

BRAZILIAN WAVE

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THE BRAZILIAN FOCUSED MARKET REPORT



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BROUGHT TO YOU BY
WESTSHORE SHIPBROKERS AS





Magda Chambriard
General Director ANP

Pre-Salt pace to heat up

On Monday, April 15th, ANP gave the market a new and exciting perspective regarding the long-awaited pre-salt bidding rounds: "I suggest that the pre-salt bidding rounds happen at least every other year", said the General director Magda Chambriard.

The reason is the large volume to be offered in the first round expected to occur in November, that could reach an estimate of 40 billion barrels of equivalent oil in situ – 10 billion recoverable. She said that the regulatory environment needs to be responsive to the demands of investment, production and local content, and therefore, the volume should be reduced, so that the industry can avoid investment bottlenecks. Since the areas that will be offered at the next pre-salt bidding round still need to be approved by the Brazilian Energy Policy Council (CNPE) between May and June, there is time to revise the bidding volumes. In addition, Magda said she recognizes the possibility of adjustments in local content rules, but only adaptations that enhance the policy. Overall, ANP is looking forward to protecting the market with local content rules as well as watching a smooth and gradual growth of pre-salt exploration and production, so that the players can effectively catch up to this pace.

A WORD WITH WESTSHORE

“ The OSV market will be positively impacted by the two bidding rounds which will happen this year, since most of the wildcat wells from the previous auctions are likely to be completed over the next two to three years. ”

Paula Quirino
Shipbroker



03 PRE-SALT SPECIAL FEATURE

A LOOK AT THE AREA IN THE NEWS RIGHT NOW

THINGS YOU DIDN'T KNOW ABOUT THE PRE-SALT IN BRAZIL

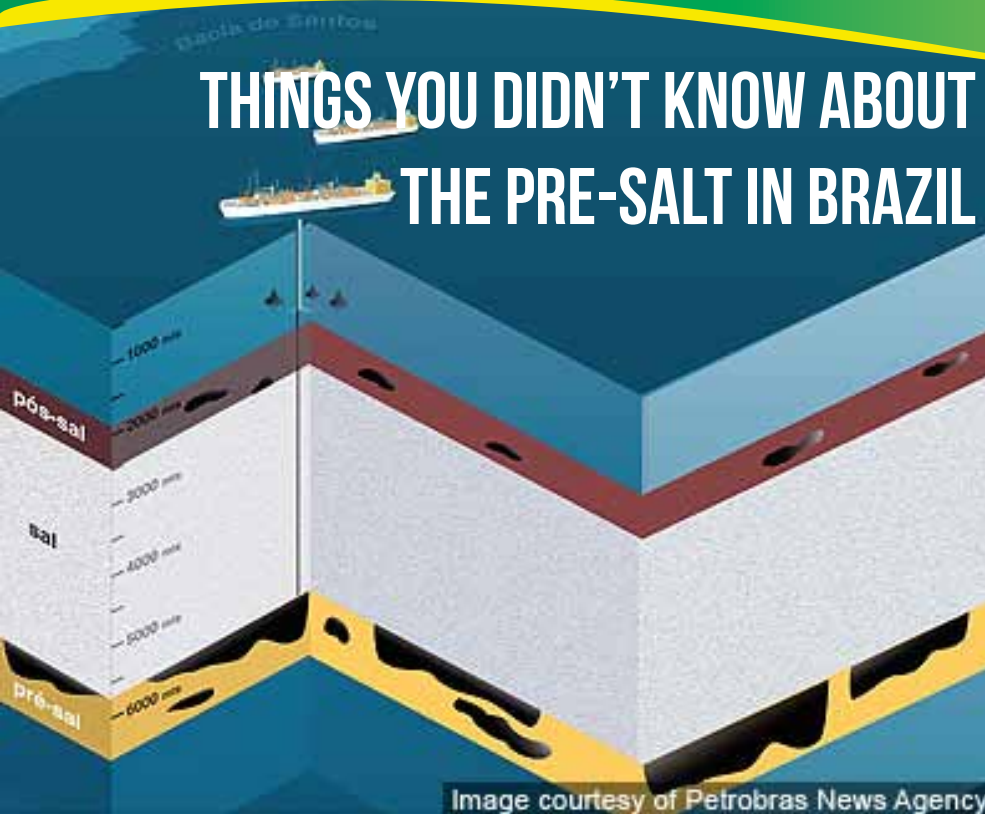


Image courtesy of Petrobras News Agency

The pre-salt discoveries, which began in 2006 and received a frenzy of media attention a couple of years ago, changed the perspectives of the oil and gas industry in Brazil. If we consider the discoveries made so far, the estimates reach 30 billion of barrels, leaving Brazil with one of the largest oil and gas reserves in the world and the opportunity to become one of the largest producers in the world.

In order to reach that position, Brazil has adopted a mixed regulatory model for the sector. Within the pre-salt area known as the polygon, the Brazilian government will promote E&P through the production partition regime, according to the law number 12,351 created in 2010, in which the oil company that offers the largest share of oil to the Brazilian

government during the bidding process is awarded the block, and this winner will have to create a consortium with "PPSA" (Pré-sal Petróleo S.A, the government representative) which will hold at least 30% of the shares with only

P e t r o b r a s

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**the exploratory
success index of the
pre-salt areas is at
82%**

authorized to produce in all blocks. The polygon is located within Santos and Campos basins and represents 2.3% of the total area of sedimentary basins in Brazil, or around 6.4 million square meters. ANP will run the first of many expected bidding rounds for the pre-salt blocks in November 2013,

and expect as many bidding companies as the number that confirmed their interest in the 11th bidding round: 71 oil companies from 18 different countries.

The production partition regime for the Brazilian pre-salt is common practice in countries with large oil reserves, high production rates and a strong desire to protect strategic resources, such as Angola, Russia, Indonesia, Libya, Nigeria, Kurdistan and Kazakhstan. In this regime, during the exploratory phase, the oil company takes the exploration risk alone, however in the event of exploration success, the costs incurred are 100% reimbursed by the Brazilian government. In this system there are mechanisms whereby the government could increase their share of the oil produced, through criteria related to economic efficiency, profitability, production volume and the oil and gas price variations, which could bring instability to the dynamics of the project. Meanwhile, a positive aspect of this regime is that all discoveries, above or below the salt layer, in

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areas located in the pre-salt polygon contracted after the announcement of the partition model law shall be governed by the partition regime rules, offering more discovery opportunities to the contracted oil companies.

04 PRE-SALT SPECIAL FEATURE

A LOOK AT THE AREA IN THE NEWS RIGHT NOW

PPSA's share of oil shall be commercialized in accordance with the policy established by the government, whether they hire Petrobras or another company for this activity. The economic profits of these oil and gas trades shall be allocated to the "Social Fund", which establishes long-term savings in order to provide a resource for social development within areas of poverty mitigation, education, environmental development, culture, science and technology, and to reduce the macroeconomic impacts resulting from changes in income generated by E&P activities. The social fund shall also receive royalties arising from pre-salt fields, which according to the government will be calculated and paid in the same way as the post-salt royalties, until a specific royalties law is voted for the partition regime only.

ANP's upcoming bidding rounds will be very important to the Brazilian offshore market, as most of the wells from the previous auctions are likely going to be completed over the next two to three years. Petrobras, which has seen a decrease in production over the last couple of years due to several platform shutdowns, delays in rigs and FPSOs deliveries, and many operational bottlenecks, will finally see its performance and productivity rates gradually rise, mostly because of pre-salt, which will partially compensate for non-satisfactory post-salt development.

Already in 2012 the pre-salt contribution was considerably higher than in 2011, showing a growth of 37.36%, reaching almost 10% of all Brazilian production, with an average of 193,660 boe per day during the year. In January 2013 the pre-salt production was approximately 320,000 boe per day, up 9.35% from the previous month and 75.23% in comparison with the same month of 2012. The 17 wells in pre-salt production are highly productive and produce excellent quality oil (approximately 28 degrees API) with an average of 18,331 boe/day per well, which is expected to improve over the years due to increasing experience in the sector. Furthermore, the exploratory success index is at 82%, while the post-salt areas have seen a rate of 64%.



Petrobras is the only operator in the area owning 100% in five blocks, while they hold 65% and 45% in two other blocks where BG Group, Repsol Sinopec and Galp Petrogal are participating with varying takes. The oil and gas that comes from the pre-salt layer is so relevant that according to the Petrobras Business Plan, an investment of at least USD 52.2 billion from 2013 until 2017 (of USD 147 billion in E&P) will be made. Petrobras account for 15 new discoveries over the last 14 months, adding 8 new wells. Between 2014 and 2016, 11 new platforms will go on stream for pre-salt production: ten in Santos Basin and one in Campos Basin. This will allow oil production operated by Petrobras in the pre-salt to exceed 1,000,000 barrels of oil per day in 2017.

The Pre-salt has technical challenges to be overcome for the optimization of production areas, such as the long distances between the discoveries and the coastline (about 300 km), the depth of the reservoirs (5 to 7 thousand meters), the water depth (1500 to 3000 meters), and the salt layer thickness in some areas (approximately 2000 meters). However, the development of oil reserves and production will never stop, and oil companies will likely embrace these technological challenges. The greatest challenge will perhaps be the ability to produce under such conditions with the lowest possible cost, which over the years can also be possible through the market maturing. One thing is certain: the oil and gas industry will no longer be the same.

05 VESSEL NEWS

THIS MONTH'S FIXTURES, REQUIREMENTS AND MARKET SCREENINGS

THIS MONTH'S FIXTURES

Spot Fixtures

FIXTURE DATE	VESSEL	TYPE	CLIENT	OWNER	PERIOD	DAY RATE
22-Mar-2013	SEABULK BRASIL	PSV	TECHNIP	SEACOR MARINE	14 DAYS+ 7 DAILY OPT	RNR
22-Mar-2013	SEA LEOPARD	AHTS	PERENCO	DEEP SEA SUPPLY	5 DAYS + 5 DAILY OPT	USD 36.000.00
23-Mar-2013	YVAN BARRETTO	AHTS	OCEAN RIG	BOURBON SHIPS	3 DAYS + 3 DAILY OPT	RNR
26-Mar-2013	MAERSK HELPER	AHTS	SHELL	MAERSK SUPPLY	10 DAYS + 10 DAILY OPT	RNR
10-Apr-2013	MAERSK HELPER	AHTS	ANADARKO	MAERSK SUPPLY	20 DAYS + 30 DAILY OPT	RNR
12-Apr-2013	SEA LEOPARD	AHTS	TRANSOCEAN	DEEP SEA SUPPLY	03 DAYS + OPT	USD 42.000.00

Term Fixtures

FIXTURE DATE	VESSEL	TYPE	CLIENT	OWNER	PERIOD	DAY RATE
04-Apr-2013	BREMONA	AHTS	QUEIROZ GALVÃO	EDISON CHOUEST	8 MONTHS + 4 MONTHS OPT	RNR
04-Apr-2013	ALFANAVE CABO FRIO	PSV	QUEIROZ GALVÃO	EDISON CHOUEST	8 MONTHS + 4 MONTHS OPT	RNR
04-Apr-2013	REEDBULK	AHTS	QUEIROZ GALVÃO	EDISON CHOUEST	8 MONTHS + 4 MONTHS OPT	RNR

SEACOR – The PSV Seabulk Brasil after completing her time charter with Vanco has been employed to Technip in order to support their subsea activities with end user Shell Brazil. The vessel has been upgraded to DP2, the same as her sister vessel Seabulk Angra which is undergoing commissioning after modifications.

CHOUEST - Brazilian Queiroz Galvão has secured three Chouest vessels on eight month charter contracts. The two Anchor Handlers Reedbulk and Bremona were fixed, in addition to the PSV Alfanaave Cabo Frio. The Anchor Handlers are well known in the Brazilian market having operated for oil majors such as Shell, BP and Chevron.

DEEP SEA SUPPLY - The Sea Leopard has achieved the highest utilization amongst all spot vessels in Brazil for more than 2 years, this month the company has kept the vessel busy working for Perenco to moor and position the S/S Ocean Star, in addition to a short four day cargo job for Transocean Brazil.

VEGA - Vega Junis has successfully started her contract with Petrobras.

MAERSK SUPPLY SERVICE - After Maersk Handler departed Brazilian waters, Maersk Supply have attained 100% utilization during the month with the vessel Maersk

Helper. The vessel has operated in the spot market for Ocean Rig, Ensco and Shell, while it is currently on to Anadarko to assist with pre-laid mooring services. Maersk Pacer and Maersk Tender have been extended with Shell Brazil while Maersk Topper has become available.

BOURBON - AHTS Yvan Barreto has completed her term docking and been employed on the spot market to Ocean Rig for cargo transportation to two rigs offshore Campos. The vessel is currently available.

CBO - CBO Campos and CBO Guanabara have been fixed to Petrobras for 2 years firm plus options.

HARMS BERGUNG - AHT Uranus and AHT Janus will be arriving in Brazilian waters with rigs under tow.

VARADA - Varada Ilhéus has successfully started her contract with Petrobras.

MAERSK SUPPLY SERVICE - Maersk Provider has been extended with Odebrecht for an additional month.

OLYMPIC SHIPPING - Olympic Hercules is expected available towards the end of April when her contract with Petrobras is to be concluded.

THIS MONTH'S REQUIREMENTS

FIXTURE DATE	CLIENT	SCOPE OF WORK	PERIOD	COMM. DATE
12-Mar-2013	TRANSOCEAN	PSV/AHTS-SUPPLY DUTIES	10 DAYS + 5 DAILY OPT	31-May-2013
19-Mar-2013	BP BRASIL	1 PSV OIL REC	3X2 MONTHS OPT	1-May-2013
19-Mar-2013	BP BRASIL	3 X OSVs / BOOM HANDLERS	6 MONTHS + 3X2 MONTHS OPT	1-May-2013
26-Mar-2013	ODEBRECHT	PSV/AHTS-SUPPLY DUTIES	15 DAYS + OPTS	16-Apr-2013
27-Mar-2013	SEVAN	PSV/AHTS-SUPPLY DUTIES	3 DAYS + 3 DAILY OPT	28-Mar-2013

New Projects

According to the company's Business Plan 2013-17 announced on March 15th 2013, 15 new platforms will be contracted by 2020 to operate in Parque dos Doces, in Espírito Santo, and deep water projects in Sergipe. The units are scheduled to begin definitive operations in 2017 in Parque dos Doces and 2018 in Sergipe. Some of them are in final chartering negotiations with SBM and the all the platforms should be contracted between 2013-17.

Tender Awards

After a long wait, the tender issued in June 2012 for vessel type PSV 3000, commencement June 2013 (Drill Cuttings A and General Cargo A types) and June 2014 (Drill Cuttings B, Fluid A and B and General Cargo B types), recently had its first contracts awarded. Twenty four vessels will be hired for all types and 21 vessels were disqualified due to excessive price or exceeding MOB fee. The vessels listed below will work with Petrobras on four plus four year contracts.

Oil production falls again

In February, Petrobras oil production in Brazil declined 1.7% reaching 2.414 mboe p/d compared to the average of 2.316 mboe p/d in January 2013. Adding the national and foreign production, the company closed February with 2.557 mboe p/d, 2.1% less than in January. These results reflect the scheduled shutdowns of P-37 (Marlim), P-53 (Marlim East) and P-54 (Roncador). According to the company, the decrease in production was partially offset by the startup of three new platforms: FPSO Cidade de São Paulo, operating since January 5th in Sapinhoá pilot project, in the Santos Basin; the Sapinhoá North LDT, operating since February 12th; and the FPSO Cidade de Itajai, placed in the Santos Basin post-salt, on February 16th.

DRILL CUTTINGS A				
OWNER	VESSEL	YEAR BUILT	DAY RATE	MOB FEE
FRATELLI D'AMATO	F.D. HONORABLE	2011	USD 29 850,00	USD 1 500 000,00
DRILL CUTTINGS B				
OWNER	VESSEL	YEAR BUILT	DAY RATE	MOB FEE
UOS	WORLD EMERALD	2013	USD 29 900,00	USD 1 794 000,00
UOS	WORLD PEARL	2013	USD 29 900,00	USD 1 794 000,00
TIDEWATER	ART CARLSON	2003	USD 29 995,00	USD 1 799 700,00
FLUID A				
OWNER	VESSEL	YEAR BUILT	DAY RATE	MOB FEE
TIDEWATER	DE VRIES TIDE	2002	USD 28 500,00	-
FLUID B				
OWNER	VESSEL	YEAR BUILT	DAY RATE	MOB FEE
VARADA MARINE	VARADA TBN361	NWB	USD 28 341,00	USD 1 000 000,00
CMM	TBN YX3188	NWB	USD 28 400,00	USD 1 704 000,00
WILSON SONS	TBN HULL 1510	NWB	USD 29 995,00	USD 950 000,00
UOS	WORLD DIAMOND	2013	USD 29 900,00	USD 1 794 000,00
UOS	WORLD PERIDOT	2013	USD 29 900,00	USD 1 794 000,00
GENERAL CARGO A				
OWNER	VESSEL	YEAR BUILT	DAY RATE	MOB FEE
TIDEWATER	RICHARD A PHILIPPI	1998	USD 27 500,00	-
TIDEWATER	PELAGUE TIDE	2009	USD 26 000,00	USD 1 560 000,00
TIDEWATER	WILLIAM E BRIGHT	1998	USD 28 000,00	-
FARSTAD	FAR STRIDER	1999	USD 29 750,00	-
GENERAL CARGO B				
OWNER	VESSEL	YEAR BUILT	DAY RATE	MOB FEE
TIDEWATER	COLLINS TIDE	2002	USD 27 000,00	-
TIDEWATER	LUANDA TIDE	2002	USD 27 500,00	-
TIDEWATER	DAVIDSON TIDE	2009	USD 27 750,00	-
VARADA MARINE	VARADA TBN362	NWB	USD 26 991,00	USD 1 000 000,00
DOF	SKANDI STOLMEN	1997	USD 27 830,00	-
TIDEWATER	SAM S ALLGOOD	1998	USD 28 000,00	-
TIDEWATER	CARLINE TIDE	2011	USD 29 000,00	-
SOLSTAD	NORMAND TRYM	2006	USD 29 750,00	-
SOLSTAD	NORMAND VIBRAN	2008	USD 29 750,00	-
HAVILA SHIPPING	HAVILA PRINCESS	2005	USD 29 950,00	-

07 PETROBRAS NEWS CONT.

UPDATE ON THE BRAZILIAN STATE OIL COMPANY



Oil Spill on the São Paulo State coast

Petrobras has been ordered to pay a fine of USD 5 million to the Sao Paulo state Environmental Company 'Cetesb' over an oil spill that polluted several beaches along Sao Paulo state coast. The spill occurred April 5th as a result of "an operational failure" at one of Transpetro's sea terminals, during the refueling of a ship. Transpetro (a Petrobras subsidiary) said it had no estimate of the amount of crude spilled. Four days after the spill, Transpetro stated that it had completed the cleaning of all the eight beaches affected in the towns of Sao Sebastiao and Caraguatatuba, however some environmental specialists say that the rocky coastal areas and other ecosystems, such as mangrove swamps and a crop of mussels raised in an offshore farm, still have oil and will require special care.



New FPSOs for Santos Basin pre-salt

Petrobras has reported a contract for two FPSOs to operate in Lula Alto and Lula Central, the units will have processing capacity of up to 150,000 boe p/d and compress 6m cbm p/d of natural gas. The contracts valued at USD 3.5 billion have been signed with Dutch company SBM Offshore. Two VLCCs will be converted into the units and are to be fixed for 20 years. Part of the conversion process will be carried out in Brazilian shipyards and are scheduled for delivery late 2015 and early 2016. The units will be owned and operated by an SBM-led joint-venture, which includes Queiroz Galvão Óleo e Gás S.A.



FPSO Cidade de Paraty gets the green light

The unit received the operating license from Ibama to start working in Lula NE until October 2016 after completing the modules integration in Brasfels shipyard. Operations are scheduled to start May 28th. The environmental agency has also previously authorized the operation of the gas pipelines for connections between Lula NE and Sapinhoá fields and the system to flow the oil from Lula field to the Natural Gas Processing Unit (UPGN) in Caraguatatuba (São Paulo). The vessel has capacity to process 120,000 boe p/d and compress 5 million cbm/day of natural gas.



FPSO Cidade de Rio das Ostras ready for Espadarte

Petrobras is authorized to start the long duration test (LDT) in Espadarte field, Campos Basin, after it obtained the installation license (IL) which is valid until March 2015. The FPSO Cidade de Rio das Ostras is capable of processing 11,527 boe p/d and 96,000 cbm/day. Petrobras expects two other similar units to produce in the same field, according to the Business Plan 2013-17.



Karoon on third well and the rig is to mobilize to Anadarko

Karoon's first well in Brazil Kangaroo 1 has shown traces of a promising future for the Australian operator with the company continuously investing in its current drilling program. After drilling their second well, the third one named Bilby started in early April with expectation of being done by early June, with an additional 20 days if the well is to be tested. The contracted rig Blackford Dolphin will upon completion of the third well return to Anadarko, which have already started hiring vessels for the pre-laid mooring system to anchor the semi-submersible.

PERENCO has begun drilling program

After having taken over the semi-submersible Ocean Star from partner OGX, Perenco has started drilling activities in the first of the offshore blocks in Espírito Santo. The drilling campaign has started following clearance of the rig and also the environmental license from IBAMA. According to current schedule the operation may last until late August and into early September depending on the wells. The oil company hired AHTS Sea Leopard to assist with the rig mobilization and anchoring of the rig on the field.

QGOE and Petrobras may negotiate rig

After offering part of Jequitinhonha Basin's BM-J-12 block to the market without success, QGOE is negotiating with Petrobras for a jack up rig to restart its drilling campaign in the area. Nothing has formally been concluded yet, as the companies must find an acceptable time period for both Petrobras and QGOE.

BP conclude formation test in Campos Basin

The British company informed the market of an output of up to 5,600 boed at its well Itaipu-1A (Anadarko and Maersk hold 33.3% and 26.7% shares of the field) in Campos Basin, after concluding the formation tests and assuring commercial traces. BP also drilled the Itaipu-2 appraisal well in 2011 and will be drilling another well, the Itaipu-3, before the end of 2013 in a location that has already been agreed by the National Petroleum Agency (ANP). In mid-2013, BP will start a drilling campaign in Camamu-Almada basin with the rig ENSCO DS-4 and at the same time will divest in Polvo field, allowing some of the OSVs to be allocated to the new campaign, plus one PSV 3000 for oil rec and three boom handlers which are being currently requested in a RFQ recently issued.

OGX 2012 results and 2013 investments

OGX have been facing many challenges since 2011 when they reported a deficit of BRL 509.8 million, with the issues increasing further in 2012 with losses of BRL 1.172 billion. According to the EBX group, these results were due to the drilling of dry and non-commercial wells, which generated costs of BRL 691 million. The company also returned blocks to the ANP in Santos and Espírito Santo-Mucuri Basins after a frustrating exploratory campaign. Despite all the problems and difficulties over the course of 2012 OGX did achieve a total production of 3.2 million barrels from Tubarão Azul field posting revenues for the field of BRL325 million.

The group recently revised its planned investments for the year with USD 100 million to USD 1.3 billion with 75% going towards the development of fields and 25% towards exploration. The main focus of the year will be in connection to the Campos Basin with the FPSO OSX-1 connected to new wells, the operational start-up of the FPSO OSX-2 connected to Tubarão Tigre, Tubarão Gato and Tubarão Areia fields and finally getting the FPSO OSX-3 mobilized to the Tubarão Martelo field. In January, the field produced 12,000 bpd, according to ANP. Meanwhile Eike Batista is seeking to increase the investments in its company through a partnership with Petrobras. According to market rumors, the shares of the businessman in the stock market rose after the president Graça Foster confirmed that Petrobras evaluates the EBX Group as a partner to ports and other services.



IMAGE OF ENSCO DS-4

09 DRILLING & PRODUCTION ROUNDUP

WHAT'S GOING ON OUT THERE?

FMC Technologies / Subsea Equipment for Petrobras

FMC Technologies has finalized a deal with Petrobras to manufacture subsea equipment valued at USD 130 million for its pre-salt fields with delivery expected to commence in 2015. The contract for three manifolds, tools, spare parts and system integration with subsea controls will be handled by FMC's technology center in Rio de Janeiro.

Aker Solutions / Wet Christmas Trees (XT)

Aker Solutions will manufacture 60 new vertical wet christmas-trees (XT) with control systems and tools to be installed at the pre-salt fields in Santos Basin for Petrobras. The Norwegian group signed an agreement with Petrobras valued at USD 800 million with options for further equipment. The orders are scheduled to be delivered from 2014 to 2018 and will be manufactured at the company's new technology center, which is being built in Curitiba, Paraná and intends to replace the current factory in the same place.

Asco / Logistic base

Asco intends to begin the construction of its logistic base at Porto do Açu super port in the second half of this year and may be operating as early as 2014. The initial start-up will see the installation of warehouses, tank storage areas for fuels, exploration and production fluids, as well as cargo handling and industrial cleaning equipment, counting initially over four berths. Among the services that will be offered in Brazil are industrial cleaning which includes the tank cleaning of vessels and the training of safety and cargo handling technicians.

Saipem and Subsea 7 / lazy-wave risers system

The two companies have signed contracts for subsea systems to be installed in the Santos Basin's fields. Subsea 7 fixed three contracts valued at USD 300 million, where two are for the installation of flexible pipes to make up a system of lazy-wave risers in Sapinhoá and Lula NE, where the FPSO Cidade de São Paulo is producing at water a depth of over 2,100 meters. The third deal not yet official involves EPC services for the installation of umbilicals and lines.

Saipem will provide engineering analysis and design service to Wood Group Kenny for the lazy-wave riser system to be installed in Sapinhoá Norte where Petrobras operate the FPSO Cidade de São Vicente. The riser and lines will be set at a water depth of approximately 2,000 meters and delivered in two stages.

Technip / Papa-Terra Project

In 2010 Technip won a contract from the Papa-Terra BV, a joint venture between Petrobras with 62.5% and Chevron 37.5%. The contract included the engineering, procurement, manufacturing and supply of 27 kilometers of Integrated Production Bundles (IPB) risers and flowlines, and an electrical and monitoring module that will be installed on the FPSO P-63. Technip will begin the installation of modules and IPBs they manufactured during the first half of 2013. The company is in the process of hiring barges and tugboats for transportation of the flowlines for the project and may require more support vessels soon. Meanwhile, they will continue with the operation in the subsea installation project (phase II) for Shell (BC-10 block) with their vessels CSV Deep Blue and MPSV Deep Pioneer, among other vessels.

10 LOOK AHEAD

WHATS UPCOMING OVER THE NEXT FEW MONTHS

BR PETROBRAS
O DESAFIO É A NOSSA ENERGIA

Presidência
Direção e Estratégia

BRASIL
100 ANOS DE INDEPENDÊNCIA

THE 2013-2017 BUSINESS & MANAGEMENT PLAN

The latest business plan from Petrobras was issued last month to the market and subsequently approved by its Board of Directors. The release of the 2013 – 2017 plan came on time which was regarded as a positive move given delays seen in previous years.

The tone was kept realistic, with the implementation of the optimisation and cost reduction programmes being the cornerstones of the report. The main focal points were PROEF (Increase of Operational Efficiency), PROCOP (Operating Costs Optimization), PRC-poço (Reduce well costs), INFALOG (Infrastructure Optimization program) and PRODESIN (Divestment program). Between them the anticipated savings could reach some USD 16 billion by 2016.

As anticipated, production targets will remain the same as the previous plan – 3million boe per day in 2015 increasing to 5.2million boe per day by 2020. Key to achieving this production target is the successful delivery and installation of 25 new floating production units which Petrobras has penned for delivery before 2017. However the 2013 production targets have been sorely pushed due to problems arising from maintenance shut-downs. Because of this Petrobras has given itself a +/- 2% leeway margin from its 2.4 boe per day target for 2013.

Level of investment showed little change from the previous plan. USD 236.7billion will be invested from 2013 to 2017, with the E&P budget claiming 62.3% of this (USD 147.5bio). Crucially all of this is earmarked for on-going projects i.e. no new projects are expected. Production development will absorb 73% of the E&P

expenditure (USD 17billion more than last plan) while 24% will be spent on exploration activities and USD 16.3billion on infrastructure and support. Most of the Exploration investment is allocated to the post-salt fields (70%), while the majority of the Production Development investment will go to the Pre-salt areas (68%).

So what does this mean on the vessel front?

For many, this will be nothing new, but our analysis leads us to conclude that a wider range of tonnage will be required for production development over drilling. This means tugs for tanker lifting operations (TS15000 class), vessels for offloading hose maintenance (TO 15000 class), anchor handlers for installation of 120t torpedoes (AHTS 21000 class), fast supply vessels (UT4000 class), vessels for bunker or water transportation (PSV 3000 oil/water carriers) and line handlers (LH 1200 class).

This does not mean that potentially other types of vessel won't also be needed. Anchor handlers and supply vessels for areas aside from Production particularly in the post-salt fields will also feature heavily. However as mid-water rigs are expected to play a smaller part in the Petrobras story, so will the mid-size AHTS vessels.

Finally, new tenders will resume as soon as outstanding ones are approved and this is expected to happen quite soon (although international definitions of "soon" do vary).



BY DANIEL DEL RIO
MANAGING DIRECTOR

As the number of DP units increases, the usage of dynamic positioning is intensifying and as a consequence, so are the DP incidents.

In the world of shipping, offshore support is still relatively young. The similarities to liners, bulk carriers or tankers is limited to sailing, loading and unloading while the rest takes it into a niche of its own. And within the world of offshore shipping DP usage is a relatively recent development, one could go as far as to say at times it takes us into unknown territory.

Therefore it's not uncommon for industry experts to have greatly varying opinions on the usage of DP. But to keep it simple, we'll start by addressing one of the most pressing issues, namely procedures. Oil companies, particularly those with historical links to shipping, IMCA, ship owners and associations have made valiant efforts towards the regulation of DP usage. As expected, the regulation began with a minimum competence matrix for offshore personnel involved, then evolved into set procedures and rules regarding minimum amount of experience any personnel must have before assuming control of a vessel whilst under DP. The procedures

currently adopted by most charterers and owners are robust and should, when followed, avoid operational issues during the use of DP. However this is not necessarily what happens

out in the field. A number of incidents have resulted from regulation being followed, but not to a sufficient extent where all harm is avoided. The issue of loss of position and the

“People only know how to push buttons these days, they don't know how to handle the ship anymore”

unreadiness of the crew have come to light.

One good example comes from what some term “relative reference systems”. A number of incidents have occurred while vessels were alongside on fan beam, the signal is lost and the DP system realigns over the GPS, which inevitably causes the vessel to move as the precision of the systems is not the same. Several operations have taken place, and still are taking place, with marine professionals using both GPS Signal

and fan beam something which is seen as a redundant operational mode. But this in itself is an example of how redundancy is interpreted differently by many within the industry. IMCA defines that an alternate mean should maintain or restore the system function, i.e. the

GPS is an alternative, but not an alternate mean to the fan beam to keep position. A prism is. “Alternate” and “alternative” are similar, but don't mean the same thing.

Based on what has been learned from previous incidents, if your DP operations rely solely on a fan beam plus GPS as redundancy while the vessel is in DP alongside, a review is recommended.

Conversely, the focus on exercises on paper as opposed to real offshore experience has resulted in another failing from charterers, and is the inspiration for this article, a DP Overdose. On incidents occurring from loss of position, what's often observed is the officer's response to take manual control was not quick enough to avoid a near miss or collision. In other cases the crew had insufficient knowledge of how to

DP OVERDOSE



12 INSIDE STORY CONT..

DELVING INTO THE ISSUES AFFECTING OFFSHORE BRAZIL



take manual control of the vessel and maneuver. "People only know how to push buttons these days, they don't know how to handle the ship anymore" we heard from an experienced DP instructor. And it's true: when some think that modern offshore vessels are like an Airbus 380, "if the electronics fail we are all dead", the dynamics of offshore shipping in most cases allow for an experienced navigator to timely take his vessel out of harm's way. An experienced navigator that is.

And therein lies the problem we hear more and more about. Charterers are demanding that in all cases and for all cargoes DP must be fully engaged and used, under the perception that DP is always the safest choice for every cargo operation offshore. Navigators with up to 10 years of experience in some cases have never maneuvered alongside a unit, have never "handled the ship" but only "pushed buttons", and a PSV is not an A380. Navigators can have extensive training to 'feel' the vessel while maneuvering elsewhere, but the question is how realistic is the perception that DP is always a safety barrier? When will it become a threat? Or rather, how

can charterers and owners adequately manage risk to the point that for a single lift of a provisions container, a vessel can approach in manual mode and safely perform the cargo transfer with the unit? Are we moving away from any and all manual approach altogether?

If your officers have never maneuvered alongside and your operations never allow for it either, a review is strongly recommended. Has 'enhanced joystick mode' been discussed within your company? Does your company know why this is not recommended, when the expectation is either to be on DP or not?

Lastly relying on DP systems has become convenient. Several if not most offshore operations are coordinated by rig personnel with limited or no marine experience. The same can be said for shore based marine managers working within oil companies who have little or no offshore experience. This results in a common outcome: the rig dictates the marine operation i.e. time alongside and approaching protocols. Especially in drilling and completion activities, the rig

under the apparently reasonable argument that fluids will be needed "at any time", requests the support vessel to remain alongside with the fluid hose connected for hours, or to sail out and re-approach quickly in such a way that DP protocols cannot be followed. Often without the adequate perception of how this practice increases the exposure to risk - in most cases unnecessarily.

When the holes on the barriers align in such a way: "the DP fails". However in most cases, it wasn't about the DP at all. Dynamic positioning is a safety barrier but the usage of it is a risk that requires top risk management practices in a holistic view of the operation.

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On 22nd to 24th May 2013 Informa Maritime Events in association with Lloyd's List will host The Offshore Support Vessel Conference in Rio de Janeiro. The event will have two interactive workshops on top of the two day seminar, covering feedback on demand from leading ship owners and oil and gas companies, training and crewing challenges as well as chartering and commercial information on Brazil's heated market. For more information please visit: <http://www.informamaritimeevents.com/event/OSV-conference-brazil>