

## Proceedings

### SOCIETY MEETINGS SEPTEMBER–DECEMBER 1980

8–11 September 1980. 1980 Regional meeting of the Engineering Group held at Kingston Polytechnic.

**Engineering geology applied to construction:** (a) slopes and earthworks; (b) foundations and foundation treatment; (c) water in construction. Field visits to (i) extractive industries, (ii) Wimpey Laboratories and TRRL; (iii) landslides of the S Kent coast; (iv) landslides of the N Kent coast. Conference dinner and Annual General Meeting.

17–19 September 1980. Joint Association for Geophysics.

3-day course on **Inversion techniques in geophysics** held at the Dept. of Geology & Mineralogy, University of Oxford. Lecturers: M. H. Worthington, G. K. Westbrook & B. L. N. Kennett.

17–19 September 1980. Mineral Deposits Studies Group meeting held at St. Peter's College, University of Aston, Birmingham. Annual General Meeting.

**A geochemical, geochronological and stable isotope study of porphyry-style mineralization in the Ophir Valley, Colorado** S. E. Jackson

**Aspects of mineralization in the Sar-Cheshmeh copper porphyry, Iran** J. Shahabpour

**Primary uranium mineralization in granites and alaskites, Namibia** A. Marlow

**The occurrence of wood tin in SW England** K. F. G. Hosking & A. Bromley

**The significance of indigenous low-grade non-ferrous metal deposits to the European Economic Community** C. Broadbent, S. Guy & D. Jackson.

**Geological setting of the massive sulphide deposits in the Oman ophiolite complex** T. Alabaster & J. A. Pearce

**The igneous horizons of the S Pennine orefield—A review of the Matlock–Wirksworth area** P. R. Ineson

**Wall-rock alteration adjacent to Pb–Zn–Ca veins in basaltic host rocks of the S Pennine orefield** S. G. Walters

**Authigenic uraninite and pyrite in Lower Proterozoic gold/uranium conglomerates** T. Garlick

**Uranium in calcrete: palaeogeographic and palaeoclimatic controls** H. Clemmy

**Marine transgression, basin-wide stagnation and consequent mineralization of the Marl Slate/Kupferschiefer** P. Turner & M. Magaritz

**Isotopic evidence from mineralization in The Permian Lower Magnesian Limestone** G. M. Harwood & M. L. Coleman

**Ore mineralogy and ore genesis of the Alderley Edge deposit, Cheshire** D. J. Vaughan & R. A. Ixer

**Aspects of mineralization within the Cheshire Basin** C. Carlon & D. B. Thompson

**Genesis of the mineral deposits in the Permo-Triassic rocks of Britain** A. M. Clarke

**Copper mineralization in Andean gravels: first stage in stratiform ore formation?** H. Clemmy

**A stable isotope study of the Mufulira copper deposits, Zambia** J. Surman

**Copper/lithofacies relationships. Late Proterozoic red bed deposits in Namibia & Botswana** P. Ruxton

**Mössbauer spectral studies of the formation of iron sulphides in Recent tidal-flat sediments** R. J. Suttill, D. J. Vaughan & P. Turner

11–12 October 1980. British Sedimentological Research Group Meeting. Field Workshop: **Eocene alluvial sediments of the Hampshire Basin** (coarse-grained point-bars and ball-clay alluvial plains).

15 October 1980. Joint meeting of the Marine Studies Group, the Petroleum Exploration Society of Great Britain, the Joint Association for Geophysics, and the Society of Underwater Technology.

**Seismic techniques in offshore exploration**

**The seismic exploration spectrum** R. McQuillin

**Seismic refraction and crustal stretching in the North Sea** D. Matthews

**The use of reflection seismics in the study of deep crystalline basement geology** D. K. Smythe

**New techniques in deep seismic exploration for hydrocarbons** P. Newman

**Ultrasonic modelling of seismic acquisition techniques** H. Peacock

**The use of seismic impedance data in field developments** G. Berkhout

**Marine seismic exploration for coal** C. D. T. Walker

**High resolution reflection systems** A. Dobinson

**The use of high-resolution seismic data together with geotechnics in offshore site investigation** C. D. Green

21 October 1980. Hydrogeology Group meeting held at the Institute of Geological Sciences, Murchison House, Edinburgh.

**Recent hydrogeological development in Scotland** I. B. Harrison

**Groundwater investigations in the Vale of Strathmore**  
L. Clark & M. J. Squibbs

**Description of groundwater movements in a crystalline rock terrain** S. L. Glendining

**Groundwater problems in civil engineering** C. A. O'Boy & P. G. Carter

24–26 October 1980. British Geomorphology Research Group Meeting held at the University of Liverpool, and Annual General Meeting.

**Frequency and magnitude concepts in geomorphology**

29 October 1980. Ordinary General Meeting

**Plate tectonic implication of chemical data from the volcanic rocks of the British Old Red Sandstone** M. F. Thirlwall

(*Journal*, **138**, Part 2)

**Ensialic spreading-subsidence in the Mesozoic and Palaeogene Andes of central Chile** B. Levi & L. Aguirre

(*Journal*, **138**, 75–81)

**The geology of the Kuh-e Dalneshin area of southern Iran and its bearing on the evolution of southern Tethys** R. Stoneley

(*Journal*, **138**, 509–526)

4 November 1980. Mineral Deposits Studies Group Meeting.

**Current research on mineralization**

7 November 1980. Students' Open Day for students who are either already Junior Associates or who are considering joining the Society.

Lectures by E. R. Oxburgh & J. K. Leggett on aspects of plate tectonics; talks by representatives of the oil industry on careers; films on scientific and applied aspects of geology; and various demonstrations.

11 November 1980. Engineering Group Meeting.

**Should engineering geology be taught, and if so, how?**

12 November 1980. Tectonic Studies Group Meeting.

**Deformation and metamorphism.**

19 November 1980. Volcanic Studies Group Meeting.

**Volcanological research in progress**

**An empirical evaluation of predictive models for diffusion coefficients in silicate melts** R. K. Lowry & J. Nolan

**Mechanism of volatile oversaturation and eruption from evolving silicic magma chambers** S. Blake

**Determination of eruption cloud height, windspeed and eruption duration for pre-historic plinian eruptions** L. Wilson

**Fluidization of wet sediments during the emplacement and cooling of various igneous bodies** P. Kokelaar

**The chemistry and origin of the White River Pyroclast Fall Series, Montserrat, West Indies** W. J. Rea & P. E. Baker

**The petrochemistry of the basic volcanic rocks of the S Connemara Group (Ordovician), western Ireland** P. D. Ryan & M. D. Max

**Petrology and geochemistry of a late pluton in the Semail Ophiolite, Oman** P. Browning & J. D. Smewing

**The Blackstones Igneous Complex** G. Durant

**A revision of the nomenclature of the Tertiary intermediate rocks of NE Ireland** P. Lyle & S. J. Thompson

27 November 1980. Geological Information Group Meeting (jointly with British Library). Workshop meeting: **Bibliographic data-bases in geology**

3 December 1980. Tectonic Studies Group Meeting, held at the Dept. of Geology, City of London Polytechnic.

**Workshop on balanced sections**, arranged by Dr J. R. Hossack

3–4 December 1980. Marine Studies Group Meeting, held at Burlington House and at the Millbank Tower Conference Suite, Vickers House, Millbank, London SW1.

**Shelf and nearshore dynamics and sedimentation**

**Introduction** D. J. P. Swift

**The relationship between ripple shape and velocity profile** K. Dyer

**Velocity profiles over some natural boundaries** P. N. Stanford

**Observed tidal variations in apparent value of von Karman's constant** M. Thorn & J. Parsons

**Modelling the coastal environment** B. A. O'Connor

**A simple model of mean sediment transport under oscillating current conditions** J. R. Hunter

**The suspension of sediment by waves** I. Savell & J. Nicholson

**3-D water movements** B. Cathers & R. Penoyre

**An impact sensor for measuring suspended sand concentrations** R. L. Soulsby

**Investigations into sediment response to tidally- and wave-induced currents** M. B. Collins & S. T. Williams

**Measurement and prediction of sediment transport in waves and tidal currents** A. D. Heathershaw

**The effect of waves and currents on sediment transport** P. H. Kemp

**Comparison of storm-built and tide-built sand ridge topographies, Atlantic shelf of N America** D. J. P. Swift

**The origin of tidal sand ridges** H. M. Pantin

**Gain and loss of sand by some sand banks, southern N Sea**  
G. Caston

**Tidal maintenance of sandbanks** I. N. McCave

**Beach processes at Hell's Mouth Bay** J. D. Darbyshire

**An energetic approach to intertidal profile changes**  
J. Hardisty

**Sediment movement around intertidal sandbanks in the Wash**  
R. E. Dugdale

**Wave flame tests on mud** M. Kendrick

**A two-dimensional siltation study of the Brisbane river**  
P. Cole

**Sediment transport relations for estuary models** G. Miles

**Sediment transport on the tidal flats of the Upper Tay estuary, Scotland** S. A. K. Alizai & J. McManus

**Measurements of salt marsh accretion in the Wash**  
T. Hartnell

**Characteristic sand populations generated by competent tidal currents in the Celtic Sea and Severn Estuary, U.K.**  
D. Hamilton

**Aspects of sediment movement near to Bridgewater bar, Bristol Channel** P. A. Mantz

**Bed type and benthonic macrofauna associations in the Bristol Channel in relation to tidal stress** R. Uncles

**Sediment response to waves and tidal currents in Carmarthen Bay** C. F. Jago

**Sediment transport processes in the Sizewell–Dunwich area, E Anglia** B. Lees

**Depth-related controls on sediment distribution in the central N Sea** R. Owens

**Settling and threshold characteristics of heavy mineral grains**  
J. K. Rigler & M. B. Collins

4–5 December 1980. Society-sponsored course on **Assessment of earthquake risk** for engineers, engineering geologists and insurance assessors.

**Seismic zones, active faults and related neotectonic fractures**  
P. L. Hancock

**Earthquake risk and its assessment** N. N. Ambraseys

**Earthquake hazards and their assessment** N. N. Ambraseys

**Earthquake hazards—case histories** N. N. Ambraseys

**Earthquake vulnerability of superficial materials—assessment of the static conditions** B. A. Skipp

**Earthquake vulnerability of superficial materials—landsliding of natural and man-made slopes** B. A. Skipp

**Methods of analyzing the response of engineering structures to earthquakes** R. T. Severn

Panel discussion

5 December 1980. Geological Curators Group Meeting held at the Geology Department and Hunterian Museum, University of Glasgow.

#### **Geology—For Sale?**

6 December 1980. Tectonic Studies Group Meeting, held at the University of Leeds.

#### **The Deep Structure of the British Caledonides.**

A meeting for discussion with: D. J. Blundell, D. Flinn, D. H. Griffiths, A. N. Halliday, A. L. Harris, M. R. W. Johnson, D. Powell, R. M. Shackleton, D. Smythe, N. J. Soper, G. K. Westbrook.

9 December 1980. Engineering Group Meeting.

#### **The role of the engineering geologist in public inquiries**

10 December 1980. Geological Information Group Meeting.

#### **Discussion and social evening**

13 December 1980. Joint Association for Geophysics Meeting held at the Department of Geology, University College, Cardiff.

#### **SQUID magnetometers and their applications**

**The first UK 3-axis cryogenic magnetometer** C. E. Barton

**Trials and tribulations of an automatic super-conducting measuring and demagnetization system** J. Rogers

**Simple techniques for interfacing SQUID magnetometers to microprocessors** J. Shaw

**Some experiences with the use of a 3-axis CCL cryogenic magnetometer** E. A. Hailwood, C. M. Brown, H. A. Townsend & N. Hamilton

**How SQUID sensors work** A. M. Guenalt

**Utilization of a SQUID magnetometer for ancient field intensity determination by the Thellier technique** M. J. Aitken

**The SQUID as a tool for authenticity testing** V. Jones

**Ancient magnetic intensities in the eastern Mediterranean**  
G. D. Bussell

**An attempt to marry Shaw and Thellier—that failed**  
P. Alcock

**Magnetostratigraphy of a Cretaceous/Tertiary boundary sequence** N. Hamilton

14–17 December 1980. British Geomorphology Research Group and British Sedimentological Research Group Meeting, held at the University of Strathclyde.

**19th Annual Meeting**

17 December 1980. Meeting held at King's College, London, preceding the first Louis Fermor Lecture.

**ICP source spectrometer—applications to the routine determination of major, trace and rare earth constituents of rocks**  
J. N. Walsh & R. A. Howie

17 December 1980

**The Kohistan crustal section in the Karakoram Range of the Himalayas** M. P. Coward & B. F. Windley (Newsletter, Vol. 9, p. 16)

Presentation of the Wollaston Medal 1980 to Augusto Gansser.

The PRESIDENT presented the WOLLASTON MEDAL to Professor AUGUSTO GANSSER and said: It gives me great pleasure to acknowledge on behalf of your fellow geologists the debt that our science owes to you, Augusto Gansser. Your earliest studies at Zurich, which culminated in the award of a PhD for a thesis on the geology and petrology of the Penninic Nappes of Grison evidently shaped your abiding interest in the younger mountain belts of the world. From the Alps you joined scientific expeditions—first to Eastern Greenland with Koch, then in 1936 to the Central Himalayas with Albert Heim. According to legend, you gained access to that ground in western Nepal and south Tibet only by adopting the disguise of a lama, and on the strength of that, I for one, Sir, look forward with heightened anticipation to illustrations of that region in your lecture later this afternoon.

After travel in the High Atlas of Algeria and Morocco, there followed a productive period of more than a decade, including the war years, when you served in posts on increasing seniority with the Shell Group, stationed in Colombia and in Trinidad, venturing out at every opportunity to explore the Andes of Peru, Bolivia and Ecuador. This Society reaped the benefit in 1971 when you chose the topic of "Facts and theories on the Andes" for the 26th William Smith Lecture. I do not think there has been a more splendid beginning to a lecture than the one you used on that occasion—I quote—"On a sunny but stormy day I sat, 25 years ago, on the northeastern tip of the Toco peninsula of Trinidad on the flysch-type, inverted rocks of Galera Point and watched how the Northern range of Trinidad plunged into the Atlantic Ocean".

You were able to see the ground lying between the Alps and the Himalayas during your time as Head Geologist of the National Iranian Oil Company in Iran during the 1950s. Then, after becoming Professor and Head of the Geological Department of the Swiss Federal Institute of Technology and the University of Zurich, you seem to have filled every remaining gap in your overview of mountain building during travels to the western U.S.A. and Canada, to the Urals, the Antarctic and the African rifts. This period was distinguished not only by your important work on ophiolites and ophiolite mélanges, but also saw you return repeatedly to the Himalayas on many expeditions. These have continued long after publication in 1964 of your classic, handsomely illustrated and definitive book on the geology of the area.

Your encyclopaedic knowledge of the actual and theoretical geology of old suture zones, your extensive contributions to both pure and applied fields of research and your international reputation as a leader and teacher have already been recognized by election to honorary or foreign membership of societies all over the world—our own included—as well as by awards such as the Patron's Medal of the Royal Geographical Society. It is therefore fitting that this, the oldest Geological Society, should add its own tribute to your achievements. The Society honours you with its highest award, the Wollaston Medal, which I now present to you.

Professor GANSSER thanked the President for the great honour bestowed upon him by the Society in the award of the Wollaston Medal.

The Louis Fermor Lecture 1980. **Himalaya and South Tibet**  
A. Gansser (Newsletter, Vol. 9, p. 17)

18–19 December 1980. Tectonic Studies Group Meeting, held at the University of Keele.

**Annual General Meeting and discussion meeting**

Children's Christmas Lectures

5 January 1981

**Fossils Alive Alive O** Julia Hubbard (in London)

14 January 1981

**Tracks and Trails and Trilobite Tales** George Farrow (in Belfast)