

THE NAVIGATOR

WESTSHORE'S MONTHLY NORTH SEA REPORT

Helicopter Tragedy

Fatal grounding of Super Puma in North Sea

Decommissioning

An update and a forecast

Shale

An updated look at the industry in Europe and elsewhere



Contents

- 2 **Newbuild News**
- 3 **Helicopter Tragedy**
Fatal grounding of Super Puma in North Sea
- 5 **Drilling & Production**

Shale 7
An updated look at the industry in Europe and elsewhere

Decommissioning 9
An update and a forecast

In & Out 12

The Last Word 13

Written and created by Inger-Louise Molvær
Offshore Analyst

■ Deep Sea eyes further fleet expansion

While news of new vessel orders has been thin on the ground thus far in 2013 as many owners prepare for the adjustment of taking delivery of previously ordered new tonnage, some owners are bucking the trend. John Fredriksen, the man with the money behind Deep Sea Supply, amongst other shipping companies, is often perceived as having a crystal ball into the shipping markets. It was announced this month that an affiliated company of Fredriksen's Hemen Holding was looking into acquiring up to 10 new PSVs for Arendal-based Deep Sea Supply. While no details were supplied regarding build yard or even continent the company has in the past placed bulk orders for tonnage at Indian and Chinese yards. Indeed acquisition of vessels, be that second hand or new, in groups of five or more almost characterises the company. Finance for the fleet expansion is set to come from "existing cash, senior bank debt, seller's credit and with limited or no use of new equity". The company stated that increased rig activity in the coming years puts a positive angle on demand for new and modern offshore tonnage while no specifics were put on which region of the globe the new vessels would be targeted. Deep Sea Supply's current newbuild programme will see its latest vessel Sea Forth a PX 105 design PSV deliver this quarter.

■ Subsea heavy month for Vard

The order books for some of the Norwegian shipyards in particular are starting to look rather thin on the ground following the last two quarters where new orders have been few and far between. Not so for Vard when this month news of several new subsea orders were placed. Vard, which is the former STX, was renamed following Italian company Fincantieri becoming the major shareholder earlier in 2013. With five locations around Norway plus several others around the globe the company has been through many changes in the last decade from its days as Aker Yards, owned by Norwegian businessman Kjell Inge Røkke's Aker company when it was first sold to South Korean company STX.

DOF Subsea in a joint venture with Technip have selected Vard for the design and construction of four pipe lay support vessels, two of which will be outfitted in Brazil and the other two in Norway. The Norwegian pair will on delivery represent some of the largest ever pipe lay towers in the industry.

And Farstad was back at Vard as it placed its second order for a subsea vessel of 143 meters long with two offshore cranes and accommodation for 130 persons. The vessel will be outfitted at Tomrefjord and delivered by the third quarter of 2015.

Deliveries

■ September 2013

Blue Protector PX 121
World Peridot Damen PSV
Demarest Tide PSV 09 CD
Highland Chieftain MMC879CD
Skandi Iceman STX AH12
Highland Guardian MMC887CD

■ October 2013

Island Duchess UT7171CD
Toisa Explorer VS4616
Highland Knight UT755XL
Edda Ferd ST920

■ November 2013

North Cruys ST216 Arctic
Seabed Supporter 'Sawicon
Design'

■ December 2013

■ January 2014

Juanita SALT 100 PSV
Island Dawn UT717CD

■ February 2014

Island Pride UT737CD
Far Sigma UT731CD
Rem Ocean MT6022
Polar Onyx Ulstein SX121
Atlantic Merlin VS 4622CD

■ Recently Delivered

Toisa Envoy VS4616
Makalu Havyard 832



Thousands of offshore workers use helicopters every month as transport to and from work all around the globe not least in the North Sea. But while the North Sea oil and gas industry has prided itself on an advancing safety record in almost all aspects of operations, a particularly dire record has been set over the past five years when it comes to helicopter transport. This was culminated on the evening of Friday 23rd August when a Super Puma helicopter with 18 persons on board en route to Sum-burgh in Shetland from the Borgsten Dolphin went down killing four of its passengers.



Helicopter Tragedy

The Super Puma craft represents 50% of the UK's 75 helicopter craft and with an immediate stop put on all flights from this type of helicopter, the impact was sudden and wide reaching. This was the fifth incident involving Super Pumas since 2009, confidence in the craft was almost nil.

Previous incidents
Last year saw two helicopter ditches in the North Sea by Super Pumas which were later attributed to gearbox problems. No loss of life was suffered in either incident but a decision to ground all EC 225 Super Pumas was taken in order to establish cause, the decision to return them to service was only taken in August 2013. In 2009 16 people lost their lives when a Super Puma ditched in the

North Sea following gear box problems. Initial reports from the scene reported a "sudden unexplained loss of power" before the helicopter ditched leaving passengers with little or no time to assume the brace position. Recovery of the voice and flight data recorder was a difficult operation due to rough weather conditions at the site of the crash but was done after a few days. As hundreds of personnel remained stranded offshore unable to return home it was decided that continuing the ban on all Super Puma flights could have a detrimental effect on safety as a result of fatigue, stress and other well-being concerns. The cumulative risk assessed against

the initial data drawn from the flight's 'black box' resulted in a decision to return the helicopters into service. Just one week after the crash, industry representatives had concluded the crash was not as a result of technical problems or air worthiness.

The opinions of offshore personell has been widely canvassed with some refusing to set foot aboard a Super Puma again while others remain stoic in accepting the inherent dangers of offshore work – transport to and from being just another aspect of this. One thing is for certain, transportation of personel be that by helicopter or otherwise will now be looked at into far greater detail, and rightly so.

Spot market impact

At one point it seemed unlikely that a solution to the shortage of helicopters would be found in the short term so operators started to turn to the spot market to cover passenger transport needs. Several of the large Norwegian AHTS vessels secured charters owing to their increased passenger carrying capabilities. What was already a tight spot market suddenly got much tighter and with known rig moves coming at the end of the month the rates took a predictable upturn. The wake of the disaster, despite the over-turning of the ban on Super Pumas, left several operators looking at the vessel market with increased interest. The effect on the market was felt on both sides of the North Sea but while initially we thought the effect could have lasted through to autumn it perhaps only bridged the gap between rig move lull and the increased activity at the end of the month.

Successful month for Statoil



« The success of Bay du Nord is the result of an ambitious and targeted drilling campaign in the Flemish Pass Basin, this discovery is very encouraging. »

Tim Dodson, Statoil's executive vice-president of exploration

Drilling programmes underway in several parts of the North Sea and elsewhere yielded interesting results this month as Statoil released details of successful finds. Drilling with the Ocean Vanguard this month five miles from the giant Johan Sverdrup field resulted in finding a small discovery of oil but no oil water contact was found and it is not thought to be connected to the aforementioned field itself. In the Norwegian Sea a discovery of around 6.3 million boe was discovered around 7.5 miles south of the Norne field drilling with the Songa Trym. The commercial viability of the find is yet to be assessed. A

gas/condensate discovery was announced in the Smørbukk North prospect drilled by semi Transocean Leader with a preliminary estimate of reserved put at 25 to 47 million boe.

Big in Canada

The big news from Statoil this month came from its drilling work offshore Canada where about 500km north east of St John's a large oil discovery was found. Although no estimates have been put on the level of reserves this is the third find announced by Statoil offshore Newfoundland. The discovery lies roughly 20km south of Statoil's

Mizzen discovery which holds an estimated 100-200 million boe. The latest find at the Bay du Nord prospect coupled with the find at the Harpoon prospect announced in June this year both drilled by the UDW semi West Aquarius, represent significant finds for Statoil. The company has said it intends to drill further appraisal wells there as it attempts to gain a better understanding of the reserves and geology of the area. This is likely to involve further seismic surveys in addition to further drilling.

Meanwhile at Island..

Island Offshore continues to establish its position as a leading provider of subsea services in the North Sea in addition to its fleet of support vessels. The latest contract award for Island Constructor will see the vessel provide light well intervention services to Premier Oil in the UKCS and is the third such contract to be awarded to the vessel this year. The Ulstein-based owner is understood to be working in tandem with Statoil to create a Cat-A LWI vessel for year round use in the Norwegian sector. Capitalising on Island's significant experience in the sector and Statoil's strategy of designing new rig types for usage in the North Sea the cooperation will see additional vessels built for increasing recovery from subsea fields. Island Offshore currently has two vessels on long term charter to Statoil under this work scope namely Island Frontier and Island Wellserver.

Meanwhile the semisubmersible drilling rig Island Innovator which is managed by Odfjell Drilling has now received its acknowledgement of compliance for drilling operations in the Norwegian Sector (SUT). Following a long and at times difficult process the rig will commence a two year charter with Lundin Petroleum in September once final testing is complete. Lundin is expected to use the rig at the Johan Sverdrup field.



Production halt at Goliat

Operator ENI will pull a halt to production at the Goliat field in September as semi Scarabeo 8 is demobbed to Tromsø for a BOP replacement. The town was chosen for its short distance from its offshore location in order to minimise down time. The project has been beset with difficulties, the latest of which relating to the construction of the field's floating production unit and its delayed construction, will see production start-up set back from the end of this year to third quarter next. The Scarabeo 8 was also involved in a listing incident last year.

Shale - an updated opinion

In the UK, Prime Minister David Cameron and finance minister George Osborne have been enthusiastically touting the benefits that a shale gas revolution would bring to the country. Enviously eyeing the benefits that shale has brought to the US, namely hundreds of thousands of jobs, gas prices halving and more than 1% added to GDP, a push for the same is well underway in Europe. But while opinion on the industry continues to divide many in Europe, European nations differ greatly when it comes to proceeding with an actual fracking programme.

The UK

Estimates vary but the North of England may contain as much as 1300 trillion cubic feet of shale gas. Extracting just 10% of this would satisfy the UK's gas needs for 40 years. For a country that currently imports 80% of its gas and in a region suffering heavy unemployment and the effects of recession, this is an issue that cannot easily be swept to one side. What has been billed as the 'next North Sea oil boom' David Cameron has publicly stated that "if we don't back this technology, we will miss a massive opportunity to help families with their bills and make our country more competitive." While knowledge of the fracking process is widespread in the US amongst the general population, it is not as well understood in the UK. Current opinion polls show 44% of





Britons were pro shale drilling however environmental protection regulation is far stricter than it is in the US and far less fragmented between local, state and federal level. And environmental organisations tend to have a greater impact than they do across the pond. One thing is certain, in order for any shale drilling to proceed there will need to be far more done to assuage the fears of the UK public.

Eastern Europe

Several of the former Soviet states are now ploughing head first into plans to establish energy independence from the Russia. Romania, Poland and Hungary are seen as the new hot beds of European Shale with many companies acquiring acreage in an attempt to exploit the national sympathy towards the industry. While exploration is still in the early stages these countries have come the furthest in Europe in terms of realising a domestic shale industry. Though public opinion is sometimes sceptical, the promise of energy independence and substantial economic benefit has far outweighed the down sides. In Poland however Talisman Energy and Exxon Mobil have just packed up and left the country following less than promising drilling results. Chevron remains there with

further plans to explore. The Polish government remains optimistic and has issued over 100 licences to drilling companies. Poland was at one point expected to have one of the greatest shale reserves in Europe, with disappointing drilling programmes from several majors leading them to shut down exploration plans, this is now being called into question. The issue in Eastern Europe is lack of domestic expertise and technology leading to high initial costs. Experts have stated that if reserves are not deemed to be high enough plans may be abandoned due to economic reasons.

Several other European states have an outright ban in place for shale gas extraction via hydraulic fracking. Most notably France which may have Europe's largest shale reserves but at present no fracking will proceed under the presidency of Nicholas Hollande. In Germany and The Netherlands although a fracking ban is in place, further studies are being carried out into the potential impact of it proceeding. The fracking obstacles in Europe are dense population, lack of infrastructure in addition to the public opposition. So while the promises of the shale revolution remain tempting it is likely we are several years away from seeing any impact on our energy prices, in Europe at least.

Not just US and Europe

The promises of shale as the energy cash cow have reached most corners of the globe. Brazil may have more in reserve in onshore shale than it does in the vast offshore fields found this century. Several oil majors are now clamouring to get acreage from the shale gas blocks up for grabs later this year in the country's first shale gas auction. China is estimated to have as much in shale reserves as the US and Canada combined. However it faces regular and severe water shortages, a distinct problem for extraction which requires vast quantities of water. Secondly a lack of pipeline infrastructure and critical lack of technology is hindering China's ambitious targets for shale production. Again several oil majors have entered the market, in this case teaming up with Chinese energy companies, to utilise local knowledge and fracking expertise from predominantly the US. The targets for shale gas production and gas as a percentage of energy consumption makes China a very interesting target for companies with the resources and technology.

The North Sea Decommissioning Story

Politicians told us to gear up for what would be a big demand for technology and expertise, but what's happened to this much anticipated industry?

The fixture this month of the massive Allseas newbuild flagship Pieter Schelte for infrastructure removal on the Brent field and the recent release of figures from Oil and Gas UK on the potential scale of this market has brought the entire decommissioning market once again into focus.

In previous years decommissioning had been touted as the saviour of

the North Sea offshore industry. The notion is that it would provide a second boom in the region as operators competed for the safest, most economical and quickest ways to remove decades of ageing facilities that were past their financially-useful life. It was anticipated by some that already the North Sea would require vast fleets of heavy lift vessels and assisting diving and ROV support tonnage and that this surge would see

Norway and the UK become the global experts, pioneering techniques that would set the gold-standard around the world and the skills, vessels and personnel would be demanded by all nations with older offshore infrastructure.

This scenario is still anticipated however, the strong oil price of recent years and its robustness even in the global economic downturn has seen the vast bulk of this

has seen the vast bulk of this decommissioning work shoved to the right. The economics of older oil fields mean that some in the North Sea can extract oil at an expense of a few dollars a barrel. It has made sense in recent times for operators to keep these cash cows ticking over with minimal maintenance and suspend their removal until the oil price inevitably takes a turn downwards in the future. Analysts have been divided on when this wave of work will come and the past decade has been filled with various predictions of a surge of requirements that will demand a dedicated fleet of specialist vessels.

One of the vessels at the forefront of this new wave is the Allseas' single lift installation / decommissioning and pipelay vessel the Pieter Schelte. The unit, which is under construction at Daewoo Shipbuilding and Marine Engineering in Okpo, Korea, will have a length overall of 382m with a 124m beam. It will be capable of topside lifts of 48,000t and will have a jacket lift capacity of 25,000t. Its first contract upon delivery will be the removal, transportation and load in to shore of the topsides of the three Shell platforms at Brent. The removals, which are set to commence in 2015/2016 with the Brent Delta, will be in water depths of around 140m and are scheduled to take around eight years to complete.

Eventually this vessel will be competing alongside established

tonnage including the Thialf, Hermod and Twin Marine Lifter Vessels for a share of the GBP 1,000 million a year market that Oil and Gas UK expects to see in the years leading up to 2020. In its latest Economic Report for 2013, released last week, it states that there are a total of 475 installations, 10,000 km of pipelines and 5,000 wells that will eventually have to be decommissioned in the UK sector of the North Sea alone with predictions for spending on decommissioning expenditure to rise substantially.

The demand aspect of the decommissioning market is well known with the requirement to carry out decommissioning work dictated by legislation. In their latest North Sea Decommissioning Forecast Douglas-Westwood predicts huge opportunities for the supply chain and vessel operators. This is primarily driven by the Convention for the Protection of the Marine Environment of the North East Atlantic (OSPAR) which prohibits the disposal, in whole or part, of offshore installation at sea.

According to Douglas-Westwood the overall situation is:

- The topsides of all installations must be returned to shore and all installations with a jacket weight of less than 10,000 tonnes must be completely removed for re-use, recycling or final disposal onshore.

- It is recognised that companies may find it difficult to remove the footings of large steel jackets weighing in excess of 10,000 tonnes and concrete installations. Thus, there are derogations for these categories of installation if the internationally agreed assessment and consultation process shows that leaving these in place is justified.

- The derogation provisions, however, apply only to installation installed prior to 9th February 1999. All installation put in place after this date must be removed completely.

In practical terms, this means that in shallow waters complete structures must be removed, but in deeper waters legislation allows platform jacket legs to be cut at -55 metres and only the upper section removed. The average weight of a platform in the waters under review is 8,300 tonnes with the largest at over 890,000 tonnes.

The decommissioning workscope is inevitable although the timing shifts as the oil price fluctuates and alters the economic outlook of marginal oil fields. The latest paper from Aberdeen Centre for Research in Energy Economics and Finance by Professor Alexander Kemp and Linda Stephen looks into the implications on decommissioning of various oil price scenarios. Operating costs over the lifetime of the fields were also calculated. The averages were found to be USD 13 per barrel of oil equivalent (boe) for all of the

UK Continental Shelf, USD 8.5 per boe in the South North Sea, USD 12.4 per boe in the Central North Sea and USD 18 per boe in the Northern North Sea. Total lifetime field costs including decommissioning but excluding Exploration and Appraisal costs were found to average USD 36.8 per boe for all of the UK Continental Shelf, USD 24.6 per boe in the South North Sea, USD 34.5 per boe in the Central North Sea, and USD 49.4 per boe in the Northern North Sea. Taking these figures into account along with potential future oil prices a forward looking picture of the decommissioning market has been put together.

The research shows that in the period up to 2020 the Northern North Sea will be the most important with a series of very large platforms undergoing deconstruction. After that period the Central North Sea is expected to dominate the demand.

This picture changes if the oil price sustains at a price of around USD 90 rather than USD 70. We could then see a high level of decommissioning work throughout the 2020s and on into period 2030 to 2040 and beyond.

The forward future volatility of the decommissioning outlook and its reliance on the oil price means that those owners looking to supply tonnage for this potentially lucrative market must seek other income-streams in the interim to spread the risk. There is naturally an



area of crossover between the Wind Turbine Installation market and the decommissioning scene with vessels including the Thialf, the Hermod and the Swire Blue Ocean units suitable for work in both sectors. Rather than directly competing for resources, these two industries intertwine and only with the pair of potential markets combining is there really the stability of demand necessary to justify the economics of the massive investment required to

build the next generation of large Heavy Lift Vessels that both markets will require going forwards. There is little doubt that the decommissioning market will be huge and will offer large rewards to those companies able to position themselves on the market at the right time. However, with so many factors feeding into the outlook the difficulty of predicting when the decommissioning market will truly begin to take-off remains outstanding.

AHTS

Vessel	Design	Manager	ENTRY	From
Maersk Transporter	VS472	Maersk Supply	Mid – Sept	West Africa
Siem Garnet	VS491 CD	Siem Offshore	Mid - Sept	BARD
Maersk Laser	Maersk L Type	Maersk Supply	End - Sept	BP UK
Skandi Iceman	Vard AH12	DOF	End - Sept	Newbuild
Island Valiant	UT787CDL	Island	End – Sept	TBA
Strilborg	UT722	Møkster	Start – Oct	AGR
Siem Amethyst	VS491CD	Siem Offshore	Start – Oct	Canada

PSV

Vessel	Design	Manager	ENTRY	From
Viking Nereus	UT755L	Eidesvik	Start – Sept	BG UK
UP Jasper	VS483MkII	Gulf Offshore	Mid – Sept	Allseas
World Peridot	Damen 3300	World Wide Supply	Mid – Sept	Newbuild
SBS Cirrus	UT705	Viking Supply	Mid – Sept	E On
Olympic Princess	MT6000	Olympic	Mid – Sept	Petersons
Olympic Orion	MT6015	Olympic	Mid – Sept	BP
Olympic Energy	PSV06LNG	Olympic	End – Sept	COP
Blue Protector	PX121	Atlantic Offshore	End – Sept	Newbuild
Highland Monarch	UT755	Gulf Offshore	End – Sept	Petersons
Rem Provider	UT755LC	Rem Offshore	End – Sept	ADTI
Demarest Tide	PSV09 CD	Tidewater	End – Sept	Newbuild
Havila Fortune	MT6009 MkII	Havila	Start – Oct	West Africa
Rem Supplier	UT755LN	Rem Offshore	Start – Oct	Centrica
Mana	UT755LN	Garware	Start – Oct	Centrica
Freyja Viking	VS470 MkII	Viking Supply	Start – Oct	Centrica
Far Server	Havyard 832CD	Farstad	Start – Oct	Nexen
Troms Lyra	PSV08 CD	Troms Offshore	Start – Oct	Shell Norge
Edda Sprint	SK6009 DL	Østensjø	Start – Oct	MOG
Energy Lord	UT727	Golden Offshore	Mid – Oct	RWE-Dea
Island Duchess	UT717CD	Island Offshore	Mid – Oct	Newbuild
Vessel	Design	Manager	EXIT	To
Energy Swan	ST216L	Vestland	Mid – Sept	COP, Wintershall
Energy Insula	VS485 MkII	Vestland	End – Sept	Wintershall
Solvik Supplier	VS485CD	Vestland	Start – Oct	Talisman
Siddis Mariner	VS485	Siem Offshore	Mid – Oct	TBA

Sales concluded

Vessel	Design	Previous Manager	Year Built	Sold to	New Name
Highland Pride	UT705	Gulf Offshore	1992	Fletcher Shipping	FS Pisces

The Market in July

		Average Monthly Rates (NOK)			
Vessel Type		aug.13	jul.13	aug.12	jul.12
AHTS	> 25,000	321 919	466 934	169 869	
	18,000 to 25,000	418 975	380 393	142 596	
	< 18,000	218 831	282 686	161 143	
PSV	> 900 m ²	200 220	252 612	72 119	
	< 899 m ²	191 129	215 108	55 787	
		aug.13	jul.13	aug.12	jul.12
# of spot supply fixtures		58	60	93	70
# of rig moves		19	20	21	26
# of AHTS fixtures		61	70	68	77
Average Utilization (%)					
AHTS		70.5	72.6	59.2	74.7
PSV		92.5	97.1	74.2	81.0

The spot market this month took a slight drop from the summer highs we saw in June and July. Activity levels down slightly on last month as fewer rig moves and spot fixtures in general were concluded. Utilisation still remained relatively high and rates too for that matter both for AHTS and PSVs.

The event that most punctuated the month was the fatal helicopter accident which resulted in the grounding of all Super Puma helicopters for just over a week. The resultant situation left thousands of offshore workers wondering when they would get home. Oil companies began to turn to the AHTS market to

supplement crew transport via helicopter. The larger Norwegian tonnage was snapped up quickly at high rates as operators prepared for a long term shortage of helicopters. The poor safety record of the Super Puma added fuel to the fire that this would be the case but the current reports are that the grounding was as a result of pilot error, thereby taking concerns over airworthiness out of the picture and the Super Pumas were returned to service. By this time however several AHTS vessels had secured work for a number of days if not weeks, taking them through what may otherwise have been a lull in the market.

On the PSV side the profitable and busy year continues for vessels trading in the North Sea both large and small. We may be on the verge of a turning point now as several vessels fixed on mid-term charters are awaiting option declaration. While operators decide on whether to keep vessels on hire or not the market could change from the state of perpetually high utilisation, to suddenly many vessels returning to the spot. And as we all know the summer weather never continues for long in the North Sea, weather chaos is surely just round the corner creating the bottle necks of activity that characterises the autumn and summer months. The fun never stops!