

INTeX bond

Zonal isolation solutions

The **Integrity eXplorer™ cement evaluation service** by Baker Hughes provides accurate information that helps operators gain an understanding of the cement bond—regardless of weight or contamination—to make critical downhole decisions with confidence. Featuring the patented electromagnetic-acoustic transducer (EMAT) technology, the service helps characterize the cement shear strength in-situ, providing accurate zonal isolation assessment which is independent of the wellbore environment.

In-situ cement mechanical properties

Cement compressive strength has been considered as the sole cement strength indicator for several decades, although the major reason for cement failure in most downhole applications is shear. The **INTeX Bond™ service** delivers the first in-situ measurement of the cement shear strength—a property which has been historically only measured in cement labs. This measurement increases confidence regarding long-term zonal isolation.

Solid-liquid-gas-microannulus map

Wellbore cement artifacts like channels and microannuli are both circumferentially and quantitatively estimated with the help of the solid-liquid-gas-microannulus map in INTeX Bond. This makes interpretation of the cement evaluation data fast, enabling timely and confident decisions. The cement shear acoustic velocity isolation map also takes out the guesswork involved in cement bond log interpretation—making this more straightforward.

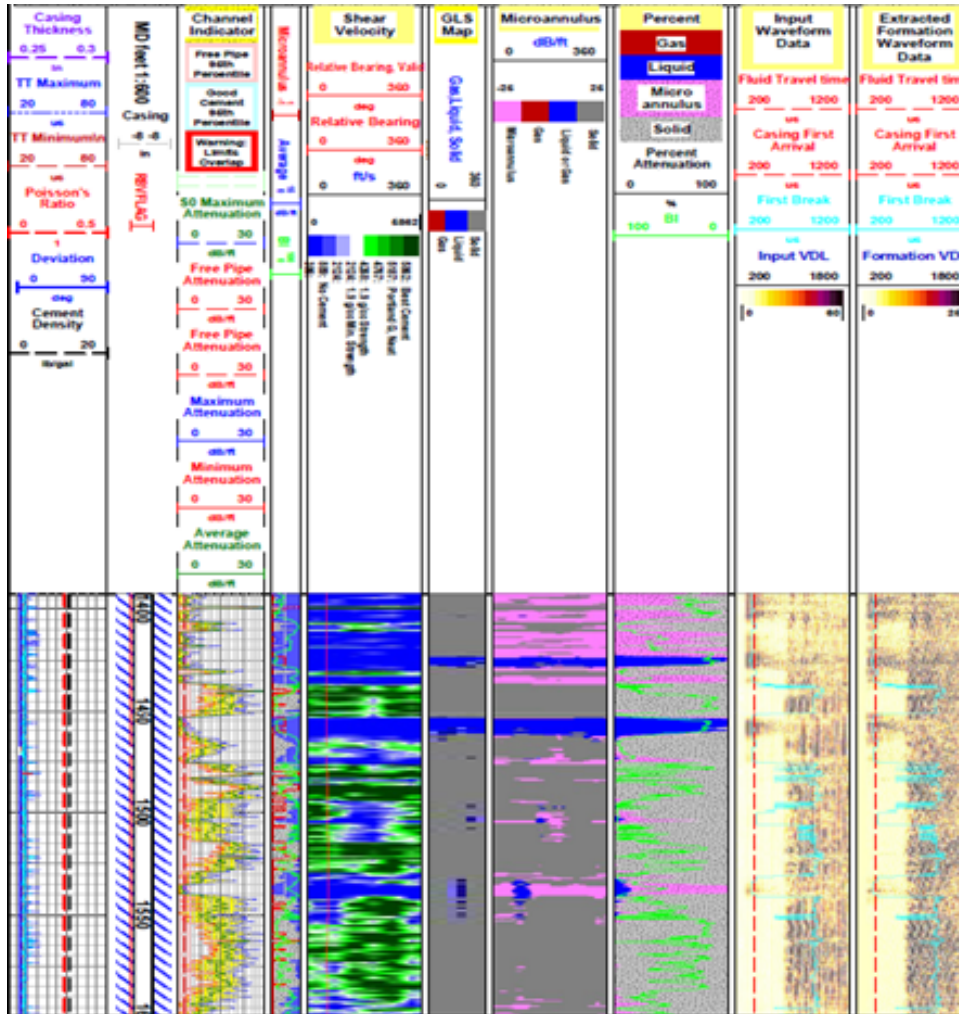
Additionally, using the advanced processing, the INTeX Bond service filters variable density log (VDL) data to remove the signals attributed to casing arrivals. The filtered waveforms reduce ambiguity and ensure reliable log evaluation during this critical operation.

Applications

- Conventional and unconventional wells
- Plug and abandon operations
- Gas or CO₂ storage wells
- Deepwater wells with lightweight or contaminated cement

Features and benefits

- Cement mechanical properties
 - Shear modulus
 - Young's modulus
 - Bulk modulus
- Solid-liquid-gas-microannulus
 - Provides percentage annular fluid and microannulus map
- Filtered VDL waveform data
 - Eliminates ambiguity caused by casing arrivals



The Integrity eXplorer service can collect accurate shear measurements—regardless of cement density, contamination level, or well condition.

