

Noise Tool (NTO)

The digital noise tool detects the sounds from liquid or gas movement in leaks, channels or perforations.



Description

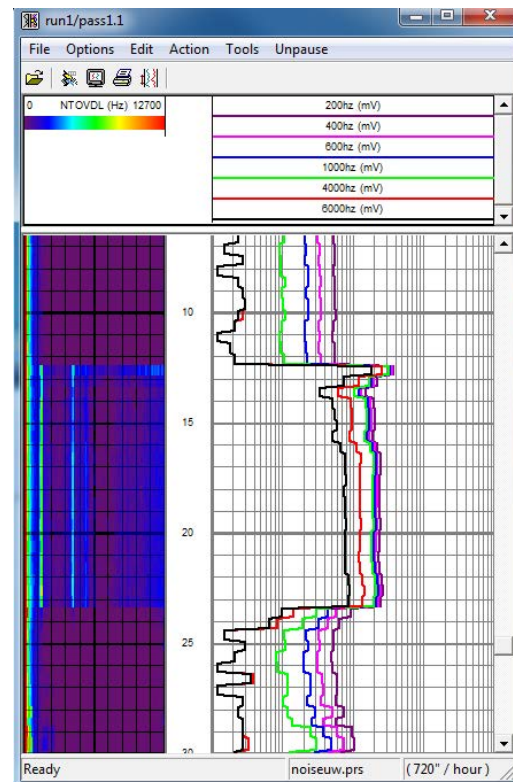
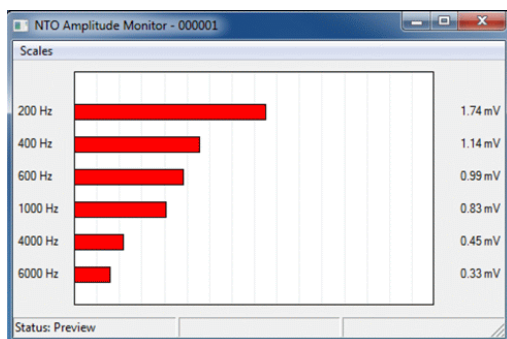
A leaking well can damage the environment and result in lost production. The NTO houses, a sensitive hydrophone that is highly effective in the detection of flow inside and outside the cased well. The electronics digitises the noise downhole and sends a frequency spectrum to the surface to be recorded. Both the frequency spectrum and six high-pass frequency cuts are displayed on a log, providing a quantitative measurement of the downhole noise.

The NTO can be combined with other Sondex Wireline tools and logs data in both memory or surface read out tool strings. Consequently, any cased hole logging intervention, such as production logging, cement evaluation or pipe inspection, becomes an opportunity to verify the integrity of downhole components at minimal additional cost.

Multiple NTO can be combined within a single toolstring, thereby making it possible to pinpoint the depth of any particular noise source effectively and efficiently. The NTO is typically run in combination with a Casing Collar Locator and Temperature tool as well as any other Sondex Ultrawire tool such as Gamma Ray, Pressure, Cement Bond, Calliper, Metal Thickness, or Production Log.

The NTO can be used to:

- Evaluate flow profiles
- Locate channels behind a well case
- Locate gas-liquid interfaces
- Locate leaks in a well case
- Locate gas entries



Noise Tool (NTO)

Features

- Several NTO can be combined in one string
- Real time FFT spectrum monitor
- Colour VDL style spectral log
- Road noise filters
- SRO or Memory operation
- Configurable sampling modes (avg, min, max)
- Combinable with all Ultrawire tools
- No cable attenuation
- Configurable frequency cuts
- Quantitative measurement

Specification	NTO009
Temperature rating	350°F (177°C)
Pressure rating	20,000 psi (138 MPa)
Tool diameter	1 ¹¹ / ₁₆ in. OD (43 mm)
Tool length	24 in. (609.6 mm)
Tool weight	10 lb (4.53 kg)
Frequency range	100 Hz to 12,700 Hz
Amplifier gain	22.4 to 67.8 dB (or x13 to x2455)
Resolution	16 bit
Dynamic Range	72 dB
Data reading rate	0.5 sec
Sample length	10 ms
Sample rate	25.6 kHz
Number of spectral channels	128

