

# Colombia

A Special Report From *Oil and Gas Investor*  
and Global Business Reports

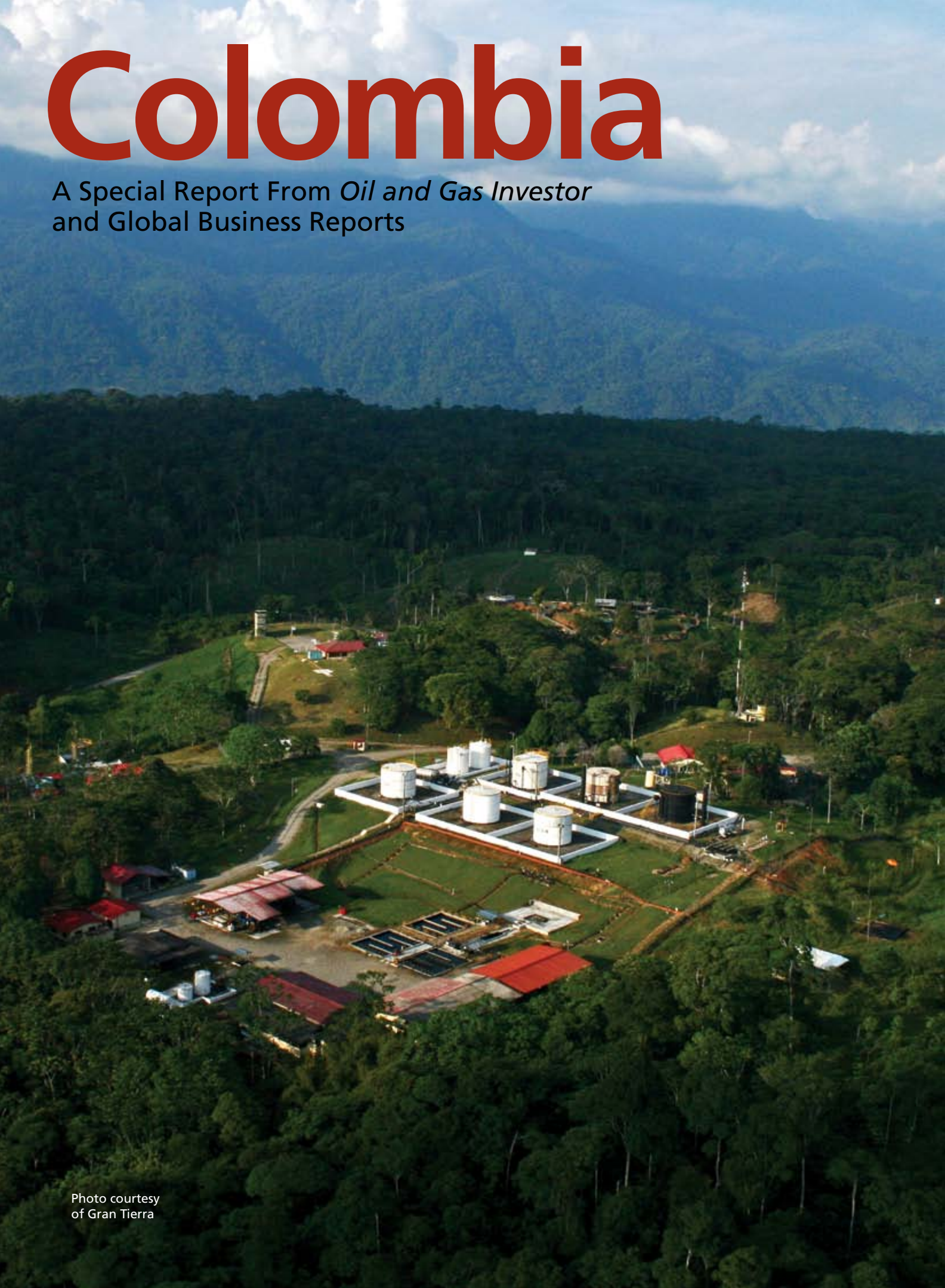


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# Maintaining the million

*After a successful decade, Colombia has achieved its 1 million barrels per day goal; the challenge, however, is to maintain this. Depleting reserves leave no room for complacency, and the country must sharpen its competitive edge to encourage juniors to continue exploring.*

This year marks the 10-year anniversary of the establishment of the Agencia Nacional de Hidrocarburos (ANH), the organization credited with rejuvenating the Colombian oil and gas sector. Taking advantage of the improved security situation achieved through 'Plan Colombia', the U.S.-funded offensive against rebels and drug trafficking, the ANH-led restructuring of the oil and gas sector has brought the attention of the international investment community back to Colombia. "International investors started hearing very good things about Colombia from around 2007; people have noted the changes in the country, with its improved security and stable contracts," says Cristian Ducara, general manager of Trayectoria Oil and Gas.

The ANH marked an impressive decade, seeing Colombia finally reaching the long-awaited one million barrels per day milestone in December 2012. Now the focus turns to maintaining that level of production in the face of aging oil fields and socio-environmental obstacles.

From a geological perspective, Colombia may not have the huge reserves of neighboring Venezuela, but as more of the nation has been freed of conflict and properly explored,

numerous smaller deposits have been found which contribute to significant production. "Discoveries of heavy oil in the Llanos have completely flipped the country's future from importer to exporter, and this is a trend which will presumably extend into the medium-term. I think the oil boom was related to a certain extent to the improved security situation in the country – although the Caño Limón boom of the 1980s was able to occur amidst great instability. Nevertheless, it is great to be able to enjoy the strengthened conditions of today," says Alberto Cisneros Lavaller, CEO and president of Venezuela-based firm Global Business Consultants.

After the major discoveries of the late 80s, such as Caño Limón, the Colombian government along with the national oil company, Ecopetrol, sought to strengthen its position in the growing sector. The subsequent restructuring of the sector to unduly favor Ecopetrol, coupled with the deteriorating security situation, led to Colombia being widely neglected by investors throughout the 90s. Still without a new discovery of significance, the birth of the ANH in 2003 saw the focus shift to the creation of an attractive fiscal regime encouraging smaller juniors to enter the mar-



Stephen Newton, CEO of Southern Cross Energy

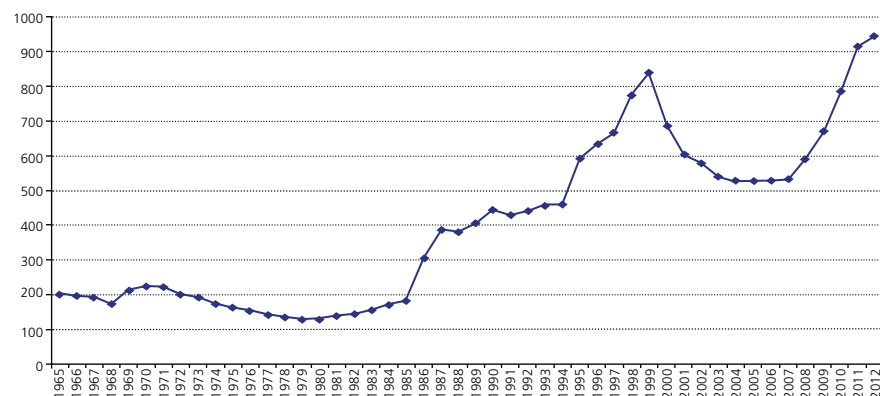
ket, and it was these pioneering explorers who established many of the biggest producing assets we see in Colombia today.

The bidding round (ronda) of 2012, through heightened qualification criteria, marked another shift in the Colombian oil and gas sector back to a focus on larger E&Ps. "If you consider the development of the U.S. oil industry, especially shale, you see that the big companies are not responsible for what it is today, but rather it was the entrepreneurs who went out there with money and a new idea. Colombia seems to be forgetting this and seems to only be encouraging the big players," says Stephen Newton, CEO of Southern Cross Energy.

Despite the concern of many in the industry, the bidding round saw ExxonMobil, Shell, ConocoPhillips and Anadarko move into the Colombian market. "While Colombia did well and was successful, the sector today is not

## Colombia, production, thousands barrels daily

SOURCE: BP Statistical Review, 2013



**This report** was prepared by Caroline Stern, Alice Pascoletti, Ramzy Bamieh and Josie Perez of Global Business Reports. For more information contact [info@gbreports.com](mailto:info@gbreports.com).

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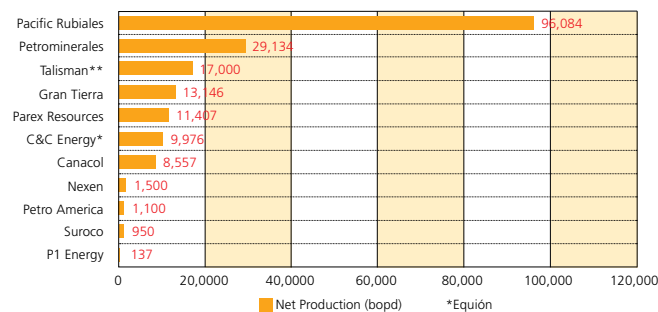
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## Daily Average Net Oil Production by Top Canadian Operators -2012

SOURCE: The Canadian Trade Commissioner Service 'Colombia's Oil and Gas Sector, June 2013'



growing as it was. Interest from junior players has withered for two reasons. The first is the problem with licensing, permits and the overall challenges of doing oil business here. The second is that the government may be becoming a bit complacent. The government feels that it made the country attractive and that this perception will continue forever," suggested Álvaro José Rodríguez, partner of natural resources at law firm Posse Herrera Ruiz.

Meanwhile, E&P firms need to find enough support on the ground along the whole value chain. Margarita Villate, executive director of Campetrol, a chamber grouping the oilfield services sector, also gave her opinion on the areas where the government must improve: "We need clarity in the regulatory framework for new activities as non-conventionals and offshore development. We continue to need security. Environmental licensing delays are time-consuming and very costly for our members. We have a hindrance in infrastructure development, which causes higher logistical costs, and we need financial support for small and medium-sized companies, so they can acquire technology and develop their R&D departments."

The Colombian government may be hoping a shift to the bigger players with strong corporate social responsibility records will help to solve growing social and environmental problems across the country. Nevertheless, particularly in terms of production, they need only look at the main players in the market today to see what can happen when smaller firms are given the right support and backing.

## Financing

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

"In the early 1990s, when the government was putting a renewed focus on the oil and gas sector, they realized that this was going to be a multimillion-dollar industry," explains Carlos Miguel Chaparro, partner and oil and gas tax leader at PwC. "With Colombia's small currency market, they understood that the foreign exchange market would be in a state of chaos if companies were regularly bringing in cash



Carlos Miguel Chaparro, partner and oil and gas tax leader, PwC

to the country to fund their operations. To protect the foreign exchange market, the government restricted the E&P companies from borrowing outside of the country and making cross-border loans. Consequently, most of the project finance that I have seen in Colombia is done locally, as borrowing within the country is not an issue. But 95% of the companies fund their operations in a different way as the government has created a window for tax purposes. If a client has a branch in Colombia, the parent company in Calgary, for example, would borrow in the home country to fund the branch's operations. The parent company would then send the money to the Colombian branch as equity because you cannot push down debt. At the same time, this parent company is continuing to pay interest to the bank in Canada where the loan was taken out. What the Colombian

government has done is allowed interest to be pushed down for tax purposes only. This is an interesting development for project finance because companies are able to push down this expense; however, the restriction on cross-border loans from a central banking perspective will probably remain."

Meanwhile, as the traditional capital markets, such as the TSX, continue to struggle through this period of slow financing, there lies an opportunity for Colombia's own stock exchange, the Bolsa de Valores (BVC), to supplement such funding. "We still believe that there is opportunity for capital raisings in the Colombian market for this industry, especially for companies that are further established with predictable cash flows as opposed to venture companies," says Juan Pablo Córdoba Garcés, president of the BVC. "We have made a lot of headway with the four oil and gas companies that are currently listed. These listings have given investors, analysts and brokers the opportunity to get involved in an industry that was relatively small five years ago. A lot of progress has been made in terms of financial knowledge within the oil and gas sector; we better understand the drivers of this field and how to analyze these companies. There is more to be done, but we have made significant progress."

Pacific Rubiales Energy, Petrominerales and Canacol Energy have taken the step to dual-list; they join national oil company Ecopetrol to make up about 40% of the index in Colombia. If these pioneering companies continue to find success on the Colombian exchange, we are sure to see more firms list on the BVC and Colombian investors gaining confidence in the oil and gas sector.

  
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## Overview of some of the leading players

### **Ecopetrol**

Colombia's state-owned oil company continues to dominate the market producing 754,000 boepd, which equates to a 70% share of total production. Continued strong production and a healthy portfolio of exploration assets position Ecopetrol well for the future. After finds at the Pastinaca, Cusuco and CPO-11 blocks earlier this year, Ecopetrol also announced a third discovery at CPO-10, this time at the Guainiz-1 well.

Ecopetrol's share price, however, has seen better days. The highs of COP\$5,700 experienced at the end of 2012 and beginning of 2013 saw a sharp decline, down to COP\$3,800 in Q2 this year. The summer, however, saw the share price stabilize at around COP\$4,350.

Service companies around Colombia have had to step up their health, safety and environmental practices in order to meet the new standards set by Ecopetrol. Many see this as raising the standards of the sector as a whole. "Ecopetrol requires significant certification for companies it works with. ICG has just completed the one and a half year process to achieve that certification which will allow us to work with Ecopetrol. I fully agree with the level of certification required by Ecopetrol as it raises our level as a service company and allows us to show our commitment to becoming an Ecopetrol service provider," explains Eduardo Enrique Rivodó, president of Industrial Consulting Group (ICG).

### **Pacific Rubiales Energy**

TSX-listed Pacific Rubiales was born out of the exodus of oil experts from Chavez' Venezuela. Pacific Rubiales maintains its position as the largest independent production company in Colombia. 2012 saw Pacific build their light oil assets base in Colombia by acquiring two mid-size players; Petro-Magdalena Energy and C&C Energy. This is in addition to international ex-

*October 2013 - OilandGasInvestor.com*



Eduardo Enrique Rivodó, president of Industrial Consulting Group (ICG)

pansion in Brazil, Peru, Guyana and Papua New Guinea. Q2 gross production was 156,099 boepd (net production was 127,555 boepd), an increase of approximately 2,100 boepd compared to the first quarter of this year.

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

## Petrominerales

Canada-based E&P company Petrominerales holds multiple properties across the Llanos Basin, in addition to single blocks in the Putumayo and Upper Magdalena basins. Production from Colombia in 2013 stands at around 24,000 boepd from a significant reserve base. “If we can modestly grow production this year, and have industry average or better success rates on our exploration program, Petrominerales can certainly grow reserves, grow production, and provide proof of concept on the two exciting resource opportunities that we have. To put the exploration program in perspective, we have 60 million barrels of original oil in place. We typically recover about half of that, so 30 million barrels of un-risked re-

serve potential. If we can be one in three, that is 10 million barrels, and that is before we take into account any heavy oil or the tight oil resource in Brazil,” says Corey Rutten, the company’s president and CEO.


## Gran Tierra Energy Colombia (GTEC)

The Putumayo Basin’s biggest producer and biggest landholder should be especially praised for overcoming the difficulties of operating in an area still feeling the social and security effects of guerilla occupancy. The Canada-based firm has continued to exceed expectations despite pipeline interruption and social resistance to oil and gas activity. “For the first two quarters of 2013, GTEC has had record production levels despite pipeline interruptions, through using alternative crude oil transportation measures. Our primary production area is the Putumayo Basin, where we have stabilized gross production at around 27,000 boepd. We are confident that for the remainder of 2013, we can meet or exceed production guidelines released at the beginning of the year,” explains Duncan Nightingale, Gran Tierra’s president.


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

## Equión Energía

A joint venture between Ecopetrol (51%) and Talisman Energy (49%), Equión Energía was formed in 2010 from British Petroleum’s (BP) Colombian assets. “Equión is, in many ways, the same company it was under



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

Two of the assets inherited from BP, RC4 and RC5, are offshore. Along with unconventional resources, the offshore sector represents a beacon of hope for increasing Colombia’s reserves. “Our offshore blocks RC4 and RC5, won in the 2008 Ronda, have huge potential, as does the Colombian offshore sector in general; for gas in shallow water and potentially liquids in the deep-water blocks. Offshore development will take time, as Colombia does not currently have the infrastructure or equipment available. It will come eventually and the ANH are revising exploration timelines on these blocks to account for this,” continues Riaño.

Equión currently produces around 27,000 boepd.

## The future: Unconventional and offshore resources

Without a major new conventional discovery in over 20 years, the oil and gas sector in Colombia is depending on the potential that lies with its unconventional and offshore resources for the longer term. 2012 saw the likes of ExxonMobil, Shell and ConocoPhillips confirm their interest in Colombia’s shale evolution. Colombia has yet to prove the full extent of unconventional reserves, but investment from such big players has given a great deal of confidence to the market. “Colombia has huge potential for



Emilio Azout, country manager, Paradigm

the production of shale oil and gas,” says Rivodó of ICG. “In fact, I believe it holds the fifth largest shale reserves in the world. Companies like Exxon-Mobil would not come to Colombia for 2,000 or 3,000 boepd. Ten years ago we did not have the technology to identify and extract shale deposits, but now we do and this represents a huge opportunity for Colombia.”

Unexplored geology, however, is not the only question mark hanging over the huge potential that shale is promising. If Colombia is to maintain its strict stance on environmental permitting, then it need only look to the political and social resistance to shale extraction methods we have seen in the U.S., Canada and Australia, among many other places around the world. The Colombian authorities will have to solve these issues in the coming years if significant unconventional reserves are found; the future growth of their oil and gas sector may hang in the balance. “New reservoirs will hopefully be found, and many of those will contain unconventional resources. There is really no alternative, because Colombia has proven reserves of approximately 2.4 Mbbl barrels as of December 2012, compared to some 250 billion barrels in Venezuela – and remaining a net oil exporter is very important for the economy,” suggests Emilio Azout, country manager of leading oil and gas software developer Paradigm.

Offshore production, meanwhile, may take longer to materialize, but most agree the potential is huge for the South American nation straddling both the Caribbean and Pacific. This year, Anadarko, in partnership with Ecopetrol, has contracted CGG

to acquire and process 5,500km<sup>2</sup> of 3D seismic, the most extensive in the country’s history. “I think there is good offshore potential in Colombia, and the sector will come to comprise a significant amount of Jason CGG’s work here,” says Jorge Aranguren, manager at Jason CGG. “Companies such as Equión, Petrobras, Ecopetrol and Anadarko have many offshore blocks. Jason CGG has been conducting feasibility and inversion studies with excellent success – not in terms of oil reserves, because many of them are gas, but in helping the companies decide whether to continue development.”

## Environmental permitting: The bottleneck

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

Oil is Colombia’s number one export; however, Colombian production is currently out-performing the discovery of new reserves, lowering the reserves-to-production ratio (RPR). The fact that 75% of basins in Colombia remain underdeveloped, a large amount of which have not even seen seismic acquisition, highlights the regulatory inertia.

“Colombia in 2012 produced approximately 345 million barrels of oil equivalent but I have doubts about how sustainable it can be,” says Nightingale of Gran Tierra. “Colom-



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

The Autoridad Nacional de Licencias Ambientales (ANLA), Colombia’s environmental regulator, may be just three years old but is under huge pressure to tackle the delays which are holding back progression of the whole industry.

Many suggest that the recent restructuring of the permitting process is to blame for delays. In return the government would suggest that the restructuring was a necessary reaction to increased demand and the delays are simply a consequence of that. “At the beginning of the recent oil boom, it was much easier for the companies present in the market,” says Nelson Navarrete, president and CEO of Petroamerica Oil, which moved successfully into commercial production in 2013. “There were attractive fiscal terms, as we see today, but in addition there was excess capacity in the pipeline network. At that stage, the environmental permitting process was much like anywhere else in the world, and there were few complaints. However, as the market grew and many new companies entered, the authorities had to restructure the environmental permitting process and with that restructuring came the delays we hear so much about today. In reality, however, the time taken for environmental permitting in Colombia is much less than that of the U.S. or Canada for example.”

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

“The exploration timeline at our Buenavista field,” he continues, “depends on when we receive our environmental license. We applied for it a year and a half ago and it is taking longer than expected. With the new rules, we had to do public consultations. The permitting process has been very tough because there has been local conflict against the company acquiring the seismic for our neighbour, which has caused problems for us too. There is a lot of contamination in the region, and with little knowledge of our environmentally responsible plans, the public fears the same from us. Perhaps to gain votes, local politicians create a lot of publicity about matters they

do not understand. OMEGA Energy has plans to drill a large number of wells at Buenavista as soon as the license is granted.”

## Communities: Freedom to produce, freedom to protest

Perhaps the only problems concerning Colombia’s oil and gas industry more than environmental permitting are community-related issues. “Many communities will completely refuse to accept oil and gas activities in their area,” says William Augusto Franco Castellanos, general manager of Colombian firm Meridian Consulting. “Other communities are the opposite; they demand a lot of the oil and gas companies before any operations can begin.”

Environmental and community issues are not exclusive of one another; the permitting procedure incorporates community consultation, which puts a lot of power in the hands of the communities. As the first on the ground, seismic companies have become accustomed to dealing directly with communities at the early exploration stage, the top seismic firms making it a key selling point of their service offering.

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

Previously named South American Exploration (SAE), the company has rebranded as SAExploration since their expansion beyond the continent and listing on the NASDAQ. Their strong record with communities has played a big part in their success in Colombia, still their biggest market, where they have served clients such as Pacific Rubiales, Talisman, Pluspetrol, Shell and Lewis Energy. “SAExploration has extremely good relations with the local communities in Colombia, which is very significant for our clients as it allows us to solve a lot of the problems for them during the exploration stages,” continues Méndez.

Historically, protests were suppressed by a mixture of heavy-handed policing and, often, paramilitary intervention. Today, most Colombian



Arturo Méndez, vice president operations Colombia, SAExploration.

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

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

Direct civil action from local peoples often revolves around environmental concerns and disagreements over the distribution of royalties



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

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

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

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

While the companies have clear objectives and the government clear responsibilities, it is the communities who clearly hold the power. For

Colombia to reach its ambitious hydrocarbon production targets in the coming years, it will have to have the oil region communities on board.

## Infrastructure: Monumental backwardness moving forward

The development of unconventional and offshore resources could see Colombia experience huge production increases in the coming years. However, these projections are being met with mixed feelings as the industry comes to the realization that Colombia's already struggling infrastructure will be playing catch up to anticipated production levels. Juan Martín, president of the Colombian Infrastructure Chamber, suggested the "monumental backwardness" of Colombia's transport system as the biggest obstacle to economic growth.

"Over the longer term, the real challenge facing the country is that of infrastructure – transportation costs are very high, and moving equipment around the country is ridiculously expensive, making it difficult to conduct short term projects. As an example, a rig move which would cost \$150,000 in North America costs a million dollars for the same distance," explains Warren Levy, chairman and CEO of Estrella International Energy, now the biggest rig holder in Colombia after its acquisition of San Antonio International Colombia this year.

Current Colombian President, Juan Manuel Santos, has pledged to

invest \$100 billion to improve infrastructure over the coming decade. At least half of these funds are forecast to come from the private sector. Where and how this money will be spent is still unclear, but the oil and gas sector will be keeping a close eye on the developments.

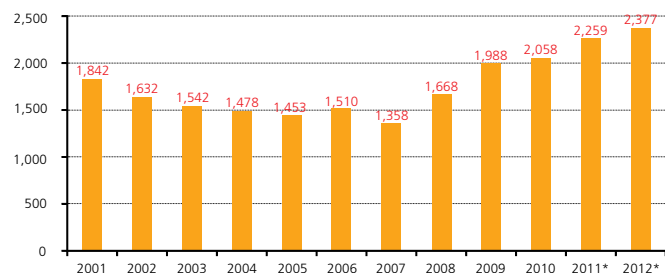
Undoubtedly the most significant infrastructure project for the oil and gas sector is the 975km Bicentennial Pipeline, the longest and largest in the nation's history. Stage one, near completion, will cover 230km through Colombia's most productive oil fields in the Llanos Basin from Araguaey to Banadía. From Banadía the 30- to 42-inch-diameter pipeline will continue to the port of Coveñas on the Caribbean coast. The project is a significant undertaking and certainly a step in the right direction, but is still some way short of satisfying the sector's demand.

Pipeline development is crucial to any developed oil and gas market, but even more pertinent to a nation without established alternatives. "Petroamerica's operating netback for Q1 2013 was \$79 per barrel, which is huge, one of the biggest in the world I believe," says Nelson Navarrete, president and CEO of Petroamerica Oil. "We sell our crude based on Brent, our royalties are at 8% and our operating costs are very low, \$3 per barrel, while transportation costs work out to about \$18 per barrel because we still truck the oil some distance. Changing that would make a huge difference."

Pipelines are the most efficient and cheapest way to transport oil, but rebel groups remain a significant force in many areas of the country, and pipelines have long

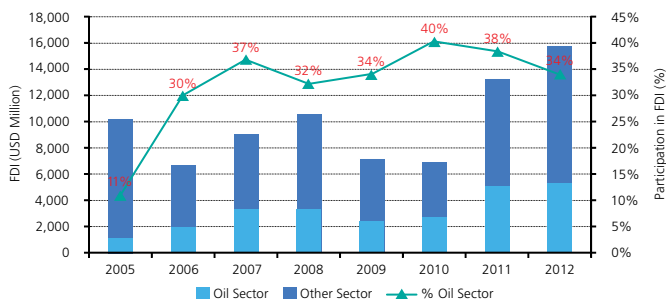
### Proven Oil Reserves 2001 - 2012

SOURCE: The Canadian Trade Commissioner Service 'Colombia's Oil and Gas Sector, June 2013'



### Foreign Direct Investment in Oil Sector 2005 - 2012

SOURCE: The Canadian Trade Commissioner Service 'Colombia's Oil and Gas Sector, June 2013'





Estrella pad and sump. Courtesy of Estrella.

represented a prime target for their attacks. According to the Colombian government, there were about 31 attacks against pipelines in 2010, and 84 attacks in 2011, and 117 in 2012. This rising trend has continued into 2013.

“There have been a lot of discussions about pipelines and river transport, but not nearly enough about roads,” suggests Warren Levy of Estrella International Energy Services. “Most conventional oilfields really require road access. Colombia badly needs major investments in highways, particularly from the ports to Bogota, and from there to the main fields. This is the missing piece in the puzzle to bring the country up from a million barrels per day to two million; everything else will sort itself out naturally.”

Colombia’s rivers represent a realistic medium for oil and equipment transport; one large river barge can move the same amount of cargo as 75 articulated trucks. The Magdalena river stretches from the inland plains near the capital, through the oil fields of the Llanos and Lower Magdalena basins to the port of Barranquilla on the Caribbean coast. The river is navigable by 25,000 barrel barges for 435km from the coast; upstream 4,000 barrel barges can reach as far inland as Barrancabermeja in the heart of oil country and home to Ecopetrol’s refining and port facility. The government is said to have been in discussions with HydroChina over channelizing and dredging from Barrancabermeja to La Dorada, just 113km from Bogotá.

Developments along the Magdalena could increase river traffic by five times and a number of logistics companies are already moving on the opportunity. Grupo Coremar seeks to establish a river port on the stretch between Barrancabermeja and La Dorada, transporting crude to its new oil and gas business cluster and port

facility in Barranquilla. Meanwhile Alianza Group’s Big River project will utilize large 25,000 barrel barges from their river port in La Gloria to their Atlantic oil terminals, storage and port facility, also in Barranquilla.

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

## Conclusion: A crucial point

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

**COLOMBIA ENERGIA** For additional information on Colombia’s oil and gas industry, visit Colombia’s periodical publication at <http://www.colombiaenergia.com>

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