

NIRAS



FASTER, CHEAPER,  
BETTER WITH  
GEOPROBE®

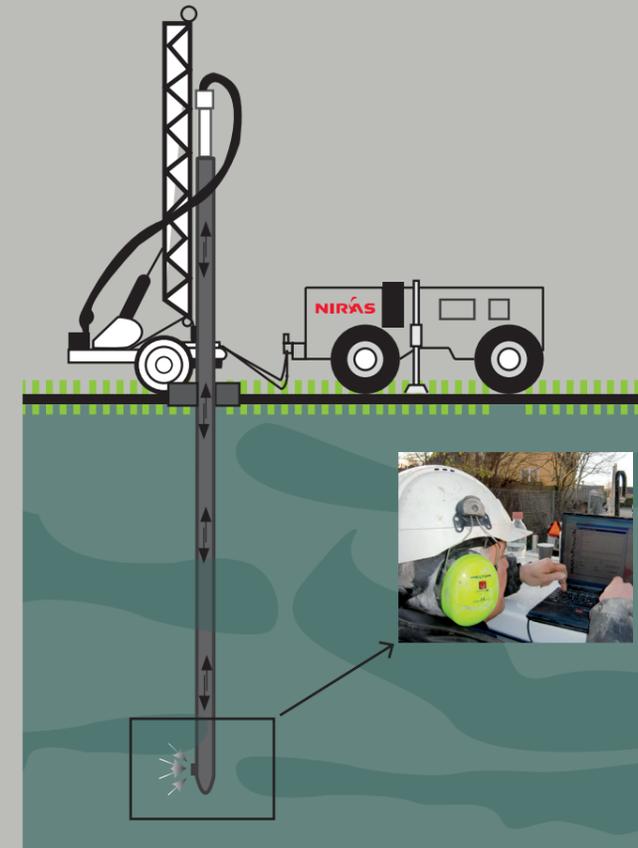
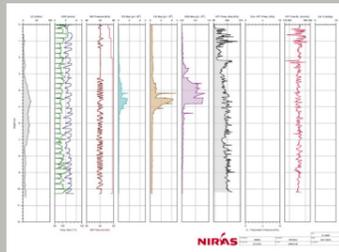
ENVIRONMENTAL SAMPLING

# WE START YOUR ANALYSIS ONCE WE HIT THE GROUND

## WE DEVELOP FOR GEOPROBE®

Already in 1998, as one of the first in Europe, NIRAS decided to implement the Geoprobe® system, a comprehensive sampling concept developed in the USA. Since then, we have taken the lead in using this system for advanced environmental sampling. We regularly cooperate on innovative projects to test and develop new equipment for Geoprobe® and other equipment suppliers. The five core members of our field team have been with us since we started without any replacements. We have completed close to a thousand individual customer assignments.

- 1 NIRAS' drilling rig is flexible and it's quick to prepare it for drilling.
- 2 The drilling rig is relatively small, thus we can drill in places with limited space.
- 3 Screen display from our mobile lab. Quick and accurate information about geology and extent of contamination.
- 4 We have almost 20 years of experience with the Geoprobe® concept.



## OVERVIEW OF OUR EQUIPMENT

If you already know the Geoprobe® concept and would like to know exactly what equipment we offer, you can get an overview in our equipment fact sheet. You find it here: [niras.com](http://niras.com) > Business Areas > Environment > Contaminated soil and ground water > Site investigations > Direct push measurements using the GeoProbe.

NIRAS has three mobile drilling rigs with accompanying mobile laboratory equipment for on-site analysis. We collect and analyse contamination samples of soil, groundwater and soil gas at the most advanced level possible today. We are one of few in Europe who are able to take samples at depths as deep as 50 metres. We have almost 20 years of experience in using this equipment in various geological contexts.

We newer risk that our samples are taken only between contaminated layers and hence that our analysis is misleading. We constantly take samples all the way down as we drill. The resulting analysis are carried out in real time in our mobile lab and are instantly visible on our computers.

## ALLOW US TO START BY BUSTING A MYTH. NO, IT IS NOT MORE EXPENSIVE TO USE THE BEST AND MOST EFFICIENT SAMPLING TECHNOLOGY FOR ENVIRONMENTAL SURVEYS.

Actually you almost always get the lowest price when you use the newest technology for environmental sampling. This applies regardless of whether you need a simple contamination investigation or a comprehensive characterisation and mapping of a source area. An example of the latter might be in connection with an environmental assessment of a large geologically complex area, such as an environmental impact assessment.

Environmental surveys using the state-of-the-art Geoprobe® sampling concept will in most cases be the most economically advantageous solution.

### Measuring equipment connected to computers

There are two reasons for this. One is that the equipment has integrated measuring equipment which is directly connected to our computers.

Geoprobe® equipment integrates sampling with drilling because we can connect various advanced sampling equipment directly to the drilling equipment and take samples in real time while we are drilling. This allows us to start the analysis as soon as the drill head enters the ground. Immediately after the drill head has entered the ground, our drilling team will see the results on their computer screen in the mobile laboratory we bring to the site along with the drilling rigs. The sampling equipment on the drill is directly connected to our computer.

### No more waiting for several days

Therefore, you do not have to wait several days as is usually the case to get the analysis results of your samples. You will on site instantly get the relevant knowledge as we go along to decide whether we should keep on drilling - or stop because the results show that there is no need to continue drilling in the planned area.

The other reason why it is economically advantageous is the flexibility NIRAS takes pride in providing to our customers. If you are experienced in the field of environmental soil surveys, you know that it is impossible to predict the exact extent, volume and chemical composition of a contamination. Nature will always surprise you.

Since we receive valid results for each drilling in real time, we can immediately and dynamically adjust the current drilling and the next drillings on the basis of the results we receive. This allows us to decide that it is not necessary to continue drilling in an otherwise planned area - and instead choose to drill in another area if this proves necessary. In conventional drilling without real time sampling analysis, all unnecessary drillings will be

completed. In that situation, you will have to devote time and money to one or more days of test drilling after you have received the analysis results from the laboratory a few days later.

### We advice you on-site while drilling

At NIRAS, we use the flexibility of the state-of-the-art Geoprobe® sampling concept to advise our customers while we are on site and drilling. We provide on-site advice on abandoning unnecessary drillings. And - if necessary - we provide on-site advice on other drillings which prove to be necessary. This means that in minor projects, we can often complete all drillings and analyses in just one working day. This saves you time and money.



After drilling there is no need for sending samples to a lab, because we have the lab with us in the

We often drill in places that are hard to reach.



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