

# INTEGRAL TYPE SPIRO-TORQ<sup>®</sup>S



## TOTAL E&P UK - West Franklin 'C'

### **Differential Sticking Prevention**

Integral Type Spiro-Torq<sup>®</sup>s were placed above the BHA assembly at one tool per stand, to prevent differential stick over depleted zones. With an OD of 8.1” on the blades the tools effectively provided the necessary standoff of the drillpipe from the formation wall. HP/HT environment. NC-50 connections.

## BP EXPLORATION AZERBAIJAN – Shah Deniz Field

### **Differential Sticking Prevention**

Integral Type Spiro-Torq<sup>®</sup>s were placed above the BHA at one tool every stand. BP lost two BHA's prior to utilising Spiro-Torq<sup>®</sup>s. The tools will be used throughout the projects second phase. NC-50 and XT-50 connections.

## TOTAL AZERBAIJAN

Integral Type Spiro-Torq<sup>®</sup>s were placed above the BHA at one tool every stand. TOTAL extremely pleased with the drilling operation – no differential sticking. Will use additional tools throughout the project.

## MAERSK OIL QATAR - Al Shaheen Field

### **Hole Cleaning**

Routinely run Spiro-Torq<sup>®</sup>s to ensure the open hole is in good condition. Have been running tools for several years. NC-50 connections.

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## APACHE AUSTRALIA - **John Brookes and Rose projects**

### **Hole Cleaning**

Special large diameter (9-1/2") tools used to address hole cleaning problems. HT-55 connections.

## SHELL E&P Gulf of Mexico - **Auger & Ursa TLP's**

### **Hole Cleaning/Cuttings Bed Agitation**

Consistent Size and transport of cuttings over the shakers were observed. 6-5/8" FH connections.

## BHP BILLITON Gulf of Mexico - **Double Mountain**

### **Hole Cleaning/Cuttings Bed Agitation / Differential Sticking prevention**

Elected to use Spiro-Torq<sup>®</sup>s in their last Gulf of Mexico well prior to the moratorium on drilling. XT-50 connections.

## DEVON Canada - **Jackfish**

### **Hole Cleaning**

Used Integral type tools to assist with hole cleaning due to high ROP. Gravity drainage wells with extremely abrasive formations. Assisted in helping to reduce back reaming times. NC-50 connections.

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**SHELL E&P UK - Merganser East & Teal Fields**

## **Hole Cleaning/Cuttings Agitation**

Cuttings bed problems were occurring over well inclinations from 38 to 70 degrees. Spiro-Torq<sup>®</sup>s were placed at one every two stands above the BHA. Excellent results. XT-57 connections.