as improving infrastructure, access to electricity, creation of jobs, technology improvements and construction of additional structures. This is the fault of the mining industry, because they do not do a good job communicating this to the public.

### Do you think mining became a target for NGOs and the guerilla groups that oppose mining following President Santos' speech identifying mining as a locomotive of development?

Criticism of the mining industry is an international trend. Colombia is no exception to the rule. The low profile policy is not a good idea, because it is important to discuss mining together with the public. If you make yourself more visible you will receive more criticism. It is on the contrary important to tell the public what the mining industry is about and how minerals can improve daily lives of the people and demonstrate positive examples of sustainable mining. Colombia is an emerging country, there is a 40% poverty rate and it is very diverse, so it is impossible not to use mining as a tool to improve lives of people. •

## Jose Vicente Zapata

Partner  
**SUAREZ ZAPATA PARTNERS ABOGADOS**



### Please begin with a brief overview of the services Suárez Zapata & Partners provides to the mining industry?

Suárez Zapata & Partners is a boutique law firm dedicated to oil and gas, mining and environmental matters. In these industries we cover all services a client could need, with the exception of criminal law, whether it be mergers and acquisitions, farm-in and farm-outs or environmental issues. In this sense, we have represented many major companies operating in Colombia, as 90% of our clients are multinational corporations.

### Suarez Zapata & Partners is active in deal making for its clients in Colombia. How would you characterize the current climate for deal making in the country?

The number of deal making activities in oil and gas is greater than mining in the last two to four years due to a clearer regulatory environment in this sector compared to mining. The change in the last few years is that it has become more expensive to conduct transfers in the Colombian oil and gas sector. In mining, conducting these activities are less expensive, however there are regu-

latory difficulties coupled with social and environmental issues in these sectors. Mining has a significantly high potential in Colombia and if it were not for the lack of clear regulations and undefined environmental and social components mining would be significantly developed in Colombia.

### How would you rate the progress of the ANM in its first year? How apt is the common comparison made between the ANM and the ANH?

The oil and gas framework has been helped by the creation of the ANH. The ANH was formed when oil and gas was being redefined in Colombia, while the National Mining Agency (ANM) is simply a change in name of the previous agency, Ingeominas. Therefore, the ANM is still plagued by the same traditional problems that it [Ingeominas] suffered before. There is this Latin tradition to regulations in Colombia: it is the belief that paper solves problems. It is not an ANM or ANH problem, but rather a problem of the definition of the administration of the entities. As entities get stronger and more robust they will ultimately strengthen the institutions. When you have better institutions, the system works. The ANM is trying to copy the success of the ANH, but unlike the ANH it did not start from scratch. Thus many aspects that were lagging from its previous organization are still present. Even if there are good administrators, they still are affected by the problems of the past. The ANM is suffering from the copy paste model of the ANH. At the end of the day, the historical problems in the mining industry are beyond copying. There are certain good aspects that can be taken from the ANH, but simply copying it will never work.

### President Santos famously called mining a locomotive of development in 2011, yet there seem to be mixed messages coming from the government as the Ministry of Environment and the Ministry of Mines and Energy have some conflicting interpretations. Does this hurt Colombia's reputation in the eyes of multinational investors?

The problem is not that there are mixed messages, it is that there are no messages. Colombians are great sellers of

our country; our potential will undoubtedly be developed sooner or later. The issue is how does government create a definition of what it is effectively supporting. When government keeps silent as to whether it supports mining and oil and gas, it slows investment. Countries are competing for investment and this lack of definition of mining's role in the country's future is hurting our competitiveness vis-à-vis other countries.

### In your view, what main challenges does the mining industry need to overcome in the next two years to reach its potential?

The first thing is what I call a lack of harmony between four different factors: the timeline of titles vis-à-vis the timeline of environmental permits vis-à-vis the timelines in environmental permits vis-à-vis the timelines in regulations vis-à-vis the defacto timeline of the operations. In essence this means matters are not fitting together correctly. For example, companies are expected to drill in a timeline that does not allow for consultation with ethnic communities, which then puts them in a position of breaching their contracts, or an environmental license may take more time to acquire than thought. So companies are always asking for more time because the synchronization is lacking from government agencies. The second thing is the effectiveness of the rule of law; everyone must respect the rule of law. The challenge is to make sure that rules are fully effective so we can state that not only Colombia respects the rights of both national and foreign investors, but also that the content and conduct of rules is fully maintained. •



# On the Hot Seat

## Coal Mining in Colombia

The bulwark of Colombia's mineral production comes from a handful of coal mines near the Caribbean coast and BHP Billiton's Cerro Matoso ferronickel asset in Cordoba. After years of impressive production growth, Colombia, the world's fourth largest exporter of coal, has faced some substantial impediments in 2013 that have impacted both immediate production and long-term investment prospects.

In October 2013, the FARC claimed responsibility for two attacks on a railway owned by Cerrejon, the country's largest coal miner. This mammoth joint venture between Glencore Xstrata, AngloAmerican, and BHP Billiton produced 33 million mt of thermal coal in 2013 and accounted for over 40% of the country's coal exports.

While these attacks highlight the lingering legacy of the country's difficult past, labor unrest, especially at the country's large coal mines, poses a substantially greater risk to productivity and the country's economy. Both Cerrejon and Drummond, the second largest producer in Colombia, experienced work stoppages in 2013. At Cerrejon, the 32 day work stoppage helped account for the mine's 4.6% decline in production in 2013.

The shut down at Drummond halted production for nearly two months, costing the company an estimated \$250 million in revenue and the government tens of millions of dollars in royalties. Things went from bad to worse for the American com-

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Currently, the main mineral resource in production in Colombia is coal. However, shale gas from the USA and other factors, have been changing the dynamics of world energy markets. This has been particularly hard for Colombian coal producers because of the reduction in thermal coal prices. Industry forecasts do not see coal recovering in the near future. Of course we expect some business from the coal industry, but we do not expect there to be too much expansion.

- Carlos Contreras,  
District Sales Manager, Andean Region,  
FLSmith

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pany as it dealt with the fallout from a barge that sank at its port in early 2013, spilling coal into the harbor. The government fined the company \$3.5 million for environmental damages and is charging six Drummond employees for their role in the disaster. More devastatingly, exports were ordered to halt in January 2014 after Drummond was found in violation of regulations requiring the use of conveyor belts rather than cranes and barges for ship loading procedures. Drummond expects to have conveyor belts in place by March 2014.

While originally Drummond agreed with regulatory authorities to pay a fine for its noncompliant port facilities to keep operating, authorities backtracked on this agreement and the Ministry of Environment halted exports causing another thorn in relations between the ministry and the mine and signaling yet another case of indecision within the government itself. "If they [Drummond] do not do things properly, we would prefer not to have this money. They have to learn that Colombia must be respected," proclaimed Environment Minister Luz Sarmiento to reporters upon the decision in January 2014 to halt the mine's exports, which is costing the government an estimated \$6 million in royalties per day.

The collapse of Brazilian tycoon Eike Batista's reputation over the course of 2013 had ramifications for Brazil's western neighbor as Batista's two Colombian mining companies, coal developer CCX

and gold junior AUX, were offered up for sale in an attempt to rescue the discredited baron's crumbling empire. Although in 2011 Batista speculated that CCX's assets could be worth as much as \$6 billion, Turkish producer Yildirim has agreed to pay a paltry \$125 million for the company. AUX has had rumored buyers for over a year, but as of writing no sale is confirmable. Batista's exit from Colombia will hopefully allow these companies to continue their development in a feasible manner that can reinstate confidence in investor's expectations in these assets and in the sector as a whole.

Despite these setbacks, there are encouraging developments that will help the country's coal majors get back on track in 2014. While low prices and weakened demand in the United States remain as major question marks, long-awaited expansion projects, upgrades and new investments are expected to run full steam ahead in 2014.

Cerrejon is expected to complete an estimated \$1.3 billion expansion project in April 2014. This P40 project is expected to increase production capacity by 28% to 41 million mt/y. Glencore Xstrata-owned Prodeco is also expected to complete a \$550 million expansion to raise its production capacity to over 20 million mt/y, more than doubling its total annual output since 2009. These upgrades are not only increasing production capacity, they are also lowering operational costs for these mines; a critical factor as Colombia seeks

to compete with other coal exporters South Africa and Russia in Europe, its largest coal export market.

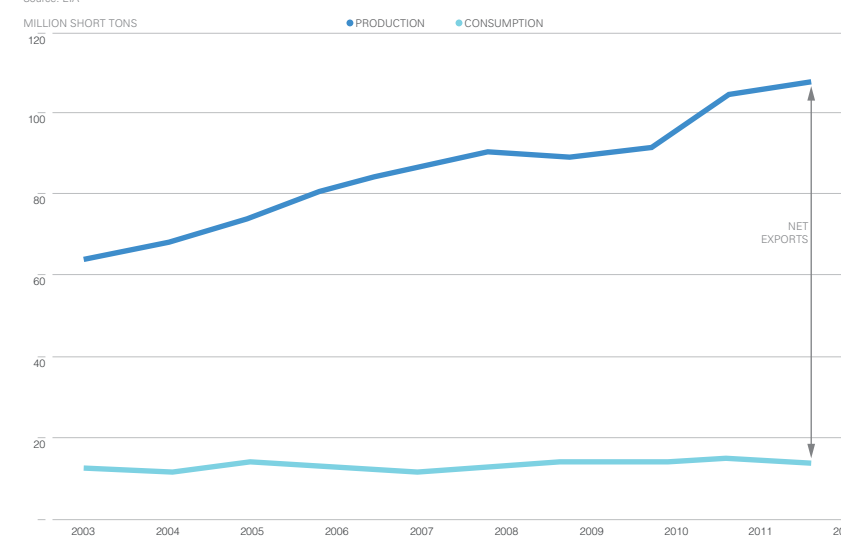
With the Caribbean coast dominated by the well-established major producers, Colombia's interior, especially in the Boyacá region is seen as the frontier of Colombian coal with many local and international companies developing projects and using foreign capital to jump start production in a region with high-quality thermal coal and excellent metallurgical coal potential. "It remains hard for a junior or a small company to have the resources to acquire or develop an open pit mine in the north of the country. We are seeing a few opportunities for local companies to develop open pit mines in the interior, but we see a prime opportunity in underground coking coal. There are still many places to explore, develop and find new potential areas that can increase the output of Colombia as a producer and exporter of metallurgical coal," explained Carlos Felipe Barrera, managing director of South America for consultancy John T. Boyd Company.

Australia-based New Age Exploration and its partner, UK-based Aurora Energy, have identified their Terranova project in Cundinamarca, 40 km outside of Bogota, as a prime development for coking coal, while for the time being, it is placing less emphasis on its infrastructure-starved thermal projects near the coast, according to Hans Friedrich, an associate at Aurora Energy.

In Boyacá, Carbid SAS, a relatively new entrant established in 2010, began initial production of thermal coal in 2013. The project attracted investment from Canadian firm Lara Exploration, which in turn sold its 19.91% ownership stake in Carbid to newly incorporated, Vancouver-based Nebo in December 2013. "Our partnership with international companies is a way of financing the expansion of Carbid and allowing it to reach its target. We are working on getting new markets, and capital injections will help us to meet the new commitments. Lara's target is to be established in Colombia with large projects in areas in which they can be competitive. They will help us in the commercialization of our coal and will also be a strategic partner for new acquisitions in our area of operation," explained Gildardo Perez, general manager, Carbid SAS in

### COLOMBIA COAL PRODUCTION & CONSUMPTION

Source: EIA



an interview before the Lara-Nebo deal was announced.

While the government has prioritized transportation in the area, a plan by Votorantim-owned Minas Paz del Rio to construct a railway from the region to the coast was reportedly cancelled in December 2013 throwing the future of this promising region in doubt. "Alternative markets need to be identified to replace those industries that could be migrating from coal to gas. The government has announced the implementation of transportation by train to satisfy the needs in the area. Once this happens, the coal industry in the Andean region will spring up. The quality in that jurisdiction exceeds that of the mines located in the Caribbean area which, on the other hand have good transportation infrastructure and exhibit massive production," said Perez of Carbid.

With a rapidly changing energy paradigm in the United States demanding fewer coal imports, Colombia now must redouble its efforts to remain competitive or its key commodity will continue to take a substantial hit. According to the ANM, 94.3% of Colombia's coal is exported with virtually all of the coal from these major mines on the Caribbean coast bound for international markets. "Companies in Colombia and the United States are going to start fighting for the same clients overseas whether they are in Europe, Asia, or Brazil. The reality is the energy situation in the United States triggers difficulties

for Colombia as the United States is now producing good quality coal and transporting it for export via efficient infrastructure. On the other hand, in Colombia we have difficulties transporting coal from the interior of the country to the ports, hurting our competitiveness. If the shale gas in the US keeps on going the way it is expected, Colombia is going to have to start looking towards other markets for our coal," commented Carlos Felipe Barrera of John T. Boyd Company. •

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Comparing gold and coal is interesting. Coal production numbers in the millions of tonnes per year, but is less valuable per ounce than gold is. The size of the gold market is much smaller, perhaps 10% of the market for coal. Bigger mining companies will probably continue developing at a slower pace until commodity prices come back to a reasonable level. As such, gold will probably show greater growth overall. One must keep in mind, however, that high growth rates are much easier to achieve percentage wise when the relevant market is much smaller to begin with.

- Carlos Ingacio Ojeda, Sales and Marketing Manager, Astecnia

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## William Feragotto

Country Manager  
**GOLDER ASSOCIATES**



**Golder Associates' Colombia office opened in 2011. Could you provide an overview of the growth of this office?**

Golder opened our Colombia operations in October 2011 with four people and today we have quickly expanded to an office of over 20 people. The situation in Colombia is not easy for mining, but for a highly specialized company like Golder, there is opportunity in the market. Since clients are looking to optimize their costs for their projects and are looking for consultants that can provide solutions to complex problems.

**There are a number of players that are preparing to move from the prefeasibility stage to development. How important is it that these mines adhere to industry best practice standards?**

It is very important that our clients adhere to the highest quality standards. Applying best practice standards give them a better opportunity to obtain the environmental license and to develop a good relationship with the communities. Bringing our international expertise to the country we can provide

clients with a host of services from the conceptual phase through prefeasibility and full feasibility stage.

**One of the major issues in Colombia is the clarity of environmental regulations. From your perspective, does adhering to internationally defined standards make a difference to the environmental authorities?**

The biggest limitation we are facing in Colombia is the issues surrounding environmental licensing. The mining ministry and the environmental ministry are working to clarify the rules of the game for the environmental licensing, which will help Colombia's international image. I am not sure what the timetable for this is, but in our meetings with the authorities we can tell progress is being made.

Adhering to international standards makes a huge difference. We support our clients in preparing the environmental impact assessments in a way that Colombian authorities can easily review them. We also prepare complimentary documents to support the environmental impact assessment. In Colombia, Golder has an engineering department and a social and environmental department that work together to prepare an environmental document that will be accepted by the environmental authorities. For example, we are delivering international standards for the treatment of wastewater. Since many of Golder's standards are stricter than local regulations, this ensures that the mine will go through an easier process of receiving its permit.

**Given the current state of the market, what are some of the ways Golder can optimize efficiency at mines?**

Since prices for some commodities are not favorable right now, clients are looking for increased efficiency first and foremost. At Golder our local engineering staff is supported by the best of our senior staff worldwide. This is important for Colombia because these senior engineers are able to transfer their knowledge from around the world to this country. One of the main aspects of local participation in the market is that we are aware of

the challenges that exist in the market especially surrounding land and water usage. In many cases we have been able to optimize past designs from other consultants in order to bring world-class quality coupled with local expertise.

**Colombia's mining industry is generally characterized by the well-established coal mines in the north and the exploratory firms in the interior of the country. In which area do you see the most potential demand for Golder's services in Colombia?**

The major coal players in the north such as Cerrejon have in-house engineering departments and will use companies like Golder for very specialized services. Golder Colombia also is focused on the gold companies in the planning phase of their projects in regions such as Antioquia. These companies are more dependent on consultancies to assist with design, waste management, underground engineering etc. As everyone is aware, the price of gold has dropped, which has particularly hurt the small gold juniors. For Golder, our key to success is diversification, which is a model that we have used worldwide. Our interdisciplinary teams provide a wide variety of services to our clients in the mining, oil and gas, infrastructure, and manufacturing sectors.

**What are the key priorities for Golder Colombia over the next two years?**

As an industry in general, we need to focus on connecting our engineering design capabilities with environmental issues. Engineering capability needs to become more integrated with stakeholder engagement in order to provide success and sustainability to the projects. Environmental issues usually can be solved applying engineering design and technology; social issues, instead, require good engagements with communities and transparency during the development of the project. This is exactly how we can add value and help our clients to succeed in their projects. •

## Gildardo Perez

General Manager  
**CARBHID SAS**



**Can we start with a brief review of the company and the different business arms both in the coal and petroleum and gas sectors?**

Carbhid SAS is working in the coal industry; for the oil sector we will establish a new organization in the future. Carbhid SAS is a young company that was incorporated in 2010 and initiated production in April 2012. Our activity is underground mining; our target for 2013 was ending the year with production of 500 mt per month; we were very close to this goal. In 2014, we expect that production will be around 1500 mt per month.

**Have you had the licenses since 2010 or have you been able to acquire licenses?**

We operate with a license that is owned by a third party, under an operation contract. We applied for a new concession this year and expect it to be resolved by mid-2014. Our plans include going after new licenses and negotiating existing licenses also in the area where we are operating.

**Does Carbhid produce thermal coal or metallurgic coal? How do the markets differ for the two at the moment?**

Currently Carbhid is producing thermal coal. From a marketing point of view, metallurgic coal is better because most of the clients are abroad and prices are more favorable. For thermal coal, the situation is difficult because we are located right in the middle of the country with no efficient transportation infrastructure. We sell our product locally to power generation plants and other industries. Alternative markets need to be identified to replace those industries that could be migrating from coal to gas. However, the government has announced the implementation of transportation by train to satisfy the needs in the area. Once it happens the coal industry in the Andean region will spring up because its quality exceeds that of the mines located in the Caribbean area which, on the other hand, have good transportation infrastructure and exhibit massive production.

**In Boyaca there are several companies like you operating in the region. Is this lack of access something that hampers the development of the coal industry in the center of the country?**

We could say that there are no more than 10 big companies in that area; however, big is a relative term because production of these companies cannot be compared to that of companies located in the northern part of the country producing from open pit. Two factors are impacting the development of the coal industry in this area; the type of mining (underground) and transportation. Growth of companies in Boyaca is in most of the cases associated with the production of metallurgic coal which is to a great degree sold abroad at prices that can absorb the negative impact of transportation costs.

**What does the partnership with Lara Exploration and other international firms allow you to do with the company financially?**

Our partnership with international companies is a way of financing the expansion of Carbhid and allowing it to reach its target. We are working on getting new markets, and capital injections will help us to meet the new commitments. Lara's target is to be established in Colombia with large projects in areas in which they can be competitive. They will help us in the commercialization of our coal and will also be a strategic partner for new acquisitions in our area of operation. The above is true not only for Lara, but also for any other company that could be willing to work jointly with Carbhid. •

**CARBHID SAS**

*A Company to Create Wealth and Opportunities for Investors in the Colombian Mining Sector*

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## Carlos Felipe Barrera

Managing Director-South America  
**JOHN T. BOYD COMPANY**



As an American firm specializing primarily as a coal-mining consultancy, please begin with a brief overview of John T. Boyd Company's operations in South America, specifically here in Colombia?

John T. Boyd Company has been present in the mining sector for over 70 years. John T. Boyd has worked in Chile, Mexico, Peru and Colombia. While we perform consultancy services for coal, industrial minerals, metalliferous ores, precious metals, and oil/gas, our work to date in South America has been primarily coal related. Colombia has the most coal potential in South America, and John T. Boyd Company has been present in Colombia for the last 30 years. We have worked in the main coalfields in the Cerrejón Guajira region since their inception. Over the last five to seven years, we have focused on the underground, metallurgical coal, dedicated to supporting the coking coal industry in Cundinamarca, Boyacá, Santander and in Antioquia. John T. Boyd has selected Colombia as the entry point for South America and we plan on having a permanent office established here to better serve our clients.

You mention the opening of a permanent office here in Colombia. What are some of the objectives for this new Colombia office?

Thankfully John T. Boyd has a good amount of ongoing work that allows us to maintain a presence in Colombia. We have experts flying from our Pittsburgh and Denver offices at least two to three times per month. The objectives of the Colombia office are to establish an outpost with technical capabilities, make us more competitive and employ and develop Colombian employees. Unfortunately the market situation is not great right now; in normal times we would have already had the office here. In the meantime, we are supporting our existing clients and positioning ourselves for better times ahead.

Some industry experts are of the opinion the demand for coal in North America is bound to decline in the medium term as the US experiences the effects of the shale gas boom. What do you see as the demand for Colombian coal in North America?

Companies in Colombia and the United States are going to compete for the same clients overseas whether they are in Europe, Asia, or Brazil. The reality is the energy situation in the United States triggers difficulties for Colombia as the United States is now producing good quality coal and transporting it for export via efficient infrastructure. Whereas in Colombia we have difficulties transporting coal from the interior of the country to the ports, hurting our competitiveness. If US shale gas keeps on going the way it is expected, more US coal will be diverted into the export market and Colombia is going to have to start looking towards other markets for coal sales.

Prior to the recent worldwide recession in coal demand, companies from Japan, China, and India were investigating the Colombian coal industry. There is potential for Colombian coal in these markets. Once Colombia has a couple met coal mechanized mines running that can guarantee a single-seam product rather than a blended one, we could see a strong shift towards Asia.

Our last report in 2011 on Colombia's mining sector named infrastructure the "Achilles Heel" of the coal industry. Has the situation changed since then?

In 2011, I am sure industry leaders complained about the lack of port infrastructure and the complexities of dealing with this. Three years later, companies can transport their coal through any port in Colombia because now there is excess capacity. Gradually, the infrastructure is getting better; we are seeing barging through the Río Magdalena, ports are being built, the central railroad project has been renewed, and other improvements are being made. Constructing modern rail infrastructure to service the interior met coal regions of Colombia will be a challenge due to the fragmented nature of the industry. A joint effort by the coal industry participants and the government will be needed to support this investment.

What do you see as the key objectives the Colombian coal industry must accomplish in the coming three years in order to enhance its position as the important player it is today?

Colombia has a great opportunity. The country is being mapped and surveyed more extensively than it ever has before by the geological survey. Those results will be handed over to the ANM, which will receive tenders from both national and international companies. This mapping will hopefully be done well and will attract international investors. Despite the difficulties in the market, now may be the right time to buy. The market will recover eventually, and if a company can explore during a down time and be positioned to reach production during peak prices, they will maximize their financial returns. •

## Fernando Elías Ganoza

CEO  
**ATICO MINING CORP.**



Could you provide an overview of the history of Atico Mining?

Atico Mining started with the idea of replicating the growth model of Fortuna Silver Mines, but in the copper and gold space. In this respect, Atico's mission is quite simple: to look for high-grade, mid-sized, advanced copper and gold assets in Latin America. The company stayed private in 2009, looking for the right opportunity. In 2010 we found El Roble and after a long negotiation, in 2011 we signed an agreement to explore in the area, with an option to purchase 90% of the mine and surrounding claims.

The owners at the time and the mining community in Colombia believed that the El Roble mine was being exhausted, whereas we saw potential for more resources. Over the following two years we explored the property and were successful in proving high grade mineralization extended below the current mine. With the support of positive exploration results we decided to execute our option to acquire the mine and surrounding claims. The mine presented all the characteristics we were looking for: high-grade, mid-sized

deposit with potential for growth, and located in a good jurisdiction for this type of operation.

Now that you have completed the acquisition, what are the next steps for El Roble?

El Roble is undergoing a complex restructuring process that will have some effects on the current working culture. I believe our team on the ground is doing an excellent job in managing the transition from very manual mining methods to a semi-mechanized modern operation. We have invested about \$20 million in El Roble so far (\$14 million of which is the acquisition itself), and we are going to spend a further \$8 million for the mine expansion and modernization. To supplement the equity funding we have an offtake agreement with Trafigura for a debt line of \$8 million in exchange for approximately 200,000 mt of concentrate.

Today, El Roble mine produces 1,200 to 1,500 mt of fine copper per annum. After the optimization we expect to produce 6,000 to 7,000 tonnes per annum, as well as 10,000 to 12,000 oz of gold. The increase will be achieved through several means. Presently, the mill operates 240 days per year and we believe it should operate for no less than 330 days per year. Second, we are expanding the plant capacity from 400 to 650 tonnes per day (tpd), this will allow the used capacity to double because currently the mine is only processing at 300 tpd. Finally, by reducing dilution we are going to increase the head grades of the ore sent to the mill. Currently the life of the mine is projected for 8 or 9 years, but we believe that we can find additional resources of significant size. Around the mine we have concessions for 6,679 hectares that have the potential to host additional VMS deposits and if discovered, could become satellite operations to the existing El Roble mill.

How is Atico Mining perceived in the market?

I believe there are currently very few companies that are valued according to their fundamentals. People are not interested in investing in the sector right now and in particular in high-risk vehicles, such as exploration companies so

funding is scarce. At the same time, big mining companies have reduced their exploration budget, which decreases the chances of a joint venture for junior explorers.

In this context we were fortunate to transition the last quarter of 2013 from having an exploration project to a producing company generating cash flow while maintaining a strong exploration upside. I believe the market has perceived this transition in a very positive way as evidenced by the fact that in the middle of the crisis and in a time of the year where it is usually challenging to raise funds (summer in the northern hemisphere), Atico raised money to execute the purchase option. We were actually oversubscribed. The few investors that have stayed in this market are choosing very carefully where to invest and Atico is an attractive option. Our advantage is that Atico reduces many of the risks that exploration companies have. El Roble generates cashflow, has growth potential and a group with a successful track record of developing mines behind it; this is important in the face of the overblown investment budgets that have been highly disappointing for investors in the last years. Finally, the deposit is very high-grade, which tends to mitigate the risks of volatility in the commodity prices.

El Roble is located in Chocó, a problematic department of Colombia.

What is the security situation?

Geographically and politically, El Roble is located in Chocó, but in many respects the operation is closer to Antioquia because it is at the border between the two departments. Chocó is historically a problematic department, with primary jungle from the mountains to the Pacific Ocean and very little infrastructure; that favors the development of illicit activities such as drug trafficking, illegal gold mining and guerrilla operations. However, this happens in the 'Bajos' of the department, while we are up in the mountains, in an area controlled by the government and the military. The last time that El Roble had to shut down due to a security situation was back in 1991 to 1992. We have never had any problems ourselves. •





## Difficult Times: The Challenges Facing Colombia's Mining Industry

"The situation has improved drastically in Colombia over the past few years.

One year ago, illegal, artisanal and informal mining were all the same thing. We had very poor institutions that were not prepared to develop the sector. One year ago, nobody in the country wanted to talk about mining or how it could benefit the country; being anti-mining was popular. Today, we have more information; sustainability is being built into the sector and the various forms of smaller-scale mining are being classified and dealt with appropriately. In every part of the world, there are those that oppose mining. In Colombia, this was the case because strong institutions did not lead the sector. It was impossible to sum up issues with the industry in a 'Twitter headline' of less than a few words, so it was easy for people to be against it."

- Mario Escobar, President and CEO,  
Ashmont Resources



## Re-strategizing Investments

Colombia's industry adapts to the market

2012 and 2013 were not easy years for the cash-strapped junior sector and Colombia's decline in mining investment reflects this harsh reality. Many juniors exited the market giving the remaining players a prime opportunity to fill the void. In such a difficult market environment, defying norms could favor the bold as traditional strategies have led to failure for many. With fewer players in the market, companies are finding financial success because they are able to blend strong projects, experienced management teams and attractive prices all into one enticing package for investors.

According to the Colombian Chamber of Mines, 90% of the country's territory remains underexplored, making Colombia a project developer's dream. Exploration activity has come to a halt for many juniors in the market and recent merger and acquisition activity in Colombia has been slow. "The current struggles of the junior market are not so much based on their exploration results but on the current poor market conditions that are determining the progress or lack of it on a project. There are certainly acquisition opportunities to be made at the right price," said Stephen Jensen, B2 Gold's vice-president for Colombia.

B2 Gold is currently in the midst of a prefeasibility study on the Gramalote project with operating partner AngloGold Ashanti. According to Jensen, Gramalote has recoverable gold reserves of 3.9 million oz with potential production of 300,000 oz/y. While AngloGold Ashanti's other Colombian asset, La Colosa, faces significant opposition, Gramalote is moving forward. "Gramalote is probably Colombia's first opportunity for modern, large-scale, open pit gold mining to come into production. Colombian mining needs

good news; this mine coming to fruition provides this," said Jensen.

A company that is creating a buzz on the market is newly formed Cordoba Minerals. The company was formed through the merger of several companies to acquire all of the land surrounding the copper gold porphyry district at Montiel. In November 2013, Cordoba announced drilling results of 1.0% copper and 0.65 g/mt of gold at 101.1m depth. "This discovery puts the focus on this newly discovered porphyry district which we control 100%. It is very rare to have 100m holes with these types of grades within a district that is controlled by one company. What the drill holes and our exploration work to date have shown is that this project has the potential to be a high-grade porphyry cluster, hosting significant grades of both copper and gold. The area is unique when compared with the rest of the middle Cauca belt, where open-pit porphyry discoveries are economically challenged due to the high elevation in a mountainous region with lower grades," said Mario Stifano, CEO of Cordoba Minerals.

With a number of Colombia's most prominent mining figures as stakeholders, including incoming chairman Ari Sussman, current CEO of Continental Gold, Paul Dias, CEO of Minatura International, and previous Cordoba CEO Simon Ridgway as director, the project certainly has an experienced team and the market took notice. "Taking our discovery and company on the road to potential investors around the world, we raised \$15 million in January 2014 and the financing was significantly over subscribed. The investors saw the potential of this district just as we did," said Stifano.

While others have shied away from the Colombian market in recent years, Cordoba is proceeding with unabashed confidence. "Cordoba is a young company, though we are a major in the making," said Stifano.

Another encouraging development for the Colombian market in the latter half of 2013 was the announcement that IAMGold had agreed to an option agreement to earn up to a 70% interest in Solvista Gold's Caramanta project. "We are very happy to have IAM Gold come into the project not just because they will be investing a significant amount of

money, but it also gives a vote of confidence in the project and the work we [Solvista] have done. There were obviously not many deals done [in Colombia] last year, and this probably is among the larger ones," said Solvista's president and CEO Miller O'Prey. Prior to the announcement, Solvista had halted its drilling program to conserve cash, a move common amongst the junior sector in Colombia as financing runs tight. With IAMGold coming onboard, O'Prey expects exploratory drilling to recommence on Caramanta by the middle of 2014.

Atico Mining, formed in 2009, attained a purchase option agreement on Colombia's only producing copper mine, El Roble. In exercising its option after promising exploration results, Atico paid \$14 million to obtain a 90% interest in the mine. Through mechanization and further exploration on the 6,679 hectare property, Atico is not only planning to significantly extend the mine's life, but is also targeting production to increase from its current figure of 1,200 to 1,500 mt/y of copper to 6,000 to 7,000 mt/y. Additionally, Atico is planning to produce 10,000 to 12,000 oz/y of gold.


Despite the challenging market environment, Atico was oversubscribed when it raised capital to exercise the purchase option in summer 2013. "The few investors that have stayed in this market are choosing very carefully where to invest and Atico is an attractive option... Atico reduces many of the risks that exploration companies have. El Roble generates cash flow, has growth potential and we are a group with a successful track record of developing mines behind us; this is important in the face of the overblown investment budgets that have been highly disappointing for investors in the last years," said Fernando Elias Ganoza, CEO of Atico Mining.

For some of Colombia's non-producers, drilling programs to prove additional reserves have taken a backseat to initiating production as soon as possible. "The problem is one of perception; from our point of view, we have hard assets with good metallurgy where a valuable project can be developed. Everything is undervalued and that is why we are going to the production side of the business and acquiring new assets that are near pro-

duction," said Mario Escobar, president and CEO of Ashmont Resources. TSX-listed Antioquia Gold has accelerated the production timetable at their Cisneros project in order to generate cash flow in the near term, while shelving some costly exploration activities for the time being. Antioquia Gold is in the final stages of securing financial backing and completing feasibility studies; once these steps are completed, the company estimates Cisneros can begin producing in 18 months with initial production targets at 35,000 oz/y. However, Antioquia Gold's president and CEO, Fernando Jaramillo, contended that this figure could eventually triple once full exploration at Cisneros is completed. "The exploration is focused on an area below a mountain; therefore exploration is not cheap because the holes to test the veins which are close to vertical run deep," he said.

"The potential for growth here is perhaps not what the government forecast for this year (2013), but we must remember that Colombia faced severe delays in its development because of security concerns, which lasted a good 20 to 30 years. It is only in the past decade that things have been looking up. We are running behind, but we have a proactive government now," said Hans B. Kulp, general manager of the recently established Colombian branch for Peruvian explosives firm Exsa.

Despite the short-term market uncertainties and the continuing growing pains of the country's regulatory regime, the geological potential of Colombia is too appealing of a prize for the mining industry to ignore. As an Andean country with the same geological DNA as mining powerhouses to the south, Colombia's mining fortunes will certainly turn as the global market recovers. "The reality is that mining takes a long time and this is a normal progression. Some companies that are idling right now are facing the market realities, while others have stepped out because their projects are simply not feasible. That is part of the risk of the junior mining industry. There are companies that are struggling and have stalled, but the groundwork is being put in place and this takes time. You cannot build a mine, or a mining industry, overnight," said Mark Moseley-Williams of Continental Gold. •



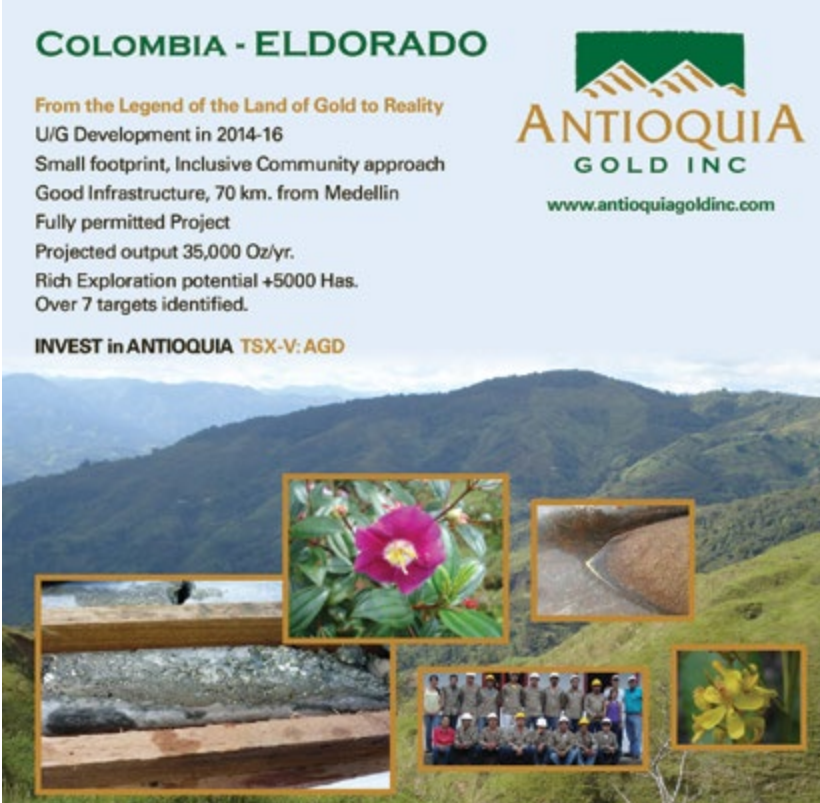
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## Fernando Jaramillo

President & CEO  
ANTIOQUIA GOLD INC.



### Could you provide an overview of Antioquia Gold?

Antioquia Gold started in 2007 with a group of 10 individuals all involved in some way with mining and with our own capital. In summer 2008, we went to the market with a reverse takeover. We raised some capital but the market crashed soon after that. The real turning point was when the Peruvian investors of Consorcio Minero Horizonte bought a significant share of the company. We invested that money in drilling and ended up with a good project; Cisneros. We have a high-grade deposit and the project is favorable from an environmental point of view, as it would cause a very small footprint. We believe we can put Cisneros into production very quickly. The exploration is focused on an area below a mountain; therefore exploration is not cheap because the holes to test the veins which are close to vertical run deep.

### What is your current resource, and how much more exploration do you need in order to take a production decision?

Right now we have around 300,000 oz of gold, which is enough to put the project

into production. We can always do more exploration as we are producing. The problem is that the market does not understand this; it wants as many oz as possible in the resource, but drilling some holes costs as much as the amount of gold they can add to the resource. Therefore, what matters to us is the grade and the cash cost of production, which in our case would be around \$500 per oz discounting development work.

### What is the estimated initial cost to put Cisneros into production and how are you going about securing the necessary financing?

We estimate that \$20 to \$25 million will be enough to put the project into production. Consorcio Minero Horizonte is committed to the project and currently hold about 45%. We are currently exploring deals with second-tier financial institutions that are willing to be paid in gold. This is a good option because it is not dilutive; besides, it aligns you very well to what you want to do because it commits you to production. The mine, to start with, will produce around 35,000 oz/y, and eventually, with further exploration success, we would like to triple that. As soon as we have full financing and complete some studies, construction should take around 18 months.

### How are you working with the artisanal miners in the area?

The community is mainly dedicated to agriculture and mining, so mining is not new for them. With the artisanal miners we have a three-pronged strategy. We will offer them a job if they want to work with us. The second option is to organize them in a cooperative to work in one of our titles. In this case we will supply technical support, financing and then we can buy the ore from them. The third approach is to help them get a mining title. Of course, we need to distinguish the true artisanal miners from the opportunistic people that just come to the area trying to get money from us.

### Besides Cisneros, is there any other project in your portfolio that shows good potential?

We have two other projects that are quite exciting, but the dilemma is: do you concentrate on one project, or do you kiss a

lot of frogs and hope that one is a prince? We currently do not have the resources to work on them as we would like, so we are looking for partners to sign joint ventures for those properties. Right now there are a lot of titles available, because many companies have left the country. In Cisneros alone we are working on 250 hectares but we actually have over 5,000 ha where we have identified an additional seven very interesting prospects, so we have enough there to keep us busy for the next years.

### The industry complains there is not enough support to the sector. What can mining and Antioquia Gold in particular bring to Colombia?

In Antioquia Gold, if we are successful in creating a modern, green gold producer we could become operators with other companies. So far, the gold industry has little to be proud of in this country. Therefore a key motivation for me is to actually prove that gold can be produced responsibly, just as the coal and nickel industry has shown with world-class operations. In Colombia we are stuck with the idea that because natural resources are non-renewable, we should keep them to ourselves or in the ground rather than exploiting these with the support of foreign investment. This attitude is crazy. I have seen Norway, the Netherlands, the UK, Australia do wonderful things with their natural resources. I have also seen what Nigeria has done with its oil, which you can check out. It is not a good story. So, because someone else has done things poorly, it does not mean that we are going to follow the same path. Gold in Colombia will be three times as big as coffee in income for the country, and no-one will dare to criticize the coffee industry, even if it has a significantly larger and more invasive footprint than modern underground gold extraction. •

## Mario Stifano

CEO  
CORDOBA MINERALS CORP.



### Cordoba Minerals Corp. is a Canadian company with a focus on Colombia. Could you provide an introduction to your company?

Cordoba Minerals has consolidated what we believe is a large unexplored porphyry district in an area with infrastructure, operating open pit mines and ideal topography. The company is well financed as we announced a \$15 million equity raise in January 2014 to allow us to aggressively drill our newly discovered porphyry district. It has taken almost three years to get this property consolidated and we are now positioned to explore. Chris Grainger the incoming vice president of exploration for Cordoba Minerals and previous vice president, exploration for Continental Gold was going through 2 million hectares of ground owned by Grupo de Bullet. In search of another Buriticá project, Mr. Grainger came across an area that held the possibility of being a high-grade porphyry deposit, which was located in rolling lands, near infrastructure. Continental ended up exercising its right of first refusal with Grupo de Bullet and created a company, which is being acquired by Cordoba Minerals. At more or less the same time that Con-

tinental Gold discovered the property, Simon Ridgway went to Colombia in 2011 to have a look at a property and he realized that there was a porphyry district owned by a private US company. Simon negotiated an earn-in agreement to lock-up the ground. In August of 2013, Cordoba Minerals acquired and consolidated all the ground such that the property porphyry district is now all 100% owned. I will be the new incoming CEO with an exceptional board led by Ari Sussman as chairman and including Simon Ridgway and David Reading.

### On November 20th, Cordoba announced the discovery of a new high-grade copper and gold porphyry system having drilled 101.1m at 1.0% Cu and 0.65g/mt Au. Please talk about these results from the Montiel project and where it positions your newly amalgamated company?

What the drill holes and our exploration work to date have shown is that this project has the potential to be a high-grade porphyry cluster, hosting significant grades of both copper and gold. The area is unique when compared with the rest of the middle Cauca belt, where open-pit porphyry discoveries are economically challenged due to the high elevation in a mountainous region with lower grades. What is significant about Montiel is the topography of the area. These rolling hills are believed to have high temperature copper-gold porphyries and it is quite possible that Cordoba is in the goldilocks of the copper-gold district of Colombia. Our work so far has given the company a kilometer of strike, with two outcrops on either end, both of which have been drilled, with one outcrop having been drilled. If we can demonstrate that these two structures are related we will be able to build our resource very quickly, while also exploring and drilling the 13km district, which includes Costa Azul.

### In addition to being located in a favorable topographical setting, the Montiel project is also very close to infrastructure.

The Montiel project is 20kms away from BHP Billiton's Cerro Matoso, the world's third largest nickel mine, which has been in operation for 30 years, with reserves estimated at an additional 40 years. Sta-

tor's Carbon del Caribe coal mine is also 10kms away and there are a number of ongoing power projects to service both of these mines in addition to the grid power already available. Also, given the history of these mines there are a number of towns in the surrounding area which can provide an experienced labor force. The project is also serviced by a landing strip, Puerto Libertador, close to the Carbon del Caribe mine and a full-service airport roughly 50km away.

### Moving forward, what does 2014 hold for the Cordoba Minerals?

Once the merger is complete, Cordoba will undergo an aggressive drilling exploration campaign to demonstrate that we have not only a great discovery at Montiel but an exciting porphyry district. Due to the topography of the area, Cordoba will incorporate drilling techniques from Australia and Western Africa. Rotary air blast drilling (RAB) will allow the company to drill 30m to 60m holes at a cost of around \$30/m. While this manner of drilling cannot be utilized for resource estimates, it allows Cordoba Minerals to significantly reduce the timeline for identifying the potential of the project and the district. The company will diamond drill the two outcrops from the previously mentioned 1km strike, RAB drill in between, and follow up with diamond drilling before moving onto our other targets.

### Given the financial markets, how will Cordoba look to raise the money required for this drilling program?

New discoveries that have real potential will always attract funding. Taking our discovery and company on the road to potential investors around the world we raised \$15 million in January 2014 and the financing was significantly over subscribed. The investors saw the potential of this district just as we did.

### When Global Business Reports returns in two to three years where will we find Cordoba Minerals?

Cordoba is a young company, though we are a major in the making. There are experienced companies and investors behind Cordoba Minerals to help guide us and in three years' time we will have clearly demonstrated that we own the entirety of a prolific copper gold porphyry belt. •



## Stephen Jensen

Vice President-Colombia  
B2GOLD



**B2Gold's portfolio has quickly grown over the last half decade to include projects in Central America and Africa; could you provide a brief overview of B2Gold's projects here in Colombia?**

B2Gold has been present in Colombia since 2006. In 2007, the company went public and was able to raise \$100 million on the TSX largely based on the potential of our Colombian exploration projects. Since that time, we have developed a couple of projects, the most noteworthy being Gramalote located in Antioquia, a joint venture with AngloGold Ashanti who became operator of the project in 2010. We are finishing a prefeasibility study by the end of Q4 2013, where we are working out the size of the operational mine and our timeline has potential production commencing in 2018 depending on market conditions and when we decide to undertake a full feasibility study. Presently, we have a 43-101 compliant resource of 3.9 million oz gold with a potential production scenario of 300,000 oz/y. Gramalote is probably Colombia's first opportunity for modern, large-scale, open pit gold mining to come into production. Colombian mining

needs good news - this mine coming to fruition provides this.

Our other notable asset is the Mocoa project in southern Colombia, which is a copper-molybdenum porphyry deposit in the Putumayo department, close to the border with Ecuador. The United Nations and the local government originally drilled in this area in the late 1970s and early 1980s with a non 43-101 compliant inferred resource of over 300 million mt. We have done some additional drilling on the property to advance the project, but at this stage we are probably looking for a partner that has experience in copper to come onboard to help advance the next stage of Mocoa. Our eventual plan would be to form a spin-off company called B2 Metals, which could become focused on developing copper plays. The timing of this will depend on when market conditions are favorable to do such a spin-off.

**Many mines in Colombia have faced opposition from local communities which has delayed the progress of projects. Is Gramalote facing these same issues?**

Gramalote is not facing the same political or social issues as projects in other regions of the country and the local community is strongly in favor of a mine at Gramalote. The local environmental authorities have a great deal of control in Colombia and play a large role in determining whether a project will proceed. Cornare, the local environmental authority in Gramalote, is very strict, but they want their name on the permit of the first modern open-pit gold mine in the country and we are working closely with them for permits including the EIA. The local governor is behind the project as he learns more about mining. For the mining industry, the most important government official in Colombia is often the local mayor: the area around Gramalote has a history of mining, so the community understands the industry and our objectives and is on side with the project. We are working with the small-scale miners to figure out how they can exist with the mine and we have demonstrated that once we integrate these small-scale miners into the project, mining will have a smaller environmental footprint than if these miners were left unregulated.

**As you look for new partners at Mocoa, are you looking to retain the operator role?**

B2Gold would be open to either retaining or relinquishing the operator role. We want to bring onboard a company with base metal experience, but we also recognize that Colombia is not an easy place to operate and that our experience here is a great asset.

**Most of the exploration focus and buzz in Colombia has been towards gold exploration. How underexplored is Colombia's copper potential given the amount of copper in its fellow Andean countries Chile and Peru?**

Copper has been less of a focus for the juniors thus far compared to gold, so the discovered reserves are not as well known. A great deal of the potential copper plays in Colombia lie in the Chocó region, which continues to be a hotbed for guerrilla groups as well as many other traditional challenges such as poor infrastructure and sensitive communities. For juniors that are often more focused on the immediate market conditions, Chocó is a difficult place to operate, whereas a major that takes a longer term view may see greater potential in the region.

**B2Gold has grown into a mid-tier gold producer over the last five years through your acquisitions in other parts of the world. Given the difficult market conditions, how much of an advantage is it for B2Gold to have cash flow versus other juniors in Colombia? Does this allow you to look at potential acquisitions in a downturn?**

Many of Colombia's junior companies cannot raise enough or any money to explore and advance their projects and they are just trying to keep the office open. During the last downturn in 2009, B2Gold acquired two assets in Nicaragua that are now producing mines instead of investing in a full drilling program at Gramalote. In October 2013, we acquired Volta Resources in West Africa for a good price. The current struggles of the junior market are not so much based on their exploration results but on the current poor market conditions. •

## The Challenge of the Unofficial

Tackling illegal mining

In October 2013, Cerrejon, the country's largest coal miner, was the victim of a railway bombing by the Revolutionary Armed Forces of Colombia (FARC). In August, Canadian geologist Gernot Wober of Braeval Mining Corporation was released after being held hostage by the National Liberation Army (ELN) for seven months. Despite ongoing peace negotiations with the FARC in Havana and the dramatically weakened position of both guerrilla groups, these instances show that the hydrocarbon and mining industries remain a target for insurgent attacks and kidnappings. Primarily due to a legacy of five decades of violence, Colombia is home to only a handful of legal, producing gold mines, which are operated by companies such as Mineros SA, Gran Colombia Gold, and Minatura. Although it is the third largest gold producer in South America, the majority of Colombia's production comes from informal sources. This gold is difficult to track, giving terrorist organizations a funding vehicle to complement their infamous source of revenue, narcotics production and trafficking. "It is necessary to separate informal mining or traditional mining, which has a long history in Colombia, from the nexus of criminality. For informal or traditional miners, the government is working towards a process of formalization for its legalization. However, for those miners that have entered into the nexus of criminality, there is no tolerance for this activity," said Amilkar Acosta Medina, Minister of Mines and Energy.

While engaged in peace talks, the government is also taking steps to curtail illegal mining. In 2013, the government issued a directive that any equipment

used by illegal miners is to be confiscated and destroyed. While a necessary step in the right direction, the directive has caused some confusion for the country's equipment dealers and leasers. "Unfortunately, the regulations have not been clearly defined, creating misinformation and delays on the machines deliveries to our legitimate customers, affecting them profoundly. Once the rules are clearly defined and communicated, we believe that these conditions will be beneficial for the legitimate miners," said Fredy Daza, mining sales and marketing manager for Gecolsa, the country's Caterpillar distributor.

As foreign companies have entered the country, many have had to contend with preexisting informal miners working on their titles. The issue is thorny as the government estimates that over half of the country's 102,000 miners are involved in unpermitted mining activity. In many cases, these informal mines are the main source of livelihood for entire communities, while at the same time they follow no environmental standards and their production may be used as a financing vehicle for the country's guerilla groups.

One company that encountered informal miners on its title was Gran Colombia Gold when it acquired the Segovia mine in 2010. Since then, the company has implemented its Artisanal Mining Program. Profits are shared between the mining company and artisanal miners, while standards for these once informal miners are implemented and upheld. "It [the Artisanal Mining Program] has transformed the community as the informal miners have gone from being in the shadows to becoming inte-

grated members of society. In Segovia the informal miners used to process the ore with mercury, making the area the most polluted in Colombia. Formalization provided a solution for this environmental challenge because as the titleholder we were liable for the adverse

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It is very difficult to differentiate illegal miners from legal ones; as an equipment provider, I cannot tell when the paperwork is legitimate or not. We strive to operate legally and are always able to provide the paperwork the government asks for. However, when we send machines to mine sites, it is not possible for us to continue doing follow up, so we cannot guarantee the illegal or legal operation of our machines. The government needs to take more initiative to monitor the mining environment by more strictly enforcing the various regulatory regimes that govern it.

- Juan Carlos Londoño,  
General Manager,  
Rodriguez y Londoño

”

environmental impact they created. This program was a risk, as we have to share profits with these artisanal miners on our title. We figured if everyone walks in the same direction we would be more productive as a whole," said María Araújo of Gran Colombia Gold. •



## Paul Dias

CEO  
MINATURA



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**Could you provide a brief overview of Minatura's key changes since we met with you for our 2011 report?**

We have focused on new projects outside of Colombia, primarily West Africa as we wade through the Colombian government's change in direction with regards to how it manages mining and environmental laws affecting long-term mining investment strategies. Colombia has been a challenging environment for last few years and we hope it improves. Most exploration companies in the Colombian gold mining sector rely solely on investment capital from foreign capital markets like Canada where new capital has become incredibly scarce. Minatura is a gold producer which has allowed us to pay our bills and continue our exploration activities. Additionally, we are involved in base metals in Colombia, which diversifies our focus. Minatura has been able to stay ahead of the curve because of our focus on production. A couple of years ago I emphasized that we needed to move into production as soon as possible in order to position ourselves for a downturn. Sure enough the market has dried up here and many companies have had to exit the market.

**How has the market changed since its peak in 2010/2011 and what will it take for companies to have success in this more difficult market environment?**

Most of the investment capital for exploration in Colombia has come from the Canadian markets. Minatura benefitted from that with its deals with Cordoba Minerals Corp. and Tolima Gold. Our deal with Cordoba Minerals Corp. is really an anomaly due to our extraordinary discoveries and strong shareholder base. In my view successful mining companies in the next decade will need active boards that get out from behind their desks and gather intelligence on the ground. For example, community relations are different than before; companies cannot simply hire a PHD to manage their social relations and hope that the situation will be resolved. Community support is essential for permitting. Keeping communities informed, creating opportunities for them, and challenging them to become partners is at the center of what companies should do. It needs to go beyond paper, beyond building a school. That is what differentiates Minatura from the other companies out there. We have developed an instinctual understanding of the community ecosystems where we exist.

**One of the government's stated goals in its reorganization of the sector's regulatory regime has been that they seek a more active investor. Do you believe a disconnect exists between mining companies and the government with regards to how active they are in the communities?**

Social programs need to be the first priority of any company, especially in Colombia where everything is regional. The mindsets and needs of people vary incredibly from region to region. Companies need to see firsthand how they will be received before making an investment. They could be entering into the middle of a family feud and one match can light an entire forest on fire. Big investment decisions often have to be based on small things.

**One of the key challenges in Colombia is the prevalence of the informal mining sector. How does Minatura work to incorporate these miners into a process of formalization?**

Minatura works to legalize areas that were

previously mined illegally through creating a structure and protocol to ensure that these miners respect the environment. One of the key aspects of formalization is that these miners stop using mercury. The most important thing we provide is assistance. These miners use alluvial methods, where we have a particular expertise. We are an open door to discussions, whether or not the miners have a presence near our title we can help them.

**Minatura's current production is largely based on 43-101 compliant alluvial mining. How does the investment community view alluvial mining?**

Alluvial mining is currently viewed by many as mining without proven and probable resources. While this is widespread practice, we don't operate that way. It is easier and less expensive to prove an alluvial resource than a hard rock resource. We produce from proven resources and continue to develop more proven resources. An alluvial mine producing 1,000 oz to 1,500 oz a month from proven resources can be developed and put into operation within 12 months or so from the first sample pit or test hole for between \$5 million and \$7 million of capital expenditures. This model can survive any down market.

We have replicated our 43-101 compliant alluvial methodology developed in Colombia worldwide. We think the methodology will be project financeable shortly. We are launching an advisory subsidiary in Q1 2014 to help other companies that want to become involved in these types of projects and processes. This company will focus on alluvial mining expertise, building relationships with communities and infrastructure.

**Can mines produce in a cost effective manner given the current prices in the market?**

When I began in this industry, gold was around \$300 /oz. In my view the gold price is high! \$1200 /oz is four times the spot price from when I started. Many people in the industry at present do not have the experience of producing when gold was at \$500 to \$600 /oz; they do not know how to tighten the belt when costs drop. Obviously profit margins are not as high now, but miners can still make a living if they are able to adapt. •

## Maria Araujo

Former President  
GRAN COLOMBIA GOLD



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**Could you provide a brief update on the key milestones for Gran Colombia Gold over the last year?**

In terms of market perception, 2013 has been a difficult year. Therefore, Gran Colombia Gold has been working hard on accomplishing three objectives. First, we are seeking to reduce costs. We cannot control the price of gold, so we have to control how much it is costing us to produce an ounce of gold. We have reduced G&A costs, cash costs, etc. From top to bottom, everyone in the company has taken a 10% salary reduction in the wake of the current price volatility. Our second objective is to be the first low-cost, mechanized gold mine in Colombia. Currently we are the largest underground gold miner in Colombia. Our operating mines in Segovia and Marato are becoming more efficient and more productive. In 2012 we expanded the capacity of our processing plant from 540 mt/d to 1,500 mt/d. We are currently operating at 1,000 mt/d. We had a financing of \$100 million to fund our Pampa Verde plant at our Segovia project, which will have an initial capacity of 2,500 mt/d. With these upgrades

and expansions, we are looking at lowering our production cost of \$1,000 /oz. Our third milestone is our work, through cooperation with the government and other stakeholders, formalizing 2,500 illegal miners in Segovia. This is the first example of a mine opening the door to these miners and providing them legal, formalized contracts. These miners have the right to mining on our title with the duty to uphold increased HSEQ standards and pay royalties.

**Informal mining is cited as one of the greatest challenges Colombia faces. How does the artisanal mining program serve as a model for other mines and communities in Colombia that have this issue?**

When we arrived in Segovia in 2010, people who had been there for generations were mining the title. We saw this not as a problem, but an opportunity. We built a new model where the informal miners are integrated with us and we share 50% of profits of the ore they mine with them based on the spot price of gold. Today, it has transformed the community as the informal miners have gone from being in the shadows to becoming integrated members of society. In Segovia the informal miners used to process the ore with mercury, making the area the most polluted in Colombia. Formalization provided a solution for this environmental challenge because as the titleholder we were liable for the adverse environmental impact they created. This program was a risk, as we have to share profits with these artisanal miners on our title. We figured if everyone walks in the same direction we would be more productive as a whole. In fact, today 70% of the ounces Gran Colombia produces come from these artisanal miners. At the beginning there were doubts especially from investors as to whether this program could succeed, especially with regard to liability issues. We worked with the Colombian Chamber of Mines and Sector Minería de Gran Escala to pass a law that prohibited the use of mercury and share the liability of safety and environmental damage between the titleholder and small-scale miners. Now the artisanal miners are

responsible for the consequences of their actions. With these differences between the formal and informal mining sectors, there have to be realistic opportunities for them to become formalized and Gran Colombia's artisanal mining program serves as model for this.

**As Gran Colombia seeks to mechanize its processes and reduce costs, how can you strike a balance between accommodating the artisanal miners and your goals?**

The layout of Segovia allows there to be room for both. Our long-term strategy is to keep our currently operating plant for the artisanal miners and then use our new Pampa Verde plant for our mechanized production. Gran Colombia has put this social relationship at the top of our priorities. Thus the mining strikes in other parts of the country do not affect us because the community knows that as we grow it enables them to grow.

**As someone who spent most of your career in government, how would you rate the progress of the government in developing mining regulation and institutions in the country?**

The government's progress has taken longer than expected. Things cannot be done with only the framework, daily activity has to be managed. The industry is clamoring for an instrument of mining policy in the country. If mining truly is a catalyst for the economic development of the country, then it is crucial for the rest of the institutions in the government to understand that.

**Do you think Colombia is a mining country?**

Colombia certainly has the mineral resources to become a mining country. If companies are creative in developing relations with communities then mining in this country will be successful. This is why Gran Colombia's artisanal mining model, which started as a modest program, has opened the door for community relations in the mining industry. As an industry and a country, we need to take the necessary steps forward in order to develop the mining sector further. •



## Iván Osario & Freddy Daza

IV: Regional Manager for Antioquia  
FD: Mining Sales Manager  
**GECOLSA**

**As the exclusive Caterpillar distributor in Colombia, could you provide a brief overview of Gecolsa in Colombia?**

**IO:** Gecolsa is a company that has been present in Colombia for over 80 years. It was founded in 1927 as a subsidiary of General Electric in Colombia and later became Gecolsa, the exclusive representative of Caterpillar in Colombia. Additionally we have in our portfolio other manufacturers' brands that complement the products that we offer to our customers. Our portfolio allows us to address all sectors of the construction, infrastructure and mining industries nationwide.

**How do the needs of your customers at the large, operating coal mines in the north of Colombia differ from the needs of the developing gold mines in regions such as Antioquia? Where do you see growth potential in Gecolsa's mining market?**

**FD:** Large operating mines have different demands compared to the emerging gold miners. Large mining rely on us to offer them support and services

for their existing fleet. We align with the maintenance strategy from our customer to better serve their needs. Some customers prefer a "Do it myself" approach, and we strive to deliver parts and components for them to execute the maintenance. Other customers have a "Do it for me" approach, where they want to focus on production and leave us the maintenance; in this case, we offer maintenance contracts like MARC (Maintenance and Repair Contracts) where we take care of all the maintenance and guarantee a machine's availability. Also we have a Component Repair Center (CRC) to repair components with state of the art technology and the highest standard to secure the customer will have the best reliability for their Caterpillar machine. Gold mines in Antioquia mainly require support in project definition, cost analysis, and in some cases, construction machines to work in the infrastructure required to operate the mine in the future. We have a well-prepared group of professionals that support the customers with their knowledge and experience.

We have a broad value chain offer to our customers, including power systems, technology, construction equipment, railway solutions, and financial support. We are certain that we can tailor solutions appropriate for our customer's mining cycle.

**In 2013, the government passed legislation ordering the destruction of confiscated equipment used by illegal miners. What has been the affect of this on Gecolsa's business?**

**FD:** We believe that the government is going in the right direction controlling the illegal mining in Colombia and we support those initiatives. Unfortunately the regulations have not been clearly defined, creating misinformation and delays on the machines deliveries to our legitimate customers, affecting them profoundly. Once the rules are clearly defined and communicated we believe that these conditions will be beneficial for the legitimate mining industry in Colombia.

**The market has seen the arrival of lower cost equipment with differ-**

**ent distributors, especially those from Asia trying to make inroads. What differentiates Gecolsa and its Caterpillar products from these providers?**

**IO:** A number of Chinese or Asian companies are coming to the country with low cost product lines. That's something you cannot hide. We strive to remain excellent in support and supply experience, presence in more than 20 branches throughout the country, which ensure not only that they will have a good support, but they will also keep their machines running.

**What are the main objectives of Gecolsa for the next 3 years?**

**IO:** The development of the mining sector in Antioquia is a process of national development that will take some time to mature. We are very optimistic about what is taking place at the political and government level trying to pave the way for foreign investment. We see an opportunity to grow as a company, to grow as a region but especially as a country.

**FD:** In the short term with the current commodity market, most of our customers are conscious with their budgets. They are postponing their investments and lowering their production targets, so we have to align ourselves with our customer's actions. Gecolsa is currently focusing on supporting initiatives with our customers that help them lower the operating cost per ton, so they can get the best value out of their Cat equipment. We have programs like CPS (Caterpillar Production System) that focuses on identifying inefficiencies and developing processes to better use valuable resources. Also we work hand in hand with Caterpillar on product excellence programs where we join efforts with customers to optimize the use of their Cat machine. All these initiatives will prepare us to weather this current market and be strong with our customers for the time the commodity market cycle rise again, which we are sure will happen. •

## Andrew Kremer

Executive Vice President  
**JACOBS (FORMERLY SKM)**

**Could we begin with a brief summary of Jacobs' operations in Colombia regarding the mining industry?**

Jacobs currently employs approximately 150 professionals in Colombia. We are committed from the highest levels of our executive management to continuing to grow in Colombia and to continuing to hire and train local engineers and technical professionals. Our service offerings include: pre-feasibility studies, feasibility studies, conceptual engineering, detailed engineering, global procurement, construction management, pre-commissioning and start-up. Most of the work we presently do is in the mining & minerals sector, and we are currently delivering an EPCM project for a large coal mine expansion in the north of the country. We also have in-country capabilities in oil & gas and infrastructure. As a large global organization with technical expertise in just about every discipline imaginable, we are able to transfer knowledge and technology from our global subject matter experts to our local offices and project teams. We operate seamlessly and without boundaries across all disciplines and geographies and bring this

global experience to our clients in the Colombian market.

**Are there projects close to meeting your services? Which is the opportunity for Jacobs and who are your main international competitors?**

Jacobs' approach to addressing the market is one of diversification. By diversifying our capabilities into several counter-cyclical markets, we have managed to grow consistently for the last 15 years. Market diversification combined with our relationship-based business model and client loyalty ensures that we have the continuous work load necessary to maintain our employees and to provide them with an opportunity to grow, even when some markets are down. We significantly increased our presence in Colombia in 2013 through acquisition, and today we are actively looking for continued growth opportunities here. Our clients drive our growth, and as our clients determine their investment plans and their own growth strategies, we position ourselves to provide the services and expertise they need locally to realize their growth objectives. Internationally, our typical competitors are the Tier 1 global players.

**From your perspective, why is there the culture of doing it in-house?**

Jacobs' execution model fosters the maximization of local resources and experts. We believe in and are committed to promoting local talent and to allowing these professionals to grow by exposing them to the pool of global experts that we have. Local project teams may be enhanced by our global experts who provide specific expertise, if that knowledge and skill-set is not available in-country. We can also leverage additional resources from our high value engineering centers, which may be used to absorb major staffing peaks and to accommodate aggressive schedule demands. We offer global exposure and many opportunities around the world to our employees in Colombia. We ultimately want to attract and retain the best professionals here, and then we want to train and develop them so that they grow with us, and so that additional expertise and capabilities are developed in-country.

**In this moment, Colombia is still in a development stage of its mining industry with the government trying to define regulations and control. How important is that there is industry's best practice and standard in the construction of new mines in Colombia?**

Foreign direct investment in mining & minerals is capital intensive and has a long-term view. Therefore, to attract foreign direct investment it is important that Colombia continue to develop clear and specific regulations and frameworks that will survive any administration, as well as a transparent tendering process. Colombia has made great progress in becoming a safe, stable and democratic place of business, and we have high expectations for the future.

**Do you have a final message or something you would like to discuss?**

Our company's relationship-based business model is focused on developing ongoing and long-term relationships with our clients so that we can fully understand their goals and needs and can provide them with superior value and quality. In this way we share in our clients' priorities and growth and make them our own. We are committed to continued growth in Colombia and view our presence here from the perspective of how we can help grow our clients' businesses in Colombia over the long-term. We are constantly looking for ways to drive down costs and add measurable value to our clients' businesses. We bring our core values, tools, innovative solutions and technological processes to all aspects of our project work here in Colombia and, in doing so, offer opportunities to increase productivity and achieve lower capital costs over the life cycle of a project. These characteristics set us apart from our competitors. Other key differentiators include our staunch commitment to safety and ethical business practices, our ability to leverage our global network of 75,000+ resources across 200+ offices worldwide ability, and our ability to offer the full cycle of project services: ranging from conceptual studies, engineering and global procurement all the way through to start-up and commissioning. •





## Magical Realism: Business Travel in Colombia

"Colombia is a country full of opportunities, which for years was repressed by internal conflict. These conflicts have diminished considerably in the last 10 years, to the point in which, today, we are working towards a definitive peace process. This has allowed the most remote regions of the country - where most of the investment-worthy natural resources are located - to remain intact, now allowing for substantial investment projects in mining, oil and gas, infrastructure, tourism and general development"

- Andrés Alarcón, General Manager,  
101 Park House Hotel



# Colombia Travel at a Glance

As security concerns wane, Colombia remains an undiscovered gem for business and leisure travelers alike with a variety of options at a lower than expected price. Bogotá's El Dorado International airport is the third busiest airport in Latin America in terms of passenger traffic making it a convenient gateway to the rest of the country and continent.

### Bogotá: The Capital District

Bogotá is the political and commercial hub of Colombia with over 6.5 million inhabitants and a thriving tourism sector. Globally recognizable brands such as Hilton, JW Marriott, Sofitel, Sheraton and Holiday Inn and local staples such as the timeless Casa Medina and the Hotel la Fontana can accommodate any range of budget. The newly opened Grace Hotel offers an intimate boutique experience on a quiet street within walking distance of the city's best restaurants in Zona G. Bogotá offers a surprisingly cosmopolitan array of dining options allowing any traveler to discover local options or find tastes from home. For a casual meal or an easy business

lunch try Gordo, a Brooklyn-inspired bar and restaurant that offers first-class American comfort food and drink such as old fashioned, fried chicken and even S'mores, complete with your own campfire, for dessert. For a night on the town or to impress clients NN offers a refined atmosphere complemented by a live pianist, while Peruvian fine-dining staples such as Astrid y Gaston and Rafael make outposts in the Capital District with the same superb seafood that can be found in Lima. Lastly, no trip to Bogotá is complete without a pilgrimage to the one-of-a-kind dining/entertainment/nightlife experience that is Andres D.C in Chia its more central sister location Andres Carne de Res in the upscale Zona Rosa neighborhood.

### Medellin: The Junior Mining Hub

Once the home to the world's most notorious narco-trafficker Pablo Escobar, Medellín is a vibrant, modern city that wears its infamous past on its sleeve while simultaneously challenging visitors to abandon any preconceived notions of the city. Numerous city tours offer a his-

tory of the country while the Museo de Antioquia offers the finest collection of the famed local painter Fernando Botero in the world. Today, Medellín is the administrative hub for most of Colombia's junior mining companies as it is within close proximity to many developing projects and the Poblado neighborhood offers foreign executives and offices a fashionable address to impress locals and foreigners alike.

“ Colombia is divided into a number of regions, each with its own culture and ethnic identity, unique gastronomy, special folklore and varied costumes. In general terms, Colombia is a very diverse country, to work in as well as live in.

- Andrés Alarcón, General Manager,  
101 Park House Hotel

In the capital city of the Department of Antioquia, the internationally recognizable brand names do not have the same presence as they do in Bogotá. Nevertheless, there is no shortage of options for business travelers as local boutiques such as the ultra-chic Charlee Hotel embody the “see and be seen” attitude held amongst Paisas. The rooftop bar and pool offers one of the most stunning views of this dramatic city and of Paisas partying in the numerous bars of Parque Llares below. Another nearby trendy destination that is a bit lighter on the wallet is the popular Art Hotel. Its oversized lobby and airy restaurant make it the perfect location for a casual afternoon meeting. •

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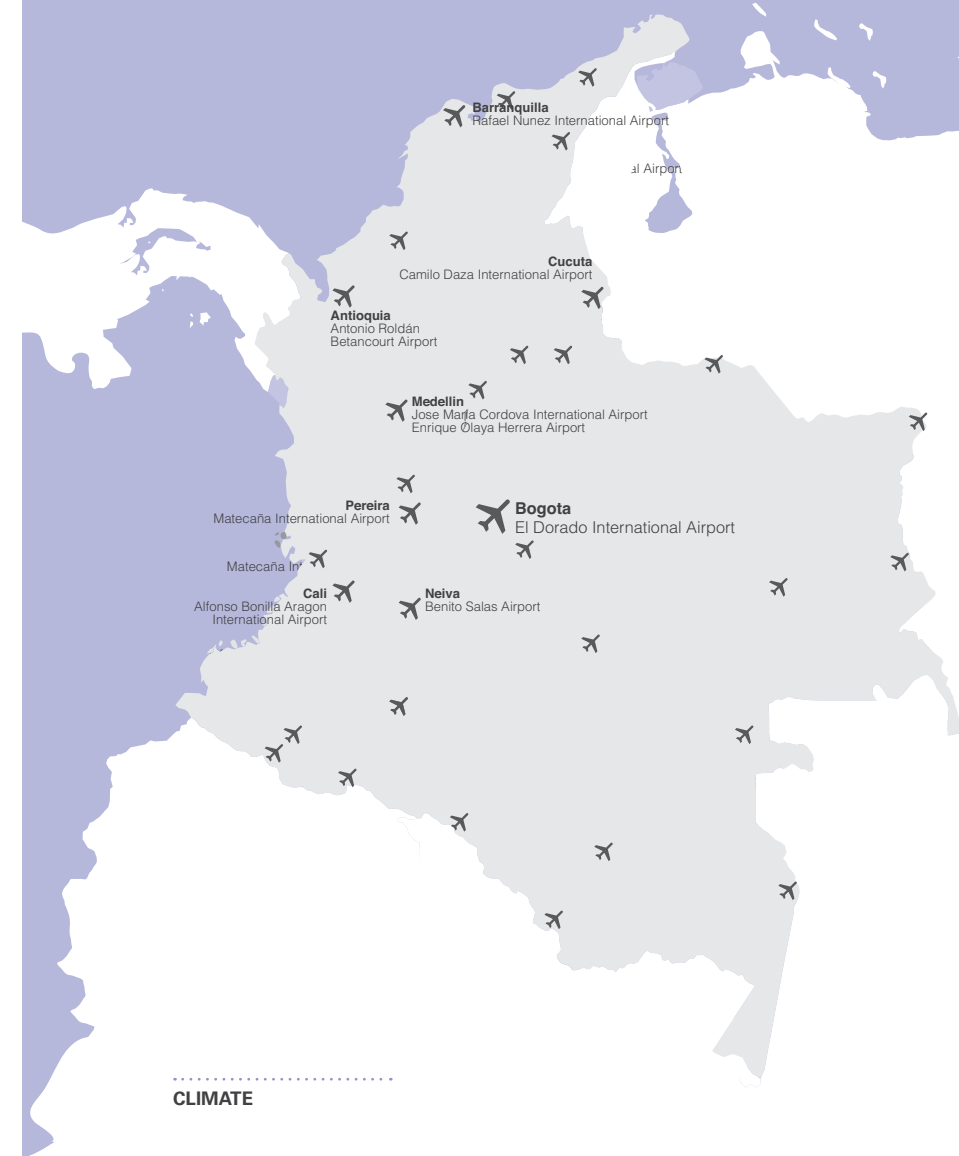
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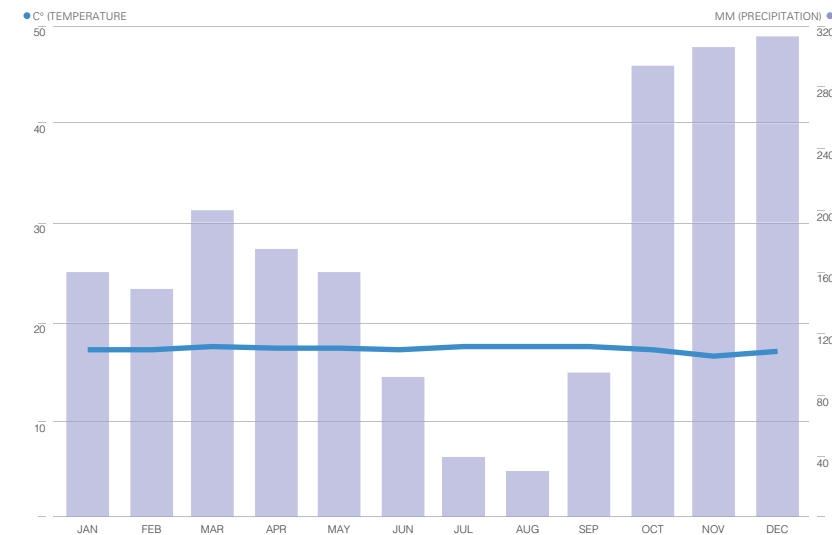
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E-mail: thegracehotel@hotmail.com  
www.bogotadesignapartments.com



## AIRPORTS IN COLOMBIA



## CLIMATE



## INTERNATIONAL DESTINATIONS TO/FROM EL DORADO INTERNATIONAL AIRPORT



## EXCHANGE RATES

Currency: Colombian Peso (COP)

1,000 COP = 0.49 USD  
1,000 COP = 0.54 CAD  
1,000 COP = 0.36 EUR  
1,000 COP = 0.29 GBP  
1,000 COP = 0.54 AUD

## DIALING CODES AND USEFUL NUMBERS

Colombia Country Code: +57  
Bogota Area Code: 1

Police: 112  
Medical Emergencies: 125  
Fire Department: 119  
Information: 114  
Traffic Accident: 127  
Tourism Police: 337-4413/243-1175



## Events & Media

There are a number of media sources devoted to the extractive industries of Colombia, and many international publications that provide excellent coverage of the country. Engineering and Mining Journal ([www.e-mj.com](http://www.e-mj.com)) remains the benchmark for mining information around the globe and Oil and Gas Investor ([www.oilandgasinvestor.com](http://www.oilandgasinvestor.com)) and Hart's E&P ([www.epmag.com](http://www.epmag.com)), both part of the Hart Energy publishing group, are two of the world's leading sources of information on oil and gas exploration, production and financing. Worth a special mention is Colombia Energía, a local publication dedicated to the energy industry – in all its manifestations – in Colombia.

In addition, there are numerous events each year focused on Colombian exploration and extraction, both for the mining and oil and gas industries. A selection of upcoming events in 2014 are listed below:

### MINING AND MINERALS

#### 21st Annual Coal Conference of the Americas

March 12th to March 13th, 2014  
Cartagena, Colombia  
[www.ihs.com](http://www.ihs.com)

*Hosted by IHS McCloskey, the Coal Conference of the Americas aims this year to explore the issues facing the Colombian coal industry, such as labor and infrastructure trends, and looks at the country's role in the global coal market. Confirmed speakers include a wide range of the industry's leading experts.*

### OIL AND GAS

#### 4th Annual Colombia Oil and Gas Conference and Exhibition

April 2nd to April 4th 2014  
Cartagena, Colombia  
[www.cwccolombia.com](http://www.cwccolombia.com)

*Over its three-year history, the Colombia Oil and Gas Conference and Exhibition has brought together 2,025 industry leaders from 39 companies and 1,084 companies, focused on Colombia's oil and gas industry. Speakers this year include Colombia's Minister of Energy and Mines, the Minister of Defense, the President of the ANH, and multiple industry representatives.*

#### 12th Latin America Leadership Forum

June 4th to June 6th, 2014  
Cartagena, Colombia  
[www.cg-la.com](http://www.cg-la.com)

*Though not specifically focused on the oil and gas industry, this forum addresses a crucial component to the industry: infrastructure. It will identify the top infrastructure projects in the Latin American region over the next year, including some in the oil and gas sector, and explore the business opportunities that these projects will present companies.*

#### 8th Andean Energy Summit

July 9th to July 10th, 2014  
Bogota, Colombia  
[www.bnamericasevents.com](http://www.bnamericasevents.com)

*This BNamericas-hosted event concentrates on hydrocarbon and electricity*

*industry trends in the Andean region and Central America, with attention paid to offshore exploration in Colombia, Ecuador's new oil drive and the Central American Regional Electricity Market. Final speakers are yet to be confirmed, however the 2013 event hosted an impressive list of industry leaders.*

#### 20th Latin Oil Week

September 1st to September 3rd, 2014  
Rio de Janeiro, Brazil  
[www.petro21.com](http://www.petro21.com)

*Though not held in Colombia, the 20th Latin Oil Week by Pacific Global Partners is one of the key events for the continent's oil and gas industries, boasting a full speakers list of industry leaders and government figures and providing a comprehensive overview of the entire region's upstream policies.*

#### SPE Heavy and Extra Heavy Oil Conference

September 24th to  
September 26th, 2014  
Medellin, Colombia  
[www.spe.org](http://www.spe.org)

*Hosted by the Society of Petroleum Engineers, this conference focuses on sharing expertise and experience gained from the application of innovative technologies to heavy and extra heavy oil fields with a view to improving recovery and increasing economic viability. Its regional scope is not just Colombia, but the whole of Latin America and the Caribbean.*

[www.globalpacificpartners.com](http://www.globalpacificpartners.com)

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## 20<sup>th</sup> Latin Oil Week

### Latin Upstream

**Exploration, Development, Production: Oil/Gas-LNG, New Ventures, Bid Rounds, Investment, Service/Supply**

<p>10<sup>th</sup> Latin Petroleum: Strategy Briefing - 1<sup>st</sup> September 15<sup>th</sup> PetroLatino Club Networking Reception - 2<sup>nd</sup> September 20<sup>th</sup> Latin Upstream Conference - 2<sup>nd</sup> - 3<sup>rd</sup> September</p>	<p><b>1<sup>st</sup> - 3<sup>rd</sup> September 2014</b> Copacabana Palace, Rio de Janeiro, Brazil</p>
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


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## Hotel Directory

### 101 Park House Hotel

Carrera 21, No. 101-10, Bogotá  
Tel: +57 1 6000101

www.101parkhouse.com

### Radisson Royal Hotel Bogotá

Calle 113, No. 7-65, Bogotá  
Tel: +57 1 6295559

www.radisson.com

### GHL Hotel Capital

Calle 25B, No. 69 A-50, Bogotá  
Tel: +57 1 4233000

www.ghlhoteles.com

### JW Marriott Bogotá

Calle 73, No. 8-60, Bogotá  
Tel: +57 1 4816000

www.marriott.com

### Hilton Bogota

Carrera 7, No. 72 - 41, Bogotá  
Tel: +57 1 6006100

www.hilton.com

### Hotel bh La Quinta

Cra. 5, No. 74-52, Bogotá  
Tel: +57 1 7424908

www.bhhoteles.com

### The Grace Hotel

Calle 66, No. 5-18, Bogotá  
Tel: +57 1 3462429

www.bogotadesignapartments.com

### Holiday Inn Bogota

Calle 26, Bogotá  
Tel: +57 1 9520052

www.ihg.com

### Bogota Marriott Hotel

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Tel: +57 1 4851111

www.marriott.com

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Calle 82, Bogotá  
Tel: +57 1 6212666

www.sofitelvictoriaregia.com.co

### Bogota Plaza Summit Hotel

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Tel: +57 1 6322200

www.bogotaplazahotel.com

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Tel: +57 1 6154400

www.hotelesestelar.com

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Tel: +57 1 6513131

www.andinoroyal.com

### Pavillon Royal Hotel

Calle 94, No. 11-45, Bogotá  
Tel: +57 4 6502550

www.pavillonroyal.com.co

### Bogotá's RoyalPark Metrotel Hotel

Calle 74, No. 13-27, Bogotá  
Tel: +57 1 6578787

www.metrotelroyalpark.com

### Hacienda Royal Hotel

Calle 94, Bogotá  
Tel: +57 1 6578787

www.haciendaroyal.com

### Hotel Rosales Plaza

Calle 72, No. 5-47, Bogotá  
Tel: +57 1 3171100

www.hotelrosalesplaza.com

### Arlington Place

Calle 109, Bogotá  
Tel: +57 1 2153507

www.arlington-place.com

### Best Western Plus 93 Park Hotel

Calle 93, #13-71, Bogotá  
Tel: +57 1 6051444

www.hotelbestwestern93.com

### Sheraton Bogota Hotel

Calle 25B, No. 69C-80, Bogotá  
Tel: +57 1 2105000

www.starwoodhotels.com

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This list represents a selection of the companies operating in the Colombian oil and gas and mineral industry and should not be considered a comprehensive guide. GBR holds an exclusive and extensive mineral company database for Colombia and the wider region. For further information on database access packages, please contact info@gbreports.com or call +44 20 7612 4511.



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[www.anm.gov.co](http://www.anm.gov.co)

**Cámara Colombiana de Minería (CCM)**

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**Ministerio de Minas y Energía**

[www.minminas.gov.co](http://www.minminas.gov.co)

**Sector de la Minería a Gran Escala (SMGE)**

[www.mineriaagranescala.org](http://www.mineriaagranescala.org)

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