Brazilian Wave

October 2016 Issue: 57

WHERE PETROBRAS GOES FROM HERE

What the new Business Plan means for the OSV sector





The Plan



SEISMIC UPDATE
Exploration Drilling Stage 1







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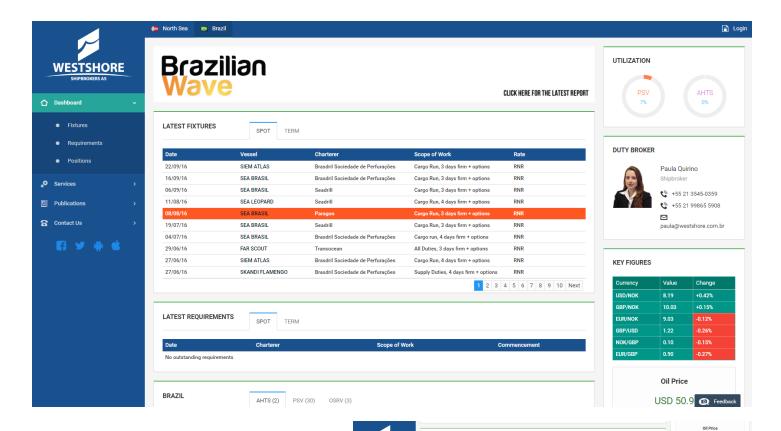
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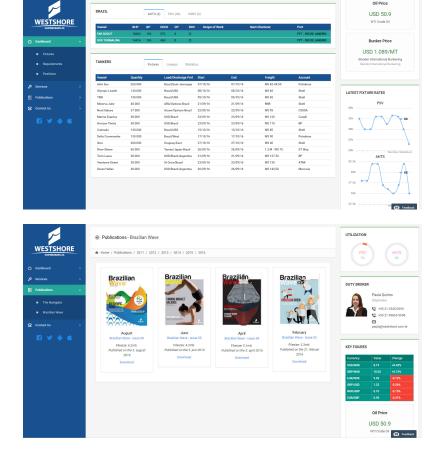






WESTSHORE LAUNCHES NEW LOOK WEBSITE

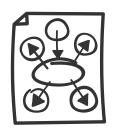
The Westshore website gets more than 3000 hits per day but the team here at Westshore decided the website needed a bit of a facelift. So this month we launched the new look site. It still has all the information you could get there previously, just hopefully in a format that's slightly easier on the eye. Our team of brokers constantly update the site with the latest fixtures and requirements and the stream of data is fed in and available for public viewing. No log in details are required. You can also find all our previous editions of Navigator and Brazilian Wave in addition to all the usual contact details etc. take a look and feel free to send us your feedback.











THE PLAN





Half empty, half full, Petrobras releases the latest Business Plan









by Luiz Monteiro & Alex Vilela

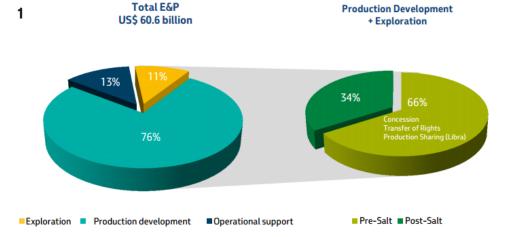
etrobras has released their business plan (BP) in a new, upgraded format. More than marking a change in management style, Petrobras has ushered in a new era, starting with the way of communicating with the market. Some say that Petrobras was not very detailed about what they intend to do, in which areas the company will specifically allocate the investment resources, as a result of not being ready or not yet having made the detailed decisions(!). Incorrect. We believe that we can crack this information code and give our customers a hint of what to expect next.

First, it is important to highlight that the latest release by Petrobras may be different from what they used to do but it is definitely much in line with what other relevant players in Oil & Gas publicize. The business plan presentation is centered in compliance, governance and financial results. This trio is always present in any other BP, and in the case of Petrobras has a special meaning. Instead of criticizing Petrobras for not baby-sitting the market by revealing in detail what they intend to invest in, one should praise the fact that Petrobras has attacked and their main problems, especially after the corruption scandals. Secondly, Petrobras seems to have the right focus now. The oil major is openly talking about divestment in noncore businesses and is inclined to adopt

a market-centered policy, as opposed to a governmental drive, which shall see reflections on their cash management and cash generation capacity.

Therefore, the current business plan sets a strong and ambitious target, from the perspective that the company has historically been the sponsor of a public agenda rather than primarily generating return to its shareholders, on top of working with "realistic" numbers. Considering that the BP is aligned with other oil majors, Petrobras has now demonstrated what the levels of investment will be per business area. In E&P, the company will invest in the period 2017-2021 over USD 60 billion. This time, Petrobras has clearly demonstrated how they will act in order to achieve this investment target. For instance, the financial leverage (Net Debt / EBITDA) which is at a 5,3 (2015) will be reduced to 2,5. Current actions already reduced the debt from USD 132 billion in 2015 to USD 124 billion in the 1H of 2016 (and current leverage ratio to 4,5). The management is streamlined. The purchasing function has now been centered and each user area with its executive management will deliver the area needs based on individual targets and demonstrating a correction on cost deviations.

This means a major change in how Petrobras will think and acquire equipment and services from the market. So far, Petrobras has been driving its purchasing based on general internal need versus market availability. That is, the company would discuss its needs on a general level and use its major demand to drag from the market whichever



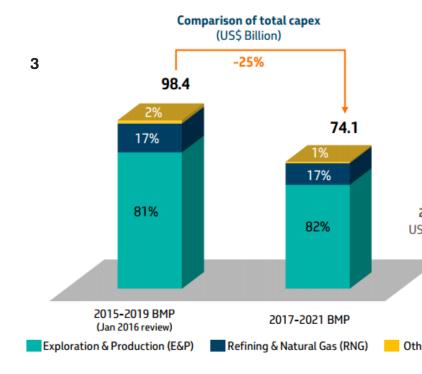
2 1 unit in Angra dos Reis

Angra dos Reis

Paraty
Itaguaí
Mangaratiba
Maricá
Saquarema

reduction in well construction and connection times

Graphs taken from latest BP 1. Upstream CAPEX breakdown 2. From the Lula field, efficiency gains from faster well construction and connection 3. Investment spending by Petrobras, the latest business plan compared to the last.



...a major change in how Petrobras will think and acquire equipment and services from the market.

Luiz Monteiro, Consultant

cont...

resources were technically suitable and offered at the lowest price, then allocate to each project. Not anymore. Executive management is tasked to work on a project basis now. Each project shall be individually scrutinized before a demand is confirmed. Further, project synergies will also have to be explored and the allocation of resources are thought of before the company reaches out to the market. In this line, Petrobras is also focusing on how the use of resources across fields and how to allocate the costs of each shared resource. For instance, the subsea portion of Lula-4 project is being analyzed from this perspective, and Petrobras is looking for an EPCI contractor to deliver the project, rather than acquiring each portion of the subsea system individually and integrate by themselves.

Conversely, some resources would still be linked to the general demand of Petrobras, in special those related to production. The PSV and OSRV categories are a good example. These are used both by the production and a portion allocated to projects. The number of units chartered by Petrobras has been reduced in function of the number of units in service being lowered, but that has come to a stable number now. With the entering of new production units and the restart of several drilling units as anticipated by the BP, the number of vessels will most likely grow - we are working a slight upwards tendency than

what seen today. Looking at the Brazilian market as a whole, other companies which had their campaigns postponed as of mid-2107 and onwards are likely to return with the demand for these vessel types.

On these categories however, the product (vessel) has become a commodity. The number of local built and suitably available ships outnumbers the demand, even on a positive scenario as demonstrated above. This means that for the vessel owners, these categories are now marketplace for large vessel numbers with a lower margin. Players with a reduced fleet size aiming for sustainable return per unit are unlikely to survive in this market. Further, the standard PSV owners are all geared towards making the vessels suitable for the OSRV category. Requiring minor investment and upgrading, considering that the environmental legislation still demands a number of OSRVs. it is a natural alternative to the standard PSV market to explore the OSRV niche.

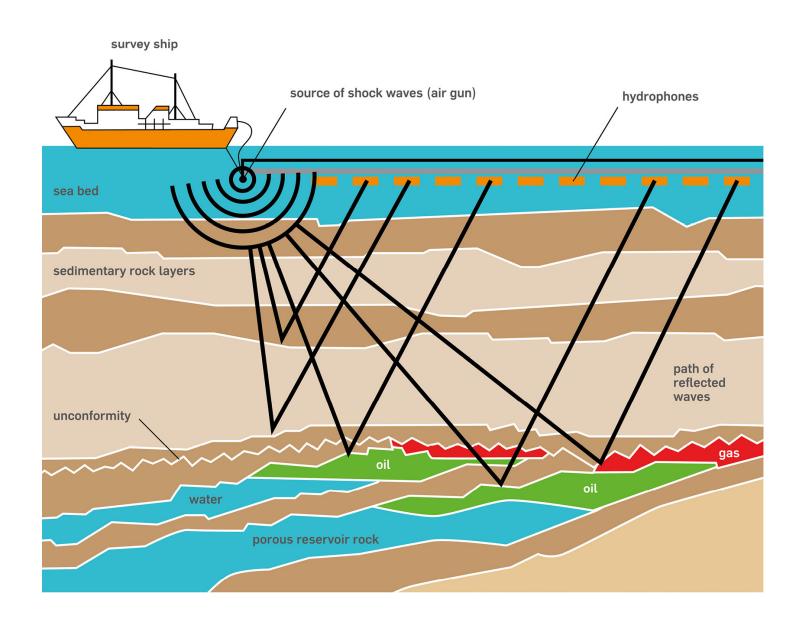
Vessel Owners business plans therefore, will have to be thought of in anticipation of these market moves, considering the global picture and not each vessel individually. It is not so predictable anymore. In this regard what we see is a major change: Petrobras as the main charterer and player in the local industry starts thinking individually per project, and the vessel Owners will have to start thinking strategically per category, rather than individually per vessel.

2017 Capex \$ 19.2 Billion

er segments

The Brazilian Seismic Boost

WESTSHORE TAKES A LOOK AT THE SEISMIC ACTIVITY UPCOMING AND ONGOING OFFSHORE BRAZIL.



Look Ahead

by Paula Quirino

ith the anticipation concerning new frontiers of the oil and gas market in Brazil, including the Equatorial margin campaigns, Santos basin (Libra and Buzios pre-salt) and the new ANP bidding round next year, the 2D and 3D seismic activities have ramped up, with licenses being expedited and long term planning finally becoming a reality within the next couple years. In this period,

long term planning finally becoming a reality within the next couple years. In this period, the oil companies have promised ANP the acquisition of 2D and 3D seismic data in more than 30 thousand square kilometers, being about 80% linked to exploration activity and 20% to production. Meanwhile, the awaited "rebid" of the seismic campaign for Libra presalt (1000 km2) is still undecided, after more than five proposals were presented to Petrobras in August.

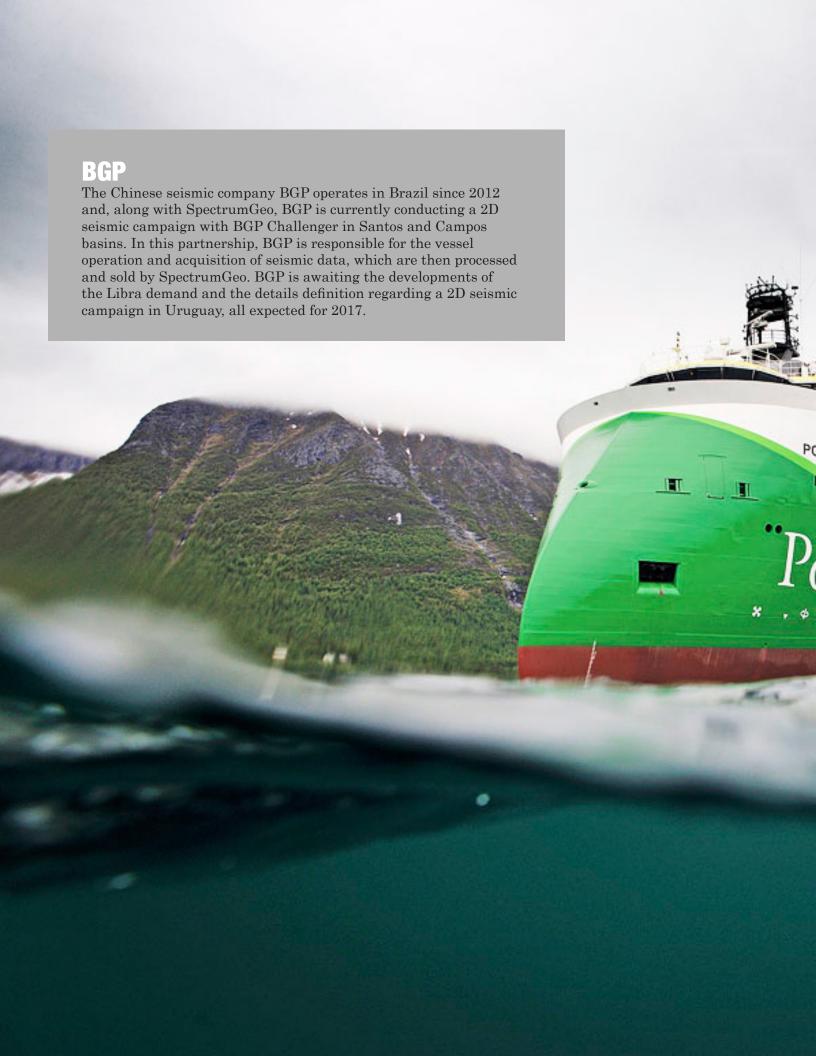
These are the ongoing and upcoming campaigns of the main seismic companies in Brazil: resources were technically suitable and offered at the lowest price, then allocate to each project. Not anymore. Executive management is tasked to work on a project basis now. Each project shall be individually scrutinized before a demand is confirmed. Further, project synergies will also have to be explored and the allocation of resources are thought of before the company reaches out to the market. In this line, Petrobras is also focusing on how the use of resources across fields and how to allocate the costs of each shared resource. For instance, the subsea portion of Lula-4 project is being analyzed from this perspective, and Petrobras is looking for an EPCI contractor to deliver the project, rather than acquiring each portion of the subsea system individually and integrate by themselves.

Polarcus

After concluding the 3D seismic project in Barreirinhas for Chariot during the first semester of this year, Polarcus started in September 2016 another 3D seismic campaign for its end client Petrobras. The campaign is covering 500 km² of Sagitario discovery in Santos Basin, and should take 120 days firm plus options to be concluded. The seismic vessel Polarcus Adira is being assisted by the AHTS 5000 VOS Theia, operated by Acamin/ Vroon. Vroon vessels have been operating in other operations with Polarcus. They are used to performing ship-to-ship offshore diesel transfer, have 350m2 of free deck area and good autonomy (over 900m3 of total diesel capacity). The chase boat hired for this demand is Ocean Route, operated by JGF Apoio Marítimo. No upcoming demands are firm at the time of writing.

SpectrumGeo

SpectrumGeo operates in Brazil since 2011, offering 2D seismic data interpretation to companies potentially interested in blocks in Brazil, most of them acquired in partnership with BGP, also established in the country. Spectrum is not a shipowner, so the company usually charters third party vessels or establishes partnerships. SpectrumGeo, which recently concluded a multi-client seismic campaign in Foz do Amazonas and Pará-Maranhão, is presently conducting a seismic campaign with the vessel BGP Challenger in Santos and Campos basins. The speculative campaign began in August and is expected to be concluded in 180 days. This vessel does not require a supply boat, so she has a port call scheduled every 30 days in average, usually in Guanabara Bay. Two chase boats are supporting BGP Challenger, one from JGF Apoio Maritimo and one from Margeo. SpectrumGeo is awaiting licenses to four other projects, being next one in the Equatorial margin, scheduled for early 2017.





PGS

In December 2016, PGS will start a 3D seismic campaign in Santos basin, most likely with their vessel Ramform Titan, which is currently in Tenerife. The campaign is expected to last about four months. The supply boat that is planned to support the campaign is Thor Magni (operated by shipowners Thor) which usually works with PGS, as the vessel is able to perform ship-to-ship offshore diesel transfer and to transport IFO, thus, PSVs currently available in Brazil would not be able to "block" Thor vessels. A few months ago, PGS launched a tender to hire a chase boat, and the charter contract with the winning vessel is soon to be signed and disclosed. PGS is also negotiating with Karoon for a short campaign in the 1st half of 2017, and is awaiting licenses for other projects.

CGG

The seismic vessel Oceanic Vega from CGG has recently started operating in the Santos VII broadband 3D multi-client survey in the pre-salt area of the deepwater Santos Basin. The project is expected to last six months and will cover an area of over 13,900 km2, including the Saturno prospect, a major pre-salt opportunity with no 3D seismic coverage so far. The supply boat Bourbon Cormorant came from the Gulf of Mexico to support Oceanic Vega. In addition, the chase boat Ocean Dream, from company JGF Apoio Marítimo, was also hired by CGG. This is the first of a two-phase project called BroadSeis dataset, which in its turn is part of the Santos Basin Trilogy project (Galaxy, Constellation and Saturno), that in total will link and create a 75,000 km2 dataset in this region until 2018.

BALLAST WATER MANAGEMENT CONVENTION COMES INTO FORCE

The International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) will enter into force on 8 September 2017, marking a landmark step towards halting the spread of invasive aquatic species, which can cause havoc for local ecosystems, affect biodiversity and lead to substantial economic loss. Under the Convention's terms, ships will be required to manage their ballast water to remove, render harmless, or avoid the uptake or discharge of aquatic organisms within ballast water and sediments.



Westshore do Brasil

he BWM Convention was adopted in 2004 by the International Maritime Organization (IMO), the United Nations specialized agency with responsibility for developing global standards for ship safety and security and for the protection of the marine environment and the atmosphere from any harmful impacts of shipping.

Untreated ballast water released at a ship's destination could potentially introduce a new invasive aquatic species. Expanded ship trade and traffic volume over the last few decades has increased the likelihood of invasive species being released. Hundreds of invasions have already taken place, sometimes with devastating consequences for the local ecosystem.

All affected ships will be required to manage their ballast water and sediments to certain standards, according to a ship-

specific ballast water management plan. All ships will also have to carry a ballast water record book and an International Ballast Water Management Certificate by the first renewal of their International Oil Pollution Prevention Certificate (IOPP), which is due at least every five years, during the vessel's special survey. This effectively means that by 2022 all ships in the fleets must have a ballast water treatment system (BWT) installed.

However and to the owner's despair, guidelines are still not adequate in providing operators with reliable, dependable BWT to install on board that meet IMO and USCG and Port State Controls compliance. As if that wasn't enough, owners/operators

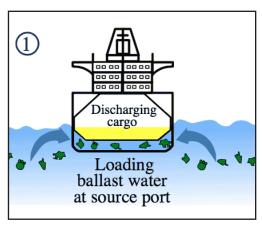
will have to face crew training timing and costs, operating practicalities, maintenance & spares, system approval and certification, planning & design costs, installation & downtime as well as running costs issues

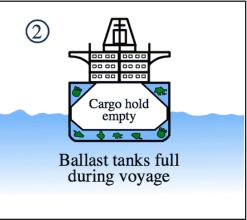
that, combined with a likely sulphur fuel cap by 2020, could have a dramatic effect on the global tanker fleet in terms of the substantial expenditure required to comply with these regulations with confidence that the use of a type approved system will enable the vessel to comply with the standard wherever the vessels call.

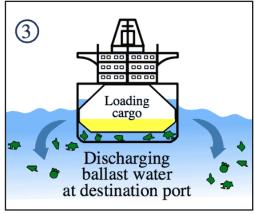
In all fairness, the environmental protection must be a concern but, given the implications and effects such measures will have throughout the industry and the costs borne and shared by all parties involved, IMO Member States and other Governments/Authorities have to finalize the Treatment Guidelines determining exactly the parameters to be complied with.

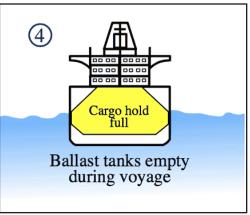
Furthermore, the US Coast Guard has its own agenda and will apply own rules including an Alternate Management System that will consider the same five years transition period. Problem is, again, their guidelines are not clearly set either. This puts owners in double jeopardy.

To ensure proper and adequate decisions are made by the owners/operators as to which systems they will evaluate to implement on their ships – as well as whether the respective ship's lifespan justify said investments – and choose the most overall favourable solution, they must have guarantees that such system(s) will be granted full approval, without the risk of making huge implementation costs only to learn during this period that the particular system(s) is/are not acceptable (and be forced to refit?!?) by any one of IMO, USCG, PSC.





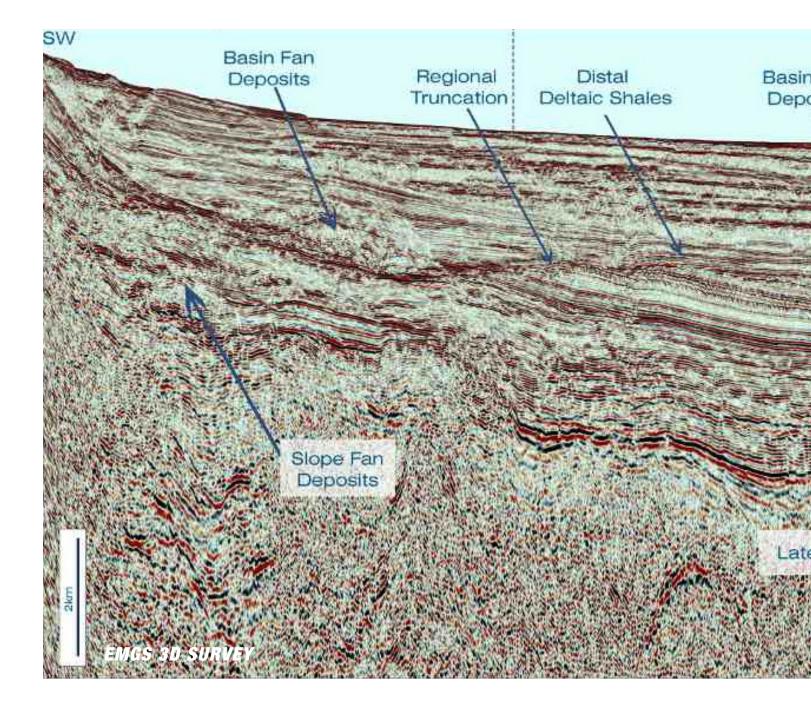




Foz do Amazonas Basin

he next oil exploration frontier in Brazil lies partly in front of the mouth of the Amazon. While prospects are encouraging, the region is considered environmentally sensitive and has large gaps of biological, oceanographic and socio-economic knowledge.





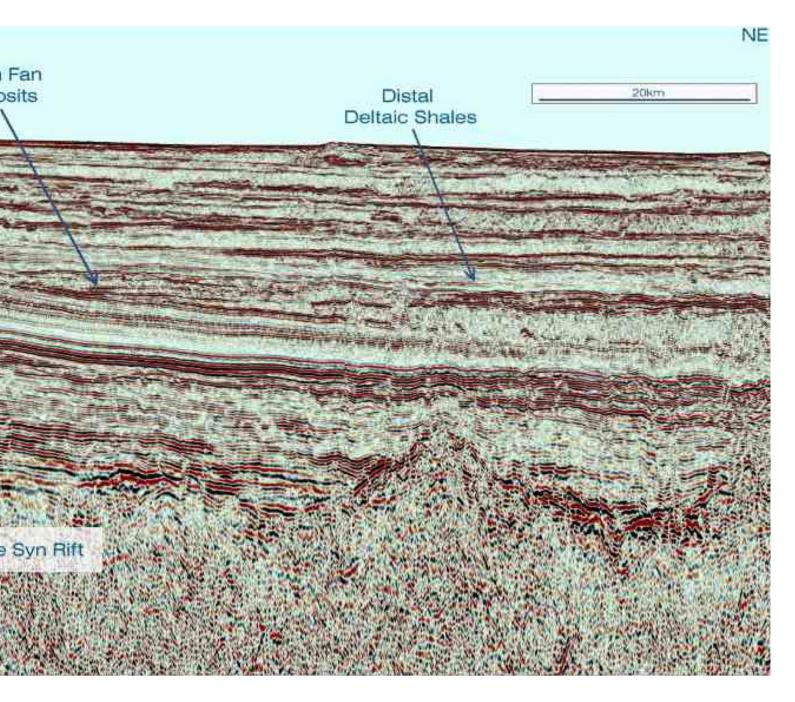
In the Atlantic estimated at one million square kilometers, divided into five major sedimentary basins. Going to the Amazon Delta to the Northeast, starting in Amapá border with French Guiana, stretching through the Pará and down to Rio Grande do Norte.

Five companies have already confirmed drilling plans for 2017, 2018 and 2019: Total, Queiroz Galvao, BP, Premier Oil, ExxonMobil and Shell. The first to explore the area will be Total, in Foz do Amazonas basin, which extends along the Amapa coast and the island of Marajó, in Pará. The area around the French Guiana is the most delicate.

Total expects to drill nine wells, at depths greater than 1000 m for their five blocks. The first well to be drilled

is situated 159 km from the coast and has a water depth of 2,300 m. The closest block to the coast is at a distance of about 120 km (65 nautical miles) from the coast of the municipality of Oiapoque, State of Amapa (AP), in water depths ranging from 200 to 3,000 m. For logistical and operational support, one logistical support base will be used, located in the Port of Belém, Para.

The logistical support base will conduct fueling operations, input shipment to platforms (including water and drilling fluids), unloading waste; and loading and unloading emergency equipment in case of incidents, among other operations. For the crew management in the offshore unit and to transport small volumes, an air support base will be used. Drilling activities will also be supported by one oil spill response vessel, for prompt service in case of any



incident and three platform supply vessels (PSV). In the Risk Analysis Preliminary the total of 21 scenarios of oil product spill potential has been identified. Among these, 14 had potential to reach the sea.

In the event of oil spill at sea, it would be difficult to contain and recover the oil and the current in the region is considered strong. The dangers of oil exploration in areas of rough seas was brought under the spotlight in 2011 when, around the mouth of the Amazon River, a drilling rig working for Petrobras was dragged by the currents.

In addition to having a rich coastline in mangroves, scientists recently discovered a large coral reef in the estuary of the Amazon River, the border between French Guiana and the State of Amapá, which extends to Para. The reef covers an area larger than

the metropolitan region of São Paulo and has a rich biodiversity - home to over 60 species of sponges and 73 species of fish.

There are many challenges, but perhaps just as many opportunities. It is estimated that in the mouth of the Amazon about 15 billion boe and 30 trillion cubic feet of gas lies beneath the seabed. The expansion of oil and gas exploration and production in Brazil is of utmost importance for the country's growth. Environmental concerns will be taken into account, but with the current political and economic woes being faced in Brazil, discounting oil expansion due to environmental factors is probably a luxury they do not have.

Total campaign has its expected start to Q2 2017 and will last approximately two years.



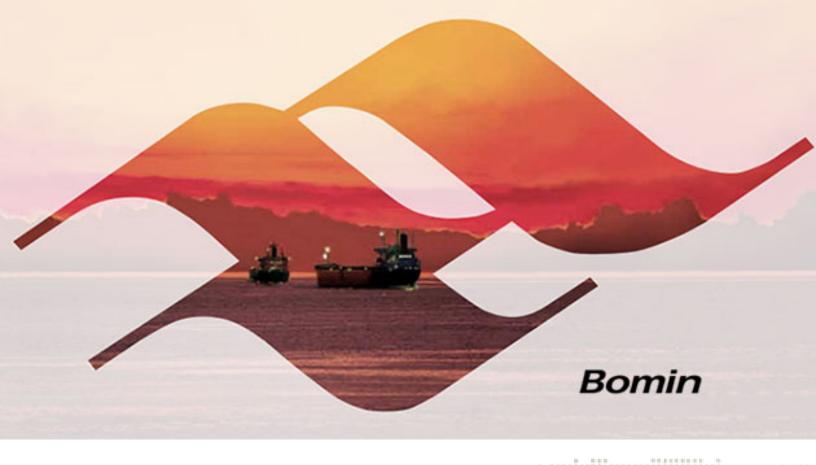
Petrobras has disclosed the commercial qualification results of vessels offered in the OSRV 750 national tender. The vessels were ranked by their virtual rate, which takes into consideration the companies' Peotram rate and the vessels' efficiency in fuel consumption. CBO had the most competitive price, with virtual rate of USD 16,905 while DOF had 2 vessels ranked last with virtual rate of USD 22.064,70. Below table displays all bidders, their final rate and contract duration:

CLASSIFIED PROPOSALS									
Ranking	Bidder	Vessel	Period	Daily rate	Virtual reductions		Virtual Rate		
					Peotram	Fuel Consumption	VIII LUAI NALE		
1	CBO	CBO Niterói	4 years	USD 17 250,00	0,02	0,00	\$ 16 905,00		
2	CBO	CBO Vitoria	2 years	USD 18 500,00	0,02	0,00	\$ 18 130,00		
3	OCEANPACT	LAB 151	4 years	USD 18 900,00	0,00	0,00	\$ 18 900,00		
4	OCEANPACT	LAB 152	4 years	USD 18 900,00	0,00	0,00	\$ 18 900,00		
5	NORSKAN	Skandi Leblon	2 years	USD 19 515,00	0,02	0,00	\$ 19 124,70		
6	ASGAARD	Asgaard Sophia	4 years	USD 20 100,00	0,00	0,00	\$ 20 100,00		
7	PAN MARINE	Danko Tide	2 years	USD 20 955,00	0,00	0,00	\$ 20 955,00		
8	ASTRO INTERNACIONAL	Astro Tamoio	4 years	USD 21 339,00	0,00	0,00	\$ 21 339,00		
9	NORSKAN	Skandi Flamengo	4 years	USD 22 515,00	0,02	0,00	\$ 22 064,70		
10	NORSKAN	Skandi Stolmen	4 years	USD 22 515,00	0,02	0,00	\$ 22 064,70		

DISCLASSIFIED PROPOSALS									
Bidder	Vessel	Period	Daily rate	Reason					
ASGAARD	Asgaard Sophia	3 years	USD 20 300,00	Classified only the best proposal for each vessel. In case of a					
ASGAARD	Asgaard Sophia	2 years	USD 20 500,00	tie, it is					
ASTRO INTERNACIONAL	Astro Tamoio	2 years	USD 21 339,00	only classified the proposal linked to the higher contractual					
ASTRO INTERNACIONAL	Astro Tamoio	3 years	USD 21 339,00	period					

Also, Petrobras has received offers for the Shallow Diving Support Vessel tender (SDSV). Companies such as Farstad + Fugro; Sistac + Wilson Sons; DOF + Sistac; Sealion + Belov are participating in the bid while the first one will provide the vessel and the second one will be responsible for the diving equipment. Petrobras is clearing up issues related to documentation submitted and shall soon disclose the technical qualification.

Item	Competitors	Vessel Name	ROV Company	Diving Company
1	NORSKAN	Skandi Commander	DOF	Sistac
2	NORSKAN	Geosea	DOF	Sistac
3	FARSTAD	Far Swift	Fugro	Fugro
4	FARSTAD	Far Scotia	Fugro	Fugro
5	SEALION	Toisa Coral	SS7	Belov
6	SISTAC	Pardela (Wilson Sons)	Oceaneering	Sistac
7	SISTAC	Ostreiro (Wilson Sons)	Oceaneering	Sistac



Spotlight on Bomin, from cargo trading to supply of bunkers and lubricants

21 Spotlight

Tactical management has always been a decisive factor in the shipping business. Today's successful operations rely on highly competent service providers. There is no room for compromise. When it comes to keeping business on an even keel, professionals select international specialists. Bomin is that specialist and much more.

omin was founded in 1976 and the company gradually expanded its trading organization in all worlds' major bunkering centers, capable of delivering wherever the customer demanded.

The Group has been active in the bunker business for 40 years via its subsidiaries and is one of the world's leading independent suppliers and traders of bunker oil. The business portfolio covers activities ranging from the supply of bunker fuels to lubricants and other services to the shipping industry. The company operates around the globe with more than 300 employees in 30 offices worldwide. Since June 2012 Bomin is 100 percent owned by Mabanaft.

Presence in Brasil for more than 20 years has enabled the Rio de Janeiro office long-standing contracts with Petrobras. Thanks to this, Bomin is able to supply the full range of fuel oils and marine gas oil to most ports for both domestic and export market and the offshore industry. In addition to this, Bomin do Brasil acts as physical supplier of gas oil in the domestic market with suppliers via truck in all Brazilian ports.



22 E Isso Ai









- 1. Brazil's President Michel Temer
- 2. Major of Rio, Eduardo Paes
- 3. New Major of São Paulo, João Doria
- **4.** Marcelo Crivella of the Brazilian Republican Party



ELIANA LAZARINIOffice Manager

Westshore do Brasil

Local Elections, National Discontent

he current political climate has been shaped by the worst recession in Brazilian history, the impeachment of former President Dilma Rousseff plus the largest anti-corruption investigation ever experienced by the country. These factors impacted directly on the voter's choice for the recent local elections. The widespread corruption that has tainted the highest echelons of business and politics in Brazil, has resulted in a growing disinterest in politics from voters. The number of blank votes was frighteningly large and also unexpected. São Paulo had the highest percentage of non-attendance in the latest elections and a higher percentage of voters that canceled their vote entirely. Meanwhile, the 'Paulistanos' surprisingly chose their new mayor, Jorge Doria (PSDB), voted in with a smaller number of votes than the total number of abstentions. Again evidence of a divided population, left with no options and exhausted by Brazilian politics.

Here in Rio, the first round of municipal elections in 2016 took place on October

second and the second round will be held on October 30. Marcelo Crivella (PRB) will compete with Marcelo Freixo (PSOL) for the mayor's seat of Rio de Janeiro. They represent two opposite poles of Brazilian politics, struggling for power of the second largest city in the country. Both will have to win over voters who opted for other candidates in the first round.

In the first stage of current elections, it became evident how difficult it is for the political system to offer alternatives. The Brazilian Workers Party (PT) collapsed at the start of October and did nothing but contribute to the climate of deep skepticism. Some specialists said the demise was predictable, but it left the former president Dilma's party with just one mayorship (Rio Branco, close to the Peruvian border) and less than half of the regional capitals that it held in 2012. Though the Brazilian electorate may be growing weary of the turmoil, the story is far from over and in an age of instant access to vast amounts of information via the internet, there will be fewer placeto hide.