



The Sterlitamuck shichan Tratow - the sea paleoreef of the Lower Permian sections with rich benthos (Photo: E.Gareev)

The Geological Heritage of the Urals - the Clue to the Realization of the History of the Earth

*E. Gareev,
Leader of the Interregional Field Seminar*

The Interregional Field Seminar «Geological Heritage of the Urals - the Clue to the Realization of the History of the Earth» was organized and conducted by the member of the working group No 5 (Russia, Kazakhstan) of ProGEO with the participation of the Institute of Geology of the USC of RAS between August, 27-30 2005. The Field Seminar took place in the Republic of Bashkortostan situated in the Southern Urals, where rocks from Ancient Archean - Upper Proterozoic

(Riphean - Meso-and Neoproterozoic) rise. The geological age vary between 2,5-3 milliard years until the contemporary (quaternary). This is nearly two thirds of the whole geological time of the Earth!

According to the lithologic composition and genesis, various complexes of sedimentary, metamorphic and magmatic rocks are developed here. These represent a rich spectrum of rock and mineral associations. The South-Eastern outlying district of the folded Siberian platform, Pre-Uralian Foredeep, West Uralian Complex, essentially Central Uralian Complex and Tagilo-Magnitogorski Complex, are joined in tectonic relation within Bashkiria.

The Southern Urals is probably the only place on the planet where the elements of the ancient (Paleozoic)



The Sterlitamuck shichan Tratow - the sea paleoreef of the Lower Permian sections with rich benthos (Photo: E.Gareev)

island-arcs are preserved and can be observed and studied today. The combination of the platform and plicate formations defined the various forms of the relief and the complex of the nature features in the area.

Karst processes are widely developed in Bashkiria. Several hundred large caves are found, which is about 20 % of all the known caves in Russia. One of the most known is the cave-chasm Kutuck-Sumgan, with a length of about 10 km and 130 m height.

It is not random that the unique nature objects of the Southern Urals are represented in the Global list of the geological areas: the stratotypical opencasts of Riphean (Meso-Neoproterozoic) on the western slope of the Southern Urals; the stratotype of the Bashkir layer of the middle carbon on the river Askyn; the Sterlitamuck shichans - the complex of sedimentary of carbon and permian, the sea invertebrates; the Yangantow mountain with the thermal phenomena; the



The Participants of the Field Seminar by the Shulgantash (Kapova) Cave (Photo: E.Gareev)

Shulgantash (Kapova) Cave with the wall drawings of the Late Paleolete; the Krasny Klyutch Spring. Such surprising geological variety caused the very pretentious title of the Field Seminar. The number of members of ProGEO, representatives of the working group No 5 and the geologists studying the Geological Heritage from 6 cities of Russia took part in the Field Seminar.

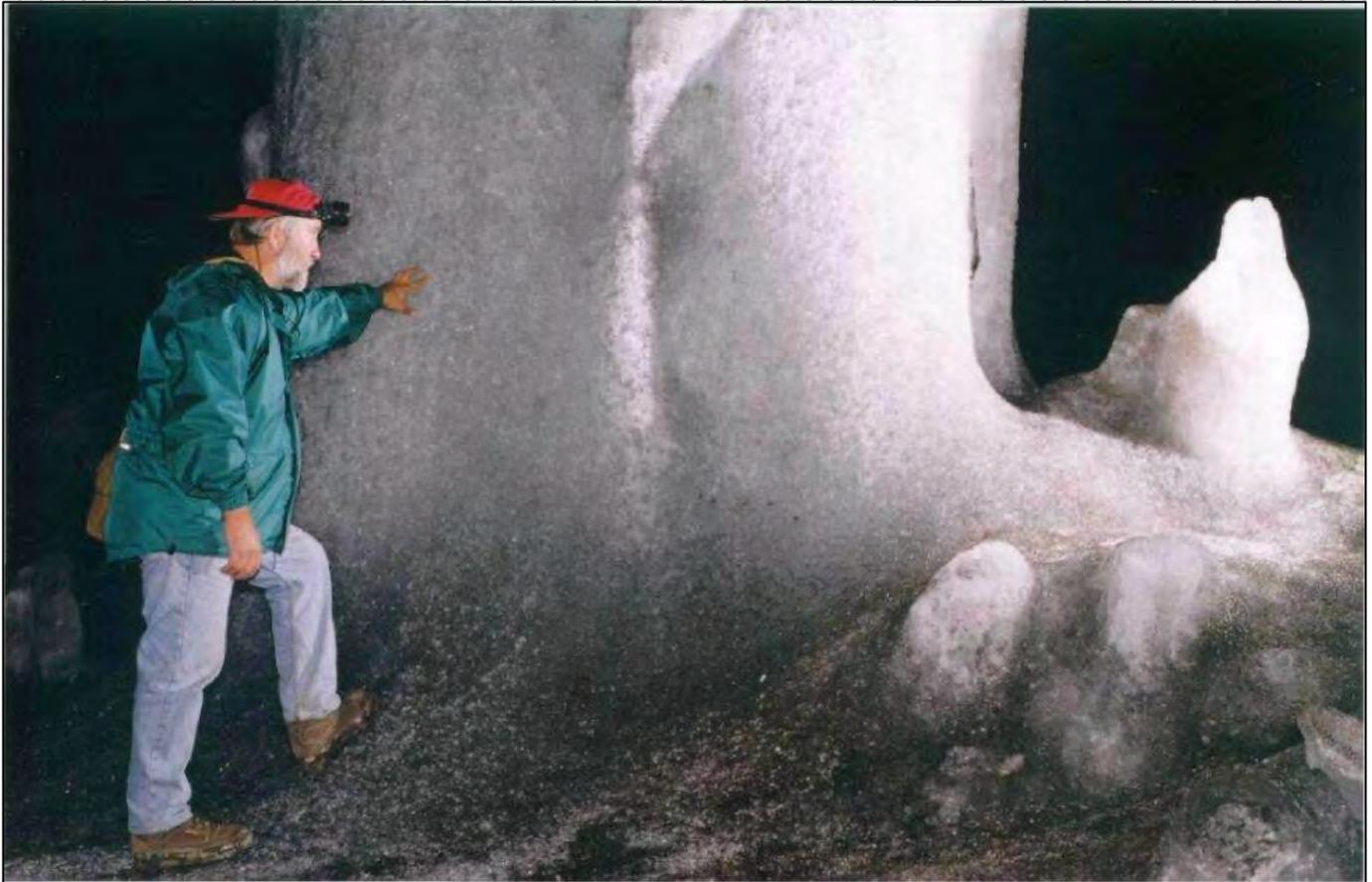
The participants of the Seminar got acquainted with

- the biggest volcuse spring of fresh water in Europe, the Krasny Klutch ("the Red Spring"),
- the stratotypical opencasts of the Lower Permian, Sterlitamuck shichans - the stratotypical opencasts of sections the Lower Permian and the richest remains of the sea invertebrate fauna,
- the classical display of gypsum karst of the Pre-Urals,
- the stratotypical opencasts of the Bashkir layer of Middle Carbon,
- the largest underground glacier of the Askinskaya cave,
- the stratotypical and supporting opencasts of Riphean and Venda, with the stratotypical and tectonic contact of proterozoic and paleozoic sediments along the Yandyck river,
- the largest hyperbazith massifs of in the Urals and the continent - Kraka and
- the Shulgantash (Kapova) Cave with the cavemen's drawings of the Late Paleolithic age.

During the Seminar the problems of conservation of the Geological Heritage of Russia and further expansion and activation of scientific researches in the conservation work, were discussed. The participants of the Field Seminar unanimously supported the idea of organization of the International European Conference and the Field Excursion of ProGEO in the Southern Urals in the future.



"The Horse" - a caveman's drawing of the Late Paleolete (Photo: E.Gareev)



The glacial stalagmites and columns of the Askyn Cave (Photo: N. Galiev)

Yearly report ProGEO 2005 **From the president of ProGEO and the executive committee**

Activities and elections

The main event for ProGEO in 2005 was the International Symposium in Braga. The conference has been advertised and reported in ProGEO NEWS (see No 3/2005) as well as externally (see IUGS journal: Episodes this autumn). The executive committee feels that the symposium was a big success and wish to thank Prof. José Brihla and his team of helpers for the great job they did making this a perfect symposium.

During the symposium the council of Pro GEO had a meeting performing elections to the executive committee. Firstly, an unanimous thanks of the council go to Dr Daniel Barretino (Director IGME, Madrid), who stepped down as a committee member. A new executive committee was elected, as follows: Jan Urban, Irini Drandaki, Gunnel Ransed, Dusan Mijovic, Radoslav Nakov, Sven Lundqvist, José Brihla, Gerardo Brancucci, Rein Raudsep, Lars Erikstad and Bill Wimbledon.

New members of note are Sven Lundqvist, SGU Uppsala (new Treasurer) and Prof Jose Brilha, University of Minho, who are wholeheartedly welcomed. The committee, chaired by the President, Dr Francesco Zarlenga, and with past-president Prof. Todor Todorov in attendance, held four business meetings during the Braga symposium and took the opportunity to formally thank Gunnel Ransed for her great work as ProGEO treasurer in recent years, and expressed its pleasure that Gunnel was willing to remain a member of the committee.

Communications

ProGEO NEWS has been issued over the last year with four numbers as planned. It has been worked with a better distribution system to secure swift deliverance to our members, preferable by electronic mail. It is important that any problem with this is reported back to the committee. ProGEO NEWS will firstly be sent to ProGEO members as a basic deliverance following membership payment. For general information purposes the newsletter also will be published on the ProGEO website after half a years delay.

The ProGEO website is www.progeo.se. The web site still awaits its clean-up and up-dating, which unfortunately has been delayed. Basic information updates

have been made. The ambition is to start early next year to fix the most urgent matters, and then gradually improve it.

Member statistics and finance

ProGEO have members representing most of the European countries. The number of members amounts to ca 230, whereof 18 institutional members (organisations and authorities). The number has increased, especially thanks to some single member countries enthusiasm for geoconservation that has gathered many dedicated persons. This is for example the case in Portugal, Albania and Russia.

A seemingly constant problem is difficulties in how to make cheap transfer of money through Europe. The bank charges vary between countries, concerning both the fee and kind of service. Still it is also too expensive for ProGEO to handle credit card payments, but we are checking for possibilities to use the Internet. This situation tends to cause that some members make their actual payments at meetings and through personal contacts, and therefore result in sometimes irregular payments (and subscriptions).

The incomes to the Association are at present solely from its subscriptions. Expenses are this year mainly support for travelling and meetings. Furthermore a fund for unforeseen expenses has been decided upon for the Newsletter.

The way forward

New members of ProGEO are welcomed! Their contribution is highly welcomed and will be necessary to develop the organisation further in 2006. One of the main events next year will be the next open European meeting of ProGEO in Ukraine. The Ukraine ProGEO group have now put forward their plan for this meeting to be held in the wonderful city of Kyiv on 4-5 September 2006. Field trips will be organized in the SW Ukraine in the River Dniester region (from Kamianets-Podilsky) on the 6-8 September. (Initial contact: secretary of ProGEO Ukraine, Dr Volodymyr Grytsenko favosites@univ.kiev.ua). It is important to remember new and old members that our association do not receive contributions from governments. Our existence depend on memberships and we hope that everyone support ProGEO by following their subscription payments.

The work of us all in our own countries is to form a strong group of people, who can share the work of our ProGEO association and our collaborating sister bodies. National group numbers fluctuate, good colleagues change jobs and also retire, but it is only with a strong national ProGEO group that continuing success will come for our movement. We can look at the large groups in Portugal and Albania, only as exam-

ples, to see what good products come when active and enthusiastic groups of colleagues work for the ProGEO cause.

We wish all members of ProGEO a Merry Christmas and a happy new Year.

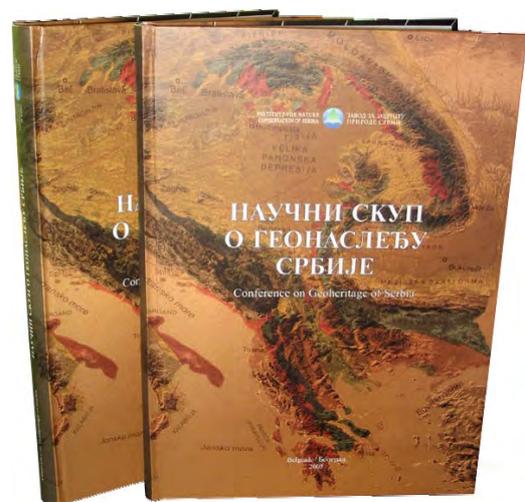
Conference on Geoheritage of Serbia

Dusan Mijovic

This monograph gives a mosaic-picture of all geosciences - geology, geography, pedology, and archeology - that has succeeded in presenting not only the evaluation of the geodiversity and geoheritage site inventory results, but also show the strong bonds between geodiversity and biodiversity. It also demonstrates the importance of geoheritage in management, education, tourism, sustainable development.

The Monograph has 35 papers, divided into three parts - Geoheritage sites for database; Geodiversity study methods for geosite identification, and Applied geoheritage. The authors of the papers are from Serbia and Montenegro, as well as from the countries of South-eastern Europe as Kazanci, Drandaki, Fermeli, Andrasanu.

As the most interesting, it has a list of Serbian Geoheritage Sites, (650 sites in Serbia evaluated according to the modern ProGEO methodology). If the purpose of a scientific study was to leave a record for the successive generations, then the Monograph Conference on Geoheritage of Serbia helps to comprehend the past events, and to understand better our unique environment.





Geoconservation Award 2005 And the winner is: Valongo Municipality and the Paleozoic Park

By José Brilha

The ProGEO Portuguese Group attributed the Geoconservation Award 2005 to the Valongo Municipality (northern Portugal) for the creation and management of the Paleozoic Park. The jury, composed by representatives of the Portuguese Geologists Association, the Nature Conservation Institute, The National Geographic - Portugal and ProGEO-Portugal, voted unanimously for this application and considered that other municipalities should reproduce this local initiative.

The Valongo Paleozoic Park is a protected area – for the moment not integrated in the national system – which combines geological, biological, and mining aspects. The project was initiated in 1995 under the scope of a EU LIFE Programme. The Park was created in 1998 and is integrated in the Natura 2000 Network. The Geology Department of the University of Porto is the scientific partner responsible for the study and

interpretation of the rich geological and mining heritage.

The area of the Paleozoic Park is rich in what concerns fossil occurrences that have been studied since the end of 18th century. Gold mining activities are known since roman times. The Portuguese geoconservation community recognizes the high quality of the Paleozoic Park Geological Heritage; the framework “Ordovician fossils from Valongo Anticle” is one of categories of international relevance recently proposed.

The Geoconservation Award is a national initiative with three main aims:

- To acknowledge the best examples of Geoconservation promoted by municipalities;
- To stimulate a critical reflection about the necessity to conserve Geological Heritage and urge municipalities toward the adoption of strategies and methodologies;
- To raise public awareness of Geological Heritage value as part of general Natural Heritage.

The jury also attributed a special mention to the Porto Municipality for the creation of the Foz do Douro Geological Walk. Nine panels were created in order to support the visit to the rocks of the Foz do Douro Metamorphic Complex. This is the first geoconservation initiative of the second largest city in Portugal.

The applications for the Geoconservation Award 2006 can be received until the end of March 2006.



Fernando Melo (Mayor of the Valongo Municipality), on the right, and Helena Couto (Professor at the Geology Department of the University of Porto), on the left, holding the Geoconservation Award 2005 (Photo: Natura, CMV, Boletim Informativo nº 2, Verão 2005).



Devonian sandstone (Old Red Sandstone): left bank of the Dniester, near Ustechko village, (Photo by Volodymyr Grytsenko)

First Announcement of the ProGEO Meeting in Kyiv, SEPTEMBER 2006

We are pleased to announce that following ProGEO Council's vote to hold an open meeting in Ukraine, the Ukrainian working group proposes the dates of the meeting be 4th-9th September 2006, in Kyiv.

Objectives

The objectives of the conference include the following:

- European and Ukrainian Geosite and Geoheritage activities
- Involvement of Geotourism in the Tourist industry
- Correlation of natural sites with cultural ones in different countries.
- Sustainable development and protection of Geological Heritage – examples and realization

- Presentation of potential new areas for the UNESCO World Geoparks Network
- New research data and trends on the promotion and protection of the geological heritage.
- Geosites and Geoparks as tools for environmental education
- New propositions to European Geosite databases
- Examples of lost Geosites
- Propositions and recommendations on the preservation of natural palaeontological monuments.

Excursions

Ukraine sits at the centre of Europe, and has a complicated geological structure. This and its conservation, demonstrated by a range different geological objects, will be interesting to both members and friends of ProGEO. Among them there are the Ukrainian Shield, Podolian Plate, Donetsk Ridge, and the Crimean and Carpathian Mountains. These geological structures are well represented by geosites. We hope to arrange geological excursions to some of the most impressive

places in Ukraine, as you choose. Excursions will be arranged before and immediately after the meeting sessions. The first place in the list of excursion routes is that through Podolia, where we will show Vendian (Ediacaran) and Silurian reference sections, in many outcrops and geosites. Besides ancient rocks, Cretaceous and Neogene (including Quaternary) deposits and features showing modern geological processes will be demonstrated.

A second excursion is intended on the River Dnipro (Dnieper). In the Dnipro's steep cliffs and banks there crop out deposits of Quaternary, older Neogene, Paleogene, Cretaceous and Jurassic age. We can also see and examine evidence of modern geological activities. Both routes can be arranged by river or bus. Other excursions may be announced in the first circular, if there are special requests from interested persons (and we can find leaders for the routes).

Essential information:

- Preliminary registration fee: 50 €
- Possible costs for each participant - Full board for 5 days (lodging, breakfast, lunch, dinner and transportation) for person: 200-350 €
- Dates: 4-9 September 2006; including pre- and post-meeting field excursions.
- Balance of conference – 2 days business meeting and 3 days in the field

There is a possibility that some delegates can be supported from funds derived from the European Council. A short cultural programme will include a sightseeing bus excursion in Kyiv, and an organ music recital in a castle, for those interested. As general information, hotels may cost from 10 Euros to 50 Euros per day, and even more.

More exact information will be follow soon in a 1st Circular on the ProGEO Website

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E. Z. Gareev “The Nature Geological Monuments of the Republic of Bashkortostan”. Ufa: Taw, 2004., - 296 pp

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Chair of the Bashkir Organization of All-Russian Society of
Preservation of the Environment*

Our colleague, E. Gareev, has written a book, dedicated to the geological heritage of the territory of Bashkortostan, stretching over an area of 140 thousand km of the Southern Urals, the Pre- Urals and the Trans-Urals.

The book presents a colorful illustrated album with numerous photographs, charts, drawings and schemes which are followed by complementary texts. The the book consists of three parts: “The Nature Conditions”, “The Classification of Geological Nature Monuments”, and “The Nature Objects of the Geological Heritage”.

The comprehensive characteristics of the nature of Bashkortostan, of the whole of the Southern Urals and the adjacent territories, is given in the first part which is full of various cartographic material. In the part “The Classification of the Geological Nature Monuments” E. Gareev acquaints the reader with the methodological bases of carrying out of research and typification of geological objects. This includes stratigraphical, paleontologic, geomorphologic, hydrologic-hydrogeological, geothermal, tectonic, mineralogical, ore-petrographic, geochemical, cosmogeneous, volcanogenic, cryogenic types.

In the third and largest part of the book the description of the geological nature monuments is given. The material is grouped according to the types of the geological monuments beginning with the stratigraphical and paleontologic ones in the territory of the Southern Urals. The description of this group of geological monuments is brought from the most ancient (the Riphean stratotype and Vendian of Asha series – the Upper Proterozoic – Meso- and Neoproterozoic) to young or quaternary (the opencast of sediments of the Middle-Upper Neopleistocene “Gornovo”).

According to the characteristics of the geomorphologic objects the author have special attention in representing the objects most fully, reflecting the specific forms of the relief of the territory of Republic of Bashkortostan and paying special attention to the geological formations presenting the greatest scientific and aesthetic interest.

Э.З.Гареев

ГЕОЛОГИЧЕСКИЕ ПАМЯТНИКИ ПРИРОДЫ Республики Башкортостан



The hydrological group consists of a number of the most famous nature (lakes, channels, waterfalls, rapids) and artificial (ponds, water-storage reservoirs) objects of the region. Characterizing the objects of the hydro-geological type, E. Gareev quite rightly pays the main attention to the description of the wide spectrum of the karst formations that are typomorphic for the region. The special charts along with the text and the bright illustrated material supply the fullness of the perception of the material on the karst formations.

The objects presenting structure-substantial complexes of different geodynamics in the process of the evolution of the Earth's crust in the Southern Ural are included into the group of tectonic monuments. It must have been difficult for the author to make up a representative selection, in which the simultaneous description of the mineralogical, ore- petrographic and volcanogenic objects is given. The information on Novoyansayit area of permafrost related to geo-cryogenic genetic group is interesting. The other industrial mining monuments of the 18-19th centuries might have been included into the group of the historical-mountain-geological monuments but it is a matter of the future.

A part of the work describes "The Cadastre of the Geological Nature Monuments of the Republic of Bashkortostan" made up for such a great territory. This is done for the first time which without doubt is an achievement of the author of the book. The Cadastre includes more than 220 objects which are given an ordinal numbers with exact names, location and a brief characteristic of the protected objects together with a typification according to the accepted nomenclature.

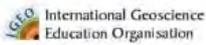
The following types are reflected in "The Chart of Geological Monuments" made up by the author for the Republic of Bashkortostan for the first time: stratigraphical and paleontologic (66 objects), geomorphologic (23), hydrologic (30), hydro-geological (karst, speleologic) (53), geothermal(1), tectonic(9), mineralogical, ore-petrography and volcanogene(29), geo-cryogenic(1), the historical mountain- geological(8) types.

The basic principals of study of the Geological Heritage of the Republic of Bashkortostan for the purpose of their conservation are well described. The laid structured material gives opportunity for its effective usage in making special scientific geological research, for the optimization of teaching of subsequent parts of curricula and all levels of geological and ecological tourism which is developing quite dynamically in the region. The cadastre, certainly, will be filled with new interesting objects. This is illustrated by a supplementary list of objects not described in the book.

The work by E. Gareev is an important milestone which should be followed similar work in the contiguous territories with the purpose of creating of the code of the Geological Nature Monuments of the whole of Ural.

The Cadastre and the Chart create the real prerequisites for the difficult task of giving the official status of "the Geological Nature Monument" to the objects not having it yet. This noble aim will be achieved in case of thorough supporting and coordination of the joint actions of the governmental structures and the Social Ecological Movement of the Republic of Bashkortostan.

It is a pity that the book was published only in Russian, first of all because our foreign colleagues and everybody interested in the study and conservation of geological heritage won't be able to enjoy reading this wonderful book about one of the surprising regions of our planet. It is the reviewers hope that one day it will be possible to find the book at least in an English version.





GeoSciEd V 2006

International Meeting on behalf of the
International Geoscience Education Organisation (IGEO)

University of Bayreuth, Germany, 18. - 21. September 2006

Geoscience Education: Understanding System Earth





The International Geoscience Education Organisation (IGEO)
The aims of the International Geoscience Education Organisation (IGEO) are to promote geoscience education internationally at all levels, to work for enhancement of the quality of geoscience education internationally and to encourage developments raising public awareness of geoscience particularly amongst younger people.

The Conference
The philosophy of the meeting is to provide a venue for geoscience and teaching professionals. The conference will be of interest to those who teach geosciences as part of earth science, geography, and natural science education (biology, chemistry and physics) at any level from kindergarden to university and to those who develop and deliver geoscientific outreach programs. Topics are:

- Public understanding of earth science (e.g. geoparks, museums, demonstrational and educational laboratories)
- Best practice in geoscience instruction
a) Kindergarden, b) Elementary, c) Secondary, d) University
- Educational geoscientific research
- Geoscience education in international comparison studies (e. g. Program for International Students Assessment PISA)
- Highlights of research in geosciences
- Teacher-training in geosciences

Field Trips
A range of field trips is also being planned for their geological and educational potential, including:

- the Ries meteorite impact crater
- the Bohemian-Bavarian Geopark
- 'From the Baltic to Bayreuth'
- 'Geology of the northern Frankenaib (Jurassic and Triassic)'
- Volcano tour

Several workshops and social events, including the Bavarian Conference Dinner, are also planned around the Conference.

Under the auspices of the Bavarian State Ministry of Environmental Affairs

Supported by:

Department for Geography Education, University of Bayreuth

Leibniz Institute of Science Education (IPN), Kiel

Geo-Centrum at the German Deep Drilling site KTB (Windscheschenbach)



Contact: E-Mail: info@geosciEd5.de
Internet: www.geosciEd5.de

Conference information

<http://www.bgi.uni-bayreuth.de/~geosciEd5/>

Deadline for the next issue of ProGEO NEWS: 1.3.2005

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