

## Subsea Wells Removal

### Summary

NCA successfully performed a combined cutting and retrieval operation of 4 suspended subsea wells on the Scott Field in the Central UK sector of the North Sea. The cutting and retrieval was done with the *Subsea Wellhead Picker*, which combines NCA's Internal Multistring Cutting Tool based on Abrasive WaterJet Cutting and a wellhead connector. The Subsea Wellhead Connector allows the wellhead to be cut and pulled in one operation. The operation was done from a Multipurpose construction vessel, Island Constructor, utilizing the heavy compensated crane for deployment and retrieval operations and ROV for guiding and surveillance. No divers were used on the project.

### Project Facts

Location: Central North Sea, Blocks 15/21 and 15/22 UK sector, Scott Field, 140m Water Depth.  
Timing: July 2008  
Client: Interact Project Management Ltd  
End client: Nexen

### Scope of Work

The scope of work was to cut and retrieve 4 wellheads. The cuts were to be done 15ft below mudline. NCA provided the following services:

- ✓ Well bore drifting and cleaning service
- ✓ Cold cutting service
- ✓ Wellhead retrieval service

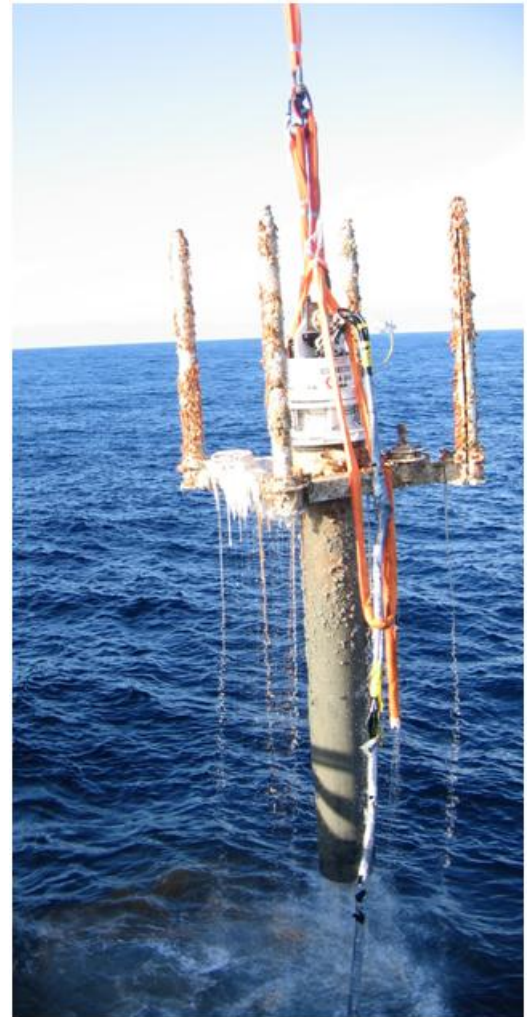
### Well configuration

Well	Casing program	Wellhead type
15/21a-55	3 string; 30" - 20" - 13 3/8"	Drillquip SS10
15/21a-20	4 string; 30" - 20" - 13 3/8" - 9 5/8"	McEvoy15k Z-1
15/22-5	4 string; 30" - 20" - 13 3/8" - 9 5/8"	Vetco SG5
15/22-13	3 string; 30" - 13 3/8" - 10 3/4"	MS 700

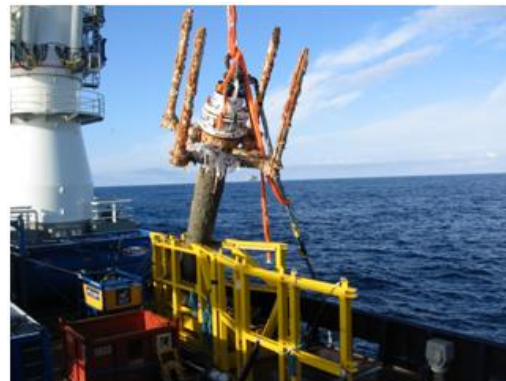
### Project Execution

NCA used Abrasive Water Jet Cutting (AWJC) with the Internal Multistring Cutting Tool (IMCT) for severance of the wellheads. All the conductor casings were cut from inside out in one operation. This is proven technology with a track record of more than 120 conductors cut, ranging from conductors on 30metres water depth to 5 string conductors on 300metres water depth.

The NCA developed a Subsea Wellhead Picker for this project that was used in combination with the IMCT. The IMCT is connected to the wellhead picker allowing the cut and retrieval of the wellheads to be done in one operation. This features a safe recovery reducing numbers of deck handling and rigging operations.



The operation was done from the subsea construction support vessel Island Constructor. The cutting and retrieval of the wellhead casings were done using the 150Te heave compensated crane onboard in combination with ROV for guiding of tool and surveillance. The operational limitations were set by the crane heave compensation capacity and the practical limitations for deck operations.



## Achievements

- ✓ The method was the first combined P&A and subsea wells removal campaign ever done using a multipurpose construction vessel instead of a drilling rig.
- ✓
- ✓ The NCA method for cutting conductors won the OTC Spotlight award in 2005.
- ✓ The method using the Subsea Wellhead Picker in combination with the IMCT won the NOF Energy Innovation and Technology award in December, 2007, and was nominated for the ONS Innovation Award in 2004.
- ✓ NCA's IMCT technology is patented.
- ✓ The NCA wellhead picker concept is patent pending.



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