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F. K. North and E. T. Tozer

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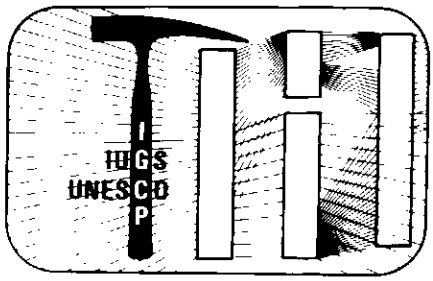

International Geological Correlation Program Canada Newsletter I

F. K. North
Chairman IGCP National Committee
Department of Geology
Carleton University
Ottawa, Ontario K1S 5B6

E. T. Tozer
Secretary IGCP National Committee
Geological Survey of Canada
601 Booth Street
Ottawa, Ontario K1A 0E8

Canada and the International Geological Correlation Programme

Establishment of the Programme. The International Union of Geological Sciences (IUGS) in 1972 launched a long-term interdisciplinary programme as a co-operative venture with UNESCO. It was given the title *International Geological Correlation Programme* (IGCP). In effect it is a sister organization to the Inter-Union Commission on Geodynamics (ICG); it also works in co-operation with the IUGS Commission on Stratigraphy (IUGS–CS).

IGCP is governed by an International Board of fifteen members. Dr. D. J. McLaren, Director of the Geological Survey of Canada, was a member of the original Board, and will continue to attend its meetings in his capacity as Chairman of IUGS–CS. Besides the governing Board, the IGCP organization includes four Scientific Committees, appointed by the Board and accorded responsibilities described below. The organization also calls for the establishment of National Committees. The rules governing the operations of all these committees were established by the Board at its first session in Paris, in May, 1973; they are set out in UNESCO publication "Geological Correlation I", called the "Yellow Book".

A National Committee is responsible for publicizing the aims and achievements of IGCP, and for encouraging both participation in IGCP projects and initiation of new projects. Canada's National Committee is in the process of formation. Professor F. K. North of Carleton University, Ottawa, is Chairman; Dr. E. T. Tozer, Geological Survey of Canada, Ottawa, is Secretary. Serving with them *ex officio* are the Scientific Adviser to the IGCP Board, Dr. W. W. Hutchison; the Chairman of the National Committee of ICG, Dr. R. A. Price; and the Chairman of the Canadian Geoscience Council, Dr. H. R. Wynne-Edwards. Formation of the IGCP National Committee is not yet complete but the following have also agreed to serve:

Dr. F. Aumento
Dr. W. Blake, Jr.
Mr. G. de Mille
Dr. A. M. Goodwin
Dr. H. J. Hofmann
Dr. E. Irving
Dr. W. D. McRitchie
Dr. A. Sutherland Brown

Scientific scope of IGCP. On recommendation of the Board, UNESCO and the IUGS divided the scope of IGCP into four divisions, and established a Scientific Committee for each. These divisions are as follows:

1. Time and stratigraphy: the practical implications.
2. Major geological events in time and space, and their implications in environmental processes.
3. Distribution of mineral deposits in space and time, and relation of the processes of ore formation to other events in earth history.
4. Quantitative methods and data processing in geological correlation.

Canada's only Scientific Committee member at present is Dr. E. Irving, on Committee no. 1.

Within these four divisions, the Board recognized such a wide range of possible topics that it chose to indicate four areas that should receive special emphasis. They are:

1. Ordering the past: refining the geological calendar.
2. In the beginning: evolution of the ancient crust.
3. Man's home: his geological environment.
4. Man's needs: energy and minerals.

The Board has, of course, no wish to limit projects to these four areas; it anticipates that the course of the programme as a whole will be largely determined by the projects submitted to it.

IGCP Projects. By the end of January 1974, 92 projects had been proposed to the IGCP Secretariat. These were reviewed and evaluated by the Scientific Committees, meeting in Paris. Rejecting those proposals that were purely national in scope, and judiciously combining others into larger projects, the Board at its second session in Vienna, in May 1974, then classified the proposals into four categories of priority:

A. Key projects: well-developed international projects of major importance, involving research in one of the previously-defined main divisions of the Programme.

B. Potential major projects: those which it accepted as offering promise as nuclei for development into international projects on major problems.

C. Project proposals which, though not acceptable for inclusion in the Programme in their present form, could be modified and developed into international projects for inclusion at a later stage.

D. Project proposals which, in their present form, were not relevant to IGCP or were not considered likely to attract sufficient international support to justify their inclusion in the Programme.

The projects that have already been approved and accepted are set out below, with the nationalities of the principal sponsoring scientists or organizations.

A. Key Projects

Division 1 – Time and Stratigraphy.
Accuracy in time (Netherlands; Germany).
Ecostratigraphy (Sweden; Poland).

Division 2 – Geological events in time and space.
Precambrian-Cambrian boundary (UK; India).
Correlation of the Precambrian in mobile zones (France; India).
Precambrian in younger fold belts (Czechoslovakia; Romania; Bulgaria; India).
Ophiolites (USSR; Romania; India).
Circum-Pacific plutonism (USA; Korea).
Neogene-Quaternary boundary (USSR; India).
Quaternary glaciation in the northern hemisphere (Czechoslovakia).
Holocene sea-level changes (Netherlands; New Zealand).

Division 3 – Mineral deposits in space and time.
Ore deposits separated by continental drift (Austria).
Metallic deposits related to acid magmatism (Czechoslovakia; Netherlands; India).
Genesis of kaolins (Czechoslovakia).

B. Potential Major Projects

Division 2 – Geological events in time and space.
Archean igneous geochemistry (Australia).
The Caledonian orogen (Norway).
Sedimentary basins in the ECAFE region (Korea; Philippines; India).
Mesozoic chronostratigraphy (New Zealand).
Southwest Pacific basement correlations (New Zealand).
Upper Paleozoic of South America (Brazil; Argentina).
Upper Triassic of the Tethys realm (Austria; Romania).
Paratethys-Mediterranean Neogene (Czechoslovakia).
Pre-Pleistocene tilloids (UK).
Southwest border of eastern European platform (German Democratic Republic).
Mid-Cretaceous events (Sweden).

Division 3 – Mineral deposits in space and time.
Metallogeny of the Precambrian (USSR).
Caledonian strata-bound sulphides (Norway).
Base metals in eastern Europe and the Mediterranean (Austria; Poland).

You will notice the highly skewed geographic distribution of project proposers – 24 from Europe excluding the USSR and the UK (which have only 5 between them); 10 from Asia; 4 from Australasia; 2 from South America; 1 from the US; none from Africa (or from Canada).

Within this set of approved projects, some are clearly of vital interest to Canadian scientists – especially, perhaps, those dealing with aspects of the Precambrian, the Caledonian orogeny, or the circum-Pacific belt. In addition, of course, every one of the projects, and many others from future proposals, will no doubt be of vital interest to particular individual groups. Details of all project proposals, accepted and unaccepted, may be obtained from the Secretary.

For future project proposals, the Board identified a number of topics that it felt were not adequately covered by this initial round of projects. In *Division 1*, the most obvious gap was in methodological approaches to correlation, especially in paleomagnetism. In *Division 2*, the Board singled out correlations by such phenomena as paleolatitudinal changes, paleoclimatic zonation, fossil sea levels, and sedimentation rates. Studies of evaporites, sapropelites, phosphates, and coals should be considered for project proposals. In *Division 3*, energy resources should provide scope for more projects – those concerning the timing of sedimentary basin development, for example. Within all divisions, the special problems of *the Precambrian* were pointedly emphasized, to the extent of recommending that an early meeting be held on Precambrian problems relevant to IGCP.

No project has so far been approved under *Division 4*. Problems currently under study using computer-based techniques have been the subject of four proposals to IGCP, but none has so far been sufficiently elaborated to constitute an international project. The application of geomathematical methods to several of the approved projects has been strongly recommended.

Initiation of (or participation in) a project. Projects may be proposed by any individual or organization from any member nation. Proposals pass via the National Committee to the appropriate Scientific Committee, and thence to the Board. If the Board approves the proposal, UNESCO (through IUGS) notifies all member nations and invites their participation. Thereafter, participants deal directly with the proposer of the project and with one another, the National Committees being informed of developments and in turn informing the IGCP Secretariat in Paris.

The deadline for submission of project proposals for examination at the 1975 Board Meeting was November 30, 1974, since they must be evaluated by the Scientific Committees in January 1975 before they are submitted to the Board.

The proposer of an accepted project is expected to convene a working meeting of participants from interested countries. If necessary, the IGCP Secretariat will assist in this arrangement. The participants will then establish their own Project Working Group, through whose offices the work of the project will be co-ordinated.

Funding of projects will be through the usual domestic granting agencies. As with the Geodynamics Sub-committee, the IGCP National Committee will add its special recommendation for priority of funding for any project-participation receiving its endorsement.

Canadian participation in projects. Canadian participation in several projects, in both key and potential categories, was already underway before the National Committee was established. The Committee urges all those already participating to inform the Secretary of their involvement.

We also commend the Programme to all Canadian geoscientists, and urge those who wish to participate in any existing project, or to propose the initiation of any new project concerned with geological correlation in its widest sense, to communicate with the Committee through any of its members.

In order to publicize the objectives of IGCP, copies of this newsletter were being sent to the Geoscience departments of Canadian universities, to the provincial organizations concerned with the Geosciences and to the officers of Canadian geological societies. They were also being sent to the editors of the CIM Bulletin; CSPG *Reservoir*, the monthly newsletter of the Canadian Society of Petroleum Geologists; *Geoscience Canada* and *Geolog*, both published by the Geological Association of Canada; *GEOS*, the quarterly publication of the Department of Energy Mines and Resources; and *Maritime Sediments*, the information journal published in Halifax.

References

More information on the history and objectives of IGCP is provided in the following publications:

"Geological Correlation 1, IGCP – First session of the Board, Paris, 22-25 May 1973." Published by UNESCO–IUGS, Paris, September 1973. This is the "Yellow Book". Copies are being distributed to all Canadian geoscientists involved in IGCP; they are available from the Secretary c/o Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario, K1A 0E8.

"Geological Correlation 2, IGCP – Second session of the Board, Vienna, 22-26 April, 1974." To be published by UNESCO–IUGS during 1974. Copies will be distributed as for (1).

Hutchison, W.W., News from Abroad – a New International Programme: Geolog, v. 2, pt. 3, May/June 1973, p. 21-25.

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International Geological Correlation Programme. Regional Meeting of the East European Countries in Liblice, Czechoslovakia, 9-11 April, 1974; Second Session of the IGCP Board; Rectification regarding Scientific Committee I: Geological Newsletter of IUGS, 1974, no. 2, p. 117-119, Haarlem, June 1974.

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