

PERU

Petroleum set to become a new source of growth

Peru is an economic success story in South America, with GDP averaging 6.4% per annum over the past decade, low inflation and a stable currency. The country has ridden the boom in minerals to boost its national income and improve the standard of living of millions of its citizens.

The government is now working purposely to make the petroleum industry another engine of Peru's growth and development.

The country has made a flying start with the 2010 commissioning of Peru LNG, the only LNG facility in South America. The country is now a net exporter of gas, despite rapid growth in domestic demand to fuel new mining projects and baseload power generation.

Current oil production remains less than 70,000 barrels a day and is only a

fraction of Peru's own needs, despite the country's wealth of basins with proven petroleum systems.

Low national oil production reflects decades of under investment in the sector and the heavy hand of government, which until 1993 controlled almost all exploration and production.

Reforms in the 1990s cleared the way for private oil and gas companies to take on a much bigger role. Exploration activity surged, but had subsided again by 2004 because of low oil prices and the country's ongoing battles with terrorism, which led to a number of attacks on a petroleum facilities and personnel.

A new wave of activity exploration began in 2006, but this been slow to translate into new production. Many explorers state that there should be improvements in the red tape, including the Law of Prior Consultation

introduced last year after protests against a number of mining projects.

The current administration of President Ollanta Humala, who took office in 2011, is determined to strike a better balance between industry and the needs of indigenous landowners and local communities.

There are many positive signs of a more productive relationship between the energy sector and the people of Peru. Most tellingly, Shell recently returned to the country with the acquisition of Repsol's 20% stake in Peru LNG.

The project draws feedstock from the giant Camisea gas field, discovered by Shell in the Amazon jungle in the 1980s. Shell walked away from Camisea in 1998 after years of conflict with Peru's governments. In a sign of better times ahead, Shell is back and reportedly eager to work in the country once again.



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Competitive taxes, stability set Peru apart from its neighbours

Explorers are eager to tap into Peru's rich hydrocarbon potential and will need the help of government to tackle red-tape

Peru's Minister of Energy and Mines, Humberto Jorge Merino Tafur, says his country has many attractions for petroleum explorers.

natural gas liquids. About 85% of these total resources were expected to lie offshore.

While the government has done many things right to attract new investment, com-

of goals. "We want to promote a national policy on hydrocarbons... and encourage government to establish a stronger framework for administering the industry. We have an energy and mining ministry, which is designed for development as it exists today, but this needs to be strengthened for the oil industry. We need to redesign and modernize the ministry, on the one hand we probably have to put in place specialized offices to give legal protection to civil servants and to also give the technical and human resources necessary so the industry can move forward with greater speed." She said another key objective is to improve the regulatory framework.

Merino says she fully respects the need for regulations to protect the rights of indigenous people. "The framework must protect these communities, and the environment. We must aim to have zero impact, and that is the desire of all our members. But it is feasible to do this and have development in much shorter timeframes."

"Peru has worked hard to encourage investment by offering attractive fiscal terms... We also offer a competitive cost regime in energy and we plan to continue along that line"

MR. JORGE MERINO
Minister of Energy and Mines



"The key is that we have maintained certainty for investors with respect to subscribed contracts and stability of our country's financial and legal systems. Peru has also worked hard to encourage investment by offering attractive fiscal terms. On the minerals side, Peru is consistently among the first of the second quartile of low cost producers. We also offer a competitive cost regime in energy and we plan to continue along that line."

He said Peru was also encouraging investment by relaunching many of its exploration areas, both onshore and offshore.

There is no shortage of geological prospectivity to tempt more new entrants to the country, which already has about 50 foreign oil companies on the ground. A 2004 study by the US Geological Survey found that the prolific Talara Basin in the country's north-west had much more to give. The Basin has already produced more than 1.7 billion barrels of oil, but USGS estimated there remained as much oil additionally in undiscovered fields. The survey also estimated recoverable resources of almost 5 trillion cubic feet of gas and 255 million barrels of

panies already in Peru are urgently seeking reform to some aspects of industry regulation.

In a sign of collaboration from the private sector, local explorers and producers earlier this year established an industry association, Peruvian Society of Hydrocarbons, as a stronger voice for change.

Association President, Beatriz Merino, says the association has a number



Gas plant

Petrominerales scores early win

Petrominerales last year proved the rich potential of Peru with a significant oil discovery from only its second exploration well

The Calgary-headquartered independent announced last October the discovery of light oil in two zones of the Sheshea-1X well in the Ucayali basin.

Internal estimates suggest between 25 million barrels of undiscovered petroleum initially-in-place (UPIIP), based on minimal closure, up to 140 million barrels of UPIIP based on maximum closure to interpreted spill point.

Petrominerales company spokesman, Rafael Ford, says more seismic

and more exploration wells are needed to confirm the size of the discovery, but "we feel the potential is great. This discovery can contribute to the Peruvian market as a whole because it is light oil and has the potential to make the heavy oil in the north accessible and more economical."

Assessing the discovery hinges on obtaining permission to begin a program of 2D and 3D seismic, but this could take as long as 18 months. Ford says Peru is a logical next step for Petrominerales,



RAFAEL A. FORD, Corporate Representative

which is the most active explorer and fourth largest oil producer in the neighbouring country of Colombia.

"We have been able to utilize a lot of our engineering expertise in Colombia to train our people in Peru, and thus bring them up to speed on the new technologies and also improve our way of doing things."

Merino says she is confident the government will respond to these calls for regulatory improvement. "They want the petroleum industry to bring benefits to Peru. We are talking here about

to freeze their obligations because despite having all authorizations they have not been allowed in because of social problems. It is a very difficult issue, which we are addressing together with the Ministry in order to find possible solutions."

She says environmental approvals have also been generating some delays. "We must ensure the speed in the administrative process, that is, when Perupetro negotiates the contract with the company and decides to sign it... the industry is looking to encourage investment, and we are working together on the required environmental modifications."

Gazzolo says the country is keen to promote the development of its gas reserves, not just oil, and in particular the use of CNG and LNG to replace diesel for domestic use. "One of the country's

priorities is the replacement of liquid fuels with gas. We have large gas reserves that guarantee we will be able to fulfill export contracts as well as using gas for domestic industry and transport."



"One of the country's priorities is the replacement of liquid fuels with gas. We have large gas reserves..."

MRS. PATRICIA DIAZ GAZZOLO
General Manager of General
Directorate of Hydrocarbons

large, reputable companies that are very respectful of the indigenous peoples, communities and the environment."

The Peruvian Government's Director of Hydrocarbons, Patricia Diaz Gazzolo, acknowledges that a few explorers are frustrated by delays. "A number of companies have declared force majeure

Exploring Beyond

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Perupetro attracts new wave of explorers

Promotion of Peru as an attractive destination for petroleum investment is led by government agency Perupetro

Perupetro Chairman, Luis Enrique Ortigas, says international investment in the country's oil and gas sector has come a long way since Perupetro was founded almost 20 years ago.

"When we began operating in 1994, there were only eight exploration contracts across the country. Today, that has increased to 60 contracts thanks to aggressive promotion by Perupetro. The number of production contracts has also increased sharply."

He says the increase in the number of exploration wells drilled was another important indicator of increased activity. "Until 2008, there were typically only four or five wells per year, but that increased to a peak of 15 wells in 2011. We expect that will double by 2014."

Ortigas says private explorers have been attracted to Peru for two main reasons. "Peru is part of the Sub Andean megatrend that runs from Venezuela in the north down to Peru. It is an oil rich area and we offer access to that trend through a number of very under-explored basins.

"Just as importantly, we have policies of tax and exchange stability, and competitive fiscal terms. These factors combine to



"We have policies of tax and exchange rate stability, and competitive fiscal terms. These factors combine to make Peru a very attractive place to explore"

MR. LUIS ENRIQUE ORTIGAS
PERUPETRO President

make Peru a very attractive place to explore." Perupetro is capitalizing on growing international interest with the release in March of a new round of offshore blocks. The nine blocks are spread across four basins off the southern end of Peru's coastline -the Salaverry-Trujillo, Lima, Lima-Pisco and Mollendo basins. The government hopes the new blocks will attract a minimum of US\$450 million in exploration spending commitments

Ortigas points out that Peru's offshore basins are historically the country's largest oil producers, with cumulative production of 1,500 million barrels dating back to the end of the 1800s. The country's northern offshore

basins — Tumbes, Talara and Sechura — currently produce an average of more than 37,000 barrels of oil per day, representing 60% of national oil production.

Ortigas says Peru's government is strongly focused on sustainable development of its natural resources. This means development must safeguard the environment and be done in such a way as to maintain a peaceful relationship with indigenous communities.

"There are various laws that apply in this regard, including the Law of Protected Natural Areas, the General Law of the Environment and more recently the Law of the Prior Consultation and Citizen Participation for the Hydrocarbon Activity."

The Prior Consultation Law has been singled out by private companies for causing some delays in access to exploration targets. Ortigas acknowledges this criticism, and says the law must work for industry as well as communities.

"Perupetro is working towards an agreement with indigenous communities under the Law of Prior Consultation. This is being done in such a way to guarantee inclusion in the decision process, which is highly appreciated by the communities and the local authorities. Petroleum companies also accept positively all the effort we are making to establish and promote good relationships," Ortigas says.



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New wave of foreign companies set to boost oil production

After some years of decline, Peru's oil production is set for an upswing thanks to key projects that are set to come onstream

While Peru ranks as one of the smaller oil producers today, its growth potential is highlighted by the presence of more than 50 foreign oil companies in active exploration. Analysts forecast a rise in production to 100,000 bopd by 2017 thanks to a number of key projects that are set to come onstream. This figure does not

include any new projects that are likely to arise from the large number of exploration programs currently active.

in London which has shown it is possible to move rapidly towards development even in the Amazon rainforest. The company has minimised its footprint by flying in drilling equipment, and using directional drilling techniques from a small number of pads. Perenco has also taken a lead role in developing programs to benefit

completed joint venture between Houston-based BPZ Energy and Canadian-based Pacific Rubiales Energy Corp, which is the largest independent oil and gas producer in Colombia.

Under the deal BPZ transferred a 49% interest in Block Z-1 to Pacific Rubiales in return for US\$150 million in cash and carried exploration and development spending of US\$185 million. The funds will be used to accelerate production and development in Block Z-1, which already has two fields with combined production of about 3,000 bopd. The Corvina field produces through Peru's first FPSO, which was built locally.

The new wave of foreign oil explorers includes private company Petrotoro Inc. While it is headquartered in Calgary, Canada, Petrotoro has strong roots in Peru thanks to a reverse takeover in 2011 of Upland Oil & Gas, which was founded by local petroleum identity Jorge Rivera Reusche.

The company has an aggressive exploration program that includes four exploration wells before the end of the year in Block 24, which straddles the oil-rich Talara Basin and the Sechura Basin. The aim of the program



"The aim of our program is to establish oil production of more than 10,000 barrels of oil per day over the next five years"

MR. JORGE RIVERA REUSCHE,
UPLAND OIL & GAS Chairman
of the Board

The high level of activity on the ground is in contrast with perceptions of a slowdown that were fuelled by news last year that ConocoPhillips and Talisman Energy were set to withdraw from the country. But Peru's upstream sector received a major boost with the February 2013 announcement that Shell was returning to Peru after an absence of 15 years. Shell is buying Repsol's 20% equity stake in Peru LNG and its rights to 100% of the offtake from the facility, which began shipping LNG cargoes in 2010 at a rate of 4.5 million tonnes per annum. The deal is expected to settle in the second half of 2013 or early 2014.

The sector is also set for a boost with new oil production due to begin this year in Block 67 in the Marañon Basin in the Loreto region. The block is held 50% by Perenco, an Anglo-French independent headquartered

local communities. Oil production, which will be tied into the 1970s Norperuano pipeline, will begin at 7,000 bopd in the first phase and increase to 60,000 bopd by 2017.

New oil production is also imminent in Peru's offshore blocks thanks to a recently



Paratori exploitation

is to establish oil production of more than 10,000 barrels of oil per day over the next five years.

This potential cash flow will help to fund a program in the frontier West Peruvian Basin, where the company has the exclusive right to negotiate with Perupetro on six exploration concessions covering almost 23 million acres.

Petrotoro is targeting conventional and unconventional petroleum plays.

"While in an early stage, we believe these areas could prove to be as prospective and profitable as Argentina's Neuquén Basin, which was developed rapidly by several international oil companies prior to Argentina's policy changes," according to Reusche, who is Petrotoro's Chairman.

Petrotoro has also branched into downstream ventures through its interest in EGP Energy Group, which is promoting the use



"The company is seeking new partners to maintain the exploration program in blocks 123 and 129"

**MR. CARLOS MONGES,
GRAN TIERRA Country Manager**

of compressed natural gas and liquefied natural gas in vehicle transport.

EGP has formed a joint venture with Clean Energy USA to build a network of CNG refuelling stations. EGP is also investing \$US126 million in a mini-LNG plant south of the capital of Lima. The plant will produce 200 tons of LNG per day in its first phase for trucking to distant refuelling points. The company is tapping into a ready market for liquid fuels, which currently relies heavily on imported diesel.

Gran Tierra Energy is another Calgary-based petroleum company that is expanding



"The good geology and the good fiscal terms have motivated many new companies to come to Peru and we are one of them"

**MR. DANA COFFIELD,
GRAN TIERRA President and
Chief Executive Officer**

its activity in Peru. The company was founded in 2005 with a focus on under-explored basins across South America.

The company's initial focus was on Colombia, where discoveries have established a production base of about 20,000 barrels of oil per day. Gran Tierra has also been expanding its presence in Peru for a number of years, including the 2011 acquisition of Petrolifera Petroleum. It has also increased its interest in Blocks 123 and 129 by taking over the equity interests of ConocoPhillips and Talisman.

Gran Tierra Country Manager, Carlos Monges, says the company is seeking new partners to maintain the exploration program in blocks 123 and 129. "Conoco did hundreds of kilometres of high tech seismic and found a series of geological structures of amazing size. There are about 14 structures ready to be explored. We are about to finish the seismic program and are seeking partners to continue into the drilling stage."

The company's investment in Peru was rewarded earlier this year with a significant oil discovery in Block 95 at the Breña Norte 95-2-1XD exploration well, which flowed at a rate of almost 2,000 barrels of oil per day.

Gran Tierra Chief Executive Officer, Dana Coffield, says the discovery has

material contingent resource potential and "is expected to provide significant growth for the company and assist Perupetro in achieving its objectives to bring new oil to the market on behalf of the Government of Peru."

He says Peru offers even better potential than Colombia for large discoveries because it so lightly explored. "The country also has slightly better fiscal terms than Colombia and this makes it attractive, in addition to its stable legal system. From that perspective, the good geology and the good fiscal terms have motivated many new companies to come to Peru, and we are one of them."



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Government shows determination to strike the right balance

Achieving a balance between development and community concerns is a tough challenge, but government is keen to get it right

Peru is a quiet achiever among the world's developing petroleum countries. It has a low profile in the global industry, but already boasts South America's only LNG facility and is now a significant exporter of gas.

Critics point to the past decline in oil production and query whether Peru will be able to realise its rich potential in the mid-term, but the country's success in the minerals industry proves this is a country that means business.

The government of President Ollanta Humala was elected in 2011 on a platform of social inclusion and greater equality for all citizens, many of whom missed out on the wealth generated by the country's minerals boom.

The new administration's policies have been considered at times challenging for some of the mineral and energy companies, but government is determined to strike a balance that will encourage energy investment and serve as a sustainable generator of wealth for the people.

The recent decision by government not to privatise the refinery and petroleum retailing assets of Repsol has been interpreted as another positive signal of the government's eagerness to promote private sector investment. Instead of sinking public funds into a second refinery operation, the government will focus on its well-advanced plans to modernize and upgrade the Talara refinery in the north of the country. One of the major objectives of the upgrade is to help the country achieve self-sufficiency in low-sulphur diesel.

The Peruvian Government's Director of Hydrocarbons, Patricia Diaz Gazzolo, says the government does not want to cause unnecessary delays for explorers, but the industry has to work at rebuilding trust with many communities.

"Unfortunately, some communities were misinformed by companies about their activities. There has been deception in the past and the companies have contaminated areas that we are still trying to clean up."

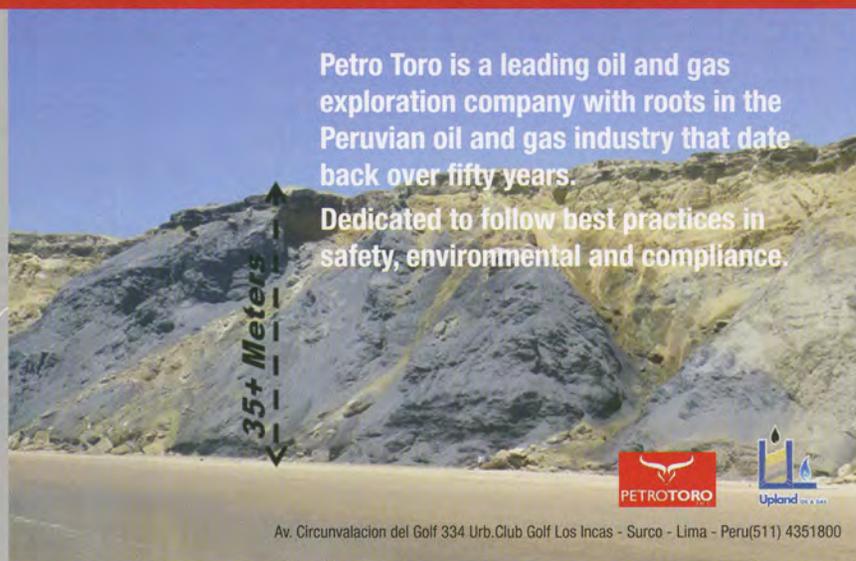


Camisea pipeline

She said the new legislation ensures communities are properly consulted and informed, and this transparent process should not create any impediment for explorers.

"We are also asking companies to make a strong commitment to this process and to take the time to explain their plans in-depth. They will achieve their goals if they are respectful of local communities and show they can be good neighbours."

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