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# F.-W. Wellmer — a life as a raw materials expert at the crossroads of research, industry and politics

Volker Steinbach<sup>1</sup>

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Throughout F.-W. Wellmer's career as an exploration geologist spanning several decades, what stands out is his exceptional skill at combining experience, both from research and from the exploration and assessment of deposits to derive recommendations for politics and industry. His professional biography was crucial in this respect, offering him a wide range of career opportunities, which he actively designed as a dedicated economic geologist.

Following his studies at the TU Berlin and the TU Clausthal and having obtained his Ph.D. in 1970, F.-W. Wellmer became an Assistant Chief Geologist at the German Metallgesellschaft AG. In this position, he had the opportunity to study numerous mineral deposits around the globe and assess their profitability. His regional focus was initially on North and South America, particularly Canada, the USA, Chile and Peru. After his appointment as a Director of Exploration at the Metallgesellschaft AG in Australia, Wellmer focused on the exploration of non-ferrous and precious metal deposits in Australia, Southeast Asia and Oceania. During this time, much of his work was dedicated to the genesis and the economic geology of ore deposits. In these pursuits, F.-W. Wellmer built up an immense knowledge of a wide range of deposit types found in the different regional geological formations around the globe.

In addition to his activities in the field and the management work as the Director of Exploration, the systematic analysis and evaluation of deposit data having been collected during exploration was another major priority of his work. The highly systematic methods for deposit analysis applied by F.-W. Wellmer in his work for Metallgesellschaft AG have also been published in the scientific book

'Statistical Evaluations in Exploration for Mineral Deposits' that is accessible to all economic geologists. Published in German and English, this book has been translated into Russian and Chinese in the past decades, and a Mongolian translation is underway. As a result, the statistical methods for deposit analysis developed and refined by F.-W. Wellmer are now available to countless economic geologists in all major mining countries around the globe, from Australia to Canada, South Africa, South America, Russia and China. Thanks to his international activities as an economic geologist and textbook author, F.-W. Wellmer has been able to collect detailed information about deposits worldwide and to make his knowledge available to the global community of economic geologists.

Another major step in his professional career was a position at the Federal Ministry for Economic Affairs in Bonn from 1979 to 1982. Mining was a major pillar of West Germany's economic growth in the 1950s and 1960s, ore mining in the Harz Mountains, for instance, or coal mining in the Ruhr region. Because these deposits were gradually depleted, the demand for raw materials in German industry exceeding domestic supply and commodity imports became increasingly important, and the need to facilitate access to international mining projects for German industry became extremely necessary. In 1975, the German Federal Government therefore started its exploration incentive scheme, for both international and national projects. With his many years of experience as an economic geologist for Metallgesellschaft AG, F.-W. Wellmer was the right person to coordinate this scheme over a period of 3 years.

In 1987, F.-W. Wellmer joined the Federal Institute for Geosciences and Natural Resources (BGR) in Hanover, Germany, as Head of the Department of Economic Geology and International Cooperation. In this position, he and his team set new priorities in international cooperation. In addition to the previous geological mapping and mineral

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resources projects of the 1960s and 1970s, the attention was now increasingly focusing on the environmental aspects of mining and on geological issues of land use and regional planning. F.-W. Wellmer also recognised the importance of material flows as a part of the material cycles in the extractive industries very early on. In the early and mid-1990s, for instance, large-scale studies on ‘Material flows and energy required for the production of selected mineral commodities’ were carried out under his guidance. The studies on copper, nickel, aluminium and manganese, which addressed the specific material flows from mining to reprocessing and to metallurgy, were particularly relevant. When, in the early 1990s, many German universities were shifting their focus away from research on deposits and raw materials, F.-W. Wellmer initiated a BGR programme for research cooperation with universities. With this countercyclical approach, BGR contributed significantly to maintaining and advancing scientific expertise in raw materials at German universities. Platinum-group metal deposits and polymetallic deposits were key areas of this BGR-research programme. Today, many of these investigated metals belong to the so-called ‘strategically important raw materials’, which will continue to play a major role for emerging technologies. This clearly underlines F.-W. Wellmer’s long-term perspective: focusing research on the right areas long before challenges for society arise, in order to give scientifically sound advice to politics and industry.

In addition to his work as Head of Department at the BGR, F.-W. Wellmer took over an honorary professorship for economic geology and raw material policy at the TU Berlin in 1991. This shows once again his close links with field work, teaching and research.

In 1996, F.-W. Wellmer became President of the Federal Institute for Geosciences and Natural Resources, the Geological Survey of Germany. In the reorientation and management of the BGR, it has always been an important issue for him what kind of contribution geology can give to societal challenges. Who benefits from the many geological research findings? Who uses what kind of geological data? How should geological data be processed to be used for both political and economic decisions? This priority is reflected in the reorientation of the BGR and also in a book published under F.-W. Wellmer’s co-editorship ‘Mit der Erde leben’ (Living with the Earth). In powerful terms, it describes the responsibility that geosciences have for using, preserving and protecting our Earth’s resources in a sustainable manner for the current and future generations.

Another one of F.-W. Wellmer’s major maxims as president or chairperson of numerous geoscientific societies and associations was to ‘bring together and coordinate’ different geology-related issues at national and international levels. As the President of the West German Society

for Geosciences (DGG), he significantly contributed to its merger in 2004 with the historically separate East German Society for Geosciences (GGW) under the German Society for Geosciences (DGG). In his role as President of the Association of the Geological Surveys of Europe ‘EuroGeoSurveys’, F.-W. Wellmer initiated many processes for the harmonisation of geological methods at European and international levels. They concerned both the harmonisation of geological maps throughout Europe and the development and introduction of internationally comparable reserve classifications.

Even in his retirement, F.-W. Wellmer has kept very busy as a highly acclaimed raw materials expert. His continued output of publications in internationally renowned journals is impressive in terms of both quality and quantity. He heads Federal Government working groups for the development of raw material research programmes and is still a member of many national scientific associations and societies, such as the National Academy of Science and Engineering ‘acatech’.

Now more than 80 years old, F.-W. Wellmer remains an important sparring partner for many economic geologists. With his decades of expertise, he provides important input for new economic geology issues in the responsible production of raw materials and a sustainable use of natural resources.

I wish F.-W. Wellmer continuing creative energy and look forward to our discussions on the future world of raw materials.

Glück Auf!

Volker Steinbach.

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