COLOMBIA

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COLOMBIA'S OIL BOOM STALLS

One of the success stories of the past decade, Colombia's oil and gas industry all of a sudden looks to be facing a gloomy future. Hopes are being pinned on deepwater and fracking, but investors don't seem that keen.

Colombia's oil and gas industry – the key driver of economic growth over the last decade which has seen the troubled South American country make serious progress – is faltering. After years of major investments and output growth put Colombia back on the oil map, reserves are dwindling, investment is down and maintaining output growth is proving elusive.

Courtesy: iStock.com

The Andean producer hit the 1 million b/d production milestone in 2013 but as production has soared, efforts to find new reserves to sustain the growth have stuttered.

Colombia, as of early 2014, held 2.2 billion barrels of proven crude oil reserves, a figure which means that the country ranks fifth in South America. But from 1993 to 2013, Colombia's oil reserve life has slumped from 19 to less than seven years, throwing a big question mark over the sustainability of its oil industry.

The country became an oil exporter in the mid-1980s but a production renaissance from its heavy onshore fields didn't really kick off until 2007. It was then that the Canadian company Pacific Rubiales brought Venezuelan technology and skills to redevelop the moribund Rubiales heavy oil field, becoming the standard bearer of Colombia's recent oil boom.

An improved security situation and better fiscal terms also helped.

However, increases in oil and gas reserves since 2007 are largely down to further investment in existing heavy oil fields to boost recovery factors, rather than any major new discoveries that might keep the boom going. In light of the failure to make significant onshore discoveries, the country is now betting on deepwater offshore and shale deposits to boost reserves.

Mexican draw

But it is doing so at a time when investment dollars are becoming harder to attract. Oil companies in the region are switching exploration budgets to Mexico because of better geology and government terms there. Rubiales is eyeing more lucrative areas in Mexico and even the state-controlled Ecopetrol is planning to bid for upstream assets being offered under Mexico's historic oil market opening in the coming months.

To make matters worse, weaker oil prices are also taking their toll. Oil tax and revenues provide about a fifth of state income and the industry pulls in billions more in foreign investment from companies such as Pacific Rubiales, Shell, ExxonMobil and Occidental Petroleum.

Ecopetrol, the biggest spender in the oil industry, is particularly vulnerable to crude prices due to the Colombian taxation system with its net production entitlement at non-operated oil fields dropping as prices fall. The company, which is owned 88.2% by the government and sees most of its earnings paid to the state in dividend payouts, is also sensitive to the impact of oil prices on its dividends yields.

"Colombia's hydrocarbon future will come from three sources; unconventionals, offshore and enhanced oil recovery," Colombia's minister of mines and energy Tomas Gonzalez told London's Oil & Money conference in October.

"All three of them are dependent on costs of production [which] are relatively higher than conventional oil. So if the price were to stay at the levels we've seen right now, or lower, that would definitely be a big challenge for us," he acknowledged.

COLOMBIA'S OIL

Source: Platts, Canacol Energy

HAS COLOMBIAN OIL PEAKED?

Colombia's oil output reached the 1 million b/d landmark in 2013 when the country pumped 90% more crude than just six years previously. But the surge has come to an abrupt end and the country's oil industry, according to some, may already be in decline.

Prior to 2008, Colombia's oil production had been flat for some years, following a period of decline that started in 1999, when output peaked at 830,000 b/d.

With help of Rubiales' heavy oil recovery technology, the oil field of the same name become the largest in Colombia and has underpinned the oil boom.

Now with exploration wells, rig counts and foreign direct investment slipping, it seems Colombia's oil success story may be short-lived unless an alternative to conventional onshore heavy oil is found.

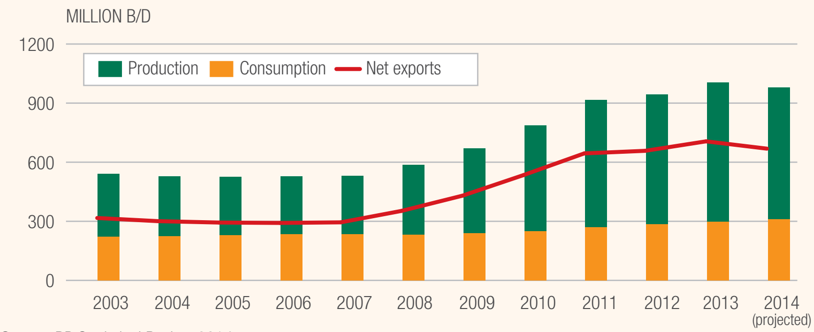
In fact, if the economy continues growing at current rates at or above 4% a year and the country fails to maintain current oil production, it could become a net importer of oil well within a decade. That timescale may be academic, however, given that Colombia will have pumped its last barrel before then unless new reserves are found.

But the most recent figures from Bogota show the country is not on the path to terminal output decline just yet. Crude output during October 2014 averaged 1.002 million b/d, a 0.94% gain from the 993,000 b/d produced in September and a 1.6% increase over the 986,000 b/d pumped in October 2013.

The figure brings the year-to-date average to 987,000 b/d, however, still below the 1,004,000 b/d average in 2013.

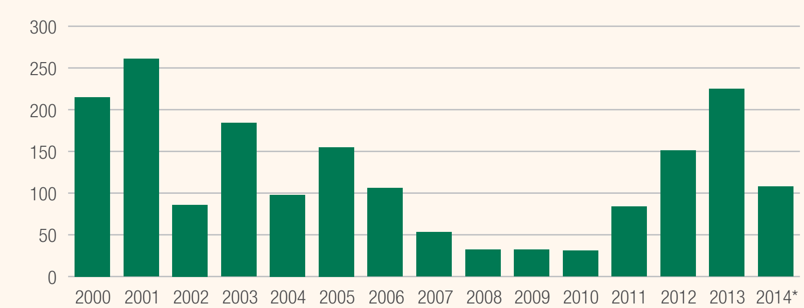
On top of an already expected decline, this year's output has been impacted by persistent oil field security issues and pipeline attacks. Latest projections from the Finance Ministry put full-year average output at 980,000 b/d, or 50,000 b/d less than was planned on at the beginning of this year.

COLOMBIAN OIL PRODUCTION, CONSUMPTION AND EXPORTS



Source: BP Statistical Review 2014

ATTACKS ON COLOMBIAN OIL INFRASTRUCTURE



*First nine months of the year

Source: Colombian Defence Ministry

Deepwater search

Ronda Colombia 2014, Colombia's latest licensing round, was meant to address the country's stagnant reserves by kick-starting the exploration and development of offshore and unconventional assets. Although the government applauded the entry of Norway's Statoil to its shores for the first time, the round was by all accounts a disappointment. Only 26 out of 95, or 27%, of the hydrocarbons blocks offered during the licensing round received bids. Out of the 19 offshore blocks on offer only five received bids, while only one of the 18 unconventional blocks up for grabs was bid on.

The offshore result was particularly worrying as the government had already gone to some lengths to sweeten its offshore terms in the hope of luring big spenders to its Caribbean waters.

In early 2014, the mines and energy ministry responded to calls to make offshore exploration more competitive. Companies drilling in deepwater would be able to recover 200 million barrels before the government began taking a 30% royalty. The threshold for ultra-deepwater was set at 300 million barrels. For projects operating at depths of more than 1,000 meters, the threshold oil price above which the 30% royalty is applied was raised from $45/barrel to $82/b. For ultra-deepwater, the level was raised to $100/b.

Industry watchers have speculated that Big Oil shied away from the frontier blocks due to shrinking appetites for riskier plays. Costly deepwater drilling in areas with little seismic and long potential payback cycles has been sidelined as shareholders demand more capital discipline and stronger returns.

To date, only two deepwater drill projects – one led by Petrobras in 2007 and the other by Equion Energia in 2012 – have been completed in Colombian coastal waters. Neither found commercial levels of hydrocarbons.

Hopes currently lie with Brazil's Petrobras, which in partnership with Repsol and now Statoil is drilling the ongoing Orca-1 exploration well, targeting a large prospect with more than 4 Tcf of gas equivalent off northeast Colombia.

US independent Anadarko is expected to drill this year in the Fuerte Norte block in partnership with Ecopetrol, while 2015 is expected to bring another two or three wildcats.

Colombia's Congress is currently considering a reform that would allow offshore projects to apply for free trade zone status, reducing corporate tax from 33% to 15% and eliminating import duties for equipment.

Shale hopes

The government continues to nurture hopes of opening up Colombia's shale oil deposits to large-scale development spending, but the results have been scant so far. Despite offering incentives such as discounts on royalties and taxes to bidders on blocks thought to contain unconventional oil and gas plays this summer, only one of 18 such blocks on offer received bids.

Although no definitive study has yet been carried out Colombia's potential shale oil deposits are extensive and the US Energy Information Administration pegs technically recoverable shale gas resources at 55 Tcf.

In September, the government gave the green light to fracking and announcing the move, Deputy Mines and Energy Minister Orlando Cabrales said that the government had established a strict regulatory framework after a "very rigorous" two-year process.

Later that month, Ecopetrol said it would apply for the environmental permits needed to begin fracking wells in the Coyote, Prometeo and Iguana wells in the country's shale-rich Middle Magdalena basin.

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Francisco Jose Lloreda, the president of the Colombian Petroleum Association (ACP), the largest oil industry trade group, who has warned that production could fall below 900,000 b/d in the next few years without rapid development of shale oil deposits, has also predicted that once fracking is underway, Colombia's proven and probable reserve levels could triple in the next 10 to 15 years.

"A part of the future for hydrocarbons in the country lies in these deposits, so it's important to redouble exploration effects to quickly improve the reserve/production ratio," Lloreda said in a recent statement on shale opportunities.

Lloreda estimates that the country's shale players could be drilling between 13 and 20 exploration wells a year with the next four years.

One of those involved is Canadian-listed Canacol Energy, which has the second-largest shale land position in Colombia behind Ecopetrol and remains resolutely upbeat over the country's shale oil potential. Canacol, which has a 10% interest in Colombia's billion barrel heavy oil Capella discovery, estimates

> "Colombia's hydrocarbon future will come from three sources; unconventionals, offshore and enhanced oil recovery … if the price were to stay at the levels we've seen right now, or lower, that would definitely be a big challenge."

that the Santa Isabel, VMM 2, and VMM 3 blocks the middle Magdalena valley show best-estimate prospective oil resources of 782 million barrels on a gross P50 basis. It is hoping to participate in about 30 shale wells in 2014-15, as part of exploration being led by ExxonMobil, Shell and ConocoPhillips in the basin.

Perhaps optimistically, it is also targeting first shale oil from the area in 2016.

"These are very expensive wells – we are playing in the big leagues here," Canacol's Financial Vice President Nicolas Acuna told investors in May. "We are at the mercy of these supermajors, but we think that there is huge opportunity for investors."

Permit delays

Colombia has promoted its shale oil and methane gas potential before. In new 2012 contract terms, the government included some incentives for unconventional resources development, including benefits in terms of royalties and relief on a "windfall price" clause.

There is also more flexibility in the contractual terms, providing for a nine-year exploration and 30-year production period, as opposed to six years and 24 years for conventional resources.

In the end, only four of the 30 blocks with prospective unconventional reserves were bid on under its 2012 licensing round.

Many industry watchers blame uncertainty over environmental licensing as one of the main reasons companies didn't bid as expected. And companies continue to complain about the length of time it takes to obtain an environmental license or to conduct a consultation process. On average, companies have to wait more than a year to obtain an environmental license, according to statistics from the ACP.

To its credit, the government has been keen to keep red tape in check and recent decrees establish fixed deadlines to expedite approval of oil and gas and mining development applications. This October, Bogota issued a decree designed to streamline environmental license applications and environmental impact studies with time limits and minimum quality standards on submissions.

Rebel violence

Colombia has also worked hard to make itself into an attractive target for oil investment by tackling head-on its 50-year-old problems with Marxist guerilla violence. A major US-backed push to secure large parts of the Colombian jungle from militants in the early 2000's saw a sharp fall in attacks on oil infrastructure. But there is still much to do.

In November, Ecopetrol said a contractor sent to repair the Transandino Pipeline, which runs parallel to the border with Ecuador, was killed by a bomb. The contractor had been working to repair damage caused by an earlier bombing. That came on the heels of reports that two workers doing maintenance work on the Cano Limon-Covenas pipeline for Ecopetrol were shot by snipers from the National Liberation Army (ELN).

Communities frequently block access to oil fields in rural areas, particularly in the eastern Llanos region, to demand a higher share of oil royalties, more inclusive local hiring, or a reduction in environmental damage or truck traffic over rural roads.

Ecopetrol saw its output slip 4.4% to 750,000 b/d of oil equivalent during the first half of 2014 with production still affected by terrorist attacks on infrastructure, blockades by the communities and other operational difficulties. In September, the company estimated it was losing around 20,000 boe/d due to a recent uptick in pipeline attacks by leftist guerrilla groups.

Overall, Colombia lost more than 6 million barrels of oil sales due to attacks in the first nine months of 2014 with over two-thirds of the barrels owned by Ecopetrol. Many of the attacks are in the southeastern Putamayo department, which lies at the heart of Colombia's and the US's war on coca.

Ecopetrol told investors more recently, however, it has seen a reduction in attacks on oil pipelines by leftist guerrillas during the third quarter. The assessment is borne out by Agora Consultorias, a Bogota-based risk analysis firm, which calculates that attacks by rebels and criminal gangs on oil infrastructure totaled 108 bombings over the first nine months of 2014, down 27% from the 147 attacks over the same period last year.

The government is also keen to point out that it could turn the page on guerilla attacks if a long-sought after peace deal with militants is forthcoming. Colombian government negotiators have been meeting with representatives of the Revolutionary Armed Forces of Colombia (FARC) since November 2012 to try to hammer out a peace accord to end a half century of civil conflict.

If and when it comes, a peace accord will likely mean billions of dollars in investment by the government in social programs to demobilize, educate and subsidize FARC fighters, said to number 10,000.

"There has been a tremendous success story in Colombia and behind this story has been oil and energy," Gonzalez said in October. "If we secure an end to conflict in the next year or so, the sector that will benefit the most will probably be energy."

Floating gas future

While Colombia's oil output may well have peaked, its natural gas prospects are less bleak. The country's 5.7 Tcf of gas reserves would last nearly 13 years at current consumption rates, according to BP. Colombia produces an average 1.2 Bcf/d of gas, and Ecopetrol exports just 250,000 Mcf/d, to Maracaibo in western Venezuela via pipeline.

But that is all set to change next year when Pacific Rubiales begins exporting LNG from the world's first floating LNG plant off northern Colombia.

Rubiales has teamed up with Belgium-based EXMAR to sell up to 500,000 mt/year of LNG from a floating vessel off Colombia's Caribbean coast. The small-scale FLNG facility, set to arrive in Colombia by mid-2015, will be supplied by Rubiales' La Creciente gas field in the northern province of Sucre.

Known as Caribbean LNG, the project's offtake has been contracted to Russia's Gazprom for five years. With a number of Caribbean countries pursuing their own LNG gas import projects, Rubiales could also sell to Caribbean and Central American markets at a later date.

The longer term prospects for Colombia gas, however, are largely dependent on whether the government can find takers for its coalbed methane blocks. Given the country's limited gas pipeline network, the prospect of further stranded gas fields is a threat to investment.

Colombia's natural gas resources are currently located mainly in the Northern Coast and Barranca regions and in La Guajira peninsula in northern Colombia.

Domestic consumption is also rising fast. Natural gas use in Colombia has climbed over 54% in the past decade. Last year it surged more than 9% to 10.7 billion cu m (1.03 Bcf/d). ■