ENVERUS

Oilfield Pulse

April 14, 2023 Volume 3. No. 7

Select Stories

Contracts & Projects | Odfjell Drilling secures LOIs for 23 months of firm activity

Contracts & Projects | Saipemrefurbished Eni FPSO starts journey to Côte d'Ivoire

Contracts & Projects | Halliburton digital suite to help Petrobras navigate subsurface

Contracts & Projects | KBR lands topsides FEED award for Bay du Nord FPSO off Canada

A&D | Liberty buys a Siren to announce start of alternative fuels biz

A&D | Seadrill closes acquisition of former partnership Aquadrill

Finance | SBM locks down \$1.63B to build FPSO for Búzios field

Finance | Noble to use \$600MM to refidebt from restructuring and merger

Energy Transition | Principle-Aker floating wind design wins U.S. DOE prize

Section index	
Contracts & Projects	3
A&D	6
Finance	8
Energy Transition	9
Recurring Tables & Graphs	PG.
Rig Count by Basin & Top Drillers	4
	4 7
Rig Count by Basin & Top Drillers PHLX Oil Service Sector Index	
Rig Count by Basin & Top Drillers PHLX Oil Service Sector Index vs. S&P 500	7

22 out of 22: Borr finds work for all its rigs for first time

The Borr Drilling jack-up Hild will go to work in Q3, having secured its first contract since it was delivered in 2020. The assignment, which is coming from an undisclosed customer for work in Latin America, means that all 22 of Borr's delivered units have contracts or

commitments—a first since the company started in 2016.

The contract duration covers a firm term of 725 days and is expected to commence in Q3, following the conclusion of the rig's ongoing

Went from 10 jack-ups available in May 2021 to none nearly two years later.

activation after nearly three years in warm stack. The estimated contract value is \$123 million, which would translate to a \$170,000 day rate, except that the contract value also includes mobilization and demobilization fees.

The contract is a landmark for the company and an indication of how dramatically the offshore drilling market has improved, as well as Borr's success in rightsizing its fleet. Borr started up in 2016 with the acquisition of two jack-ups from the Hercules Offshore bankruptcy auction. By May 2021, Borr had 23 delivered rigs and five under construction but only 13 rigs under contract or committed. **Read more...**

Step postpones U.S. frac expansion amid depressed gas prices

Step Energy Services has delayed its plan to activate a fourth fracking crew in the U.S., the latest sign that the frac market is rebalancing amid soft natural gas prices. The Calgary-based company did not project an activity decline, saying it expects its U.S. frac utilization to remain steady for the rest of 2023.

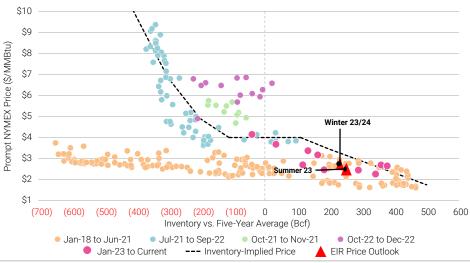
"The recent strengthening of WTI oil prices above \$80 will likely provide support to activity, but the ongoing weakness in the natural gas price will remain a limiting factor in the U.S.,

Gas expected to stay at \$3.00/MMBtu or below for at least another year, EIR says.

and as a result Step has deferred its plan to expand to four fracturing crews until market conditions can support additional capacity," the company said in an April 10 operational update. Step also said shifting client schedules related to drilling delays and commodity price pressures and an inability to find sufficient spot work damaged its Q1 frac results in the U.S.

Enverus Intelligence® | Research anticipates Nymex gas prices averaging \$2.50/MMBtu this summer and remaining at \$2.50-\$3.00 until winter 2024-2025. However, a hot summer could send gas prices over \$3.00 earlier than forecast. *Read more...*

Gas Inventory Surplus Likely to Keep Prices Low



Source | Enverus Intelligence® | Research

Oilfield Pulse

Activity Index —

Company	Headline	Category	PG.		
Aker Solutions	Principle-Aker floating wind design wins U.S. DOE prize	Energy Transition	9		
Aquadrill	Seadrill closes acquisition of former partnership Aquadrill	r partnership Aquadrill A&D			
Bluehenge Capital	Pelican scoops up Iron Horse Tools from Bluehenge Capital	A&D	7		
Borr Drilling	22 out of 22: Borr finds work for all its rigs for first time	Contracts & Projects	1		
BP	BP selects KBR as integrated project manager for hydrogen	Energy Transition	9		
Clariant	India's Dorf Ketal expands with Clariant's N. American oil chem	A&D	6		
Dorf Ketal	India's Dorf Ketal expands with Clariant's N. American oil chem	A&D	6		
Eni	Saipem-refurbished Eni FPSO starts journey to Côte d'Ivoire	Contracts & Projects	3		
Equinor	KBR lands topsides FEED award for Bay du Nord FPSO off Canada	Contracts & Projects	5		
Eserv	Neptune enlists Eserv to create additional digital twins	Contracts & Projects	4		
Halliburton	Halliburton digital suite to help Petrobras navigate subsurface	Contracts & Projects	4		
Halliburton	Repsol using Halliburton well construction solution	Contracts & Projects	5		
Iron Horse Tools	Pelican scoops up Iron Horse Tools from Bluehenge Capital	A&D	7		
KBR	KBR lands topsides FEED award for Bay du Nord FPSO off Canada	Contracts & Projects	5		
KBR	BP selects KBR as integrated project manager for hydrogen	Energy Transition	9		
Liberty Energy	Liberty buys a Siren to announce start of alternative fuels biz	A&D	6		
Neptune Energy	Neptune enlists Eserv to create additional digital twins	Contracts & Projects	4		
Noble Corp.	Noble using \$600MM to refi debt from restructuring and merger	Finance	8		
Odfjell Drilling	Odfjell Drilling secures LOIs for 23 months of firm activity	Contracts & Projects	3		
Pelican Energy Partners	Pelican scoops up Iron Horse Tools from Bluehenge Capital	A&D	7		
Petrobras	Halliburton digital suite to help Petrobras navigate subsurface	Contracts & Projects	4		
PGS	PGS delivers first data from Pacific MegaProject off Colombia	Contracts & Projects	3		
Principle Power	Principle-Aker floating wind design wins U.S. DOE prize	Energy Transition	9		
Repsol	Repsol using Halliburton well construction solution	Contracts & Projects	5		
Saipem	Saipem-refurbished Eni FPSO starts journey to Côte d'Ivoire	Contracts & Projects	3		
SBM Offshore	SBM locks down \$1.63B to build FPSO for Búzios field	Finance	8		
Seadrill Ltd.	Seadrill closes acquisition of former partnership Aquadrill	A&D	7		
Shaanxi LNG Reserves & Logistics	Technip to FEED, supply LNG project in China	Contracts & Projects	4		
Siren Energy	Liberty buys a Siren to announce start of alternative fuels biz	A&D	6		
Step Energy Services	Step postpones U.S. frac expansion amid depressed gas prices	Developments & Trends	1		
Technip Energies	Technip Energies to FEED, supply LNG project in China	Contracts & Projects	4		
Tenaris	Ternium & Tenaris taking control of Brazil steelmaker Usiminas	A&D	6		
Ternium	Ternium & Tenaris taking control of Brazil steelmaker Usiminas	A&D	6		
Usiminas	Ternium & Tenaris taking control of Brazil steelmaker Usiminas	A&D	6		
Valaris Ltd.	Valaris offering notes, opening revolver two years after Ch. 11	Finance	8		



Oilfield Pulse

Contracts & Projects

PGS delivers first data from Pacific MegaProject off Colombia

PGS released the first data from its new Pacific MegaProject so E&P companies can evaluate prospectivity across most of Colombia's Tumaco and San Juan basins. Modern techniques have been applied to reprocess all available data in the target area, including several vintages, the Oslo-based geosciences company said.

"These basins have significant exploration potential, and the new PGS MegaProject dataset has been produced in response to renewed interest in this area," said Sharon Walker, VP of sales in North and South America. The area covering the Tumaco and San Juan basins is characterized by a forearc basin structural style in convergent margins, relating to the subduction of the Nazca plate beneath the western part of South America.

MegaProjects are merged, post-stack datasets consisting of multiple 2D and 3D surveys that have been matched to produce a phase-balanced and uniformly scaled contiguous regional volume. The regional coverage provided by MegaProject data supports the understanding of tectonic and stratigraphic evolution across entire basins, which leads to a robust understanding of existing and potential petroleum systems, PGS said.

Odfjell Drilling secures LOIs for 23 months of firm activity

Odfjell Drilling Ltd. announced that it had secured two LOIs from a single client for the harsh-environment semisubmersible Deepsea Atlantic to conduct operations in the North Sea region. The LOIs have a combined firm duration of 23 months and a value of \$290 million excluding integrated services, upgrades, modifications and mobilization fees. While Odfjell did not identify the client, it has said the Deepsea Atlantic was committed to Equinor into 1Q24 with options through 2029 under a frame agreement.

Four priced single-well options follow the firm periods. The arrangement also provides for three further optional periods of roughly one year each with the rates for each period to be mutually agreed prior to exercising.

In addition to the base value, the LOIs include provisions for performance bonuses and fuel incentives. The Deepsea Atlantic is currently working for Equinor on Phase 2 of the Johan Sverdrup development, which includes the drilling of 28 new wells.

The LOIs are contingent on license approval, with one also depending on governmental approval and formalization of contract. The firm periods will take place consecutively following completion of the rig's special periodic survey, which is planned for 1H24.

"In the year of our 50th anniversary these LOI's are testament to Odfjell Drilling's experience and continued drive to innovate and remain at the forefront of change in our industry," Odfjell Drilling CEO Kjetil Gjersdal said. "While providing valuable, continuous and lengthy backlog these contracts are also a platform for us to take the next step in terms of automation, digitalisation and carbon reduction together with our valued client."

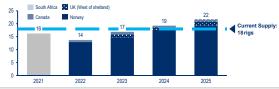
Odfjell Sees Bullish Factors in Its Favor

Market Outlook

Positive outlook for demand in our key areas of expertise.

- All time high cash flow generation among E&Ps driving increased investments
- Covid-19 tax incentives in Norway resulting in multiple new PDO's submitted before year end
- UK's 33rd licensing round received as many applications as in 2019, a positive sign for further investment in the basin
- Focus on energy security driving new license rounds and activities
- Other regions starting to look towards harsh rigs for work due to a tightening drillship market, water depth flexibility and proven performance exemplified by Deepsea Bollsta and Deepsea Mira which have been contracted in West Africa

Harsh Environment Demand Set to Tighten Towards 2025 HE Supply HE Demand Supply: -39.0% Demand: +52% Demand: +52% Demand: +52% Demand: +52% Cumulative Core Region Demand for Tier 1 Harsh Environment rigs



Saipem-refurbished Eni FPSO starts journey to Côte d'Ivoire

Eni, in partnership with PetroCi, marked the April 6 sailaway of the FPSO Firenze from Dubai Drydocks to Baleine field off Côte d'Ivoire. Its arrival will allow production to start at Baleine, the largest hydrocarbon discovery in Côte d'Ivoire to date with an estimated 2.5 Bbo and 3.3 Tcf in place. The FPSO Firenze, which will be renamed Baleine after its arrival in Côte d'Ivoire, has been refurbished and upgraded by Saipem so it can treat up to 15,000 bo/d and around 25 MMcf/d.

FPSO Firenze formerly served the Eni-operated Aquila field in the Mediterranean.

The entire gas production will be delivered onshore via a newly built export pipeline. The installation of the subsea production system and well completion campaign are underway so production can start in June.

In addition to having served as EPC contractor for the refurbishment, Saipem will provide 10 years of operations and maintenance services for the FPSO. Eni also hired Saipem to provide EPCI of the subsea umbilicals, risers and flowlines as well as an onshore gas pipeline to connect Baleine gas to Côte d'Ivoire's distribution grid. Saipem valued the contracts at a combined €1 billion (\$1.09 billion) when they were awarded last September. The FPSO formerly served Eni-operated Aquila field in the Mediterranean and was acquired by Eni from Saipem for €336 million in 2013.

Eni's phased development model and fast-track program have the project set to start production less than two years after the Baleine 1X discovery and one and a half years after the FID. Eni already made a positive FID for the second phase in December and is progressing Phase 2 toward a planned production startup by December 2024.

Baleine field extends over blocks CI-101 and CI-802. Eni also owns interests in four other Ivorian deepwater blocks—CI-205, CI-501, CI-401 and CI-801—all with the same partner, Côte d'Ivoire-based E&P firm PetroCi Holding.

Oilfield Pulse

Contracts & Projects

Halliburton digital suite to help Petrobras navigate subsurface

Petrobras will use Halliburton's Landmark iEnergy digital platform to address its subsurface challenges, according to a March 29 announcement. The companies executed a contract that gives the state-controlled Brazilian producer access to the entire Halliburton Landmark DecisionSpace 365 Geoscience Suite, including cloud-based, next-generation technologies such as Seismic Engine, Scalable Earth Modeling, Assisted Lithology Interpretation, DS365.ai, and Neftex Predictions to support its E&P programs.

"Migrating from on-premise and private cloud environments to an enterprise-scale geoscience suite in a secure public cloud environment allows geoscientists and engineers at Petrobras to extract more value from their data and make more informed decisions every day," Halliburton Landmark, digital solutions and consulting SVP Nagaraj Srinivasan said. The iEnergy digital platform, which powers DecisionSpace 365 cloud applications, is the E&P industry's first hybrid cloud designed to deploy, integrate, and manage sophisticated cloud applications, according to Halliburton. The digital platform contains solutions for geology, geophysics and engineering in a public cloud, along with high-performance processing and machine learning.

Petrobras has had a long history of collaboration with Halliburton. In January it recognized the oilfield services giant as its best supplier of drilling and completion services for 2021 and 2022.

Earlier in March, Halliburton Landmark DecisionSpace 365 secured another notable E&P customer. Hess Corp. selected DecisionSpace 365 Well Construction applications powered by iEnergy to help it plan, design and construct safe, costeffective and productive wells.



U.S. Rig Count by Basin & Top Drillers

	Current 04/11/23	Week Ago 04/04/23	Month Ago 03/11/23	Year Ago 04/11/22	Δ YOY (%)
Total	807	813	836	765	5%
Top Drillers					
Helmerich & Payne Inc.	180	182	186	172	5%
Patterson-UTI Drilling	125	119	112	111	13%
Nabors Industries Ltd.	81	82	89	83	(2%)
Ensign Energy	54	54	58	45	20%
Precision Drilling	52	51	56	45	16%
Rigs by U.S. Basin					
Delaware	197	194	196	169	17%
Midland	146	149	146	133	10%
Gulf Coast	97	95	106	93	4%
Anadarko	65	70	72	60	8%
Appalachian	53	51	54	51	4%
Ark-La	40	44	46	47	(15%)
Williston	39	40	40	36	8%
East Texas	32	32	36	32	0%
Gulf of Mexico	30	31	30	29	3%
DJ	17	16	18	15	13%
Powder River	13	15	14	12	8%
Uinta	11	11	9	10	10%
Fort Worth	10	12	15	15	(33%)
Permian Central Platform	10	7	10	13	(23%)
Permian Eastern Shelf	7	7	5	10	(30%)
Other	40	39	39	40	0%

Source | Enverus Rig Analytics

Technip Energies to FEED, supply LNG project in China

Technip Energies has been awarded a €50-250 million (\$55-275 million) contract from Shaanxi LNG Reserves & Logistics for the 3 million normal cubic meters per day (106 MMcf/d) Xi'An LNG emergency reserve & peak regulation project in China. The contract covers the process design package, FEED and supply of key equipment of a single 0.8 mtpa LNG train. It also covers technical services for construction, commissioning, startup and testing.

The plant will utilize Air Products' single mixed refrigerant liquefaction technology, which is designed for mid-scale LNG, and will be all-electric motor-driven with the aim of reducing emissions. It will be the largest liquefaction unit in the world using a single electric motor-driven mixed refrigerant compressor, Technip Energies said.

"This award strengthens our positioning in the mid-scale LNG market in China. By being all-electric motor-driven, this LNG plant will be a reference for low-carbon LNG in the industry," said Loic Chapuis, Technip Energies SVP of gas and low-carbon energies.

Neptune enlists Eserv to create additional digital twins

Neptune Energy has selected U.K.based 3D technology specialist Eserv to create digital twins for two of its offshore platforms in the Dutch North Sea, bringing the operator's total digitized assets to 14. Eserve will digitize the Neptune-operated D15-A and K12-C platforms. Neptune noted that Eserve has already digitized 12 other platforms in Dutch and U.K. waters.

D15-A, installed in 1999, is located in the DEK area and accumulates gas from several fields in both the Dutch and U.K. North Sea sectors. K12-C is a satellite wellhead platform at K12 field, also in the DEK area, and began production in 1984.

Digital twins allow engineers to carry out traditional offshore work from an onshore location, Neptune said, accelerating work schedules and reducing costs. Since its first digital twins were introduced, the company has completed thousands of hours of work from office-based locations where teams can visit assets virtually.

Contracts & Projects

KBR lands topsides FEED award for Bay du Nord FPSO off Canada

KBR received an LOI from Equinor for FEED for the topside facilities of the 200,000 bo/d Bay du Nord FPSO to be located off Newfoundland and Labrador. The agreement also includes an option for continuation of detailed design and procurement management

services through final completion of the harsh environment FPSO. Financial terms were not disclosed.

The FEED scope comes on the back of the pre-FEED work KBR carried out in 2022 and $\,$

Will help Equinor develop one of the world's lowest carbon-emitting FPSOs.

will further mature the engineering and execution planning as Equinor works toward an FID for the \$9.4 billion Bay du Nord project. First production is expected in the late 2020s.

KBR said its FEED work would help Equinor develop one of the lowest carbon-emitting FPSOs in the world, using an onboard combined-cycle power system and technology to minimize the number of crew onboard and maximize digital solutions. KBR will execute the work scope jointly with subcontractor Hatch Ltd., an engineering, project management and professional services firm with a Newfoundland and Labrador office in St. John's and will provide Equinor with an integrated team across Canada and London.

Norwegian Salt Ship Design AS is designing the FPSO hull for the project. Equinor previously planned for an FID in 2020, but it was delayed amid the coronavirus pandemic. BP is Equinor's minority partner in Bay du Nord since last June when it acquired Cenovus Energy's 35% stake.

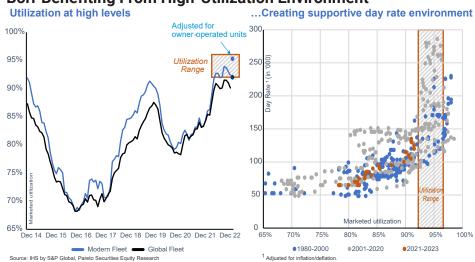
22 out of 22: Borr finds work for all its rigs for first time ◀ From PG.1

Since then, Borr has disposed of one operational jack-up, selling the Gyme during a refinancing with PPL, and divested three of the five jack-ups under construction. The two rigs that remain under construction are not scheduled for delivery until 2025.

The contract is merely the latest in a series of positive developments for the jack-up provider. Last August, Borr was able to complete a refinancing that deferred \$1.4 billion in maturing debt from 2023 to 2025, using proceeds from a \$250 million equity offering. Borr issued 2023 guidance in February, with revenue targeted at \$740-780 million and adjusted EBITDA at \$360-400 million; both results are more than the previous two years' figures combined.

Borr now has no open availability until September. According to its February fleet status report, Borr does have five rigs that will go off contract between then and YE23. The company said it remains optimistic about recontracting opportunities for its fleet amid an improving market.

Borr Benefiting From High-Utilization Environment



Repsol using Halliburton well construction solution

Spain's integrated energy company Repsol is using the Halliburton Landmark DecisionSpace 365 Well Construction Suite as its preferred digital solution to automate and streamline its well design process, Haliburton announced April 5. According to the oilfield services giant, the deployment provides scalability, flexibility, integration and third-party collaboration and accelerates the adoption of machine learning and artificial intelligence across the drilling and wells organization.

Accelerates machine learning and AI across the drilling & wells organization.

The Well Construction Suite and Digital Well Program helps Repsol standardize its well design process and automate routine work to increase efficiency and minimize down time, Halliburton said. The SmartDigital co-innovation service delivers tailored workflows and new components to further reduce cycle time and provide greater data quality throughout the well workflow process.

"Halliburton Landmark's cloud technologies reduce planning time and automate workflows throughout the value chain," said Nagaraj Srinivasan, SVP of Landmark, Halliburton digital solutions and consulting. "DecisionSpace 365 applications on iEnergy hybrid cloud allow Repsol to re-engineer their business processes and adapt them to the cloud for simplified global operations and lowest total cost of ownership."

Repsol drilling manager Roberto Tello added, "We are excited to streamline our digital processes with Halliburton. The DecisionSpace 365 systems will contribute to shorten our well planning time, automate engineering calculations and reduce our non-productive time."



Thank you! We hope you've enjoyed your sample of our Oilfield Pulse report. Enverus is the trusted source for global oil & gas and renewables activity

Enverus is the trusted source for global oil & gas and renewables activity,

including projects and operations, M&A activity, capital markets

and new technologies.



Thank you! We hope you've enjoyed your sample of our Oilfield Pulse report. Enverus is the trusted source for global oil & gas and renewables activity.

Thank you! We hope you've enjoyed your sample of our Oilfield Pulse report. Enverus is the trusted source for global oil & gas and renewables activity,

including projects and operations, M&A activity, capital markets

and new technologies.

Thank you! We hope you've enjoyed your sample of our Oilfield Pulse report. Enverus is the trusted source for global oil & gas and renewables activity,