

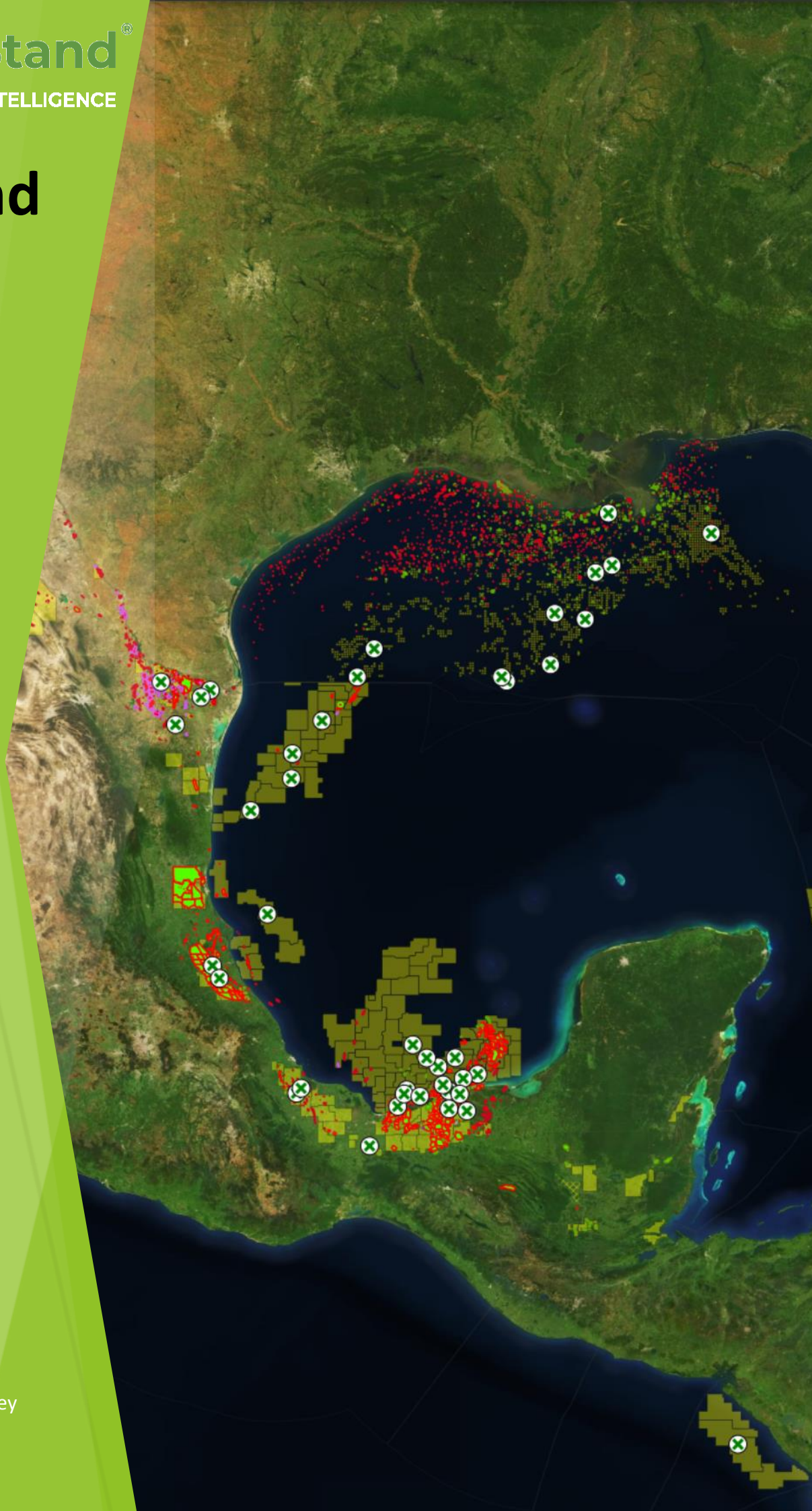


MapStand
LOCATION INTELLIGENCE

MapStand Monthly Mashup

June 2020

A monthly round up of key
developments and insight





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Industry News Round-up

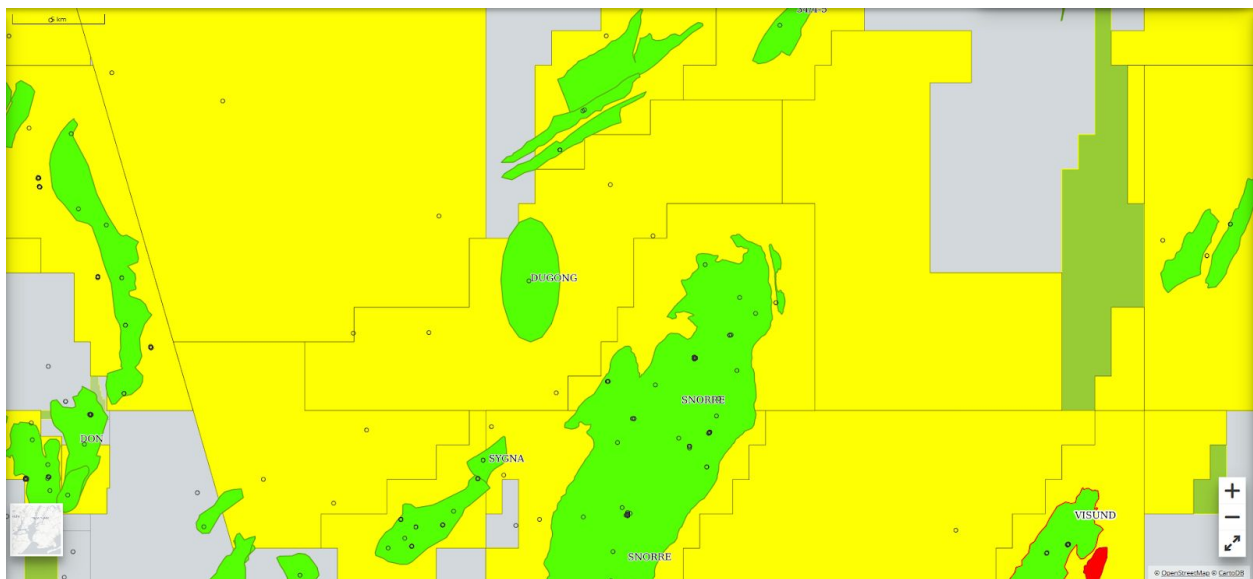
Exploration in Norway

Exploration activity has continued offshore Norway throughout June. Alongside the APA 2020 and 25th licensing round announcement which we will highlight later, we have seen a number of exploration wells approved or commenced drilling.

In licence PL882 operator [Neptune Energy](#) Norge AS has announced a discovery at the Dugong prospect with the first of two wells. Well 34/4-15 S is currently being drilled by [Yantai CIMC Raffles Offshore Ltd.](#) Deepsea Yantai drilling rig with Neptune announcing the discovery of hydrocarbons and that operations in the reservoir section are continuing.

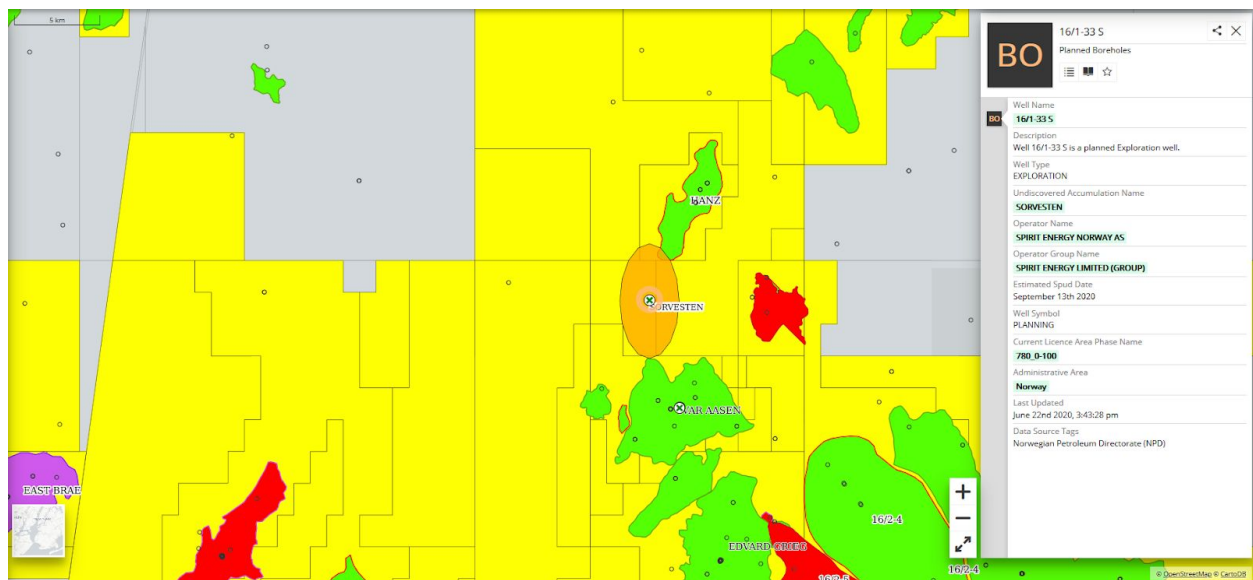
The Dugong prospect is located in the Viking Graben basin with prospective recoverable resources of 86 mmboe. With the exploration well a success, this prospect could open up the adjacent prospectivity in an under-explored area of the basin, exciting news for nearby licence holders.

[Neptune Energy](#) Norge holds 40% working interest in PL882 with the remaining divided between [Concedo ASA](#) (20%), [Idemitsu Petroleum Norge](#) AS (20%) and [Petrolia NOCO AS](#) Noca (20%). For [Petrolia NOCO AS](#) Noca a success in this well could transform the company with its advantageous working interest in two adjacent and prospective licences.



It has also been a busy month for [Spirit Energy](#) as they commenced their two well exploration programme in the Barents/Norwegian Sea. On the 1st June, well 7321/8-2 S was spud, using the Leiv Eiriksson, in PL719 in the Barents Sea to test the Sandia prospect. PL719 is operated by [Spirit Energy](#) (50% WI) alongside partners [Aker BP ASA](#) (20% WI) and Lukoil (30% WI). On the 6th July, Spirit announced that the well was dry.

Following completion, the Leiv Eiriksson will move on to PL780 after [Spirit](#) secured an exploration drilling permit from [The Norwegian Petroleum Directorate](#) for a wildcat well 16/1-33 S in the production licence. The well will appraise the Sorvesten Prospect. PL780 is operated by [Spirit Energy](#) who owns 60% working interest and the remaining 40% is with [Aker BP ASA](#).



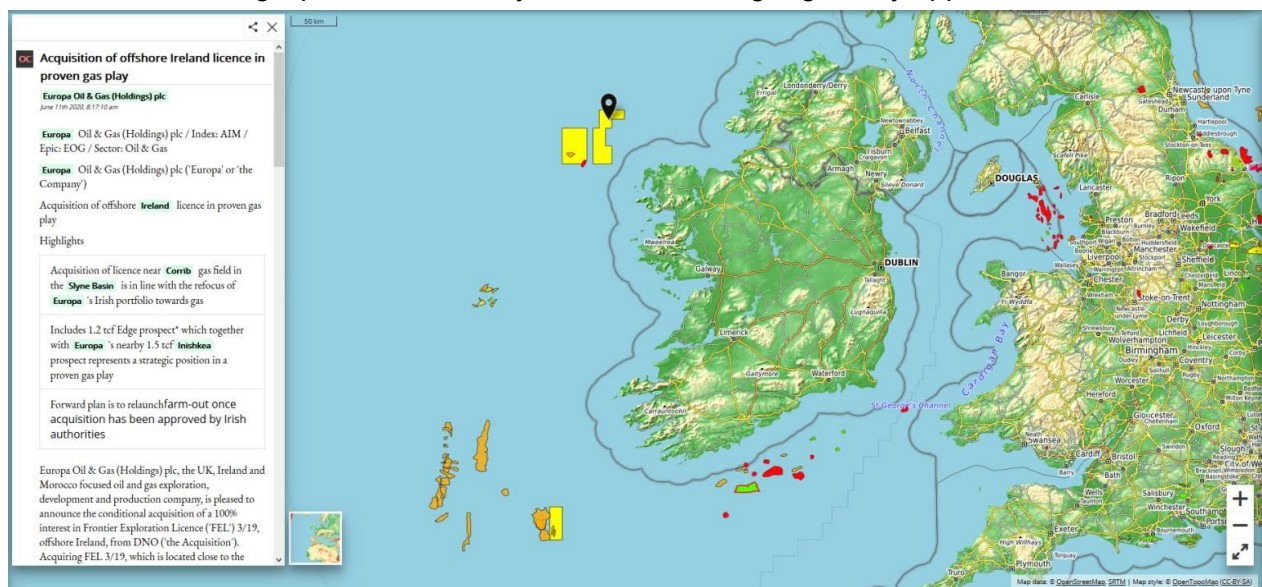
Following the dry hole at the Sandia prospect, the Leiv Eiriksson will now drill the Sorvesten Prospect.

Europa Oil and Gas (Ireland)

Europa Oil & Gas has increased its presence offshore Ireland with the acquisition of a 100% interest in Frontier Exploration Licence 3/19 (FEL 3/19) from [DNO ASA](#).

The licence contains the 1.2 tcf Edge Prospect and is located proximal to both the Corrib Gas field and the 1.5 tcf Inishkea prospect located within Europas FEL 4/19 licence.

Europa believes both prospects to be at a 'ready to drill' stage and plans a relaunch of the farmout of its strategic position in the Slyne Basin following regulatory approval.



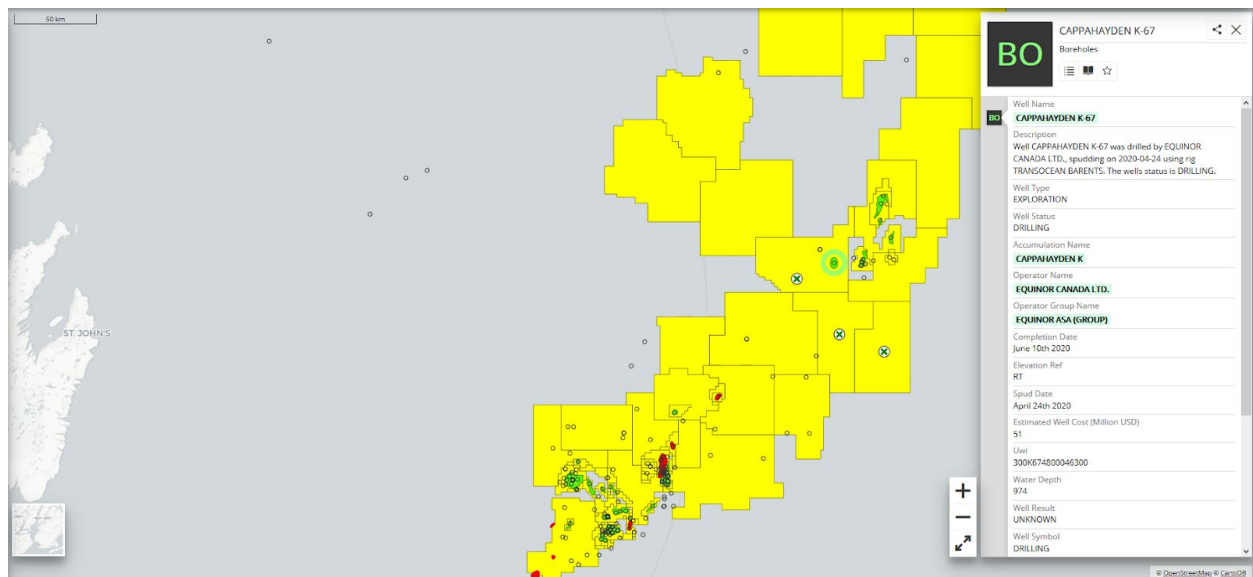
Europa Oil and Gas assets, offshore Ireland.

Equinor - Flemish Pass 2020 Exploration Campaign

Early reports indicate a possible commercial oil discovery in the Flemish Pass offshore Canada at [Equinor](#)'s Cappahayden K-67 well. Cappahayden K-67 was drilled by the [Transocean Barents](#), which is currently still on location drilling a sidetrack, likely to determine the extent of the reservoir.

Following the completion of this well, the Transocean Barents will move on to drill Cambriol G-92, the second exploration well in EL1156 (Equinor 60% (operator) and BP 40%), which insiders believe to be a bigger prospect than Cappahayden.

Both could be tied-in to a proposed FPSO that Equinor hopes to commission for the Bay du Nord field.



Cappahayden K-67 well (highlighted) and proximal Cambriol G-92 will form Equinors 2020 exploration campaign in the Flemish Pass.

C-NLOPB Call for bids - NL20-CFB01

The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) has issued a Call for Bids for Exploration Licences in the Eastern Newfoundland Region.

NL20-CFB01 consists of 17 blocks with interested parties having until 4th November 2020 to submit their bids. A minimum bid of \$10,000,000 in work commitments has been set by C-NLOPB.

C-NLOPB Announces 2020 Call for Bids in the Eastern Newfoundland Region

C-NLOPB - Canada Newfoundland and Labrador Offshore Petroleum Board

June 11th 2020, 6:02:09 pm

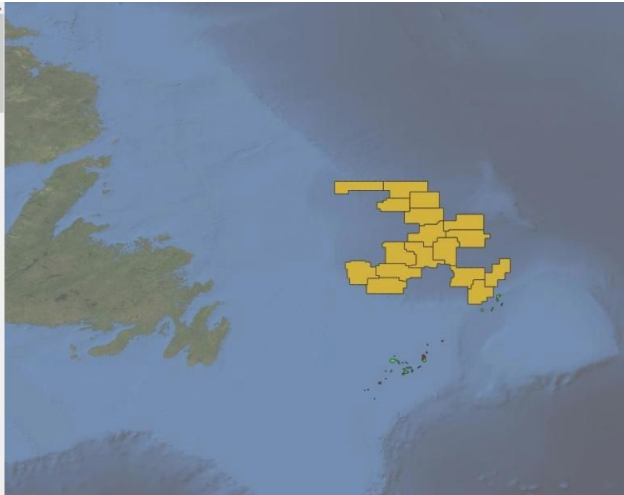
The **Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB)** has issued a Call for Bids for Exploration Licences in the Eastern Newfoundland Region.

Call for Bids NL20-CFB01 (Exploration Licences, Eastern Newfoundland Region) consists of 17 parcels and a total of 4,170,509 hectares.

Interested parties will have until 12:00 p.m. NST on November 4, 2020 to submit sealed bids for the parcels offered in this Call for Bids. Notification of any changes to the Call for Bids will be posted on the **C-NLOPB**'s website.

The sole criterion for selecting a winning bid will be the total amount of money the bidder commits to spend on exploration of the parcel during Period I (the first period of a nine-year licence). The minimum bid for the parcels offered is \$10,000,000 in work commitments.

Planning, monitoring and assessment of offshore petroleum activities will ensure they occur in an environmentally responsible way. Required regional and/or site-specific mitigation measures will be



Canada-Newfoundland and Labrador

Licensing Round Status

Round Name

Canada Newfoundland and Labrador NL20-CFB01 (Eastern Newfoundland Region)

Description

Call for bids NL20-CFB01 consists of 17 parcels in Eastern Newfoundland. Sealed bids must be submitted to the C-NLOPB by 4th November 2020. The sole criteria for winning bids is the total exploration spend committed with a minimum of \$10,000,000 in work commitments. For more information visit: <https://www.cnlopb.ca/exploration/issuance/#bids-active>

Status

Bid Round Open

Round Closing Date

November 4th 2020

Round Opening Date

June 11th 2020

Last Updated

June 12th 2020, 10:32:41 am

C-NLOPB - NL20-CFB01 consists of 17 blocks in eastern Newfoundland.

Nigeria OPL 310 - Ogo appraisal finally proceeding

Partners Lekoil and Optimum Petroleum have completed their offshore site survey in OPL 310 and are now moving forwards with plans to contract a jackup rig for two appraisal wells on the Ogo field, offshore Nigeria.

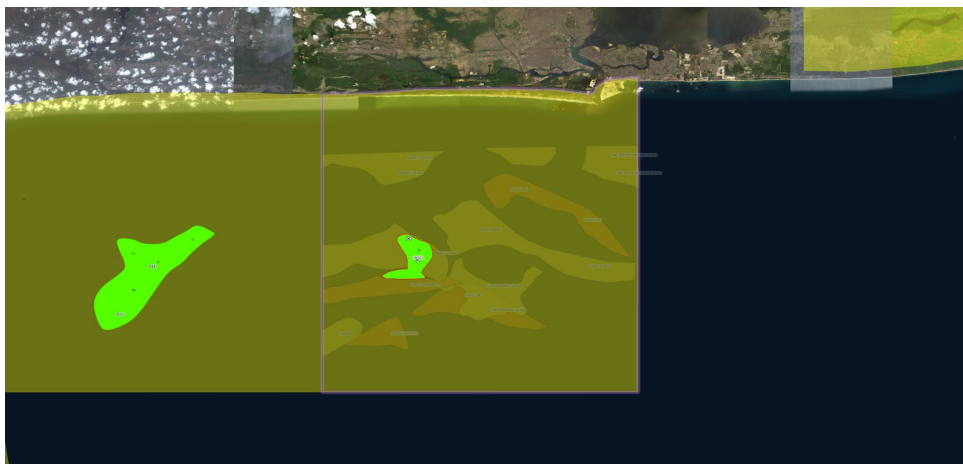
Lekoil hit the news earlier this year after announcing the company was a victim of a loan scam in its attempt to raise funds. The unfortunate event delayed the February 2020 Ogo appraisal work as the company was unable to raise its share of \$10mn for the first well, estimated to cost \$28mn.

The delay could however work in the partners favour. Now able to take advantage of the recent slump in drilling activity within the area, negotiating an attractive day rate for the rig shouldn't be a challenge. For the past couple of years, jackups in West Africa were awarded contracts at a slight premium to global averages. A timid quantity of shallow water projects tapered speculative mobilisations to the region, creating a marginal shortage of supply in the area. But fast forward to today and rigs are either coming to the end of their contracts or facing early terminations.

Shelf Drilling's Trident XIV which was operating on behalf of Chevron in Nigeria, received an early termination notice in March and could be a contender for the job. Shelf has a number of other standard jackups operating in the country set to conclude contracts this year.

Borr Drilling will likely make a bid with their two modern premium jackups which are currently warm stacked in neighbouring Cameroon.

Given the lack of future work and a plethora of assets set to roll off contract, it is unlikely rig managers will mobilise more assets into the region any time soon.



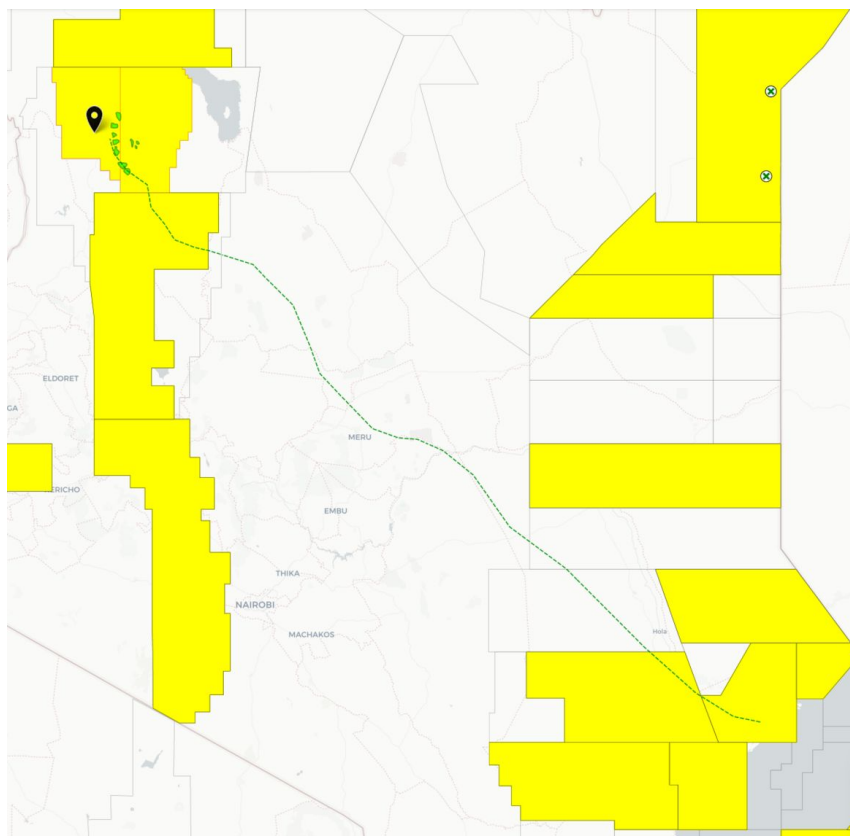
OPL 310 and Ogo Field

Recent events in Kenya

Lokichar Project under force majeure

Tullow and its partners announced last month that it had declared Force Majeure on its Lokichar development project in response to restrictions imposed by Covid-19, ending the Early Oil Pilot programme and slamming the door on a 2020 FID.

Both Tullow and Total are still seeking to farm-out a respective 20% and 12.5% interest in the project. Whilst no firm reportings have been announced, rumours suggest that CNOOC is among one of the favourites to acquire the 32.5% interest on the table. But with a break-even reported at ~\$60 per barrel, there won't be any rush to pick up these assets.



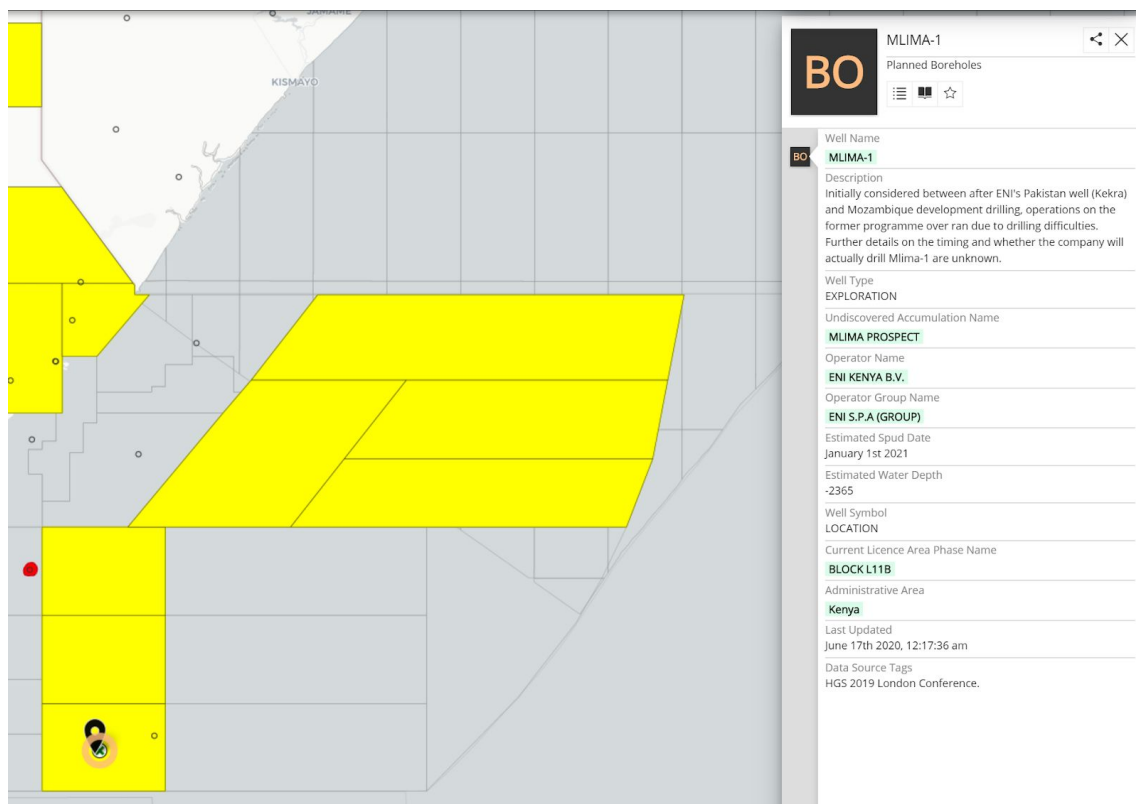
Lokichar Development Project now under Force Majeure

Mlima-1

Eni's long awaited deep-water Mlima-1 well is unlikely to be drilled this year. Initially pegged for 2019, the well was to be drilled using the Saipem 12000 drillship inbetween Eni's Kekra-1 well offshore Pakistan and development drilling in Mozambique on Area 4.

Technical difficulties at the dry Kekra-1 well meant operations ran over schedule, with the rig instead proceeding straight to Mozambique. The Saipem-12000 recently concluded its operations offshore Mozambique and has now been stacked in the warm azure waters of the Réunion island.

Although Qatar Petroleum did farm-in to Blocks L12, 11A and 11B, capex is tight and Eni has many other exciting targets in it's portfolio. As the expiry date for the licences fast approaches, it remains to be seen if the partners will negotiate an extension and push ahead with the well or relinquish the blocks instead.



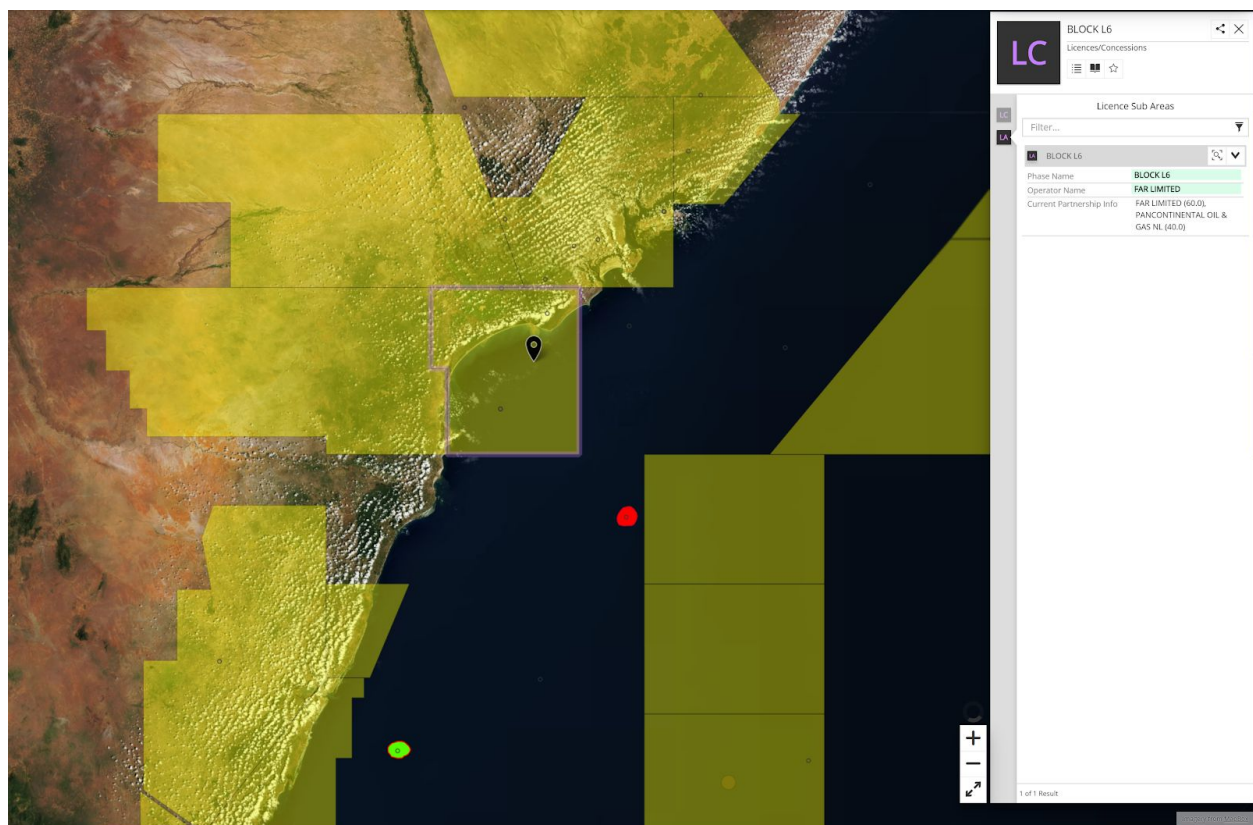
The Mlima-1 well (highlighted), offshore Kenya is unlikely to be drilled this year.

Far - Pancontinental Block L6: resolution and relinquishment

Kenya is forced to watch on whilst yet another licence is relinquished as Partners Far (60%) and Pancontinental (40%) finally resolve a five year old dispute over cash call payments in Block L6.

Back in 2015, Far Issued a cash call to its partners with Pancontinental being asked to pay 40% of that total. Pancontinental disputed that figure, claiming it only needed to pay 16% after a farm-in agreement with Milio International had split the equity: (Milio) 60% - (Far) 24% - (Pancontinental) 16%. Even then, Pancontinental also claimed it had already paid \$38,060 to the Kenyan Ministry and refused to pay the remaining amount as no work had been conducted on the licence. The farm-out agreement with Milio since fell through due to delayed government approval

Fast forward to today and both partners have attained a resolution to the dispute, with Pancontinental agreeing to pay a much needed \$150,000 to Far. The partners now intend to exercise a surrender and termination agreement, relinquishing the licence.



Block 6 (highlighted) relinquished by FAR and Pancontinental



Bahamas PLC - Uruguay award and Columbus Energy merger.

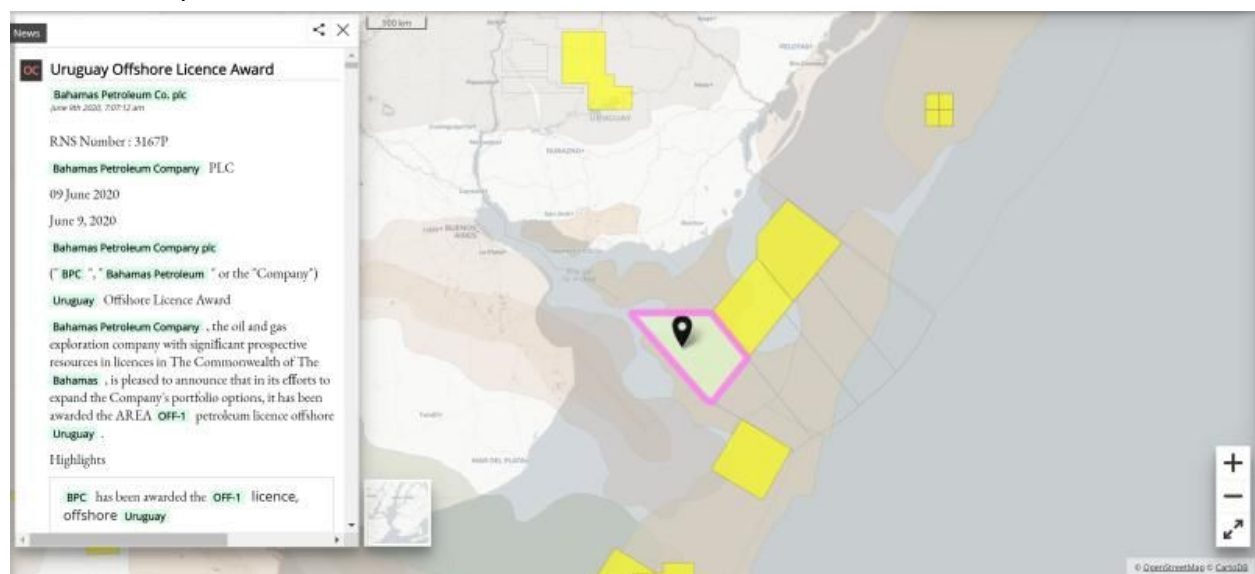
It was another busy month for Bahamas Petroleum PLC (BPC) with the award of the OFF-1 shallow water block offshore Uruguay adjacent to [Kosmos Energy](#)'s acreage positions in the country.

The initial 4-year exploration period has no drilling obligation and only includes work related to reprocessing and re-interpreting historical 2D seismic data.

Uruguay's maritime area remains under-explored with only three wells drilled to date. The most recent well, [Total](#)'s Raya-1 which came up dry, still holds the record for deepest offshore well ever drilled.

Alongside this, Bahamas also launched an all-shares acquisition of Columbus Energy, valuing Columbus at ~£25mlm. This strategic move will create a "Caribbean and Atlantic margin focused oil and gas champion", giving BPC stakes in five producing fields in Trinidad, alongside two appraisal and development projects, including a brand new discovery, alongside onshore acreage in Suriname.

The move helps to further diversify BPC's portfolio in the event of a dry well at Perseverance-1 and provides a steady flow of cash to fund further exploration projects or potential developments. For Columbus, the merger gives shareholders exposure to significant commercial upside in the event of a success.



Bahamas Petroleum awarded OFF-1 Licence (highlighted), offshore Uruguay

Norway APA 2020 & 25th Licensing Round

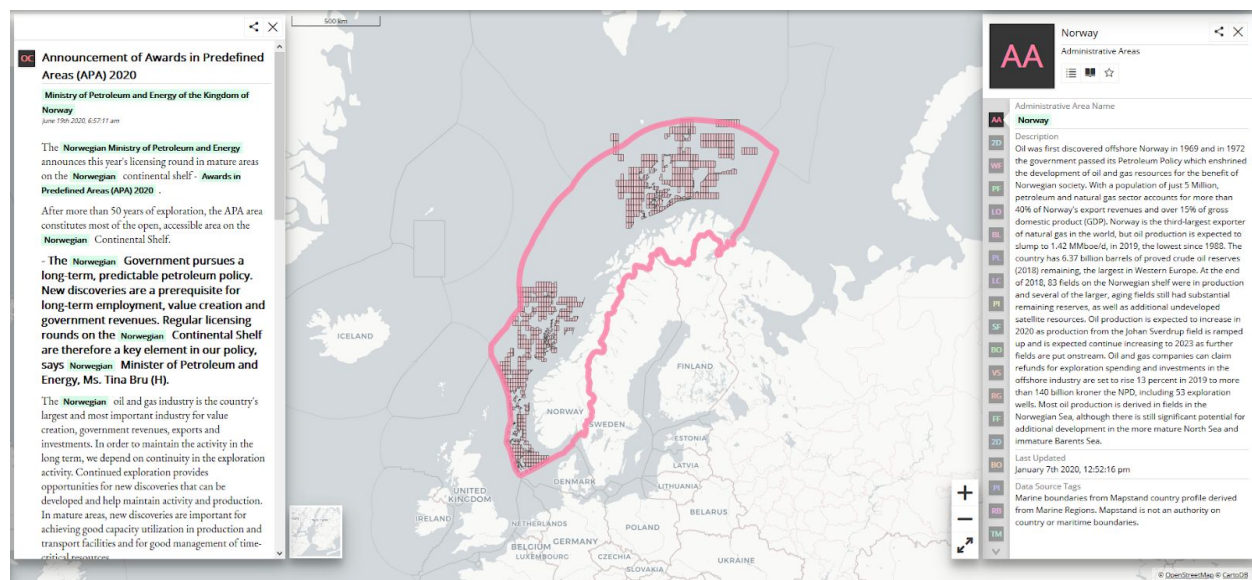
On the 19th June, the Norwegian ministry of Petroleum and Energy announced the launch of [APA 2020](#), encompassing the predefined areas with blocks in the North Sea, Norwegian Sea and Barents Sea.

Since APA 2019, the predefined areas (APA acreage) have been expanded by 36 blocks, these are located in the western Norwegian Sea. The deadline to apply for APA 2020 is 22 September 2020. Awards are expected during the first quarter of 2021.

APA 2020 will be supported by the [25th Norwegian Sea licensing round](#) with the [Norwegian Ministry of Petroleum and Energy](#) entering the public consultation phase for the areas proposed on 1st July 2020.

The 25th round is set to contain 9 areas, 8 in the Barents Sea and 1 in the Norwegian Sea. The consultation deadline is set for 26th August 2020 with an application deadline anticipated for the New Year and allocations in Q2 2021.

The initiation of the 25th licensing round alongside APA 2020 provides the oil and gas industry access to land in both lesser-known and well-known areas.



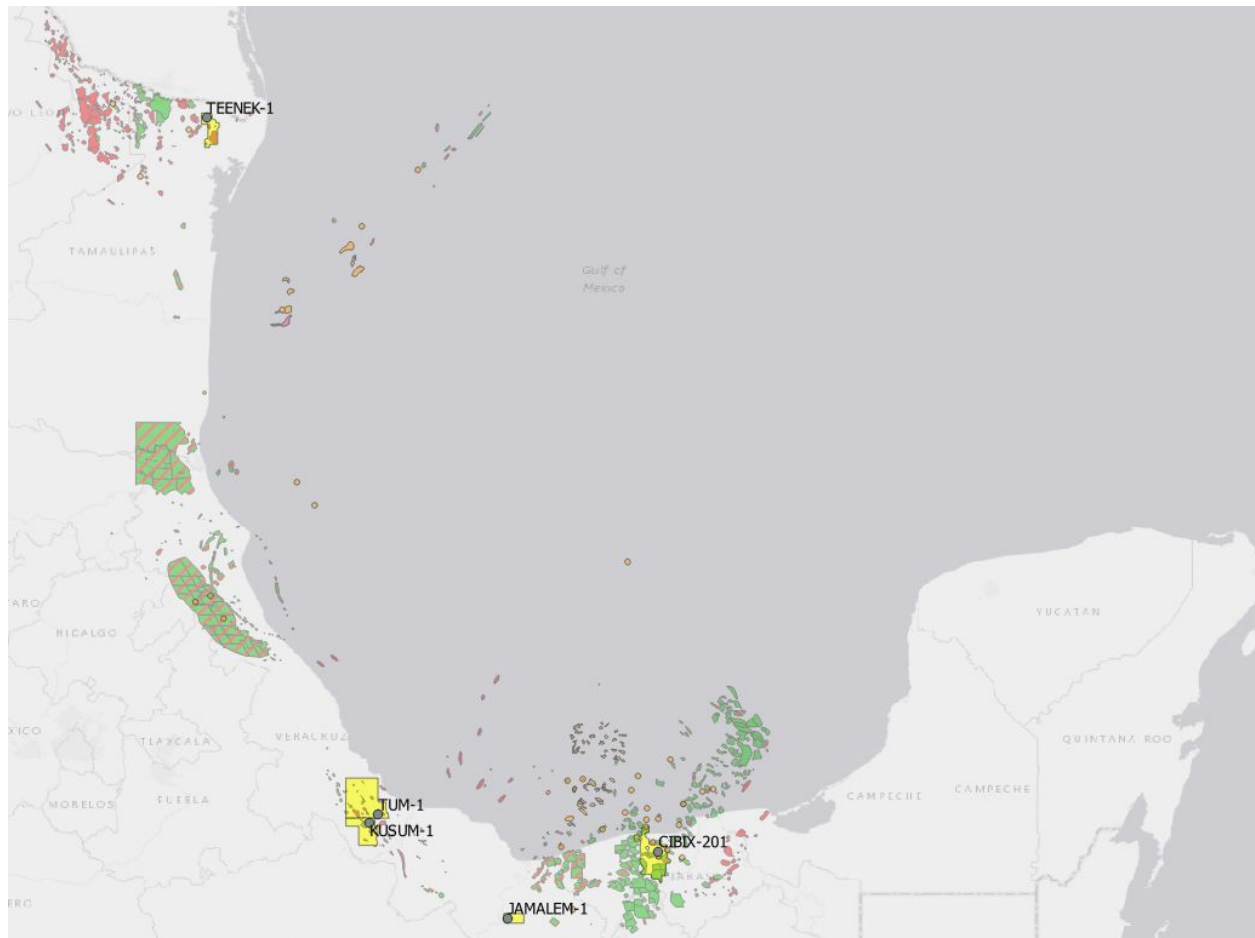
APA 2020 and 25th Licensing round areas - MapStand

Mexico

Exploration has shown no signs of a let-up in Mexico with continued approval for onshore exploration by the country's hydrocarbon commission, alongside some major developments in the offshore where future exploration plans were approved and discoveries made.

Onshore Exploration

A number of onshore exploration wells were approved throughout June, these include a number for PEMEX ([Tum-1](#), [Kusum-1](#)), alongside the Operadora Bloque 12 ([Jamalem-1](#)) and Pantera Exploration and Production ([Teenek-1](#))



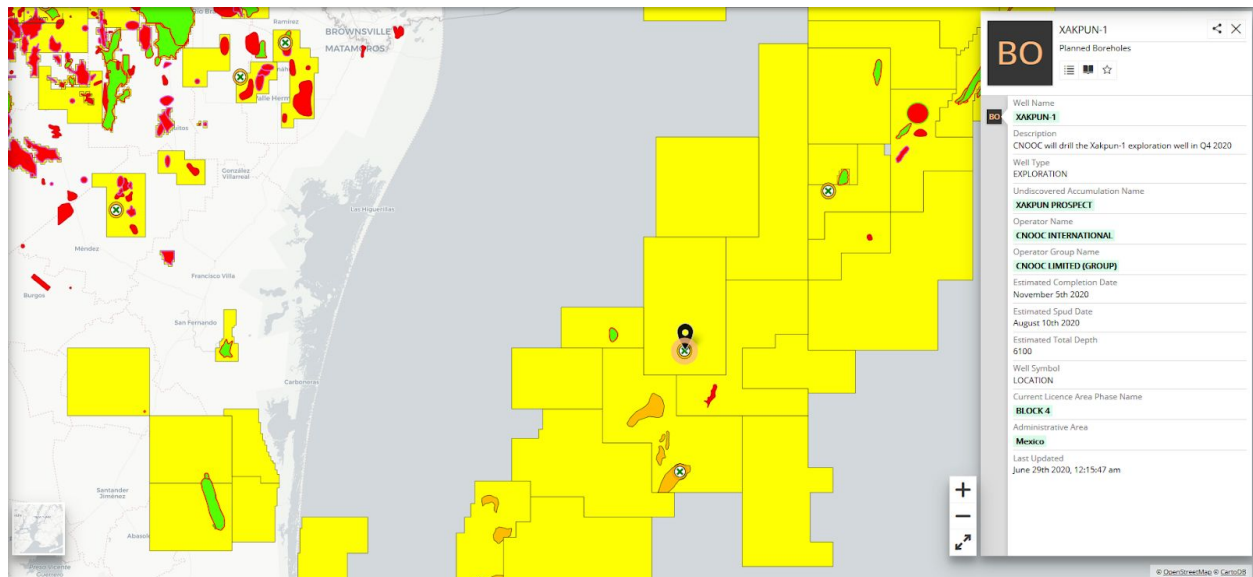
Approved Exploration Wells in June 2020 - Onshore Mexico

Xakpun-1 - CNOOC

The Xakpun-1 well was approved by CNH Mexico during the 25th Extraordinary Session on the 18th June 2020. The well is set to be drilled in deep-water, 115Km from the Tamaulipas coast in Block 4 (CNH-R01-L04-A4.CPP/2016).

The well is targeting Wilcox formation reservoirs with an estimated resource of 993mmboe with a percentage of geological success of 42%.

The well will be drilled by the Rowan Renaissance and is planned to begin on the 10th August 2020 and is expected to conclude on 5th November 2020. Total well cost is estimated to be in the region of \$96.2 million



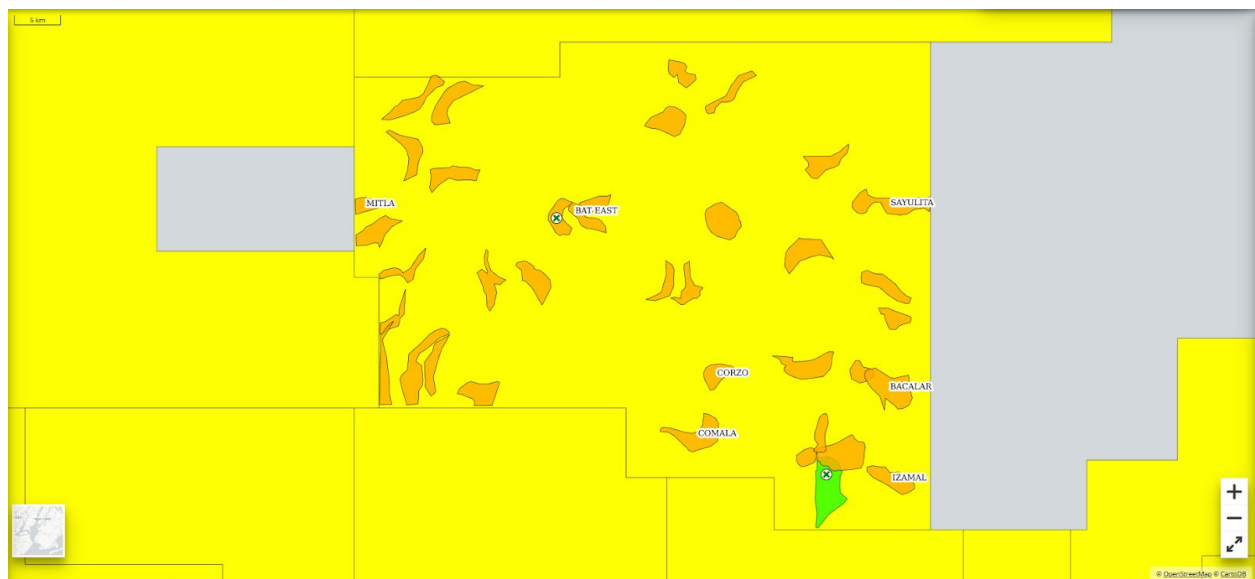
Xakpun-1 Planned well - Block 4

Cholula Discovery - Murphy Oil

Murphy Oil encountered oil and gas in its Cholula-1 well in the Salina del Istmo Basin, offshore Mexico. The Salina del Istmo Basin is a sub-basin of the Sureste Basin, and sits in deeper waters outboard of the shallower waters of the Zama discovery.

The Cholula-1 well was targeting gross mean resources of 220mmboe in the Upper and Lower Miocene and partner Ophir Energy has indicated that the results were broadly in line with pre-drill expectations.

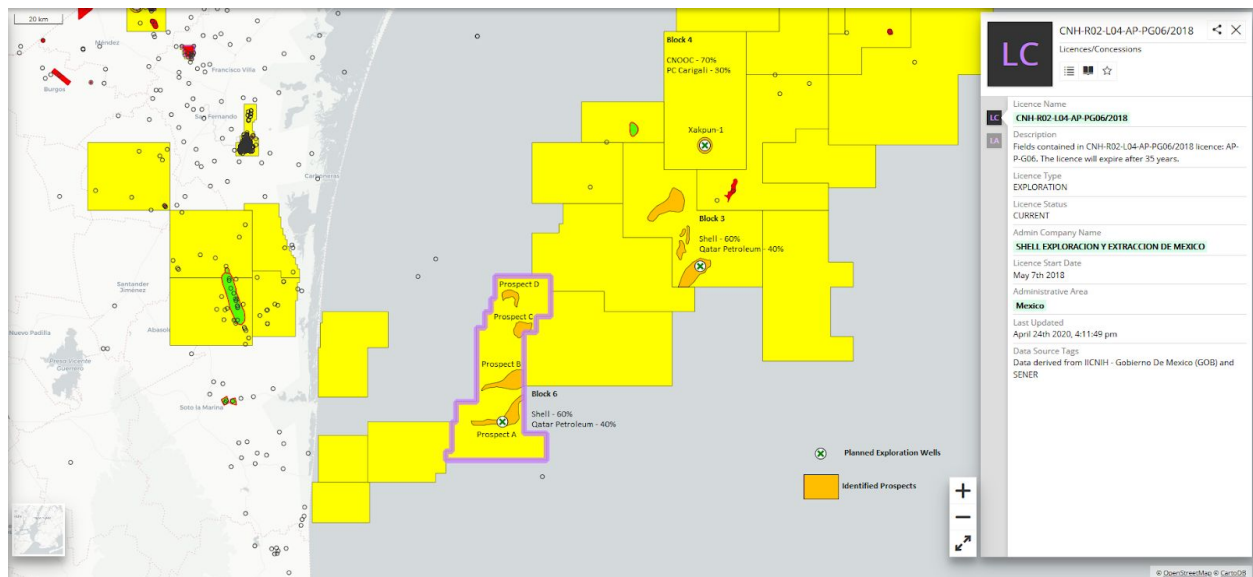
Cholula-1 sits in Block 5 and was drilled to 4000m in a water depth of 750m at an expected cost of just under \$47m. Despite the promising results and the multiple prospects identified within the block (as shown below), Ophir has announced that it is in advanced discussions to sell its 23.33% share in the block.



Block 5 - Cholula discovery (green) and other prospects and leads (orange) identified by Murphy

Shell Exploration Programme - Block 6 (CNH-R02-L04-AP-PG06/2018)

At the 23rd Extraordinary session on the 11th June, 2020. CNH approved Shell's exploration programme for Block 6 (CNH-R02-L04-AP-PG06/2018). Shell has identified a number of prospects in the region and has received approval for exploration drilling, this alongside its interest in Block 3 (CNH-R02-L04-AP-PG03/2018) where it has a second exploration well planned.



Shell Mexico - Prospects (orange) and planned exploration wells



Open-source data and technology

Having originated as an approach to software development, open source is now widely used as a way of describing a set of core values for projects and products in which innovation, collaboration and sharing are at the forefront.

At MapStand, we have embraced this philosophy with our open data application, our community of users who suggest improvements, provide data or engage with each other through our platform and our enterprise solutions where we strive to utilise open source software and technology as much as possible to provide the best service to our customers, allowing them to build on what we have created and without restricting them to 3rd party software.

Open source GIS technology is at the heart of what we do and we thought it might be useful to provide a quick summary of what is out there and what we use to deliver MapStand to you. For those interested in the broader topic of open source GIS, [OSGeo](#) is a great place to start.

So, how does MapStand get the latest oil and gas data to you? All of our geospatial data is stored in a PostgreSQL database, widely accepted as one of the most advanced open source databases. We have utilised the PostGIS extension which adds support for geographic objects and allows location queries to be run. Here we can collate data from disparate sources into a set of defined tables and schemas, cleaning it, standardising it and creating relationships between datasets which enable us to deliver some of the unique functionality you see in our web app. These databases underpin everything we do.

From here, we use Geoserver to read this data and create our map layers. This link is key in providing users with the latest data. Geoserver has a host of functionality allowing us to select the data to display and customise its styling but one of the main features is that it implements industry standard OGC protocols such as Web Feature Service (WFS), Web Map Service (WMS). It is this WMS that we use to display these Geoserver layers on our web app.

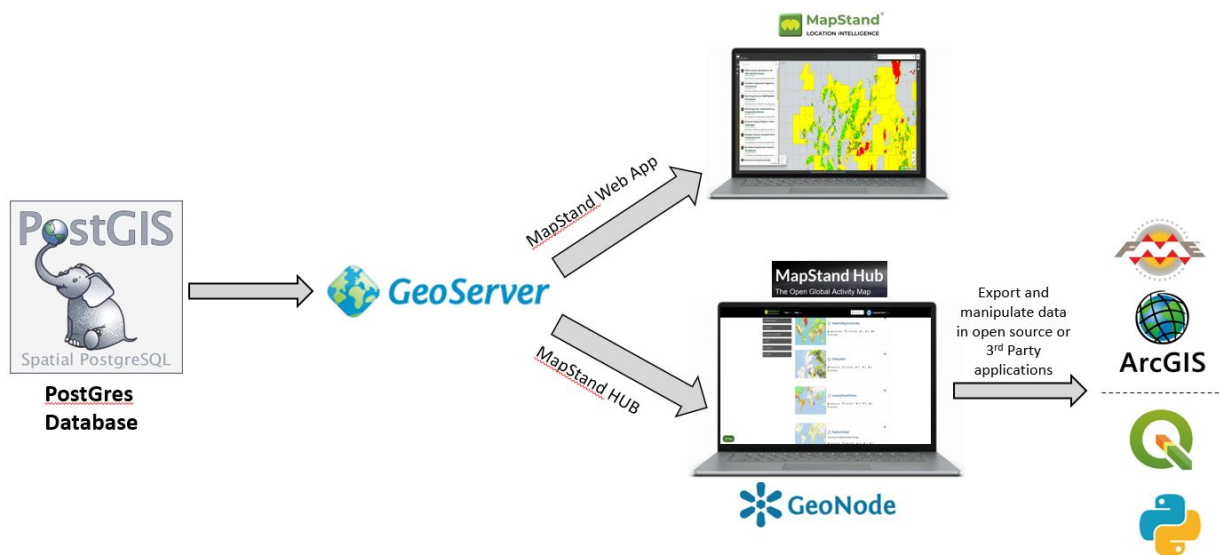
For our enterprise solution (MapStand Hub), we use GeoNode. GeoNode is a web-based application and platform for developing and deploying spatial data. It is designed to be extended and modified, and can be integrated into existing platforms, something we encourage our clients to do. Here we can extend the offering to our subscribers, including some of the following features:

- Develop custom styles
- Download/access data as Shapefile, GeoJSON, XLS, WMS, WFS
- Upload your own data (raster, vector, files)
- Build custom maps (apps) and dashboards in your browser



With access to our data through the MapStand Hub, users can also utilise the WMS and WFS feeds to stream data straight into their own GIS software, whether that be proprietary, ESRI ArcMap or an open source solution such as QGIS. This method ensures users are constantly viewing the latest data available to them and never have to download content which, as we update data daily, can become stale.

Alongside these two delivery methods, we are also seeing members of the community build their own projects from MapStand data and this is something we actively encourage, only asking that in keeping with our open philosophy that the projects are made open. A great way to do this is utilise open source python libraries, some of the best geospatial ones include Shapely, Geopandas, Folium, Rasterio, GDAL and PySAL. If you have an idea or a project that you think might benefit from MapStand data, please get in touch at support@mapstand.com



MapStand open source technology stack