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# SUBSEA CAMERAS CASE STUDY PACK.

an ACTEON company

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Claxton has long been a trusted name in the oilfield. As a business, we've grown significantly over the years in order to respond to our clients needs. However, throughout our growth, we've always asked ourselves three questions:

**Are we giving the best, most responsive, service we can?**
**Is there a more cost effective and safe way of doing this?**
**Can we offer a better solution to our clients?**

In continually answering these questions, Claxton has built an enviable reputation and gained enormous experience in shallow water engineering. The content of this brochure shows how those three simple questions have shaped a broad, deep product range for well systems, structures and pipelines and gained us a catalogue of innovation that we're truly proud of.

We look forward to asking the same three questions of a solution to your own operating needs very soon.

**Laura Claxton**
Managing Director

**www.claxtonengineering.com**

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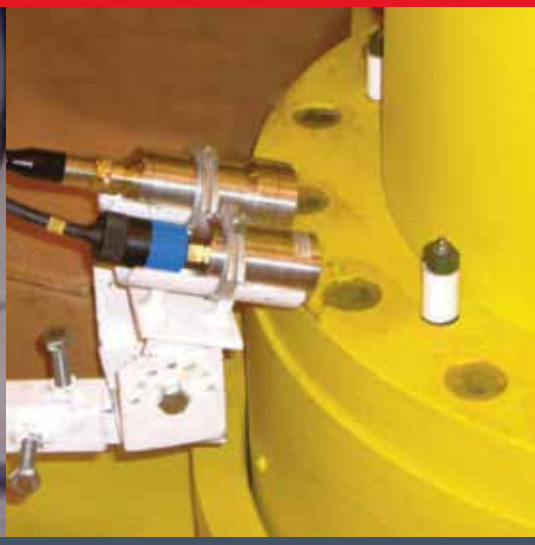

# INTRODUCTION TO SUBSEA CAMERAS

With over two decades of experience in subsea working, we understand the challenges operators face on their projects, the harsh treatment equipment must withstand, and the visual performance needed to make decisions.

It's thanks to this experience that our camera systems are rugged, powerful and trusted by clients all over the world.

In addition to the subsea camera systems, we supply additional products to suit your operation from slim-bore and zoom variants to mounting camera brackets.

The projects in this case study pack represent just a small sample of the capabilities we can offer to assist operators with their camera requirements and we're committed to developing our tooling and personnel to ensure we can help you achieve your goals reliably, successfully and safely both now and in the future.

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# CAMSCAN™ PROVES VITAL TO SUCCESSFUL TIEBACK.

Downhole visualisation capability keeps tieback project on track, preventing extended drilling delays.

## THE PROBLEM

Claxton was asked by Qatar Shell GTL to mobilise one of its fleet of CAMSCAN™ subsea camera systems based in Doha to carry out a visual survey in Well NFP 1-1 of the 13⅜" mudline suspension hanger area at about 76m below the drill floor.

The well had been drilled using a conventional mudline suspension system. During cementing operations when turning back into the mudline suspension hanger left-hand threads, the 13⅜" casing above the hanger started to back out. It was necessary to rotate to the right to make up the casing. This resulted in the 13⅜" mudline suspension hanger running tool backing out of the hanger threads.

Despite several attempts, it proved impossible to make up the running tool back into the casing hanger. The string of casing was pulled back to surface. Mudline hanger thread damage was suspected, so an inspection inside the mudline suspension hanger was required.

## THE SOLUTION

Claxton mobilised a CAMSCAN™ system offshore at short notice. This was deployed downhole on drillpipe to inspect the mudline suspension hanger threads and the seal surfaces.

## THE RESULT

The CAMSCAN™ images enabled the drilling supervisor to decide to utilise a ratch-a-latch tieback sub. This was made up successfully. The integrity of the tieback was confirmed and drilling continued.

"I would like to thank you and the staff involved for making it possible to react so quickly. A good job was done. The camera work was key to the success in recovering the well."

Jan Pellenbarg, Qatar Shell GTL

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# CAMSCAN™ RESUMES STALLED TIEBACK OPERATION.

CAMSCAN's downhole performance provides fast verification of downhole junk to get a tieback on track.

## THE PROBLEM

A tieback operation for ATP Oil & Gas (U.K.) Ltd on Kilmar field wells 43/22-1 and 43/22-2 in the Southern North Sea had been halted because dropped objects were suspected downhole.

## THE SOLUTION

Claxton was asked to assist with visual well inspections. The company mobilised a CAMSCAN™ system with internal LED lights to provide strong illumination and maximum visibility. The CAMSCAN™ system was deployed downhole and located the position and orientation of junk for subsequent fishing operations.

## THE RESULT

The camera provided vital visual feedback and clear images of the location and nature of the objects. The CAMSCAN™ system was also instrumental in inspecting the tieback threads and checking for further debris. After the deployment of CAMSCAN™ system, the tieback was completed successfully.

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# MULTICAM™ ESSENTIAL TO SEVEN WELL INSTALLATION.

Cost effective visual verification ensures speedy subsea tree installation on Callanish and Brodger field development.

## THE PROBLEM

A Claxton client had seven subsea trees to install as part of the Callanish and Brodgar field development programme.

High currents, coupled with low subsea visibility, sometimes less than 1m, restricted the ability of a remotely operated vehicle (ROV) to oversee the operations, which created the potential for delays in the completion programme.

In addition, the operating parameters meant that the viewing angles on a traditional ROV camera were not useful.

## THE SOLUTION

Claxton was contracted to supply the MULTICAM™ camera system to aid the installation of the Xmas trees and obtain the required viewing angles. Each subsea tree was fitted with three camera–light assemblies via a Claxton-designed mounting bracket system.

The simple, fully extendable and multi-plane-adjustable mounting bracket clamped to the existing structure enabled Claxton to attach unidirectional cameras to confirm actuation. A weak-link system enabled the umbilical to be retrieved and the camera–light assemblies to stay in place on the tree.

Captio

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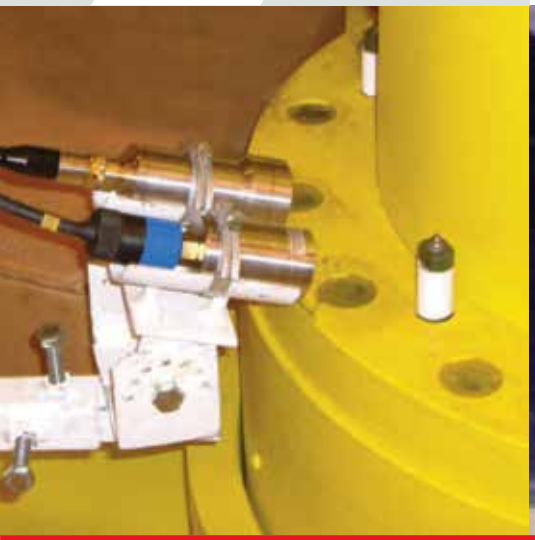
## THE RESULT

The Claxton camera assemblies were installed and functioned reliably throughout the project and proved instrumental in the on-schedule completion of the project.

MULTICAM™ is just one of a range of field-proven, high-performance cameras designed and built by Claxton, including downhole, inspection, low-light and slim-bore options.

### OFFSHORE CAMERAS FROM CLAXTON

Claxton camera range is rugged, field proven and offers powerful visual performance for subsea installation and inspection. Simple to operate and install, our cameras will give you the visual information you need to be confident about what's going on subsea – and can often be used where an ROV would struggle to reach – or to ensure your ROV's stay on the critical path.



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# MULTICAM™ SUBSEA CAMERA ENSURES INSTALLATION SUCCESS.

Claxton's powerful, disposable subsea camera system verifies installation beyond the reach of an ROV.

## THE PROBLEM

An operator was engaged in the completion and installation of a subsea tree and an overtrawlable structure on a development well for Rose field in the Southern North Sea. The completion and tree were to be deployed from the Galaxy I jackup rig. Several steps of the operation were planned to be monitored by using an ROV in order to show successful execution.

However, there were challenges. High currents and periodically low subsea visibility (sometimes less than 1 m) limited the ability of the ROV and risked operational delays in the completion programme. In addition, the tight confines of the pre-installed overtrawlable structure made ROV observation of indicators on the subsea tree assembly unfeasible.


A side view of the bespoke mounting bracket supplied by Claxton to enable an optimum view of the procedure.

## THE SOLUTION

Claxton's MULTICAM™ system provides high visual performance in a compact, low-cost camera system. Unidirectional cameras were mounted on the overtrawlable structure to provide positive confirmation of the alignment and landing of the unit on the wellhead via a retrievable umbilical run with the landing string.

A simple unidirectional camera mounted on the subsea tree structure to provide positive confirmation of the lock-down mechanism via a retrievable umbilical.

## THE RESULT

All the camera assemblies functioned successfully and provided the expected data. Both the overtrawlable structure and subsea tree assembly were installed successfully without delays, despite the poor subsea visibility.

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# STATOIL CHOOSES CAMSCAN™ FOR INSPECTION AND RETRIEVAL.

Claxton visualisation aids tieback programme.

## THE PROBLEM

Claxton was asked by Statoil SP Gas AS, Tehran, Iran, to provide visual and tooling assistance with the South Pars 6, 7 and 8 tieback programme, which consisted of three subsea wells to be tied back to the platform. Help was required because there was marine growth in the retrieval socket of the trash cap and the tieback threads/seal area, and a damaged retrieval socket in wellhead trash cap was hindering stabbing of the retrieval tool.

## THE SOLUTION

Claxton supplied and ran a CAMSCAN™ system, which was called-off from stock at short notice, to:

- Support the retrieval of a damaged trash cap through the platform guides
- Support the inspection of the tieback threads/sealing areas for damage and cleanliness
- Observe the running of the bottomhole assembly through the platform guides
- Observe the cleanup operation
- View the damage to the trash cap and assist in its retrieval.

## THE RESULT

The camera functioned successfully throughout the tieback operations. Because the damage to the trash cap was viewed at the earliest opportunity, there were fewer latching attempts, which saved time and allowed a successful retrieval to be achieved.

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# CLAXTON MAKES IT HAPPEN ON TYRA EAST.

By completing what is believed to be the first rigless recovery of a stuck bottom hole assembly (BHA), Claxton took away a significant operational headache on the Tyra East field during a recent slot recovery.

Our rigless approach reduced costs for the field operator and our experience, tooling and personnel enabled their conductor to be recovered four days faster than planned.

Read the case study for this project at:
**www.claxtonengineering.com/stuckBHA**

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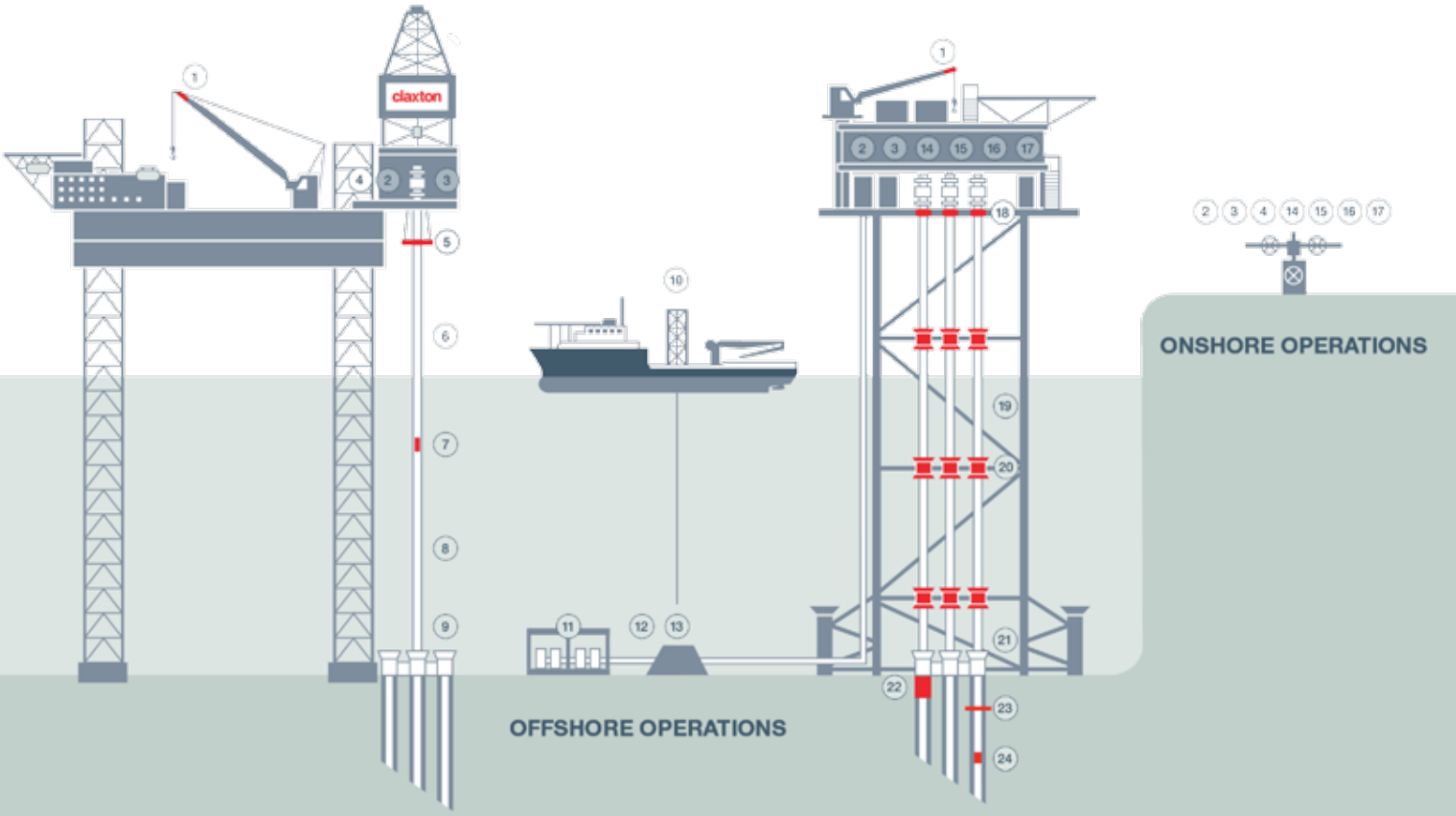
# MAKE IT HAPPEN.

Trust Claxton to make your project happen.

## CLAXTON CAPABILITIES




Over 270 operators, contractors and rig owners have trusted Claxton to make their projects happen across the entire life of field – visit our website to find out why, or learn more about any of the products on this page.

**www.claxtonengineering.com**

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3. Cold Cutting
4. Equipment rental
5. Tension Rings & Tension Systems
6. Drilling Risers/Riser design
7. Subsea/Downhole Cameras
8. Tie Back Tooling
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20. Structural Centralizers
21. Slot Recovery
22. Cement top up
23. Abrasive Cutting
24. Internal Centralizers

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