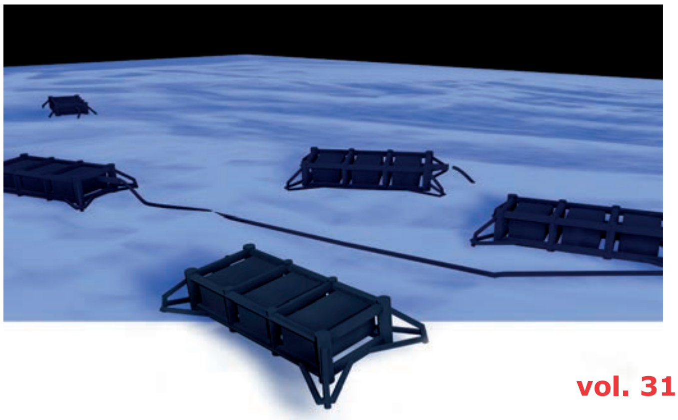



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SEN

SUBSEA
ENGINEERING
NEWS

## AUSSIE MINNOWS TRY TO REVIVE *CORNEA* PLAY

*From Australia (RW):* The controversial *Cornea* oil and gas field in the Browse Basin, offshore Western Australia, is set for a thorough five-year assessment by a joint venture of local independent companies banding together as Cornea Resources.

The group has been awarded retention licence WA-54-R which covers six graticular blocks encompassing the discovery. The permit term is five years.

Cornea Resources chairman, veteran oil and gas entrepreneur and solicitor Geoff Albers, said a programme to test the completion design and long-term production behaviour of the various reservoirs penetrated by wells in the field is the only way to assess whether they can support a commercial development.

The P50 oil resource estimate is about 410mmbbls in place, but the recovery factor is thought to be quite low. This, he said, presents a technical challenge to any would-be developer.

### Study away

The JV proposes to conduct a series of engineering study programs to address these challenges to production and perceived barriers to commercialisation. Subject to the study results, a production test programme will be initiated in the fourth permit year.

*Cornea* hit the headlines when discovered by Shell in the mid-1990s. Shell subsequently made a huge work programme bid for surrounding open acreage in the 1996 offshore bidding round including the proposal to drill no less than 42 wells in a $30mn exploration program during the six-year permit term.

After several wells, Shell realised that the initial potential could not be sustained and applied for a variance of its commitments. After a lot of controversy, industry angst and media hostility, the government acquiesced to the request at *Cornea*, but forced Shell to use its spending commitments in other permits.



WHAT'S INSIDE

Cornea Resources believes a more measured step-by-step approach will answer the question of commercial potential for this dormant discovery.

(*From the Editor:* This prospect is located inshore from Inpex's *Ichthys* giant gas-to-LNG floater development. The contingent gas reserves are around 3bcm.

The partners involved in this venture include Moby Oil & Gas, Octanex and a number of entities with have 'Cornea' as part of thier their names.)

## REPORT FROM *UTC*

### SUBSEA FACES OLD AND NEW CHALLENGES

*From UTC-2014, Bergen:* Thirty years ago, when subsea production was just emerging as a development option, many operators carried out concept select studies comparing subsea wells with small unmanned platforms. So what has changed?

Statoil's Anders Opedal, senior veep for project management & control, came to this major subsea event and told the audience that his company was now looking at a simple slim-leg unmanned platform as an alternative to subsea. This could be used initially on its *Oseberg* complex.

While the basic platform model - meant to be too small to build anywhere, but domestically or at least regionally - would likely require a jackup for development drilling, a bigger model, capable of operations to 200m, could be designed to handle a modular drilling that would be lifted aboard.

Opedal's keynote address was not necessarily meant to throw a scare into Statoil's big subsea team - although it must have made a few sweat a bit - but to illustrate how serious the industry is, particularly the big Norwegian operator, on reducing development costs.

While some of the blame for rising costs has been directed at operators, eg due to increased amount of project documentation, Opedal threw the ball back at the supply chain. He said that 70% of engineering documents were returned as insufficient and another 20% were returned more than once which added NOK700mn - or more than $112mn at current exchange rate - to the cost of doing business.

Statoil is trying to do its part, Opedal said, with a number of inhouse initiatives. These include STEP (Statoil Efficiency Programme) which is looking to reduce capex by 20-30%, partially through standardisation, but also through industrialisation, ie making projects and processes repeatable.

Some of the possible outcomes include standard manifolds and the new vertical subsea tree (SEN, 31/6) which is meant to save NOK300mn ($50mn) per well and be installable by all 37 rigs under charter.

The issues touched on by Opedal were repeated over and over again here - notably standardisation, improved oil recovery and reducing cost - as well as the inexorable drive towards improved technology.

Chevron's Steve Thurston said his company has 'a big seven' list of technologies that it sees as key in the next decade. At the top of the list was something on the seabottom, but not directly related to production.

Ocean bottom node seismic, often called 4-D seismic, is a gamechanger for Chevron not just in the future but now as it is being deployed on its *Jack/St Malo* (31/2) Gulf of Mexico deepwater floater development. Others in the list include dual gradient drilling (31/5); seabed boosting; and single-trip frac pack completions. It is currently involved in 30 technology projects.





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Ingrid Solvberg of NPD revealed one the worst kept secrets in the industry - that operators underestimate expected reserves recovery. Ms Solvberg said that projects recover 70% more oil and gas than the reserves suggested in project plans for development (PDO).

The NPD official also mentioned costs, but what is exercising minds at the regulatory body are what is small - fields which on average have reserves of just 4.3mboe (27mmbbls) not including the giants *Johan Sverdrup* and *Johan Castberg* and the new class of licencees with more limited resources, both financial and in personnel.

And there is also the issue of access to infrastructure with NPD having the powers and tools to push developers of small fields and holders of infrastructure together, but is reluctant to use them.

Refurbishment of equipment is a way to save money and to make money as well. A big IOR programme on *Troll West* is aimed at raising recovery from 42% to 52% - or up to 2.1bnbbls. This will involve four rigs drilling 10-15 wells per year - on top of the 122 already there!

Statoil wants to refurb 14 trees per year, but supplier Aker Solutions only had the capacity to do 7/year, but this actually translated into only 3-4/year. A new initiative, dubbed Pit Stop, has enabled AkerSol to do seven already this year. Good business.

Also part of this IOR programme is the *Troll B* SURF life extension which is aimed at determining the remaining life - 'margin to failure' - of flexibles and umbilicals as well as manifolds and templates. What Statoil is trying to determine is whether to go-ahead with replacement of equipment or to continue monitoring the equipment to see how long they will last.

**UTC UTTERINGS**: Here is a code - TR1233 - which you should know if you have or intend to supply subsea equipment to Statoil. It is its specifications and it is the gospel, ie rules, according to the Norwegian operator.

GE Oil & Gas subsidiary Naxys is looking to expand its subsea monitoring expertise to cover rotating machinery and intends to work with topside specialist Bentley Nevada to marinise its existing sensors.
SEN has been telling folks for some time that subsea raw water injection is going to be big and now it is true. Besides the projects already in place (*Columba* and *Tyrihans*), Saipem has installed a pilot system in the Congo for Total. The key element is sulfate removal to avoid scaling in reservoirs with high barium/strontium/calcium content in the produced water.

ExxonMobil has spent a good part of the last five years working on subsea separation and has patented two pieces of the system - the gas/liquid slug catcher and the liquid/liquid separator. The question remains - will they be deployed?

SEN heard one unusual sector that is being considered - but if we say this might be last issue of SEN! - but it could be that some of the technology may be licenced. This would ensure those engineers and technologists don't feel they have worked for no result.

On the issue of power for long-distance tiebacks, Statoil has decided that it will not need to look at technology for beyond 250km, ie DC, for at least 10 years.

When does a word not mean what is meant to mean? The assumption that a 'compact' separator is meant to be smaller than what has been deployed to date is not necessarily the case, according to FMC. When asked what was the definition of 'compact', the FMC presenter smiled and said it does not mean size, but simply non-vessel-based.

Norske Shell has not been shy to say that its *Linnorm* subsea project (30/16) has not met commercial parameters. What wasa not heard before is the fact that the wellstream has $H_2S$, $CO_2$ and mercury. Nasty.

Here is a typical USA v the rest of the world issue. There is some reluctance on the part of a number of US companies to sign up to some





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ISO standards, because Iran is a signatory to those agreements. So the Americans are sticking to API.

This has complicated issues for the Norwegians who have, as a result, gone back to resurrect its own NORSOK standards to get over this issue.

What some people know as *Gendalo/Gehem* (31/6), the twin deepwater gas fields in Indonesia being developed by Chevron, is also known as **IDD**, or Indonesian deepwater development. SEN was told that GE has picked up the subsea hardware job there.

Wintershall which handed the FEED work for its upcoming **MARIA** (30/18) subsea development in Norway to Reinertsen looked at 24 different possibilities during the concept select phase with Genesis. The current one has it linking up with four different hosts.

GE Oil & Gas has taken a business like approach to future demands for **SUBSEA COMPRESSION**. It looked at 1,100 possible candidate fields, winnowed that number down to 245 and came up to the conclusion that only three projects would deploy it at current costs and technology.

It decided that what was required was a simple, robust and low-cost solution based on a centrifugal design for a wet gas scenario. What was interesting was that all of the cases in which subsea compression seemed most applicable were under 1,500m of water and with liquid void fraction under 2%.

## PROJECT UPDATES

### F-M KICKS OFF DEEPWATER REDEVELOPMENT SCHEME

*From Houston (BN):* Subsea 7 announced a $50mn contract from Freeport-McMoRan for installation of flexible pipelines and umbilicals at the *Holstein Deep* and *KOQV* projects in the Gulf of Mexico.

*KOQV* stands for the *Kilo/Oscar* and *Quebec/Victory* segments of the *Horn Mountain* development. The work will be done by the vessel *Seven Seas* late next year. Planning will be done by S-7's Houston office.

The S-7 work is part of the copper miner's ambitious surge into deepwater GoM exploration and development that has included takeover of Plains in December 2012, big spending on leases at the March Central GoM sale and, most recently, purchase of Apache's deepwater GoM interests.

*Holstein Deep* and *KOQV* will redevelop or invigorate declining fields, reflecting F-M's focus on 'brownfield' and 'near-field' work to maximise the production facilities acquired from Plains - *Holstein* (Green Canyon 645), *Horn Mountain* (Mississippi Canyon 127) and *Marlin* (Viosca Knoll 915).

The facilities have the capacity to handle 250,000b/d and 14bcm/d, but only about 25% of that capacity is being utilised. The goal is to push usage of the three facilities to 90-95% by 2020, carrying forward plans filed with regulators by previous operators (Plains acquired the facilities from BP shortly before the F-M takeover).

The announced S-7 work appears to be part of a phased expansion of *Holstein* into a nearby prospect dubbed *Holstein Deep*, which lies along a 5km north-south axis that's 6-9km west and northwest of the *Holstein* spar in GC645. It will involve wells as deep as 9,450m on the opposite side of a salt deposit from the spar and existing *Holstein* wells. Water depth at the site is about 1,180m.

Under the contract, S-7 will link three producing wells and an injector being drilled in GC643 back to the platform. A later phase, if F-M executes the exploration plan filed with regulators, will include two more wells and another injector in GC599, which is about 5km north of the drill center in GC643. There will also be a sidetrack drilled in GC 643.

The estimated production boost to *Holstein* is 10,000boe/d with added reserves estimated at 117mmboe. Ultimately, F-M may take exploration at *Holstein* deeper, into the Wilcox (aka Lower Tertiary), with a well 10,970m deep. The deeper well could result in an additional 10,000boe/d in production and a reserves boost of 445mboe, according to F-M.

S-7 also will lay umbilicals and flexible pipe for the *Kilo/Oscar* and *Quebec/Victory* additions to *Horn Mountain*. Two wells, each penetrating two sands, will be drilled to about 3,970m. Water depth is 1,646m.

With other planned work, the goal is to dramatically lift *Horn Mountain* throughput to 56,000boe/d by 2018 from the current figure of under 10,000boe/d. Reserves are expected to grow to 187mboe from 28mboe.

Altogether, F-M has more than a dozen projects planned by 2020. Other tiebacks include *Copper*, *Tungsten* and *Silver Fox* to *Holstein*; seven prospects including *Platinum* to *Horn Mountain*; and *Dorado*, *Mercury* and further development at *King* to *Marlin*.

F-M is currently drilling the *Tara* exploration in 2,666m in Keathley Canyon 627 and has an approved exploration plan for *Giverny* in 1,162m in GC393.

## RUSSIAN BEARS MOVE INTO THE BARENTS SEA

*From the North Sea (NT):* Lukoil is to team up with Gazprom to go exploring in Russia's Barents Sea, despite saying last year it made more sense to develop onshore fields in Siberia than chase new discoveries offshore.

The private company will hold a 34% stake in a joint venture which is due to be established by year-end, according to CEO Vagit Alekperov. Under Russian law, offshore exploration rights are reserved for state-owned enterprises, but private companies like Lukoil can get round the restrictions by partnering with a license-holder like Gazprom.

Meanwhile a research expedition has returned to port after finding 'extreme ice conditions' in areas licensed to Rosneft and ExxonMobil in the Kara, Laptev and East Siberian seas.

During the two-month voyage nearly 1,000 icebergs were encountered, representing a real challenge to drilling, *Barents Observer* reports. Volcanologists will be despatched to the East Siberian Sea to investigate signs of seismic activity.

This summer Rosneft and ExxonMobil plan to spend an estimated $600mn drilling the *Universitetskaya* wildcat in the Kara Sea.

The Natural Resources Ministry has tendered for an aerial survey to help establish the prospectivity of the northern East Siberia Sea.

## MOL WANTS TO BE A BIG UK PLAYER

*From Aberdeen (IF):* One of the newest entrants to the UK North Sea wants to be an operator of producing assets in the basin by next year. The transaction could be for a project to be brought onstream or it could be an established development.

Hungary's MOL Group aims to be a big player on the UK Continental Shelf within three years – and has $5bn to back up its plans.

The international company announced last December it was spending $375mn on acquiring 14 UK North Sea licences from Wintershall of Germany.

These included non-operating equity stakes in the *Broom* field (29%) as well as the *Catcher* (20%), *Cladhan* (33.5%) and *Scolty/Crathes* (50%) developments.

The managing director of MOL Energy (UK) is industry veteran Chris Bird, whose previous roles include being a boss at Venture Production before its takeover by Centrica.

Bird told SEN this week that the group had only opened its Aberdeen office in March - the same month the Wintershall deal closed - and things were moving along quickly.

Earlier this month, Premier received UK Government approval of the *Catcher* (SEN,





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31/6) field development plan. The Central North Sea project is expected to produce 96mboe with a peak production of 50,000b/d.

It involves the drilling of 22 subsea wells (14 producers and eight water injectors) on the Catcher, Varadero and Burgman fields which will be tied back to a leased fpso. First oil is targeted for mid-2017. Premier operates (50%) for Cairn Energy (30%) and MOL.

Alexander Dodds, executive veep E&P at MOL, said the *Catcher* go-ahead was a milestone in the group's North Sea strategy.

**Growing**

'This region is of growing importance for MOL - we have also submitted a bid for licences in the UK...28th offshore round of...licensing, and we look forward to a successful outcome of our submission,' Dodds said.

Bird said the planned investment of more than $1bn was just the starting point for MOL to grow the size of its business in the UK and the rest of Western Europe. He said that 'within three years, we want to be a significant player on the UK continental shelf in terms of production rate and capital spend to build the business.'

Bird said MOL could become an operator of UK producing assets by next year through an acquisition. They were working on four or five possible key transactions, which could start in value from just $100mn. The group was also looking at some 'very big' deals.

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## PETROBRAS TALKS THE TALK AT WPC

*From Houston (BN):* Petrobras did a lot of bragging at the recent World Petroleum Congress in Moscow.

Some of the metrics were familiar, but they're still interesting. Anelise Lara, executive manager for the *Libra* (31/5) field, touted the speed of development, noting it took just eight years for production in the Brazilian pre-salt to reach 400,000b/d.

It took 134 days to drill the first well in 2006. By 2013, it was taking 60 days. And wells hit paydirt 100% of the time. There are now nine fpso's and by 2020, there will be 24 more, Lara told delegates.

**Unemployment dip**

In another presentation, Petrobras' gas and energy director Jose Alcides Santoro pointed to a decline in Brazilian unemployment to 6.7% in 2012 from 9.9% in 2002, driven in large part by oil and gas.

The shipbuilding industry, helped by local content requirements for offshore development, is booming. In 2003, there were two yards employing 7,465. This year there are 10 employing 80,000.

Petrobras expects to take delivery of 28 drilling rigs, 32 production platforms, 154 large support vessels and 81 tankers by 2020, all built in Brazil, Santoro said.

*From the UK:* Also at WPC, a Petrobras adviser on local content, said such a policy must be used to encourage indigenous development, not to be protectionist. It was pointed out that since 2006, 95,000 workers have been trained under the the PROMINP programme.

It may be early for Christmas presents, but Petrobras just bolstered its reserves base by another 10-15bnbbls of oil from the Transfer of Rights area. This is the additional amount of oil - beyond the 5bnbbls Petrobras already has access to - in the *Buzios*, *Iara*, *Florim* and *Tupi NE* fields.

For the privilege of getting access to this extra reserves, Petrobras will pay the government $900mn this year and another $5.85bn in what is known as 'profit oil' through 2018.

## PROJECT BRIEFS

*From Australia (RW):* Subsea Engineering Associates (SEA) has been awarded a A$1.3mn contract to deliver a significant part of the FEED work for the **BALTIC GAS** project, offshore Poland.

The work includes FEED of subsea pipelines, including the shore approach, trenching, risers and tie-ins. The job will be done from SEA's Perth office with help from Polish contractors.

The project will develop two fields, B4 and B6, in the Polish sector of the Baltic Sea. Resources are estimated to be up to 4bcm.

*Baltic Gas* is a partnership established specifically for the project between CalEnergy Resources and LOTOS Petrobaltic with CalEnergy as operator.

Aker Solutions is to writeoff potential income of $150mn following Total's cancellation of the remainder of a two-year charter of the well intervention vessel **AKER SKANDI** which had been working in Angola.

SEN has been told that the vessel had suspended operations at the end of March following technical issues with its workover system. Total had the right to cancel the charter following the vessel downtime.

Only this week AkerSol had solved the problem with the system which had been hampered by difficulties in securing visas for personnel and getting access to spares. The vessel is now ready for operations again.

*From Houston (BN):* Japan is pressing forward with offshore **METHANE HYDRATE** development (31/5).

Officials announced a five-month programme to plan medium and long-term production tests, building on work Japan has done since 2001 to develop the icy deposits that could hold billions of cubic meteres of gas.

Japan Petroleum Exploration Co, Japan Drilling and INPEX have contracted with the public-private entity, Japan Oil, Gas & Metals National Corp for technical studies and policy formulation to be completed by late October.

Genesis has secured a concept select study and pre-FEED work covering BG Group's deepwater gas finds, offshore **TANZANIA**. The discoveries to date in Blocks 1-3-4, totalling 470bcm, are in waters of 1,000m to 1,800m. The scope of work covers the production system which will provide feedstock for an onshore LNG plant.

Just to add more grist to the mill, Statoil and partner ExxonMobil have now confirmed their sixth find in Block 2, in deeper waters of over 2,3200m, bringing total reserves to 566bcm.

*From Houston (BN):* Husky's plan for a concrete gravity wellhead platform to develop **WHITE ROSE EXTENSION** (30/19) is moving through the regulatory maze.

Memorial University's Harris Centre has been hired by the Canada-Newfoundland & Labrador Offshore Petroleum Board to hold public information sessions, collect input, analyze Husky's application and make recommendations to the board.

Environmental assessments already have been completed and approved by regulators, who found no significant adverse impacts.

Husky and its co-venturers Suncor and Nalcor plan construction at Argentia and Placentia Bay and production startup in late 2017, assuming all necessary approvals.

*From the North Sea (NT):* Maersk has engaged Technip for subsea work in connection with projects in Denmark.

The contractor will supply and install an 18km, 8in replacement flowline between the **ROLF** and **GORM E** platforms.

As part of the **VALDEMAR/ROAR** gas-lift project, it will supply and install two riser caissons at those platforms and 34 spools. The projects will be executed from Norway in summer 2015 with the reelship *Apache II* laying the flowline, which will be fabricated at the Orkanger base, and dsv *Wellservicer* handling construction work.

The first of four 'standard umbilicals' has been delivered by Nexans to Statoil for its

**OSEBERG DELTA** (30/14) subsea development. Standard in this context means prequalified components grouped in configurations specific to the field. SEN has been told that there has been considerable savings on engineering and documentation.

The Technip-DeepOcean joint venture has secured the frame agreement for pooled services for Statoil's existing **PIPELINE REPAIR SYSTEM** beginning 1 December. The agreement covers 15,000km of pipelines in the Norwegian offshore sector.

GE Oil & Gas will supply its first **20K BOP** (31/4) and riser system for the BP/Maersk Drilling 20K rig design project.

*From the North Sea (NT):* The Norwegian Petroleum Directorate has completed the drilling of three shallow boreholes on the little explored **MØRERAND HIGH** region of the western Norwegian Sea.

The primary objective of the operation was to take core samples of slanted reflectors found deeper than 130m below the seabed as part of investigations into the geological development of the Norwegian Sea basin, the NPD says. Drilling was carried out by Fugro Seacore's *Greatship Manisha* vessel in waters of 2,130m.

*From Australia (RW):* Sunbird Energy has completed acquisition of 76% of Block 2a offshore South Africa which includes the **IBHUBESI** (30/23) gas project.

All South African government approvals have been received enabling the company to finalise its acquisition from Forest Oil.

*Ibhubesi* is the largest undeveloped gas discovery in South Africa with 2P reserves of 15bcm. With significant exploration upside, the best estimate prospective resource is put at 220bcm. The Block 2a covers an area of 5,000km$^2$ within the Orange Basin, 380km west of Cape Town and 70km off the coast.

More than $125mn has been invested in exploration and appraisal of the block since 2007. Seven of the 11 wells to date have discovered commercial volumes of gas.

Sunbird will now press on with gas sales negotiations with Eskom for the supply of gas to the existing Ankerlig power station that is currently using diesel as an electricity generating fuel.

*From the North Sea (NT):* As Det norske oljeselskap prepares to publish details of how Wintershall's **ASHA** (30/16) discovery will be incorporated into the *Ivar Aasen* development, following NPD's determination that it is part of *Aasen*, Detnor has moved to increase its stake in the Wintershall licence by acquiring Spike's 20% interest.

In return Spike will get 10% from Detnor in the **GARANTIANA** (29/18) discovery, leaving Detnor with 10%. Operator Total is currently drilling an appraisal well on *Garantiana*, which like *Aasen* is in the Norwegian North Sea

*From Houston (BN):* The BP sell-off in the Gulf of Mexico continues. Noble announced agreement to acquire 50% of BP's interest in 17 deepwater GoM exploration leases in the Atwater Valley area.

As a result, Noble will have a 50% interest in 13 leases and an average 26% interest in four. Among the acquisitions is half of the **BRIGHT** (31/5) prospect, which BP is currently drilling in 1,700m in AT 362. Plans call for the well to be drilled to 4,115m total depth, targeting Upper and Middle Miocene prospects and an estimated 90 to 350mboe, with results expected in the third quarter. BP also confirmed selling six deepwater GoM blocks to LLOG. Details were unavailable.

Noble also said it expects results from its **KATMAI** exploration in 632m in Green Canyon 40 by its second quarter earnings call July 24. Noble also is currently drilling a second well at **DANTZLER** in 2,000m in Mississippi Canyon 782. Noble announced the *Dantzler* discovery in December (30/18).

*From Australia (RW):* The BG-led group that includes Pancontinental Petroleum has reported the first ever offshore oil discovery in East Africa.

A 14m gross oil column and a 29.6m gross gas column were intersected in a buried reef reservoir with **SUNBIRD-1** in Kenyan permit L10A. The well also encountered a thick and effective seal over the top of the reef with porosity and permeability of the reservoir better than expected. *Sunbird-1* is in the Lamu Basin and confirms a valid prospective oil system in the region.

The well, drilled last March, has taken a while to evaluate because of technical difficulties. But the group was alerted to the good reservoir parameters after it lost drilling mud, seawater and remedial cement pumped into the reservoir during drilling.

Pancontinental (18.75%) told the Australian Stock Exchange that the group is now in a prime position to explore for oil over its portfolio of prospects and leads in the permit and two other nearby blocks. The company also expects the *Sunbird* result to spark an increase in industry interest in the region. BG operates (50%) for PTTEP (31.25%) as wekk as Pancontinental.

**GREECE** is to open an offshore licencing round on 1 July and present results of a large seismic shoot carried out by PGS. Greece has been encouraged to licence acreage by recent big gas finds off Israel and Cyprus.

## FLOATER NEWS

### LLOG READIES TO PARTY AT *DELTA HOUSE*

*From Houston (BN):* LLOG is planning 9 July ceremonies to christen its *Delta House* (SEN, 30/15) fps at Kiewit's Ingleside TX yard.

The Kiewit-assembled topsides and the Exmar Opti-11000 hull, built at Hyundai in South Korea, were integrated at the yard on June 17 after the hull arrived from overseas on 13 May. The semi is expected to be ready for sail-out to Mississippi Canyon 254 on 27 July with actual departure dependent on factors including weather. Installation at the site will take two weeks later this year. Target date for first production is still 1H 2015.

*Delta House*, which will be moored in 1,350m the Gulf of Mexico 220km southeast of New Orleans, is an ambitious project, intended to pull in production from several blocks, some as far as 21km away. Its design capacity is 100,000b/d and 6.8mcm/d.

Discoveries *Son of Bluto-2* in MC431, *Marmalard* in MC300 and *Neidermeyer* in MC253 will be developed subsea and flowed back to *Delta House*. Interestingly, development of the latter apparently has led to LLOG acquiring part of MC252 - site of BP's *Macondo* accident.

*Neidermeyer* plans call for a subsea connection across the northeast corner of MC252, linking MC208 to MC253. LLOG did not respond to requests for comment.

BP issued a statement confirming the transaction: 'Under the terms of the agreement, BP will retain responsibility for the *Macondo* well and the two relief wells drilled in 2010.

'Out of respect for the victims of the *Deepwater Horizon* accident and to allow BP to perform any response activities related to the accident, there is an exclusion zone covering the original *Macondo* well, the two relief wells and nearby debris, in which there will be no oil and gas operations'.

## FLOATER BRIEFS

*From Australia (RW):* The GDF Suez/Santos joint venture in the Bonaparte Gulf has decided to can the proposed A$10.6bn floating LNG concept for the development of its **BONAPARTE** (SEN, 31/4) gas fields and consider other development options.

The partners now say that plugging the *Petrel-Tern-Frigate* gas fields which lie 250km west of Darwin into existing projects and infrastructure in the region may be a more realistic option. These include piping the gas to the Inpex *Ichthys* LNG project or the ConocoPhillips *Bayu-Undan* LNG plant in Darwin or connecting to the ENI *Blacktip* gas pipeline to link to the Northern Territory domestic supply.

While the three fields have material value and have been fully appraised, the future development using FLNG does not currently meet the commercial requirements despite being technically robust. As a result the proposed *Bonaparte* FLNG development will not be taken into FEED stage at the moment.

The original plan after 3 year's study was a 2.4mt/a FLNG facility with first production in 2019 supplying Asia/Pacific markets.

GDF Suez operates with 60%. Santos (40%) received a $200mn cash consideration when the *Bonaparte* JV was formed and has received a full carry from GDF on study and development costs encountered so far.

*From Australia (RW):* Saipem's big semi-submersible pipelay barge *Semac 1* has arrived in Darwin to prepare for the shallow water section of Inpex group's gas pipeline from the **ICHTHYS** (31/4) field in the Browse Basin off Western Australia.

BMT Marine Services will supply a riser monitoring system for Statoil's **ASTA HANSTEEN** (30/21) deepwater spar as a subcontract to SURF installation contractor Subsea 7. The system will consist of strain, motion and position sensors, to be deployed by rov in the touchdown zone for the steel catenary risers, the first of their kind to be installed in the North Sea.

The 164km shallow water component of the total 882km line will begin about mid-July. About 18km of the line will run through Darwin Harbour to the LNG plant and associated facilities at Blaydin Point.

*Semac 1* is scheduled to work from east to west in the harbour feeding pipe to the landfall site for a 3km shore-pull. The onshore component will run for 7km from the beachhead at Middle Arm to the plant.

The laybarge will have 10 or 11 support vessels working alongside and helicopters will be used for personnel transfer to the vessel. Saipem says the harbour work will last for about four weeks while the total shallow water section will take just short of three months to complete.

On completion *Semac 1* will hand over to Saipem's deep water installation vessel *Castorone* to lay the remaining 718km of pipeline to the field. Saipem won the EPIC contract for the project in January 2012.

## POLICY

### OGA GOES HUNTING FOR A TOP MAN

*From Aberdeen (IF):* The search has begun for a chief executive for the new UK regulatory body, the Oil & Gas Authority.

The boss is expected to receive £200,000 a year to transform the way the North Sea is run. Executive search firm Odgers Berndtson is leading the hunt.

A number of industry figures are being touted for the post including ex-BG headman Chris Finlayson, former CEO of Talisman Sinopec Geoff Holmes and soon to be departing executives, Simon Lockett of Premier Oil and Sam Laidlaw of Centrica.

Sir Ian Wood's recent report into maximising recovery from British waters listed a number of recommendations, including creation of an arm's-length regulatory body.

Malcolm Webb, chief executive of industry body Oil & Gas UK (OGUK), said that OGA 'is now much more than just a vision or a theoretical construct.'

' It is beginning to take shape, with a name, a location and the search for the new chief executive is underway,' Webb said. 'This is all very good news for our industry and we look forward to the creation of the new regulator over the coming weeks and months.'

Webb said it is a big job and needs someone with credibility in the industry.





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The Chief Secretary to the Treasury, Danny Alexander, announced more details about the new agency at the OGUK annual conference in Aberdeen earlier this month.

Alexander said Aberdeen-based OGA has the aim to encourage economic production in the UK and provide sustainable, long-term support for the industry. The body will be responsible for stewardship and regulation of oil and gas exploration and production.

There has been controversy, though, about the new agency even before it is up and running. Early this month, the UK government came under fire for its plans to make the North Sea licencees pick up all the cost for the new regulator.

OGUK went on the attack after confirmation of the levy in the Queen's Speech. It does not agree that the entire cost of the new regulator should be paid by the industry.

Webb said that his organisation disagrees with the government plan to absolve itself from all financial involvement or responsibility for the new regulator.

'This is not a question of the size of the bill. Production taxes paid by this industry...run into many billions of pounds and the total cost of the new regulator will be a very tiny fraction of that,' Webb said. 'It is rather a question of good governance, transparency and fairness that at least a part of the cost of the regulator should continue to be borne by the Department of Energy.'

(*From the Editor:* At the UTC conference in Bergen last week, SEN was told by an official of the Norwegian Petroleum Directorate that the agency had been invited to Aberdeen to discuss how OGA might benefit from the Norwegian approach to regulation.

Norway has a more 'national interest' approach to reservoir management, ie reserves are the property of the nation and must be produced in a fashion which is beneficial in the long term. The UK approach has always been much more 'laissez faire'.)

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## OFFSHORE WORKERS 'ARE HEAVY', SAYS OGUK REPORT

*From Aberdeen (IF):* The average weight of Britain's offshore workforce has shot up by nearly 20% in recent decades.

The latest health and safety report from industry body Oil & Gas UK (OGUK) reports that their mean weight rose from 76.1kg (167lbs) in 1985 to 90.9kg (200lbs) in 2009.

The report says that, due to this increase, it is vital that an up-to-date survey is completed to assess the changes in shape and size of workers to aid future design and layout of offshore facilities. OGUK and researchers from Robert Gordon University in Aberdeen are carrying out a study to sample 600 offshore workers using 3D scanning technology.

Data from the survey - now in its second and final year – could go a long way to improve safety and comfort in situations and environments offshore, from helicopter passenger survival safety suits to corridor widths on installations.

The report also shows that health and safety performance during the last year presents a mixed picture. Whilst progress has been made in certain areas, some safety indicators have deteriorated compared with the previous year.

The document confirmed a 49% reduction in the number of reportable hydrocarbon releases over three years to March 2013, just missing the 50% industry target. Despite the decrease in major and significant releases continuing a five-year downward trend, the remainder of 2013 saw an overall increase in total number of releases.

There was also an increase in the frequency of reportable injuries and dangerous occurrences, reversing the trend of improvement in previous years.

Aviation safety dominated the 2013 agenda. Last August, a helicopter crash off Scotland resulted in four deaths. This prompted investigations and reviews of offshore aviation safety by various bodies. Recommendations arising from those reviews have far-reaching implications for industry and the workforce.

The report also noted that 2013 marked the 25th anniversary of the Piper Alpha disaster in which 167 people died.

## DECOM STUDY TO LOOK AT WORLDWIDE RULES AND ACTIVITY

The subsea decommissioning study (SEN, 31/6) being carried out for Petrobras - by Endeavor Management in Houston - is aimed at setting up a framework for future abandonment work in the Brazilian sector.

The study is looking at three issues - meeting regulatory requirements; worldwide best practice; and contracting strategy.

As there has been little field decommissionning activity to date in Brazilian waters - Petrobras has only carried out well abandonment and equipment recovery - there are no formal rules, such as what could be left on the seabed and what might have to be recycled.

It is even unclear who has oversight. The agencies include the National Petroleum Agency and the evironmental body IBAMA.

There is also a need to look into what has been done elsewhere in the world and what are the requirements. The sectors which will be mostly studied are the North Sea - both the UK and Norway - and the US Gulf of Mexico. The latter might have more relevance based on the water depth.

Petrobras also wants to take a look at how the contracting is carried out. That is whether a lead contractor then subcontracts various jobs and the chartering of vessels or whether the operator handles project management.

## POLICY BRIEFS

*From the North Sea (NT):* The threat of a **STRIKE** by offshore workers in Norway was averted this week when the Safe trade union accepted a wages and conditions settlement put forward by the arbitrator to which the dispute with the Norwegian Oil & Gas Association had been referred. The other two unions, Industri Energi and Lederne, had already accepted deals proposed during the arbitration talks.

**SUBSEA UK** held its annual beano - a sort of 'think-and-drink' - for the politicos in Westminster this week. Despite SSUK's success in getting the current Tory government to recognise the importance of the subsea sector both to the UK economy and the worldwide industry, there remain concerns that those in high places do not realise that help is needed.

Firstly, many politicians do not quite get that there is a difference between the operators and the supply chain. So the idea of helping SME's and how to direct them towards industry needs has to be explained.

The good thing is that there are now buffers, ie people in organisations who control some pursestrings. There is the Technology Strategy Board and UKTI who can help smaller companies. This was evidenced by the recent 'Deep Dive' workshop organised by the latter.

Even for operators and licencees a bit of a carrot could help the sector. Why are there hp/ht and heavy oil allowances, but none for IOR? You only have to look across the median line to see what can be done, but with so many small operators, often run by accountants, it is difficult to encourage investment for more production. It is so much easier to abandon than to continue.

Embarking on a risky strategy, **EIRE** is to increase its tax take on income from offshore related production following a review of its fiscal regime by UK analyst Wood Mackenze (SEN, 30/24).

The main thrust is to allow the government to take an earlier and bigger take and smooth over some anomalies in the tax regime.

The existing concession system is to remain as is and so will the 25% corporation tax on production. Based on the recommendations from WoodMac, Eire will: change the regime for fields from future licencing; tax ona field by field basis depending on profitability; establish a minimum take of 5% which would act as a royalty; increase the maximum take rate on new licences to 55% up from the current 40%.

Having announced these planned changes, Eire then put out details of the next Atlantic Margin **LICENCING ROUND**. As production from the Irish sector remains small and the interest variable - mostly from small players - one would have thought the Irish government would have considered incentives, not boosting the take.

*From the North Sea (NT):* Norway's rightwing coalition no longer plans to sell down its stake in **STATOIL**. The company's name was conspicuous by its absence in a list of enterpreises in which the government is seeking backing to reduce its holding.

According to trade minister Monica Mæland, there is broad political agreement in Norway that the state should keep a majority stake in Statoil, as it has a special place in Norwegian oil and gas policy. Her words contrast with Prime Minister Erne Solberg's pre-election declaration that she wanted to cut the state's 67% stake in Statoil.

## BUSINESS

### UK ASSETS REMAIN POPULAR IN THE MARKET

*From Aberdeen (IF):* June has seen a flurry of deals for UK assets with the sellers including BG Group, Sumitomo Corp and BP.

The most valuable - and unusual - transaction involves BG offloading its majority stake in the *Central Area Transmission System* (*CATS*) gas pipeline and associated infrastructure to a French fund manager for up to £562mn.

The buyer is Antin Infrastructure Partners and the transaction is due to close in the second half of the year. Fund managers taking control of North Sea assets is a rare occurrence and this may be the first.

A DECC spokesman told SEN, 'There are no bars on the type of investor in North Sea infrastructure, but all investors must meet our robust and stringent standards for financial capacity and sound management.'

BG said the deal was in line with its portfolio strategy to deliver value to shareholders. The company is selling its 62.78% stake for £523mn on completion of the deal and a deferred amount of £39mn. The sale does not impact BG Group's rights to capacity in *CATS*.

*CATS* comprises a fixed-riser platform linked to the *Everest* platform, a 404km, 48mcm/d pipeline and a two-train onshore gas processing terminal at Teesside.

Antin specialises in investments in operating European infrastructure assets in the energy and environment, transportation and telecom sectors, such as Pisto, a French midstream oil pipeline and storage business. It has a £880mn fund with backing from European and Canadian investors.

Ithaca Energy has agreed a deal with Sumitomo to acquire interests in three non-operated UK oil fields for £100mn. The transaction covers an additional 20% in the *Cook* field where the company has a 41% stake, a 7.5% stake in *Pierce* and 7.4% holding in the onshore *Wytch Farm* field. This will give Ithaca an increase in net proved and probable reserves of around 12mboe, leading to a 20% boost to its reserves.

#### Cashflow aid

Another June deal saw Serica Energy taking 18% of blocks containing the *Erskine* field from BP. Serica is paying £6.5mn in cash plus issuing BP with 27mn new ordinary shares in the company worth around £3mn.

The deal for the stake in the Chevron-operated field is said to provide Serica with an immediate and long-term cashflow stream. Net production for 2014 for the interest acquired is estimated to be 1,234boe/d after providing for shutdowns to meet planned maintenance programmes.

It also increases Serica's proven and probable reserves from an estimated 5.2mboe to an estimated 8.8mboe.

Serica operates the upcoming *Columbus* (SEN, 31/4) development with a 50% interest and sees 'operational and taxation synergies' in this deal. The *Erskine* field produces through the *Lomond* facilities, which lie close to the *Columbus* field with *Lomond* still one of the preferred host options for *Columbus*.

'Securing an interest in *Erskine* provides us with a valuable foothold in a nearby producing field together with access to associated infrastructure and will assist us in our ongoing efforts to bring *Columbus* on to production,' Serica chairman Tony Craven Walker said.

Also this month, Premier Oil sold its 30% stake in Norwegian licence PL359 to Lundin for an after-tax consideration of £10.3mn.The licence contains the *Luno II* find where an appraisal well is expected to spud in June.

## SHELL REDUCES STAKE IN WOODSIDE

*From Australia (RW):* Shell has sold 156.5mn shares in Woodside Petroleum for about $5bn reducing its stake from 23.1% to 4.5%.

Shell has sold 78.3mn shares to institutional investors at A$41.35/share. Woodside has also signed a binding buy-back agreement to purchase 78.3mn of its shares from Shell for $2.7bn. This represents a 14% discount to the volume-weighted average price of Woodside shares over the five trading days prior to and including 16 June. The 78.3mn shares represent a 9.5% stake.

The buy-back is subject to shareholder approval along with an independent expert providing an opinion that the transaction is fair and reasonable to all Woodside shareholders. The buy-back price includes a capital component of $7.95/share with the remainder of the buy-back price comprising a fully franked dividend.

Woodside says the proposed buy-back will be funded from a combination of the company's existing cash and debt facilities.

An extraordinary general meeting to enable shareholders to vote on the issue is likely to be held during early August. The transaction requires approval of 75% of shareholders excluding Shell and its associates. It also requires consents under a number of Woodside's facility agreements. The board recommends shareholders vote in favour of the buy-back.

Woodside CEO Peter Coleman says the combined deal is an efficient and disciplined use of capital and creates value for shareholders. Coleman said the deal 'allows us to optimise...near-term capital structure' while continuing existing projects and making investments in new opportunities.

Shell CEO Ben van Beurden said the sell-down was part of the company's drive to improve its capital efficiency and focus its Australian growth in directly-owned assets.

Shell's 23.1% shareholding in Woodside came after its aborted takeover bid for the company in 2001 when the controversial bid was vetoed by then Australian government on the grounds it was contrary to national interests. The new deal will remove the uncertainty regarding Shell's stake in Woodside that has been persistent for some time.

## BUSINESS BRIEFS

*From the North Sea (NT):* This is shaping up as the year when **OFFSHORE INVESTMENTS** peak in Norway which would be consistent with the decision by many oil companies, including Statoil, to rein in spending.

The latest quarterly survey by Statistics Norway forecasts investments falling back 21% from a record NOK231.7bn ($38bn) this year to NOK182.4bn in 2015.

The field development spend is set to decline - 33% to NOK56.3bn in 2015 - while opex on producing fields drops 20% to NOK75.4bn.

Exploration expenditure of NOK33.3bn will only be 6.5% down on this year. Statistics Norway has now introduced decommissioning investments into its forecasts. This is the only item set to rise - up 7% to NOK7.9bn next year.



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Petrofac is to free up nearly half a billion dollars from its floating production assets in a deal with equity fund First Reserve to form **PETROFIRST INFRASTRUCTURE PARTNERS**. Petrofac will realise a $450mn gain from selling an 80% stake in three floaters - *Berantai*, *FPF3* and *FPF5*.

The new venture will be valued at $1.25bn with FR putting in $1bn in cash and assets and Petrofac the balance. The aim is for PetroFirst to look for new projects to invest in.

*From Australia (RW):* Shareholders of **NEXUS ENERGY** have voted against a proposal under which media group Seven Group Holdings offered to take over the struggling company. A meeting on 12 June counted a 58% vote against the motion.

The A$26.6mn deal offered $0.02/share as a takeover offer that would have solved Nexus' debt problems. The company's shares closed at A$0.013 when trading halted pending the meeting. The market value during its zenith six years ago was more than A$1bn.

As a result of the vote Nexus has now called in administrators to exert authority over the company. Its nine subsidiaries will avoid administration. The boards of those companies will work with administrators and Seven Group to put in place funding arrangements to continue production at the *Longtom* gas field and to develop the *Crux* (SEN, 29/23) and *Echuca Shoals* gas/condensate fields.

The Seven Group has provided a 90-day loan facility with a A$30mn limit, but has given no guarantees for the longer-term. It controls most of the Nexus debt and could still gain control as Nexus' main creditor. Seven supplied A$40mn in bridging finance.

There is a danger that Seven could end up with debts and no assets if the *Crux* liquids recycling and gas development falls into the hands of Shell which is operator and joint venture partner.

*From the North Sea (NT):* Up to 1,400 posts may go in **STATOIL** under plans to streamline the company to meet the challenge of growing costs. According to reports, the jobs will go as part of 25 restructuring projects which Statoil intends to implement by 2016.

Technip has formed a strategic partnership with naval architecture and marine services company **INOCEAN** and taken a majority share in the firm. This deal gives Technip access to a 70-strong team of engineers with expertise in floating production. The aim is to provide services in the Norwegian sector and on a worldwide basis.

**INTECSEA** is to open an office in New Zealand in New Plymouth...Danish engineering firm Ramboll has made a foray into the UK market by acquiring **APPLY ALTRA**'s Aberdeen operation. It will be renamed Ramboll Oil & Gas....Oceaneering has acquired NDE firm **SPECTRUM**...**Jean-Luc Laloe** has joined the advisory committe of new SURF contractor CEONA.

Inpex Corp, the Japanese company which is operator of the giant **ICHTHYS** (31/5) gas floater development, offshore Australia, has set up a Norwegian subsidiary and opened an office in Oslo...**EXPRO** reported record annual revenue in 2013 of $1.4bn, up 15% with EDITDA up over 32% to $385mn and leverage down from 6.1 to 5.



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