



TECHNICAL SHEET

MICROSEISMIC

LRPC TOOL

Generalities

Principle

A small pneumatic hammer located on the probe emits an acoustic wave. Two vibration sensors are maintained in contact with the borehole walls by micro-jacks. The probe measures the time of the first compressional arrival time at each vibration sensor. The difference in arrival time between each sensor allows determination of formation velocity.

Result

Depth-based curves of seismic compressional velocity (slowness).

Interest

- Bed rocks recognition ;
- Micro-fracturing study ;
- Target plan's parameters optimization.

Constraints / borehole

- | | | | |
|-----------------|---|---|--|
| filling up | : <input checked="" type="checkbox"/> water | <input checked="" type="checkbox"/> mud | <input checked="" type="checkbox"/> dry |
| casing | : <input type="checkbox"/> PVC | <input type="checkbox"/> steel | <input checked="" type="checkbox"/> open |
| borehole | : <input checked="" type="checkbox"/> cored | <input checked="" type="checkbox"/> destructive | |
| max. depth | : 200 m | | |
| effective diam. | : 89 mm – 140 mm | | |
| temperature | : 0°C – 30°C | | |
| max. pressure | : 20 bars | | |

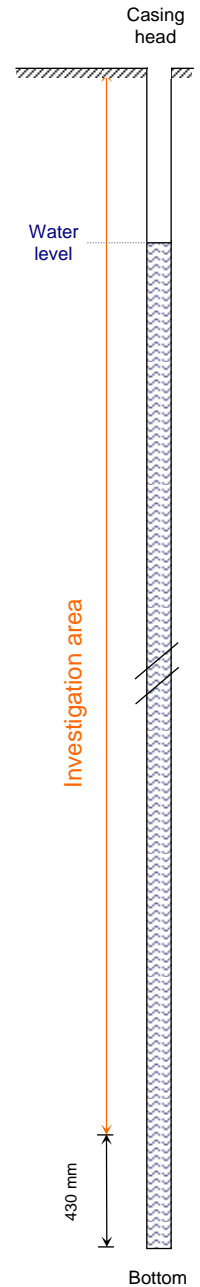
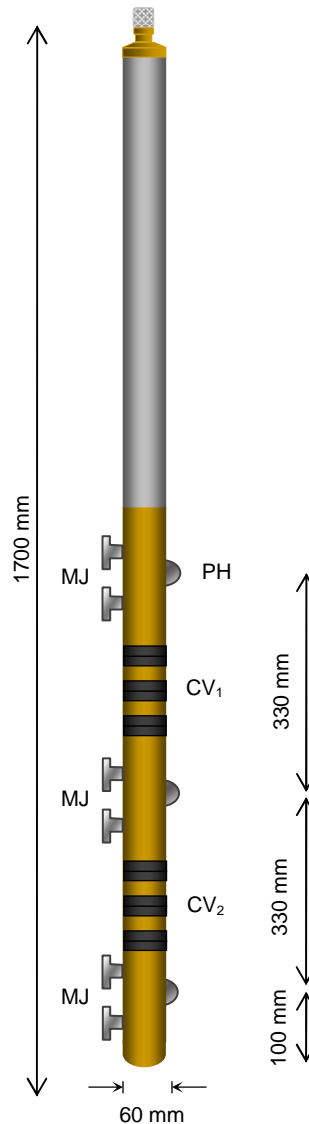
Technical specifications

Dimensions

- length : 1700 mm
- diameter : 60 mm
- weight : 20 Kg

Elements

- 1 pneumatic hammer : PH
- 2 vibration sensors : CV₁, CV₂
- 6 micro-jacks : MJ



Records / Measures

Records

- Tool : centered off-centered
- Measure : down up
- Rec. speed : depends on the sampling rate
- Oscilloscope : Nicollet Pro 10

Measures

- Range : 1000 m/s to 7000 m/s
- Resolution : 100 m/s
- Vert. resolution. : 330 mm or 660 mm



Example

