

## Mission-Oriented Research

A. J. Baer

Volume 3, Number 3, August 1976

URI: [https://id.erudit.org/iderudit/geocan03\\_03let02](https://id.erudit.org/iderudit/geocan03_03let02)

[See table of contents](#)

---

### Publisher(s)

The Geological Association of Canada

### ISSN

0315-0941 (print)

unknown (digital)

[Explore this journal](#)

---

### Cite this document

Baer, A. J. (1976). Mission-Oriented Research. *Geoscience Canada*, 3(3), 258–259.

refusing to enter the golden age. We are doing what works for ourselves the best. Perhaps the paleontologists and mining companies could use more limited services, tailor made to their specific needs. These already are being developed for micropaleontologists. Note that this narrowly-defined type of computer application would accord rather well with the three criteria of good computer use, as set out in my original article.

A. D. Miall

*Institute of Sedimentary and Petroleum Geology  
Geological Survey of Canada  
3303 - 33rd St. N.W.  
Calgary, Alberta T2L 2A7*

Miall will get no argument from me on the undesirability of building "unuseable data files"! However, criticism for such wasteful activity must be directed at people and management, not at computer technology or at the concept of data management. Even so, it is difficult to discuss the utility or value of computer-based data files on a generalized basis. One must ask with respect to a particular file: unuseable to whom? and: unuseable in what context? Having satisfied the immediate and narrow need, too many geologists effectively discard their expensively acquired data on the arrogant assumption that no other geologists - much less non-geologists - could understand or use them.

My comments on the general lack of objective data in geology and on the attitude of many (most?) geologists that only their "own" data are trustworthy (i.e., the data are not considered reproducible) do not represent quibbling on the definition of "science". This is a serious indictment, and I'm not reassured by Miall's failure to recognize it as such or by his evident faith in scientific progress through "... guesswork, intuition, interpolation and extrapolation ...".

Miall's attitude on geological data carries over to the literature where he considers only papers known to him through an informal personal network to be worthy of consideration. Data and ideas generated outside this network are evidently not relevant simply because they are outside. He contradicts himself on his contention that "nobody" wants to

search the literature systematically, since elsewhere he acknowledges that 10 per cent of scientists at his institution use the CAN/SDI service offered by the Canada Institute for Scientific and Technical Information (CISTI). Complaints about "half-inch thick printouts", "guarantees of relevance", six-month turnaround times for GEO-REF citations, etc., may or may not be resolvable, but the main question is: What is the alternative? For most, it's an intellectual ghetto.

C. F. Burk, Jr.

*Canada Centre for Geoscience Data  
Department of Energy, Mines  
and Resources  
Ottawa, Ontario K1A 0E4*

---

### Mission-Oriented Research

I am writing to suggest that the geoscientific community (that means you) should establish a central organization to coordinate and fund mission-oriented research.

A few years ago, mission-oriented research was a dirty word among many academics but two series of events of the early seventies should make us change our minds. One has been the progressive drying up of research funds, accompanied by the apparent inability of federal ministers to understand the potential of pure research, and by the refusal of the federal government to give any priority to science programmes. The other has been the demonstration that political decisions are continuously being taken on the basis of inadequate and incomplete scientific data because the necessary (mission-oriented) research has not been done on time. Variations of guestimates of the oil potential of the Arctic are only one case in point.

If academics are hard-pressed for research support and if the government badly needs specific work to be done, surely the two should meet.

I would envisage a three-tiered structure, with a policy-making body, a coordination office and potential grantees.

*Policy-making should be handled by a small joint committee of universities, governments and industries. Its members would be respected experts who would consult others formally and informally and would establish a priority list of problems that need to be solved. They would not deal with details but identify specific questions that must be answered. Their fundamental criterion should be to promote what will be most beneficial to the country as a whole.*

Once the goals are set, a coordination office is necessary, that would receive proposals, act in effect as a granting agency, and distribute funds according to policies and guidelines established by the joint committee discussed above. Mission-oriented research is evidently funded by those who want it done. Such funds would be put at the disposal of the coordination office by various government agencies or departments, and oil or mining companies for instance. The office should presumably be integrated to the Geoscience Council.


Realisation of the actual projects would mainly be the task of university groups or individuals. "Quality-control" could be assured by peer review through people in industry, government or university, but maybe more particularly through scientists in EMR. It would be up to the coordination office to ensure that reviewing is up to standards required.

In the proposed system, EMR research agreements which are notoriously insufficient at present and IREM grants of NRC would become just two aspects of a larger structure.


The suggested approach is only one of many possibilities, but in the earth sciences time has now come to organize ourselves and to think of what is in store for the 1980s. The simple fact of agreeing upon a limited number of priorities could serve as a solid base on which to build a national earth science policy.

A. J. Baer

*Department of Geology  
University of Ottawa  
Ottawa, Ontario K1N 6N5*



**RESOURCE ASSOCIATES  
OF ALASKA**  
GEOLOGISTS & MINING ENGINEERS  
GEOCHEMICAL & ASSAY LABORATORY  
3230 Airport Way  
Fairbanks, Alaska, 99701  
Tel.: (907) 479-6231 or 479-6097  
Telex 090 35402



GEOLOGY GEOCHEMISTRY GEOPHYSICS


**BARRINGER RESEARCH**

Specialists in Earth Sciences,  
Instrumentation and Multi-Sensor Systems

304 CARLINGVIEW DRIVE, METROPOLITAN TORONTO, REXDALE, ONT. M9W 5G2  
TEL. (416) 677-2491 TELEX 06-968743

**DERRY, MICHENER & BOOTH**  
MINING GEOLOGICAL CONSULTANTS

<p><b>CANADA</b> 401 Bay Street, Toronto, Ontario M5H 2Y4 Tel. (416) 368-4636 Cable: DEMBEE Telex 06-23686</p>	<p><b>AUSTRALIA</b> Derry, Michener &amp; Booth Pty. Ltd., Capital House, 10 William Street, Perth, Western Australia. Tel.: 22-3177 Cable—DEMIBO</p>
--	---



Soil mechanics, rock mechanics, foundations, pavement evaluation, earth dams, sanitary land fill, air photo interpretation.

**H.Q. Golder & Associates Ltd.**,  
3151 Wharton Way, Mississauga, Ontario L4X 2B6 (416) 625-0094  
1796 Courtwood Crescent, Ottawa, Ontario K2C 2B5 (613) 224-5864  
747 Hyde Park Road, London, Ontario N6H 3S5 (519) 471-9600  
2479 Howard Ave., Windsor, Ontario N8X 3V7 (519) 254-8241

**Golder Brawner & Associates Ltd.**,  
224 West 8th Ave., Vancouver, B.C. V5Y 1N5 (604) 879-9266  
5915 3rd Street S.E., Calgary, Alta. P2H 1K3 (403) 252-5525  
785 Tranquille Rd., Kamloops, B.C. V2B 3J3 (604) 376-1207

SEATTLE • ATLANTA • MELBOURNE • SYDNEY • BRISBANE • LONDON, ENGLAND

## University of Saskatchewan Requires Geological Engineer

The Department of Geological Sciences, University of Saskatchewan, Saskatoon, has a faculty vacancy, with rank of appointment, salary, and effective date of appointment negotiable. Applicants should have a basic degree in geology or preferably geological engineering and a Ph.D. or equivalent in an appropriate field. Applicants should have an interest in developing the geological engineering program of the department and be prepared to maintain an active research program.

Send applications:

Professor W. G. E. Caldwell, Head  
Department of Geological Sciences  
University of Saskatchewan  
Saskatoon, Saskatchewan  
S7N 0W0  
Canada

## Department of Earth Sciences University of Waterloo

invites applications for a faculty position, at Associate or Full Professor rank, that involves teaching and research in engineering geology. The Department currently has one of the largest undergraduate and graduate enrolments in geology in Canada, offers a unique cooperative undergraduate geology program, and specializes in environmental geology at the graduate level. Excellent research facilities are also available in the Faculty of Engineering. Salary minima are Associate \$20,600, Full Professor \$27,000. The position is available January or July 1977.

Apply to:

Professor C. R. Barnes, Chairman  
Department of Earth Sciences,  
University of Waterloo,  
Waterloo, Ontario, N2L 3G1.