

Downhole Shut-in Tool

A typical deployment of the downhole shut-in tool is below a lock mandrel and equalising sleeve with a shock absorber situated between the shut-in tool and the memory gauges below.

The shut-in tool is electronic and is set to operate at surface with a time delay, which can be programmed into the tool either via a personal computer or, more typically, through Nan Gall Energy Systems' hand-held programming device.

Quartz memory gauges, when used in conjunction with a downhole shut-in tool can produce many benefits when compared with shut-ins at surface.

Shut-in Tools

Nan Gall's downhole shut-in tool, in conjunction with Nan Gall memory gauges, can produce benefits in the following circumstances:

- Wellbore storage effects during pressure build-up surveys can 'mask' the reservoir flow period, thus making interpretation very difficult.
- Leaking flow-line valves on many older wells can mean that true surface shut-in is never achieved
- Oil-gas wells, when shut-in at surface, can have a large gas cap forming which gives erroneously high bottom-hole pressures
- The length of time wells must be shut-in at surface to achieve useful bottom-hole pressure information is excessive
- Pressure fall-off data following water injection is always distorted by the hydrostatic column above the gauges

The downhole shut-in tool eliminates wellbore storage effects during pressure build-up surveys that mask the reservoir flow period and render interpretation extremely difficult.

Deployment of the simple-to-operate Nan Gall Energy Systems shut-in tool can remove the disadvantages and provide improved bottom hole condition information.



The Shut-in Tool is set to operate at surface with a time delay, which can be programmed into the tool

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Product Specification Table

Tool Type	Outside Diameter	Maximum Pressure Range	Maximum Temperature	Maximum Differential Pressure
Downhole Shut-In Tool	1.75" (4.45cm)	10,000psi	150°C (302°C)	5,000psi
Downhole Shut-In Tool	2.5" (6.35cm)	10,000psi	150°C (302°C)	5,000psi
Downhole Shut-In Tool	3.5" (8.89cm)	10,000psi	150°C (302°C)	5,000psi

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measured performance