

The x in Oil & Gas

In mathematics, the x is a variable that can take the place of any changeable value in an equation or inequation; it is the wild card of the equation. In the real world, OGX, from entrepreneur Eike Batista stands for the equation of success that has been formulated from this company that started as the **x** in the Brazilian oil and gas industry and may be the unknown variable of great value.

by Beatriz Cardoso

IN LESS THAN SIX MONTHS of drilling, the company made discoveries in each of the seven wells it drilled, one in the Santos basin and the other six in the Campos basin. Five wells already have estimated reserves of 2.1bn to 4.7bn barrels of oil.

In order to get these results, OGX has put together a team of heavyweights, led by geologist Paulo Mendonça, one of the stars of Petrobras that OGX managed to 'extract', along with forty other highly qualified personnel, including the company's director of Production Development, Reinaldo Belotti.

In this exclusive double interview for **TB Petroleum**, the two executives, each with more than 30 years of Petrobras, talk about the expectations and preparations for OGX, youngest oil and gas company in the nation, which, at the beginning of 2011, celebrated only 4 years in the industry.

TB Petroleum – During the five years you were at the head of exploration at Petrobras, there was a growing

curve of discoveries and incorporated reserves, including the pre-salt, the focus for much investment and expectations. Since then in OGX, you have invested heavily in the Campos basin, where you have made several discoveries. Does this mean that the basin still has a big potential to be explored?

Paulo Mendonça – Without a doubt. The Campos basin has a very interesting history, mainly since the search began in deep Waters, with high success rates – much less it is true between 1998 and 2002, due to the focus on the central part of the Campos basin. When it was decided to head a bit north, trying other models, such as the one in Roncador (discovered in 1996), we arrived at Parque das Baleias. The discovery of Jubarte (2001) only demonstrated the business was drill, discover and tie the loose ends up, because it became quite clear that there was much more than had been imagined, including the pre-salt. Hence the saying from one of the old

explorers: 'Oil is where you find it'— and where you find it is exactly where you'll find more.

That is what OGX has been demonstrating with its strategy to intensify its exploration activities and invest heavily in seismic analysis. The achievements obtained in such a short time is obviously the result of a highly qualified team – yourself alone has 35 years of Petrobras – or are these results those of a more daring business model?

There are several factors that must be taken into consideration. Firstly, it is important to point out that we are talking about the history of a company that started in just two and a half years. We began in July 2007 when I left Petrobras (end of June), we started a company and went to the market, afterwards we went to the 9th Bid Round and acquired the first 21 exploration blocks (in the basins of Santos, Campos, Pará-Maranhão and Espírito Santo),



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paying a total of R\$1,479,723,282.00 in signature bonus. We did the IPO, which at the time was the biggest ever in the history of the Brazilian stock market (raising R\$6.7bn in capital). We acquired the environmental licensing and we did all the seismic analysis, contracting rig teams at a time when we were told it was impossible: we now have five contracted rigs. We started drilling; we discovered oil; and we still have US\$ 4bn in cash.

That means you still have resources to continue the fast pace...

It's fantastic, without a doubt. But if it weren't for a man named Eike Batista, I'd say none of this would have been possible. Petrobras is a company that commands respect: it has made great achievements, mainly in the exploration area; it is highly innovative, which allowed the company to consolidate its state-of-the-art technological basis to discover great reserves, reaching the pre-salt. I am proud to have worked there for 35 years. The question of speed is quite different when talking about a private enterprise. Eike is much more than the main shareholder: he is the force that pushes us, takes

care of the business, and he knows everything about it. First, he banked the company at the beginning with his own resources, investing US\$ 400m initially, and then another US\$ 400m, until reaching US\$ 1bn. Who in Brazil can do that? No one. Second, he talked to me, frankly, and believed in me and all the team we brought here – this is what has made the difference.

The same goes for the market and the investors, right?

When we arrived, there was nothing. Eike Batista banked everything – and not just financially. I remember



when we went to Canada and the US on the first round, Marcelo [Marcelo Faber Torres, director of Investor Relations] and I: had we gone alone, no one would have listened to us. With Eike, we were well-received and listened to what we had to say about the project. In other words, he gave credibility to the project, and not just with money; he holds great credibility together with the shareholders around the world. It was something I had never seen before. Without him, OGX would not be here today. It may seem to have been easy, but it wasn't. It was easy with him. Now it is a daring and demanding business: deadlines, with Eike, have got to be met. Preferably beforehand. All these factors helped us to get to where we are now in just two and a half years.

What is the next step?

Produce! This is where we are at the moment. Were we lucky? No! We made the right choices. We paid a high price: we did high quality seismic 3D imaging; the world's best specialists analyzing the data; we used state-of-the-art technology. There is no doubt in my mind that we have only just begun discoveries in the Campos basin. And so not even tell me that we only found oil for being right next to Petrobras areas: we went far beyond. For four months I've said that all the

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elements we encountered in the center of the Campos basin were present in the shallow waters to the south. The discoveries prove this: the oil reserves are at a depth of 2,000 m, 2,100 m, but in shallow waters of 130 m, and less than 80 km off the coast. The oil is heavy, but with very low viscosity, allowing for high flow transfer.

What is the estimated volume of reserves until now?

The first discovery, at the well OGX-1 (Vesúvio prospect) in block BM-C-43 (Campos basin), has been estimated between 500m and 1.5bn barrels of oil equivalent (boe). In well OGX-2A (Pipeline prospect) in block BM-C-41 (also in the Campos basin) there have been five indications in different sections, totaling a volume between 1bn and 2bn barrels. At OGX-3 (Waimea prospect), the expectation is for volumes between 500m and 900m barrels. At OGX-4 (Kilawea), between 100m and 200bn. At OGX-5 (Krakatoa) there were between 30m and 90m barrels in just one of the three reservoirs discovered. All together,

we have around 2.1bn to 4.7bn. The numbers of the first discovery (OGX-1) are conservative, since that is our culture. But we have reservoirs that extend 14km with 500-meter columns of oil. Thus, we can expect nothing less than a billion barrels of oil from a field this size. Regarding the second discovery, we must point out that we only announced the indicators – even this we did with caution. When we announce a discovery, it is because we have seen the oil and the flow of this oil. Therefore we continue drilling, going further, since the expectations are great.

You mentioned heavy oil. What is the API?

Something between 17° and 18° API, with GOR around 50, with a fantastic viscosity between 5 and 30 centipoises – heavy oils usually have around 400, 300 centipoises. It is a very high permeability – from 1 to 3 darcy. We are looking forward to a fantastic business.

The plan was to start production in 2011. Has that been moved up?

The chronogram has been anticipated to the beginning of 2011.

You increased the exploration campaign from 51 to 79 wells. Why?

We have got about US\$ 4bn in cash to finance all the exploration Capex, first production, new farm-ins or acquisitions. The seismic analysis has helped to improve out numbers: we've gone from 4.8bn boe of potential reserves to 6.7bn boe (and 212m in contingent reserves), according to the two latest reports of DeGolyer & MacNaughton (the American consulting firm for certifying reserves of the oil and gas industry, which has given an average success rate of 34.5% to OGX operations). The new numbers require a different exploration campaign, because the will be a different production curve. It will certainly

be necessary to contract more rigs, more seismic study. The five rigs were enough for the previous project. We are now assessing how many will be necessary. One thing is for sure: we will need a rig for the basins of Pará-Maranhão (offshore) and Parnaíba (onshore).

3D seismic imagery is a major differential? How much have you spent on it?

More than one hundred million dollars.

How much has been spent in total investments, including acquisitions and exploration, since OGX was created in 2007?

The numbers are impressive: between US\$ 1.1 to 1.6bn. Here is where the ingeniousness enters: we raised US\$ 4.6 to 4.7bn in the IPO, and then the dollar took off and caused the economic crisis with everyone wanting to hedge. Eike said we were going to wait, that we should believe in our own currency. Happily, we still have US\$ 4bn in cash, despite all the expenses, especially the seismic assessment. It was the right bet. Last year, whoever decided not to invest in the real and invest in dollars lost 40% of their money. Of course we must always be aware of eventual changes, but when dealing with oil, you cannot play games.

Are new acquisitions part of your strategy? Are there players selling assets?

Most certainly, but there is one thing: when we buy a company or a block, we must be certain we see something there. We do not just aggregate quantity, only quality. We analyze everything that is happening in the market.

Are you also analyzing opportunities abroad?

This is a topic we discuss internally a lot. Firstly, there are political factors



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to be considered. In Brazil, we have political and economic stability. Upon analyzing any investment abroad, the political and economic stability must be analyzed, as well as the exploratory potential, looking at each opportunity with another set of eyes. I've been taking this reading for 37 years and I know how important it is to look at things with a different perspective: the view from inside is quite different from the view from outside. It is important not to be afraid. And we have the resources available to do business. But do not expect OGX to go running after a field of 500,000 barrels, 1m barrels. It is not among our activities. We want bigger things. If the block is onshore, were the risk is palatable and there are opportunities for discovering big things, we will most certainly be there – whether onshore or offshore.

Considering all your experience, do you believe that the Brazilian basins are being poorly explored?

I'm sure of it. It is not that they are being poorly explored. Actually, they have been well-explored. It is just that, for decades, Petrobras has been the only player in this area. And even recently, the foreign companies

that have come to Brazil have often ended up in partnerships with Petrobras. It was just 'one head' with 'one management' thinking about the subject. OGX has put another 'head' with another way of managing projects to think about things. Brazil has gained a lot from this. And I am quite sure that there will be many more discoveries in these basins. Another four more enterprises are needed to really explore these basins.

Is regulation a concern/ does it create instability?

What is important is to discover opportunities and comply with the rules. The company most concerned with all the changes is Petrobras. I, just like Petrobras, would not like to be obliged to have 30% of all the pre-salt blocks and also be the operator. Were this offered to us, we would have to tell the main shareholder that it is simply impossible. I want the freedom to choose where I go, whether winning or losing. The masterminds that thought they were helping Petrobras are not helping the company. This could do more harm than good to Petrobras, since it forces the company to concentrate on pre-salt, and ignore areas that the company considered, at least from a philosophical standpoint, priorities. Petrobras will have to focus on pre-salt. We have to analyze what will be approved and in light of that decision, reach some conclusions on whether it is worth going for pre-salt or not. Pre-salt is not the only thing out there. There are shallow waters, deep waters and the equatorial margin. Unfortunately, entrepreneurs like Eike, who are not afraid of risk, are few and far between.

Is it too early for the company to enter into other segments along the oil and gas production chain, such as refinery?

Rest assured that OGX is an exploration and production company.

In anticipation of the LDT

As the director of production development for OGX, engineer Reinaldo Belotti has got everything planned for OGX to begin production at the beginning of 2011.

“EIKE BATISTA’S SENSE OF URGENCY is contagious”, reveals the executive who had occupied several positions in more than 30 years of Petrobras, including the executive manager of both E&P Services and Production in Campos Basin, besides having been the president of Petrobras America Inc. and the director of the Service Station Network for Petrobras Distribution.

Further to their ahead-of-schedule targets, he reveals that all the development projects in the fields discovered to date will be done with dry completion, avoiding the dependence on fixed rigs. The Long Duration Test (LDT) and wet completion may be used to test reserves if it facilitates first production.

T&B Petroleum – You’ve amplified the exploration campaign, increasing the number of wells to be drilled from 51 to 79 by 2013. What exactly does that represent?

Reinaldo Belotti – Firstly, it represents the possibility of having much more oil and gas in our blocks than previously thought. We are only doing this because the reserves and indicators have shown that we have more chances of new discoveries. This is the productive part of the business. It also reflects the sense of urgency of our CEO, Eike Batista, which is, in fact, contagious.

You’ve already contracted five rigs: how many more are you planning on?

Actually, we only needed four rigs for the 51 wells foreseen at the beginning. The fifth rig was anticipated, since we began to notice we would need additional wells. We have got a serious of possibilities. We could simply use the contracted rigs to drill more wells and get ahead once again by bringing in more equipment. Everything is still open. We are analyzing all the possibilities. The industry’s main service providers have solicited us, impressed with the extraordinary speed with which we have reached each step, without problems. In just a bit more than two years, the company was created, rigs were contracted, the first exploration program was done, and we drilled and discovered oil. They have noticed the great business opportunity and the sense of urgency from the directory.

Do these discoveries prove you have made the right choices in both acquiring assets and operational and technological decision-making?

Yes, it does... it couldn’t be any other way. We’ve got a team that knows these basins like the back of their hands, with the best professionals in the E&P industry. And we have chosen the best partners: among OGX’s 15 main suppliers of goods and services, all are top of the line throughout the world. We are using the best in human resources and technology, since we are not bound by the lowest prices and we basically work in shallow



waters with proven technology. There was no reason not to be successful.

Considering this accelerated pace, have you already defined the model to be used in the development of these fields? Any novelty or innovation?

The models we are going to use were already developed, tested and proven. We’ll be using horizontal wells, since we have the best drilling engineers and all the expertise and technology at hand to do so. We know exactly how to do it. And our production system will be based on dry completion. We’ll avoid submarine completion, which maybe used in anticipation production, to test some reservoir. In general, the final production development will be with dry completion with a high level of local content, since we already have highly-qualified suppliers here in Brazil. Even when we go to deep waters, we are going to try to maintain this model in order to avoid being dependent on the fixed rigs necessary for operational maintenance.

You mentioned anticipating production... can we expect the LDTs, largely used by Petrobras, to also be used by OGX?

We are analyzing this possibility.



Regarding the target to produce first oil in the beginning of 2011: have you anticipated it by some months?

Yes. One of the possibilities we are analyzing is doing a LDT. Naturally, we need the authorization of the National Petroleum Agency. The LDT is a way of getting to know the reservoir better and do the final development for production that is safer.

With all that accumulated experience, you haven't thought about testing some new or applying a different solution?

As far as technology is concerned, we are not going to use anything innovative. Most important is our management model: selecting people, partners, outsourcing, and our sense of urgency. One characteristic of this company is the velocity at which it implements its business. We are not looking to innovate, but work with speed and safety. If you look at all the phases our company has already completed and compare it with any other company in the world of the same size, operating in the offshore industry, you will see, for sure, that we are using several shortcuts, but with safety.

You have emphasized the time factor... How many days did it take you to drill the first well?

A little more than forty days... and with all the tests that needed to be done! Remember that we contracted four rigs in just two months, like all the partners, to do the wellheads, casing etc.

The results indicate that the Campos Basin is about to be rediscovered?

What happened was, as time passed and experience in this basin accumulated, the knowledge base broadened. The seismic studies we did in the southern area of the Campos Basin – which is difficult to visualize due to submarine volcanoes – allowed us to reinterpret the data. The results obtained from the first wells we drilled showed that our exploration staff was completely right. Thus, we have got before us a smooth exploratory campaign: of the 71 wells OGX will drill by 2013, 40 are located in this basin.

WE ARE USING THE BEST IN HUMAN RESOURCES AND TECHNOLOGY, SINCE WE ARE NOT BOUND BY THE LOWEST PRICES AND WE BASICALLY WORK IN SHALLOW WATERS WITH PROVEN TECHNOLOGY.



Is Campos strategic?

It is the best known basin, so the risk is much smaller. And we need this opportunity to test of team and procedures. But we will soon be doing the same in the Santos and Maranhão Basins.

Oil or gas: which is the priority for OGX?

What comes first is the supply. From then on, the business opportunities are made. We want oil, but gas will be very welcome, since we're aligned with MPX for energy generation.

You are in Parnaíba because of the thermoelectric plant located there?

MPX is our partner there. And we have our team that most understands natural gas in the country there – José Brito de Oliveira, the engineer onboard the Enchova platform for the first oil in the Campos basin.

If natural gas is discovered, what transfer model will be used: subsea gas pipeline or liquefaction?

We are still analyzing the options, and they are many. We believe that there are more chances of having gas in the Santos and Espírito Santo basins, where

there are other aspects that must be considered, such as environmental licensing, distance offshore, etc. At any rate, there are many parameters that must be analyzed.

Which are the major challenges: public tender, environmental licensing, contracting equipment? Where is headway being made in the operations?

I would say that, today, the main challenge is government regulation – but this is not our only challenge. We need to know what lies in store for us. As far as public tender is concerned, after the 9th Bid Round, no further auctions have been held, which represents a challenge, but we have been able to solve this problem via areas that had already been tendered, such as Parnaíba.

Has there not been a challenge in contracting equipment?

That is much easier. The challenge is really in getting local content. This is a subject that everyone has been studying more. The team has been preparing for this. OSX was created to guarantee local content offered in the 9th Bid Round by constructing offshore units in its Santa Catarina shipyard. We are preparing to go to the market so solicit the necessary bids. OSX will be doing all of this now in 2010.

How many platforms does OGX expect to have by 2015?

We haven't discussed it yet.

When do you plan on ramping up the exploration plan for Santos basin? I believe you are expecting to drill 18 wells by 2013...

We are all set to go. In this first semester we'll be going to Santos. By 2013, we are planning on drilling 7 wells in the Espírito Santo basin and 7 in Parnaíba (7).

Are there any plans for reaching deeper waters? The pre-salt maybe?

We plan on exploring our blocks in their totality. We'll explore whatever is there. We've got a team that has already drilled in the pre-salt and know much about the area. ■