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COLOMBIA - ENERGY & MINING

New Opportunities

CTO, CTAC

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BIO

Guillermo J. Gamez is a mechanical engineer who graduated from the Polytechnic Institute of Volgograd in Russia and earned his master's in design internal combustion engines. In 2009, he co-founded Advanced Technologies Company Colombia "CTAC SAS." Gamez has more than 10 years of experience in consolidation of technological innovations, introducing innovations to the market and support for different branches of the mining and energy sectors.

TBY talks to Guillermo J. Gamez, CTO of CTAC, head of R&D, the company's portfolio, and doing business in Colombia.

What unique technology does CTAC use?

Our technology is the result of more than 30 years of investigation developed by scientists from Ukraine and Russia and millions invested aiming to help develop the hydrocarbon and mining sectors. Our technology is called Oil & Gas Finding Technology (OFT), Minerals Finding Technology (MFT), and Water-Finding technology, and that is exactly what it does. In general terms, any of these applications of the technology are based on three phases. The first one is a remote satellite sensor followed by laboratory data processing using resonance frequencies that allows us to detect any undersurface deposit that alters the electromagnetic field of the Earth, which gives rise to anomalies of the local type that evidence the presence of the material sought. The satellite uses a platform that captures electromagnetic information from any area of interest around the world. After that, together with the client we select the most interesting areas and proceed to fieldwork (the second and third phase). Our technology focuses on exploring areas where the fluids of interest are detected, unlike seismic technology, which looks for geological traps or structures where hydrocarbons might accumulate. Like complementary methods, the proposed technology is a wonderful tool for the industry and geologists.

How important is R&D for CTAC?

The last few years have been of great importance for our company because of the industry circumstances. As the companies in the oil and gas sector worry for the market situation, we find this moment to be an opportunity for change. Companies are now trying to think differently and are more aware of the importance of strategic management. In the last few years, the oil prices have gone from above \$100 to \$20, so now everything is possible. Nowadays, our technology can do wonders in helping operators make better investment choices, which is a major step. In 2016, oil companies began to rethink their methods. We try to invest 20-30% of our annual revenues in R&D because we want to increase our knowledge on the topic.

How large is your client portfolio, and how is it divided?

We work maybe 70% in hydrocarbons, 25% in minerals, and 5% in water. Water research is interesting because it is becoming more important each day, and our technology can help this problem worldwide. We have the unique capability to find fresh water and differentiate these deposits from salty water deposits. We foresee water as the future, because everyday the world is more concerned about it. In Colombia, we are trying to help the government control these deposits and explore them with responsibility.

What characteristics would you highlight about the sector for international investors who want to invest in the country?

The most important thing for international investors in Colombia is how much work still remains to be done. Colombia has explored and exploited no more than 30% of the whole country's resources, and the level of the entire infrastructure in downstream is low. Therefore, there are many new opportunities to develop and improve. International companies can explore new areas of the country, and the government is making the right adjustments to make it more profitable and attractive for investors.

What are CTAC'S expectations for 2016?

The energy market has to wake up from the lethargy it fell into as result of low oil prices. It is necessary to start again and reactivate the oil and gas economy. We are ready to help the industry to do it faster, more cost-effectively and by taking care of the environment. Next year and the following will be great for Colombia. The peace agreement and the oil prices will create many opportunities for international and national investors. In addition, the new legislation will encourage the private sector outside the oil and gas industry to invest in other sectors, which will create plenty of new opportunities.

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