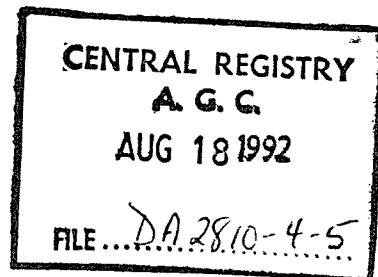


Institute of Arctic and Alpine Research
Box 450, University of Colorado,
Boulder, Colorado 80309, USA

Phone. 303-492-5183; Fax. 303-492-6388
E-Mail: Internet "ANDREWS_JT@CUBLDR.COLORADO.EDU"
OMNET:INSTAAR.Library

Re: Core Depository Facility, AGC/BIO

08/14/92

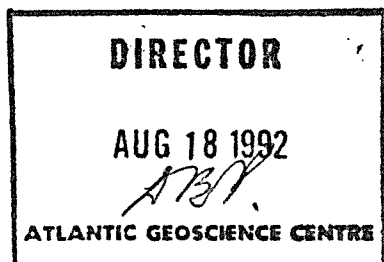


Dear David,

I have just returned from my annual visit to the Core Facility of the Atlantic Geoscience Center, Bedford Institute of Oceanography. Possibly the Canadian marine community does not fully appreciate the quality of the facility that is available, hence I thought it appropriate to write to you as Director and pass on some comments as an "outsider".

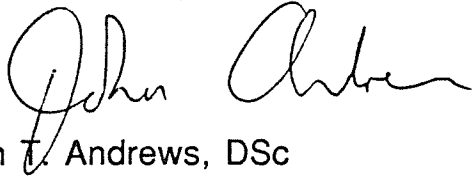
The collection of cores in the facility is impressive and has national and international significance, especially in the areas of global change, plaeoceanography, and sediment processes. The care and attention given the cores by the research staff is first class. Although I have not visited and sampled at all such facilities, I have had occasion to visit several, and I would like you to know that in my experience the AGC/BIO facility is second to none.

In days of tight budgets it is certainly appropriate to critical evaluate core collections. There may be a feeling that cores older than 10 years have no value to the research community. However, I think that response is wrong! In my own case I am now working on a series of cores which were collected in 1975 (HU75-009-IV) in the NW Labrador Sea. These cores had been well stored and cared for, but had not attracted any interest. However, two years ago I thought these cores might contain invaluable information on the history of the Laurentide Ice Sheet over the last 40,000 years or so. Because of the careful storage I was able to use

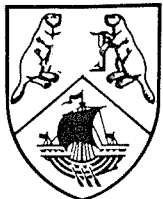


these cores, obtain foraminifera for dating, and the results will be published in "Geology" in the next few months. I am sure there are similar stories from other researchers. Thus I commend your institute for a superb facility and a staff who are a pleasure to work with. Thank you!

Yours sincerely,

A handwritten signature in cursive script, appearing to read "John Andrews".

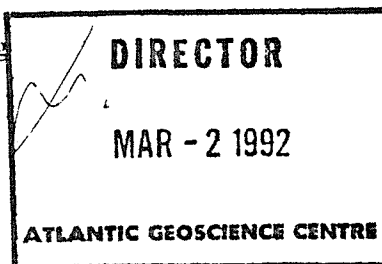
John T. Andrews, DSc
Professor Geological Sciences



UNIVERSITY OF
NEW BRUNSWICK

Post Office Box 4400 / Fredericton, N.B. / Canada E3B 5A3

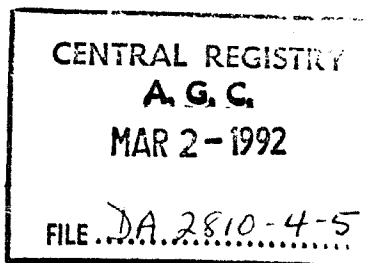
Ocean Mapping Group
NSERC Chair in Ocean Mapping
Dept. of Surveying Engineering
Dept. of Computer Science



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24 Feb. 1992

Dr. David Ross
Director, Atlantic Geoscience Centre
Bedford Institute of Oceanography
Dartmouth, Nova Scotia



028162

Dear Dave,

It was nice to see you and get a chance to chat with you last week; I was greatly saddened to learn of your imminent departure but at the same time quite excited about the new adventure you are about to embark upon. I wish you all the best of luck in New Zealand -- we will miss you up here.

It is not often that I am prompted to write a note of praise about my colleagues at AGC but the experience that Dave Rea, Ted Moore and I had in the Core Lab last week was so extraordinary that it deserves special attention. While I have been slowly witnessing the "evolution" of the core processing facilities at AGC, in my six month absence there has been tremendous progress towards what I would consider to be one of the finest (if not the finest) core processing facility in North America (if not the world). I know that my colleagues from the University of Michigan were dazzled to see computer work stations at every table, systems like the velocimeter and the Colormet, and "semi" automated database entry (this still needs a little work). Most impressive was the extremely professional and helpful staff -- Jean Ponsford, Bob Archer and in particular Kate Jarrett who worked put extra time in to make sure the lab was ready for us, worked well after typical BIO quitting time and even came in on Saturday to help us out. I must also thank Kate Moran (who took time away from her studies to help us out) and Iris Hardy for their help while we were there and for their efforts in bringing the lab to its present condition.

Both Ted and Dave commented that they could think of no lab in the world where they could have walked in and accomplished so much in such a short period of time. It is something we can all be proud of.

Sincerely

Larry Mayer
Professor and NSERC Chair in Ocean Mapping

C.C. Mac Staff.
RT 11
John Scott.

J.S.Scott
Senior Science Advisor
Room 227, 601 Booth Street
Geological Survey of Canada

23 December 1991

From: Iris A. Hardy
Curator, Atlantic Geoscience Centre

As per our discussions at the informal curation workshop in November, please find enclosed a final copy of the minutes* taken (a faxed copy was sent earlier), together with the manuals for the databases supported by the Curation group, here at the Atlantic Geoscience Centre.

Thank you for the questionnaire on Information on GSC Collections. I shall return it to you at the GSC Forum in Ottawa in January. I understand there is a tentative meeting scheduled with Herd, Snow etc. on the 23 January with you, so will give the completed questionnaire to you at that time.

All the best to you and your family in the New Year and see you in January.

Yours sincerely,



Iris A. Hardy

* corrected.

MINUTES OF IMPROMPTU CURATION MEETING*, BEDFORD INSTITUTE OF OCEANOGRAPHY NOVEMBER 18-20,1991

ATTENDING:

- Elspeth G. Snow, Senior Collections Manager, Institute of Sedimentary and Petroleum Geology, Geological Survey of Canada
- Kathleen Mottershead, Systems Analyst, Institute of Sedimentary and Petroleum Geology, Geological Survey of Canada
- Chris Mato, Assistant Curator and Supervisor, Curation and Repositories, Ocean Drilling Program, Texas A&M University Research Park, USA
- Paula Weiss, Supervisor, Deep Sea Drilling Program, ODP, Lamont-Doherty, USA
- Chloe Younger, Curator, Centre Marine Geology, Dalhousie University, Halifax
- John S. Scott, Senior Science Advisor, Geological Survey of Canada, Ottawa

* Refer to attached agenda;

Day 1 - 18 November 1991- Open Round Table Session

Elsbeth Snow - Overview of the sample repository at the Institute of Sedimentary Geology (ISPG) was provided. They will be celebrating their 25th anniversary in 1992. As a mandate ISPG is custodian of all cores collected north of 60°N. Prior to 1985/86 all cores for the east coast of Canada were also maintained in Calgary. Since then, they have been curated at COGLA (Canadian Oil and Gas Lands Administration) or what is now called CNSOPB (Canada Nova Scotia Offshore Petroleum Board). No deep sea cores are curated. On location there is an open office area and repository, 14 examination booths (some confidential) and roller tables for core access between the repository and examination area. Because of the Canada Gas Lands Administration Act 50 % of every core is permanently maintained. All sample residues must be returned or future access to material will be denied.

Collections management involves a card file system on a KARDEX, rolling card system which contains all cuttings that are available; listings of unwashed cuttings; and identification of previous work performed. K. Mottershead supports the curation group with a dBase collection management system.

Storage of the samples is modelled after the Alberta Provincial Core Repository located nearby ISPG; rows are numbered numerically, bins alphabetically and boxes numerically ad infinitum. In 1984 an expansion permitted an additional 20 rows of space. During the boom era (early 1980's) ISPG received up to 30-40 wells per annum. At present ISPG receives only 2-3. Frozen arctic cores are permitted to thaw and then kept in ambient

storage. In general oil and gas companies are looking for the same kinds of analyses: porosity, x-ray diffraction, thin sectioning, and paleontology. Loan forms and record examination files are catalogued routinely by month / year. Call-backs are easily traced. Failure to return residues may result in cancellation of privileges if not adhered to. Generally permit thin sectioning and sampling of one in³ every lineal foot; permission to oversample ie. for conodont work where more sample may be needed is required. Time limit for loans 6 months although researchers can write and request an extension. The paleo section in Ottawa routinely receives material that is designated for preservation. In 1991 a Collections Committee was established to set guidelines and provide in-house feedback. Collections are considered to belong to the people of Canada and not to the individual collector.

Ques. P. Weiss - Sampling of cores - who performs?

Ans. Sampling is usually performed by the technician(s) of scientist or company. ISPG is quite vigilant in monitoring.

Ques. Who does sampling?

Ans. Sampling is performed at the back of the core not the face. Also do core photography for a permanent record. Sampling by the technician is on the honours system. X-raying is not routinely performed. Companies have a priority of 2 years, wildcats 3 months. All unwashed cuttings are maintained and are routinely requested. Cutting subsamples are maintained in two-tier, two-level rock cabinets in vials. ISPG also purchases cuttings from the four western provinces and associated well logs. Until recently all field log books were sent to Ottawa. Labelling on specimens is with inert paint and India ink covered with clear nail polish.

Iris Hardy - A slide presentation of the kinds of collections maintained by the Atlantic Geoscience Centre, why and kinds of research for which they are utilized was presented (until the slide projector decided to catch fire). The purpose of this presentation was to emphasize the true value of the collections maintained by any organization ie. how frequently utilized by both external and internal clients. At AGC we have documented that by year 7 from the date of collection, the interest in any core sample generally wanes. At this time, a core can be culled- that is removed from the collection and placed in ambient storage or can be discarded. Deaccession of this material is based on the availability to return to the same location for additional cores should they be required, or of their stratigraphic significance to the research of the group as a whole. Guidelines have been developed under the auspices of a Curation Advisory Committee (CAC) consisting of inhouse researchers representing each subdivision. The Curation group has deemed it their responsibility for educating the researchers to be more responsible for their sample acquisitions ie. that they demonstrate some discretion in the quantity of material recovered, as well as ensuring that they are properly handled in the field until they are returned to the Bedford Institute of Oceanography. The "it's mine" syndrome is strongly

discouraged as the collected material is acquired with public funds. However, the collector does have two years within which to do routine research. How these collections are curated was provided by an onsite visit to the AGC Core facility on the morning of 19 November 1991.

Chloe Younger - Provided an overview of the way research programs are conducted by universities through the assistance of grant monies for example at Dalhousie University. The Center for Marine Geoscience curation facility is utilized by both the student and the researcher. Generally the student is told " my way or your way if you know better." Students are taught to think. They must work logically. As they are a transient population there is no ownership, instead they are taught responsibility for the material and are dissuaded from learning bad habits from their peers.

Elsbeth Snow Comment: University of Calgary - does not encourage curation of samples; it is not considered to be a priority . For advancement, scientists are encouraged to publish as much as possible. Curation lasts until the research is complete.

Chris Mato Comment: In the USA scientists must describe acquired cores and submit information to the USGS Data Centre.

Iris Hardy Comment: AGC Curation also submits a complete listing (since 1984) of all marine samples collected from the offshore to the NGDC (National Geophysical Data Centre - NOAA) for incorporation into the Marine Geological Database. This submission enables any GSC scientist access to this database free-of-charge.

Toni Cole : Provided an overview of the Foram/Mollusc Collection for the east coast and high Arctic presently maintained inhouse at AGC. It presently consists of some 8000 slides and reference specimens that have been checked against Smithsonian holotypes and paratypes. The collection is utilized for comparison and cross correlation. Specimens have also been donated to the Smithsonian and Canadian Nature History Museum for inclusion into their collections on permanent retention.

Chris Mato Comment: ODP/DSDP Paleoreference Centre(s)- are there any in Canada? (Will be looked into by Hardy - No there is not. It had been discussed when Canada became an active member of ODP (L. Meyer, personal communication; but never pursued. Is there a need for one in Canada?))

Iris Hardy Comment: There is a working reference collection in Ottawa which is maintained with types/names/species lists.

John Scott Comment: Reference was made to the GSC paper 84-23 by F.Simpson, " A User's Guide to Core- Storage Facilities in Canada."
(Copies were circulated by Hardy to attendees of workshop).

Iris Hardy Comment: This paper is and was not the be "all" nor end "all". It is now out-of-date and some of the text was not necessarily correct at the time of publication. A draft description for the AGC facility was completely rewritten during the final stages as it was deemed incomplete. It was changed verbatim and printed in the released GSC paper.

Chris Mato - Introduced herself as the Assistant Curator of the Ocean Drilling Program. She is responsible for three repositories: Scripps DSDP Pacific/ Indian Ocean; East Coast at Lamont-Doherty under the supervision of Paula Weiss; and Texas A&M which houses the South Atlantic, Mediterranean and Black Sea material as well as the West coast material that formally went to Scripps.

Sample requests are accepted for future work as well as for older Legs. They have well established Sample Distribution Policies. As with the old DSDP policy, a panel discusses how samples are to be distributed. Individuals have one year to work up material for inclusion in the Leg volumes for each cruise. After one year they can publish in outside journals. Every request is submitted on a standard form, linked into a dBase which matches each and every request by career tracking ie. submission of papers etc. whether residues have been returned. This is informal, they do not insist on return (refer to ODP policy meeting afternoon of 19 november 1991). Under DSDP pre'84 hard rock mini-cores, slices etc. were placed back into the cores from which they came; soft rock core was placed into refrigeration. Processed residues are considered more important when there is no core remaining. There are limits to shipboard sampling: 1/4 of the core only. Presently discussing after depletion of the working half if the remaining 1/2 of the archive can be used - not yet finalized. To-date only one scientist has ever obtained a sample from an archived core half. Sampling of interstitial water, and whole rounds was discussed. Generally, sampling is conducted every 25 cm for whole round and every 30 cm when cores are frozen. Whenever a subsample is removed, ethafoam is used to fill gaps as well as during the re-curating of cores (cleaning them up): over 150,000 sections to-date. Core log history is considered very important: ie. did core fall on deck? This will be noted with a cautionary sticker if box has been dropped. Also note any unusual features ie. T/K boundary , ash layers, nuclear resonance, beta testing. D-tubes are also color-coded for information ie. T/K boundary.

Paula Weiss - Provided a video " walk-through" of the DSDP core lab and refrigerated core repository for the East Coast facility located at Lamont-Doherty University, Palisades, New York State. Approximate size of complex 8400 sq. ft.; have some 66 km of core from the Atlantic, mid Carribbean, and Black Sea. Cores are housed in aisles alphanumerically, and on racks numerically. They have a sponge wetting program for the oasis material utilized in older cores. Sampling is done by D employees and by visiting scientists. They have enough core storage to last until 1 and

are very interested in the rolled racking utilized by AGC Curation for core storage, for potential renovations at DSDP. They also maintain a Paleoreference Centre. Sample requests are PC driven and can be easily traced. Hard rock cores are subsampled by use of rock saws, drillpresses etc., while soft cores are oriented and plugs used wherever subsamples are removed. Dbases are maintained for inventory control using a Microvax 3400. All requests are to be authorized by the Curator first. Every request is entered into the dBase as to who, what kind of analyses to be performed and for scientific reasons. Inventory of every sample can be tied back to requestor. Their database also permits chronology of sponge re-wetting, mold growth observed, as well as general house (core) keeping or re-curation. They are concerned about contamination by Saran wrap and offgassing, and humidity control.

Iris Hardy Comment : Use of food wrap at core interface is encouraged as it is inert. Spoke of introducing contaminants if sediment core face is not covered during examination and subsampling.

Paula also provided an overview of the labelling procedures on cores, matching of core halves against photo mosaics, checking voids, laminations as well as checking for core shrinkage and expansion. Shrink tubing is used to keep cores in place within the core liners. Microfilming of prime data for what has been collected is ongoing as part of the core description. Tubes are also marked for discrepancies by colour ie. yellow- re-curate; blue - igneous; red - critical K/T boundary etc. Labels are also epoxied to surface of D-tubes. A discussion of when a sample should receive a unique designation followed.

Afternoon session: Common issues arising from morning session-
REC - Responsibility, Education and Communication

RESPONSIBILITY/COMMUNICATION:

From the morning presentations it was resolved that there must be co-operation between organizations curating geological collections. People who are disorganized have to be taught how to work in an organized manner- first we must educate, make them responsible and then communicate results -"REC";

We have to make scientists aware of the availability of the collections housed within the repositories represented at this meeting. They must also be responsible enough to return the samples on the honours system. Most of the repositories have in place. Agreed that the two years for individuals to work up material is more than enough. ODP will report any failure by the individual scientist to provide initial reports as required. This is eventually noted to the JOIDES group as to whether or not a manuscript has been submitted. Whether results are good or negative are important to report, ie. no results, are also important to the scientific community at large. Many of those attending agree that

a university setting may be more appropriate where duplicates are made wherever possible and the originals are left intact. More interaction between curators would benefit the organizations represented. There is almost a mandate to provide information to each other, almost an obligation on our behalf. Perhaps workshops, much as the Geological Survey of Canada does through the Oil and Gas Forums. We considered how a curation facility can be likened to a cow, we just have to learn or teach, how to milk it appropriately. Revenue generation was also discussed- how much? ODP only charges ~~only~~ data requests in excess of \$25.00. The Alberta Core facility charges so much a Well, or so much a boxcore, a flat fee for each tray plus a rental per cubicle ie. \$12 per 1/2 day. A cash deposit is also be a deterrent prior to providing access to material requested. When residues are returned can either receive cash deposit (would stimulate a quick turnaround). A " Hit " list for circulation amongst repositories might also provide a deterrent. A composite list of suppliers would also benefit those attending as well as supporting group purchases ie. plastic boxes etc.

EDUCATION:

A copy of the manual for AGC Collection Methods, GSC Open File #1044 was circulated. Most students are expected to find out on their own how to subsample. This text provides a means of describing the methodology utilized at AGC. New employees or scientists should be encouraged to come forward if they have a better way to do an analysis. This method can be evaluated prior to accessing the core sample and then individuals can be versed in what they can or cannot do ie. use of drain gutters as opposed to u-channels for magnetic studies or scoring of coreliners.

Day 2 - 19 November 1991

Morning:

Tour of AGC Curation and geotechnical Facilities:

P.Mudie/ I.Hardy discussed geriatric core study with C.Mato.

K. Moran gave a brief overview of geotechnical core analyses as practised at AGC.

Afternoon:

Open Session on ODP/DSDP Sample Distribution Policies:

A record of thin sections for each core is the most important part of the ODP collection. Usually within three years from termination of a cruise, a letter is sent to borrowers. Samples can be utilized by the requestor for the life of the project.

The researcher and not the Institute for which they work, is responsible for any material on loan from ODP/DSDP. Recall of residues has been a low priority. Estimate cost of

sampling for external requests as approximately \$1.00 per sample. Can produce 16,000 samples over a 5 day period, or at a cost of \$16,000.00. A discussion on which samples to keep was discussed. The ODP group has noted an increase demand for samples since the initiation of this program by as much as 43%. A routine letter is presently being formulated for circulation to outstanding residue sample holders and copied to the curators of those facilities.

Shorebased sampling programs were discussed as well as a way of measuring vibration of the rolled racking for refrigerated storage of marine samples at AGC. Kate Moran will assist I. Hardy with these measurements and will report same to those attending this workshop, sometime in the New Year.

Day 3 - 20 November 1991

A. Sherin - Discussion of data acquisition and uses by AGC; Explained how AGC Curation fits into the scheme of things, by use of a flow chart as well as a review of the Subdivision and Division mandates. Management of the scientific data is deemed the responsibility of the collecting group. Data section is responsible for the release and maintenance of this data, not the interpretation of the data. A review of the 5 main databases was provided in ORACLE: SID, SAD, multiparameter, publications, record/tapes(HOUSE); individual subdivision databases also reviewed which house analyses data. Explained why we use ORACLE and the shortcomings/benefits of a user-pay access to information system by the public sector. Identified a real need for us to increase public access with minimum monetary resources from the Federal Government- a value added cost at a fair price, as with the Australian government scenario. A copy of the overviews used by Sherin attached for your reference.

After open discussion a presentation of the SID and FINS databases was provided by L.Johnson and Darrell Beaver, Program Support Subdivision.

MEMORANDUM

TO:

John Scott, Sedimentary and Cordilleran Geoscience Branch, GSC
Elspeth Snow, Institute of Sedimentary Petroleum Geology, GSC
Kathy Mottershead, Institute of Sedimentary Petroleum Geology, GSC
Chris Mato, ODP, Texas A&M
Paula Weiss, DSDP, Lamont Doherty
Chloe Younger, Dalhousie University
Andrew Sherin, Atlantic Geoscience Centre
Toni Cole, Atlantic Geoscience Centre

SUBJECT: Proposed Agenda for Curation Meeting 18-20 November, 1991

AGENDA

Monday, 18 November 1991

5th Floor AGC Boardroom

0900 Open Round Table Session

"Maintaining Geoscience Collections - main issues affecting Centres represented"

* Each Centre represented may provide 15 minute overview of facilities; Overhead/slide projectors will be available if required.

1200-1300 Lunch

1300 Common issues arising from morning session;

Tuesday, 19 November 1991

0900 Tour of AGC Curation and Geotechnical facilities Discussion on geiatric cores with P. Mudie/I. Hardy./K. Jarrett/K. Moran

1200-1330 Lunch

Tuesday, 19 November 1991 (cont'd)

- 1330 Open session Scientific Staff at AGC with Curators ODP/DSDP - " Sample Distribution Policies"
- ORACLE - K. Mottershead with A. Fricker/W. Prime

Wednesday, 20 November 1991

- 0900 A.G. Sherin, AGC Data Manager - will provide overview of data acquisition and uses by AGC;
- 1000-1200 L. Johnston/D. Beaver - will provide demonstration and discussion data bases in use at AGC; Data Capture in the field (SHIP and FINSS) and sample/record inventory control (SID);
- 1200-1300 Lunch
- 1300 CNOPB facility visit E. Snow

Thursday, 21 November 1991

- 0900 E. Snow/I. Hardy - GSC'92 Forum Poster

cc. K. Manchester
D. Ross
L. Johnston
D. Beaver
W. Prime
S. Merchant
A. Fricker

OPEN SESSION FOR
SCIENTIFIC STAFF AT AGC
WITH CURATORS ODP/DSDP

"SAMPLE DISTRIBUTION POLICIES"

AGC BOARDROOM

TUESDAY, 19 NOVEMBER 1991

1330 HOURS

Data Management at AGC

1. Organization

- AGC is a Division of the Geological Survey of Canada.
- It is divided into three scientific and two support subdivisions.
- Informatics support and data management responsibility is distributed.
- The AGC Computer Advisory Committee provides advice to management, it has representatives from each scientific subdivision and the Manager of Data Section.
- Data Section's mandate:
 - Archive and provide reasonable access to AGC's collections;
 - Administer the release of information to the public;
 - Investigate and assist in the planning and implementation of relevant new technologies;
 - Plan, develop, implement and maintain corporate information systems;
 - Provide advice on and where appropriate conduct information system development;
 - Coordinate the planning for information systems and use of computers for the Division;
 - Provide advice to the Division on curation, data management, technical records management, information systems and related technologies.

Data Management at AGC

2. Computing Environment

- Distributed, networked, based on "open systems"
- 120 IBM compatible PC computers
 - 15 MacIntosh computers
 - 3 MicroVax computers (VMS)
 - 2 DEC 5400 computers (UNIX)
 - 1 Sun Sparc I computer (UNIX)
 - 1 SGI Personal Iris (UNIX)
 - 1 DEC Station 3100 (UNIX)
- 1 Compute server
- 5 Workstations
- MicroVax computers (Shipboard)
 - Cyber 840 (NOS/VE)
 - Stardent (UNIX)
 - Supercomputers
- DECNet (between DEC VMS computers)
- Novell (for file & printer sharing)
- TCP/IP (between most computers & externally)
- ORACLE data base management system
- Geographical Information System
 - CARIS (Sun/UNIX/USL Fredericton)
 - ARC/INFO (PC386/MS-DOS/ESRI Redlands, CA)
 - SPANS (PC386/OS2/Tydac Ottawa)
 - InFocus (PC/MS-DOS/E&O Dartmouth)
 - Grass (SGI/UNIX/public domain; US Corp of Eng.)

Data Management at AGC

3. Information systems

- Data Section's Data Bases (ORACLE)
 - Sample Inventory Data Base (SID)
 - Sample Analysis Data Base (SAD)
 - Multiparameter Data Base
 - Publications Data Base
 - Record / Tape Inventory (HOUSE)
- Environmental Marine Geology
 - Geotechnical data
 - Coastal Information System
 - Iceberg Scour
 - Geochemistry
 - Dating
 - Biostratigraphy
 - Digital Initiative
 - Mapping
- Basin Analysis
 - Wellsys
 - Shotpoint locations
 - Biostratigraphy
 - Lithostratigraphy
 - Palynological bibliographic data
 - Lexicon
 - Basin Atlases
- Regional Reconnaissance
 - Potential field data base (gridded)
 - Other gridded data sets
 - Arctic Magnetic data set
 - Deep seismic data
 - Refraction data



TO
A

Curators of Geological Survey of Canada
Collections

FROM
DE

J.S. Scott
Senior Science Advisor
Room 227, 601 Booth Street

SUBJECT
OBJET

Request for Information on GSC Collections

SECURITY - CLASSIFICATION - DE SÉCURITÉ

OUR FILE - N / RÉFÉRENCE

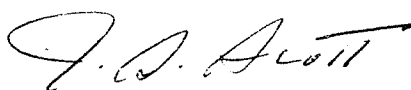
YOUR FILE - V / RÉFÉRENCE

DATE 10 December, 1991

1. The attached memorandum to Directors of Scientific Divisions from me of 9 December 1991 contains a statement of the objectives of my current assignment of reviewing the management and curation of GSC collections.
2. A first requirement of this assignment is to obtain a complete set of information on all of the various collections held by the Geological Survey. Some of this information has already been provided in response to a request from Geological Information Division following the meeting held at Touraine in June 1990 to discuss the issue of collections curation. This previous information has been included on the attached questionnaire(s) regarding the collection(s) for which you have responsibility.
3. As noted in paragraph 1 of my memo to Directors of Scientific Divisions, this date, I intend to place initial emphasis in my study on the management and curation of specimen collections. However, you are also requested to provide information on other collections held by Divisions such as notebooks, geophysical records, airphotos, manuscripts, artifacts etc. that warrant curation for scientific and/or historical purposes.
4. I would very much appreciate your completion of the attached questionnaire(s) through providing any necessary modifications to the information provided and by providing the requested new information. You will note that the questionnaire is intended only as a means for listing the information required. Your responses should thus be recorded on separate sheets with each information entry keyed to the letter/number designation shown in the left hand column. Your return to me of completed responses by 31 January 1992 is requested.

... 2

5. I intend to use the completed questionnaires as a basis for further discussion with curators, Division Directors and selected scientific staff prior to assembly of the information into a progress report for GSC senior management. It is expected that these discussions will begin immediately and extend into February 1992.



J.S. Scott

Distribution (with attachment)

A. Achab
H.G. Ansell
M.J. Berry
M.E. Best
T.E. Bolton
A.C. Colvine
J.M. Duke
I.A. Hardy
R.K. Herd
A.D. McCracken
K.N. Nairn
D.J. Tempelman-Kluit
J-S. Vincent

For Information

E.A. Babcock
A.E. Bourgeois
D.C. Findlay
R.T. Haworth
G.D. Mossop
G.S. Nowlan
R.P. Riddihough
D.I. Ross
E.G. Snow



TO
A

Directors of Scientific Divisions

FROM
DE

J.S. Scott
Senior Science Advisor
Room 227, 601 Booth Street

SECURITY - CLASSIFICATION - DE SÉCURITÉ

OUR FILE - N / RÉFÉRENCE

YOUR FILE - V / RÉFÉRENCE

DATE

9 December, 1991

SUBJECT
OBJET

Review of GSC Collections of Rocks, Minerals, Fossils and Related Geoscience Materials

1. My current assignment of reviewing the specimen collections of the Geological Survey of Canada has as its objective the acquisition and analysis of sufficient information to provide senior management with a basis for "developing a co-ordinated approach to the management of all of the Survey's scientific collections". This objective is clearly reflected in the Libraries and Curation sub-program of the Sector's Long Term Strategic Plan. During the initial phases of the study I intend to place emphasis on the management and curation of specimen collections and the documentation pertaining to specimen, core or sample materials. However, you and/or curators are requested to identify other specimen collections held by Divisions and other materials such as notebooks, geophysical records, airphotos, manuscripts, artifacts etc. that warrant curation for scientific and/or historical purposes. Information on these other types of collections will be dealt with in a later phase of the collections study.
2. The attached questionnaire has been developed as a means for acquiring, in a consistent format, the information required on the collections of the Geological Survey. Copies of the questionnaire, partly completed on the basis of information provided by collection curators to Ms A.E. Bourgeois during the summer of 1990, have been sent to curators (see attached list) for completion and return to me by 31 January 1992. Your assistance in encouraging your curation staff to provide as complete a response as possible and its return to me by the target date will be much appreciated.
3. Information provided by the returned questionnaires is intended for the following uses:
 - a) Creation of a single database providing descriptive information on GSC collections from which an information publication can be prepared for both internal and external use.
 - b) Identification of strengths and weaknesses in documented policies and procedures for management and curation of existing collections.
 - c) Provide senior GSC management with a perspective on the current and anticipated future human and financial resources, space and equipment required for management and curation of collections.
 - d) Substantiate a sound scientific rationale for the continuation, modification or abandonment of collections.

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- e] Determination of the need for data/information linkages among GSC collections and/or with complementary collections primarily of Canadian origin.
4. As part of the process of acquisition and analysis of information provided by the questionnaires I intend to consult as widely as possible with curators, scientific staff and Division management. These consultations will begin with Ottawa-based Divisions as soon as possible and will extend to regional offices beginning in early February 1992.



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For Distribution (with attachment)

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M.J. Berry
M.E. Best
A.C. Colvine
J.M. Duke
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For Information

E.A. Babcock
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D.C. Findlay
R.T. Haworth
R.P. Riddihough

**GEOLOGICAL SURVEY OF CANADA
SPECIMEN COLLECTIONS
- GUIDE -**

A. DESCRIPTION OF COLLECTION

A.1 Name of the collection:

A.2 Year established:

A.3 Purpose and significance of the collection:
(Include extent of geographic coverage)

A.4 Nature of materials in the collection:
(Hand specimens, fossil/plant specimens, thin sections, drill cores etc.)

A.5 Approximate number of specimens/items in the collection:
(Break down based on catalogued vs uncatalogued)

A.6 Approximate annual increment to the collection:
(No. specimens, lineal ft. core)

B. LOCATION AND HOUSING OF THE COLLECTION

B.1 Responsible division:

B.2 Location(s) of the collection:
(Include mailing address, phone/fax nos.)

B.3 Name of curator:

B.4 Space/storage facilities:
(State physical location within address(es) noted under 'B.2' above and area (ft²) occupied by collection.)

B.5 Describe type of storage facilities:
(e.g. rock cabinets, shelves, bulk containers; ease of access, loading/unloading facilities, examination/preparation space, fire/flood protection, handling/preparation equipment etc.)

B.6 Comment on adequacy of storage facilities:
(In terms of space for storage, layout, shipping/receiving, bulk material handling etc.)

B.7 Describe any special preparation, access and storage requirements:
(e.g. security, radioactive shielding, temperature/humidity control, refrigeration etc.)

B.8 Estimated annual incremental of storage space requirement:
(ft²)

B.9 Estimated time to full capacity of existing storage facility:
(yrs.)

C. MANAGEMENT/CURATION PRACTICES

C.1 Policy and procedures for specimen accession:
(Please make particular reference to criteria for selection from groups of specimens, restrictions on specimen size, accession of duplicate material etc. Make specific reference to or append copies of published accession policies and procedures.)

C.2 Policy and procedures for specimen preparation prior to accession to the collection:

-
- C.3 **Policy and procedures for specimen maintenance/preservation:**
(Where required to maintain original physical or chemical state of specimens.)
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- C.4 **Policy and procedures for specimen discard:**
-
- C.5 **Estimate of amount of previously curated material discarded per year:**
-
- C.6 **Standards for this type of collection:**
(Please make reference to any published national/international standards that have been established for the curation of this type of collection)
-
- C.7 **Policy and procedures for specimen documentation:**
(Please state types of documentation available for specimens in collection: e.g. field notes, accession records, laboratory analytical data, data base, catalogues etc.)
-
- C.8 **Location of specimen documentation:**
(Please state location(s) of records of analytical work performed on specimens if stored separately from this collection.)
-
- C.9 **Accessibility of Specimen Documentation:**
(Are the specimen documents readily available to GSC staff or external users?)
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D. ACCESS TO THE COLLECTION

- D.1 **Policy/procedures for loan and return of materials by GSC staff:**
(Describe or make reference to published policy/procedure documents.)
-
- D.2 **Policy/procedures for loan and return of materials by external users:**
(Describe or make reference to published policy/procedure documents.)
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- D.3 **Policy/procedures for on-site examination of material by GSC staff:**
(Describe or make reference to published policy/procedure documents.)
-
- D.4 **Policy/procedures for on-site examination of material by external users:**
(Describe or make reference to published policy/procedure documents.)
-
- D.5 **Policy/procedures for requests for samples of material for destructive analysis or tests by GSC staff:**
(Describe or make reference to published policy/procedure documents.)
-
- D.6 **Policy/procedures for requests for samples of material for destructive analysis or tests by external users:**
(Describe or make reference to published policy/procedure documents.)
-
- D.7 **Policy/procedures for return of loaned sample materials:**
(Describe or make reference to published policy/procedure documents.)
-
- D.8 **Policy/procedures for accession of analytical data from loaned sample materials:**
(Describe or make reference to published policy/procedure documents.)
-
- D.9 **Loan records:**
(Please describe type of loan records.)
-
- D.10 **Management of loan records:**
(Please describe procedure for records management.)
-

E. U S E O F T H E C O L L E C T I O N

E.1 **By GSC staff:**
(Total number requests for access to specimens or specimen documentation per year).

E.2 **By external sources:**
(Total number requests for access to specimens or specimen documentation per year).

F. **PROMOTION OF THE COLLECTION**

F.1 **Publicity:**
(Please make reference to published catalogues, lists, brochures or other publicly available information).

G. **GSC SUPPORT FOR THIS COLLECTION**

G.1 **Curation/specimen preparation staff:**

G.1a **Professional:**
(Please provide names of full time continuing staff and number of person-months/yr. used by each employee).

G.1b **Technical/clerical support:**
(Please provide names of full time continuing staff and number of person-months/yr. used by each employee).

G.1c **Term employees:**
(Indicate number of person-months/yr.)

G.2 **Training requirements:**

G.3 **Funds spent annually to acquire and prepare new material:**
(O&M, Capital)

G.4 **Funds spent annually to maintain/preserve existing material:**
(O&M, Capital)

G.5 **Monetary value of the collection:**
(An optional question. If current average costs for purchase/acquisition of specimens are known or can be estimated a relative replacement value can be calculated on the basis of average cost per specimen multiplied by the number of specimens. For some collections the respondents qualitative estimate of order of magnitude of monetary value may be all that can be provided.)

H. **ADDITIONAL INFORMATION**

H.1 **Other related collections:**
(Please identify any complementary collections of Canadian federal or provincial governments, universities or industry that relate to the collections(s) described herein. Please provide address(es) for such complementary collections).

H.2 **Linkages to other GSC collections:**
(Please identify any requirement for the linkage of the collection identified under 'A.1' above to other collections within the Geological Survey of Canada)

I. **ISSUES FACING THIS COLLECTION:**
(Please identify any financial, human resource, equipment, space or scientific issues that you feel are particularly relevant to this collection.)

Completed by:

Date:

**GEOLOGICAL SURVEY OF CANADA
SPECIMEN COLLECTIONS**

Name of Collection	Responsible Division		Curator (*)
GSC Rock Collections (current)	CGD	*	Dr. A.C. Colvine
GSC Rock Collections (current)	MRD	*	Dr. R.K. Herd
Archival Rock Collection	MRD	*	Dr. R.K. Herd
National Meteorite Collection	MRD	*	Dr. R.K. Herd
Ore Reference Collection	MRD	*	Dr. J.M. Duke
Ore Commodities	MRD	*	Dr. R.K. Herd
National Mineral Collection (Systematic Reference Series)	MRD	*	Mr. H.G. Ansell
National Geochemical Reconnaissance: Lake Sediments, Stream Sediments, Water Samples	MRD	*	Dr. J.M. Duke
National Type Collection of Fossil Invertebrates and Plants	ISPG	*	Dr. G.S. Nowlan Dr. T.E. Bolton Dr. A.D. McCracken
Reference Fossil Collection (Ottawa)	ISPG	*	Dr. G.S. Nowlan Dr. A.D. McCracken
Reference Fossil Collection (Calgary)	ISPG	*	Dr. G.S. Nowlan Mr. K.N. Nairn Mr. D. McInroy
Subsurface Cores and Samples	ISPG	*	Mr. K.N. Nairn Ms. Elspeth G. Snow
Processed Subsurface Material	ISPG	*	Mr. K.N. Nairn Mr. D. McInroy
Radio Carbon dated materials	TSD	*	Dr. J-S. Vincent
Surficial Sediment	TSD	*	Dr. J-S. Vincent
Arctic Herbarium	TSD	*	Dr. J-S. Vincent
Reference Heavy Minerals	TSD	*	Dr. J-S. Vincent
National Geomarine Samples	AGC	*	Ms. Iris Hardy
GSC Rock Collections (Vancouver)	CD	*	Dr. D.J. Tempelman-Kluit
Reference Fossil Collection (Vancouver)	CD	*	Dr. D.J. Tempelman-Kluit
GSC Rock Collections (Quebec City)	CGQ	*	Mme. A. Achab
Surficial Sediments (Quebec City)	CGQ	*	Mme. A. Achab
Marine Soft Sediment Cores	PGC	*	Dr. M.E. Best
Geophysical Specimens	GD	*	Dr. M.J. Berry