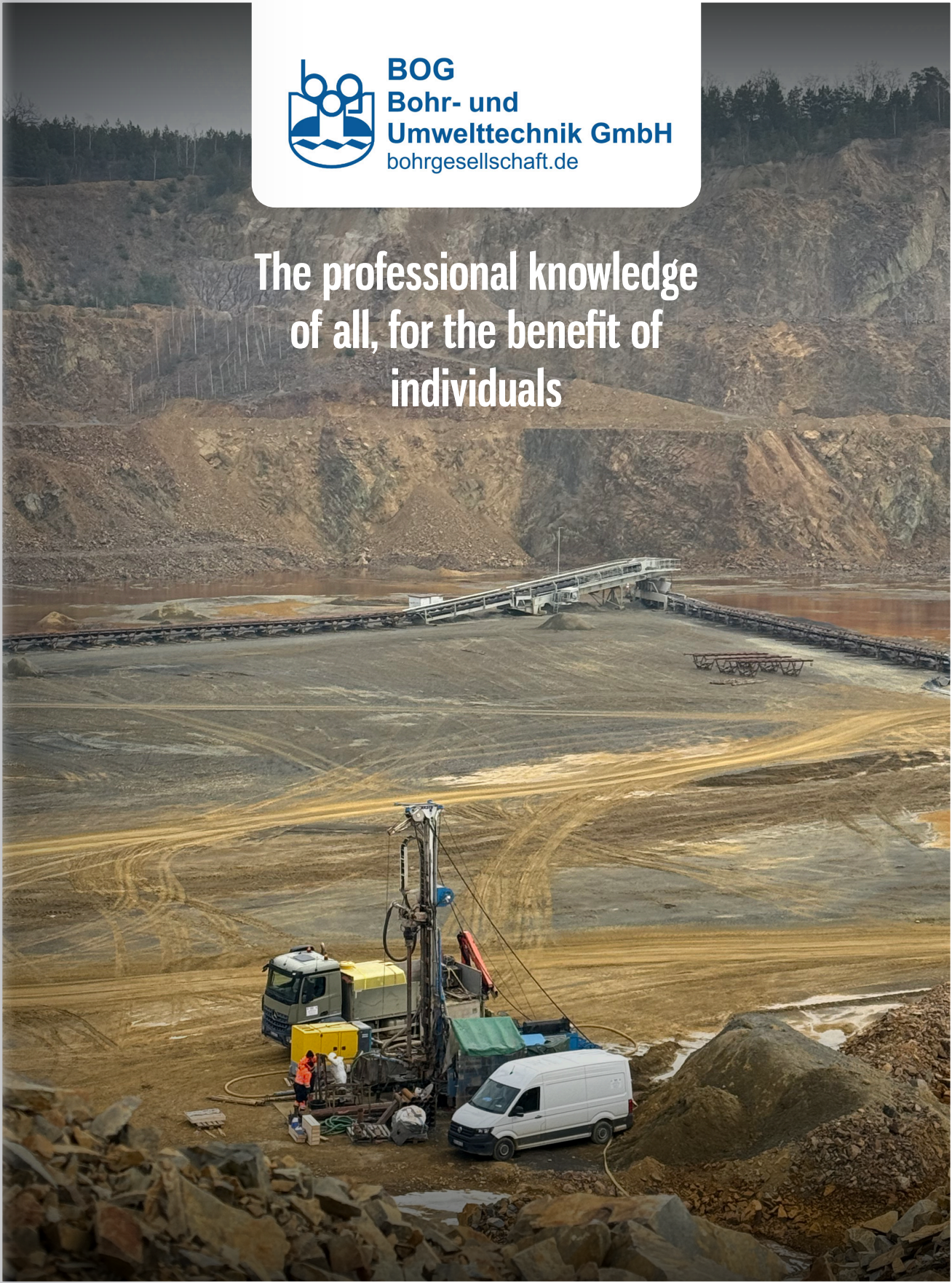




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The professional knowledge  
of all, for the benefit of  
individuals





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# The professional knowledge of all, for the benefit of individuals

Interviewees: Dirk Wolff and Thomas Fischer,  
joint CEO's of BOG Bohr- und Umwelttechnik GmbH

**BOG Bohr – und Umwelttechnik GmbH provides specialist geotechnical and mining solutions. Could you provide a brief overview of your day-to-day activities, your primary field of activity, and the client base you typically serve?**

Our customers include infrastructure-oriented companies and authorities such as, from a national perspective, Die Autobahn GmbH des Bundes, water shipping authorities, and Deutsche Bahn AG. Our tasks range from the geotechnical exploration of geological formations to exploration drilling for opencast mine expansions or deposits, as well as structural drilling for any infrastructure projects, for example dams, routes/pipelines, bridges, or tunnels. Core drillings, predominantly with a diameter of 101 millimetres, can reach depths of 300 metres.

In addition, the exploration of old mine shafts and underground tunnels is another important focus of our activities. This includes inclined target holes to hit cavities, for example. If there is a risk to third parties, these will be accordingly kept or sealed in order to minimise dangerous situations such as sinkholes or similar. Such abandoned mining projects always place new demands on people and machines. This is due, on one hand, to the partly inadequately recorded documentation regarding mine shaft filling and, on the other hand, the suddenly changing underground conditions and the associated gain in knowledge.

We also work for engineering offices and associations, offering our special expertise to other companies to expand their range of services. Large-scale projects with many drillings are carried out in cooperation with other partners.

We value our customer base and would like to take this opportunity to thank all partners for the good cooperation and trust they have placed in us.

**What, in your opinion, is your key differentiator? What does the company do to stand out from the competition?**

We see ourselves as an established player in the industry when it comes to carrying out geotechnical drilling and exploring abandoned mine sites. The high-quality of our work and organised know-how make us a reliable contact for our customers. Any problems that arise are dealt with in a solution-oriented manner. In close cooperation with our in-house workshop, we can prepare and adapt our machines and tools individually for each project according to requirements. This means we can prepare for all eventualities and deal with them





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in a goal-oriented manner. This is always done with a view to protect and preserve the environment with minimal impact on nature.

We have deliberately specialised in these two areas of activity. This means that, according to our motto - “We do everything to make everything possible” - we can ensure that our work in these areas is carried out professionally and reliably in the interests of our customers.

In order to share our interests and goals with different companies, exchange ideas, and have the opportunity to network further, we belong to various professional associations. Amongst other things, we are a proud member of the VBGU Association for Mining, Geology, and the Environment, which has an excellent international network in the industry and supports us with advice and support.

However, our company's greatest asset is our employees. We strive to develop solutions as a team through communication at eye-level and with a hands-on mentality. Through the passion and commitment of our colleagues, we were able to grow into what we are today. At the same time, good communication is also very much appreciated by our customers.

### **Can you talk about your work with GEOPS and the recent projects you have collaborated on? How do you see your relationship with GEOPS developing going forwards?**

The starting point of our cooperation with GEOPS was a service request from SolarWorld Industries GmbH in Freiberg, Saxony regarding the exploration of a lithium deposit in the village of Zinnwald 10 years ago. To our knowledge, there were no longer any efficient exploration companies in Germany at the time, so we tried to find a corresponding company elsewhere in Europe. Through our contacts in Poland, we were referred to Bulgarian company, GEOPS.

Over the last few years, various exploration projects in the Saxon Erzgebirge region have been carried out together, with the technical work being carried out by GEOPS and the organisational and legal work, such as mining authority permits, by our company, BOG. All projects, such as lithium exploration in Zinnwald and gold and silver exploration projects in the Freiberg area (Saxony) were thus successfully completed.

Exploration drilling has hardly been carried out in Germany in the last 40 years. However, due to today's



economic and political conditions, this could change. Through cooperation with GEOPS, we can learn technical and organisational skills in the field of raw material exploration and possibly open an area of activity for ourselves.

### **Could you tell us more about your borehole tests, and how they are able to provide precise insights into geotechnical and hydrological conditions?**

Depending on the task, we carry out various borehole tests, sometimes in cooperation with well-established subcontractors. In addition to the drill core extraction, other important properties and parameters of the rock are obtained. Amongst other things, permeability, deformation, and stratification of the formation can be determined using optical, acoustic, or seismic measurements. Geophysical measurements can also be implemented. The results are used to prepare reports and to assess foundations or for the planning and implementation of tunnel structures.

I would like to discuss the so-called Lugeon test. For this purpose, a closed borehole area is subjected to water pressure over a pre-defined period in order to determine the permeability of the mountain. This knowledge provides information about how dense a formation range is and is primarily needed in tunnel construction, hydraulic engineering, or at pollutant landfills.

Bored cavities from former mining are measured by using laser scanning or sonar measurement. During a laser scan, the distance to the reflecting wall is measured by a laser. The data is referenced by sampling the cavity wall from different areas. With the help of a displayed point cloud, a 3D model of the cavity is generated and used to get visual information of the measured areas. In addition to determining the volume for subsequent storage, knowledge can also be gained regarding possible installations in old mines.

### **Having grown exponentially in Germany over the past 30 years, what are BOG Bohr – und Umwelttechnik GmbH's key priorities, targets, and goals for the year ahead?**

Our goal is to maintain and expand our employee base. As already said, we are proud of every single worker. The atmosphere within our company is family-oriented, which is also reflected in the extremely low fluctuation rate. This climate is also perceived from the outside, which our business partners and subcontractors really appreciate. Unfortunately, in the next few years, we



will have to say goodbye to some of the pillars of the company because they have reached retirement age. Nevertheless, we look to the future with confidence, as we have already been able to attract a number of interested young people who are joining us in the future with ambition and commitment.

Achieving our goals begins with the people who implement them. The commitment and passion of our employees also includes strong specialist knowledge, which they receive through training measures and specific further education opportunities. This allows us to meet increasingly complex requirements.

We see another focus on investing in equipment and tools. New technology makes work easier, meaning new goals can be achieved. Accordingly, we strive to always keep our equipment up to date with the newest technologies and expand it if necessary. We are also open to investments to expand our product portfolio.

**Finally, is there anything that hasn't been touched upon that you would like to mention?**

At the beginning of this year, a change in the leadership of BOG, which had been prepared for several years, was successfully implemented. We are looking forward to upcoming projects, exciting customers, and the company's successful future with confidence and enthusiasm. We owe our successful company history of over 30 years, including many exciting projects and events, to the former Managing Directors, Peter Wölk and Stephan Nacke, who successfully prepared us for the challenge ahead. With every new project and task that arises from it, our company continues to grow. We therefore look to the future with confidence and great expectations for the tasks that lie ahead and our future companions.

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