Colombia’s extractive industries accounted for roughly 38% of FDI and 56% of exports as recently as 2019, as well as constituting a significant portion of state revenues. With oil prices taking a nosedive this year, the country faces short term revenue challenges as well as longer term challenges in maintaining and attracting desperately needed investment in exploration and production. The Colombian Petroleum Association noted in April 2020 that previously projected investments in exploration could see a decline of up to 60% by the end of the year, with the production output falling around 50% of previous targets. Shocks to commodity prices in the mid 2010’s forced Colombia’s hydrocarbon companies to become more efficient, and these improvements are once again being put to the test.

Indeed, the twin effects of fluctuating oil prices and the global COVID-19 pandemic in the first half of 2020 provided an extraordinary challenge for the already embattled Duque administration. What was meant to be a year of stable growth is virtually guaranteed to become the country’s first recession since 1999. However, the quick and targeted government response at the onset of the pandemic and Colombia’s strong macroeconomic fundamentals have most projections in agreement that Colombia will weather the storm among the best in the region, giving way to a strong recovery period.

In the longer term, the picture is several shades rosier. While the challenges presented in the first half of 2020 are undoubtedly daunting, they do not erase the natural wealth lying beneath Colombia’s mountains and under its waves. Unconventional hydrocarbon reserves, although only accessible through limited pilot programs now, could bring the country’s total oil reserves up to 30 years and gas reserves up to 50. Much of Colombia’s vast mineral wealth still remains untapped or improperly utilized. Several large-scale projects have faced delays with local legal issues, while illegal mining—although improving, estimates in recent years give a figure of up to 80% in the case of gold—still persists. The opportunity for growth is clear, and success stories are becoming more common. Gran Colombia Gold posted record production in 2019, totaling 10% above 2018, with revenue increasing 22% as well.

This special report aims to investigate the state of Colombia’s extractive industries, as well as wider developments in the green economy, through articles and analysis and the words of interviewees from across the sector. ☑
COLOMBIA ENERGY & MINING
SPECIAL REPORT

From the editor’s desk
Oscar García, Country Director, Veolia Holding Colombia • Interview
Federico Echavarría, General Manager, AES Colombia • Interview
Renewables to the rescue • Focus: Diversifying the energy mix
Nicolás Rodríguez Sarmiento, General Manager, EOM Consulting • Interview
Enrique Garzón, General Manager, Power Group • Interview
María Fernanda Suárez, Former Minister of Mines and Energy • Interview

Industry associations • Forum
Felipe Bayón, CEO, Ecopetrol • Interview
Oil and gas • B2B
Piercing the fold • Focus: Fracking, offshore, and natural gas
Joe Hickey, President & CEO, Kodiak Services Intl Inc. • Interview
Services & products • Forum
Andre Conceicao, Amazon & Andean Area Manager, Expro • Interview
Engineering services • B2B

Luis Miguel Fernández Zaher, CEO, TEBSA • Interview
Inching toward a state of right • Focus: CSR in mining
José Miguel Linares, President, Drummond • Interview
Lombardo Paredes, CEO, Gran Colombia Gold Corp. • Interview
Felipe Márquez Robledo, President, AngloGold Ashanti Colombia S.A. • Interview
Charles Clifford Burgess, President, Minería Texas Colombia (MTC) • Interview
Eric Flesch, President, Promigas • Interview

Read more at thebusinessyear.com/colombia
Veolia seeks to develop environmental strategies and policies to maintain resources and create better access to them.

Oscar García
COUNTRY DIRECTOR, VEOLIA HOLDING COLOMBIA

Aims to eliminate 6.6 billion kg of CO2 emissions

Invested in environmental education for Latin American children

Veolia has been in Colombia since the 1990s, focused on the issue of water, waste, and, more recently, energy efficiency. In water, we are a respected name; we are participating in large concessions in Tunja and Montería where we have been serving for more than 20 years. We have extended the Tunja contract until 2026, and will maybe extend it further, until 2034. Previously, Tunja did not have complete coverage and suffered from lack of continuous service and operational problems. Today, with the same infrastructure, it has coverage 24 hours a day, water of the highest quality, and an excellent uncounted water ratio of 16%. In Colombia, this number is usually 36%. We have been innovating with technology, waste collection, and disposal. We have 11 environmental parks where we manage the disposal of solid waste. Hubgrade, a registered trademark of Veolia, is for energy efficiency issues, specifically for monitoring and control, so that our customers can reduce their CO2 footprint. We have a large global network through the company. On a global level, Veolia is increasingly oriented toward the industrial sector. In Colombia, our client base is composed of 70% municipal clients and 30% industrial clients.

Veolia has been focusing on becoming a responsible company committed to the future of Colombia. How does this translate to your focus on the future? Veolia’s rationale is to contribute to human development through a series of environmental strategies and policies to maintain resources and have better access to them. We are focused on circular economies from the point of view of sustainability. For example, for plastics, we have global agreements with companies like Nestlé, so that in five years, the plastic they produce can be recycled. With energy, we try to produce it with our waste.

Veolia renewed an agreement with the Organization of Ibero-American States (OEI). How does your private approach relate to this agreement? We want a better environmental education, so this agreement’s objective is to manage a program that caters to children of low and medium resources in the seven countries where we are present. With the program and through their artistic expressions, they can imagine a way to transform the world into a better place. Some 35,000 children in Latin America have participated.

What is Veolia’s relationship with the oil and gas sector, and how will you continue to serve this sector? This sector is vital to us since it has to do with our commitment to encouraging circular economies, in terms of environmental protection and upstream and downstream management. We are working hard in this sector with Ecopetrol. We are growing gradually in the refinery space.

Veolia wants to eliminate the emission of 6.6 billion kg of CO2 annually. What are other achievements planned for 2020 and beyond? In two of our environmental parks, we are already working to reduce CO2 emissions. This CO2 emission reduction management is audited, which allows us to have resources for the sale of carbon bonds later. We are reducing CO2 emissions when we use energy efficiently or when we use waste to produce energy. We are taking these actions in hospitals, shopping centers, and large buildings. Another goal is to increase our portfolio of industrial clients. To help with this, we will use the hub-grade system to create better and smarter ways of managing energy, water, and waste. In water management, Colombia is doing well. As large cities already have efficient operators, we want to focus on medium-sized cities that do not have the same capabilities as Bogotá or Medellin. Regarding energy efficiency, we are working with Coca-Cola Femsa in Barranquilla on the construction of a turbine that will generate cold, heat, and energy for the Barranquilla heat plant. This is a great template of what we want to pursue in the future.

“We have been innovating with technology, waste collection, and disposal.”
ENERGY that keeps on giving

AES Colombia is not only working to bring clients renewable energy, but also laying the foundation for Colombia’s renewable energy portfolio.

AES is building the largest self-generation solar park in Colombia. What does this mean for the company, and how does it position it in the market? Castilla Solar Park is the largest self-generation solar project in Colombia. We have been in a process of transforming a great company that owns 1,020MW of Colombia’s hydro facilities into a portfolio of energy solutions that include different renewable technologies. We are not only talking about water, but also solar, wind, and batteries. 2019 was important because we consolidated that transformation. One of the key projects is Castilla Solar. But even more important is our project with Ecopetrol, the state-owned oil company. We have a long-term PPA with Ecopetrol that facilitates the development of these renewable projects, creating a great precedent for other companies in Colombia. This project will help Ecopetrol replace part of its energy matrix with cleaner energy and cut 154,000 tons of CO2 emissions. It will provide significant savings for Ecopetrol, around 30% in the energy produced at the Castilla oil field. AES Colombia is currently working to provide sustainable and competitive energy solutions to the most important consumers in Colombia.

Why did you acquire Cold Wind, which had an energy project in Colombia’s north? We want to ensure we develop the most sustainable and competitive portfolio in Colombia. We did plenty of analysis of how we could combine Chivor’s hydro plant with other types of technologies to make ours the country’s most sustainable and competitive portfolio. What we found is that wind and hydro make the perfect match. We explored multiple alternatives and found that the best wind was in La Guajira region, so we acquired Jemeiwaa Kai, the country’s largest wind development project. With Jemeiwaa Kai, we won 29% of the government’s tender auction, making AES one of Colombia’s main players in the energy transformation space. In order to develop projects, it is important to have long-term contracts, which is a key element that the Colombian market doesn’t have. Under the leadership of Minister of Energy María Fernanda Suárez, we had the first long-term contract auctions in Colombia and the opportunity to start building the future of energy in Colombia.

You signed a contract with Gensa to sell unconventional energy for 15 years. Which other companies might you work with in the future? What differentiates us is that we want to work with our clients to provide energy solutions. We are working with large commercial and industrial users, both for grid and on-site energy. We are also working with wholesale companies like Gensa that want to have renewable energy to rebalance their portfolio. We also work with distribution companies. Utility companies were our main buyers in this renewable auction, so we have a product that is not only 100% renewable, but also complementary and competitive for the Colombian market.

The energy sector has historically been composed of men. What campaigns are you carrying out to involve women? The percentage of men in this sector is around 90%. We had a great experience in Castilla Solar Park. The expectation was that 95% of the workforce was going to be men. Through working with our contractors, we saw the possibility of involving women in the construction process. As a result, more than 100 people, 29% of the total workforce, were women. It was nice because for many of them it was their first job. They felt proud to be part of a project that reflects the energy transformation of a whole country. AES is committed to the inclusion of women in the energy sector, and we expect to have more female workers at all levels in our organization.

Building Colombia’s biggest self-generation solar park

Plans to accelerate growth in Colombia in 2020

BIO

Federico Echavarría has been General Manager of AES Colombia since 2009. Previously, he was AES Colombia’s vice president for North America business development and vice president of North America Central. Echavarría joined AES in 2004. Prior to AES, he was general manager of Merilectrica, a local thermal generator, and head of investment banking at Corfinsura (now Bancolombia), a local private financial institution. He has also served as an alternate director of Bancolombia. He is an industrial engineer with an undergraduate degree from Universidad de Los Andes and holds an MBA degree from Harvard Business School.
RENEWABLES TO THE RESCUE

With Colombia’s gas reserves set to run out in a decade and El Niño weather patterns affecting its hydroelectricity production, Colombia must look to renewables to provide a more diversified energy mix.

COLOMBIA’S BEAUTIFUL LANDSCAPE offers more than scenic photo opportunities. More specifically, its sunshine, which can shine almost 12 hours a day in certain areas, offer it a valuable renewable energy source. Furthermore, it has one of the two areas in Latin America that receive Class 7 winds, blowing at 10m per second annually on average. However, these energy sources have thus far been largely untapped by the country. Colombia’s energy portfolio already features a large amount of “clean” energy: 70% of the country’s energy needs are met by hydroelectricity. However, as such energy can be undone by the El Niño weather pattern, it is of vital importance that the government diversify its energy portfolio.

Fortunately, this is exactly what the government currently has in mind. Under the watchful gaze of the Ministry of Mines and Energy (MME), the country has adopted its Indicative Action Plan, which targets having 6.5% of on-grid and 30% of off-grid generation coming from renewable sources by 2020. As such, the government has also put in place several laws, decrees, and tax benefits to drive the sector itself and to offer incentives to businesses willing to switch their energy sources.

Law 633 of 2000 created the Financial Support Fund for Energy Provision in Non-Interconnected Zones (FAER). The goal of this fund is to finance projects in areas not connected to the national grid. The law also sets up a fund that will help finance initiatives in non-conventional energy with public and international resources. For those looking to invest in renewable energy projects, they can receive a 50% annual deduction of taxable income for the first five years following the investment. Furthermore, equipment and machinery needed for this sector are excluded from the country’s VAT. If such equipment is imported, it will also be exempt from customs duties.

What energy offerings does Colombia have in mind? Wind is seen as the most potent of Colombia’s renewable sources. La Guajira, located on the country’s Caribbean coast, offers excellent wind conditions. Furthermore, it is also exceptional for its solar capacities. Indeed, Colombia registers some of the highest rates worldwide in terms of solar irradiance, according to ABB Latin American President Ramon Monras. Additional departments that also offer great solar potential are Atlántico (also found on the Caribbean coast), Antioquia (found in the country’s Northwest in the Andes region), and Valle del Cauca (found in the country’s southwest on its Pacific coast).

This may be why AES Colombia has decided to build the largest self-generation solar park in Colombia, Castilla Solar Park. The company is “currently working to provide sustainable and competitive energy solutions to the most important consumers in Colombia,” as stated by its general manager, Federico Echavarría. In line with this goal, the company has acquired Jemeiwa Kai, the country’s largest wind development project, in an effort to create Colombia’s most sustainable and competitive energy portfolio, according to Echavarría. The company plans to reach 2,000MW of energy production by 2025 and 3,000MW by 2030, if its investments play out well.

Another sector in the renewable energy area is biomass fuel, yet another energy creator that Colombia is uniquely placed to provide. According to a 2013 research done by the Dutch government, 44.6% of Colombia’s arable land is used for agriculture. Main farming activities include bananas, flowers, cotton, and cattle, all of which are great providers of biomass for fuel needs. The only thing missing is know-how, a necessary component to driving entrepreneurship in this area. In order to harness the power of these traditional sectors, the current administration would do well to introduce incentives for foreign companies with the appropriate know-how to invest. Furthermore, it could offer state-funded program to send engineers to learn from other countries, such as the US and Brazil. One thing is for certain: Colombia is poised to be a leading example for the world in terms of renewable energies.
As the sole multinational company with global experience in clean up and contingencies present in Colombia, EOM has a lot to offer the market, especially with new oil blocks on the line.

Nicolás Rodríguez Sarmiento  
GENERAL MANAGER,  
EOM CONSULTING

What is the state of environmental consulting in Colombia?  
There was no clear regulation for this matter in Colombia until 10 years ago. We had an operation in Magdalena Medio with a project that was managed by a US-based company later taken over by Ecopetrol. The previous operator did not take the necessary environmental measures, so we used our technology to do a proper clean up. The National Agency for Environmental Licenses (ANLA) and corporations currently have an inventory of over 10,000 environmental passives, but unfortunately, there is no law that forces them to it clean it up. It is an important market, but it is unregulated.

What does Colombia represent for the company, and how easy has it been to position your technology in Colombia?  
Colombia represents around 60% of our operations. Our company is present in Colombia, Panama, Ecuador, and Argentina. It has not been easy to position because the technology is a bit expensive. There are local technologies that try to do the same at 30% of the cost; however, our technology is more efficient in the long term. We manage traditional processes such as cleaning, recollection, extraction, and transportation. In general, we work on contingencies, clean ups, and domestic water treatment. The focus in Panama is storage tanks in water plants. We work with Oil Spill Eater (OSE) II to lower the percentage of oils and reduce around 90% of contaminants in the water. It is used in chicken farms, for example. We worked with the aqueduct of Panama to treat sewage water. We also worked with a service station that had some damaged tanks.

How did you start offering your services to companies like Ecopetrol, Parex, Ismocol, and Vetra?  
Our first strategy was to offer a pay-per-view model. We offered to do all the treatment on a certain proposed budget, and the client paid us only if we managed to do a proper clean-up. That is how we started. At present, we have ongoing contracts, and they call us when they have a contingency. We are the second respondent in these situations. The first respondents are the companies that have plants close to the disasters. We have partnerships with companies that are based all over the country. We mainly work with geoparks on this.

What is your relationship with companies such as Verde, Gpower, and OSE?  
There are six representatives in Latin America for the OSE II technology. Traecol has plants in 12 cities; they are our first respondents, and they only use our technologies. Verde has a technology similar to ours, but it does not provide the same experience. Verde has other lines of business for water treatment, and it applies the product to golf courses or football fields to grow grass. Gpower is our ally in Ecuador, and we have been working with it since 2017.

Do you have the positive outlook for the sector shared by the National Agency of Hydrocarbons (ANH) and Ecopetrol?  
The current administration has put forward new oil blocks. During the last round, it offered 50 blocks, but the previous administration did not offer any blocks, mainly due to low investment. Long-term investments are coming in due to these new offers because what is assigned today will be profitable in around five years. ANH should focus more on the environment, because at present it is only focused on exploration and production.

What will be the main strategies to attract new allies or clients?  
We want to focus mainly on operators, showing them our results and reductions in costs. We are the only multinational company with global experience in clean up and contingencies that has a presence in Colombia. The country has a great deal of experience in these types of contingencies, but the methods used here are traditional and archaic. 

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**BIO**

Nicolás Rodríguez Sarmiento is a professional with a master’s degree in specialized projects in the oil and gas sector. He has specific experience in hydrocarbon marketing and logistics, crude oil export and diluent import, knowledge and contractual and operational management of transport contracts for pipeline and tanker cars, development of blending projects and discharge stations, knowledge and management of the pipeline system, nominations and volumetric compensation for quality, negotiation processes, planning and execution of budgets, and excellent recognition in the oil and gas industry.
SUSTAINING the future

Power Group is developing ways to bring sustainable energy and potable water to all of Colombia’s cities and communities.

What are your main focuses?
One of our main focuses and what we have been working on for 20 years is the generation of energy via conventional fuels. We generate it with diesel, a refined fuel; crude, which comes directly from the earth; and gas. We have also been using unconventional renewable energies for five years.

Which industries do you work with, and who are your clients?
We work with the oil industry and almost all the operators in the country. One of our main clients was Pacific Rubiales, which we worked with for 11 years. In 2016, we terminated the contracts with them. Four or five years ago, we were dispersed in most of all the oil fields of Colombia.

There is the possibility of approaching the public sector and cities to begin to implement your technology around renewables. Could you tell us a little more about this?
Colombia is experiencing an energy crisis that will further develop with time. We have been studying and analyzing it for almost five years to determine how we can provide renewable and unconventional energy to industries and cities, leading them to gradually develop in industries on the governmental part. We hope that cities develop modern energy infrastructure so they can become self-sustainable.

How significant are innovative solar energy projects for the future of the country?
Here at the company we have a photovoltaic facade with glass. We produce 32kB of installed capacity, and the most important thing about it is the contribution we are making to the environment from a small area. We have a saving of 24,000kg of CO2 per year. We see ourselves as the leaders in renewable energy in the near future. It is important that Colombia starts developing renewable energy.

How do you plan to look for solutions to increase the amount of drinking water that Colombians have access to, and how is this related to the generation of energy and the use of natural resources?
We have done studies in the Caribbean region and Boyacá, which are quite rich in water. But abundant water does not mean it is drinkable and good for the human body. To further this research, we have allied with other countries and solar generation modules that also capture solar energy and accumulate it. We plan to develop simple modules to bring drinking water to more remote places.

What is the added value of Power Group in the market?
Our added value is bringing innovation and development to provide better services to our customers. We have qualified personnel traveling the world, visiting the best industries, fairs, and companies to capture state-of-the-art synergies, test them, and then develop them in Colombia.

What are your goals for 2020 and beyond?
Developing projects is our main goal. KfW Development Bank has donated some modules that we must install in conflict zones such as Caquetá, Tolima, and Urabá. Initially, we plan to bring energy where it does not exist and start its development in these areas so that these communities start receiving help. We are investing knowledge and money in technology tests to be leaders of renewable energy at the national and Central American level.

Power Group’s facilities save 24k kg of CO2 annually
Worked with Pacific Rubiales for 11 years

Enrique Garzón, the founder of Power Group, has served as CEO since its founding in 2010, with a great vision and development of innovative projects and a high impact on environmental care. A mechanical engineer with extensive experience in strategic management of companies in the energy sector, his work has been recognized with distinctions such as The Great Cross Order of Environmental Merit Baron Von Humboldt and the Britcham Lazos award, awarded to leaders who focus their efforts on environmental care, social responsibility, and business sustainability.
Colombia's electricity generation matrix is one of the cleanest in the world. Nearly 70% of the electricity that Colombians consume is generated through hydropower, while 30% is generated through thermolectric plants. At the same time, we have an objective to reduce our CO2 emissions by 11.2 million tons through 2030. Over the last 19 months in government, Colombia has taken very important steps for our energy transition and speeding up the use of non-conventional renewable sources. This will allow us to provide cleaner, more efficient, and sustainable energy for Colombians while at the same time continuing to close the existing inequality gaps.

What actions can be taken by the government to further promote development of renewable energy resources?

Energy transition in Colombia is a reality. The country has taken a historical leap toward renewable energies, which will allow us to generate more than 12% of our electricity from solar and wind power by 2022. We will go from having less than 50MW of installed capacity for solar and wind generation, which are equivalent to the capacity that a city the size of Ibagué requires, to more than 2,500MW in 2022, which the amount collectively needed by cities such as Cali, Medellín, Bucaramanga, Barranquilla, and Cartagena. That will be achieved through 14 generation megaprojects, reducing CO2 emissions by 9 million tons, attracting over COP8 trillion in investment, more than 6,000 jobs, and a 30% reduction in electricity rates for consumers.

What opportunities do comprehensive research pilot projects (PPII) represent for Colombia?

PPIIs are an experimental and scientific process that will be developed to evaluate the effects of tech-
“Our goal is to achieve a more efficient, reliable, and sustainable energy service.”

What role do you envision the energy and mining sectors playing in the future of Colombia’s economy?
The mining-energy sector is an important revenue source for the country; 7% of the country’s GDP corresponds to mining, hydrocarbon, and energy activities, and 12% of the current income for the country between 2015 and 2018 were generated through oil revenues. Nearly 38% of the FDI in the country is related to that industry, and 56% of the exports in Colombia in 2019 correspond to mining-energy resources. Additionally, the sector provides resources that boost economic and social development in regions, through the general royalty system, which for 2019 and 2020 totaled COP24.2 trillion, which is the highest amount since its creation in 2012.

What are the priorities of the ministry moving forward?
Our goal is to achieve a more efficient, reliable, and sustainable energy service. The experts of the Energy Transformation Mission have delivered a number of recommendations to our country, which are focused such issues as achieving a higher reliability in the energy supply for all Colombians at more efficient prices and increasing the offer and demand of natural gas by increasing the participation of generation plants, which currently has a participation of less than 12%. Other focuses include empowering energy users through the introduction of technologies, like smart meters, which will allow to make better decisions around consumption, control spending, or concerning the environment, and further focusing on energy subsidies. This, could contribute toward closing equity gaps and bring energy to more than 500,000 families who do not currently have access. In 2019, we connected more than 27,000 of these families to electric power for the first time, and our goal is to connect at least 100,000 families. Finally, we must strengthen and modernize the institutions and companies in the sector and achieve a higher level of coordination, which will allow us to respond to the new challenges in the electricity sector. Through these initiatives, the national government is working to develop a transformation roadmap that takes into account the expert recommendations, unions, businesses, and other players in the energy sector.

BIO
María Fernanda Suárez is a business administrator of Colegio de Estudios Superiores de Administración (CESA) where she graduated with honors and has a master’s in public policy management from Georgetown University. She has more than 20 years of experience in the public and private sectors. From 2015 until her appointment, she served as vice president of strategy and finance for Ecopetrol. In addition, she was director of public credit and national treasury of the Ministry of Finance. Prior to her experience in the public sector, she served in the private sector as vice president of investments in the Porvenir Pension Fund and executive in Citibank, ABN AMRO, and Bank of America. In addition to her competitive career, she has been a member of the board of directors of several companies.
ALL STAKEHOLDERS NEED TO WORK TOGETHER in order to establish a bigger and stronger mining sector in Colombia. In the past, it was probably the most important sector in Colombia. Our first message was that we need to work together with all companies in order to have a better and stronger sector in the future. In the last three years, we have improved the regulatory framework to ensure stability in the sector. We have been discussing the balance between agriculture, tourism, and mining in order to create a new and more stable regulatory framework that attracts FDI. In the past, public consultation was a major issue but under the current constitution, municipalities can mine with public consultation and any kind of town hall agreement. We have to establish a new law in Colombia in order to coordinate with municipalities to advance mining activities. We have been working hard with the government, congress, and municipalities on this new law. Besides the law, which is necessary, we need a new public policy in order to promote exploration. Countries such as Chile, Peru, and Mexico represent around 30% of FDI in Latin America, whereas only 1% ends up in Colombia. As a country, we need to promote high-potential sectors such as mining to attract FDI.

2019 WAS THE STARTING POINT for the re-activation and recovery of the oil and gas sector in Colombia. This means we will likely see the results in the coming five years, considering all the investments we have made for the long term. That aside, production will grow in a short period of time. In fact, in 2019 we had an average of 886,000bpd compared to 865,000 in 2018. We hope to reach 900,000bpd in 2020. This means a growth of around 4-5% for each of the last four years. Another factor is we are improving rig count activity in the country. We finished 2019 with around 139 oil rigs working in Colombia, which represents about 93% of the record in October 2014. All this increased activity will bring new contracts, which is always a great indicator of how the country is performing. In 2019, we had more than 30 new E&P contracts, which is great news for the country. This is a permanent process of assigning blocks, and there are two routes to follow in this regard. One is the blocks that the National Hydrocarbons Agency (ANH) will submit, and the other is the oil and gas industry itself. In fact, in 2019 we had purchasing rounds, in May and November-December.

2018 WAS THE SECOND SERIES OF THE EMERALD SYMPOSIUM because there were many developments around the world. Our basic idea was to work on standardization and harmonization while transforming the emerald industry into a consumer-oriented activity. For that, we brought together retail such as LVMH, Cartier, and Dior, as well as regulators such as RGC, OCDE, and other global associations. Apart from promoting Colombian emeralds, our main goal is to establish the next generation of standards and initiatives around the world. In fact, internationally, our natural recognition stems from the premium product we have positioned to become industry leaders. Around the industry, leaders and managers have been studying our market to better understand how Colombia relies on a socially responsible supply chain to create value. We have two primary targets: our internal market, which requires that we maintain and improve the investment environment to attract new companies; and our export market, which requires us to keep improving our branding and positioning. It is important to recognize the huge strides we have achieved. Although the average emerald export value around the world is USD3-5 per carat, Colombian emeralds are valued at USD100 per carat.
INTERVIEW

Felipe Bayón
CEO,
ECOPETROL

COLombia Energy & Mining
Special Report

INTERVIEW

Felipe Bayón
CEO,
ECOPETROL

What is Ecopetrol’s role and relevance for the Colombian economy?
Ecopetrol generates impact in many ways. For example, in Colombia, we operate in 337 municipalities, a large part of the country, and we have been present in most of these places for decades. Each peso we invest in a municipality has the potential to multiply in the regions where we operate. For example, in 2019 Ecopetrol increased local procurement of goods and services by 6% to COP7.2 billion, clearly energizing regional economies. Ecopetrol also contributes through taxes and dividends to shareholders. In 2019, Ecopetrol Group contributed COP26.3 billion to the nation, in the last 10 years contributing over COP230 billion. Additionally, we have close to 260 direct shareholders, and more than 16 million Colombians have part of their savings in the company through pension funds and severance payments.

What have been the main drivers of Ecopetrol’s growth in recent years?
Our business plan is based on three fundamental pillars: growth of reserves and production, protection of the cash flow, and cost efficiency with strict capital discipline. Today, more than ever, capital discipline allows us to carefully analyze where we place every dollar and ensure that it gives Ecopetrol the expected profit. For the past five years, we have focused on developing a robust transformation plan accounts approximately to COP13 billion in productivity improvements and reduced cost structures and has enabled us to better withstand industry volatility. Our vision is to continue to be efficient. We are well positioned in the region; we have a reputation for being flexible and agile and for being able to transform ourselves.

The National Hydrocarbons Agency (ANH) has assigned new blocks in Colombia. How does that impact Ecopetrol’s and Colombia’s exploration and production activity?
For us, Colombia continues to be the focus of our investments. In fact, in 2019/2020 about 80% of such investments will be allocated to projects in the country. Our country still has great potential to explore and find new hydrocarbon reserves, both in the mainland and offshore. During the second cycle of the area allocation process carried out by ANH in 2019, we presented the best offers for five blocks. These blocks that we are bidding on will strengthen our portfolio in Colombia. We hope they will translate into new jobs, more barrels, and additional resources for the benefit of all Colombians.

What is Ecopetrol’s role and relevance for the Colombian economy?
Ecopetrol has been operating in a large part of the country for decades, energizing local economies while generating profits for its shareholders.

BIO

Felipe Bayón has been the CEO of Ecopetrol since 2017. He holds a degree in mechanical engineering from the Universidad de los Andes. He has over 26 years of experience in the oil and gas industry. Prior to being CEO, he was COO and worked at BP plc for 20 years as senior vice president of BP America and head of its global deep-water response. From 2005-2010, he was the regional president of BP Southern Cone (South America), and before 2005 he worked in BP’s headquarters as chief of staff to the CEO and the head of the executive office for exploration and production. He began his career in BP Colombia in 1995 as a project engineer, where he held various positions until becoming vice president of operations in Colombia.

for the benefit
OF ALL

Ecopetrol has been operating in a large part of the country for decades, energizing local economies while generating profits for its shareholders.
In the global bid to transition to more sustainable practices, oil and gas companies have started to incorporate best practices into their operational processes to ensure their longevity in the business.

How can the perspectives of the oil and gas business improve with the steps taken in the local electric vehicle sector?

SYLVIA ESCOVAR One of the things that is changing are the needs of people facing new fuel options and new digital services “on the move.” Terpel is always there to see how we can better serve these options in terms of fuel, payment, tools, service strategies, and more. Some new transportation schemes are changing the fuel they use today, choosing more renewable energies like electricity from wind or solar sources. That is why Terpel is strengthening its portfolio to use and offer electric chargers for these new consumers. Now and in the future, Terpel will be there to provide whatever source of energy people need. In addition to the source of energy, we are also looking into the future to provide any other service that people could need while transporting goods or travelling. Many companies in our sector may be concerned; this is not our case. We do not look at the risks but the opportunities to serve people in many different ways.

How will the new oil discovery open up new operations in the country?

MARCELA VACA TORRES We are still testing, so we cannot anticipate anything beyond the limits of our block. As with any new discovery, we aim to get as much information as we can. Guaco may or may not open new areas of exploration within the Llanos 34 block, though we will certainly provide new information regarding how our structure works. That is a day-to-day operation. We will probably drill the last well 20 years from now and will still be obtaining information. The industry is interested in increasing exploration activities in the new blocks awarded by the National Hydrocarbons Agency (ANH), and, accordingly, GeoPark expects to lead new discoveries in the Llanos basin.

How have you seen good practices in the industry improve over the years?

SE Reducing the levels of CO2 is an important concern in Terpel and part of our sustainability objectives. We start by checking our own operational processes in order to achieve the higher standards in the industry concerning this matter. Moreover, we are major actors in the carbon bond strategy put in place by the last government (carbon tax or forest project financing in the country). We also have solar power initiatives in farms and service stations as part of our goal to minimize nonrenewable energy consumption. Additionally, our board is heavily focused on our transition to greener energy. Finally, we are proud to have been found deserving of the Dow Jones Sustainability Index.

MVT We still have a great deal to do. After the 2015 crisis, companies learned a great deal. We learned to manage our costs and be cautious with our investments. Because of the nature of our business, companies such as ours have a long-term view. We have all learned that the world is changing, and the industry needs to focus more on ESG practices. If we want to be sustainable and think of future generations, the industry can be a great contributor to that purpose. The industry has learned and is willing to contribute more.

What are your goals for 2020 and the upcoming years?

SE 2020 will be one of the most iconic years in terms of the transformations that we will experience. In 2019 and 2018, we were developing projects that will boom in 2020. Initiatives in both service stations and lubricants regarding innovations for our consumers is something that we will see, especially in terms of more convenience all over the country. Finally, as announced in late December 2019, we will finalize our network of electric chargers throughout major roads in Colombia.

To what do you attribute your recent growth?

MVT In 3Q2019, our consolidated oil and gas production grew by 6% to 39,619bpd. We are getting closer to our goal of increasing production in Colombia by around 15%. We have improved our revenue and increased our production on the back of our drilling program, which includes 25 wells. We have increased production with our workover program and with our new discovery and development wells.
Just when the Colombia Petroleum Association seemed on the verge of convincing the Council of State to approve aggressive new fracking pilots, a collapse in global oil prices complicated the country’s bid for long-term energy independence.

PIERCING THE FOLD

Though activists saw the council’s decision to order Drummond to suspend operations at 15 different wells at its La Loma block in December 2019 as a major victory, in March 2020, the government published regulations for pilot projects that entail the drilling, fracking, and measuring of non-conventional deposits. These, of course, were written with the aforementioned pilots in mind, which, according to the Colombia Petroleum Association (ACP), could entail USD600 million in investment in their first phase alone. Once they get off the ground, argues Executive Chairman Francisco Lloreda, they could generate USD5 billion a year in investment alone.

And fracking is hardly the only potential solution to Colombia’s dwindling reserves. In the spring of 2019, ExxonMobil and Ecopetrol SA each signed joint contracts with Spain’s Repsol SA worth a collective USD700 million in investment to explore offshore blocks in the country’s Caribbean. Each around 400,000ha, Exxon and Repsol will split participation in the COL-4 block some 100km north of Bolívar province, while Repsol and Ecopetrol will explore the GUA-OFF-1 block 80km north of La Guajira. What’s more, The Hague-based Shell, Texas-based Noble Energy and Calgary-based Parex have also signed contracts to operate new offshore blocks that should bear considerable fruit.

All this said, the swift rise of COVID-19 and the attendant price collapses it has wrought are giving environmentalists a moment of reprieve. With the price of oil hovering at its lowest in nearly 20 years, partially due to COVID-19 and the Saudi-Russian price war, pricier long-term investments in fracking and offshore have momentarily lost some of their luster. Though environmentalists may count this as a temporary victory, it does nothing to assuage Colombia’s long-term energy dilemma. How these shocks might influence the Council of State’s decision, expected no later than July 2020, is more than ever anyone’s guess.
This year we celebrate 10 years of operations in Colombia.

10 years of rolling out a comprehensive strategy of economic growth, social development, improving the environment, balancing the wellbeing and security of our employees, working with local communities to better their standard of living, and important advances toward formalizing the work of artisanal mining operators.
Focusing on specialty services and optimization of procedures has helped Kodiak and its clients minimize costs and optimize the turnaround times on wells, increasing profits.

Joe Hickey
PRESIDENT & CEO,
KODIAK SERVICES INTL INC.
Colombia is a small country; however, traveling within the country takes a long time. That is why equipment needs to be strategically placed in the right areas to avoid downtimes. It also helps with security and people. The potential within the regions depends on the clients and their focuses. We are fortunate to have enough clients that we can stay busy in most areas. Another of our advantages is the presence of Canadian and US companies here. They trust our experience, and we speak the same language. We have a slight advantage with the Canadian oil companies for that reason. If they have a problem in a well, generally they only call us.

There are many projects in the Gulf of Mexico, Brazil, and the Colombian Caribbean with offshore exploration. How can that positively impact operations? We focus on land other than our fluids management division. That side already looked after the fluids engineering, solids control and waste management on the Anadarko offshore in Colombia a few years ago, and we plan to get back out there. Generally, it takes 18-24 months to bring those wells online. The long-term issue could be if they had huge success, and there was a great deal of oil. Below USD50, Colombia is not the greatest place, which is true of most places. Ideally, USD70 per oil barrel is the best for everyone; let us hope that we get there.
SERVICES & PRODUCTS

Now that Colombia has issued exploration licenses, drilling for new resources will follow, leading to an increase in activity and a need for accompanying services.

FEEL CONSULTING WAS ESTABLISHED in 2013 to provide consulting services for drilling engineering for different oil and gas operators. I started FEEL Consulting because the drilling market at the time was at its peak. There was a boom, and with the oil price above USD100, there was an opportunity in the market.

FEEL is an acronym for fluid, environment, engineer, and logistics. The company has many experienced engineers and consultants who have worked all over Latin America, the Middle East, and beyond, although so far we maintain a focus on Ecuador and Colombia. We provide optimization services for our clients and a holistic drilling approach that helps them optimize their operations. We are experts in drilling fluids.

In Colombia, drilling fluids expertise is interesting due to the geological characteristics of the country’s basins. There is a great deal of engineering behind the fluids used by the operators to conduct their drilling activities. Our potential customers are all O&G operators with active drilling campaigns.

WE REORGANIZED THE COMPANY into two main divisions two years ago: surface production management (SPM), which is everything we do at the surface, such as well testing and early production facilities, among others services; and well production management (WPM), where we bring tools and technology into the country to help our clients improve well productivity. This split allows us to consolidate our portfolio of services and increase our participation in the market.

In SPM, for instance, we have been able to help our new clients launch oil production in remote areas of Colombia. In WPM, we helped clients increase well productivity through wireline technologies and well stimulation.

Developing technology is a major investment. We have to be realistic about how a company of our size and resources can be creative and have an innovative mindset in order to find these new technologies. We have been extremely successful based on our integrity and commitment to close solid and transparent agreements.

WE ARE PLEASED with our current portfolio in Colombia. The two blocks that we hold have many leads and potential for exploratory drilling. That said, we will always consider investment in other projects that may fit well into our global portfolio.

Our success internationally has been in offshore projects, so we continue looking at offshore opportunities, mainly in the Caribbean. Our offshore activities will help strengthen Colombia’s service sector, supply chain, and shore-based operations. As a safe and responsible operator with decades of both onshore and offshore experience, we can also play a leading role in strengthening environmental stewardship across the oil and gas sector. The purpose of Noble Energy is “Energizing the World, Bettering People’s Lives.” Fitting within that purpose is our strong commitment to communities where we live, work, and operate. If we make important, economically viable hydrocarbon discoveries, our projects will create jobs and require infrastructure investments that will have positive impacts in various parts of the nation.
A DRILLING RIG OPENS A HOLE FOR THE CLIENT, and, at the end of this job, they remove the drilling rig and install a new rig. This is our rig—we complete the process with a surface pump. These rigs are extremely important to maintain the production of a country like Colombia and Ecopetrol with our workover rigs. We are a successful company and have trained 15 Colombians. Recovery service rigs can increase the reserves of the country and are known as enhanced oil recovery (EOR), which is the reason why we are here, since Colombia has huge demand for EOR. We brought in a different kind of equipment called fast move machinery. In Colombia, the majority of rigs in 2012 needed a crane to put on the truck to move from well to well. This can be dangerous, as a large crane is needed and had to be transported on a truck. When we arrived here, we brought fast-moving trucks to Colombia that reduced the mobilization time by 70-80%.

THE GROUP HAS BEEN IN COLOMBIA for over 20 years, and we provide petro physics and geological services to the oil and gas industry. That was our first line of business, and we then integrated other services. We are the first to offer integrated services regarding core analysis and core services. We do not have a competitor in that field. We are the only company that does the entire spectrum. This is a plus for us and our clients. We save on human resources, expertise, and so on. We have done more than 40,000 feet of core in the entire country. We see a niche offshore in Colombia, and in analysis for non-conventionals. Right now, the government has approved the pilot projects for non-conventionals. There are six fracking projects that are approved, and those six projects will be underway for fracking as pilots. We have a strategic alliance with a US company called Premier Oilfields that we are working with for non-conventionals.

THE COLOMBIAN MARKET has an immediate need to improve its gas reserves. We are able to install at a faster pace than steel pipelines and at lower prices. We have some gas projects in Peru and Bolivia. In the unconventional hydrocarbon sector, flexible pipelines are more effective than traditional ones. They are more resistant to corrosion by chemicals, and logistically, it can even be transported via air. It can be installed in places or reach areas that steel pipelines cannot. There is a market that still installs steel pipelines, but most companies seek to migrate to flexible pipelines. People are understanding the advantages of this system. We are focused on crude and are commercializing a new line of products, which is the only pipeline for hydrogen generation. This allows us to become the first company to transport hydrogen in the market. We have used some of these pipelines to transport potable water in Indonesia but have not implemented it in Colombia yet.

IN LATIN AMERICA, we provide all of Stork’s services. The client asset—throughout its whole life cycle—lies at the heart of everything we do. We make sure we keep industrial facilities running, allowing them to efficiently and sustainably. In Colombia and Peru, maintenance is our core business; nevertheless, we are looking into positioning ourselves as full integrated partners for operation and maintenance services and assemblies. We work in the mines of Cerrejón and Drummond, although our core expertise is in oil and gas. We have extensive experience in the power sector in Colombia and Peru and are moving our operations and maintenance services to renewable energy projects. Our capabilities in this sector continue to grow, as we not only leverage our expertise from Stork worldwide but Fluor as well. Our maintenance service is extremely specialized; we operate and maintain all types of facilities and most of the hydrocarbon pipeline structures in the country. This is an important part of our business.
INTERVIEW

Andre Conceicao
AMAZON & ANDEAN AREA MANAGER, EXPRO

Colombia Energy & Mining

INTERVIEW

Colombia needs more fields to keep growing and increase its gas production

Focusing on offshore explorations, the future of gas

Strong systems in terms of service quality, maintenance, and client contact

How do you assess the evolution and success of Expro’s projects over its four years of experience providing services, particularly to offshore exploration, in the Colombian market?

Expro is a major company that has been growing via more acquisitions over the last four years. We are looking to open new business lines in different countries. Colombia has always been a target market for Expro because the company management knows there are many opportunities here, even in offshore. However, offshore is just starting out in Colombia, and we are looking at participating in these projects. We are being proactive and aligning ourselves with Ecopetrol to bring new technologies and become a major part of helping it determine the best way to drill new wells and deliver the final product. Colombia’s offshore is more focused on gas production, and the country needs to look for more fields to continue growing and increase its gas production. However, we are having some issues in developing the offshore. The main problem in Colombia today is the licensing regime; currently, it is not easy to get a license because the plan for offshore is for 2021, so it will take more time before licenses are issued.

What collaborations has Expro been working on in Colombia with Ecopetrol and private companies, and what opportunities do you see for your services going forward?

Colombia is a different market, and if operators want to acquire a field, there are different processes compared to most countries. Colombia’s oil production is increasing again, which is good because it shows the oil industry is active. However, it has been somewhat quiet to date because of low oil prices and companies waiting for a solid economic outlook before they invest. 2020 will be the year for companies to invest more. They are currently preparing for the processes they will have to go through in 2020-2021. For 2021, the plan is to invest almost USD10 million in Colombia. In terms of what is happening today, Ecopetrol has specific partnerships for Colombia’s main fields with companies like Frontera Energy and Hocol, which is the right arm of Ecopetrol. Ecopetrol has also acquired 100% of its biggest partner, Acción. Furthermore, Ecopetrol has strong connections with Perenco, Frontera Energy, and Parex Resources. The other exploration company that is growing strongly in Colombia is Geopark. These are the clients we need to focus on.

How has Expro continued to deliver services in its main areas of expertise such as subsea development, product optimization, and well abandonment?

Colombia is looking to increase its production. However, this is not easy to do here, and Ecopetrol needs a great deal of help because it has specific fields it receives all its production from. It needs to increase this capacity, so production is still the main market for Expro. However, Expro is strong in offshore where we can deploy our subsea technology and as we know offshore is the future in terms of gas, Expro is really focused on this side of the market. Unconventional wells are another area of opportunity for Expro to show clients that we are here and have the capabilities to perform all jobs.

What collaborations has Expro been working on in Colombia with Ecopetrol and private companies, and what opportunities do you see for your services going forward?

Expro employs over 40 years of global experience in the field, along with the technology and capabilities to deliver whatever is needed to support exploration in Colombia.

How is Expro demonstrating it has the knowledge to tackle unconventional wells once these projects kick off in Colombia?

The process is not easy in Colombia. For example, for a new company that wants to enter the Colombian market, it is difficult to gain contracts because all local companies ask about its experience in Colombia. Expro seeks to show potential clients its background and expertise. We have over 40 years’ global experience in the field and the technology and capabilities to deliver whatever is needed to support exploration in Colombia. The most important point is to stay in contact with one’s clients. You need to be there at the right place and the right time.

BIO

Andre Conceicao holds a degree as an electro mechanic engineer from CIEP of Rio de Janeiro. He served in leadership positions for Schlumberger in Brazil, Mexico, Peru, and Colombia before joining Expro in 2016.

Expro employs over 40 years of global experience in the field, along with the technology and capabilities to deliver whatever is needed to support exploration in Colombia.
Do you need help maximising economic return throughout the lifecycle of your well?

By utilising both new technology and strategic partnerships, we can safely access, optimise flow, capture data and provide integrity and assurance.

45+ year’s global offshore experience

Subsea Well Access
Delivering integrated subsea well control and access systems throughout the well lifecycle

Well Flow Management
E&A testing, well clean-up services, production testing, DST/TCP and well maintenance packages

Well Intervention
Wireline, slickline, cased hole evaluation, CoilHose and well integrity services

Production
Fast-track, cost-effective and enhanced production solutions
ENGINEERING SERVICES

More than just services, these companies also provide their expertise and know-how to better serve their clients.

What have been the company’s achievements thus far?

JOSÉ GREGORIO RAMÍREZ FONTALVO GIP is a dream that we have been materializing through the consolidation of strengths, which allows us to distinguish ourselves from other actors regarding the provision of services with which we reach our clients. The strengths that we have consolidated are fundamentally three: a quality assurance system that allows us to deliver products and services that meet the standards of the industries with which we are involved; a consolidated team that is proud to work in this organization advising and providing services for the country’s largest companies; and a work culture that not only involves those who are here, but also the families of those workers who feel their absence. GIP has the recognition of companies and sectors in real estate and social management, where we are leaders. Our purpose is to achieve the same level of recognition in environmental and project management. Our mission is to be leaders in our four business units in the upcoming years.

GERMÁN VALDERRAMA We have had a presence in Colombia since we opened a sales office in 2012. The whole team came shortly after 2016. We now have a manufacturing plant for panels. We are 65 people at present, divided into manufacturing, sales and customer service, engineering, HR, financing, IT, and quality. We sell engineering solutions in addition to electronic devices for the electrical industry. Our main goal at this moment is to solve engineering problems for the electrical and manufacturing industries. We work with the major players in utilities. In 2020, we will start serving the manufacturing industry. Schweitzer was the first company to have digital relay, which revolutionized the protection system. We have evolved to a high-tech company and work in protection equipment, control, monitoring, measuring, and communication. Our mission is to make electricity more secure, economical, and dependable. As for the market, a country develops in line with electricity, and we expect to have a great deal of business in the coming years.

What has been your experience working in many diverse sectors?

JGRF Following the oil price crisis in 2014, the company underwent a transformation. We entered a stage aimed at diversifying the internal products we were offering and reaching sectors of the economy that were previously not of interest. This caught the attention of customers, and we were able to diversify our portfolio. In 2014, 100% of our portfolio was oil companies, though now it has fallen to 40%. The rest is focused on the mining, electricity, and infrastructure sectors. We fundamentally support 4G projects, and this strategy has allowed us to grow. Normally, the companies in the oil sector complain about the situation, but we have been able to get ahead. We have been able to handle the crisis in an appropriate way and grow between 15% and 18% annually since 2014.

How have you managed to cover the country and provide solutions, considering the geography of Colombia?

GV We do not build power lines or substations nor do we build generating stations. We provide solutions for protection, measuring, control, and so on. Right now, we have an interesting solution for Petroeléctrica de los Llanos. It has long lines, and when a problem occurs it can take a while to locate it. We have a new relay, the T400L, that can locate faults in a precise manner through the traveling wave principle. We have a complete set of solutions to assist all companies using stations and lines. Protection is our main call. We provide many solutions in automation for substations. We have what we call remedial action schemes and did one of these schemes in the interconnection between Ecuador and Colombia. We developed the entire system for XM, the operator in Colombia. We are not as strong in Ecuador as we are in Colombia; however, we sell many products there. We just finished an automation project for distribution systems.
TEBSA is Colombia’s largest consumer of natural gas and the biggest thermal plant in the electrical system. Can you tell us about the scale and size of TEBSA’s operations and the growth you saw in 2019?

TEBSA is the biggest thermal generator in the Colombian electricity system and the largest single gas consumer in the country. We have the capacity to produce almost 10% of Colombia’s total energy demand and nearly 35% of the total energy demand of the Caribbean coast. Colombia’s electrical system is composed of approximately 70% hydro and 30% thermal capacity. During the last El Niño, Colombia’s thermal capacity produced 55% of the country’s total energy demand, demonstrating the importance of thermal capacity to respond to different environmental challenges. Additionally, TEBSA is located in the Caribbean region, which has the highest energy consumption growth rate and energy demand in the country. In 2018, Colombia’s energy demand grew by 3.3% compared to 5.5% on the Caribbean coast. Due to the area’s contribution to the growth of the economy, TEBSA is essential to supporting the growth of not just the Caribbean coast, but the country as a whole, by securing access to at least 2,000MW of gas-fired energy.

Aside from increasing supply through importation, is TEBSA promoting increased local production of natural gas in Colombia?

We also currently have medium-term local gas supply contracts that have been contributors to the development of new gas fields located on Colombia’s Atlantic Coast. They have contributed significantly to expanding the local gas transportation capacity to connect those new fields to the grid. New fields and gas pipelines can only be developed if there is significant gas demand, so TEBSA is essential to the growth of Colombia’s local supply and transportation capability.

How is TEBSA promoting Colombia’s shift to renewable energy sources?

We need to bear in mind that Colombia’s energy generation matrix is one of the cleanest in the world. This is different from other countries, such as the US or Germany, where you find a higher proportion of thermal gas and coal-fired generation than renewables. The government has sent a clear signal to develop renewable energy in Colombia, and we see renewables and efficient gas-fired technology as complementary energy sources. Renewables have posed significant challenges, given the natural intermittent renewable production. With today’s existing technology, we still cannot store significant amounts of energy. If renewables are to penetrate Colombia’s energy matrix, they need efficient assets like ours to continue supporting the country’s energy grid at attractive price levels.

Royal Vopak acquired a 49% equity stake in the Sociedad Portuaria el Cayao (SPEC) LNG import facility partnership and operation. What does this say about the international attention currently focused on Colombia’s natural gas industry?

Because Colombia has a regasification facility, we are on the map for the international energy markets. Given the diminishing local gas production capability until Colombia develops additional local gas supply capabilities, we will need to connect to and supply our needs from these international markets. Royal Vopak is an internationally renowned player, and it is a positive sign that international markets are interested in developing meaningful relationships with Colombia.

What are TEBSA’s main goals and milestones for 2019-2020?

In terms of 2019, TEBSA is currently undergoing an extensive maintenance program for all its units, including completely overhauling one of its steam turbines. We are also finalizing that same process for two gas turbines, where we are implementing a new state-of-the-art control system. We are currently seeing lower-than-normal inflows of water into Colombia’s reservoirs, so our plant has been providing a significant amount of energy not only to the Caribbean region, but also to the country’s interior. In 2020, we will continue with our schedule of overhauling seven gas turbines, with two in 2020 and three the following year.

TEBSA, as Colombia’s biggest thermal generator and gas consumer, is a key player in developing the Caribbean region’s energy resources.

Luis Miguel Fernández Zaher
CEO, TEBSA

Capacity to produce close to 35% of total energy demand of Caribbean region

Invested over USD 60 million in maintenance and operational upgrades since 2014

Colombia’s energy demand grew by 3.3% in 2018 compared to 5.5% in the Caribbean

BIO
Luis Miguel Fernández Zaher has over 19 years of experience in multinational and national companies operating in the electricity generating sector. He has been the CEO of Termocandelaria Power LTD (TPL) and the President of TEBSA since 2010, where he has led the value creation transition of both entities from a public-private association (PPA) platform to a fully private operation. In 2019, he led the company’s debut in the debt capital markets with a USD 60 million bond issuance.
INCHING TOWARD A STATE OF RIGHT

Mining companies have a unique opportunity to help improve Colombia’s health, education, and transport infrastructure, something they must do without pause if they are to help the government and industry gain the country’s trust.

THE BATTLE FOR THE FUTURE OF COLOMBIA, including its soul, soil, economy, and so much more, is tied up in the country’s booming mining industry. The fifth-largest coal exporter in the world, Colombia also has important reserves of gold and nickel. As the price of oil continues to drop and the country’s reserves dwindle to merely six or seven years’ worth of consumption, many policymakers and private sector players, both foreign and Colombian, want mining to fill the ‘gap.’ With fears, not unwarranted, that environmentally damaging mining holds the key to saving the currency, too, the Duque government, in league with some of the world’s biggest mining companies, has been at loggerheads with environmental activists and local governments the nation over to determine the right mix between mining and preservation.

It is not, however, as if a long-time consensus already existed: a 2018 paper from the United Nation’s Office on Drugs and Crime (UNODC) showed that 66% of all gold mining in the country was illegal, while another paper from the same body in 2019 reported that 48% of all illegal mining activity was happening within the country’s national parks. With 84,000ha across the country affected by illegal mining, an uptick of 6% on 2014, the UNODC reported, illegal activity also deeply affects indigenous reserves and black community lands, areas where mining is in theory strictly prohibited. Thought to generate at least USD2.4 billion per year—some three times more than the cocaine industry—illegal gold mining alone is present in 14 of Colombia’s 32 provinces, though the bulk is in the west of the country, chiefly Antioquia (37%) and Chocó (39%).

While total gold production was up 3% in 2019, nickel was down by 6% to 89.4 million pounds that year, according to the National Mining Agency, and coal down by 2% as a result of drought and a series of judicial rulings, especially one that prevented the extension of operations at Cerrejón in La Guajira, a major mine jointly owned by BHP Group, Anglo America, and Glencore. But the price of thermal coal also fell drastically, from USD82.50/ton in 2018 to merely USD51.40 in 2019, according to Silvana Habib, president of the National Mining Agency, causing further tensions with the Sintracarbon and Sintracerejon unions onsite at Cerrejón, both of whom were mulling whether to strike in early March 2020 before fears over COVID-19 caused the mine’s operators to halt most operations until the virus is better contained. Some 15,000 workers directly employed in the industry will thus cease working, the Colombian Mining Association (ACM) said in a statement, as will another 18,000 indirectly employed.

Given the importance of the industry as Colombia’s second-largest generator of foreign currency, what have major firms done to alleviate the burden of mining on local communities? With such a huge percentage of the industry done under the table, bringing operations into the open is a crucial first step. This not only generates critical tax revenue for the government, but, more importantly, also legitimizes small miners, plugs workers into the country’s social security system for the first time (GranColombiaGold, for example, has now added 12,000 workers to its books and gotten another 3,000 to open bank accounts), and helps extend the critical transport, health, and educational infrastructure into previously unserved areas.

In addition to helping bring clean drinking water and new roads to far-flung parts of Antioquia and Chocó, GranColombiaGold has also helped develop one of the most important plant nurseries in northeast Antioquia to reforest areas degraded by illegal mining. Great, then, are the initiatives that can be taken by the country’s largest miners; however, until they unify and coordinate their efforts in conjunction with the government and give illegal miners enough of an incentive to go legit, they are unlikely to act as more than temporary band-aids across a scarred and battered landscape.
people FIRST
José Miguel Linares
PRESIDENT,
DRUMMOND

No matter the market performance, maintaining a good understanding and relationship with the surrounding communities has always been important to Drummond.

How did the company position itself as an industry leader?
Drummond has been taking care of business in times when the market has not been the best. Despite facing low prices, the company has been cost conscious in its operations. We have always taken excellent care of our customers. Looking at the market, we have diversified our customers and moved a large amount of our coal to Asia, which was not the case 10 years ago. At the time, we sold about 50% of our coal to the US. Then, the US started fracking and produced a large amount of oil and gas with it. Its coal-based power plants were converted into gas plants. That forced us to start looking for other markets. Now, we have diversified and sell coal to about 25 different countries all over the world.

How has the company prepared to cope with recent low coal prices?
At the moment, we have an important infrastructure in Colombia in mining, ports, and railroads. Rather than reducing production, we are maintaining the same level of production and exports, with very few variations. We are also trying to maintain and use the infrastructure as best we can with the resources we have. We have 1.4 billion tons in reserves. The other key issue is our CSR programs. Maintaining a good understanding and relationship with the surrounding communities has been important to developing our projects. Having support from the community helped us to obtain all the necessary permits to continue advancing with our remaining plans.

“At Drummond, we employ people from the local area for a full year of paid training with benefits.”

What was the result of the Bettercoal evaluation in 2019?
It was positive. Colombia is in a great position among the countries Bettercoal has been evaluating. Within Colombia, Drummond is in a solid position as well, and the evaluation showed that we made improvements in many areas. There are still some areas where we can make many important improvements, and we are in a constant process of improving these. In general, though, it was a positive evaluation. We were the first company in the world to be audited by Bettercoal in 2014.

What about professional formation?
In terms of our CSR and matching that with our operational needs, the formation and training of workers is one of our key priorities. With that in mind, we put together our in-house training program. Most of the locals in the area have a basic level of education, and we give priority to locals. They do not have access to the level of education needed, so we offer in-house training programs instead of having them attend SENA, the Colombian public institution focused on the development of professional formation programs, which often doesn’t offer training in the skillset we need. That is why we do our own training. At Drummond, we employ people from the local area for a full year of paid training with benefits. Today, we have about 60 people in the program, nearly all of whom land a permanent job with us by the end of it. We also offer 20 university scholarships per year for the best students at local public high schools, from families with low incomes. Including those awarded in 2020, we have handed out 150 scholarships. The scholarship not only pays their tuition, but also gives them money for their meals, materials, and transport. Today, we have a large number of graduates who are working for Drummond. They went to schools built by Drummond, with teachers trained by Drummond in one way or another, and received scholarships financed by Drummond to go to university. Now, they have found a job working for Drummond.

“Production of 32,644,000 tons in 2019”

Audited by Bettercoal
Operations have been re-certified with OSHAS 18001 and ISO 14001

BIO
José Miguel Linares is a lawyer by trade and has been with Drummond since the early stages of its operations in Colombia in the late 1980s, directly participating in the negotiations with the government for mining contracts and setting in motion the purchase of the real estate where the operations are located. After his post as the company’s legal and administrative manager, he strategically transitioned to become vice president of corporate affairs. He took on the presidency toward the end of 2012.
INTERVIEW

Colombia Energy & Mining Special Report

Can you tell us more about your initiative to formalize illegal small-scale miners in Colombia?
We have 46 cooperatives for miners producing and complying with security, safety, and environmental aspects. We support them from a technical point of view, they serve us the material they produce, and we remunerate them according to international standards.

How have you managed in other ways to have a positive impact on those communities?
We have a scholarship in place; the school is bilingual, and we meet the expenses (salary, house, food, and transportation) of volunteer teachers. Currently, we have 475 students in the primary school and are set to open a secondary school shortly.

How is the company trying to reduce the use of mercury?
That was a problem arising from illegal mining, where the output was sold to small processing facilities. We use mercury to amalgamate the gold. In other cases, we buy material for the processing facility that does not use mercury. Currently, we are building a plant to recover zinc and lead to sell. It is a combination of an environmental project and a profitable one.

Gran Colombia Gold remains the largest producer of gold and silver in Colombia. What has been its strategy in the market?
This company was once on the verge of bankruptcy, and the key to its success has been its people. A company is its people, which is why we give our people the best benefits according to international standards. Second, we have financial discipline and, third, we strive to obtain all the environmental and social licensing or permits.

How was the company able to break its gold production record last year?
Gran Colombia Gold has been growing at a rate of 20% per year since 2014. Our production in 2014 was 90,000oz of gold between Segovia and Marmato and 240,000oz in 2019. Financial discipline has been a key issue, but our people are a key element in our success, as is the technology we utilize and our work with the local community. When we arrived in the territory, we grasped the situation of illegal mining and sought to work with those engaged in it. To date, we have signed with 44 mining units and have a small mining team in place dedicated to them. Other initiatives have to do with the issue of education, which is necessary for development, and that is where our scholarships come into play. We also have a training program for women to integrate them into the economy. Women who are heads of households, if they do not have a husband, have no way to support their children. For example, our security team is mostly made up of women, specifically single mothers. We have an alliance with The National Training Service (SENA) to provide proper training. We are also building a school with it and investing in other such initiatives.

What are your goals for 2020 and the upcoming years?
The main goal in Segovia concerns drilling and infrastructure, since we expect to find and extract. In Marmato, we expect to finalize it mid-2020 and then start building the new mine. We expect to have the first bar of gold by the end of 2022.

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BIO

Lombardo Paredes holds a bachelor of science in mechanical engineering and a master’s in economic analysis and financial economics. He has over 20 years of corporate leadership and operations management experience in the resource sector in Latin America. During this career, he held several important roles within Petróleos de Venezuela (PDVSA), such as vice president of public affairs and managing director and a board member of Maraven S.A., an affiliate of PDVSA. Since he assumed the role of CEO in 2014, Gran Colombia Gold Corp. has become the top gold producer company in Colombia.
Felipe Márquez Robledo  
PRESIDENT,  
ANGLOGOLD ASHANTI COLOMBIA S.A.

BIO
Felipe Márquez Robledo is currently President of AngloGold Ashanti Colombia S.A., a position he has held since 2017. He has been associated with AngloGold Ashanti Colombia as vice president of sustainable development for AngloGold Ashanti globally. Before joining AngloGold Ashanti, he was vice president of corporate affairs for Coca-Cola Femsa’s South America division and held various positions at Unilever, and at different law firms. He is a lawyer from Universidad Javeriana, with a master’s degree in economic science from the same university. He graduated with honors from the Phoenix Institute at the University of Notre Dame in the US. In addition, he has simultaneously held various academic positions at both Colombian and US universities.

responsible MINING

Colombia has great potential for responsible mining

Serving interests of local communities is a must

What is the potential of responsible mining and modern mining processes in Colombia?
At AngloGold Ashanti, every mining project should deliver economic, environmental, and social benefits. Through responsible mining practices, companies can demonstrate benefits and success that local mining can bring to communities, particularly to those who have concerns. Overall, the situation in Colombia as a whole is improving. All the relevant authorities are working on policies and the regulatory framework so that mining in the country is sustainable. Community and local engagement are critical to mining in any location.

What is the company’s plans for the Gramalote and Quebradona projects?
We have acquired the license for the Gramalote mine and are planning to present the feasibility study to our different boards—B2Gold is a partner and manages the project—early in 2021. Assuming the board approves it, we aim to start building it by mid-2021. We are still working on the license for the Quebradona project and aim to also present the feasibility study to our board in 1Q2021. Our company has an investment return hurdle of 15% for new projects.

How is AngloGold Ashanti positioned in Colombia’s mining industry?
AngloGold Ashanti is the largest explorer in Colombia. We manage the three biggest projects in the country; two of them, Gramalote and Quebradona, are categorized as projects of national strategic interest. In 2019, La Colosa was the third such project in our portfolio, but we have since reached a non-formal agreement with the government and local community to halt its development. The two biggest projects we are working on are both located in Antioquia. While Gramalote is an open-pit, low-grade gold mine, Quebradona is an underground mine with higher quality gold (80%) and copper (20%) deposits.

How is the company planning to generate benefits for local communities?
Quebradona is our flagship project, and we want to use it as a model of responsible mining. So far, we have held 160-170 public hearings with more than 3,000 members of local communities. Our main goal is to transform the underground wealth into social benefits. We propose to build the mine in a 2,500-ha biodynamic park. Our idea is to make the park self-sustainable. To that end, we will generate solar energy and create spaces for businesses. The park will be managed by a third party, and the profits will go to local communities. The mine itself will have a huge economic impact in terms of royalties, taxes, and jobs. The foundation will receive a minimum of USD2 million. If we sell more, the foundation will receive more. This foundation is separate from our social corporate responsibility projects. The foundation will be 100% managed by people from Jericó, Antioquia.

What is it like operating in Colombia?
It all depends on the regional jurisdiction the company is located in. Some areas are easier to navigate than others, mainly based on the local understanding of mining and their past experience of mining, in addition to the outlook of the public sector. Having a successful operation can demonstrate the benefits and success that local mining can bring to communities, particularly to those who have concerns. Overall, the situation in Colombia is improving. All the relevant authorities are working on policies and the regulatory framework so that mining in the country is sustainable. Community and local engagement are critical to mining in any location.

“We are the largest explorer in Colombia. We manage the three biggest projects in the country.”
Given that Colombia produces the bulk of the world’s high-quality emeralds, MTC seeks to increase its production to meet global demand.

This is one of the reasons the price has continued to rise. Colombia produces the bulk of the world’s high-quality emeralds.

How are you aligned with the government’s agreement to export a percentage of emeralds to the Chinese market? These agreements were recently signed. We are in contact with Acodes, part of Federales Esmeraldas, and it helped negotiate these agreements with the Chinese government. The issue was that there were extremely high taxes on importing emeralds from Colombia into China, as well as other obstacles. Acodes is working on removing those obstacles to make the flow of Colombian emeralds to the Chinese market easier. We support those efforts but are adopting a wait-and-see attitude. We eventually intend to be full participants.

How do you plan to bring the relevant stakeholders together to achieve Colombia’s goal of being the top emerald exporter by 2025?

We have had tremendous support from the government. This industry can grow significantly and can dominate the global industry. What we need is capital investment, either Colombian or foreign. We need the government to adopt policies that will favor the industry. We have to go out and make sure the world knows the value of Colombian emeralds. We know we have the best product. When the industry has matured and is producing at the level it should, there will be no question that people will want Colombian emeralds.

How are technology and innovation changing production?

To find more emeralds, one needs to expand mines and go deeper. To operate a mine in a modern fashion in accordance with the law, they need technology. To operate the mine efficiently, they need geological information. There are many different things that come together to make the mine more efficient. Our goals are mainly about modernization and expansion of the mine. Notably, due to our overall standards, we were ranked one of the top-10 mining companies in Colombia by Brújula Minera. It was the first-time ever an emerald mining company was included in this ranking. We were also rated fifth in terms of how we treat our workers.

How was the production environment in 2019?
The production environment remained steady in 2019. We are involved in some major infrastructure projects in the mining sector and are extremely satisfied with production. Clearly, everyone would like more production, and we have plans for that, though we are moving into new areas and expanding some of the ramps. We expect some new infrastructure to significantly boost production in 2020. Additionally, we plan to work on ramps and other areas of the mine that are not currently active. We have every reason to believe production will increase as it has done in the past few years.

What is the status of your jewelry line and other projects?
We want to work with the Colombian emerald industry as a whole and support our partners. The emerald mining sector produces high-quality emeralds, commercial-quality emeralds, and other emerald materials. Overall, there is a great demand for the whole line of emeralds.

Why did you select Geneva and New York as your major distribution centers?
New York is one of centers for the gem trade, as is Geneva. We have worked with agents, sellers, and buyers in other parts of the world in Asia and the Middle East, but New York and Geneva are excellent places as centers of distribution.

Are there other markets you would like to target?
We would like to be in all the major markets of the world, whether it is the Middle East, China, Europe, the US, or South America. Our sales staff are constantly looking for new opportunities. We have no problem selling our product; we concentrate on production and quality. Emeralds, especially high-quality emeralds, are rarer than diamonds.

BIO
Charles Clifford Burgess is the CEO of MTC and the Muzo Companies in Colombia. Burgess graduated from the University of Florida in history and political sciences and also holds a master’s in public administration. After three years of military service as an officer with the US Marine Corps, he started working for the US Department of State as a diplomat. He worked with the US Foreign Service for over 30 years in Paraguay, Ecuador, Cuba, and Colombia, where he worked for two terms. In 2009, he retired from the diplomatic service and founded MTC.
How has the company maintained high-quality standards, and how has this guaranteed better performance for your clients’ vehicles?
We have managed high quality standards for the vehicles that use our products through our main focus on performance and strong client orientation. We have set up strategic and management processes to train our distributor and their staff. We have a quality control and monitoring system and are in the process of obtaining certifications to strengthen our management system. We have a well-defined corporate governance process, which can be described as strong, agile, practical, and efficient, and enables swift decision making. While larger companies take four to five months to make decisions, we can make them in 15-20 days. We have in-house committees and autonomy in decision-making processes, being a small company.

Can you tell us what the production plant means for the company?
The plant means everything, allowing us to compete with larger players in the market. Without an internal storage facility, a company cannot compete under the same conditions as large firms. When we acquired the company, we had a storage location that we rented from a competitor, but those contracts did not give us the required autonomy to negotiate with dealers. As a result, we made the decision to build the plant. Within our projections we wanted to make the process more vertical.

What is the importance of the company’s operation in Colombia?
Gasco is over 160 years old and has been adapting throughout its history providing energy solutions. The company has been in different businesses: marine terminals, pipelines, natural gas distribution, LPG distribution, and electricity generation. Gasco got into Colombia because there was a change in the LPG regulation with the Trademark Law, which obliged companies to be responsible for the cylinders. The Colombian model became similar to the Chilean one, which drew Gasco’s attention. In Colombia, there were over 200 distributors; it was a family business-dominated industry. In Chile, there are three highly formalized distributors operating in a mature market. The company has two commercial brands: Vidagas and Unigas. Empresas Gasco has control over 100% of both operations. Today, Colombia represents 15% of the company’s EBITDA and holds great potential for the future.

How easy was it to integrate gas services in a sustainable way?
It was not easy, because the industry is not easy. There is still a great deal of informality and illegality within the industry, which poses a challenge for companies like us that carry out legal operations. The regulation is in place, though the culture of companies has not necessarily caught up. We need a great deal of support from the government. We are regulated by the Superintendence of Public Services.
Promigas is looking to expand its business outside of Colombia. In which countries does it seek to grow, and what are its projections for 2020?

We recently deepened our commitment to expanding operations in Peru through a natural gas distribution agreement with the government in Piura, the second-most populous region after Lima, to reach 250,000 new users. We are also looking at the Caribbean and Centroamerica, where most countries depend on heavy fuel oil as the main power generation source, making them especially vulnerable to volatile oil prices. Natural gas can provide a feasible alternative to reduce fuel oil dependency for roughly 25 million people, according to International Energy Agency (IEA) estimates, thereby lowering electricity prices.

What is the scope of investment and main goals of the new Gasoducto Jobo-Majaguas pipeline in Sucre and Cordoba, and what impact will it have in the local market?

Since December 2018, we have constructed this pipeline, connecting new natural gas reserves to markets in Barranquilla and Cartagena, with a lump-sum investment of USD200 million. It is strategic for all of Colombia’s Caribbean coast, since declining natural gas reserves in La Guajira are now compensated by new findings in Sucre and Cordoba. Colombia’s largest oil refinery in Cartagena, alongside many other industries in northern Colombia, depends on natural gas as an energy source.

What is the mission of your Energy and Gas Research and Innovation Center (CIIEG), and what will be its main activities for 2020?

CIIEG seeks to develop new energy alternatives for a highly diversified Industry 4.0 solutions portfolio. Amongst many things, we are looking into the optimization of natural gas-powered dedicated vehicles. China already has a 5-million vehicle fleet, and the opportunities in the hemisphere are significant.

How is Promigas promoting the offshore and fracking explorations on the Caribbean coast, and what potential does the company see with these concessions?

We focus on addressing energy affordability as a means for promoting competitiveness and increasing human development. Colombia has a few natural gas sources, namely offshore exploration and unconventional natural gas resources, also known as fracking. It is estimated that offshore reserves in the Caribbean Sea, which include Kronos, Gorgon-1, Purple Angel-1, Tayrona, and Orca-1, hold reserves of up to 30TPC. Our Pacific coast also has offshore potential with the Choco offshore, Tumaco offshore and Pacifico Profundo, which are estimated to hold 5.88TPC. Currently, Colombia has proven natural gas reserves of just 3.8TPC, which is enough for about 9.8 years; however, we have unconventional natural gas resources estimated between 4-24TPC in Magdalena Medio, Cesar-Ranchería, and Catatumbo. If these optimistic estimates materialize, it amounts to a century of natural gas reserves, a real game-changer in energy competitiveness.

How is Promigas working to promote and educate the markets about natural gas as a cleaner alternative to hydrocarbons?

Naturgas, Colombia’s natural gas industry association, has done an outstanding job educating the public on the economic, environmental, and health benefits of natural gas: it is 50% cheaper than gasoline and 35% cheaper than diesel, and it has substantially lower CO2 emissions. Bogotá, Medellín, Cali, Barranquilla, Cartagena, Manizales, and Palmira have incorporated natural gas-powered vehicles into their mass transport systems, with 1,600 buses serving 1 million passengers daily at the end of 2019.

What is the growth potential of the LNG market in Colombia?

The LNG market growth potential both in Colombia and the hemisphere is significant. Colombia’s Mining and Energy Planning Unit (UPME) has stated the need for a new LNG plant in Buenaventura on the Pacific Coast. This would require the construction of a natural gas pipeline connecting the coast to Yumbo, near the outskirts of Cali. It would require around USD870 million in investment and will begin operations in 2025. Promigas has considered participating.

Promigas has been bringing progress and well-being to Colombia and Peru for more than 45 years, with an active role in the process of massification of natural gas in Colombia.