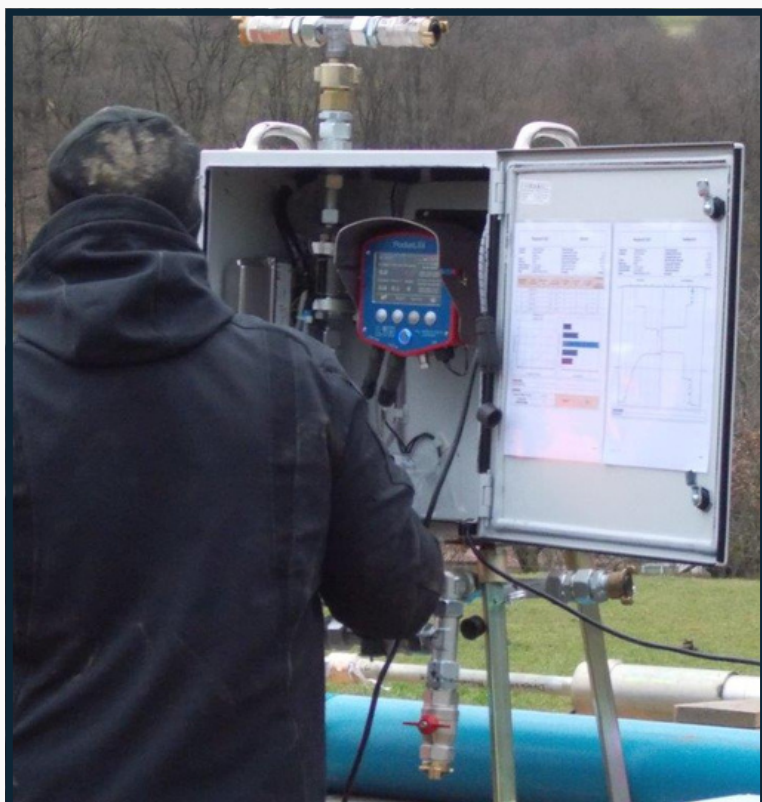


### LUGEON PERMEABILITY TEST (PACKER TESTING) - DATA ACQUISITION



The Lugeon packer test is used to determine the permeability of soils. Done within the borehole in a cavity below the packer, the Lugeon test measures the variation of the water flow at different pressure values.

The LUGEON application of the **PocketLIM & MiniLIM** records versus time every 1, 2, 4 or 8 seconds the pressure, flowrate and volume of the injected water during the Lugeon packer test.

The sensors used by the application are:

- one electromagnetic flowmeter fitted to the water pipe to measure the flow and volume;
- one pressure transducer either fitted to a membrane separator if the capture is done out of the borehole or with an adapted probe connected by cable to a winch if the capture is done at the depth of the test within the borehole.

The graphics of the 3 parameters, pressure, flow and volume are displayed in real time by the **PocketLIM / MiniLIM - LUGEON**.



Site		Forage	
Site00		sbj11/8	
hc 37 m	hb 42 m	Date Debut mar., 05 oct. 2010 18:09:14	
l 1 m	B 101 mm	Date Fin mer., 20 juil. 2011 20:10:19	
hw 5.15 m	hm 36 m	Nom Fichier 50023101005160914L	
pg 10 bar	hg 0.5 m	Operateur	
Position GPS			



Device for measuring the pressure in the borehole at the level of the cavity located under the packer.

### LUGEON PERMEABILITY TEST (PACKER TESTING) - DATA ACQUISITION

#### DATA PROCESSING

The recorded data ([BOR](#)) and graphic (PDF) files are automatically synchronized in the USB flash drive of the **PocketLIM / MiniLIM**. With **LIM@Mail**, they can also be transferred by mobile internet (3G/4G, Wifi) to the dedicated **GEO-LOG 4** internet server and to email addresses chosen by the operator.

Once downloaded to PC, the recorded Lugeon data is processed by the **LugeoSOFT** software that does the followings:

- ✓ Listing of the water flowrates for each value of pressure;
- ✓ Drawing of the recorded data and Lugeon curves;
- ✓ Calculation of the Lugeon value corresponding to a 1 Mpa pressure;
- ✓ Data export to EXCEL compatible TXT files.

