

**SPE Aberdeen Well Late Life and Well  
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**Aberdeen Section**

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# **Alternative Permanent Abandonment Barrier Verification using CaTS™ Wireless Technology**

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# Introduction

## Cable-less Telemetry System (CaTS™)



### 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.**

### 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.

### 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.**

# Wireless Barrier Monitoring

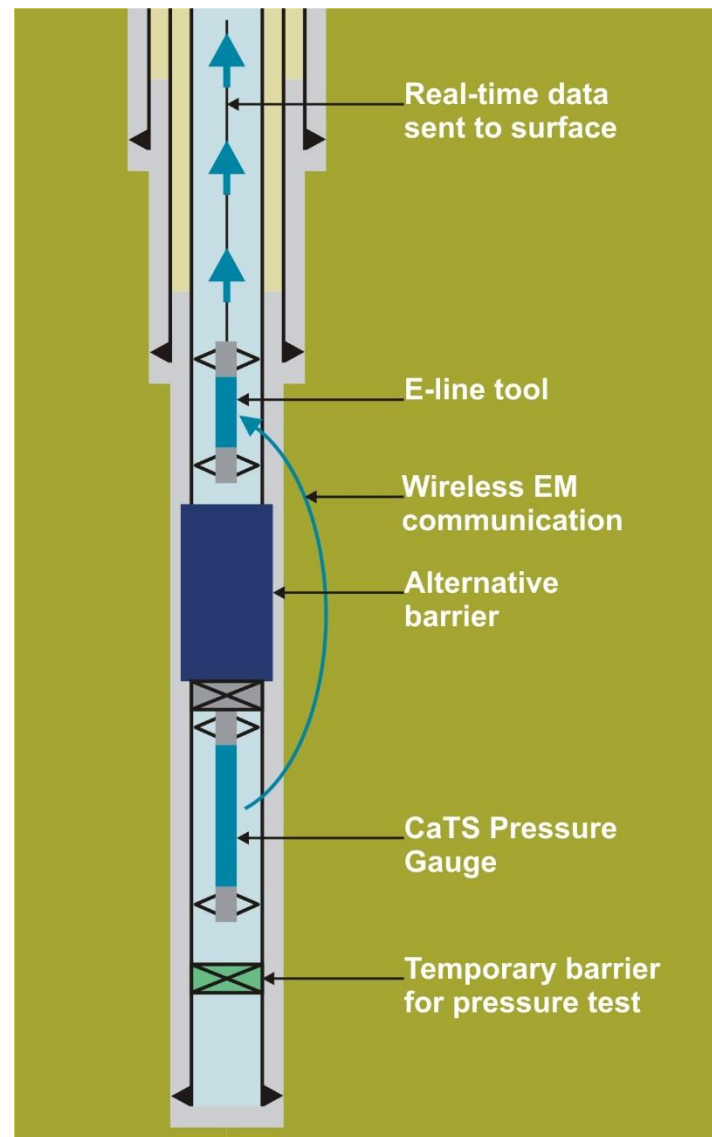
## Cable-less Telemetry System (CaTS™)

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**



**EXPRO**