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ILLUSTRATED GEOSCIENCE ANALYSIS OF DRILLING ACTIVITY AND EXPLORATION POTENTIAL IN THE UK WITH SUPPORTING WELL DATA

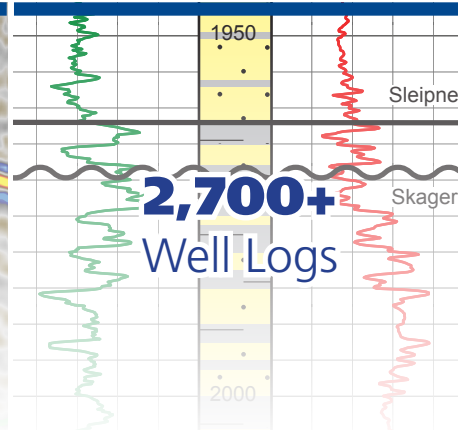
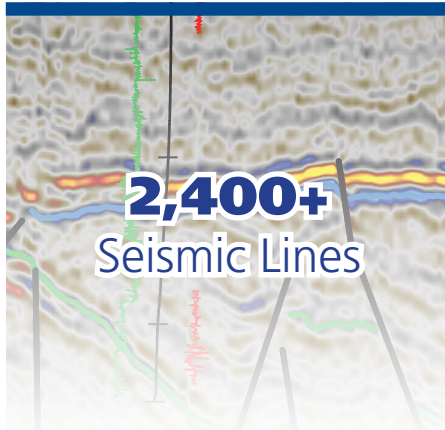
- » Follow activity and results within your core areas and across the UKCS
- » Stay up-to-date with competitors' activities and licensing rounds
- » Get up-to-date well information, hydrocarbon shows and test data in a consistent and reliable geological setting for over 4,900 wells
- » Get up-to-speed quickly with our library of over 6,700 articles, interpreted well logs and seismic lines, updated continuously



Appraisals on Liberator and Serenity with Captain Sandstone objectives. Well 13/23c-9 tested Upper Captain Sandstone mound up-dip of Liberator discovery 13/23d-8; objective absent with Lower Captain below anticipated oil-water contact at 5,270 ft TVDSS. Deviated well 13/23c-11, drilled following re-mapping encountered 220 ft gross Captain reservoir deep to prognosis with 15 ft TVT oil pay to oil-water contact at 5,270 ft TVDSS. Well 13/23c-10 on Serenity pinch-out trap designated appraisal of Tain discovery. Proved potential 512 ft oil column (165 ft TVT gross pay) in Captain and Coracle, but with main pay in 20 ft TVT Captain sand at 4,740 ft TVDSS. Porosity 24.5%, 31.5% API oil recovered. Pressure data supports communication with Blake and Liberator and potential deeper contact at 5,270 ft TVDSS.

	13/23c-9	13/23c-10	13/23c-11
Operator	IE Energy	IE Energy	IE Energy
Well Type	Appraisal	Appraisal	Appraisal
KB Elevation	102 ft	102 ft	102 ft
Water Depth	381 ft	348 ft	314 ft
Spud	21 August 2019	1 October 2019	7 November 2019
Completed	16 September 2019	16 September 2019	16 September 2019
Status	P&A Dry	P&A Dry	P&A Dry
TD/Formation	5,818 ft (5,716 ft TVDSS) Lower Cretaceous (Valk Formation)	6,568 ft (5,344 ft TVDSS)	5,950 ft (5,492 ft TVDSS)

Block 13/23 lies largely within the South objectives within the South Halibut Basin Halibut Basin, a late Jurassic/early Cretaceous (Figure 2). The Coracle Sandstone Member rift located south of the Halibut Horst. Rift movement had effectively ended by the Barremian, but thick, very high porosity sands interbedded with shales and thin-bedded but laterally extensive turbidite sandstones deposited on a basement slope.



Since 1999, the UK Discovery Digest publication has provided E&P professionals with essential illustrated geoscience analysis of drilling activity and exploration in the UK. The UK Discovery Digest includes:

- » In-depth geo-technical reviews of all drilling, completed and released exploration and appraisal wells
- » Licensing round reviews
- » In-depth, illustrated technical reviews focused towards specific plays, regions, stratigraphic investigations and other hot topics
- » **Norway Digest Module:** Access to our extended library of over 5,200 historical articles, interpreted well logs and seismic lines

Users can access Digest articles, along with up-to-date well, hydrocarbon and test data, via our online mapping application. The interactive map is designed to provide users with a geological setting for their work with seamless coverage across the UKCS.

VALUE-ADDED GEOSCIENCE INTELLIGENCE

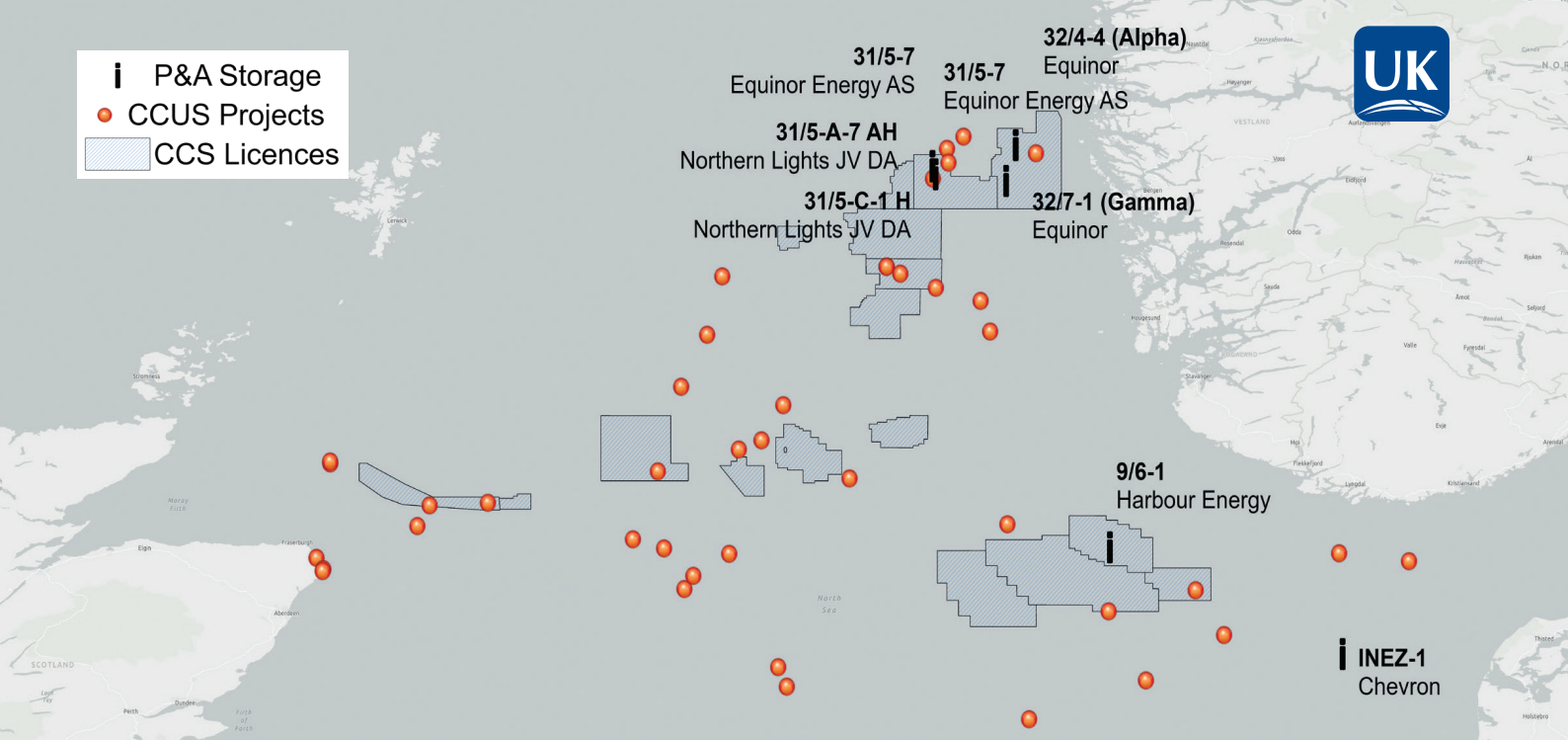
- » **Comprehensive Coverage** – Our experts track all activity offshore UK
- » **Technical Excellence** – In-depth analysis and interpretation by seasoned professionals
- » **Strategic Partnerships** – Interpretation of seismic data acquired through working relationships with numerous providers. In-depth analysis of logs, including well correlations and petrophysical summaries, using data available through NDR.

PLATFORM AND DELIVERY DETAILS

- » **Map-based Interface** – user-friendly, reservoir distribution maps with geology and field information
- » **Digital** – easy on-screen reading, ready to use illustrations and supporting well data
- » **ArcGIS™ Shapefiles** – downloadable module to enhance your in-house databases and workflows
- » **Annual Subscription** – unlimited company-wide access, anytime from anywhere

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NVENTURES UK & NORWAY DISCOVERY DIGEST: CCUS APPLICATIONS

The United Kingdom Discovery Digest is a detailed geotechnical database that, over the last quarter century, has proved invaluable to and been well-supported by the oil and gas exploration industry. These data, which includes detailed well summaries, well test information, reservoir distribution maps and reservoir review articles, will prove equally invaluable to the CCUS industry – with all material accessed via a web-based portal in an easy and cost-effective manner.



Completed Well 21/3a-H5, HSZ

Central Graben

8 August, 2025

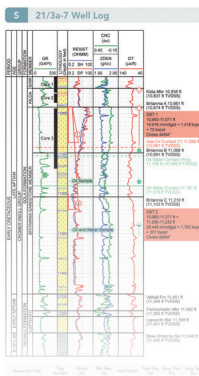
The 21/3a-H5 exploration well was deviated north to Brodgar North; a stratigraphic pinch-out of the Lower Cretaceous (Aptian) Britannia A Sandstone onto the flank of the Rattray High from 10,700 ft and with probable common contacts with the main Brodgar gas/condensate field area at approximately 10,990 ft, with an estimated mean gas resource of 60 bcf and planned TD of 12,750 ft (11,139 ft TVDSS). This well was P and A gas. Sidetrack 21/3a-H5Z, drilled as pilot hole with a planned TD of 13,425 ft (11,360 ft TVDSS) encountered oil and gas and was plugged back to drill production well 21/3a-H5Y on Brodgar East.

	21/3a-H5	21/3a-H5Z
Operator	Harbour Energy (Chrysoa)	Harbour Energy (Chrysoa)
Well Type	Exploration	Appraisal
KB Elevation	77 ft	77 ft
Water Depth	446 ft	446 ft
Spud	10 November, 2024	9 January, 2025
Completed	8 January, 2025	3 February, 2025
Status	P&A Gas	P&A Oil/Gas
TD/Formation	Not released	Not released

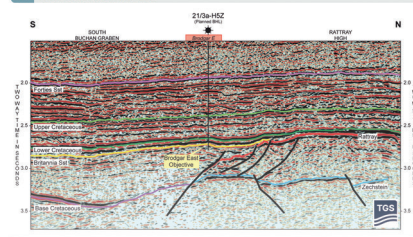
21/3a-H5, HSZ Location Map

Covering the central and northern part of block 21/3, the Rattray High is a major threat fault

Following the 21/3a-4 well, the P118 licence passed to Conoco (75%) and Chevron (25%). Vertical appraisal well, 21/3a-7 was drilled in 2000 on the crest of the Brodgar structure, approximately 2 miles SE of the discovery well. This well encountered the main Britannia Sandstone, below a thin Kilda (Figure 5), from 10,981–11,451 ft (10874–11,344 ft TVDSS), with an older section of Lower Aptian sands (the Lapworth Member) down to 11,549 ft (11,422 ft TVDSS). A total of 111 ft of net pay, with an average porosity of 19.3%, was seen in the Britannia A Sand, down to a shale unit at the top of the Britannia B at 11,098 ft (10,991 ft TVDSS). RCI pressure data located a possible gas-oil contact near the base of the sand at 11,088 ft (10,981 ft TVDSS), with a projected oil-water contact at 11,106 ft (10,999 ft TVDSS). A separate 20 ft oil column was developed in the Britannia B from 11,161 ft (11,054 ft TVDSS) to an oil-water contact at 11,181 ft (11,079 ft TVDSS). A sample of 33° API oil was recovered at 11,166 ft (11,060 ft TVDSS). Local residual oil was seen below this contact.



8 Seismic Inline C 21/3a-H5Z



9 Seismic Crossline D 21/3a-H5Z



THE DIGEST DATABASE INCLUDES:

- » Structural and geological framework maps
- » A suite of reservoir distribution maps for fifteen horizons from the Permian to the Eocene in the UK North Sea
- » Test data for all UK and most Norwegian exploration and appraisal wells
- » Detailed summaries for exploration and appraisal wells on spud, completion and data release
- » A series of in-depth articles that includes reviews of the quality and distribution for most significant reservoirs on the UK and Norwegian continental shelf

OF SIGNIFICANT INTEREST TO THE BURGEONING CCS INDUSTRY IN THE UKCS AND NCS, THE DIGEST INCLUDES DATA AND LOG SUMMARIES ILLUSTRATING:

- » Reservoir distribution over the main plays (maps and parameters)
- » Log summary data to illustrate reservoir and seal
- » Salt layer mapping in GIS
- » Reservoir parameters and formation pressures
- » Trapping and structural summaries
- » Blocks, wells and fields
- » Ongoing CCS news and updates

Over the last twenty-five years the vast majority of oil and gas exploration wells drilled on the United Kingdom continental shelf, plus many key appraisal wells have, on data release, been covered in the United Kingdom Discovery Digest – a total of 727 released well summaries. An additional 459 released wells were covered on the Norwegian shelf between 2006 and 2021. These well reports bring together and standardise all available material and typically include:

- » Exploration / play context and in-depth well results – including structure / prospect / play maps and seismic, key offset well details etc.
- » Bespoke interpretation from 3D lines through well locations – provided by seismic partner companies PGS / TGS, CGG / Veridien and Schlumberger
- » Bespoke log sections and reservoir summaries – including reservoir parameters and formation pressures, available CPI logs and wireline / DST test details and pressure profiles
- » Full listing of formation tops (MD and TVDSS), with interval transit times where available

Wells are also covered on spud and on completion – a total of an additional 675 articles for the UK and 531 for Norway.

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