Alternative Permanent Abandonment Barrier Verification using CaTS™ Wireless Technology

James Yard
Project Manager
Introduction

Cable-less Telemetry System (CaTS™)

- **Metallic structure:** of the well (casing or tubing) is used as a conduit to transmit EM signals to surface. CaTS is also capable of **short open hole communication** without casing.

- **Retrofittable:** can be installed into existing completions using conventional methods.

- **Field proven:** capable of transmitting real-time pressure and temperature data from downhole gauges at depths up to 13,000 ft in a single-hop. The use of repeaters enables unlimited wireless range.

- **Addressable:** enabling multiple gauge installations in a given well. Monitored 20 separate zones in a single well.

- **Duplex communication:** commands sent from surface to control downhole devices, including changing gauge transmission schedules and requesting historical data from high sample rate gauge memory.

- **Monitoring:** durations of over 5 years have been achieved and 7 year capability.

© Copyright Expro 2018

For Presentation at the SPE Aberdeen Well Late Life and Well Abandonment Conference – 27th June 2018
The CaTS pressure and temperature gauge will verify the alternative permanent abandonment barrier during the initial pressure test and has the flexibility for long term qualification monitoring.

Alternative P&A barriers include:-

- Rock-to-rock plug
- Perf & wash cement system
- New types of cement slurry
- Metal plug

The CaTS technology can be used with barriers which use existing casing, newly perforated casing or with casing removed to create a rock-to-rock seal.
Benefits

**Cable-less Telemetry System (CaTS™)**

- **Cased or Open Hole**
  Proven wireless technology that can be used in both cased hole and open hole or rock-to-rock abandonments

- **Long Transmission Range**
  Capable of transmitting long distances so multiple alternative barriers can be monitored

- **Real-time**
  Delivers real-time data to surface using E-line and not reliant on logged data

- **Independent**
  Offers independent verification to aid industry qualification of alternative barriers

Proving well integrity and reducing abandonment cost