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Geological Sciences in Canada
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Compiled by
THOMAS E. BOLTON





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Resources Canada

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Ressources Canada

**GEOLOGICAL SURVEY
PAPER 76-5**

CANADIAN GEOSCIENCE COUNCIL

**CURRENT RESEARCH IN THE GEOLOGICAL
SCIENCES IN CANADA, MAY 1975 - APRIL 1976**

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INTRODUCTION

In 1974, the Canadian Geoscience Council accepted an advisory role in the production of this annual compilation of Research in the Geological Sciences in Canada. The present publication recording research in progress from May 1975 to April 1976 is the result of a survey undertaken using a new computer-oriented questionnaire prepared under the guidance of the Council's Editorial Committee. The forms were distributed between January and March, 1976. Mistakes arose in this initial trial survey both in the questionnaire's format and the completed forms, thus delaying this final report. The computer programming and processing of the data received was performed by R.M. Laramée, Geological Survey of Canada, applying the MARS VI system. As a result of this year's experience with this non-text processing system, a revised questionnaire and computerization scheme is being considered for the 1976-77 survey of current research in the geological sciences.

The research projects listed in this compilation have been obtained mainly from universities, federal and provincial department of mines, and non-industrial institutions carrying on research in the geological sciences. Data on industrial research is limited. The Canadian Geoscience Council through its adhering organizations, however, was able to increase the input from industry as well as provide data on soil and geography research underway not formerly included in previous annual surveys.

Using the data supplied for this compilation by the respondees, some indication as to the lines of research receiving the greatest attention, and conversely the least, can be formulated. Research projects undertaken as graduate thesis in the universities are so designated wherever possible. Other statistics that can be compiled from the data on hand are presented in Table 1.

Table 1

Research projects newly supported in the 1975-76 report period	226
Research projects federally supported	768
Research projects provincially supported	249
Research projects industrially supported	58
Research projects specifically Precambrian oriented	276
Research projects specifically Paleozoic oriented	164
Research projects specifically Mesozoic oriented	93
Research projects specifically Tertiary oriented	30

Additional details on research in the earth sciences underway in Canada during 1975 can be obtained through many of the annual reports prepared by the individual universities, research councils, and museums. Projects in geophysics again are not completely reported in this year's publication; comprehensive reports on geophysical research in Canada are published annually in the Canadian Geophysical Bulletin by the Earth Physics Branch of the Department of Energy, Mines and Resources. Summaries of progress and short research reports related to hydrogeology are provided annually by the Hydrology Research Division, Environment Canada, and Quaternary research in Québec through the Bulletin — AQQUA, Université de Sherbrooke.

In order to provide as much data as possible on geological research in Canada, the present publication includes a listing of the 1975 awards provided within the Research Agreements programs of the Departments of Energy, Mines and Resources and Environment, and the Department of Indian and Northern Affairs Grants in the Natural Sciences program. The National Research Council of Canada also provided for publication herein of a computer printout of the operating grants awarded in 1975.

Use of the compilation

The projects are grouped under main headings that cover the different branches of the geological and allied sciences. These groupings, though somewhat modified from previous compilations (Geological Survey of Canada, Paper 75-5, 1975), are only slightly broader than the disciplines reported upon in Canadian Geoscience Council status reports (Geological Survey of Canada, Paper 75-6, 1975 and 77-6, in prep.). Readers of both publications can readily relate the research in progress in the fields in which they are interested.

A complete list of organizations contributing to the present survey is provided (p. 59). An alphabetically arranged index (p. 91) lists each researcher and the compilation number(s) of his project(s).

AREAL MAPPING, 1:50 000 OR LESS

ALBERTA

1. GODFREY, J.D., ALTA. RESEARCH COUNCIL, GEOL.:
PRECAMBRIAN MAPPING, FT. CHIPEWYAN DISTRICT, ALTA., 1970-76:
2. GODFREY, J.D., ALTA. RESEARCH COUNCIL, GEOL.:
PRECAMBRIAN MAPPING, ALEXANDER LAKE DISTRICT, 1971-76:
REPORT NEAR COMPLETION.
3. GODFREY, J.D., ALTA. RESEARCH COUNCIL, GEOL.:
PRECAMBRIAN MAPPING, WYLIE LAKE DISTRICT, ALBERTA, 1971-75:
REPORT NEAR COMPLETION.
4. GODFREY, J.D., ALTA. RESEARCH COUNCIL, GEOL.:
PRECAMBRIAN MAPPING, RYAN-FLETCHER LAKES DISTRICT, 1972-76:
REPORT NEAR COMPLETION.
5. GODFREY, J.D., ALTA. RESEARCH COUNCIL, GEOL.:
PRECAMBRIAN MAPPING, BOCCUENE-DISAPPOINTMENT LAKE, 1973-:
6. GODFREY, J.D., ALTA. RESEARCH COUNCIL, GEOL.:
TULIP-MERCREDI-MYERS-HOOKER LAKES, ALBERTA, 1974-:
7. HAMILTON, W.N., ALTA. RESEARCH COUNCIL, GEOL.:
ALBERTA PEAT MOSS RESOURCES, 1975-75:

A COMPILATION TO SHOW THE DISTRIBUTION OF PEAT MOSS Bogs
IN ALBERTA AS PART OF A REGIONAL ASSESSMENT OF THE
PROVINCE'S PEAT MOSS RESOURCES. PEATLANDS ARE CONFINED
LARGELY TO THE NORTHERN TWO-THIRDS OF THE PROVINCE, WHERE
ONE-THIRD TO ONE-HALF OF THE LAND SURFACE IS BOG COVERED
TO AN EXTENT GREATER THAN 60 PERCENT. IN SURFACE AREA,
THIS TRANSLATES INTO ABOUT 25 MILLION ACRES, PERHAPS LESS
THAN TWO PERCENT OF WHICH WOULD HAVE COMMERCIAL POTENTIAL.
8. OLLERENSHAW, N.C., GEOL. SURV. CAN.:
GEOLOGY S. ALBERTA FOOTHILLS, HIGHWOOD-ATHABASCA R., 1970-:

SEE: ROCKY MOUNTAIN FOOTHILLS AND FRONT RANGES (MAP) AND
ROAD LOG CALGARY, TURNER VALLEY, JUMPINGPOUND, SEESE: CAN.
SOC. PETROL. GEOL., GUIDEBOOK EXPLORATION UPDATE '75, 1975.

WORK CONTINUING ON BRAGG CREEK.

BRITISH COLUMBIA

9. GRETTE, J.F., ARMSTRONG, R.L., DANNER, W.R., MCTAGGART, K.C., UNIV.
BRITISH COLUMBIA, GEOL.:
CACHE CREEK AND NICOLA GROUPS NEAR ASHCROFT, B.C., 1975-76:
M.Sc. THESIS.

DETAILED MAPPING OF UPPER PALEOZOIC AND EARLY MESOZOIC
ROCKS IN SOUTHERN INTERIOR B.C. TO DEFINE STRATIGRAPHY,
STRUCTURE AND METAMORPHIC AND DEFORMATIONAL HISTORY HAS
SIGNIFICANTLY CHANGED EARLIER MAPS. MUCH OF WHAT
FORMERLY WAS MAPPED AS CACHE CREEK GROUP IS NOW
CONSIDERED TO BE NICOLA GROUP PRIMARILY ON LITHOLOGIC
GROUND BUT ALSO BASED ON STRONGER DEFORMATION IN THE
CACHE CREEK ROCKS. ISOTOPE GEOCHEMISTRY MAY GIVE FURTHER
INSIGHT TOWARD DETERMINING AGES AND CHEMICAL DIFFERENCES
BETWEEN THE TWO GROUPS.
10. MULLER, J.E., GEOL. SURV. CAN.:
GEOLOGY VICTORIA MAP-AREA, VANCOUVER ISLAND, B.C., 1973-78:

SEE: CAPE FLATTERY MAP-AREA (192C), BRITISH COLUMBIA: GEOL.
SURV. CAN., PAPER 76-1A, P. 107-112, 1975.
11. RICHARDS, T.T., GEOL. SURV. CAN.:
HAZELTON MAP-AREA, BRITISH COLUMBIA, 1972-:

PRODUCTION OF 1:250 000 GEOLOGIC MAP OF HAZELTON MAP AREA.
12. TAYLOR, G.C., GEOL. SURV. CAN.:
OPERATION LIARD, BRITISH COLUMBIA, 1963-:

CONTINUING STUDIES OF CARBONATE TO SHALE FACIES CHANGES
AND THEIR RELATIONSHIP WITH BASE METAL MINERALIZATION:
TWO ORAL PAPERS PRESENTED ON TOPIC.

13. TAYLOR, G.C., GEOL. SURV. CAN.:
OPERATION SMOKY, BRITISH COLUMBIA, 1968-:

REGIONAL SYNTHESIS OF SURFACE MAPPING SUBMITTED FOR ONE
TO ONE MILLION SCALE MAP OF PARSHIP RIVER. FOUR PARTIAL
MAPS AT ONE TO 125 000 PLACED ON OPEN FILE.
14. TIPPER, H.W., RICHARDS, T.A., GEOL. SURV. CAN.:
SMITHERS MAP-AREA, BRITISH COLUMBIA, 1969-76:

REPORT ON HAZELTON GROUP COMPLETED, MAP IN PREPARATION.

MANITOBA

15. CORKERY, M.T., WEBER, W., MCRTCHIE, W.J., FROHLINGER, T.G.,
MANITOBA GEOL. SERV. BR.:
LOWER NELSON RIVER PROJECT, 1974-79:

SEE: NELSON RIVER-ILFORD AREA: MANITOBA MINES BRANCH GEOL.
PAPER 2/75, 1975.

A MAPPING PROGRAM IN THE GULL LAKE-CLARK LAKE AREA OF THE
NELSON RIVER WAS INITIATED TO CLARIFY SUCH GEOLOGIC
PROBLEMS AS 1. THE POSSIBLE CONNECTION OF THE FOX RIVER
VOLCANIC BELT AND THE THOMPSON WALK L. ASSEAN LAKE
LINEAMENT, 2. INTERPRETATION OF HIGH GRADE ROCKS IN THE
GULL L. CLARK L. REGION IN TERMS OF THE SUPERIOR-
CHURCHILL BOUNDARY PROBLEM, 3. REASSESSMENT OF THE
GREENSTONE BELTS (QUINN 1961) IN THE GULL L. CLARK L.
AREA.
16. GILBERT, H.P., HUBREGTSE, J.J.M., ELLERS, F.J., MANITOBA GEOL.
SERV. BR.:
GREENSTONE BELT, 1971-76:

REPORT ON PROJECT IN FINAL STAGES, RELATED INVESTIGATION
OF GRANITOID ROCKS CONTINUING.
17. LAMB, C.F., WEBER, W., MANITOBA GEOL. SERV. BR.:
GEOLOGY OF SOUTHEASTERN MANITOBA, 1974-78:

SEE: SOUTHEASTERN MANITOBA: MANITOBA MINES BRANCH GEOL.
PAPER 2/75, P. 38-39, 1975.

REGIONAL MAPPING WAS COMPLETED IN THE WEST HAWK LAKE -
SMOAL LAKE AREA, AN EXTENSION OF THE LAKE OF THE WOODS
GREENSTONE BELT. THE REMAINDER OF THE PROJECT WILL
INVOLVE MAPPING THE BATHOLITHIC COMPLEX SOUTH OF THE
WINNIPEG RIVER. THE BATHOLITHIC COMPLEX FORMS THE
SOUTHERN PORTION OF THE ENGLISH RIVER SUBPROVINCE.
SPECIAL ATTENTION WILL BE GIVEN TO THE PROBLEM OF THE
BOUNDARY BETWEEN THE WABIGOON AND ENGLISH RIVER
SUBPROVINCES.
18. LENTON, P.G., MCRTCHIE, W.D., MANITOBA GEOL. SERV. BR., MREMI:
GEOL. OF THE MCKNIGHT L. AREA, 1975-77:

SEE: GEOLOGY OF THE MCKNIGHT LAKE AREA: MANITOBA MINES
BRANCH GEOL. PAPER 2/75, 1975.

GEOLOGICAL MAPPING AT A SCALE OF 1:50 000 HAS BEEN
COMPLETED ON NTS SHEET 64C03 (MCKNIGHT L.) AND PORTIONS OF
64C04 (MCCALLUM L.). THE DOMINANT ROCK TYPES ARE UPPER
AMPHIBOLITE GRADE GNEISSES DERIVED FROM GREYWACKE AND
ARKOSIC SEDIMENTS. EMPHASIS IS PLACED ON DETERMINING THE
STRATIGRAPHY OF THESE KISSEYNEW GNEISSES.
19. MCRTCHIE, W.D., MANITOBA GEOL. SERV. BR., MREMI:
KISSEYNEW BELT, LYNN LAKE-FLIN FLON AREA, 1970-80:

REGIONAL CORRELATION OF LYNN LAKE KISSEYNEW FLIN FLON
THOMPSON DISTRICT AS BASIS FOR MODELLING AND METALLOGENIC
INVENTORY OF CHURCHILL RIVER SEGMENT OF CHURCHILL
PROVINCE IN NORTHERN MANITOBA.
20. SCHLEDEWITZ, D.C.P., MCRTCHIE, W.D., MANITOBA GEOL. SERV. BR.,
MREMI:
SEAL RIVER, MANITOBA, 1974-77:

SEE: SEAL RIVER PROJECT: MANITOBA MINES BRANCH GEOL. PAPER
2/75, 1975.

REGIONAL MAPPING COMPLETED IN THE SEAL RIVER AND
CHURCHILL AREA. AREAS OF PROBABLE ARCHEAN BASEMENT
OUTLINED. FURTHER EXAMINATION OF STRUCTURAL CONTROL, BY
BASEMENT STRUCTURAL TRENDS, DURING LATER DEFORMATION OF
COVER ROCKS. EXAMINATION OF AGE OF VOLCANIC ROCKS THEIR
COMPOSITION. COMPARISON OF PROTEROZOIC GREAT ISLAND
GROUP METASEDIMENTARY ROCKS WITH ROCKS OF THE HURWITZ
GROUP.

21. SCOATES, R.F.J., CORKERY, M.T., MACEK, J.J., MANITOBA MIN. RES. DIV., GEOL.
FOX RIVER GREENSTONE BELT, NORTHEASTERN MANITOBA, 1972-77:

SEE: FOX RIVER GREENSTONE BELT: MANITOBA MIN. RES. DIV., PREL. MAPS G1, G2, 1975.

THE FOX RIVER GREENSTONE BELT (250X15KM) APPEARS TO OCCUPY THE APPROXIMATE POSITION OF THE CHURCHILL-SUPERIOR STRUCTURAL PROVINCE BOUNDARY IN NORTHEASTERN MANITOBA. THE 2KM THICK FOX RIVER STRATIFORM ULTRAMAFIC COMPLEX OCCURS AS A SERIES OF DISCONNECTED LOPOLITHS ALONG THE LENGTH OF THE BELT. THE METAMORPHIC GRADE WITHIN THE BELT RANGES FROM PREHNITE-PUMPELLYITE TO UPPER GREENSCHIST FACIES.

22. WEBER, W., HUBREGTSE, N.M.W., MCRTCHIE, W.D., CORKERY, T., MANITOBA GEOL. SERV., 1975:
NW, SUPERIOR - PIKWITONEI PROJECT, 1974-78:

SEE: HIGH HILL-UTIK LAKE AREA: MANITOBA MINES BRANCH GEOL. PAPER 2/75, 1975.

AFTER HAVING MAPPED THE MOST NORTHERN GREENSTONES IN THE NW. PORTION OF SUPERIOR PROVINCE (MANI) WORK WILL CONTINUE TOWARDS THOMPSON BELT TO STUDY THE RELATIONSHIP BETWEEN GREENSTONE BELTS, GRANULITES N. AND W. OF GREENSTONES, AND THOMPSON NICKEL BELT (CROSS LAKE SUBPROVINCE, PIKWITONEI PROVINCE?), HARBOWDEN SUBPROVINCE).

23. ZWANZIG, H.V., MANITOBA GEOL. SERV., 1975:
FOX MINE-KAMUCHAWIE LAKE AREA, 1975-77:

SEE: GEOLOGY OF THE KAMUCHAWIE LAKE AREA: MANITOBA MINES BRANCH GEOL. PAPER 2/75, 1975.

MAPPING PROGRAMS AT 1:50000 AND MORE DETAILED STUDIES OF STRATIGRAPHY, STRUCTURE AND MINERAL DEPOSITS STRADDLE THE BOUNDARY BETWEEN THE KISSEYNEW SEDIMENTARY GNEISSES AND THE LYNN LAKE META-VOLCANICS. THE STUDIES CENTRE ON THE RELATIONSHIP BETWEEN THE VOLCANICS AND THOSE GNEISSES WHICH WERE DERIVED FROM A BASAL SUCCESSION OF GREYWACKE AND ON THE OVERLYING ARKOSIC ROCKS.

NEW BRUNSWICK

24. GRANT, R.H., PAST, N., UNIV. NEW BRUNSWICK, GEOL.
CARBONIFEROUS STRATIGRAPHY & RELATION TO BASEMENT, 1972-77:

25. RUITENBERG, A.A., HOWELLS, K.D.M., VENUGOPAL, D.V., VENKATESWARAN, G.P., PIERCE, G.A., N.B. DEP. NAT. RESOURCES, GEOL.
CALEDONIA HIGHLANDS GEOLOGY, 1979-75:

DPEF SPONSORED-MAPPING ON SCALE OF 1:50000 (GEOLOGY-GEOPHYSICS) CALEDONIA HIGHLANDS, ANNIDALE-NEREPIIS BELT, AND ST. GEORGE BATOLITH, INCLUDING LATE PRECAMBRIAN, ORDOVICIAN-SILURIAN, AND DEVONIAN-CARBONIFEROUS ROCKS.

NEWFOUNDLAND/LABRADOR

26. BERGER, A.R., JAYASINGHE, N.R., MEMORIAL UNIV., GEOL.
GEOLOGY OF WESLEYVILLE DISTRICT, 1974-76; M.Sc. THESIS.

WORK BY JAYASINGHE HAS ESTABLISHED A LENGTHY HISTORY OF REGIONAL DEFORMATION AND GRANITE EMPLACEMENT ENDING IN UPPER PALAEOZOIC. FOUR PLUTONS OF MEGACRYSTIC GRANITE POSTDATE EARLY REGIONAL DEFORMATION, METAMORPHISM AND MIGMATIZATION OF GNEISSIC COUNTRY ROCKS. THE LAST MEGACRYSTIC GRANITE POST DATES INTENSE CATACLASIS OF THE EARLIER ONES AND A SUITE OF COAST- PARALLEL DIABASE DYKES. A SINGLE PLUTON OF LEUCOGRANITE INTERVENED BETWEEN THE EMPLACEMENT OF THE EARLIER AND LATER MEGACRYSTIC PLUTONS.

27. BROWN, P.A., GREENE, B.A., Nfld. DEP. MINES & ENERGY:
PORT AUX BASQUES - LA POILE AREA 1:50000 MAPPING, 1975-77:

SEE: GEOLOGY OF THE ROSE PLANCE, PORT AUX BASQUES, AND PART OF THE CODROY MAP SHEETS, SW, NEWFOUNDLAND: NEWFOUNDLAND DEP. MINES & ENERGY, REP. ACTIVITIES 1975, 1976-1, 1976.

TWO COMPLEXLY DEFORMED AND METAMORPHOSED GNEISSIC BASEMENTS ARE JUXTAPOSED ALONG THE TRACE OF THE CAPE RAY FAULT. THIS RESULTS IN REWORKING OF THE PORT AUX BASQUES GNEISS AND INFOLDING OF A COVER SEQUENCE. THE HARBOUR MAIN GROUP AND THE EMPLACEMENT OF THRUST SHEETS OF A POSSIBLE OPHIOLITE. THE LONG RANGE MAFIC-ULTRAMAFIC COMPLEX. LATE MOVEMENTS ALONG THE FAULT RESULT IN THE DEPOSITION AND DEFORMATION OF THE WINDSOR POINT GROUP. SEDS.

28. COLMAN-SADD, S.P., GREEN, B., Nfld. DEP. MINES & ENERGY:
GEOLOGICAL MAPPING AT BAY D'ESPOIR, 1974-82:

1:50000 MAPPING OF THE BAY D'ESPOIR AREA, NEWFOUNDLAND. THE BAY D'ESPOIR GROUP IS OF LOWER TO MIDDLE ORDOVICIAN AGE, IN TECTONIC CONTACT WITH BASEMENT GNEISSES TO THE SOUTHEAST AND INTRUDED BY GRANITE TO THE WEST. IT HAS BEEN REGIONALLY DEFORMED TWICE, THE SECOND DEFORMATION CAUSING MAJOR RECUMBENT STRUCTURES OVERTURNED TO THE SOUTHEAST AND REGIONALLY METAMORPHOSED IN THE AMPHIBOLITE FACIES. THE PRINCIPAL LITHOLOGIES OF THE GROUP ARE ACID AND BASIC VOLCANICS, SHALE, SILTSTONE, PSAMMITIC SC.

29. DEGRACE, J.R., GREEN, T., Nfld. DEP. MINES & ENERGY:
1:50,000. MAPPING OF NIPPERS HARBOUR SHEET 2E/13, 1974-76:

1:50000 MAPPING OF THE NIPPERS HARBOUR (2E13) HAS BEEN COMPLETED. THE ROCKS IN THE AREA COMPRIS AND ORDOVICIAN TO SILURIAN BIMODAL CALC-ALKALINE VOLCANIC PILE (WITH RELATED PLUTONIC ROCKS) OVERLYING IN THE SOUTH AN EARLIER SUITE OF VOLCANIC AND OPHIOLITIC ROCKS, AND IN THE NORTH A SECTION OF PREDOMINANTLY PSAMMITIC ROCKS. THE ROCKS HAVE BEEN DEFORMED INTO LARGE TIGHT UPRIGHT NORTHEAST-TRENDING FOLDS WHICH HAVE BEEN MODIFIED SOMEWHAT IN THE NORTH BY SUBSEQUENT DEFORMATIONS.

30. FONG, C.K., KNIGHT, I., Nfld. DEP. MINES & ENERGY:
1:50000 GEOLOGICAL MAPPING ST GEORGES BAY AREA, 1973-76:

SEE: GEOLOGICAL MAPPING NORTHERN PART OF ST GEORGES BAY CARBONIFEROUS BASIN: NEWFOUNDLAND DEP. MINES & ENERGY, REP. ACTIVITIES, 1975, 1976-1, 1976.

CARBONIFEROUS BASIN ON THE WESTERN COAST OF Nfld. WAS MAPPED ON A SCALE OF 1:50000. THE AREA IS DIVIDED BY THE HIGHLANDS RIVER INTO A NORTHERN AND A SOUTHERN PART. THREE GROUPS OF CARBONIFEROUS ROCKS OCCUR IN THE NORTH: ANGUILLÉ-L. MISSISSIPPIAN, COODROY-U. MISSISSIPPIAN, AND BARACHOIS-PENNSYLVANIAN. ANGUILLÉ ROCKS ARE OF MINOR OCCURRENCE; COODROY ROCKS OCCUPY THE WESTERN PART OF THE MAP AREA WHILE BARACHOIS THE EASTERN. COODROY ROCKS COMPRISE EVAPORITES AND CLASTIC SEDIMENTARY WHILE BARACHOIS CLASTIC SEDIMENTARY & COAL.

31. GREENE, B.A., ODRISCOLL, C.F., Nfld. DEP. MINES & ENERGY:
1:50000 MAPPING GAULTOIS-HARBOUR BRETON AREAS, 1974-77:

SEE: GEOLOGY OF THE GAULTOIS MAP SHEET 1M/12: NEWFOUNDLAND DEP. MINES & ENERGY, REP. ACTIVITIES 1975, 1976-1, 1976.

AREA DIVIDED INTO TWO CONTRASTING TERPANS BY HERMITAGE FAULT-FOLIATED GRANITIC ROCKS N. OF FAULT OF POSSIBLE PRECAMBRIAN AGE, LATE PRECAMBRIAN TO CAMBRIAN VOLCANIC AND SEDIMENTARY ROCKS, DEVONIAN CONGLOMERATES AND PRE-DEVONIAN AND LATE DEVONIAN GRANITIC INTRUSIVES SE. OF HERMITAGE FAULT AREA. MARKED STRUCTURALLY BY STEEPLY DIPPING REVERSE FAULTS. SPARSE MOLYBDENUM FLUORITE AND COPPER MINERALIZATION.

32. KEAN, B.F., GREENE, B.A., Nfld. DEP. MINES & ENERGY:
1:50000 MAPPING VICTORIA LAKE VOLCANIC BELT, 1975-80:

REGIONAL MAPPING AND COMPILATION IN THE SOUTH-CENTRAL AREA OF THE NEWFOUNDLAND CENTRAL MOBILE BELT. MAPPING OF VICTORIA LAKE 12/AG SHEET ESSENTIALLY COMPLETE. MAPPING WILL BEGIN IN LAKE AMBROSE 12/A10 SHEET IN 1976.

33. KNIGHT, I., FONG, C.C.K., Nfld. DEP. MINES & ENERGY:
GEOL. MAPPING OF CARBONIFEROUS, SW, NEWFOUNDLAND, 1974-76:

SEE: GEOLOGICAL MAPPING CARBONIFEROUS ROCKS CAPE ANGUILLÉ MOUNTAINS SW NEWFOUNDLAND/GEOLOGY OF THE CARBONIFEROUS OF THE COODROY & NORTHERN ANGUILLÉ MTS: NEWFOUNDLAND DEP. MINES & ENERGY REP. ACTIVITIES 1975.

MAPPING COMPLETED FOR NTS 1:50000 MAP SHEETS-COODROY, FRIARS COVE, ST. FINTANS, GRANDY'S LAKE AND REPORTS AND MEMOIR ON CARBONIFEROUS OF ST. GEORGES BASIN IN PREPARATION.

NORTHWEST TERRITORIES

34. BARRETT, K.R., LAPORTE, P.J., LEGGETT, S.R., DEP. IAND:
FERGUSON LAKE, NWT., 1975-:

SEE: PRELIMINARY GEOLOGICAL MAP, FERGUSON LAKE AREA, 65I/15I IAND PUBL. 76-2, 1976.

PREPARE GEOLOGICAL MAP AT 1 INCH TO ONE-HALF MILE SCALE.

35. BARRETT, K.R., LEGGETT, S.R., DEP. IAND:
GEOLOGY OF HENINGA LAKE AREA, NWT., 1975-76:

SEE: PRELIMINARY GEOLOGICAL MAP, HENINGA LAKE, 65H/16I IAND PUBL. 76-1, 1976.

PREPARE GEOLOGICAL MAP AT 1 INCH TO ONE-HALF MILE SCALE.

36. BLUSSON, S.L., GEOL. SURV. CAN.,
OPERATION SELWYN, NWT., YUKON, B.C., 1965-76;

GEOLOGIC MAPS 105H, 105I, 105P COMPLETED.
37. CHRISTIE, R.L., GEOL. SURV. CAN.,
OPERATION GRANT LAND, ELLESMERE I., NW, GREENLAND, 1963-;

SEE: GLACIAL FEATURES BORGLUM ELV REGION EASTERN N.
GREENLAND AND L. PALEOZOIC STRATIGRAPHY OF
SOUTHERN PEARY LAND: GEOL. SURV. GREENLAND, REP. NO. 75, P. 21-
28, 1975.

FIELD WORK IN NTHN. GREENLAND-EXCHANGE WITH GREENLAND
SURVEY-PAPERS. PARTLY COMPLETED ON STRATIGRAPHY AT BORGLUM
ELV GREENLAND + MSS. ON TERTIARY ROCKS OF LAKF 14ZEN
REGION, ELLESMERE ISLAND.
38. COOK, D.G., AITKEN, J.D., BALKWILL, H.P., YORATH, C.J., KLASSEN, R.W.,
GEOL. SURV. CAN.,
OPERATION NORMAN, DISTRICT OF MACKENZIE, 1967-;

SEE: ONTARATUE RIVER (106J), TRAVAILLANT LAKE (106D), AND
CANOT LAKE (106P) MAP-AREAS, DISTRICT OF MACKENZIE,
NORTHWEST TERRITORIES: GEOL. SURV. CAN., PAPER 74-17, 1975.
39. JEFFERSON, C.W., PADGHAM, W.A., BRYAN, M.P.D., DEP. IAND;
HALF-MILE MAPPING OF THE HACKETT R. VOLCANIC BELT, 1974-76;

THE GREENSTONE BELT COMPRISES A METAVOLCANIC COMPLEX WITH
THOLEIITIC AND CALC-ALKALINE DIFFERENTIATION TRENDS.
CARBONATES, CALCAREOUS VOLCANICS, MASSIVE SULPHIDES,
CARBONACEOUS SLATES AND IRON FORMATION MARK THE TOP OF
THE PILE AND ARE OVERLAIN BY GRADED BEDDED METASEDIMENTS.
THE HACKETT PLUTON, RINGED BY POSSIBLE PARACONGLOMERATE,
MAY BE BASEMENT TO VOLCANICS. ORE PROSPECTS WITH
CARBONATES TOP THIN CALC-ALKALINE PYROCLASTIC FELSIC
VOLCANIC PILES NEAR POSSIBLE BASEMENT. FOUR ORDERS OF
DEFORMATION ARE APPARENT.
40. KERR, J.W., GEOL. SURV. CAN.,
BOOTHIA PENINSULA AND SOMERSET ISLAND, 1974-;

SEE: GEOLOGICAL INVESTIGATIONS OF SOMERSET ISLAND AND
BOOTHIA PENINSULA (OPERATION BOOTHIA) DISTRICT OF
FRANKLIN: GEOL. SURV. CAN., PAPER 75-1A, P. 491-499, 1976.

PREPARE GEOLOGICAL MAP AND STRATIGRAPHIC AND STRUCTURAL
SUMMARY OF SOMERSET ISLAND.
41. KERR, J.W., GEOL. SURV. CAN.,
ELLESMERE-DEVON ISLANDS (OPERATION GRINNELL), 1967-;

PREPARE GEOLOGICAL MAP AND REPORT ON STRATIGRAPHY AND
STRUCTURE OF GRINNELL PENINSULA.
42. LAPORTE, P.J., BELL, R.T., JOLLY, W.T., PEACH, P.A., BROCK UNIV.,
GEOL;
THE GEOLOGY OF THE RANKIN INLET AREA, NWT., 1972-76: M.SC.
THESIS.

THE RANKIN INLET AREA IS UNDERLAIN BY METAMORPHOSED
VOLCANIC AND SEDIMENTARY ROCKS PREVIOUSLY MAPPED AS PART
OF THE ARCHEAN KAMINAK GROUP. THE RANKIN INLET GROUP
CONSISTS OF GREYWACKE WITH MINOR QUARTZITE AND DOLOMITE
OVERLAIN BY MASSIVE AND PILLOWED BASALTIC FLOWS. TWO
PERIODS OF FOLDING WERE DEFINED DURING THE MAPPING.
GEOCHEMICAL ANALYSES OF VOLCANIC AND GABBROIC ROCK
SAMPLES INDICATE THAT THE RANKIN INLET GROUP IS
CORRELATIVE WITH THE APHEBIAN HURWITZ GROUP RATHER THAN
THE ARCHEAN KAMINAK GROUP.
43. PADGHAM, W.A., DEP. IAND;
HALF-MILE MAPPING, TAKIYUAK VOLCANIC BELT, NWT., 1976-78;

WITH FIXED WING SUPPORT AND FOOT TRAVERSING, MAPPING WILL
COMMENCE AT THE NORTH END OF THE BELT IN NTS AREA 86 I/SE
AND PROGRESS TO THE SOUTH TOWARDS ITCHEN LAKE.
44. TRETIN, H.P., FRISCH, T., MAYR, V., WILSON, J.G., GEOL. SURV. CAN.,
RECONNAISSANCE GEOLOGY, N. ELLESMERE ISLAND, 1973-;

TERMINAL REPORTS ON ALL ASPECTS OF BEDROCK GEOLOGY AND
MAPS AT 1:250000 OR MORE DETAILED WHERE REQUIRED. FIELD
WORK IN EASTERN PARTS OF PROJECT AREA MOSTLY COMPLETED.
IMPORTANT REVISIONS IN REGIONAL STRATIGRAPHIC FRAMEWORK
MADE.
- ONTARIO**
45. AMUKUN, S.E., ONTARIO DIVISION MINES;
WILLET LAKE AREA, DISTRICT OF THUNDER BAY, ONTARIO, 1975-76;

SEE: WILLET LAKE AREA; ONTARIO DIVISION OF MINES, PREL. MAP
P. 1092, 1976.

DETAILED MAPPING OF LAT. 50 15'30" N. LONG. 87 30'-87 45' E.
46. BENNETT, G., ONTARIO DIVISION MINES;
JARVIS LAKE - GARDEN RIVER AREA, ONTARIO, 1974-76;

SEE: JARVIS LAKE-GARDEN RIVER AREA; ONTARIO DIVISION OF
MINES, PREL. MAP P1064, 1975.

GEOLOGICAL MAPPING 1 IN TO 1/4 MI OVER 188 SQ. MI,
CENTERED 14 MI NE. OF SAULT STE MARIE. EARLY
PRECAMBRIAN GRANITIC AND METAVOLCANIC ROCKS ARE
UNCONFORMABLY OVERLAIN BY HURONIAN VOLCANIC AND
SEDIMENTARY ROCKS. TO DETERMINE THE NATURE AND
DISTRIBUTION OF HURONIAN VOLCANIC ROCKS AND THEIR EFFECT
UPON LOWER HURONIAN SEDIMENTATION WITH SPECIAL REFERENCE
TO URANIFEROUS CONGLOMERATES.
47. BENNETT, G., ONTARIO DIVISION MINES;
TWO HORSE LAKE AREA, ONTARIO, 1976-77;

GEOLOGICAL MAPPING 1 IN TO 1/4 MI OVER AN AREA OF 80 SQ.
MI, CENTERED 22 MI ENE. OF SAULT STE MARIE. EARLY
PRECAMBRIAN GRANITIC ROCKS ARE UNCONFORMABLY OVERLAIN BY
SEDIMENTARY AND VOLCANIC ROCKS OF HURONIAN SUPERGROUP.
TO DETERMINE THE NATURE AND DISTRIBUTION OF HURONIAN
VOLCANICS AND THEIR EFFECT ON LOWER HURONIAN
SEDIMENTATION WITH SPECIAL REFERENCE TO URANIFEROUS
CONGLOMERATES.
48. BLACKBURN, C.E., ONTARIO DIVISION MINES;
BOYER-MEGGISI LAKES AREA, KENORA DIST., ONTARIO, 1974-76;

SEE: BOYER-MEGGISI LAKES AREA, DISTRICT OF KENORA; ONTARIO
DIVISION OF MINES, MISC. PAPER 63, P. 39-43, 1975.

AREA COVERED BY NTS 52F/7E. COMPLETES MAPPING OF NTS
52F/7, CENTRED ON MANITOU LAKES.
49. BLACKBURN, C.E., ONTARIO DIVISION MINES;
SYNOPTIC GEOLOGY, MANITOU LAKES, KENORA DIST., ONTAR., 1976-77;

SYNOPTIC STUDY OF AREA COVERED BY NTS 52F/7 WITH
PARTICULAR REFERENCE TO STRATIGRAPHY AND STRUCTURE OF THE
VOLCANIC/SEDIMENTARY SEQUENCES, AND ECONOMIC POTENTIAL.
50. BREAKS, F.W., RONO, W.D., ONTARIO DIVISION MINES;
GEOLOGY OF THE ENGLISH RIVER SUBPROVINCE, ONTARIO, 1974-77;

SEE: OPERATION KENORA-SYONEY LAKES 1974 & OPERATION KENORA-
EAR FALLS, 1975; ONTARIO DIVISION OF MINES, MISC. PAPER 63,
1975.

RELATIONSHIP, AREAL EXTENT, DISTRIBUTION AND CHEMISTRY OF
THE LITHOLOGIC UNITS WITHIN A 1000 SQ. MI. TRACT OF
THE ENGLISH RIVER SUBPROVINCE, RELATION OF ENGLISH RIVER
SUBPROVINCE TO ADJACENT SUBPROVINCES.
51. BRIGHT, E.G., ONTARIO DIVISION MINES;
GEOLOGY OF CAVENDISH AND ANSTRUTHER TPS., ONTARIO, 1975-77;

SEE: CAVENDISH AND ANSTRUTHER TOWNSHIPS; ONTARIO DIVISION
OF MINES, MISC. PAPER 63, P. 94-97, 1975.

DETAILED GEOLOGY AND ECONOMIC MINERAL DEPOSITS OF THE
SOUTHWESTERN PART OF THE BANCROFT URANIUM BELT.
52. CARTER, M.W., ONTARIO DIVISION MINES;
KELVIN-CABOT TOWNSHIPS, ONTARIO, 1975-77;

SEE: KELVIN AND CABOT TOWNSHIPS; ONTARIO DIVISION OF MINES,
MISC. PAPER 63, 1975.

GEOLOGICAL MAPPING 1 INCH TO A QUARTER MILE TO SHOW THE
LITHOLOGY STRUCTURE AND STRATIGRAPHY OF THE MAP-AREA.
UNDERLAIN BY SUBALKALIC AND ALKALIC METAVOLCANIC ROCKS
ASSOCIATED WITH METASEDIMENTS AND ULTRAMAFIC ROCKS,
INTRUDED BY DIORITE, GABBRO, GRANITIC ROCKS AND DIABASE
DIKES. CENOZOIC ROCKS OF QUATERNARY AGE MANTLE THE
PRECAMBRIAN ROCKS.
53. DRESSLER, B.B.O., ONTARIO DIVISION MINES;
GEOLOGY EMO RHODES-ROTHA TPS., SUDBURY DISTRICT, 1975-76;

SEE: EMO RHODES AND ROTH TOWNSHIPS, DISTRICT OF SUDBURY;
ONTARIO DIVISION OF MINES, MISC. PAPER 63, P. 88-90, 1975.

ARCHEAN AND PROTEROZOIC ROCKS MINERAL POTENTIAL- REPORT
DESCRIBES ARCHEAN VOLCANICS, SEDIMENTS, INCL. IRON
FORMATION, GRANITES AND DIABASE, HURONIAN ROCKS,
NIPISSING DIABASE, SUDBURY TYPE BRECCIA, PSEUDOTACHYLITES
AND OLIVINE DIABASE.
54. EDWARDS, G.R., ONTARIO DIVISION MINES;
PIPESTONE LAKE (SOUTH) ONTARIO, 1975-76;

SEE: PIPESTONE LAKE (SOUTH); ONTARIO DIVISION OF MINES,
MISC. PAPER 63, P. 44-47, 1975.

ONE YEAR DETAILED MAPPING PROJECT EARLY PRECAMBRIAN
(ARCHEAN) VOLCANIC BELT AND BORDERING PLUTONIC ROCKS.
COMPLETED SUMMER 1975. PRELIMINARY MAP AND GEOLOGICAL
REPORT TO FOLLOW, SCALE ONE INCH TO ONE QUARTER MILE.

55. JENSEN, L.S., ONTARIO DIVISION MINES:
GEOL. KIRKLAND LAKE AND LARDER LAKE AREA, ONTARIO, 1976-78;

A CONTINUING STUDY OF THE STRATIGRAPHY OF THE TIMMINS-KIRKLAND LAKE-NORANDA AREA IN THE ADIRIABI BELT. INCLUDES CLASSIFICATION AND DISTRIBUTION OF ULTRAMAFIC, THOLEIITIC, CALC-ALKALINE, AND ALKALINE VOLCANIC AND INTRUSIVE ROCKS, THEIR METAMORPHISM AND DEFORMATION AND THEIR RELATIONSHIPS TO ASSOCIATED SEDIMENTARY ROCKS AND MINERALIZATION OF AU, AG, CU, ZR, PB, NI, CP, ASB.

56. LUMBERS, S.B., ROYAL ONTARIO MUS.:
GEOLOGY OF THE PEMBROKE AREA, ONTARIO, 1975-77;

SEE: PEMBROKE AREA, DISTRICT OF NIPISSING AND COUNTY OF RENFREW: ONTARIO DIV. MINES, MP 63, P. 91-93, 1975.

REGIONAL GEOLOGICAL MAPPING AT 1 INCH TO 1 MILE TO COMPLETE A CROSS-SECTION ACROSS THE GRENVILLE PROVINCE OF ONTARIO. AREA STRADDLES THE BOUNDARY BETWEEN MIDDLE AND LATE PRECAMBRIAN SUPRACRUSTAL SEQUENCES AND RELATIONSHIPS BETWEEN THESE SEQUENCES WILL BE STUDIED IN ADDITION TO RELATIONSHIPS EXISTING BETWEEN MINERALIZATION AND STRATIGRAPHY, PLUTONISM, AND METAMORPHISM. MUCH OF THE NORTHERN PART OF THE AREA WAS MAPPED DURING THE 1975 FIELD SEASON.

57. MEYN, H.D., ONTARIO DIVISION MINES:
AFTON - CLEMENT TOWNSHIPS, ONTARIO, 1977-77;

58. MORRIS, A.W., GEOL. SURV. CAN.:
OPERATION WINISK, ONTARIO-MANITOBA-QUEBEC, 1957-;

SEE: DEVONIAN STRATIGRAPHY OF THE HUDSON PLATFORM, PARTS I, II: GEOL. SURV. CAN., MEM. 379, 1975.

A REPORT BY L. L. PRICE ON MESOZOIC DEPOSITS OF MOOSE RIVER BASIN IS NEARING COMPLETION AND THIS WILL COMPLETE OPERATION WINISK.

59. PIRIE, J., ONTARIO DIVISION MINES:
GEOLOGY OF TROTTER AND WEAVER TOWNSHIPS, ONTARIO, 1975-76;

DETAILED MAPPING TROTTER-WEAVER TPS. ALONG WITH NORTH-SOUTH EXTENSIONS COMPLETED. REPORT ON GEOLOGY IN PROGRESS. AREA STRADDLES NARROW METAVOLCANIC BELT IN FAULT CONTACT WITH A SEQUENCE OF PROGRESSIVELY METAMORPHOSED TURBIDITES TO THE SOUTH & IN INTRUSIVE CONTACT WITH TROCHJEMITIC BATHOLITHIC COMPLEX TO THE NORTH. SMALL MAFIC TO ULTRAMAFIC BODIES CUTTING THE METASEDIMENTS HAVE MINOR CU-NI MINERALIZATION ASSOCIATED WITH THEM.

60. PYKE, D.R., ONTARIO DIVISION MINES:
RADISSON LAKE AREA, ONTARIO, 1975-77;

SEE: RADISSON LAKE AREA: ONTARIO DIVISION OF MINES, MISC. PAPER 63, 1975.

61. PYKE, D.R., ONTARIO DIVISION MINES:
WATABEAG LAKE AREA, ONTARIO, 1974-76;

SEE: WATABEAG LAKE AREA: ONTARIO DIVISION OF MINES, MISC. PAPER 59, P. 94-98, 1974.

62. ROBERTSON, J.A., ONTARIO DIVISION MINES:
GEOLOGY OF THE MASSEY AREA, ONTARIO, 1966-76;

SEE: GEOLOGY OF THE MASSEY AREA: ONTARIO DIVISION OF MINES, GEOL. REPT. 136, 1976.

63. SIRAGUSA, G.M., ONTARIO DIVISION MINES:
GEOLOGY OF BATCHAWANA PANGIS AREA, ONTARIO, 1974-76;

SEE: BATCHAWANA-PANGIS AREA (WESTERN HALF): ONTARIO DIVISION OF MINES, PREL. MAP P998, 1975.

64. TROWELL, N.F., ONTARIO DIVISION MINES:
GEOLOGY OF STURGEON LAKE CHEVRIER TWP AREA, ONT., 1974-76;

DETAILED GEOLOGICAL SURVEY, EMPHASIS ON REGIONAL STRATIGRAPHY AND MINERAL EVALUATION.

65. WALLACE, H., ONTARIO DIVISION MINES:
GEOLOGY OF THE MIMINISKA LAKE AREA, ONTARIO, 1974-75;

SEE: MIMINISKA LAKE AREA: ONTARIO DIVISION OF MINES, MISC. PAPER 63, P. 15-18, 1975.

COMPLETION OF AN AREAL MAPPING PROGRAM ONE INCH TO ONE QUARTER MILE, OF AN AREA BOUNDED BY 51° 30' - 51° 40' NORTH LAT. AND 88° 15' - 88° 53' WEST LONG. PREPARATION OF REPORT WITH SPECIAL EMPHASIS ON STRATIGRAPHY, STRUCTURE, AND METAMORPHISM IN THIS PART OF THE UCHI BELT.

66. WOOD, J., ONTARIO DIVISION MINES:
GEOLOGY OF NORTH SPIRIT LAKE-MACDOWELL LAKE AREA, 1971-76;

UNDERLAIN BY ULTRAMAFIC TO FELSIC METAVOLCANICS, METASEDIMENTS- CONGLOMERATE, SANDSTONE, MUDSTONE, CARBONATE AND CHERT, ULTRAMAFIC TO FELSIC INTRUSIVE INTRUSIVES, AND BATHOLITHIC GRANITIC ROCKS. SUPRACRUSTAL ROCKS HAVE BEEN FOLDED, METAMORPHOSED AND FAULTED, HIGH GRADE ASSEMBLANCES ARE PRESENT LOCALLY.

QUEBEC

67. CATY, J.L., QUEBEC DEP. NAT. RES., MRN:
1/2M RICHARDSON, QUEBEC, 1975-77;

68. CIESIELSKI, A., MAURICE, O.D., QUEBEC DEP. NAT. RES., MRN:
CARTOGRAPHIE GEOLOGIQUE DE LA FOSSE DU LABRADOR, 1971-78;

SEE: GEOLOGY OF THE NACHICAPAU, HORSSEHORE (1/6-SW), MARCEL, BUTEUX, AND JOQUES (EAST HALF) LAKES AREAS, NEW QUEBEC TERRITORY: PREL. REP., OPEN-FILE, DP-269, 1974.

FINIR LA CARTOGRAPHIE DE LA FOSSE DU LABRADOR A L'ECHELLE DE 1:131680. LE PROJET DEVRAIT ETRE COMPLETE APRES TROIS ETES DE TRAVAIL DE PLUS.

69. DE ROMER, H.S., QUEBEC DEP. NAT. RES., MRN:
FITCH BAY, QUEBEC, 1975-77;

70. DUBE, C., MAURICE, O.D., QUEBEC DEP. NAT. RES., MRN:
REGION DU LAC BECHARD ET DU LAC CHAMPION, 1974-76;

SEE: REGION DU LAC CHAMPION ET REGION DU LAC BECHARD: QUEBEC MRN, DP-278, DP-340, 1975.

EXPLORATION GEOLOGIQUE DANS LE SECTEUR DU LAC NEMISCAU ET CARTE DE COMPILATION POUR LA REGION.

71. GODEIL, A., QUEBEC DEP. NAT. RES.:
GISEMENT FER-VANADIUM, 1975-;

72. HEBERT, C., QUEBEC DEP. NAT. RES.:
NH. ROHAULT, QUEBEC, 1975-77;

73. HOGARTH, D.O., UNIV. OTTAWA, GEOL.:
GEOLOGY OF QUINNVILLE AREA, QUEBEC, 1976-78;

CONTINUATION OF DETAILED GATINEAU GEOLOGICAL INVESTIGATIONS, IGNEOUS AND METAMORPHIC PETROLOGY, AND STRUCTURAL GEOLOGY.

74. KISH, L., QUEBEC DEP. NAT. RES., MRN:
LAC PATIBRE, QUEBEC;

PARTIE D'UN TRAVAIL D'INVENTAIRE DE L'URANIUM AU QUEBEC.

75. LACHANCE, S., QUEBEC DEP. NAT. RES., MRN:
ST FRANCOIS D'ASSISE, QUEBEC, 1975-80;

76. LAROUCHE, C., MAURICE, O.D., DIMROTH, E., QUEBEC DEP. NAT. RES., MRN:
INTRUSIONS GRANITOIDES REG. DE PONTIAC, 1974-76; M.Sc. THESIS.

SEE: RAPPORT PRELIMINAIRE: STRATIGRAPHY, VOLCANOLOGY, SEDIMENTOLOGY AND STRUCTURE OF ROUYN-NORANDA: QUEBEC MRN, DP-300, 1975.

REVUE DES INTRUSIFS ARCHEENS DANS LA REGION DE CLOUTIER. GROUPE DE PONTIAC RECOUPE PAR DES SYENITES A HORNBLENDE OU A PYROXENE, GRANITE A HORNBLENDE GRANODIORITE ET PAR DES DYKES APLITQUES ET PEGMATITQUES.

77. PROVOST, G., MAURICE, O.D., DIMROTH, E., QUEBEC DEP. NAT. RES., MRN:
FACIES ET MECANISMES DE L'ECOULEMENT RHYOLITQUES, 1974-75; M.Sc. THESIS.

78. REMICK, J.H., MAURICE, O.D., QUEBEC DEP. NAT. RES., MRN:
REGION DE WEMINDJI, QUEBEC, 1975-75;

EXPLORATION GEOLOGIQUE D'UNE REGION JAMAIS CARTOGRAPHIEE. CARTOGRAPHIE EN DETAIL DE PARTIES AFFECTEES PAR LES TRAVAUX HYDRO-ELECTRIQUES. TRAVAUX DE DETAIL SUR DES BANDES VOLCANIQUES.

79. ROCHELEAU, M., MAURICE, O.D., DIMROTH, E., QUEBEC DEP. NAT. RES., MRN:
FACIES ET ENVIRONNEMENTS REG. ROUYN-NORANDA, QUEBEC, 1973-76; Ph.D. THESIS.

80. SHARMA, K.N.M., MAURICE, O.D., QUEBEC DEP. NAT. RES., MRN:
REGION DE LA GRANDE RIVIERE, QUEBEC, 1975-78:

YUKON TERRITORY

SEE: LA GRANDE RIVER AREA (1973-1974) PROJECT GEOLOGICAL
REPORT:

EXPLORATION GEOLOGIQUE DES REGIONS AFFECTEES PAR LES
TRAVAUX HYDRO-ELECTRIQUE SUR LA GRANDE RIVIERE.
PREPARATIONS DES CARTES ET RAPPORTS GEOLOGIQUES. TOUTES
LES ROCHES CRISTALLINES DE LA REGION, A L'EXCEPTION DE
FORMATION PROTEROZOIQUE SONT ARCHEENNES ET COMPRENNENT
LES ROCHES VOLCANO-SEDIMENTAIRES ET LES ROCHES
GRANITOIDES ASSOCIEES.

81. TASSE, N., MAURICE, O.D., DIMROTH, E., QUEBEC DEP. NAT. RES., MRN:
SEDIMENTO-VOLCANOLOGIE COULEES PYROCLASTIQUES, 1974-75: PH.
D. THESIS.

82. TRUDEL, P., MAURICE, O. D., DIMROTH, E., QUEBEC DEP. NAT. RES., MRN:
STRATIGRAPHIE REGION DE CLERICY, QUEBEC, 1974-75: PH.D.
THESIS.

SASKATCHEWAN

83. DAVISON, W.L., GEOL. SURV. CAN.,
MILLIKEN LAKE-GOLDFIELDS MINING AREA, SASK., 1975-:

84. PATERSON, D.F., KENDALL, A.C., CHRISTOPHER, J.E., SASKATCHEWAN
GEOL. SURV.,
LA LOCHE AREA, SASKATCHEWAN, 1975-76:

85. BLUSSON, S.L., GEOL. SURV. CAN.,
OPERATION STEWART, MACKENZIE-YUKON, 1968-76:

86. CAMPBELL, R.R., GEOL. SURV. CAN.,
OPERATION MT. ST. ELIAS, YUKON AND BRITISH COLUMBIA, 1973-:
COMPILATION OF DATA CONTINUING, FIELDWORK DELAYED,
CONTRACT STUDY COMPLETED.

87. NORPIS, D.K., GEOL. SUPV. CAN., EMR:
OPERATION PORCUPINE, MACKENZIE-YUKON, 1961-:
SEVEN OF 12 MAPS NOW ON OPEN FILE. REPORTS IN PROGRESS.

88. TEMPELMAN-KLUIT, D., GEOL. SURV. CAN.,
OPERATION SNAG, YUKON, 1970-:

SEE: POTASSIUM-ARGON AGE DETERMINATIONS OF METAMORPHIC AND
PLUTONIC ROCKS IN THE YUKON CRYSTALLINE TERRANE: CAN.
J. EARTH SCI. V. 12, P. 1995-1909, 1975.

COMPILATION OF GEOCHEMICAL DATA FIELD WORK COMPLETED.

GENERAL

89. DAY, J.H., SOIL RESEARCH INST., AGR:
INVENTORY OF SOILS AND LANDFORMS:

IN COOPERATION WITH PROVINCIAL AGENCIES SOIL SURVEY
PROJECTS IN ALL PROVINCES IN 1975 COVERED 4, 4M HA NEW
SURVEY AT RECON. SCALE 125K TO 50K, 177K HA AT 50K, 37.
5M HA AT 250K AND SMALLER SCALES. ADDITIONAL AREAS WERE
RESURVEYED TOTAL AREA INVENTORIED 217M HA.

AREAL MAPPING, GREATER THAN 1:50 000

ALBERTA

90. DOUGLAS, R.J.W., GEOL. SURV. CAN.,
CENTRAL FOOTHILLS OF ALBERTA, 1971-:

91. FENTON, M.M., ANDRIASHEK, L.D., ALTA. RESEARCH COUNCIL, GEOL.,
SURFICIAL GEOLOGY WABAMUN MAP SHEET, ALBERTA, 1973-76:

FIELDWORK COMPLETED, FINAL INTERPRETATION AND MAP IN
PREPARATION.

BRITISH COLUMBIA

92. GABRIELSE, H., DODDS, C.J., MAUSY, T.L., GEOL. SURV. CAN.,
OPERATION FINLAY, 1970-:

SEE: OPERATION FINLAY: GEOL. SURV. CAN., PAPER 76-1A, P. 87-93,
1976.

93. HUTCHISON, W.W., GEOL. SURV. CAN.,
PRINCE RUPERT-SKEENA MAP-AREAS, BRITISH COLUMBIA, 1962-:

94. MULLER, J.E., CARLISLE, D., GEOL. SURV. CAN.,
GEOLOGY NORTHERN VANCOUVER ISLAND, B.C., 1968-:

GEOLOGY AND MINERAL DEPOSITS NOOTKA SOUND MAP AREA AND
BUTE INLET MAP AREA: SW 1/4 TO BE COMPLETED IN 1976.

95. OLLERENSHAW, N.C., GEOL. SURV. CAN.,
STRUCTURAL ANALYSIS OF THE FERNIE BASIN, 1975-:

TO ELUCIDATE THE STRUCTURAL BEHAVIOUR OF COAL AS AN
ELEMENT OF THE SEDIMENTARY SUCCESSION. PRELIMINARY FIELD
WORK ONLY.

96. PRICE, R.A., GEOL. SURV. CAN.,
OPERATION BOW-ATHABASCA, BRITISH COLUMBIA-ALBERTA, 1965-:

SEE: WHITE RABBIT CREEK: GEOL. SURV. CAN., MAPS 1338A, 1389A,
1975.

MANUSCRIPT MAPS AND SECTIONS FOR MEDICINE LAKE AND
SIFLEUR RIVER COMPLETED.

97. RODDICK, J.A., WOODSHORTH, G.J., HUTCHISON, W.W., GEOL. SUPV. CAN.,
COAST MOUNTAINS PROJECT, BRITISH COLUMBIA, 1963-80:

SEE: TIMING OF PLUTONISM IN THE COAST PLUTONIC COMPLEX OF
BRITISH COLUMBIA: GEODYNAMICS OF THE PACIFIC AREA, 13TH
PACIFIC SCI. CONGR., 1975.

FIELD WORK TO BE ESSENTIALLY COMPLETED IN 1976. DURING
PAST YEAR FIELD DATA FROM BUTE INLET MAP-AREA HAS
COMPILED AND ANALYSED. SPECIAL ATTENTION WAS GIVEN TO
TIMING OF PLUTONISM AND THE RELATION BETWEEN PLUTONIC
ROCKS AND MINERALIZATION.

MANITOBA

98. BAILES, A.H., MC RITCHIE, W.D., MANITOBA GEOL. SERV. BR.,
GRASS RIVER PROJECT, MANITOBA, 1976-:

THE GRASS RIVER AREA STRADDLES THE BOUNDARY BETWEEN
STRATA OF THE FLIN FLON VOLCANIC BELT, KISSEYNE
SEDIMENTARY GNEISS BELT AND THOMPSON NICKEL BELT. THE
AREA, IS BEING MAPPED AT 1:50, 000 SCALE TO DEFINE THE
GEOLOGIC RELATIONSHIP OF THE AFOREMENTIONED BELTS AND TO
TRACE THEM INTO AREAS HITHERTO UNMAPPED.

99. BAILES, A.H., MC RITCHIE, W.D., MANITOBA GEOL. SERV. BR.,
GEOLOGY FILE-MORTON-WOOSLEY LAKES AREA, MANITOBA, 1970-77:

STRATIGRAPHIC, TECTONIC AND METAMORPHIC HISTORY OF AN
AREA THAT CONTAINS STRATA OF TWO MAJOR APHEBIAN
LITHOLOGIC BELTS: THE FLIN FLON VOLCANIC BELT AND THE
KISSEYNE SEDIMENTARY GNEISS BELT. STUDIES COMPLETED,
REPORT CURRENTLY IN PREPARATION.

100. BAILES, A.H., MC RITCHIE, W.D., MANITOBA GEOL. SERV. BR.,
GEOLOGY OF GUAY-WIMAPEDI LAKES AREA, MANITOBA, 1968-76:

SEE: GEOLOGY OF THE GUAY-WIMAPEDI LAKE AREA, MANITOBA:
MANITOBA MINES BRANCH GEOL. PAPER 2775, 1975.

101. DAVISON, W.L., GEOL. SURV. CAN.,
GEOLOGY SEAL RIVER MAP-AREA, MANITOBA, 1968-:

102. DAVISON, W.L., GEOL. SURV. CAN.,
GEOLOGY S. INDIAN LAKE, MANITOBA, 1968-:

103. HERD, P. K., ERMANOVICS, I. F., PARK, R. G., FYSON, W. K., DELANEY, G.,
GEOLOGICAL SURVEY OF CANADA, REG. 1
ISLAND LAKE MAP-AREA (53E) MANITOBA AND ONTARIO, 1974-76:

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FOLD INTERFERENCE PATTERN CAUSED BY AS MANY AS FIVE
DEFORMATIONS. STANLEY FAULT ZONE EXTENDS SSW PAST BLACK
ISLAND. NUMEROUS SHEARS PARALLEL ABUNDANT LINEAMENT
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ACCOMPANIED WITH GRANITIC AND MIGMATITIC ROCKS ARE WIDELY
DISTRIBUTED IN THE AREA. THE ROCKS HAVE BEEN
METAMORPHOSED TO UPPER GREENSCHIST TO AMPHIBOLITE FACIES
GRADE. SULPHIDE MINERALIZATION WAS NOTED, BUT APPEARS TO
HAVE LITTLE ECONOMIC POTENTIAL. A COMPUTER- BASED DATA
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PELITES AND PSAMMITES, APPARENTLY UNCONFORMABLE ON
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SOUTHEAST BY THE PAULL RIVER SHEAR FROM PELITES AND
INTRUSIVES OF THE LA RONGE DOMAIN.

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ROTTENSTONE DOMAINS. LATTER UNDERLAIN BY INTRUSIVES OF
UNKNOWN AGE WHILE THE WOLLASTON DOMAIN CONTAINS ARCHEAN
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TENEUR EN CO2 DE L'EAU ET DE L'AIR. D'OU L'INTERET DE
CONNAITRE LES VARIATIONS DE CO2 DANS L'AIR DES CAVITES
SOUTERRAINES ET DU SOL; CECI PEUT EXPLIQUER DES
VARIATIONS DU TAUX DE DISSOLUTION DES CALCAIRES. DES
MESURES SONT PRISES PAR MOI SUR LE TERRAIN MEME A L'AIDE
D'UN APPAREILLAGE PORTATIF A ELECTROLYSE. BUT:
COMPARAISON DE DIFFERENTES REGIONS DU QUEBEC ET ETUDE DU
RYTHME SAISONNIER.
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SERIES OF SPECIALIZED MAPS OF CANADA SHOWING CHANGES TO
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ACTIVITIES IN ALTERING THE NATURAL SURFACE FORM OF CANADA
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DRILLHOLE DATA UNDER WAY. AUGER DRILLING PROGRAM IN
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SHEETS IS RECOGNIZABLE.
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TRIBUTARY TO THE (CANADIAN) GREAT LAKES. ASSESS ADEQUACY
OF DATA AND CALCULATE ANNUAL LOADINGS OF POLLUTANTS AND
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TO INVESTIGATE THE TWO-PHASE FLUID FLOW IN A FRACTURED
MEDIUM AND PRODUCE A DESIGN CRITERION WHICH TAKES INTO
ACCOUNT THE ACUTE SCALING PROBLEMS AND CONSEQUENTLY
AVOIDS POLLUTION OF THE ENVIRONMENT.
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CHARACTERISTICS (MERCURY & OTHER HEAVY METALS), PROCESSES
& RATES OF SEDIMENT & POLLUTANT TRANSPORT. DETAILED
STUDY OF VELOCITY PROFILES IN RELATION TO DUNES TO BE
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ACTIVATION ANALYSIS. THE OBJECTIVE OF THIS RESEARCH IS
TO ESTABLISH THE BACKGROUND LEVELS OF THESE METALS IN
FRESH WATER SYSTEMS. THESE LEVELS WILL ALLOW AN
EVALUATION OF THE EFFECT OF HUMAN AND INDUSTRIAL
ACTIVITIES IN DETERMINING THE LEVEL OF THESE METALS IN
FRESH WATER SYSTEMS. THE MAIN GEOCHEMICAL PATHWAYS BY
WHICH THESE METALS ENTER THE FLUVIAL ENVIRONMENT CAN THEN
BE ESTABLISHED AND THE CONTRIBUTION OF VARIOUS SOURCES
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AND TRACE ELEMENTS IN ROCKS WHICH HAVE UNDERGONE VARIOUS
DEGREES OF METAMORPHISM. THE DATA WILL BE USED TO
DETERMINE BACKGROUND VALUES FOR HYDROTHERMAL ALTERATION
ZONES NEAR AREAS OF MINERALIZATION. THE RESULTS MAY HELP
US TO UNDERSTAND THE GENESIS OF THESE DEPOSITS, AND
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AND WATER SOLUBLE CATIONS AND ANIONS IN A AND B HORIZON
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AREAS TOTALLING 4800KM2 ON THE AVALON PENINSULA,
NEWFOUNDLAND, AT AN AVERAGE DENSITY OF ONE SAMPLE PER 4
KM2. THE SURVEY COVERED AREAS UNDERLAIN MAINLY BY
HADRYNIAN ROCK INCLUDING MAFIC AND FELSIC VOLCANICS OF
THE HARBOUR MAIN GROUP AND BULL ARM FORMATION, FELSIC
INTRUSIVES OF THE HOLYROOD PLUTONIC SERIES, AND
METASEDIMENTS. THE <177 FRACTIONS OF THE SAMPLES WERE
ANALYSED FOR CU, PB, ZN, CO, NI, AG, MO, AS, F, MN, FE,
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IN THE OPHIOLITE BELT OF SE. TURKEY FIRMLY ESTABLISHES
THEY VOLCANIC-SEDIMENTARY DEPOSITS SIMILAR TO THOSE OF
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BASALTIC HOST ROCK PROMISE TO BE USEFUL IN EXPLORATION.
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BEING ANALYZED FOR TRACE AND MAJOR ELEMENTS BY A VARIETY
OF DIGESTION TECHNIQUES TO DETERMINE DIFFERENCES AND
SIMILARITIES BETWEEN A SHIELD MASSIVE SULPHIDE AND
APPALACHIAN SULPHIDES FOR ROCK EXPLORATION PURPOSES. THE
ORE GENESIS WILL BE INVESTIGATED FROM A GEOCHEMICAL POINT
OF VIEW.
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THESE DATA WILL BE COMPARED WITH RESULTS FROM OTHER
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PURPOSE EXPLORATION PROCEDURE AND GENERAL ORE GENESIS
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AND ANALYZED FOR COPPER, ZINC AND LEAD. ONLY ONE COPPER
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ELEMENTS. NW. VICTORIA ISLAND DOES NOT APPEAR TO BE AN
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DEPOSITIONAL ENVIRONMENT OF THESE DEPOSITS AND TO HELP
UNDERSTAND THE METALLOGENY OF THIS LARGE AREA. SUITES OF
SAMPLES HAVE BEEN COLLECTED BY THE INVESTIGATORS AND BY
PARTICIPATING MINERAL EXPLORATION COMPANIES.
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INFLUENCE OF SP CURRENT ON ELEMENT DISPERSION POSSIBLY
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THE POTENTIALS OF ALTERATION ZONES WITH SULPHIDE
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- FACTORS INFLUENCING MIGRATION OF ELEMENTS FROM BEDROCK THROUGH SOIL AND INTO VEGETATION AND RETURN CYCLE TO SOIL OR TRANSFER TO THE ATMOSPHERE ARE BEING INVESTIGATED THROUGH FIELD MEASUREMENT AND LABORATORY EXPERIMENT.
222. UTHE, R. E., GOVETT, G. J. S., UNIV. NEW BRUNSWICK, GEOL.: ROCK AND SOIL CONDUCTIVITIES, 1974-77; PH. D. THESIS.
- A COMPARITIVE STUDY OF GEOCHEMICAL AND ELECTROGEOCHEMICAL RESPONSES IN SOILS AND ROCKS TO DETERMINE POSSIBLE REGIONAL EXPLORATION APPLICATIONS. THE FUNDAMENTAL CONTROLS OF SOIL CONDUCTIVITIES ARE BEING INVESTIGATED.
223. WAHL, J. L., GOVETT, G. J. S., UNIV. NEW BRUNSWICK, GEOL.: ROCK GEOCHEMISTRY, 1973-76; PH. D. THESIS.
- DETAILED ROCK GEOCHEMICAL STUDIES OF TRACE AND MAJOR ELEMENT DISTRIBUTION IN DRILL CORE AND SURFACE SAMPLES AROUND KEY ANACON AND HEATH STEELE A-C-D-AND B-ZONE MASSIVE SULPHIDE DEPOSITS IN N. B. HAVE LED TO THE RECOGNITION OF TWO TYPES OF GEOCHEMICAL HALOES RELATED TO TWO GENETIC VARIANTS OF DEPOSIT. THESE RESULTS ARE EXPECTED TO LEAD TO FORMULATION OF GENERALIZED EXPLORATION PROCEDURE FOR NORTHERN NEW BRUNSWICK.
224. WEBBER, G. R., MCGILL UNIV., GEOL.: INVESTIGATIONS IN APPLIED GEOCHEMISTRY, 1976-:
- SEE: EFFICACY OF ELECTROCHEMICAL MECHANISMS FOR ION TRANSPORT IN THE FORMATION OF GEOCHEMICAL ANOMALIES; J. GEOCHEM. EXPLOR., V. 4, P. 231-233, 1975.
- RESEARCH IS AIMED AT THE INVESTIGATION OF DISTRIBUTION OF ELEMENTS NEAR MINERAL DEPOSITS. CURRENT RESEARCH HAS BEEN CONCERNED WITH HYDROGEOCHEMICAL PROCESSES.
225. WILSON, H. D. B., KUO, H. Y., UNIV. MANITOBA, EARTH: TRACE ELEMENT GEOCHEMISTRY NW. ONTARIO, 1975-:
- TRACE ELEMENT GEOCHEMISTRY OF THE KAKAGI LAKE METAVOLCANIC SEQUENCE- NEUTRON ACTIVATION ANALYSIS OF VOLCANIC ROCKS FROM THE KAKAGI LAKE SECTION, NW. ONTARIO FOR REE, PRECIOUS METALS, SC, CR, CO, AND HF TO ESTABLISH THE DISTRIBUTION OF THESE ELEMENTS IN A LAVA SEQUENCE TYPICAL OF MANY ARCHEAN GREENSTONE BELTS.

THEORETICAL

229. FORESTER, R.W., UNIV. SASKATCHEWAN, GEOL.:
OXYGEN ISOTOPE STUDY, IGNEOUS & METAMORPHIC ROCKS, 1976-77:

OXYGEN ISOTOPE STUDY OF THE PRECAMBRIAN ROCKS IN THE VICINITY OF FLIN FLON TO DETERMINE THE THERMAL GRADIENTS IN THE AREA IMPOSED BY THE METAMORPHIC EVENTS, EVALUATE THE EFFECT OF RECRYSTALLIZATION AND DEFORMATION ON THE RETENTIVITY OF THE OXYGEN ISOTOPE RECORD, AND TO INDICATE THE ORIGIN, TEMPERATURE, AND RELATIVE AMOUNTS OF HYDROTHERMAL FLUIDS.
230. HENLEY, R.W., MEMORIAL UNIV., GEOL.:
MASSIVE SULPHIDE-EPIGENETIC AU DEPOSITS, E.CANADA:

GEOCHEMISTRY OF ALTERATION SYSTEMS ASSOCIATED WITH MASSIVE SULFIDE AND EPIGENETIC GOLD DEPOSITS IN THE ARCHAIC AND PALAEOZOIC OF EASTERN CANADA. INCLUDES STUDY OF METAMORPHISM AND STRUCTURAL GEOLOGY IN VICINITY OF DEPOSIT.
231. LONGSTAFFE, F.J., MCNUTT, R.H., SCHWARZ, H.P., MCMASTER UNIV., GEOL.:
ISOTOPIC AND GEOCHEMICAL STUDY OF ARCHAIC ROCKS, 1973-77: PH.D. THESIS.

TO DETERMINE THE DISTRIBUTION OF OXYGEN ISOTOPES IN VARIOUS ARCHAIC TERRAINS. TO INTEGRATE Rb/Sr ISOTOPIC INFORMATION, OXYGEN ISOTOPE DATA, AND MAJOR AND TRACE ELEMENT RESULTS INTO COHERENT MODELS FOR PROTOLITH TYPES. TO USE SUCH INFORMATION TO EVALUATE FLUID TRANSFER IN METAMORPHIC ROCKS AND ITS EFFECT ON ISOTOPIC AND TRACE ELEMENT SYSTEMS. TO DEMONSTRATE THE USEFULNESS OF OXYGEN ISOTOPES IN THE SELECTION OF SAMPLES FOR Rb/Sr AGE DETERMINATIONS.
232. MACLENNAN, S.D., YOUNG, G.M., FRYER, B.J., UNIV. WESTERN ONTARIO, GEOL.:
GEOCHEM. HURONIAN ARGILLITES & CARBONATES, 1975-77: M.Sc. THESIS.

INVOLVES MAJOR AND TRACE ELEMENT ANALYSES OF ARGILLACEOUS AND CARBONATE-RICH ROCKS OF THE HURONIAN (EARLY ARCHEAN) SUCCESSION IN AN ATTEMPT TO DETERMINE THE CONDITIONS UNDER WHICH THESE ROCKS WERE DEPOSITED. IN PARTICULAR, AN ATTEMPT WILL BE MADE TO DIFFERENTIATE BETWEEN ARGILLITES OF THE GOWGANDA FORMATION IN NORTHERN (NON-MARINE?) AND SOUTHERN REGIONS. TRACE ELEMENTS IN THE ESPANOLA FORMATION WILL BE COMPARED WITH THOSE IN IRON-FORMATIONS.
233. MACRAE, N.D., UNIV. WESTERN ONTARIO, GEOL.:
SULPHIDE MINERALS, 1975-80:

A PETROGRAPHIC AND CHEMICAL STUDY OF SULFIDE MINERALS IN MAFIC AND ULTRAMAFIC INCLUSIONS AND XENOLITHS FROM MANTLE-DERIVED ROCKS IS AIMED ULTIMATELY AT UNDERSTANDING THE DISTRIBUTION OF SULFUR BETWEEN MANTLE AND CRUST.
234. REARDON, E.J., UNIV. WATERLOO, EASCI:
NATURAL WATER GEOCHEMISTRY:

RESEARCH IS BEING CONDUCTED INTO THE NATURE AND STABILITY OF ION PAIRS OF INTEREST IN NATURAL WATERS. OF IMMEDIATE CONCERN IS THE STUDY OF THE INTERACTION OF ALKALI AND ALKALI EARTH METAL CATIONS WITH SULFATE, CARBONATE, SILICATE, AND BORATE ANIONS. DISSOCIATION CONSTANTS, ENTHALPIES OF REACTION AND CARBON 13 ISOTOPIC FRACTIONATION FACTORS FOR THE CARBONATE ION PAIRS ARE BEING DETERMINED.
235. ROUSSEAU, R.A., CLAISSE, F.C., UNIVERSITE LAVAL:
METHODE CORRIGER EFFET MATRICE FLUORESCENCE X, 1969-75: PH.D. THESIS.

SEE: COMPUTED ALPHA COEFFICIENTS FOR ELECTRON MICROPROBE ANALYSIS: ANALYTICAL CHEMISTRY, V.47, P.2174-2178, 1975.
236. RUCKLIDGE, J.C., PATTERSON, G.C., UNIV. TORONTO, GEOL.:
CHLORINE IN UNALTERED ROCKS, 1975-: M.Sc. THESIS.
237. RUSSELL, R.D., BIRNIE, D.J., UNIV. BRITISH COLUMBIA, GEOPH:
EVOLUTION OF THE EARLY EARTH, 1970-:

ISOTOPIC PATTERNS OBSERVED FOR LEAD IN OCEANIC ISLANDS AND CONFORMABLE ORES PROVIDE A BASIS FOR THE CONSTRUCTION OF EVOLUTIONARY MODELS FOR THE EARLY EARTH. RATE CONSTANTS AND TIME-SCALES CAN BE INFERRED. THE RESULTS ARE RELATED TO INTERPRETATIONS OF RADIOGENIC STRONTIUM AND ARGON AND OF THE THERMAL HISTORY OF THE EARTH.
238. SCOTT, S.D., FARKAS, A., HUTCHISON, M., UNIV. TORONTO, GEOL.:
PHASE EQUILIBRIUM REFRACTORY SULFIDE SYSTEMS, 1969-: PH.D. THESIS.
239. THODE, H.G., MONSTER, J., MCMASTER UNIV., CHEM.:
SULPHUR ISOTOPE RATIOS IN PETROLEUM AND SEDIMENTS, 1960-:

STABLE ISOTOPE ABUNDANCE VARIATIONS ARE USED TO TRACE NATURALLY OCCURRING PROCESSES SUCH AS THE INCORPORATION OF SULPHUR AND OTHER ELEMENTS SUCH AS CARBON AND OXYGEN INTO SEDIMENTS. THE DIAGENESIS OF SEDIMENTS, THE FORMATION OF PETROLEUM, ITS MATURATION AND MIGRATION. OTHER RELATED STUDIES ARE CONCERNED WITH THE ROLE OF MICROORGANISMS IN THE LAYING DOWN OF CERTAIN PRECAMBRIAN SEDIMENTS.
240. THODE, H.G., REES, G.C., MCMASTER UNIV., CHEM.:
SULPHUR ISOTOPE RATIOS IN LUNAR MATERIALS, 1970-:

SEE: SULPHUR CONCENTRATIONS AND ISOTOPE RATIOS IN GRAIN SIZE FRACTIONS OF LUNAR FINES: LUNAR SCI., VII, PT. II, P. 861-863, 1975.

MEASUREMENTS OF SULPHUR CONTENTS AND $\delta^{34}\text{S}$ VALUES IN LUNAR ROCKS, SOILS AND GRAIN SIZE FRACTIONS OF SOILS ARE USED TO INTERPRET PROCESSES CONNECTED WITH THE FORMATION OF THE MOON AND THE HISTORY OF ITS SURFACE.
241. VEIZER, J., HARTREE, R., UNIV. OTTAWA, GEOL.:
CHEM. EVOLUTION-DIAGENESIS CARBONATE ROCKS, 1975-77: M.Sc. THESIS.

CHEMICAL COMPOSITION OF CARBONATE ROCKS AND ITS VARIATION DURING GEOLOGIC HISTORY. THE MAJOR EMPHASIS IS ON DETERMINATION OF BASE METAL CONCENTRATIONS IN EARLY PALEOZOIC AND PROTEROZOIC FACIES. THIS COMBINED WITH THE ALREADY ESTABLISHED MAJOR ELEMENT AND ISOTOPE COMPOSITION OF THE STUDIED SAMPLES MAY HELP TO UNDERSTAND THE FACTORS CONTROLLING THE BACKGROUND BASE METAL CONCENTRATIONS IN CARBONATES.
242. VEIZER, J., LEMIEUX, J., FRITZ, P., UNIV. OTTAWA, GEOL.:
DIAGENETIC TRANSFORMATION RECENT-NEOGENE LS., 1975-78:

CHEMICAL AND MINERALOGICAL DIAGENESIS OF YOUNG CARBONATE ROCKS AND CARBONATE FOSSILS. THE PROJECT INVOLVES A STUDY OF DIAGENETIC TRANSFORMATION OF RECENT AND NEOGENE LIMESTONES IN FLORIDA AS MONITORED BY TRACE ELEMENT REDISTRIBUTION. SIMILAR TECHNIQUE IS UTILIZED IN STUDIES OF POST-DEPOSITIONAL ALTERATION OF MESOZOIC MOLLUSCS THIS IS OF IMPORTANCE FOR THEIR UTILIZATION IN PALEOTEMPERATURE DETERMINATION.
243. VEIZER, J., LEMIEUX, J., JONES, B., UNIV. OTTAWA, GEOL.:
PALEOZOIC CARBONATES, ARCTIC ISLANDS, 1975-78:

GEOCHEMICAL FACIES ANALYSIS OF PALEOZOIC CARBONATES OF THE ARCTIC ISLANDS TO ASSIST IN INTERPRETATION OF THEIR DEPOSITIONAL AND DIAGENETIC HISTORY. PRELIMINARY RESULTS ON SOMERSET ISLAND INDICATE HYPERSALINE TENDENCIES FOR THE CAPE STORM FORMATION. THE READ BAY LIMESTONES SHOW GEOCHEMICAL ANALOGIES WITH RECENT ARAGONITIC MUDS. THE DOLOMITIZATION OF THE LANG RIVER AND ALLEN BAY ROCKS PROCEEDED PROBABLY THROUGH REPLACEMENT OF A STABLE CALCITIC ASSEMBLAGE.

GEOCHRONOLOGY

244. ARMSTRONG, R.L., SOUTHER, J.G., WOODSWORTH, G., GOODWIN, G.I., TEMPELMAN-KLUIT, D.J., UNIV. BRITISH COLUMBIA, GEOL. GEOCHRONOMETRY AND SR ISOTOPES IN CORNILLERA, 1975-:

MORE THAN 200 RB/SR AND SR87/SR86 ANALYSES AND 50 K/AR DATES HAVE BEEN DETERMINED FOR CORNILLERA IGNEOUS AND METAMORPHIC ROCKS. AREAS OF STUDY INCLUDE GARIBALDI, EDZIZA, AND WRANGELL VOLCANIC FIELDS, OKANAGAN-PRINCETON, COAST MOUNTAINS, HOGEM, KLOTASSIN AND SHUSWAP PLUTONIC COMPLEXES, YOUNG PORPHYRY COPPER-MINERALIZED PLUTONS, AND HIGH PRESSURE METAMORPHIC ROCKS OF VEEDER MOUNTAIN.
245. CLEMENT, P.M.J., UNIV. SHERBROOKE, GEOG.

VARIATIONS SPAT. CARACTERES SOLS DERIVES DE TILL, 1970-76:

ETUDE DES VARIATIONS SPATIALES DE CARACTERES PHYSICOCHIMIQUES DE TILL ET SOLS DERIVES DANS HAUT PLATEAU APPALACHIEN CANTONS DE LEST. INFLUENCES GEOLOGIQUES GEOMORPHOLOGIQUES ET HUMAINES SUR LES VARIATIONS. UTILISATION DE TECHNIQUES STATISTIQUES POUR LA GENERALISATION CARTOGRAPHIQUE DES TENDANCES DECELEES. EXEMPLES A GRANDE ET MOYENNE ECHELLE. TRAITEMENT DES DONNEES EN COURS.
246. CLEMENT, P.M.J., UNIV. SHERBROOKE, GEOG.

EROSION DANS UN BASSIN VERSANT APPALACHIEN, 1969-:

SEE: INSTALLATIONS EXPERIMENTALES EXTERIEURES DE GEOGRAPHIE PHYSIQUES DE L'ODES: BULL. RECHERCHE DEP. GEOG. UNES, V.14, 1974.

EVALUATION DES PROCESSUS D'ABLATION (PRODUITS SOLIDES ET LISSOUS) A L'OEUVRE SUR VERSANTS ET DANS COURS D'EAU. MOYENS: PARCELLES EXPERIMENTALES DRAIN EN SITES DIVERS. ROLE DE LA VEGETATION DANS LES PROCESSUS EN COURS. VARIABILITE SAISONNIERE DES PHENOMENES. APPORTS ATMOSPHERIQUES AU BILAN DE MASSE. DONNEES EN COURS DE TRAITEMENT. FAIBLE ABLATION SOLIDE SOUS PRAIRIE. EROSION PRINTANIERE SUR SOL NU LIMITEE. QUALITE DES EAUX DE RUISSELLEMENT INFLUENCEE PAR LES LITIERS.
247. CLEMENT, P.M.J., BOUCHARD, M., UNIV. SHERBROOKE, GEOG.

COMPOSITION CHIMIQUE DES EAUX DU SOL, 1975-76:

SEE: SPATIAL VARIATIONS IN CHEMICAL COMPOSITION OF SLOPE WATER: INTERNAT. SYMP. GEOCHEM. NATURAL WATERS, BURLINGTON, AUG. 1975.

RELATION COMPOSITION CHIMIQUE DES EAUX DU SOL-CARACTERES PHYSIQUES DU MILIEU NOTAMMENT PEDOLOGIQUES ET GEOMORPHOLOGIQUES. ETABLISSEMENT DE PROFILS PEDOLOGIQUES REPRESENTATIFS DE VERSANTS A COUVERTURE VEGETALE DIFFERENTE (FORET PRAIRIE).
248. CLEMENT, P.M.J., CARSON, M.A., UNIV. SHERBROOKE, GEOG.

CHARGE DEFONDEE RUISSEAUX FORESTIERS APPALACHIENS, 1973-76:

EVALUATION DE LA CHARGE DE FOND DE 2 RUISSEAUX DE VERSANT. RELATION AVEC PARAMETRES HYDRAULIQUES ET CONDITIONS GEOMORPHOLOGIQUES. DONNEES DE CRUES RECUILLIES DURANT DEUX ANS EN COURS DE TRAITEMENT. FORTE VARIABILITE DANS L'UTILISATION DE LA FORCE EROSIIVE DUE A DISPONIBILITE DU MATERIEL ET OBSTACLES DU LIT. MODIFICATIONS NOTABLES DU LIT.
249. OIG, R., HIGGINS, M., FOWLER, A., MCGILL UNIV., GEOL.

RB-SR GEOCHRONOLOGY, 1975-78:

SEE: A SYENITE PLUTON OF ARCHEAN AGE WITHIN THE GRENVILLE PROVINCE OF QUEBEC: CAN. J. EARTH SCI., V.12, NO.5, P.890-893, 1975.

RB-SR ISOTOPIC DATING OF METASEDIMENTARY ROCKS-INTERPRETATION, RB-SR GEOCHRONOLOGICAL STUDIES, GRENVILLE PROVINCE, QUEBEC (REGIONAL), AGE AND ORIGIN OF SEVEN ISLANDS ANORTHOSITE SUITE, QUEBEC, AND AGE AND ORIGIN OF URANIUM OCCURRENCES MONT LAURIER, QUEBEC.
250. DOUGLAS, R.J.W., GEOL. SURV. CAN.

BASIN RECOGNITION CRITERIA, 1971-:
251. FLETCHER, I.R., FARQUHAR, R.M., UNIV. TORONTO, PHYS.

PB ISOTOPE VARIATIONS IN SULPHIDE MINERALS, 1973-78: PH.D. THESIS.

LEAD ISOTOPE RATIOS HAVE BEEN DETERMINED FOR GALENAS IN GRENVILLE AND OVERLYING PROTEROZOIC ROCKS. THE 207/206 - 206/204 PLOT IS LINEAR. THE SIMPLEST INTERPRETATION REQUIRES ADDITION OF RADIOGENIC LEAD GENERATED BETWEEN 1300 M. Y. AND 1000 M. Y. LEAD IN OTHER SULPHIDES AND IN POTASSIUM FELDSPARS FROM GRENVILLE AND ASSOCIATED ROCKS WILL BE ANALYSED.
252. FORD, D.C., SCHWARZ, H.P., GLASCOYNE, M., FALLICK, A.D., MCMASTER UNIV., GFOL.

SPELEOTHEM DATING & PALAEOTEMPERATURE STUDIES, 1970-80: PH.D. THESIS.

SEE: URANIUM SERIES DATING OF SPELEOTHEMS: BULL. NAT. SPELEO. SOC. AMER., V.37, NO.2, P.21-33, 1975.

STALAGMITES OF CANADIAN ROCKIES & MACKENZIE MOUNTAINS DATED, VANCOUVER ISLAND IN PROCESS, QUEBEC & NEWFOLK. PLANNED. MOST AGES RANGE 50000-350000 YEARS BP. PALEOTEMP IN VICINITY COLUMBIA TCEFIELD ESTABLISHED 155000-90000 YEARS BP. GLACIAL SEQUENCE OF NAHANNI (MACKENZIE MTNS) ESTABLISHED & DATED BACK TO 400000 YEARS. PALAEOMAGNETIC INVESTIGATIONS OF SPELEOTHEMS PLANNED.
253. FRAPEY, M.J., GFOL. SURV. CAN.

CORRELATION-GEOCHRONOLOGY CANADIAN SHIELD, 1975-:

TO IDENTIFY, DATE, AND CORRELATE DEPOSITIONAL, THERMAL AND OROGENIC EVENTS WITHIN THE VARIOUS PROVINCES OF THE CANADIAN SHIELD, TO INTEGRATE SHIELD PROVINCE HISTORIES, AND TO EXTEND AND IMPROVE PRECAMBRIAN TIME CLASSIFICATION.
254. HUANG, Y.F., FARQUHAR, R.M., UNIV. TORONTO, PHYS.

URANIUM IN ROCKS AND MINERALS, 1972-77: PH.D. THESIS.

SLOW NEUTRON INDUCED FISSION TRACKS IN POLYCARBONATE FOILS HAVE BEEN COUNTED TO PROVIDE A METHOD OF DETERMINING LOW URANIUM CONCENTRATIONS IN POWDERED MINERALS. URANIUM LEVELS IN CHERT, JASPER, FLINT, CRYSTALLINE QUARTZ, RANGE FROM 10 TO 100 PARTS PER BILLION. U CONCENTRATION IN ONE OPAL WAS 100 PARTS PER MILLION. URANIUM MAPPING IN QUARTZ IS BEING UNDERTAKEN. ATTEMPTS WILL BE MADE TO ETCH AND DETECT ARTIFICIAL AND FOSSIL FISSION TRACKS IN QUARTZ.
255. KUMARAPALI, P.S., DELAND, A.N., CONCORDIA UNIV., GEOL.

GRENVILLE DIKE SWARMS, EASTERN CANADA, 1975-77:

IT IS PROPOSED (A) TO STUDY THE FIELD RELATIONS OF THE GRENVILLE DIKE SWARM WITH RESPECT TO THE RIFT STRUCTURES OF THE OTTAWA GRAPEN SYSTEM, (B) TO SAMPLE THE DIKES FOR PETROCHEMICAL AND ISOTOPIC AGE STUDIES. A FEW K-AR AGES ARE AVAILABLE BUT THESE HAVE YIELDED AGES RANGING FROM 400MY TO 974MY. IT IS HOPED THAT IN SOME OF THE LARGER DIKES THERE WOULD BE GRANOPHYRIC DIFFERENTIATES, SO THAT SUITABLE MATERIAL FOR A RB-SR ISOCRON CAN BE COLLECTED.
256. LONDON, J.A., GEOL. SURV. CAN.

RADIOCARBON LABORATORY DEVELOPMENT, 1959-:
257. MATHEWS, W.H., UNIV. BRITISH COLUMBIA, GEOL.

ANOMALOUS K-AR DATES FROM GNEISSES TRINITY HILLS, 1973-76:

PATTERN OF DATES BECOMING CLEAR BUT RATIONAL EXPLANATION STILL ELUSIVE.
258. MAXWELL, R.J., ARMSTRONG, R.L., UNIV. BRITISH COLUMBIA, GEOL.

STRONTIUM ISOTOPIC STUDIES, 1975-76: M.SC. THESIS.

STUDY OF TRACE CONCENTRATIONS OF SR AND RB AND ISOTOPIC COMPOSITION OF SR IN MINERAL SEPARATES INCLUDING GALENA PYRROTHITE SPHALERITE AND CARBONATE IN MISSISSIPPI VALLEY-TYPE PB-ZN ORES AND OPHIOXYROXENE CLINOPYROXENE AND OLIVINE IN ULTRAMAFIC NODULES AND ALPINE ULTRAMAFIC ROCKS.
259. MILLER, S.H., ANDREWS, J.T., BIRKELAND, P.W., LARSON, E.E., UNIV. COLORADO, INST.

AMINO ACID CHRONOLOGY, EASTERN BAFFIN ISLAND, NWT., 1974-78:

SEE: USE OF AMINO ACID REACTIONS IN SOME ARCTIC MARINE FOSSILS AS STRATIGRAPHIC AND GEOCHRONOLOGICAL INDICES: CARNEGIE INST. WASH. YR 900K 74, 19769.

TEST OF APPLICABILITY OF AMINO ACID RATIOS AS GEOCHRONOLOGICAL AND STRATIGRAPHIC INDICES FOR MOLLUSKS FROM QUATERNARY SEDIMENTS GREATER THAN 30000YR OLD ON E BAFFIN ISLAND. CONTINUED EXPERIMENTS ON RELIABILITY OF AMINO ACID RATIOS AND COMPARISONS WITH C14 AND U-SERIES DATES AND POLLEN DATA. RECONSTRUCTION OF GLACIAL CHRONOLOGY AND RELATIVE SEA LEVEL HISTORIES USING THIS DATA PLUS PALEOMAG. MICROFAUNAL EVIDENCE.
260. SLAWSON, W.F., BUSER, L.J., HILL, P.A., SHORE, P.J., UNIV. BRITISH COLUMBIA, GEOPH.

ANALYSIS OF LEAD ISOTOPES, NORTHERN SPAIN, 1975-76: M.SC. THESIS.

BUSER HAS POSTULATED THE ORE WAS DERIVED FROM AN ADJACENT DEPOSITIONAL BASIN. LEAD ISOTOPE ANALYSIS OF ORE FROM THE REPLACEMENT DEPOSITS LOCATED AT VARYING DISTANCES FROM THE OLD BASIN MAY DELINEATE A PATTERN RELATED TO DIRECTION OF MIGRATION OF ORE-FORMING FLUIDS.

261. SLAWSON, W.F., LECOUTEUR, P.C., SHORE, P.J., UNIV. BRITISH COLUMBIA, GEOPH. LEAD ISOTOPES OF THE SHASTA DISTRICTS, CALIFORNIA, 1973-76:
SAMPLES HAVE BEEN COLLECTED FROM BOTH THE EAST (TRIASSIC) SHASTA AND THE WEST (DEVONIAN) SHASTA DISTRICTS. BOTH ARE POSTULATED TO BE VOLCANOGENIC, HENCE THE ORES SHOULD BE NEAR 'PRIMARY' IN COMPOSITION. THE ANALYSIS SHOULD YIELD DEFINITIVE INFORMATION WITH RESPECT TO BOTH SUPPOSITIONS.
262. SLAWSON, W.F., SATO, K., SHORE, P.J., UNIV. BRITISH COLUMBIA, GEOPH. KUROKO DEPOSIT LEAD ISOTOPES, 1974-76:
TO COMPARE THE ISOTOPIC COMPOSITION OF LEAD FROM KUROKO DEPOSITS WITH LEAD COLLECTED FROM VEIN DEPOSITS OF THE SAME GEOLOGIC AGE. AN ATTEMPT WILL BE TO ELUCIDATE HISTOY AND ORIGIN OF THE ORE MINERAL SOURCES.
263. WANLESS, R.K., GEOL. SURV. CAN. :
ISOTOPIC STUDY MICA-BEARING ROCKS, ANOMALOUS K-AR, 1965-:
264. WANLESS, R.K., GEOL. SURV. CAN. :
DEVELOPMENT K-AR DATING TECHNIQUES YOUNG BASALTS, 1968-:
SEE: POTASSIUM-ARGON AGE DETERMINATIONS OF METAMORPHIC AND PLUTONIC ROCKS IN THE YUKON CRYSTALLINE TERRANE; CAN. J. EARTH SCI., V. 12, NO. 11, P. 1895-1909, 1975.
265. WANLESS, R.K., GEOL. SURV. CAN. :
DEVELOPMENT TECHNIQUES GEOCHRONOLOGICAL STUDIES, 1973-:
266. WOLF, M., CROCKET, J.H., MCMASTER UNIV., GEOL. :
AGE OF GRANITIC PLUTONS, FELSIC VOLCS., KAKAGI LK., 1974-76:
M.Sc. THESIS.
AGE RELATIONSHIPS OF GRANITIC PLUTONS AND FELSIC VOLCANICS FROM THE KAKAGI LAKE AREA NW ONTARIO (ODM MAP P931 KAYE) WILL BE DETERMINED BY R3-SR DATING. GEOLOGICAL RELATIONSHIPS INDICATE THAT THE PLUTON OF INTEREST, THE STEPHEN LAKE STOCK, AND THE FELSIC VOLCANICS ARE EXTRUSIVE AND INTRUSIVE EQUIVALENTS. IF EITHER ROCK TYPE CAN BE RELIABLY DATED A GOOD ESTIMATE OF THE AGE OF MAJOR VOLCANISM IN THE WESTERN SEGMENT OF THE WABIGOON GREENSTONE BELT WILL BE OBTAINED.

GEOLOGICAL COMPUTER APPLICATIONS

267. CLARK, D.A., MOBIL OIL CANADA, LTD. :
GEOLOGICAL DATA PROCESSING, 1975-76:
CONTINUING DEVELOPMENT OF GEOLOGICAL DATA FILES TO PROVIDE MORE EFFICIENT SERVICE; EXPAND COMPUTER MAPPING FACILITIES TO INCLUDE THE CONSTRUCTION OF DETAILED AND SOPHISTICATED BASE MAPS; CONTINUE THE INVESTIGATION OF APPLYING MATHEMATICAL AND STATISTICAL METHODS TO GEOLOGY.
268. LESKIN, K., SHELL CANADA LTD. :
CLUSTER ANALYSIS Q-R MODE JUR. FORM. WEST. CANADA, 1974-:
DEFINE FAUNAL ASSEMBLAGES BY MEANS OF R-MODE AND Q-MODE CLUSTER ANALYSIS.
269. MARANDA, R., CHAGNON, J.Y., DEBATS, J.M., LEFEURE, J., QUEBEC DEP. NAT. RES., MRN :
BANQUE DE DONNEES GEOTECHNIQUES, 1973-77:
ETABLISSEMENT DUNE BANQUE DE DONNEES GEOTECHNIQUE/PROJET EN COLLABORATION AVEC ECOLE DES MINES DE PARIS/BORDEREAU ETABLIS/PROGRAMMATION A FAIRE.
270. PORUKS, M., HAMILTON, W.N., ALTA. RESEARCH COUNCIL, GEOL. ALBERTA INDEX TO GEOSCIENCE DATA, 1975-78:
AN INDEX TO UNPUBLISHED DOCUMENTS IN THE MINERAL FILES OF ALBERTA RESEARCH COUNCIL. AS CONTRIBUTING AGENCY FOR ALBERTA TO THE CANADIAN INDEX TO GEOSCIENCE DATA. PUBLISHED REPORTS BY THE RESEARCH COUNCIL EVENTUALLY ARE TO BE INDEXED AS WELL. SO FAR ABOUT 200 UNPUBLISHED DOCUMENTS FROM ASSESSMENT FILES HAVE BEEN INDEXED.
271. ROVE, G.D., CRICHTON, L.G., ENVIRONMENT CANADA, INM :
GOWN - GROUNDWATER DATA PROCESSING SYSTEM, 1967-:
DEVELOPMENT OF RETRIEVAL CAPABILITIES IS BEING CONTINUED. EFFORTS ARE ALSO BEING MADE TO UPGRADE THE DOCUMENTATION FOR THE SYSTEM.
272. SMITH, F.G., GRUNSKY, E., UNIV. TORONTO, GEOL. :
DEVELOP. LEMCAT, A COMPUTER-AIDED TEACHING METHOD, 1973-76:
273. SUTTERLIN, P.G., COOPER, M.A., UNIV. WESTERN ONTARIO, GEOL. :
STRUCTURE OF COMPUTER FILES OF GEOLOGICAL DATA, 1974-:
SEE: SOME CONSIDERATION IN THE MANAGEMENT OF COMPUTER-PROCESSABLE FILES OF GEOLOGICAL DATA; MATHEMATICAL GEOL., V. 6, NO. 4, P. 291-310, 1975.
AN INVESTIGATION OF THE VARIOUS STRUCTURES OF GEOLOGICAL DATA AND THE EFFECT THIS HAS ON FILE COMPATIBILITY AND PROCESSING.
274. WYNNE-EDWARDS, H.R., SINCLAIR, A.J., MONTGOMERY, G.H., GIRDOUX, G.H., SYMONDS, D.T., UNIV. BRITISH COLUMBIA, GEOL. :
MINDEP-MINERAL DEPOSIT FILES FOR BRIT. COLUMBIA, 1973-77:
SEE: MINDEP PROJECT-DESIGN AND CONSTRUCTION OF MINERAL DEPOSIT FILES; WESTERN MINER., V. 49, NO. 2, 1975.
DESIGN CONSTRUCTION AND USE OF COMPUTER PROCESSABLE MINERAL DEPOSITS FILES. COMPLETED ARE MINDEP ABC FILE OF LOCATION STATUS OWNERSHIP AND BIBLIOGRAPHY FOR 8300 DEPOSITS AND DEEP GEOLOGICAL FILE OF TEST AREA APPLICATIONS IN PROCESS ARE COMMODITY MAPS FOR BC, EXPLORATION MODELLING STUDIES, AND MINERAL ZONING AND METALLOGENESIS PATTERNS. COMPARISON OF OTHER SYSTEMS AND FILES AND EVALUATION IN PROGRESS.

GEOMATHEMATICS

275. AGTERBERG, F.P., GEOL. SURV. CAN. :
PROBABILITY MODELS ESTIMATING MINERAL POTENTIAL, 1969-:
276. CHAPMAN, R.P., PARKER, E.R., SHELL CANADA LTD. :
APPLICATION OF STATISTICS TO PETROLEUM GEOLOGY, 1973-:
THE APPLICATION OF STATISTICAL METHODS TO ASSIST THE GEOLOGIST'S EXPLORATION EFFORT TO LOCATE HYDROCARBON ACCUMULATIONS. STATISTICAL METHODS HAVE BEEN USED IN CONJUNCTION WITH THE FOLLOWING GEOLOGICAL DISCIPLINES: ORGANIC GEOCHEMISTRY, BIOSTRATIGRAPHY, PROSPECT EVALUATION, PETROPHYSICS, PALYNOLOGY, STRUCTURAL GEOLOGY, MINERAL EXPLORATION AND TAR SAND DEVELOPMENT.
277. FABRI, A.G., GEOL. SURV. CAN. :
QUANTIFICATION OF GEOLOGICAL VARIABLES, 1972-:
278. LANCERY, J.H., UNIV. DU QUE. TROIS-RIV., GEOG. :
HYDROGRAPHIE DE LA REGION DES TROIS-RIVIERES, 1975-:
VERIFIER, S'IL EXISTE UNE RELATION ENTRE L'EVOLUTION DES COURS D'EAU DE LA REGION DES TROIS-RIVIERES ET LEURS CARACTERISTIQUES HYDROGRAPHIQUES.
279. LEECH, G.B., AGTERBERG, F.P., CHUNG, C.F., DIVI, S.R., GEOL. SURV. CAN. :
PROJECT APPALACHIA, 1972-:
SEE: PRELIMINARY STATISTICAL ANALYSIS OF PROJECT APPALACHIA DATA; GEOL. SURV. CAN., PAPER 75-1C, P. 133-140, 1975.

280. SCHEIDEGGER, A.E., UNIV. WINDSOR, GEOL. &
GEOPHYSICAL STRESSES AND JOINTS, 1975-00:

STUDY OF GEOPHYSICAL STRESS FIELD MOSTLY BY MEASUREMENTS
OF JOINT ORIENTATIONS IN CANADA AND GLOBALLY. ALSO
FURTHER GEOPHYSICAL STUDY OF STRESS ANOMALIES.

281. SUTTERLIN, P.G., DREIMANIS, A., COOPER, M.A., UNIV. WESTERN
ONTARIO, GEOL. &
ANALYSIS OF PLEISTOCENE DATA USING SAFRAS SYSTEM, 1972-78:

DATA ORGANIZATION, COLLECTION AND REDUCTION TO MACHINE-
READABLE FORM GENERATION OF FIVE SAFRAS COMPUTER-
PROCESSABLE FILES. MERGING OF THE FILES INTO A SINGLE
INTERGRATED FILE CONTAINING APPX. 7000 STATIONS.

GEOMORPHOLOGY

282. BARENDREGT, P.W., ONGLEY, E.D., QUEEN'S UNIV., GEOG. &
GEOMORPHOLOGY SE. ALBERTA, 1975-77: PH.D. THESIS.

INVESTIGATION OF CONTEMPORARY AND PALEOGEOMORPHOLOGY OF
SOUTHEASTERN ALBERTA. THE EXISTING DEGLACIAL CHRONOLOGY
OF WESTGATE HAS BEEN SIGNIFICANTLY CHANGED. TILL HAS
BEEN DATED TO 700000 YEARS BP.

283. BARNETT, D.M., GEOL. SURV. CAN. &
PROGLACIAL GEOMORPHOLOGY, GENERATOR LAKE, BAFFIN I., 1968-:

284. BEATY, C.B., UNIV. LETHBRIDGE, GEOG. &
SLOPE MORPHOLOGIES, SOUTHERN ALBERTA, 1974-76:

A STUDY OF CONTRASTING SLOPE MORPHOLOGIES ON COULEE WALLS
IN SOUTHERN ALBERTA, WITH THE AIM OF DETERMINING THE
CLIMATIC, GEOLOGIC, OR OTHER REASONS. MICROCLIMATIC
DIFFERENCES APPEAR TO BE IMPORTANT.

285. BEATY, C.B., UNIV. LETHBRIDGE, GEOG. &
LANDSLIDES, CYPRESS HILLS, ALBERTA, 1974-76:

STUDY OF POSTGLACIAL LANDSLIDING ON SOUTH FLANK OF
CYPRESS HILLS, ALBERTA, LOCALIZED IN OCCURRENCE BY
INFLUENCE OF WHITEMUD AND BATTLE FORMATIONS.

286. BEATY, C.B., UNIV. LETHBRIDGE, GEOG. &
SOUTHERN ALBERTA GEOMORPHOLOGY, 1970-75:

SEE: THE LANDSCAPES OF SOUTHERN ALBERTA, A REGIONAL
GEOMORPHOLOGY: UNIV. LETHBRIDGE PROJ. SERV., 1975.

287. BIRD, J.B., MCGILL UNIV., GEOG. &
LATE QUAT.-GEOMORPHOLOGY MANITOBA ESCARPMENT, 1975-77:

THE DOMINANT MORPHOLOGICAL ELEMENTS OF THE MANITOBA
ESCARPMENT ARE INHERITED PREWISCONSINAN LANDFORMS
MODIFIED BY COMPLEX GLACIAL, FLUVIOGLACIAL AND
GLACIOLACUSTRINE EVENTS. POSTGLACIAL STEADY-STATE SLOPE
STABILITY HAS BEEN INTERRUPTED BY SHORT PERIODS OF
ENVIRONMENTAL DISTURBANCE. THE CAUSES, MAGNITUDE AND
CHRONOLOGY OF SLOPE DISRUPTION ARE DETERMINED BY ANALYSES
OF PALEOSOLS, SEDIMENTS AND MORPHOLOGY OF FANS.

288. CRAWFORD, F.D.C., BRANDON UNIV., GEOL. &
ILLUST. GEOL. OF MANITOBA IN COLOUR SLIDES, 1975-77:

AIM TO PRODUCE A COLLECTION OF COLOUR SLIDES WITH WRITTEN
DESCRIPTIVE BOOKLET TITLED "THE ILLUSTRATED GEOLOGY AND
LANDFORMS OF MANITOBA" AREAS AND ASPECTS OF THE GENERAL
GEOMORPHOLOGY AND GEOLOGY OF MANITOBA WILL FORM THE BULK
OF THE WORK. AIR PHOTOGRAPHS, PLUS OUTCROP, HANDSPECIMEN,
THIN SECTION AND LINE DIAGRAM PICTURES WILL BE TAKEN.
COMPLETED MATERIAL WILL BE OFFERED ON A NON PROFIT BASIS
TO HIGH SCHOOL TEACHERS IN THE EARTH SCIENCES IN MANITOBA.

289. FORD, D.C., BROOK, G.A., COWELL, D., BEAUPRE, M., ROBERGE, J.,
MCMASTER UNIV., GEOG. &
KARST LANDFORM GENESIS IN CANADA, 1967-78: M.SC. THESIS.

STUDIES OF THE NAHANNI KARST (MACKENZIE MTNS.) & BRUCE
PEN. KARST (ONT.) HAVE BEEN COMPLETED (BROOK, COWELL,
IN LITT). THE NAHANNI KARST IS ANCIENT (ORIGIN > 300000
YEARS B. P.) & THE MOST ACCIDENTED & DIVERSE KARST
TERRAIN IN ANGLO-AMERICA. STUDIES OF KARST FORMS &
GROUNDWATER SYSTEMS IN LIMESTONE & GYPSUM OF ANTICOSTI IS.
(P. Q.) & NEWFOUNDLAND WILL COMMENCE IN 1976. THEY
ARE BELIEVED TO BE LATE-GLACIAL OR HOLOCENE IN AGE.

290. FORD, D.C., GLEW, J.G., MCMASTER UNIV., GEOG. &
CANYON MORPHOLOGY & HYDROLOGY MACKENZIE MTNS., 1975-78:

A STUDY OF THE MORPHOLOGY, MORPHOMETRY, MODERN HYDROLOGY
& FLUVIAL EROSION (BED, SUSPENDED & SOLUTE LOADS) OF A
SAMPLE OF RIVER CANYONS OF THE CANYON RANGES, MACKENZIE
MOUNTAINS, NWT. SAMPLE SITE IS ON THE RAM RIVER, CENTRE
OF RAM PLATEAU, OBSERVATIONS JUNE-AUGUST, THREE STAGE
RECORDERS & THREE MET. STATIONS INSTALLED. RELATION OF
CANYON GENESIS TO COMPLEX HISTORY OF GLACIO-LACUSTRINE
FILLINGS IS STUDIED.

291. KUPSCH, W.O., ROBERTSON, R., UNIV. SASKATCHEWAN, GEOL. &
FALLS AND RAPIDS IN NORTHERN SASKATCHEWAN, 1975-76: M.SC.
THESIS.

DEPENDENCY OF WATERFALLS AND RAPIDS ON GEOLOGICAL
STRUCTURES SUCH AS FAULTS AND LITHOLOGICAL DIFFERENCES
SUCH AS DEGREE OF ERODIBILITY IN THE PRECAMBRIAN OF
NORTHERN SASKATCHEWAN: FEASIBILITY OF USING SOME
WATERFALLS AND RAPIDS FOR HYDROELECTRIC DEVELOPMENTS.

292. LEWIS, C.P., GEOL. SURV. CAN. &
GEOMORPHOLOGY OF DELTA LAKES, MACKENZIE DELTA, 1969-:

293. MARSHALL, I.B., FAIRBAIN, D., SURV. & MAPPING, EMR &
ATLAS OF CANADA MAPS, 1976-79:

SERIES OF SPECIALIZED MAPS OF CANADA GENERATED FROM
QUANTITATIVE ANALYSIS OF PHYSICAL PARAMETERS AND
SYNTHESIS OF PUBLISHED MAPS AND REPORTS. THE MAPS ARE AT
SCALES SMALLER THAN 1 TO 1 MILLION, AND INCLUDE, RELATIVE
RELIEF, LAND SURFACE FORM, SURFACE MATERIALS, LANDFORMS
AND PHYSIOGRAPHIC REGIONS.

294. MCCANN, S.B., ARMON, J.W., BIRNIE, S., MCMASTER UNIV., GEOG. &
BARRIER ISLAND DYNAMICS, PRINCE EDWARD ISLAND, 1971-:

295. OWENS, E.H., GEOL. SURV. CAN. &
COASTAL GEOMORPHOLOGY SOUTHERN GULF ST. LAWRENCE, 1973-76:

SEE: BARRIER REACHES AND SEDIMENT TRANSPORT IN THE
SOUTHERN GULF OF ST. LAWRENCE, CANADA: PROC. 14TH INTERNAT.
CONF. COASTAL ENG., V. 2, 1975.

296. YOXALL, W.H., MEMORIAL UNIV., GEOG. &
A STUDY OF MICROLANDFORMS, 1971-76:

TO DEVELOP TECHNIQUES IN LABORATORY AND FIELD SITUATIONS
TO FACILITATE QUANTITATIVE AND DESCRIPTIVE STUDY OF
MICROLANDFORMS.

GEOPHYSICS

EXPLORATION, GENERAL

297. ALOPIDGE, K.D., UNIV. BRITISH COLUMBIA, GEOPH: EXPLORATION GEOPHYSICS, 1975-76:

DYNAMIC PROGRAMMING TECHNIQUES ARE APPLIED TO DECISION MAKING IN GEOPHYSICAL PROSPECTING. IF A PROBABILITY DISTRIBUTION FOR THE MERIT OF A PROSPECT IS KNOWN A DECISION CRITERIA FOR PROCEEDING WITH ITS DEVELOPMENT CAN BE DETERMINED.

298. ANDERSON, C.D., UNIV. MANITOBA, EARTH: GEOPHYSICAL TEST GRID - CENTRAL CANADA, 1975-76:

THE GRID IS LOCATED JUST SOUTH OF THE TRANSCANADA HIGHWAY AT THE MAN-ONT. BORDER, OVER 5 DRILLED CONDUCTORS. SIX LINE-MILES OF HOR. LOOP, VLF, AND MAGNETIC DATA PLUS LIMITED IP MEASUREMENTS ARE AVAILABLE. BOTH SULPHIDE AND GRAPHITE CONDUCTORS ARE PRESENT AND THE GRID IS INTENDED FOR RESEARCH ON THE GRAPHITE/SULPHIDE IDENTIFICATION PROBLEM AS WELL AS FOR GENERAL USE.

299. ANDERSON, C.D., UNIV. MANITOBA, EARTH: INSTRUMENT DESIGN-CONTINUOUS MAGNETIC PROFILING, 1974-77:

TO DEVELOP A PRACTICAL INSTRUMENT TO MAKE CONTINUOUS, OR NEARLY CONTINUOUS, GROUND MAGNETIC MEASUREMENTS ALONG PROFILES, PRIMARILY FOR MINERAL EXPLORATION.

300. ANDERSON, D.T., ANDERSON, C.D., LESAVAGE, S., UNIV. MANITOBA, EARTH: GEOPHYSICAL EVALUATION-NEEPAWA IRON DEPOSIT, 1973-77:

TO OUTLINE AND EVALUATE THE POTENTIAL ECONOMIC VALUE OF A VERY LARGE IRON DEPOSIT 2500 FT. BELOW SURFACE USING MAGNETIC AND GRAVITY METHODS.

301. ANNAN, A.P., GEOL. SURV. CAN.: RADAR SOUNDING FOR GEOLOGICAL MAPPING, 1975-:

SEE: IMPULSE RADAR WIDE ANGLE REFLECTION AND REFRACTION SOUNDING IN PERMAFROST: GEOL. SURV. CAN., PAPER 75-1C, P. 335-341, 1975.

302. BOYLE, R.W., GEOL. SURV. CAN.: PRIMARY HALOS AID IN LOCATION OF OREBODIES, 1973-:

303. CASTLE, R.J., CHEVRON STANDARD LTD.: SEISMOLOGY EXPLORATION, 1976-76:

SEISMIC DATA PROCESSING.

304. ELLIOTT, H.M., ENVIRONMENT CANADA, INR: GEOPHYSICAL SURVEY - STRAIT OF CANSO, 1974-76:

APPLICATION OF SURFACE RESISTIVITY TECHNIQUES TO DETERMINE 1) DEPTH TO THE WATER TABLE, 2) STRATIGRAPHY, AND 3) INDICATIONS OF WATER QUALITY.

305. FOLINSBEE, R.A., VAN DER LINDEN, W.J.M., SRIVASTAVA, S.P., HAWORTH, R.T., GEOL. SURV. CAN.: EAST COAST OFFSHORE SURVEYS, 1973-78:

REGIONAL GEOPHYSICAL COVERAGE OF THE LABRADOR SEA HAS BEEN COMPLETED. DETAILED COVERAGE HAS BEEN EXTENDED NORTH TO 51N. THE DATA IS BEING CONTOURED FOR INCLUSION IN THE NATURAL RESOURCE MAP SERIES. WE HAVE ANALYZED THE GRAVITY, MAGNETIC AND SEISMIC DATA BETWEEN ORPHAN KNOLL AND THE NORTH EAST NEWFOUNDLAND SHELF. THIS REGION APPEARS TO BE OF CONTINENTAL ORIGIN. THE GRAVITY HIGH (125 MGAL FREE AIR) IS DUE TO ANOMALOUSLY LOW DEPTH TO THE MOHO.

306. GENOZWILL, D.J., UNIV. SASKATCHEWAN, GEOL.: SOLUTION-COLLAPSE STRUCTURES, PRAIRIE EVAPORITE, 1973-76:

ROCK SALT OF THE PRAIRIE EVAPORITE FORMATION HAS BEEN DISSOLVED IN MANY PLACES IN SASKATCHEWAN RESULTING IN LARGE AND SMALL SCALE COLLAPSE OF OVERLYING ROCKS. MUCH OF THE ACTIVITY HAS TAKEN PLACE IN PLEISTOCENE OR LATER TIME AND THERE IS EVIDENCE TO SHOW THAT IT IS GOING ON NOW-SEISMIC EQUIPMENT HAS BEEN BUILT TO MONITOR POSSIBLE GROUND MOVEMENT IN ORDER TO IDENTIFY ZONES OF LOCAL ACTIVITY.

307. GENOZWILL, D.J., UNIV. SASKATCHEWAN, GEOL.: SEISMIC STUDIES POTASH DEPOSITS, SASKATCHEWAN, 1973-:

SEISMIC REFLECTION SURVEYS ARE DESIGNED AND USED TO EXTRACT DETAILED INFORMATION ABOUT POTASH BEDS IN SASKATCHEWAN.

308. GENOZWILL, D.J., KING, M.S., PANDIT, B., UNIV. SASKATCHEWAN, GEOL.: ELECTROMAGNETIC APPLICATION SALT THICKNESSES, 1975-:

PRINCIPLES OF AUDIO RANGE ELECTROMAGNETIC FIELDS ARE BEING APPLIED TO THE PROBLEM OF DETERMINING THE THICKNESS OF SALT COVER ABOVE SASKATCHEWAN POTASH MINES. COMPUTER MODELLING WILL BE USED AS A DESIGN GUIDE FOR THE CONSTRUCTION OF A SUITABLE INSTRUMENT.

309. GREENHOUSE, J.P., UNIV. WATERLOO, EARTH: VLF AND INDUCTIVE RESISTIVITY MTDS. IN HYDROLOGY, 1975-77:

VLF AND INDUCTIVE RESISTIVITY TECHNIQUES ARE BEING COMPARED WITH GALVANIC RESISTIVITY AND OTHER GEOPHYSICAL METHODS FOR SHALLOW SUBSURFACE INVESTIGATION IN SOUTHERN ONTARIO. FEATURES OF INTEREST INCLUDE BEDROCK VALLEYS, LEACHATE CONTAMINANT PLUMES AROUND LANDFILL SITES, AND RIVER-CONNECTED GRAVEL DEPOSITS SUITABLE FOR INDUCED INFILTRATION PROJECTS (WATER SUPPLY).

310. HODYCH, J.P., MEMORIAL UNIV., GEOL.: MAGNETIC PROPERTIES OF ULTRAMAFICS OF NFLD., 1975-76:

TO TRY TO DECIDE WITH THE AID OF AEROMAGNETIC INTERPRETATION WHETHER THE ULTRAMAFICS OF EASTERN NEWFOUNDLAND ARE OPHIOLITES OR MANTLE DIAPYRS.

311. HUNTER, J.A., GEOL. SURV. CAN.: SEISMIC PROPERTIES OF EARTH MATERIALS, PERMAFROST, 1973-:

SEE: MARINE SEISMIC REFRACTION PROFILING KAY POINT, YUKON TERRITORY: GEOL. SURV. CAN., PAPER 75-1B, P. 9-12, 1975.

312. KATSURU, T.J., GEOL. SURV. CAN.: ELECTRICAL ROCK PROPERTIES, 1963-:

SEE: THE ELECTRICAL POLARIZATION MECHANISM MODEL FOR MOIST ROCKS: GEOL. SURV. CAN., PAPER 75-1C, P. 353-360, 1975.

313. MACAULAY, H.A., GEOL. SURV. CAN.: SEA-BOTTOM, PERMAFROST S. BEAUFORT SEA, ARCTIC, 1974-:

SEE: ANOMALOUS SHALLOW SEISMIC VELOCITIES IN MACKENZIE BAY, NORTHWEST TERRITORIES: GEOL. SURV. CAN., PAPER 76-1A, P. 481-484, 1976.

314. MCHARO, B.A., MCALLISTER, A.L., BURKE, K.B.S., UNIV. NEW BRUNSWICK, GEOL.: EVALUATION OF GEOPHYSICS AT KEY ANACON MINE, 1973-75: M.SC. THESIS.

GROUND GEOPHYSICAL METHODS INCLUDING, MAGNETICS, VLF, RESISTIVITY AND GRAVITY WERE FOUND TO BE USEFUL. OVERBURDEN EFFECTS WERE SUCH THAT IT IS RECOMMENDED THAT OVERBURDEN THICKNESS BE DETERMINED AS A PART OF DETAILED COVERAGE.

315. MITCHELL, G.G., RUSSELL, R.D., UNIV. BRITISH COLUMBIA, GEOPH: INDUCED POLARIZATION TECHNIQUE, 1974-: M.SC. THESIS.

FIELD MEASUREMENTS OF INDUCED POLARIZATION SIGNALS, OBSERVED IN BOTH ANALOG AND DIGITAL FORMATS, ARE BEING ANALYSED TO OBTAIN CHARACTERISTICS OF THE WAVEFORMS. TIME-DOMAIN AND FREQUENCY DOMAIN TECHNIQUES ARE BOTH USED. LINEARITY TESTS ARE PLANNED.

316. MADEAU, A., QUEBEC DEP. NAT. RES., MRN: LEVES EM INPUT PAR AVION (3), 1975-76:

317. OVERTON, A., GEOL. SURV. CAN.: SEISMIC, PRECAMBRIAN SHIELD, QUEBEC, 1970-:

SEE: SEISMIC VELOCITY MEASUREMENTS ON SAMPLES AND SULPHIDE OREBODIES: GEOL. SURV. CAN., PAPER 76-1A, P. 485, 1976.

318. RICHARDSON, K.A., GEOL. SURV. CAN.: GAMMA X-RAY SPECTROMETRY (EXPERIMENTAL SURVEYS), 1972-:

319. SCOTT, W.J., GEOL. SURV. CAN.: ELECTRICAL MAPPING TECHNIQUES, 1967-:

SEE: IMPULSE RADAR PROFILING IN PERMAFROST: GEOL. SURV. CAN., PAPER 75-1C, P. 343-351, 1975.

320. SINHA, A.K., GEOL. SURV. CAN.: APPLIED EM PROBLEMS, 1973-:

321. STRANGWAY, D.W., KOZIAR, A., KRYZAN, A., REDMAN, J.D., UNIV. TORONTO, GEOL. I
AUDIOFREQUENCY MAGNETOTELLURIC-CRUSTAL SOUNDING, 1970-78:
PH.D. THESIS.
322. STRANGWAY, D.W., KOZIAR, A., ROSSITER, J., WONG, J., REDMAN, J.D., UNIV. TORONTO, GEOL. I
ELECTRICAL SOUNDING IN PERMAFROST AND GLACIERS, 1973-77:
PH.D. THESIS.
323. STRANGWAY, D.W., NOWINA, S., SAPPER, S., UNIV. TORONTO, GEOL. I
ELECTRICAL PROP. OF ROCKS AND SULFIDE MINERALS, 1973-: M.SC. THESIS.
324. STRANGWAY, D.W., OLMHOEF, G. R., WONG, J., UNIV. TORONTO, GEOL. I
ELECTRICAL PROP. PERMAFROST AND LUNAR SAMPLES, 1972-: PH.D. THESIS.
325. ST-AMANT, M., PERRAULT, G., COLLETT, L., SOQUEM I
RECEPTEUR DE POLARISATION PROVOQUEE DIGITAL, 1974-76:

UN RECEPTEUR P. P. TOTALEMENT AUTOMATIQUE, GERE PAR UN MICRO-ORDINATEUR "PROGRAMMABLE" ET PORTATIF (12 KG) A EYE CONSTRUIT SUITE AU BREVET CANADIEN NO. 970039.
326. SURYAM, J. V., CHRISTOPHER, J. E., SASKATCHEWAN GEOL. SURV., D. M. R. I
SEISMIC SURVEY, ATHABASCA SS., SASKATCHEWAN, 1976-80:

DETAILED SEISMIC SURVEYS WILL BE CONDUCTED OVER THE EASTERN EDGE OF THE ATHABASCA SANDSTONE BASIN OF NORTH-CENTRAL SASKATCHEWAN, TO MAP THE BASEMENT TOPOGRAPHY BELOW THE BASIN. THE AREA (10 MILES BY 200 MILES) EXTENDS NORTHEAST FROM CREE LAKE TO WOLLASTON LAKE AND SWINGS NORTHWEST FURTHER TO BLACK LAKE. THE AREA GAINED PROMINENCE WITH THE GULF DISCOVERY OF URANIUM AT WOLLASTON LAKE, AND WITH OTHER NUMEROUS URANIUM FINDS DISTRIBUTED ALONG THE EASTERN EDGE OF THE BASIN UNDERNEATH THE SANDSTONE COVER.
327. WALKER, P. G., PROCTER, R. M., GEOL. SURV. CAN., EMR. I
REGIONAL GEOPHYSICS NORTHERN CANADA, 1974-:

TO OBTAIN, INTERPRET AND MAKE AVAILABLE TO OTHER SCIENTISTS IN THE PROGRAM, GEOPHYSICAL INFORMATION OF ASSISTANCE IN DESCRIBING THE STRUCTURAL CONFIGURATIONS WITHIN AND BETWEEN THE SEDIMENTARY BASINS OF NORTHERN CANADA IN SUPPORT OF MINERAL INVENTORY OBJECTIVES.
328. WASHKURAK, S., GEOL. SURV. CAN. I
HOLOGRAPHIC ENHANCEMENT OF GEOPHYSICAL DATA, 1970-:

SEE: PRESENT AND FUTURE SATELLITE PROGRAM OF USA; GEOL. SURV. CAN., PAPER 75-13, P. 321-323, 1975.
- GEOMAGNETISM**
329. ALDRIDGE, K. D., UNIV. BRITISH COLUMBIA, GEOPH. I
OSCILLATIONS OF ROTATING FLUIDS, 1974-75:

OSCILLATIONS OF A ROTATING FLUID WHICH OWE THEIR EXISTENCE TO ROTATION ARE STUDIED EXPERIMENTALLY. THE DEPENDENCE OF EIGENFREQUENCY ON TIME SINCE THE CONTAINER BEGAN ROTATING FROM REST IS MEASURED AND COMPARED TO RESULTS FROM LINEAR THEORY.
330. BEALES, F. W., JOWETT, E. C., PEARCE, G. W., STRANGWAY, D. W., UNIV. TORONTO, GEOL. I
PALEOMAG. AND ORIGIN OF MISSISSIPPI-TYPE ORES, 1975-: M.SC. THESIS.

DETERMINATION OF STRATIGRAPHIC RELATIONSHIPS BETWEEN HOST ROCKS AND ORE USING PALEOMAGNETISM.
331. CHRISTIE, K. W., GEOL. SURV. CAN. I
PALEOMAGNETISM OF THE HOPEDALE DIABASE DYKES, 1972-:
332. DVORAK, Z., RAST, N., SCHLOESSIN, H. W., UNIV. NEW BRUNSWICK, GEOL. I
ELECTRICAL CONDUCTIVITY MODELS OF EARTH'S CRUST, 1974-76:

SEE: ELECTRICAL CONDUCTIVITY MODELS OF THE CRUST; CAN. J. EARTH SCI., V. 12, NO. 6, P. 962-970, 1975.

PHYSICAL PROPERTIES OF POTASH FROM SE. NEW BRUNSWICK BEFORE AND DURING FRACTURE.
333. EDWARDS, R. N., GARLAND, G. D., BAILEY, R. C., DUNCAN, P. M., UNIV. TORONTO, PHYS. I
CONTROLLED SOURCE ELECTROMAGNETIC SOUNDING, 1975-77:

LONG POWER LINES ARE FED WITH A CURRENT MODULATED INTO PULSES OF RANDOMLY VARYING WIDTH. AT RECEIVING STATIONS THE CROSS CORRELATION IS CALCULATED BETWEEN THE SIGNAL AS DETECTED BY A FLUXGATE MAGNETOMETER AND THE SOURCE. THIS TECHNIQUE GREATLY REDUCES NOISE, ALLOWING OBSERVATIONS TO BE MADE UP TO 20 KM FROM A LINE CARRYING ONE AMPERE. THE CROSS CORRELOGRAMS ARE COMPARED WITH MODEL CURVES IN ORDER TO ESTIMATE ELECTRIC CONDUCTIVITY AT DEPTH IN THE CRUST.
334. EDWARDS, R. N., GREENHOUSE, J. P., BAILEY, R., UNIV. WATERLOO-TORONTO, EASCI I
GEOMAGNETIC INDUCTION IN EASTERN UNITED STATES, 1973-76:

RECORDING MAGNETOMETERS HAVE BEEN PLACED AT 29 SITES RANGING FROM WEST VIRGINIA TO THE CANADIAN BORDER AND COVERING THE APPALACHIAN AND COASTAL PLAIN PROVINCES. INFORMATION IS BEING SOUGHT ON THE ELECTRICAL CONDUCTIVITY OF THE LOWER CRUST AND UPPER MANTLE BENEATH THIS REGION. THESE STATIONS EXTEND SOUTHWARD COVERAGE OF EASTERN CANADA PREVIOUSLY OBTAINED BY THE EARTH PHYSICS BRANCH, DEMR, THE UNIVERSITY OF TORONTO, AND DALHOUSIE, UNIVERSITY.
335. FAHRIG, W. F., GEOL. SURV. CAN. I
PALEOMAGNETISM OF DYKES OF WEST GREENLAND, 1972-:

SEE: PALEOMAGNETISM OF THE MESOZOIC COAST PARALLEL DOLERITE DYKES OF WEST GREENLAND; CAN. J. EARTH SCI., V. 12, NO. 7, P. 1244-1248, 1975.
336. FAHRIG, W. F., GEOL. SURV. CAN. I
PALEOMAG. PROTEROZOIC-DEVON. ACROSS BOOTHIA ARCH, 1974-:
337. FOSTER, J. H., GEOL. SURV. CAN. I
PALEOMAG. PEVERSALS PALEOZOIC ST. LAWRENCE PLATFORM, 1972-:
338. FOSTER, J. H., GEOL. SURV. CAN. I
PALEOMAG., NATKUSIAK VOLCANICS, VICTORIA ISLAND, 1975-:
339. FOSTER, J. H., GEOL. SURV. CAN. I
PALEOMAGNETIC STRAT. ABITIBI BELT, ONTARIO-QUEBEC, 1975-:
340. HALLS, H. C., UNIV. TORONTO (ERINDALE), GEOL. I
PALEOMAG. KEWEENAWAN SLATE ISLANDS, L. SUPERIOR, 1973-78:

SEE: SHOCK-INDUCED REMANENT MAGNETIZATION IN LATE PRECAMBRIAN ROCKS FROM LAKE SUPERIOR; NATURE, V. 255, P. 692-695, 1975.

LATE PRECAMBRIAN KEWEENAWAN VOLCANICS AND ASSOCIATED DYKES FROM THE SLATE ISLANDS ARE FOUND TO BE STRONGLY SHATTER-CONED AND ALSO TO POSSESS A PROMINANT SECONDARY COMPONENT OF MAGNETIZATION WHOSE DIRECTION (D=85, I=47) CAN BE FOUND FROM THE COMMON INTERSECTION POINT OF CONVERGING REMAGNETIZATION CIRCLES. BOTH FEATURES ARE HIGHLY UNUSUAL IF NOT UNIQUE, FOR KEWEENAWAN ROCKS, SUGGESTING COMMON CAUSE, THOUGHT TO BE INTENSE SHOCK, POSSIBLY RESULTING FROM METEORITE IMPACT.
341. HOOD, P. J., GEOL. SURV. CAN. I
OCEAN AEROMAGNETICS, 1965-:
342. HOOD, P. J., GEOL. SURV. CAN. I
QUEENAIR HIGH RESOLUTION AEROMAGNETICS, 1968-:
343. MCGLYNN, J. C., GEOL. SURV. CAN. I
PALEOMAGNETISM, PROTEROZOIC RED BEDS, W. CANADA, 1968-:
344. MCGRATH, P. H., GEOL. SURV. CAN. I
AEROMAGNETIC INTERPRETATION, APPALACHIA, 1968-:
345. MURTHY, G. S., GUNTUR, P., MEMORIAL UNIV., PHYS. I
PRECAMBRIAN PALEOMAGNETISM, 1973-78:

SEE: PALEOMAGNETISM OF STEEL MOUNTAIN AND INDIAN HEAD ANORTHOSITES FROM WESTERN NEWFOUNDLAND; CAN. J. EARTH SCI., V. 13, NO. 1, P. 75-83, 1976.

ANORTHOSITES FALL ON A SIMPLE BELT WHEN PLOTTED ON PRE-CONTINENTAL DRIFT RECONSTRUCTIONS. WORK IS CONTINUING ON PALEOMAGNETIC INVESTIGATIONS OF ANORTHOSITIC AND OTHER PRECAMBRIAN ROCK UNITS FROM NEWFOUNDLAND, LABRADOR AND GREENLAND.

346. SCHWARTZ, E.J., GEOL. SURV. CAN.:
PALEOMAGNETISM OF CIRCUMUNGAVA BELT, 1973-:

REMOTE SENSING

347. SEGUIN, M.K., LAMBERT, G., GRENON, A., SENECHAL, J.N., LAFOND, D.,
UNIVERSITE LAVAL:
PALEOMAGNETISME DES OPHIOLITES DU SUD DU QUEBEC, 1974-77:

SEE: PETROLOGICAL FEATURES AND MAGNETIC PROPERTIES OF
PILLOW LAVAS FROM THE THETFORD MINES OPHIOLITE (QUEBEC):
CAN. J. EARTH SCI., V.12, NO.8, P.1405-1420, 1975.

ETUDE DETAILLEE DE L'AIMANTATION REMANENTE ET DES AUTRES
PROPRIETES MAGNETIQUES DES LAVES A COUSSINS OPHIOLITIQUES
D'AGE CAMPRIEN. DETERMINATION DE LEUR AGE PAR METHODE
PALEOMAGNETIQUE ET COMPARAISON DES RESULTATS OBTENUS AVEC
CEUX PAR LA METHODE RADIOGENIQUE: POTASSIUM-ARGON.

348. SRIVASTAVA, S.P., GEOL. SURV. CAN.:
METHODS DIURNAL CORRECTION, MARINE MAGNETIC DATA, 1972-77:

ASSESSMENT OF METHODS FOR APPLYING DIURNAL CORRECTION TO
MARINE MAGNETIC DATA AND OF GRADIOMETER FOR ITS USE IN
APPLYING DIURNAL CORRECTION.

349. SRIVASTAVA, S.P., GEOL. SURV. CAN.:
SEA FLOOR SPREADING HISTORY, LABRADOR SEA, 1974-77:

SEE: GEOPHYSICAL MEASUREMENTS IN LABRADOR SEA AND DAVIS
STRAIT: TRANS. AM. GEOPHYS. UNION, V.55, NO.6, 381, 1975.

A DETAILED SURVEY OF THE MID LABRADOR SEA RIDGE TO
DETERMINE THE AGE AND MAGNETIC PROPERTIES OF ROCK SAMPLES
COLLECTED NEAR THE EXPOSED PORTION OF THE RIDGE.
RECONNAISSANCE GEOPHYSICAL SURVEY OF WEST GREENLAND
CONTINENTAL MARGIN AND RELATE TO CANADIAN CONTINENTAL
MARGIN. HISTORY OF EVOLUTION OF THE LABRADOR SEA.

350. STRANGWAY, D.W., LANOIX, M., PEARCE, G.W., HOYE, G.N., UNIV. TORONTO,
GEOL.:
MAGNETISM IN METEORITES AND LUNAR SAMPLES, 1975-: M.SC.
THESIS.

351. STRANGWAY, D.W., SHARPE, H.N., RYLAARSMA, J.C., UNIV. TORONTO,
GEOL.:
MODELS OF LUNAR AND PLANETARY EVOLUTION: PH.D. THESIS.

SEE: MAGNETIC ANOMALIES NEAR VAN DE GRAAFF CRATER: PROC.
6TH LUNAR SCI. CONF., P.2975-2986, 1975.

352. SYMONS, D.T.A., GEOL. SURV. CAN., WINDSOR:
PALEOMAG. PRINCE RUPERT PLUTONS, B.C., 1974-:

353. TIFFIN, D.L., GEOL. SURV. CAN.:
GEOLOGICAL-GEOPHYSICAL STUDIES BEAUFORT SEA, 1971-:

GRAVITY

354. BARLOW, R.B., ONTARIO DIVISION MINES:
BIRCH-UCHI-CONFEDERATION LAKES GRAVITY SURVEY, 1975-76:

FIELD WORK COMPLETED - GRAVITY VALUES REDUCED - MAP BEING
PREPARED. GRAVITY STATION DENSITY EQUALS ONE STATION PER
TWO SQUARE MILES (AVERAGE) 2634 STATIONS OBTAINED - 1300
DENSITY DETERMINATIONS MADE.

355. BRISBIN, W.C., UNIV. MANITOBA, EARTH:
GRAVITY-STRUCT. STUDIES, NW. ONTARIO, 1972-77:

SEE: MANITOBA, 1974 ANN. REP., 1975.

OVER 1000 STATIONS HAVE NOW BEEN ESTABLISHED COVERING
KENORA-FALCON L. GREENSTONE BELT AND ADJACENT INTRUSIVE
GRAPHITIC BODIES. MASS MODELLING AND DERIVED THEORETICAL
ANOMALIES SUGGESTS GRAPHITE-GREENSTONE CONTACTS EXTEND TO
VARIABLE DEPTHS UP TO 16 KM.

356. ELLIS, R.M., SPENCE, G.D., CLOWES, R.M., UNIV. BRITISH COLUMBIA,
GEOPH:
GRAVITY SURVEY IN S. ROCKY MTN. TRENCH, 1974-76: PH.D. THESIS.

A GRAVITY SURVEY WAS CARRIED OUT IN THE S. ROCKY MTN.
TRENCH TO TEST A PARTICULAR INTERPRETATION GIVEN IN A
SEISMIC P-WAVE STUDY. IT SUGGESTED A HIGH-ANGLE CRUSTAL
FAULT CROSSING THE TRENCH NEAR RADIIUM. IF DENSITY
CONTRAST BETWEEN BASEMENT & COVER ROCKS IS 1 G/CC, AN
ANOMALY OF 18MGAL IS EXPECTED. SURVEY SHOWED A
PROMOUNCED LOW COINCIDING WITH TRENCH THROUGH OUT AREA-
NOT CONSISTENT WITH FAULT MODEL. LOW DUE TO CENOZOIC
FILL 500M THICK. ALTERNATIVE HYPOTHESES FOR SEISMIC DATA
NEED TO BE CONSIDERED.

357. MADEAU, A., QUEBEC DEP. NAT. RES., MRN:
LEVE GRAVIMETRIQUE NORANDA, QUEBEC, 1975-:

358. ANDERSON, D.T., UNIV. MANITOBA, EARTH:
PHOTOINTERPRETATION, E. MANITOBA, 1970-77:

COMPILING REMOTE SENSING INFORMATION FROM AIRPHOTOS,
LANDSAT IMAGERY AND AEROMAGNETIC TO SHOW
INTERRELATIONSHIPS BETWEEN LITHOLOGY, STRUCTURE, AND
IMAGERY.

359. CLARKE, G.K.C., NAROD, B.B., GOODMAN, R.H., UNIV. BRITISH COLUMBIA,
GEOPH:
RADIOGLACIOLOGY, 1972-78: PH.D. THESIS.

AN AIRBORNE 840 MHZ PULSED RADAR SYSTEM HAS BEEN
DEVELOPED FOR GLACIER DEPTH PROFILING. EXPERIMENTS TO
MEASURE ELECTROMAGNETIC REFLECTANCE, INTERNAL
SCATTERING AND ATTENUATION, GLACIER BED ROUGHNESS AND
DEPOLARIZATION ARE BEING ATTEMPTED. OTHER POTENTIAL
APPLICATIONS ARE AIRBORNE BATHYMETRY OF FRESH WATER
BODIES, SEA-ICE THICKNESS MEASUREMENT AND SOUNDING
THROUGH SALT DEPOSITS.

360. DAVIS, J.L., GEOL. SURV. CAN.:
IN-SITU METER RELAT. PERMITTIVITY EARTH MATERIAL, 1975-:

TO DEVELOP AN INSTRUMENT IN THE 10 TO 1000 MHZ RADAR
RANGE THAT CAN MEASURE THE IN-SITU ELECTRICAL
CHARACTERISTICS (RELATIVE PERMITTIVITY) OF EARTH
MATERIALS IN THE FIRST METER BELOW THE SURFACE, TO
ESTABLISH THE RELATIONSHIP BETWEEN RELATIVE PERMITTIVITY
AND SOIL MOISTURE IN THIS RADAR FREQUENCY RANGE FOR
VARIOUS SOIL TYPES WITH SEASONAL RAINFALL AND TEMPERATURE.

361. GRASTY, R.L., GEOL. SURV. CAN.:
GAMMA RAY SPECTROMETRY (TECHNIQUE DEVELOPMENT), 1972-:

362. ROBINSON, J.E., CARROLL, S., UNION OIL CO. CAN. LTD.:
ENHANCEMENT OF LANDSAT DATA FOR SED-EXPLORATION, 1974-75:

TO DIGITALLY ENHANCE AND OPTIMALLY PRESENT MULTISPECTRAL
LANDSAT AND OTHER REMOTELY SENSED INFORMATION FOR USE IN
GEOLOGICAL INTERPRETATION AND EXPLORATION FOR ECONOMIC
MINERALS.

363. SLANEY, V.R., GEOL. SURV. CAN.:
MULTISPECTRAL PHOTOGRAPHY, 1963-:

SEISMOLOGY AND PHYSICS OF INTERIOR

364. ALDRIDGE, K.D., UNIV. BRITISH COLUMBIA, GEOPH:
HYDROMAGNETIC WAVES, 1974-75:

SEE: INERTIAL WAVES AND THE EARTH'S OUTER CORE: GEOPHY. J.
ASTRO. SOC. V.42, P.337-345, 1975.

THE EXISTENCE OF WAVE SOLUTIONS TO THE POINCARÉ EQUATION
FOR A ROTATING FLUID CONFINED BETWEEN RIGID SPHERICAL
BOUNDARIES IS INVESTIGATED. THE POINCARÉ EQUATION IS OF
GEOPHYSICAL INTEREST BECAUSE IT IS CENTRAL TO THE STUDY
OF HYDROMAGNETIC WAVES IN THE EARTH'S OUTER CORE.

365. CLOWES, R.M., CUMMING, W.B., ELLIS, R.M., UNIV. BRITISH COLUMBIA,
GEOPH:
SOUTHERN TRANS-B.C. SEISMIC PROFILE, 1973-76: M.SC. THESIS.

DATA ACQUISITION ALONG A SEISMIC REFRACTION PROFILE
EXTENDING ACROSS S. BC IS COMPLETE. PROFILE IS
PARTIALLY REVERSED AND USES MINE BLASTS OF KAISER
RESOURCES AS EASTERN SOURCE, BLASTS OF LORNEY MINING
BETHLEHEM COPPER AS WESTERN SOURCE. SEISMOGRAMS AT
DISTANCES FROM 3 TO 400 KM HAVE BEEN RECORDED WITH MAX
STATION INTERVALS OF 15 KM. THE DATA RECORDED ON FM TAPE
ARE DIGITIZED AND HAVE BEEN COMPILED INTO RECORD SECTIONS.
ANALYSIS AND INTERPRETATION IS IN PROGRESS.

366. GARLAND, G.D., ALLIS, R.G., UNIV. TORONTO, PHYS.:
HEAT FLOW THROUGH STABLE LAKES, 1974-77: PH.D. THESIS.

THE STABILITY OF SELECTED LAKES FOR HEAT FLOW
MEASUREMENTS IN NORTHWEST ONTARIO WAS DEMONSTRATED IN
1974. DURING 1975 A SELECTION WAS MADE OF ADDITIONAL
LAKES ON A PROFILE ACROSS FOUR MAJOR BELTS OF THE SHIELD.
WATER TEMPERATURE MEASUREMENTS MADE AT FOUR TIMES OF THE
YEAR CONFIRM THE SUITABILITY OF THESE LAKES. HEAT FLOW
IS MEASURED WITH AN OCEANIC TYPE PROBE WHICH PENETRATES
THE LAKE BOTTOM SEDIMENTS. THERMAL CONDUCTIVITY IS
DETERMINED IN SITU.

367. GREEN, A.G., HALL, D.H., STEPHENSON, O.G., UNIV. MANITOBA, EARTH CRUSTAL STRUCTURE USING SEISMIC REFLECTIONS, 1973-76:
- THE AULNEAU GRANITE BATHOLITH IN NW ONTARIO WAS SUBJECTED TO A CONVENTIONAL SEISMIC REFLECTION SURVEY. REFLECTIONS WERE OBSERVED FROM A NUMBER OF NEAR VERTICAL STRATIGRAPHIC/STRUCTURAL BOUNDARIES IN THE GREENSTONE BELTS TO THE NORTH OF THE BATHOLITH. THE APPARENT DIP AND DEPTH OF THREE MAJOR, NEAR HORIZONTAL DISCONTINUITIES (RIEL 1, RIEL 2, MOHO) HAVE BEEN ACCURATELY DETERMINED. A COMMON REFLECTION POINT SURVEY WAS CONDUCTED ACROSS THE SIOUX NARROWS GREENSTONE BELT TO THE EAST OF THE AULNEAU BATHOLITH IN 1975.
368. GREEN, A.G., HALL, D.H., STEPHENSON, O.G., UNIV. MANITOBA, EARTH CRUSTAL SURVEYS, 1975-77:
- THE UNIVERSITY OF MANITOBA HAS SET UP A SEISMIC OBSERVATORY AT STAR LAKE IN THE WHITESHELL PARK (EASTERN MANITOBA). DATA FROM A SHORT PERIOD THREE COMPONENT SYSTEM AND A LONG PERIOD TWO COMPONENT SYSTEM IS CURRENTLY BEING COLLECTED. SCREENED AND DIGITALLY PROCESSED. VARIOUS MODELLING TECHNIQUES (SURFACE WAVE DISPERSION, SPECTRAL RATIO TESTS) WILL SOON BE APPLIED IN ORDER TO INVESTIGATE THE STRUCTURE OF THE CRUST AND UPPER MANTLE OF THE PRECAMBRIAN SHIELD.
369. HAJNAL, Z., UNIV. SASKATCHEWAN, GEOL. CRUSTAL SEISMIC STUDIES, S. SASKATCHEWAN, 1970-80: M.SC. THESIS.
- A CRUSTAL SEISMIC PROGRAM IS FOCUSED ON SCIENTIFICALLY AND ECONOMICALLY INTERESTING AREAS IN SASKATCHEWAN. AT PRESENT THE STUDY IS DIRECTED OVER THE NELSON TREND IN SOUTHEASTERN SASKATCHEWAN. DERIVATION OF A WORKABLE HYPOTHESIS TO ACCOUNT FOR THE ORIGIN OF THIS ANOMALOUS ZONE WOULD BE AT MAJOR ECONOMIC AND SCIENTIFIC SIGNIFICANCE.
370. HAWORTH, R.T., GEOL. SURV. CAN. GEOPHYSICAL STUDY GEOLOGICAL ZONES, NEWFOUNDLAND, 1975-77:
- SEE: PALEOZOIC GEOLOGY OF NORTHEAST GULF OF ST. LAWRENCE, AND MARINE GEOSCIENCE SURVEY NORTHEAST OF NEWFOUNDLAND: GEOL. SURV. CAN., PAPER 76-1A, P. 1-15, 1976.
- GRAVITY, MAGNETIC, SHALLOW SEISMIC REFLECTION AND BATHYMETRIC SURVEY BETWEEN NE. SHORE NEWFOUNDLAND AND INNER LIMIT OF 73-019 MINNA SURVEY AND CORRELATION OF NEWFOUNDLAND GEOLOGICAL AND TECTONIC TRENDS WITH POTENTIAL FIELD TRENDS TO INTERPRET THE OFFSHORE EXTENSION OF THE ZONATION OF NEWFOUNDLAND.
371. HOBSON, C.D., GEOL. SURV. CAN. SEISMIC REFRACTION, SVERDRUP BASIN, ARCTIC, 1972-:
372. HUNTER, J.A., GEOL. SURV. CAN. HAMMER SEISMIC SURVEYS, 1968-:
- SEE: HAMMER SEISMIC STUDIES OF SURFICIAL MATERIALS, BANKS ISLAND, ELLESMERE ISLAND, AND BOOTHIA PENINSULA, NWT: GEOL. SURV. CAN., PAPER 75-18, P. 13-17, 1975.
373. KEEN, C.E., GEOL. SURV. CAN. GEOPHYSICS CONTINENTAL SHORE-RISE OFF E. CANADA, 1972-:
- INVESTIGATIONS OF THE NEWFOUNDLAND BASIN- COMPLETION OF STUDIES OF THE MAGNETIC QUIET ZONE AND MESOZOIC HISTORY OF THE N.W. ATLANTIC. STUDIES OF DENSITY DIFFERENCES BETWEEN THE CONTINENTAL AND OCEANIC UPPER MANTLE USING GRAVITY ANOMALIES.
374. HEREU, R.F., UNIV. W. ONTARIO, GEOP. CRUST AND UPPER MANTLE SOUNDING, 1972-78:
- SEE: A COMPARISON OF ADAPTIVE PROCESSING TECHNIQUES WITH ROOT BEAM FORMING METHODS: GEOPHYS. J., ROY. ASTR. SOC., V. 42, P. 653-670, 1975.
- A VERY DETAILED SYSTEMATIC STUDY OF THE COMPLEX TOP 800 KM OF THE UPPER MANTLE IS UNDER WAY. ARRAY RECORDINGS OF EARTHQUAKES AT 3 UKMEA SEISMIC ARRAYS FORM THE BASIS OF THIS WORK. OVER 700 EARTHQUAKES IN THE 12 TO 35 DEGREE DISTANCE RANGE ARE BEING ANALYSED. AN ADDITIONAL SMALL SEISMIC ARRAY WAS SET UP AT LONDON ONT. TO OBTAIN DATA FOR RAY PATHS FROM THE EARTHQUAKE BELTS TO EASTERN CANADA. THIS STUDY ALSO INVOLVES THE DEVELOPMENT AND IMPROVEMENT OF NEW HIGH RESOLUTION DECONVOLUTION AND VELOCITY FILTERS.
375. OVERTON, A., GEOL. SURV. CAN. SEISMIC-ARCTIC CONTINENTAL SHELF-COASTAL MARGIN, 1975-:
- SEE: ICE RECONNAISSANCE ON THE BEAUFORT SEA: GEOL. SURV. CAN., PAPER 76-1A, P. 419, 1976.
376. ROBIN, P.-Y.F., UNIV. TORONTO (ERINDALE), GEOL. PHYS. PROPERTIES, PHASE CHANGES AT HIGH PRESSURES, 1974-77:
- FACILITIES ARE DEVELOPED TO STUDY ELECTRICAL AND SEISMIC PROPERTIES IN EARTH MATERIALS AT PRESSURES UP TO 30 KBAR AND/OR AT HIGH TEMPERATURES. SEVERAL PROBLEMS ARE EXAMINED. 1. THE EFFECTS OF RAPID DISPLACIVE PHASE TRANSITIONS ON THE TRANSMISSION OF SEISMIC WAVES. 2. ACCURATE ELASTIC & DATA OF SELECTED IGNEOUS ROCKS.
377. ROCHESTER, M.G., CROSSLEY, D.J., MEMORIAL UNIV., PHYS. THEORETICAL SOLID-EARTH GEOPHYSICS, 1961-:
- SEE: CAN PRECESSION POWER THE GEOMAGNETIC DYNAMO: GEOPHYS. J., V. 43, P. 661-678, 1975.
- IMPROVE PHYSICAL THEORY OF DYNAMICS OF EARTH AS A PLANET: EFFECTS OF INTERNAL STRUCTURE AND PROPERTIES (ESPECIALLY LIQUID CORE) ON EARTH'S ROTATION, TIDAL DEFORMATION, FREE OSCILLATIONS: USE GEOPHYSICAL DATA AS FILTER TO TEST FUNDAMENTAL THEORIES OF GRAVITATION: EXAMINE ENERGETICS OF POSSIBLE MECHANISMS FOR TRANSFERRING POWER TO GEOMAGNETIC FIELD RAPIDLY ENOUGH TO OFFSET OHMIC DISSIPATION IN CORE: PROVIDE THEORETICAL BASIS FOR INTERNATIONAL ADOPTION NEW ASTRONOMICAL-GEODETIC CONSTANTS BY 1980.
378. STESKY, R.M., HALL, H.C., UNIV. TORONTO (ERINDALE), GEOL. SHOCK-INDUCED MICROFRACTURING IN PC. ROCKS, 1975-:
- TO TEST THE RELEVANCE OF CRACK STUDIES TO PRECAMBRIAN GEOLOGICAL PROBLEMS, TO EXAMINE CHARACTERISTICS OF SHOCK CRACKS NEAR METEORITE IMPACT SITES (SLATE ISLANDS, LAKE SUPERIOR), AND TO ESTABLISH CRITERIA FOR IDENTIFYING IMPACT CRATERS LACKING SHATTER CONES AND DEFORMATION LAMELLAE.
379. STEWART, I.C.F., MEMORIAL UNIV., PHYS. SEISMOTECTONIC STUDIES OF NEWFOUNDLAND, 1974-78:
- PORTABLE SEISMOGRAPHS WILL BE USED TO MONITOR LOCAL & TELESEISMIC EARTHQUAKES & QUARRY BLASTS, TO DETERMINE CRUSTAL & UPPER MANTLE STRUCTURE IN Nfld. FIXED HIGH-GAIN INSTRUMENTS AT ST. JOHN'S & CORNER BROOK WILL PROVIDE A REFERENCE WHEN INTERPRETING P-WAVE RESIDUALS. LOCAL SEISMICITY WILL BE RECORDED ALSO, & DATA USED FOR RISK & STRUCTURAL STUDIES. CRUSTAL THICKNESS DETERMINATION MAY BE USED IN DERIVING THE TECTONIC HISTORY OF THE REGION. THE PROJECT MAY BE EXTENDED TO LABRADOR.

GEOTECHNIQUE

MUSKEG

380. JARRETT, P.M., LEE, R.A., RIDDELL, D.V.B., ROYAL MILITARY COLLEGE: ENGINEERING PROPERTIES PEAT, 1970-78:
- STUDY OF ROAD CONSTRUCTION ON PEAT, DEVELOPMENT OF METHODS TO ASSESS ENGINEERING PROPERTIES OF PEAT IN THIS RESPECT, AND THE USE OF SYNTHETIC FABRICS AS REINFORCEMENT OF MUSKEG SURFACE MAT TO ALLOW EMBANKMENT CONSTRUCTION.
381. MATYAS, E.L., LELIEVRE, B., WHITE, O.L., UNIV. WATERLOO, CIVIL: SHORELINE EROSION, 1972-76: M.SC. THESIS.
- STUDY OF THE GEOTECHNICAL AND HYDRODYNAMICAL ASPECTS OF SHORELINE EROSION ON LAKE ONTARIO BETWEEN NIAGARA-ON-THE-LAKE AND ETOBICOKE CREEK IS ESSENTIALLY COMPLETED. THE RESULTS WILL BE REPORTED IN FOUR PARTS. PART I, SHORELINE EROSION MEASUREMENTS HAS BEEN SUBMITTED, AND PART II, GEOTECHNICAL ASPECTS IS ESSENTIALLY COMPLETED.

PERMAFROST

382. BAKER, T.H.W., NAT. RESEARCH COUNCIL, DBR: 1
DEFORMATION & STRENGTH OF FROZEN & THAWING SOIL, 1971-79:

TO INCREASE KNOWLEDGE CONCERNING THE DEFORMATION CHARACTERISTICS AND STRENGTH PROPERTIES OF FROZEN AND THAWING SOILS AND TO DEVELOP INSITU METHODS FOR DETERMINING THE STRENGTH OF FROZEN GROUND IN THE FIELD. TO ESTABLISH A CORRELATION BETWEEN LABORATORY AND FIELD STRENGTH PARAMETERS.
383. BROWN, R.J.E., NAT. RESEARCH COUNCIL, DBR: 1
PERMAFROST DISTRIBUTION IN CANADA, 1953-:

SEE: PERMAFROST INVESTIGATIONS IN QUEBEC AND NEWFOUNDLAND (LABRADOR); DBR TECH. PAPER 449, NAT. RESEARCH COUNCIL 14966, 1975.

PERMAFROST GROUND SURFACE ENERGY EXCHANGE, THOMPSON, MANITOBA. PERMAFROST GROUND TEMPERATURES AND TERRAIN STUDIES, NORTHERN MANITOBA AND KEEWATIN DISTRICT. ALPINE PERMAFROST STUDIES, SOUTHERN ALBERTA AND BRITISH COLUMBIA.
384. GOODRICH, L.E., JOHNSTON, G.H.J., PENNER, E., NAT. RESEARCH COUNCIL, DBR: 1
GROUND THERMAL REGIME, 1970-80:

DEVELOP & APPLY NUMERICAL MODELS FOR GROUND-THERMAL REGIME IN NATURAL & DISTURBED CONDITIONS: APPARATUS & MEASUREMENT SOIL THERMAL CONDUCTIVITY IN FIELD & LABORATORY: THERMAL EVALUATION ROAD EMBANKMENT, MACKENZIE HIGHWAY.
385. HEGINBOTTOM, J.A., GEOL. SURV. CAN.: 1
EROSION IN A PERMAFROST ENVIRONMENT, 1969-:
386. JOHNSTON, G.H., NAT. RESEARCH COUNCIL, DBR: 1
STRUCTURES IN PERMAFROST, 1950-80:

PREPARATION OF MANUAL ON PERMAFROST ENGINEERING. FIELD OBSERVATIONS OF PERFORMANCE OF FOUNDATIONS OF BUILDINGS, DYKES ETC.
387. JOHNSTON, G.H., NAT. RESEARCH COUNCIL, DBR: 1
INSULATED EMBANKMENTS ON PERMAFROST, 1972-80:
388. NICHOLSON, F.H., GRANBERG, H.B., LEWIS, J., JONES, I.G., MCGILL UNIV., GEOG.: 1
PERMAFROST DISTRIBUTION AMELIORATION GROUNDWATER, 1971-77:

SEE: SNOW DEPTH MAPPING FROM AERIAL PHOTOGRAPHS FOR USE IN PERMAFROST PREDICTION: PROC. 32ND EASTERN SNOW CONFERENCE, 1965.

PERMAFROST DISTRIBUTION AND PREDICTION BASED ON 100 SITES TO 130M DEPTH, PREDICTION BASED ON RELATIONSHIP OF GROUND TEMP. TO SNOW AND INDIRECT GROUNDWATER MEASURES. SNOW MAPPING BY SEQUENCE AERIAL PHOTOS IN SNOWMELT PERIOD. SUPRAPERMAFROST GROUNDWATER STUDIED BY SHALLOW WELLS AND THERMOCABLES. PERMAFROST AMELIORATION BY SNOWFENCES AND STRIPPING VEG. SHOWS GAIN OF 20 MILLION MJ2 PA AT 5M DEPTH GIVING RISE OF 2, 5 DEGS OVER 4 YEARS. SNOW ROLE IN HEAT BUDGET BY DETAILED MICROMET TECHNIQUES WITHIN AND ABOVE SNOW.
389. PENNER, E., NAT. RESEARCH COUNCIL, DBR: 1
INFLUENCE OF STEEL POSTS ON GROUND TEMPERATURES, 1975-77:

FROST HEAVING AROUND FOOTINGS OF TRANSMISSION TOWERS IS AGGRAVATED BY EXCESSIVE HEAT WITHDRAWAL FROM THE SOIL BY STEEL SUPERSTRUCTURES. AN INSULATED TOWER LEG INSTALLATION HAS INSTRUMENTED INCLUDING THE SURROUNDING SOIL TO ASSESS THE INFLUENCE OF HORIZONTALLY PLACED INSULATION ON THE THERMAL PATTERN AND FROST HEAVING CHARACTERISTICS.

ROCK MECHANICS

390. BARRON, K., BIELENSTEIN, H.U., GRANT, F., CANMET, EMR: 1
ROOF STABILITY IN COAL MINES, 1970-:
391. COATES, D.F., CANMET, EMR: 1
PIT SLOPE TASK, 1972-78:

AN ENGINEERING MANUAL FOR USE BY STAFF ENGINEERS AT MINING PROPERTIES WILL BE PUBLISHED ON COMPLETION OF TASK. WORK IS DIRECTED TOWARD CHAPTERS ON GROUNDWATER, BLASTING, STRUCTURAL GEOLOGY, MATERIAL TESTING, MONITORING, DESIGN ANALYSIS AND SUPPORT SYSTEMS.

392. CURRIE, J.B., DAS GUPTA, U., RODRIGUEZ, A., UNIV. TORONTO, GEOL.: 1
MECHANICS-DEVELOP. FRACTURES IN SEDIMENTARY STRATA: PH.D. THESIS.
393. EDEN, H.J., PENNER, E., GRATTAN-BELLEN, P.E., NAT. RESEARCH COUNCIL, DBR: 1
EXPANSION OF PYRITIC SHALE, OTTAWA AREA, 1969-79:

SEE: CONCRETE DETERIORATION AND FLOOR HEAVE DUE TO BIOGEOCHEMICAL WEATHERING OF UNDERLYING SHALE: CAN. GEOTECH. J., V. 12, P. 372-378, 1975.

TO DEFINE CONDITIONS LEADING TO SWELLING OF PYRITIC SHALE IN PRESENCE OF SULFUR BACTERIA: TO STUDY METHODS OF PREVENTION AND CONTROL OF THE SWELLING AT BUILDING SITES.
394. GADD, N.R., GEOL. SURV. CAN.: 1
GEOLOGICAL VARIABILITY OF MARINE DEPOSITS, 1974-:

SEE: GEOLOGICAL VARIABILITY OF MARINE DEPOSITS, OTTAWA-ST. LAWRENCE LOWLANDS: GEOL. SURV. CAN., PAPER 76-1A, P. 37-41, 1976.
395. HEGINBOTTOM, J.A., GEOL. SURV. CAN.: 1
TERRAIN SENSITIVE EVALUATION-MAPPING, MACKENZIE, 1971-:
396. HERET, E., MILES, P.H., CANMET, EMR: 1
GROUND STRESS DETERMINATIONS FOR MINE DESIGN, 1976-76:

SEE: GROUND STRESSES BELOW 3000 FEET: PROC. TENTH CANADIAN ROCK MECH. SYMP., V. 1, 1975.

TO ESTABLISH GROUND STRESSES WITH DEPTH FOR MINE DESIGN.
397. HUDEC, P.P., UNIV. WINDSOR, GEOL.: 1
SALT EFFECTS ON CONCRETE AGGREGATES, 1974-77:

DIFFERENT SALTS, NaCl, KCl, CaCl2, MgCl2, LiCl WERE USED TO TREAT THE ROCK SAMPLES. WATER SORPTION AT 45% RH AND 95% RH WAS THEN DETERMINED. HIGH CORRELATION WAS OBTAINED BETWEEN WATER SORPTION AND CLAY CONTENT OF THE ROCKS. SALT TREATMENT RESULTED IN SIGNIFICANT INCREASE IN SORPTION AT BOTH HUMIDITIES. HIGH CORRELATION ALSO EXISTS BETWEEN SORPTION CAPACITY OF ROCKS AND THEIR WEATHERING SUSCEPTIBILITY. SALTS, SUCH AS USED FOR WINTER DEICING ARE SHOWN TO INCREASE WEATHERING.
398. HUDEC, P.P., UNIV. WINDSOR, GEOL.: 1
PROPERTIES OF SHALES, 1975-76:

SHALE SAMPLES FROM VARIOUS FORMATIONS IN ONTARIO HAVE BEEN SUBJECTED TO VARIOUS SLAKING, WATER SORPTION, FREEZING AND EXPANSIVITY TESTS. THE RESULTS WILL BE CORRELATED AND A TESTING TECHNIQUE THAT BEST EVALUATES SHALES FOR USE IN EMBANKMENTS AND SWAMP FILLS WILL BE RECOMMENDED.
399. KENNEY, T.C., UNIV. TORONTO, CIVIL: 1
STABILIZING CLAY SLOPES BY DRAINAGE, 1974-:
400. KENNEY, T.C., UNIV. TORONTO, CIVIL: 1
LOAD-SETTLEMENT PIERS SOCKETED IN WEAK ROCK, 1975-:
401. KING, M.S., UNIV. SASKATCHEWAN, GEOL.: 1
UNDERGROUND ACOUSTIC MEASUREMENTS, 1970-76:

TO DEVELOP ACOUSTIC-WAVE TECHNIQUES FOR USE UNDERGROUND TO LOCATE AND DELINEATE GEOLOGIC DISCONTINUITIES ADJACENT TO MINE WORKINGS, AND TO DETERMINE THE STABILITY OF MINE PILLARS. AN ACOUSTIC BOREHOLE LOGGING SYSTEM HAS BEEN DESIGNED, CONSTRUCTED AND SUCCESSFULLY FIELD-TESTED. A REFINED SYSTEM IS IN THE FINAL STAGES OF CONSTRUCTION.
402. KING, M.S., UNIV. SASKATCHEWAN, GEOL.: 1
FIELD STUDIES OF MICROSEISMIC ENERGY EMISSION, 1974-77:

THE EMISSION OF MICROSEISMIC ENERGY AROUND A BOREHOLE IN A POTASH MINE PILLAR APPEARS TO BE RELATED TO THE STRESS IN THE PILLAR. A PORTABLE MICROSEISMIC COUNTING UNIT HAS BEEN DESIGNED, CONSTRUCTED AND SUCCESSFULLY FIELD TESTED. PRELIMINARY RESULTS WITH THE UNIT HAVE SHOWN PROMISE.

403. KING, M. S., PANDIT, B. I., UNIV. SASKATCHEWAN, GEOL. :
MECHANICAL AND ELECTRICAL PROPERTIES OF ROCKS, 1967-78:
- SEE: ACOUSTIC VELOCITIES AND ELECTRICAL PROPERTIES OF FROZEN SANDSTONES AND SHALES: ABSTRACTS WITH PROGRAMS, GEOL. SOC. AMER-GEOL. ASSOC. CAN., V. 7, NO. 6, P. 797, 1975.
- THE ELASTIC PROPERTIES OF ROCKS ARE BEING MEASURED BY STATIC AND DYNAMIC TECHNIQUES. THE STATIC STRESS-STRAIN RELATIONS AND ULTRASONIC-WAVE VELOCITIES ARE MEASURED SIMULTANEOUSLY ON EACH SAMPLE AS IT IS SUBJECTED TO CHANGES IN TRIAXIAL LOADING CONDITIONS. ALSO MEASURED ARE THE ELECTRICAL RESISTIVITY AND PHASE ANGLE RELATIONSHIPS. THESE TESTS ARE PERFORMED IN A CONTROLLED-ENVIRONMENT CHAMBER AT TEMPERATURES IN THE RANGE -20C TO +25C.
404. MOORE, D. P., MATHEWS, W. H., UNIV. BRITISH COLUMBIA, GEOL. :
RUBBLE CREEK LANDSLIDE, BRITISH COLUMBIA, 1973-76: M. SC. THESIS.
- REPORT IN FINAL STAGES OF EDITING ON A DEVASTATING LARGE LANDSLIDE OCCURRING ABOUT 1856.
405. OWEN, E. B., GEOL. SURV. CAN. :
ENGINEERING GEOLOGY IN CANADA, 1975-:
406. ROBINSKY, E. I., SMITH, W., UNIV. TORONTO, CIVIL :
INSULATED FOUNDATIONS, 1975-: PH. D. THESIS.
- INVESTIGATION INTO THE PHYSICAL AND ECONOMIC ADVANTAGES OF PREVENTING HEAVE OF FOUNDATIONS THROUGH THE USE OF VARIOUS THICKNESSES AND TYPES OF INSULATIONS: 19 TEST SECTIONS ARE BEING MONITORED IN ONTARIO.
407. ROEGIERS, J. C., UNIV. TORONTO, CIVIL :
ENGINEERING CLASSIFICATION OF ONTARIO SHALES, 1973-:
- TO EVALUATE THE TYPICAL BEHAVIOUR ON ONTARIO SHALES, USING CASE HISTORIES AND LABORATORY PROPERTY DETERMINATIONS.
408. ROEGIERS, J. C., UNIV. TORONTO, CIVIL :
INFLUENCE PERMEABILITY FACTOR HYDRAULIC FRACTURES, 1974-:
- TO INVESTIGATE THE DEPENDENCY OF THE PERMEABILITY ON APPLIED STRESS FIELD BOTH FOR GRANITIC AND SEDIMENTARY ROCK TYPES: TESTING PHASE UNDERWAY.
409. ROEGIERS, J. C., UNIV. TORONTO, CIVIL :
DEVELOPMENT "UNIV. LIEGE" CELL, 1975-:
- TO BUILD THE CELL: TO DETERMINE IN-SITU STRESSES IN SOUTHERN ONTARIO.
410. RUTTER, N. W., GEOL. SURV. CAN. :
SURFACE GEOL.-LAND CLASSIFICATION, MACKENZIE, 1971-:
411. WHITE, O. L., FENTON, S. L. A., KARROW, P. F., UNIV. WATERLOO, CIVIL :
GEOTECHNICAL DATA BANK REGION OF WATERLOO, 1972-77: M. SC. THESIS.
- SEE: THE GEOTECHNICAL DATA BANK - THE UNIVERSITY OF WATERLOO: FIELD TRIPS GUIDEBOOK WATERLOO 75, GEOL. ASSOC. CAN., P. 279-285, 1975.
- GEOTECHNICAL DATA NOW LARGELY COLLECTED, CHECKED, PROCESSED AND INCORPORATED INTO STORAGE. LOCAL PACKAGE RETRIEVAL PROGRAMMES UNDER DEVELOPMENT IN ASSOCIATION WITH GSC.
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LIME STABILISATION OF NORTHERN ONTARIO CLAYS, 1975-76:
- TO INVESTIGATE THE POSSIBILITY OF STABILISING NORTHERN ONTARIO CLAYS BY THE ADDITION OF HYDRATED LIME.
413. WHITE, O. L., THOMPSON, J. C., UNIV. WATERLOO, CIVIL :
RESIDUAL STRESSES IN ROCK AT SHALLOW DEPTHS, 1973-:
- FIELD STUDIES OF THE ORIGIN OF HIGH HORIZONTAL RESIDUAL STRESSES ENCOUNTERED AT SHALLOW DEPTHS IN BEDROCK IN THE TORONTO - HAMILTON AREA ARE CONTINUING. LABORATORY MODEL STUDIES ARE DIRECTED AT SIMULATING THE BUCKLING OF NEARSURFACE COMPETENT ROCK. COMPLEMENTARY THEORETICAL INVESTIGATIONS HAVE PRODUCED MATHEMATICAL MODELS WHICH SATISFACTORILY DESCRIBE THE RESULTS OF THE MODEL STUDIES. THE EFFECT OF LOCAL ROCK DISCONTINUITIES ON DESIGN IS NOW BEING INVESTIGATED.
414. YONG, R. N., GEOL. SURV. CAN.-MCGILL U :
DYNAMIC BEHAVIOUR-RESPONSE OF SENSITIVE CLAYS, 1974-:
- RESPONSE OF SENSITIVE CLAY OF CHAMPLAIN SEA DEPOSITS TO DYNAMIC LOADING AND TO ULTIMATELY DETERMINE IF LANDSLIDES CAN BE PRODUCED BY TRAFFIC VIBRATIONS.
- SOIL SCIENCE
415. BOZOUK, M., EDEN, W. J., LAW, T., NAT. RESEARCH COUNCIL, 08R :
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- SEE: MECHANISM OF LANDSLIDES IN Leda CLAY WITH SPECIAL REFERENCE TO THE OTTAWA AREA: PROC. 4TH GUELPH SYMP. ON GEOMORPHOLOGY, UNIV. GUELPH, 1976.
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MODELLING SOIL WATER AND NUTRIENT TRANSPORT, 1974-78:
- SEE: FIELD MEASUREMENT OF HYDRAULIC CONDUCTIVITY - AIR ENTRY PERMEAMETER, AND TEMPERATURE-MOIST. EFFECTS ON NITROGEN TRANSFORMATIONS - MODELLING: CAN. J. SOIL SCI., 1976.
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TUNNEL LINING IN DENSE CLAYEY TILL SOIL, 1972-: PH. D. THESIS.
- INSTRUMENTATION OF TUNNEL IN MISSISSAUGA PAST THREE YEARS TO STUDY FACTORS INFLUENCING THE PRIMARY AND SECONDARY LININGS.
418. FOSCOLOS, A. E., RUTTER, N. W., HUGHES, O. L., GEOL. SURV. CAN. :
SOILS GLACIATED AND UNGLACIATED TERRAIN, 1969-:
419. HUGHES, O. L., GEOL. SURV. CAN. :
SURFICIAL GEOL.-LAND CLASSIFICATION, MACKENZIE, 1971-:
420. KALIN, M., QUEEN'S UNIV., GEOL. :
MULTIVARIATE STATISTICS PREDICTION SOIL MECHANICS, 1974-76:
- TO PREDICT SOIL MECHANICAL PROPERTIES WHICH ARE DIFFICULT OR EXPENSIVE TO MEASURE BUT WHICH ENTER ENGINEERING DESIGN FROM PROPERTIES WHICH ARE EASY OR INEXPENSIVE TO MEASURE. THE TOOL IS MULTIVARIATE STATISTICS.
421. KENNEY, T. C., UNIV. TORONTO, CIVIL :
FORMATION-TECHNICAL PROPERTIES VARIED SOILS, 1974-:
- BOTH A GEOLOGICAL (PROCESSES INVOLVED IN FORMATION OF SOILS) AND GEOTECHNICAL-ENGINEERING (PHYSICAL PROPERTIES, PERMEABILITY, SHEAR STRENGTH) INVESTIGATION CENTERED IN THE LAKE TIMISKAMING BASIN, NORTHERN ONTARIO.
422. LEBUIS, J., CHAGNON, J. Y., PISSMANN, P., ROBERT, J. M., BERGERON, R., QUEBEC DEP. NAT. RES., MRN :
CARTO DES ZONES EXPOSEES AUX COULEES ARGILEUSES, 1975-:
- IDENTIFIER ET CARTOGRAPHIER LES FACTEURS GEOLOGIQUES ET GEOMORPHOLOGIQUES DES COULEES ARGILEUSES. COMPLETER CES DONNEES PAR DES FACTEURS GEOTECHNIQUES (ASSOCIE NO 3). DELIMITER SI POSSIBLE LES ZONES EXPOSEES AUX COULEES ARGILEUSES SUR DES CARTE AU 1:25000. LE PROJET EST A L'ETAPE PRELIMINAIRE. ON EN ETUDIE ACTUELLEMENT LA FAISABILITE DANS LA REGION DE ST THURIBE ET DE ST AMBROISE DE KILDARE.
423. MARSHALL, I. B., DUMANSKI, J., SURV. & MAPPING, EMR :
SOILS OF THE NATIONAL CAPITAL REGION, 1973-76:
- DETAILED INVENTORY AND ASSESSMENT OF THE SOILS OF THE NATIONAL CAPITAL REGION, NEPEAN AND GLOUCESTER TPS. SCALE OF MAPPING 1:25000-JOINT PROJECT OF SOIL RESEARCH INSTITUTE, CANADA AGRICULTURE, J. DUMANSKI COORDINATOR AND GEOG. DIV, EMR. INCLUDES FIELD MAPPING OF ALL SOILS AND SURFACE MATERIALS, DRAINAGE CHARACTERISTICS, LANDFORM PARAMETERS, PHYSICAL, CHEMICAL AND ENGINEERING ANALYSIS OF REPRESENTATIVE SAMPLES. SOIL INTERPRETATIONS FOR SOIL CAPABILITIES AND LIMITATIONS FOR PLANNING PURPOSES.
424. RIGLIN, L. D., MATHEWS, W. H., UNIV. BRITISH COLUMBIA, GEOL. :
PERPETUAL LANDSLIDE, SUMMERLAND, BRITISH COLUMBIA, 1974-76: M. SC. THESIS.
- LANDSLIDE WHICH HAS BEEN ACTIVE FOR SIX DECADES IS BEING INVESTIGATED FOR SEASONAL VARIATIONS IN RATES OF MOVEMENT AND FOR SOURCES OF GROUND WATER WHICH FACILITATES MOVEMENT. FIELD WORK ALMOST FINISHED.

425. ROBERT, J. M., CHAGNON, J. Y., BLONDEAU, F., QUEBEC DEP. NAT. RES.,
MRN:
ANALYSE DE STABILITE TRAVAUX SURVEILLANCE, 1976-77:

PROJET EN COLLABORATION AVEC LAPO CENTRAL PONTS ET
CHAUSSEES FRANCE/ EXAMINER EN TROIS VOLETS DEUX
GLISSEMENTS DE TERRAIN UN EN FRANCE L'AUTRE AU QUEBEC /
LES TROIS VOLETS ANALYSE DE STABILITE MESURES CORRECTIVES
SURVEILLANCE / PARTAGER LES CONNAISSANCES ACQUISES AU
PROFIT DE CHAQUE PARTIE.

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SHALLOW FOUNDATIONS, 1974-: PH.D. THESIS.

STUDY OF THE INTERACTION OF SHALLOW SPREAD FOOTINGS AND
SUPPORTING COHESIONLESS SOIL: CARRYING CAPACITY OF SUCH
SOILS IS GREATER THAN PREDICTED AND SETTLEMENTS SMALLER.

427. ROSS, C. J., KODAMA, H., SCHNITZER, M., GAMBLE, D. S., MILES, N., SOIL
RESEARCH INST. AGR.:
SOIL CLAY MINERALS, 1975-80:

CHARACTERIZATION OF SOIL CLAY MINERALS, THEIR ADSORPTION
EXCHANGE AND WEATHERING REACTIONS, AND THEIR
RELATIONSHIPS TO SOIL BEHAVIOUR: CHARACTERIZATION OF SOIL
HUMIC SUBSTANCES, THEIR REACTIONS WITH METAL IONS AND
CLAYS, AND THEIR RELATIONSHIPS TO SOIL BEHAVIOUR.

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SOIL MICROSCOPY SE. ONTARIO, 1974-77: M.SC. THESIS.

SOIL MICROSCOPY OF GRAY BROWN LUVISOLIC SOILS IN SE.
ONTARIO USING LIGHT AND ELECTRON MICROSCOPE TECHNIQUES.
CHEMICAL AND MICROPROBE ANALYSES.

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SOILS OF SUBURBARY AREA, ONTARIO, 1975-76: M.SC. THESIS.

PROPERTIES AND DISTRIBUTION OF POLLUTED AND DEGRADED
SOILS AT CONNISTON, NORTHERN ONTARIO, WITH EXTENSIVE
CHEMICAL AND GEOCHEMICAL ANALYSES, AND SOIL MAPPING.

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THESIS.

TO DETERMINE THE INFLUENCE OF CAMPING AND RECREATIONAL
ACTIVITIES IN A PROVINCIAL PARK ON THE SOIL, USING
CHEMICAL SOIL AND WATER ANALYSIS, AND MAPPING OF SOIL
DISTRIBUTION IN THE PARK.

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RESEARCH INST., AGR.:
NUTRIENT AND WASTE MANAGEMENT IN SOILS, 1975-80:

TO FURTHER THE UNDERSTANDING OF THE INTERACTIONS OF
FERTILIZERS, MANURES AND WASTES WITH SOIL SO AS TO
DEVELOP IMPROVED PRACTICES OF SUPPLYING NUTRIENTS
REQUIRED FOR CROP PRODUCTION AND OF DISPOSING OF WASTES
WHILE AVOIDING POLLUTION OF THE ENVIRONMENT.

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LAKE ICE AND SNOW, 1975-76:

A STUDY OF SPATIAL AND STRATIGRAPHIC DEVELOPMENT OF ICE
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OF ICE SURVEY AND MEASUREMENT.

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PROPERTIES OF RIVER, LAKE AND SEA ICE. TO INVESTIGATE
ICE FORCES ON STRUCTURES AND THE LOAD BEARING CAPACITY OF
ICE COVERS.

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STUDIES OF WATER FLOW IN COLD SNOW ON MOUNT SEYMOUR, B.
C., SHOWED THAT ISOTOPIC VARIATIONS WERE ENHANCED WHEN
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SECTIONS. EIGHTY-THREE SAMPLES OF SURFACE ICE AND TWENTY-
SIX SAMPLES FROM BELOW SURFACE WERE OBTAINED FROM THE
STEELE GLACIER, YUKON, FOR ISOTOPIC STUDIES OF GLACIER
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TO GLACIER SURGING: J. GLACIOLOGY, V. 14, P. 235-
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THE STEELE GLACIER REGION ARE BEING CARRIED. THE AIM OF
THESE STUDIES IS TO DEDUCE THE SURGE MECHANISM. DEEP ICE
TEMPERATURES, ICE THICKNESS AND SURFACE FLOW HAVE BEEN
MEASURED ON THE STEELE, RUSTY AND TRAPRIDGE GLACIERS. A
THERMAL SURGE MECHANISM APPEARS LIKELY.

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THREE SEASONS OBSERVATIONS IN VANDOM FIORD AREA OF
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ICE MARGIN. PROGRESS REPORTS COMPLETE. TWO MSc THESES
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STRAIN NET WAS REMEASURED ON NORTHWEST SIDE DEVON ICE CAP.
PROFILE ACROSS SVERDRUP GLACIER WAS LEVELLED FOR
COMPARISON WITH 1961 AND 1971. POLLEN SAMPLES WERE
COLLECTED IN SHALLOW CORES ON FOUR ICE CAPS. LABORATORY
WORK PROGRESSES ON PARTICULATE CONTENT, CHEMISTRY AND
CRYSTALLOGRAPHY OF THREE CORES TAKEN AT 1800 MASL ON
DEVON ISLAND ICE CAP IN 1971, 1972 AND 1973.

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PRELIMINARY DRIFT THICKNESS MAP CONSTRUCTED, PRELIMINARY STRATIGRAPHY OF MARKER HORIZONS COMPLETED, DRILLING AND OTHER FIELD WORK COMPLETED.
441. BIBBY, R., ALTA. RESEARCH COUNCIL, GWTERR:
DEVEL. OF MET. & TECH. OF AQUIFER EVAL. FOR SEDIMENTS, 1972-75:

REPORT COMPLETED.
442. BORNEUF, R. D., ALTA. RESEARCH COUNCIL, GWTERR:
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DATA COMPUTERIZED, GEOLOGY MAP PREPARED, WATER SAMPLES GATHERED AND ANALYZED, TEST DRILLING UNDERWAY.
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444. BORNEUF, D. M., STEVENSON, D. R., ALTA. RESEARCH COUNCIL, GWTERR:
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445. CARR, P. A., GEOL. SURV. CAN.:
HYDRODYNAMICS OF SLOPES IN CHAMPLAIN SEA DEPOSITS, 1974-:

A PICTORIAL HYDROCHEMICAL STUDY OF GROUND WATER FLOW IN THE INTERSTREAM AREA OF THE OTTAWA AND ST LAWENCE RIVERS.
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HYDROCHEMICAL CONTOURING, 1968-74:

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NITRATE MOVEMENT IN GROUNDWATER, 1975-: M.Sc. THESIS.

CONTRIBUTION OF NITRATES TO GROUNDWATER AS A FUNCTION OF LAND USE SOIL TYPE AND FLOW SYSTEM CHARACTERISTICS IS BEING INVESTIGATED. ENVIRONMENTAL ISOTOPES AND MATHEMATICAL MODELS ARE BEING APPLIED IN THE INTERPRETATION OF THE VARIOUS FLOW SYSTEMS.
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RADIOACTIVE TRANSPORT IN GEOLOGIC MATERIALS, 1975-: M.Sc. THESIS.

LABORATORY EXPERIMENTS ARE BEING CONDUCTED TO INVESTIGATE THE RETARDATION CAPABILITY OF A RANGE OF CANADIAN SURFICIAL DEPOSITS. GEOLOGIC VARIABLES INCLUDE PARTICLE SIZE, MINERAL COMPOSITION AND CARBONATE CONTENT. PARAMETERS FOR USE IN SIMULATION MODELS ARE BEING MEASURED AND THEIR APPLICABILITY WILL BE TESTED IN THE SIMULATION OF LABORATORY COLUMN EXPERIMENTS.
450. CHORLEY, D., FRIND, E. O., UNIV. WATERLOO, EASCI:
MULTILAYER AQUIFER-QUITAND SYSTEMS MODELLING, 1974-76: M.Sc. THESIS.
451. CURRIE, D. V., ALTA. RESEARCH COUNCIL, GWTERR:
EVAL. OF GWTERR BUDGET FOR TRT-CREEK WATERSHED., 1957-:

MANUSCRIPT AND SYNTHESIS UNDERWAY.
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NTS 73E - VERMILION, 1971-73:

REPORT NEAR COMPLETION.
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HYDROGEOLOGY, MONTREAL ISLAND, QUEBEC, 1971-76: M.Sc. THESIS.

HYDROGEOCHEMICAL INTERPRETATION OF POLLITT'S DATA COLLECTION 1951-3, DOMINANT CaHCO3 ZONE WITH 90PERCENT SAMPLE SATURATED, TWO LOCALISED MAGNESIUM RICH AND AT LEAST ONE SODIUM RICH ZONE.
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HYDROGRAPH SEPARATION USING ENVIRONMENT. ISOTOPES, 1975-77: PH.D. THESIS.

TO CLARIFY AND RESOLVE THE CONTROVERSY IN STORM RUNOFF GENERATION. OXYGEN-18 HAS PROVEN SUITABLE AS A NATURAL TRACER FOR COMPONENTS OF RAIN AND GROUNDWATER. IN STORM RUNOFF THE MECHANISM TO ACCOUNT FOR A LARGE PROPORTION OF GROUNDWATER IN THE STORM RUNOFF HAS NOT BEEN ESTABLISHED. THE RESEARCH WILL INVOLVE PHYSICAL HYDROLOGY, ISOTOPE AND CHEMICAL TECHNIQUES TO IDENTIFY THREE SOURCES OF RUNOFF IN SMALL WELL INSTRUMENTED BASINS IN ALBERTA, ONTARIO, AND QUEBEC.
455. FARVOLDEN, R. N., FRITZ, S., FRITZ, P., UNIV. WATERLOO, EASCI:
GROUNDWATER RECHARGE, SW. ONTARIO, 1975-77:

WATER SAMPLES ARE BEING COLLECTED THROUGHOUT THE HEAVILY PUMPED, KITCHENER-WATERLOO WELL FIELDS FOR DETERMINATION OF THE ISOTOPE COMPOSITION WITH RESPECT TO OXYGEN-18, TRITIUM, AND CARBON-14. IN ADDITION, THE GEOLOGY AND HYDRAULICS OF AT LEAST ONE WELL FIELD WILL BE EXAMINED IN DETAIL TO DETERMINE AQUIFER PARAMETERS AND BOUNDARY CONDITIONS. PRELIMINARY RESULTS INDICATE THAT SOME WELLS DRAW WATER FROM BEDROCK AND OTHERS FROM SURFICIAL AQUIFERS, WHICH HELPS EXPLAIN ANOMALIES IN QUALITY.
456. FORD, D. C., EWEES, R. O., MCMASTER UNIV., GEOG.:
GENESIS OF SOLUTION CAVE SYSTEMS, 1970-77:

A GENERAL THEORY OF SYSTEM DEVELOPMENT IN THE DIMENSIONS OF LENGTH & DEPTH HAS BEEN CONSTRUCTED & SUBMITTED FOR PUBLICATION. GENERAL THEORY FOR THE DIMENSIONS OF LENGTH & BREADTH HAS BEEN DEVELOPED BY HARDWARE & COMPUTER SIMULATION & FIELD STUDIES, A DOCTORAL THESIS IS IN PREPARATION. IT IS SHOWN THAT OLDER CONFLICTING THEORIES (VADOSE, DEEP PHREATIC & WATERTABLE) MAY BE RECONCILED WITHIN ONE LARGER GENETIC MODEL. SYSTEMS PROPAGATE FROM THE HEAD BUT INTEGRATE FROM THE SPRING.
457. FREEZE, R. A., UNIV. BRITISH COLUMBIA, GEOL:
MATH. MODELS SUBSURFACE FLOW IN GEOL. ENGINEERING, 1975-78:

SEE: A STOCHASTIC-CONCEPTUAL ANALYSIS OF ONE-DIMENSIONAL GROUNDWATER FLOW IN NONUNIFORM HOMOGENEOUS MEDIA: WATER RES. RESEARCH, V. 11, NO. 5, P. 725-741, 1975.

TO ASSESS INFLUENCE OF STOCHASTIC PARAMETER DISTRIBUTIONS ON THE ANALYSIS OF SUBSURFACE FLOW. TO APPLY THE MODELS TO PROBLEMS OF CONSOLIDATION, LAND SUBSIDENCE, WELL HYDRAULICS AND REGIONAL GROUNDWATER FLOW.
458. FRIND, E. O., UNIV. WATERLOO, EASCI:
HERMITIAN FINITE ELEMENT, 1975-76:

SUITABILITY OF HERMITIAN FINITE ELEMENT IN FLOW MODELLING.
459. FRIND, E. O., SEGOL, G., UNIV. WATERLOO, EASCI:
MASS TRANSPORT MODELLING, 1975-76:

MODELLING OF TWO-AND THREE-DIMENSIONAL FLOW AND MASS TRANSPORT IN VARIABLY SATURATED SOILS.
460. FRIND, E. O., VERGE, M., UNIV. WATERLOO, EASCI:
THREE-DIMENSIONAL GROUNDWATER FLOW MODELLING, 1973-75: PH.D. THESIS.

THREE-DIMENSIONAL SATURATED-UNSATURATED GROUNDWATER FLOW MODELLING.
461. FRITZ, P., CHERRY, J. A., UNIV. WATERLOO, EASCI:
CARBON-13 AND-14 DISTRIBUTION CANADIAN SHIELD, 1975-78:

INVESTIGATION OF THE DISTRIBUTION (GEOCHEMICAL AND ORGANIC CONTROLS) OF CARBON-13 AND CARBON-14 IN WATERSHEDS ON THE CANADIAN SHIELD. THE PROJECT INVOLVES ALSO ANALYTICAL GEOCHEMISTRY, STABLE ISOTOPE ANALYSES (O-18, DEUT) AND TRITIUM DETERMINATIONS. CLASSICAL HYDROLOGS PROVIDES THE BACKGROUND INFORMATION NEEDED.
462. GABERT, G. M., ALTA. RESEARCH COUNCIL, GWTERR:
INVS. OF HYD. OF CRUDE OIL NEAR ROCKY MTN. HOUSE, 1974-75:

REPORTS COMPLETED.
463. GABERT, G. M., WITHERS, D., ALTA. RESEARCH COUNCIL, GWTERR:
ALTA. OBSERVATION-WELL NETWORK, 1956-:

NETWORK CONTAINS 73 WELLS- A MANUSCRIPT REPORT OF THE WELL COMPLETION, STRATIGRAPHY, AND HYDROGEOLOGY HAS BEEN COMPLETED: HYDROGRAPHS ARE INCLUDED.

464. GELINAS, P. J., SCOTT, J. D., LAFOND, J. M., UNIV. OTTAWA, GEOL. & MIN. RES. BRANCH, 1975-77: M.Sc. THESIS.
SAMPLING OF FIVE LOCALITIES WAS PERFORMED DURING THE 1975 FIELD SEASON IN EASTERN ONTARIO. SEDIMENTOLOGICAL ANALYSES ARE UNDER WAY AND THE LABORATORY SETTING FOR ANISOTROPIC MEASUREMENT OF HYDRAULIC CONDUCTIVITY IS BEING CALIBRATED. Darcy's LAW AT LOW GRADIENTS WILL BE VERIFIED AND PERMEABILITY RATIOS FOR VARIOUS SAMPLES OF MARINE CLAYS WILL BE MEASURED. THESE VALUES WILL BE COMPARED TO A FLOW NET DRAWN BY NUMERICAL METHODS AND CONTROLLED IN THE FIELD.
465. HACKBARTH, D., ALTA. RESEARCH COUNCIL, GWTÉR: EFF. OF STRIP MINING GWTÉR, RÉGIME, GRANDE CACHE, 1972-:
466. HACKBARTH, D., ALTA. RESEARCH COUNCIL, GWTÉR: HYD. EVAL. OF ATHABASCA OIL SANDS AREA, 1974-:
PRELIMINARY MAPS CONSTRUCTED, PIEZOMETER SITES BEING DRILLED; MONITORING OF EXISTING PIEZOMETERS UNDER WAY, METHODOLOGY & EQUIPMENT UNDER DEVELOPMENT & TESTING.
467. HERR, R. L., ENVIRONMENT CANADA, IWB: HYDROGEOLOGY NATIONAL CAPITAL REGION, 1975-78:
468. HORE, R. C., FLEISCHER, F. C., WOOD, M. G., GHAN, T., ONN, D., ONT. MINISTRY ENVIRON., WRRES: IJC PLUARG (POLL FROM LAND USE ACTIVITIES REF. GRP), 1972-78:
469. HORE, R. C., FUNK, G., VIIRLAND, J., MELLARY, A., HAMMOND, C., ONT. MINISTRY ENVIRON., WRRES: GROUNDWATER QUALITY PROTECTION, ONTARIO, 1957-:
470. HORE, R. C., HUGHES, G., GOFF, K., HOLLAND, C., SMALL, E., ONT. MINISTRY ENVIRON., WRRES: GROUNDWATER QUALITY PROTECTION, ONTARIO, 1957-:
471. HORE, R. C., HUGHES, G., GOFF, K., HOLLAND, C., SMALL, E., ONT. MINISTRY ENVIRON., WRRES: ENVIRONMENTAL ASSESSMENT-GROUNDWATER, ONTARIO, 1961-:
472. HORE, R. C., SIBUL, U., GOFF, K., HOLLAND, C., SMALL, E., ONT. MINISTRY ENVIRON., WRRES: WELL INTERFERENCE PROBLEMS, ONTARIO, 1961-:
473. HORE, R. C., SIBUL, U., WANG, K. T., ROY, A. C., LAMMERS, W., ONT. MINISTRY ENVIRON., WRRES: NORTHERN ONTARIO WATER RESOURCES STUDIES, 1966-76:
474. HORE, R. C., VALLERY, D., VIIRLAND, J., MELLARY, A., HAMMOND, C., ONT. MINISTRY ENVIRON., WRRES: WELL INTERFERENCE PROBLEMS, ONTARIO, 1961-:
475. JACKSON, R. E., LENNOX, D. H., ENVIRONMENT CANADA, IWB: RADIOACTIVE LIQUID WASTES NATURE WITH TIME, 1975-:
SEE: MIGRATION OF SR-90 AND CS-137 IN A SHALLOW GROUNDWATER-FLOW SYSTEM: ABSTRACTS WITH PROGRAMS, GEOL. SOC. AMER. NORTH-CENTRAL SEC., V. 7, P. 821, 822, 75.
TWENTY YEARS AGO TWO EXPERIMENTAL SUBSURFACE DISPOSALS OF RADIOACTIVE LIQUID WASTES WERE CONDUCTED AT AECL'S CHALK RIVER NUCLEAR LABS. SINCE THAT TIME THE WASTES HAVE CHROMATOGRAPHICALLY SEPARATED INTO SR-90 AND CS-137 PLUMES, WHOSE MIGRATION VELOCITIES ARE MUCH RETARDED RELATIVE TO THE GROUNDWATER VELOCITY DUE TO GEOCHEMICAL REACTIONS. THE PURPOSE OF THIS PROJECT IS TO INVESTIGATE THE NATURE OF THESE REACTIONS IN TERMS OF THE GROUNDWATER GEOCHEMISTRY AND THE SEDIMENTARY MINERALOGY.
476. JEFFS, D. N., FLEISCHER, F. C., LOGAN, L. A., SINGER, S. N., COWARD, J., ONT. MINISTRY ENVIRON., WRRES: HYDROLOGIC AND HYDROGEOLOGIC MODELLING, ONTARIO, 1972-:
477. JEFFS, D. N., FLEISCHER, F. C., SINGER, S., HORE, R. C., ONT. MINISTRY ENVIRON., WRRES: IND REPRESENTATIVE BASIN STUDIES, ONTARIO, 1965-76:
478. JEFFS, D. N., LOGAN, L. A., COWARD, J., FUNK, G., ONT. MINISTRY ENVIRON., WRRES: IND REPRESENTATIVE BASIN STUDIES, ONTARIO, 1965-76:
479. JEFFS, D. N., OSTRY, R. C., RALSTON, J. G., BLACK, S., KING, D., ONT. MINISTRY ENVIRON., WRRES: IJC PLUARG (POLL FROM LAND USE ACTIVITIES REF. GRP), 1972-78:
480. JEFFS, D. N., SALBACH, S. E., RALSTON, J., FLEISCHER, F. C., OSTRY, R. C., ONT. MINISTRY ENVIRON., WRRES: GRAND RIVER BASIN STUDY, ONTARIO, 1974-79:
481. OSTRY, R. C., SINGER, S. N., ONT. MINISTRY ENVIRON., WRRES: IFYGL LAKE ONTARIO, 1968-76:
TO COMPLETE STUDIES OF THE AMOUNT OF GROUNDWATER INFLOW INTO L. ONTARIO FROM THE MAJOR HYDROGEOLOGIC REGIONS ON THE CANADIAN SIDE OF THE LAKE. THIS INFORMATION WILL BE USED TO REFINE THE WATER BALANCE EQUATION FOR THE LAKE ONTARIO BASIN. STUDY HAS BEEN CARRIED OUT IN CONJUNCTION WITH REMOTE SENSING FLIGHTS BY OTHER AGENCIES TO ASSESS THE APPLICATION OF REMOTE SENSING TECHNIQUES TO GROUNDWATER STUDIES.
482. OZORAY, G., ALTA. RESEARCH COUNCIL, GWTÉR: HYDROGEOLOGICAL ATLAS OF ALBERTA, 1974-:
483. OZORAY, G., ALTA. RESEARCH COUNCIL, GWTÉR: NTS 83P & 84A- PELICAN & ALGAR LAKE, ALBERTA, 1975-:
FIELD WORK COMPLETED; DATA COMPUTERIZED; E-LOG INTERPRETATION UNDER WAY.
484. OZORAY, G., LYTIVIAK, A., ALTA. RESEARCH COUNCIL, GWTÉR: NTS 82(N&I)0, (GOLDEN) CALGARY, ALBERTA, 1972-:
REPORT NEAR COMPLETION.
485. OZORAY, G., LYTIVIAK, A., ALTA. RESEARCH COUNCIL, GWTÉR: NTS 74E & 84 H BITUMOUNT & NAMUR LAKE, ALBERTA, 1973-74:
REPORT NEAR COMPLETION.
486. OZORAY, G., LYTIVIAK, A., ALTA. RESEARCH COUNCIL, GWTÉR: NTS 73L SAND RIVER, ALBERTA, 1974-75:
REPORT NEAR COMPLETION.
487. PATTERSON, R. J., QUEEN'S UNIV., GEOL.: GROUNDWATER QUALITY ADJACENT TO RIVERS, 1975-76: M.Sc. THESIS.
APPLICATION OF A NEW APPROACH TO THE STUDY OF GROUNDWATER QUALITY-DETAILED GROUNDWATER CHEMISTRY DATA WILL BE COLLECTED TO DEFINE MORE PRECISELY THE DEGREE OF CHEMICAL INHOMOGENEITY IN AQUIFERS, TO EVALUATE THE RELIABILITY OF TRADITIONAL GROUNDWATER SAMPLING METHODS, AND TO ASSESS THE MOST RELIABLE METHODS FOR MEASURING GROUNDWATER INPUTS TO SURFACE WATERS. GROUNDWATER QUALITY DATA WILL BE OBTAINED BY ANALYSING SQUEEZE WATERS FROM CORES OF AQUIFER MATERIALS.
488. ROBINSON, J. E., UNION OIL CO. CAN. LTD.: HYDRODYNAMIC SYSTEMS OF WESTERN CANADA, 1973-77:
TO MAP THE HYDRODYNAMIC GRADIENTS AND FLUID FLOW PATTERNS FOR VARIOUS SUBSURFACE FORMATIONS IN THE SEDIMENTARY BASINS OF WESTERN CANADA AND HENSE TO EVALUATE FAVORABLE AREAS FOR PETROLEUM EXPLORATION.
489. RYCKBORST, H., ALTA. RESEARCH COUNCIL, GWTÉR: GWTÉR, HYD. IN REP. DRAINAGE BASINS, 1975-:
DEVELOPMENT OF METHODOLOGY BY WHICH CHARACTERISTIC HYDROGEOLOGICAL REGIONS CAN BE MAPPED ON A PROVINCIAL SCALE.
490. SALBACH, S. E., DENNIS, P., OSMOND, D., GOFF, K., PIRIE, D., ONT. MINISTRY ENVIRON., WRRES: THAMES RIVER BASIN STUDY, ONTARIO, 1972-75:
491. SALBACH, S. E., WEATHERBE, D., CHOO-YING, K., ONT. MINISTRY ENVIRON., WRRES: THAMES RIVER BASIN STUDY, ONTARIO, 1972-75:
492. SIBUL, U., HICKINBOOTHAM, A., ONT. MINISTRY ENVIRON., WRRES: GROUNDWATER PROBABILITY MAPPING, ONTARIO, 1966-:
TO CARRY OUT GROUNDWATER PROBABILITY MAPPING IN SELECTED COUNTIES IN SOUTHERN ONTARIO TO AID IN GROUNDWATER RESOURCE EVALUATION, DEVELOPMENT AND MANAGEMENT.
493. SIBUL, U., WANG, K. T., VALLERY, D., CHIN, V., ONT. MINISTRY ENVIRON., WRRES: DRAINAGE BASIN STUDIES, ONTARIO, 1969-:
494. STEIN, R., ALTA. RESEARCH COUNCIL, GWTÉR: NTS 83H EDMONTON NE, SE, SW, ALBERTA, 1972-:
EDMONTON NE. -COMPLETED MANUSCRIPTS AND MAPS. SE. - DATA GATHERED, NO WORK DONE IN 1975. SW. -DATA COMPUTER MANIPULATED. PRELIMINARY YIELD, WATER LEVEL AND CHEMISTRY MAPS AS WELL AS 4 GROSSECTIONS COMPLETED.

495. STEIN, R., AKITI, T., BIRBY, P., ALTA. RESEARCH COUNCIL, GWTER:
PROJECT EDMONTON, 1972-75:
496. STEIN, R., OZORAY, G., ALTA. RESEARCH COUNCIL, GWTER:
CENTRAL DATA FILE AND AHMS, 1969-:
- APPROXIMATELY 10,000 CHEMICAL ANALYSES, 4500 DRILLERS
REPORTS AND 12,000 FLOWING SHOTHOLES WERE ADDED TO THE
FILE. THREE MORE AHMS ATLASES ARE UNDER CONSTRUCTION.
497. STEVENSON, D. R., GREEN, R., ALTA. RESEARCH COUNCIL, GWTER:
HYD. INV. NEAR HYDERABAD, ANDHRA, PRADESH INDIA, 1970-75:
- ALL FIELD ASPECTS COMPLETED. HYDROGEOLOGICAL MAPS
COMPILED. FINAL REPORT WRITING IN PROGRESS.
498. TERRY, R. D., MILLER, J., MCCLENAGHAN, W., ONT. MINISTRY ENVIRON.,
WRRES:
GROUNDWATER DATA, 1947-:
499. TOKARSKY, H., BEERWALD, A., ALTA. RESEARCH COUNCIL, GWTER:
NTS 83K & J IOSEGUN LAKE & WHITESCOURT, ALBERTA, 1971-72:
- REPORT NEAR COMPLETION.
500. TOTH, J., ALTA. RESEARCH COUNCIL, GWTER:
RELATION BTHW. GWTER. MOVEMENT & HYDROCARBON ACCUM., 1973-:
- PRELIMINARY SYNTHESIS OF SOME AREAS COMPLETE.
METHODOLOGY UNDER DEVELOPMENT.
501. VANDENBERG, A., ENVIRONMENT CANADA, IWB:
PUMPTESTS IN HETEROGENEOUS AQUIFERS, 1975-76:
- A NUMERICAL MODEL OF AN INFINITE CONFINED AQUIFER WITH
UNIFORMLY-RANDOM DISTRIBUTION OF TRANSMISSIVITY AND
STORATIVITY WAS USED TO SIMULATE A CONSTANT RATE PUMPTEST.
TIME-DRAWDOWN CURVES AT 600 NODES WERE ANALYSED BY THE
THEIS METHOD FOR APPARENT TRANSMISSIVITY (TA) AND
APPARENT STORATIVITY (SA). BOTH TA AND SA WERE NORMALLY
DISTRIBUTED WITH MEAN CLOSE TO THE ARITHMETIC MEAN OF THE
INPUT, AND SMALL STAND. DEV. TA AND SA ARE BETTER
ESTIMATORS OF AVERAGE T AND S THE FARTHER THE OBSERVATION
NODE IS FROM THE PUMP.
502. VAN EVERDINGEN, R. D., ENVIRONMENT CANADA, IWB:
NORTHERN GROUNDWATER AND ENGINEERING PROBLEMS, 1974-:
- SEE: USE OF ERTS-1 IMAGERY FOR MONITORING OF ICINGS, N.
YUKON AND NE. ALASKA: ENV. CANADA, INT. WATERS DIR., REP. SER.
42, P. 75-87, 1975.
- INVESTIGATION OF SPRING AREAS, DIST. OF MACKENZIE,
SUBSURFACE ICE MOUNDS NEAR FORT NORMAN, RECHARGE AREAS
WITH SINKHOLES ON NTS 96F, SURFACE TEMPERATURES FOR
HOT SPRINGS. DEVELOPMENT OF FROST AND FREEZING DETECTORS
AND RECORDING SYSTEM FOR GROUND FREEZING DATA.
503. VOGHILL, P. I. J., ALTA. RESEARCH COUNCIL, GWTER:
HYD. INVES. OF A COAL SEAM NEAR HALKIRK, ALTA., 1975-:
- TO DETERMINE HYDROGEOLOGIC PARAMETERS IN CONJUNCTION WITH
A PROPOSED INSITU COAL GASIFICATION PROJECT.
504. VOGHILL, P. I. J., ALTA. RESEARCH COUNCIL, GWTER:
NTS 83F EDSON, ALBERTA, 1975-:
- WELL SURVEY 75% COMPLETE, 200 WATER SAMPLES COLLECTED TWO
TESTHOLES DRILLED & TESTED. TWENTY 6-HOUR TESTS
COMPLETED. AIR SURVEY COMPLETED & THERMOMETERS INSTALLED
IN 4 SPRINGS. ALL WELL DATA COMPUTERIZED.
505. VOGHILL, P. I. J., BEERWALD, A., ALTA. RESEARCH COUNCIL, GWTER:
NTS 830 LESSER SLAVE LAKE, ALBERTA, 1974-75:
- REPORT NEAR COMPLETION.
506. WALLICK, E. I., ALTA. RESEARCH COUNCIL, GWTER:
QUALITY OF GROUNDWATER IN ALBERTA, 1973-:
- REPEATED HYDROCHEMICAL TRAVERSES CONDUCTED.
HYDROCHEMICAL CROSSSECTIONS AND MAPS CONSTRUCTED FOR SAND
RIVER NTS SHEET.
507. WALLICK, E. I., ALTA. RESEARCH COUNCIL, GWTER:
HYDROGEOLOGY OF MINERAL DEPOSITS (SODIUM SULFATE), 1974-:
- RELATIONSHIP BETWEEN GROUNDWATER FLOW SYSTEM, CHEMISTRY,
AND ACCUMULATION OF SODIUM SULFATE / SODIUM CARBONATE
DEPOSITS. SOME DRILLING & SAMPLING COMPLETED.
508. WANKIEWICZ, A. C., ENVIRONMENT CANADA, IWB:
PERMAFROST NEAR ARCTIC STREAMS, 1975-77:
- THE TEMPERATURE PROFILE BELOW THE BED AND BANKS OF ARCTIC
STREAMS WITH DIFFERING STREAMFLOW REGIMES IS TO BE
MEASURED PERIODICALLY. MEASUREMENTS WILL HELP SHOW THE
EFFECT OF STREAMS ON PERMAFROST DEPTH, PRESENCE AND SIZE
OF TALIKS, GROUNDWATER AFTER FREEZE-UP AND ZERO-AMPLITUDE
TEMPERATURE. DETERMINATION OF GROUND THERMAL PROPERTIES
AND BOUNDARY CONDITIONS WILL PRODUCE DATA SUITABLE FOR
TESTING OF MODELS.
509. WILKINS, D., SIPUL, U., VIIRLAND, J., MELLARY, A., HAMMOND, C., ONT.
MINISTRY ENVIRON., WRRES:
ENVIRONMENTAL ASSESSMENT-GROUNDWATER, ONTARIO, 1961-:
510. WONG, J., RODRIGUEZ, E., FLIGG, K., ONT. MINISTRY ENVIRON., WRRES:
GROUNDWATER GEOPHYSICS, ONTARIO, 1955-:
511. YAKUTCHIK, T. J., MCKENNA, P. F., ONT. MINISTRY ENVIRON., WRRES:
GROUNDWATER DEVELOPMENT, ONTARIO, 1957-:
- TO CARRY OUT GROUNDWATER SURVEYS, TEST DRILLING, AND WELL
CONSTRUCTION FOR MUNICIPAL WATER SUPPLIES.

MARINE GEOSCIENCE

512. AUMENTO, F., HALL, J. M., DALHOUSIE UNIV., GEOL.:
DETAILED INVESTIGATION OF THE OCEANIC CRUST, 1971-:
- SEE: 1974-THE YEAR OF THE MID-ATLANTIC RIDGE; REV. GEOPHYS.
AND SPACE PHYS., V. 13, NO. 3, P. 53-65, 1975.
- FIVE RECORD-PENETRATION HOLES DRILLED BY THE GLOMAR
CHALLENGER INTO THE ACOUSTIC BASEMENT OF THE MAR AT 36 N
HAVE GIVEN THE FIRST INDICATIONS OF THE POSSIBLE COMPLEX
NATURE OF THE OCEANIC CRUST. THE HOLES HAVE SHED LIGHT
ON THE ORIGIN OF LINEAR MAGNETIC ANOMALIES, ON THE
CORRELATION BETWEEN SEISMIC DATA AND ROCK TYPES, ON MAGMA
GENESIS BENEATH ACTIVELY SPREADING MID-OCEANIC RIDGES,
AND ON THE POSSIBLE FORMATION OF TWO DISTINCT LAYERS, 2A
AND 2B WITHIN OCEANIC LAYER 2.
513. BIDGOOD, D. E. T., PRENTISS, D. D., OSBORNE, J., RANKIN, D., NOVA
SCOTIA RES. FOUND., GEOPH:
HIGH RESOLUTION DEEP TOW SEISMIC PROFILING SYSTEM, 1972-78:
- EVALUATION OF OPERATIONAL PERFORMANCE OF EXISTING SYSTEM
IN VARIOUS GEOLOGIC AND GEOGRAPHIC SETTINGS, TECHNICAL
DEVELOPMENT OF IMPROVED SOURCES, TRANSDUCERS, TOW SYSTEMS,
DATA RECORDING AND DISPLAY, INTEGRATION WITH SIDE SCAN
AND OTHER SURVEY TECHNIQUES.
514. BIDGOOD, D. E. T., RANKIN, D. S., MCKAY, A. G., NOVA SCOTIA RES. FDN.:
ATTITUDE AND SPEED SENSORS, 1975-76:
- SENSORS FOR ROLL, TILT, AND YAW AS WELL AS SPEED ARE
BEING INTEGRATED INTO A SINGLE PRESSURE CASE FOR USE IN
UNDERWATER TOWED BODIES. SIGNALS FROM THE SENSORS CAN BE
DIRECTLY DISPLAYED ON A MULTITRACE CHART RECORDER OR
METER ROLL OR TILT-RANGE 45, RESOLUTION 0, 5, YAW-RANGE
360 CONTINUOUSLY, RESOLUTION 12, SPEED-RANGE 0-10 KTS,
RESOLUTION 0, 5 KTS.
515. CLOWES, R. M., KNIZE, S., MALECEK, S. J., S. LYNCH, S., UNIV. BRITISH
COLUMBIA, GEOPH:
MARINE DEEP SEISMIC SOUNDING - WEST COAST CANADA, 1971-:
PH.D. THESIS.
- A TWO-SHIP MARINE SEISMIC SYSTEM FOR RECORDING NEAR-
VERTICAL INCIDENCE TO WIDE-ANGLE REFLECTED WAVES &
REFRACTED WAVES WITH PENETRATION FROM OCEAN BOTTOM TO
UPPER MANTLE (DEEP SEISMIC SOUNDING OR DSS) HAS BEEN
DEVELOPED. INTERPRETATION OF 20 KM REVERSED PROFILES
OVER DEEP WATER SEDIMENTARY BASINS IS NEARLY COMPLETE. 2
75 KM REVERSED PROFILES PARALLEL & PERPENDICULAR TO
EXPLORER RIDGE HAVE BEEN INTERPRETED. IN 1975 EXCELLENT
DSS DATA WERE OBTAINED ON 3 PROFILES (600 KM TOTAL) IN
WINONA BASIN.

516. FALCONER, R.K.H., PURDY, G.M., BARRET, J.L., JACKSON, R.L., HEFFLER, D.E., GEOL. SURV. CAN.:
JOINT WHOI/AGC IPOD SITE SURVEY AT 22 N N. ATL., 1975-76:

IPOD SITE SURVEYS AT SITES 2, 2A AND 6 ON FLCHLINE THROUGH 22 DEGREES N IN NORTH ATLANTIC SURVEYS CONSISTING OF BATHYMETRY, MAGNETICS, GRAVITY, SEISMIC REFLECTION AND REFRACTION, HEAT FLOW, DREDGING PROJECT ON RV ATLANTIS OF WHOI UNDER LEADERSHIP OF G.M. PURDY, WHOI.
517. HOWELLS, K., MCKAY, A.G., NOVA SCOTIA RES. FOUND., GEOPH.:
SEISMIC PROFILES, NEW BRUNSWICK, 1975-76:

REPORT IN PREPARATION ON SEISMIC PROFILING AND ECHO SOUNDER SURVEY IN MIRAMICHI BAY, NEW BRUNSWICK. SHALLOW BOREHOLE DATA INCLUDED.
518. MCKAY, A.G., NOVA SCOTIA RES. FOUND., GEOPH.:
SEDIMENT ACOUSTICS, 1975-76:

THE ASSEMBLY OF A HYDROPHONE ARRAY FOR SURFACE OR DEEP TOW OPERATION, OBSERVATION OF WIDE-ANGLE REFLECTED AND REFRACTED ARRIVALS. EXPECTED APPLICATION TO ENGINEERING SEISMIC SURVEYS (FIRST 30 METRES BELOW SEABED).
519. STEARN, C.W., MACGEACHY, J.K., BOUCHER, D., FRYOL, P., MCGILL UNIV., GEOL.:
CARBONATE BUDGET OF THE BELLAIRES REEF, BARRADOS, 1974-: PH. D. THESIS.

MEASUREMENT OF THE RATE OF GROWTH OF PRINCIPLE FRAMEBUILDERS SUCH AS CORAL AND ALGAE ALLOW AN ESTIMATE TO BE MADE OF THE TOTAL CALCIUM CARBONATE ON THE REEF. BORING AND GRAZING BY PARROT FISH AND SEA URCHINS DESTROY THE REEF. CEMENTS ACCUMULATE WITH SEDIMENTATION IN THE REEF. ASSESSMENT OF ALL OF THESE ACTIONS ALLOWS ONE TO APPROXIMATE A CARBONATE BUDGET.
520. TIFFIN, D.L., GEOL. SURV. CAN.:
GEOLOGICAL-GEOPHYSICAL STUDIES, PACIFIC MARGIN, 1971-:
521. YORATH, C.J., GEOL. SURV. CAN.:
MARINE GEOLOGY, DISTRICT OF FRANKLIN, 1973-76:

MINERAL/ENERGY GEOSCIENCE

GENERAL

522. BROWN, A.C., ECOLE POLYTECHNIQUE:
STRATIFORM COPPER IN CARBONIFEROUS, NEW BRUNSWICK, 1974-76:

SEE: A STUDY OF STRATIFORM COPPER DEPOSITS IN MIDDLE CARBONIFEROUS STRATA OF NEW BRUNSWICK AND NOVA SCOTIA: GEOL. SURV. CAN., PAPER 76-1A, P. 517, 1976.
523. BROWN, A.C., ECOLE POLYTECHNIQUE:
GENESIS OF NON-FERROUS STRATIFORM ORES, 1970-:

SEE: CUPRIFEROUS SHALES OF THE ADELIN ISLAND FORMATION, SEAL LAKE GROUP, LABRADOR: ECON. GEOL., V. 70, P. 145-163, 1975.

NUMEROUS INVESTIGATIONS OF SEDIMENT-HOSTED NON-FERROUS ORES ARE BEING CONDUCTED SIMULTANEOUSLY WITHIN THIS PROJECT. STIMULATION FOR RESEARCH INTO THE GENESIS OF SUCH ORES IS GIVEN PRINCIPALLY TO GRADUATE AND FINAL YEAR UNDERGRADUATE PROJECTS. CURRENT STUDIES INCLUDE ZINC DEPOSITS IN GRENVILLE MARBLES, COPPER IN PROTEROZOIC SHALES AND CARBONATES, AND EXPERIMENTAL REPRODUCTION OF BASE METAL ZONING.
524. CHEVE, S., BROWN, A.C., ECOLE POLYTECHNIQUE:
METALLOGENY OF THE CLINTON MINE, QUEBEC, 1974-76: M.SC. THESIS.

AREAL AND LOCAL MAPPING, INCLUDING EXTENSIVE USE OF DRILL CORES, HAS RESULTED IN A DEFINITION OF THE PROBABLE VOLCANO-SEDIMENTARY BASIN WITHIN WHICH BASE-METAL MASSIVE SULFIDE DEPOSITS FORMED IN THE LAC MAGANTIC AREA OF SOUTH-EASTERN QUEBEC. THE VOLCANOGENIC ENVIRONMENT WILL BE INVESTIGATED FURTHER DURING A DOCTORAL RESEARCH PROGRAMME.
525. CHURCHILL, T.R., PALOMBO, D.P., MASON, G.L., CANMET, EMR:
SPECTROCHEMICAL ANALYSIS OF SULPHIDE ORES, 1976:

INSTRUMENTATION AND METHODOLOGY FOR THE ANALYSIS OF SULPHIDE ORES IS NOW AVAILABLE.
526. CLOSS, L.G., COLVINE, A.C., ONTARIO DIVISION MINES:
GEOLOGY-GEOCHEMISTRY OF PYRITE GRAPHITE HORIZONS, 1975-:

SEE: GEOLOGY AND GEOCHEMISTRY OF PYRITIC AND GRAPHITIC VOLCANOGENIC SEDIMENTS AND THEIR RELATIONSHIP TO MASSIVE SULPHIDE DEPOSITS: ONTARIO DIVISION OF MINES, MISC. PAPER 63, P. 146-149, 1975.
527. COLVINE, A.C., ONTARIO DIVISION MINES:
GEOLOGY OF COPPER, ZINC, LEAD DEPOSITS IN ONTARIO, 1974-:

A STUDY OF ASPECTS OF GEOLOGY, PETROLOGY AND GEOCHEMISTRY OF BASE METAL DEPOSITS IN ONTARIO AND COMPARISON WITH DEPOSITS OUTSIDE ONTARIO.
528. DARLING, R.G., ECOLE POLYTECHNIQUE:
VOLCANIC ROCKS AROUND MANITOU-BRAVUE ORE DEPOSIT, 1972-77:

THE SAMPLING AND MOST OF THE MAJOR-ELEMENT GEOCHEMICAL WORK IS COMPLETED. A PETROGRAPHIC AND GEOCHEMICAL PROFILE HAS BEEN DEVELOPED FOR THE VOLCANIC SECTION IN THE MAIN MINE AREA, AND THE POSITION OF THE AG-7N AND CU OREBODIES IN THIS SECTION HAS BEEN DETERMINED.
529. FAYE, G.H., SUTARNO, R., CANMET, EMR:
CANADIAN REFERENCE MATERIALS PROJECT (CCRMP), 1970-:

SEE: A MEASURE FOR ASSESSING CERTIFIED REFERENCE ORES AND RELATED MATERIALS: TALANTA, 22P675-581, 1975.
530. GALE, J.E., GEOL. SURV. CAN.:
SUBSURFACE CONTAINMENT OF SOLID RADIOACTIVE WASTE, 1974-:

TO DETERMINE THE BEST HOST ROCK IN THE PRECAMBRIAN SHIELD AREA OF ONTARIO FOR CONTAINING RADIOACTIVE SOLID WASTES.
531. GORDON, J.B., ONTARIO DIVISION MINES:
GOLD DEPOSITS OF ONTARIO, 1975-:

A STUDY OF THE GEOLOGICAL ENVIRONMENTS OF GOLD AND SILVER DEPOSITS IN ONTARIO AND COMPARISONS WITH DEPOSITS OUTSIDE OF ONTARIO.
532. GOVETT, G.J.S., GOVETT, M.H., UNIV. NEW BRUNSWICK, GEOL.:
AVAILABILITY SUPPLY USE OF MINERAL RESOURCES, 1970-:

SEE: THE CANADIAN MINERALS INDUSTRY-A PERSPECTIVE: RESOURCES POLICY, V. 2, 1976.

THE PROBLEMS OF MINERAL SUPPLIES BOTH GLOBALLY AND NATIONALLY IS BEING EXAMINED FROM VARIOUS INTER-RELATED ASPECTS, INCLUDING ECONOMICS, POLITICS, EXPLORATION, CONSERVATION AND PROCESSING.
533. GUHA, J., UNIV. DU QUE. CHICOUTIMI:
MINERALISATIONS ET CONTEXTE GEOLOG. CHIROUGAMAU, 1975-:

SEE: ROLE OF FLUID STATE MOBILIZATION DURING METAMORPHISM OF THE HENDERSON ORE BODIES, CHIROUGAMAU, QUEBEC, CANADA: CAN. J. EARTH SCI., V. 12, NO. 9, P. 1515-1523, 1975.

ETUDE PONCTUELLE DE DIFFERENTES MINERALISATIONS ET LEUR CONTEXTE GEOLOGIQUE PAR PLUSIEURES APPROCHES Y COMPRIS LA GEOCHIMIE DES ISOTOPES DU SOUFRE ET INCLUSIONS FLUIDES. LES RESULTATS CONTRIBUERONT A LA CONNAISSANCE METALLOGENIQUE REGIONALE.
534. HSU, E., NFLD. DEP. MINES & ENERGY:
MINERAL INVENTORY, 1972-76:

NO WORK OR UPDATING IN 1975. MINERAL INVENTORY CONSISTS OF A MANUAL FILE ON APPROX. 1200 DEPOSITS AND OCCURRENCES. FOR EACH OCCURRENCE DATA IS SUMMARIZED ON 2 CARDS, ONE OF WHICH IS THE SAME AS THE NATIONAL MINERAL INVENTORY. THEY HAVE BEEN ENTERED INTO THE CANADIAN INDEX OF GEOSCIENCE DATA.

535. KIMMERLEY, M. M., UNIV. TORONTO (ERINDALE), GEOL.:
DIAGENESIS AND THE ORIGINS OF SEDIMENTARY ORES, 1975-77:
- SEE: BASIC SIMILARITY OF ARCHEAN TO SUBSEQUENT ATMOSPHERIC AND HYDROSPHERIC COMPOSITIONS AS EVIDENCED IN THE DISTRIBUTIONS OF SED. C, S, U, AND FE: EARLY HISTORY OF THE EARTH, WILEY LONDON, 1976.
- AN ARCHEAN ACID COMPLEX 265 MILES NE. OF YELLOWKNIFE-LITHOFACIES VARIATION OF IRON FORMATION CONTAINED WITHIN THE ACIDIC VOLCANIC PILE. PART OF THE IRON FORMATION IS SIMILAR TO PHANEROZOIC IRON FORMATION AND THIS PERMITS A COMPARISON OF PROCESSES OF IRON CONCENTRATION IN SEDIMENTARY ROCKS THROUGH TIME.
536. LAIFA, E., BROWN, A. C., ECOLE POLYTECHNIQUE:
PRECAMBRIAN URANIUM IN FISSURE-VEINS, ALGERIA, 1974-76; M. SC. THESIS.
- DESCRIPTIVE MINERALOGY OF NEAR SURFACE AND DEEP PORTIONS OF VEIN-TYPE URANIUM DEPOSITS IN THE ALGERIAN SAHARA HAS BEEN INVESTIGATED. THE CHEMICAL CHARACTER OF HOST ROCK UNITS AND THEIR ALTERATION IS NOW IN PROGRESS.
537. MACRAE, W., CROCKET, J. H., MCMASTER UNIV., GEOL.:
NOBLE METALS IN ULTRAMAFICS, TIMMINS-KIRKLAND LAKE, 1975-79; M. SC. THESIS.
- PLATINUM METALS AND GOLD ARE DETERMINED BY ACTIVATION ANALYSIS IN ARCHEAN ULTRAMAFICS FROM THE TIMMINS-KIRKLAND LAKE AREA ULTRAMAFIC ARE SAMPLED TO REPRESENT THE MAIN TECTONIC AND PETROGRAPHIC TYPES THE MAIN OBJECTIVES ARE TO TEST A HYPOTHETICAL GENETIC RELATIONSHIP BETWEEN ECONOMIC GOLD MINERALIZATION AND ULTRAMAFIC ROCK AND TO EVALUATE THE RELATIVE POTENTIAL OF THOLEIITIC AND KOMATIITIC AS ECONOMIC SOURCES OF THESE METALS.
538. MOSSMAN, D. J., CLUFF, R. G., UNIV. SASKATCHEWAN, GEOL.:
GEOLOGY PORPHYRY COPPER MT. WASHINGTON, B.C., 1974-77; M. SC. THESIS.
- RELATE METALLIZATION WITH ALTERATION AND TIMING OF HYDROTHERMAL SOLUTIONS IN THE MUREX BRECCIA PORPHYRY COPPER DEPOSIT, MT. WASHINGTON, BRITISH COLUMBIA.
539. MOSSMAN, D. J., CLUFF, R. G., HEFFERNAN, K. J., UNIV. SASKATCHEWAN, GEOL.:
PETROLOGY ORE DEPOSITS CANADIAN SHIELD ENVIRONS, 1972-; PH. D. THESIS.
- SEE: EVALUATION OF PRIMARY AND SECONDARY GEOLOGICAL PROCESSES AT THE FLIN FLON CU-7N DEPOSIT, MANITOBA AND SASKATCHEWAN, USING FACTOR-VECTOR ANALYSIS: CHEMICAL GEOL., V. 16, P. 1-14, 1975.
- CONTINUE GEOCHEMICAL-GEOLOGICAL STUDY OF ORE-BEARING AND POTENTIALLY ORE-BEARING ROCKS IN THE AREA.
540. MOSSMAN, D. J., HEFFERNAN, K. J., UNIV. SASKATCHEWAN, GEOL.:
EXPERIMENTAL RECRYST. OF METAL-RICH MUD, RED SEA, 1974-76; M. SC. THESIS.
- SIMULATE EXPERIMENTALLY THE LOW-GRADE (BURIAL) METAMORPHISM OF RED SEA METAL-RICH MUDS FROM ATLANTIS II GEOTHERMAL DEEP.
541. ROEGIERS, J. C., UNIV. TORONTO, CIVIL:
GEOTHERMAL ENERGY, 1973-:
- FIRST PHASE CONCENTRATES ON EXTRACTION FEASIBILITY AND POTENTIAL IN CANADA BY COLLECTING AND ANALYZING EXISTING DATA FROM DEEP WELLS. TO FOLLOW WILL BE AN IN-DEPTH STUDY OF BEHAVIOUR OF RESERVOIR FORMATIONS UNDER CONDITIONS OF TEMPERATURE AND PRESSURE TO ASSESS THE EXTRACTION PROCEDURE.
542. RUZICKA, V., GEOL. SURV. CAN.:
GEOLOGY URANIUM RESOURCES OF CANADA, 1975-:
- SEE: ASSESSMENT OF SOME CANADIAN URANIUM OCCURRENCES AND SOME SEDIMENTARY FEATURES OF CONGLOMERATIC URANIUM ORE FROM ELLIOT LAKE, ONTARIO: GEOL. SURV. CAN., PAPER 76-1A, P. 341-346, 1976.
543. SAGE, R. P., ONTARIO DIVISION MINES:
ONTARIO ALKALIC ROCK - CARBONATITE COMPLEXES, 1975-78:
- SEE: CARBONATITE - ALKALIC COMPLEXES: ONTARIO DIVISION OF MINES, MISC. PAPER 63, P. 58-60, 1975.
544. SPITZ, G., DARLING, R. G., ECOLE POLYTECHNIQUE:
GEOCHEM. VOLCANIC ROCKS AROUND LOUVEN CU DEPOSIT, 1969-76; M. SC. THESIS.
- SEE: THE PETROCHEMISTRY OF ALTERED VOLCANIC ROCKS SURROUNDING THE LOUVEN COPPER DEPOSIT, VAL D'OR, QUEBEC: CAN. J. EARTH SCI., V. 12, NO. 11, P. 1820-1849, 1975.
545. STEGER, H. F., FAYE, G. H., CANMET, EMR:
ELEMENTAL SULPHUR IN ORES AND MINERALS, 1975-75:
- DEVELOPMENT OF A METHOD USING A SUBLIMATION TECHNIQUE TO DETERMINE ELEMENTAL SULPHUR IN ORES AND MINERALS HAS BEEN COMPLETED AND A REPORT HAS BEEN ACCEPTED FOR PUBLICATION.
546. STEGER, H. F., FAYE, G. H., CANMET, EMR:
REVIEW OF METHODS OF CHEMICAL PHASE ANALYSIS, 1974-75:
547. STEGER, H. F., FAYE, G. H., DESJARDINS, L. E., CANMET, EMR:
OXIDATION OF SULPHIDE ORES AND MINERALS, 1973-77:
- A STUDY OF THE STABILITY OF THREE CERTIFIED REFERENCE ORES TO VARIOUS CONDITIONS OF TEMPERATURE AND HUMIDITY HAS BEEN COMPLETED AND A REPORT HAS BEEN ACCEPTED FOR PUBLICATION. CURRENTLY SPECIMENS OF PURE SULPHIDE MINERALS ARE BEING OXIDIZED IN ORDER TO ELUCIDATE THE MECHANISM AND KINETICS. ANALYTICAL METHODS ARE BEING DEVELOPED TO DETERMINE THE PRODUCTS OF OXIDATION.
548. TIHOR, S., CROCKET, J. H., GRUNDY, H. D., MCMASTER UNIV., GEOL.:
MINERALOGY OF CARBONATE ROCKS, KIRKLAND LAKE AREA, 1974-76; PH. D. THESIS.
- THE LARDER-KIRKLAND LAKE CARBONATE HORIZON WHICH IS HOST TO THE KERR-ADDISON GOLD MINE HAS BEEN FOUND TO BE MAINLY A DOLOMITE-MAGNESITE-QUARTZ ROCK CONTAINING A SUBORDINATE MICACEOUS PHASE, PROBABLY CHROMIUM-RICH MICAFUCHSITE. THE MINERALOGY IMPOSES SIGNIFICANT RESTRICTIONS ON THE GENESIS OF AURIFEROUS ROCK IN THE KIRKLAND LAKE AREA AND INDICATES THAT PRECAMBRIAN CARBONATE HORIZONS CANNOT BE SIMPLY UNDERSTOOD IN TERMS OF THE DEPOSITIONAL ENVIRONMENT OF MODERN CARBONATES.
549. TIHOR, L. A., CROCKET, J. H., RIDLER, R. H., MCMASTER UNIV., GEOL.:
GOLD IN ARCHEAN GREENSTONES BY ACTIVATION ANAL., 1974-77; PH. D. THESIS.
- SEE: ORIGIN AND DISTRIBUTION OF GOLD-BEARING CARBONATE ZONES OF THE KIRKLAND LAKE-LARDER LAKE AREA, ONTARIO: GEOL. SURV. CAN., PAPER 76-1A, P. 407-412, 1976.
- SELECTED EXPOSURES OF CARBONATE BEARING ROCKS FROM THE KIRKLAND-LARDER LAKE AREA IN EBY, OTTO, TECK, LEBEL, GAUTHIER, MCWITTIE AND MCGARRY TOWNSHIPS WERE MAPPED AT 1 INCH TO 100 FEET. SAMPLES OF THE CARBONATE HORIZON AND ROCKS INTERBEDDED WITH IT WERE ANALYSED FOR GOLD BY NEUTRON ACTIVATION ANALYSIS. RESULTS SUGGEST THAT THE HORIZON IS HIGHLY VARIABLE IN GOLD CONTENT AND THAT INTRUSION OF THE CARBONATES BY SYENITIC ROCK OR STRUCTURAL DEFORMATION CAUSES A MAJOR REDISTRIBUTION OF GOLD.
550. VAN DE POLL, H. W., UNIV. NEW BRUNSWICK, GEOL.:
CARBONIFEROUS STRAT. SED., ATLANTIC CANADA, 1974-:
- THE CARBONIFEROUS SUCCESSION OF EASTERN CANADA OFFERS A UNIQUE OPPORTUNITY TO STUDY THE SPATIAL AND TEMPORAL DISTRIBUTION OF SYNSEDIMENTARY MINERAL OCCURRENCES IN A LARGE POSTOROGENIC MOLASSE BASIN. THIS STUDY EMPHASIZES THE IMPORTANT RELATIONSHIPS THAT EXIST BETWEEN THIS TYPE OF MINERAL OCCURRENCE AND THE SEDIMENTOLOGICAL AND STRATIGRAPHICAL AND PALAEOCLIMATIC CONDITIONS OF DEPOSITION WITH RESPECT TO THE EVOLUTIONARY ASPECTS OF THE BASIN.

COAL GEOLOGY

551. BIRMINGHAM, T. F., GEOL. SURV. CAN.:
PETROG. ANALYSES COAL SEAMS KOOTENAY FM., B.C., 1975-:
- CORRELATION, ORIGIN, SEDIMENTATION AND LATERAL VARIATIONS IN COMPOSITION, QUALITY, THICKNESS, ETC. OF COAL SEAMS, AND FROM PETROGRAPHIC COMPOSITION AND RANK DETERMINATIONS TO PREDICT COKING PROPERTIES.
552. BLUSSON, S. L., GEOL. SURV. CAN.:
METALLOGENY OF SELWYN BASIN, 1973-78:
- STRAT. PAPER IN PREPARATION; URANIUM PROJECT TO START IN 76, END 78.
553. BOTHAM, J. C., GARDNER, W., JORGENSEN, J. G., MONTGOMERY, W. J., LLOYD, T. A., CANMET, EMR:
EVALUATION CANADIAN COKING COALS:
- SEE: COKING COALS OF WESTERN CANADA ASSUME GROWING IMPORTANCE: NORTHERN MINER, MAY 1, P. 5-39, 1975.
- TO ASSIST CANADIAN COAL PRODUCERS AND PROSPECTIVE PRODUCERS IN MATTERS PERTAINING TO USE OF THEIR RESPECTIVE COAL SOURCES IN COKE MAKING. THE WORK ENTAILS TECHNICAL SCALE OVEN TESTS AND SUPPORT ANALYSES.

554. BROUGHTON, P. L., WHITAKER, S. H., IRVINE, J. A., SASKATCHEWAN GEOL. SURV. 1
COAL RESOURCES OF SOUTHERN SASKATCHEWAN, 1972-76:

BOREHOLE EVALUATION OF TERTIARY LIGNITE BASINS OF SOUTHERN SASKATCHEWAN- SEAM CHEMISTRY, SEAM CORRELATIONS, BASIN STRUCTURE, AND RESERVE-RESOURCE CALCULATIONS. PROJECT NEARLY COMPLETED FOR ESTEVAN, WILLOWBUNCH, WOOD MOUNTAIN AND CYPRESS COALFIELDS.
555. CAMERON, A. R., GEOL. SURV. CAN. 1
PETROG. COOKING COALS CROWNEST COALFIELD, ALTA. - B. C., 1961-1

A TECHNICAL REPORT HAS BEEN SUBMITTED ON THE PETROLOGY AND COOKING PROPERTIES OF COAL SAMPLES FROM AT LEAST THREE SEAMS IN THE FLATHEAD AREA OF BC. ADDITIONAL SAMPLES FROM SEAMS EXPOSED AT THE SOUTH END OF THE FERNIE BASIN (MORRISSEY - LODGEPOLE CREEK AREA) HAVE STUDIED PETROGRAPHICALLY AND DATA COLLECTION ON MACERAL MICROLITHOTYPE DISTRIBUTION HAS BEEN PARTIALLY COMPLETED.
556. CHURCH, B. N., SUTHERLAND BROWN, A., B. C. DEP. MINES PETR. RES., MINES 1
GEOLOGY OF THE HAT CREEK COAL BASIN, 1975-1

SEE: GEOLOGY OF THE HAT CREEK AREA; GEOLOGICAL FIELDWORK, B. C. DEP. MINES PETROL. RES., 1975.

THIS REPORT IS INTENDED AS A BRIEF GEOLOGICAL OUTLINE OF THE HAT CREEK BASIN OF SOUTH CENTRAL BRITISH COLUMBIA. THE FOCUS OF INTEREST IS A DEPOSIT OF SEVERAL HUNDRED MILLIONS OF TONS OF SUB-BITUMINOUS COAL. PRESENT INVESTIGATION CENTERS ON THE STRUCTURE AND STRATIGRAPHY OF THIS DEPOSIT.
557. DONALDSON, J. R., BOTHAM, J. C., CANMET, EMR 1
DATA BANK OF COOKING PROPERTIES OF CANADIAN COALS, 1974-1

EVALUATION OF COOKING POTENTIAL OF MOST OF COALS FROM PRODUCING MINES IN WESTERN CANADA HAS BEEN CARRIED OUT BY CANMET FOR MORE THAN 15 YEARS, INCLUDING EXPLORATION STUDIES OF NEW SEAMS. COMPLETE ANALYSIS AND PILOT SCALE COOKING TESTS ARE AVAILABLE FOR OVER 1000 SAMPLES. COMPUTERIZATION OF THIS INFORMATION BEGAN IN 1974. INFORMATION PRESENTS A SIGNIFICANT CONTRIBUTION TO QUALITY OF COOKING IN RELATION TO THE NATIONAL INVENTORY.
558. GUNTHER, P. R., GEOL. SURV. CAN. 1
CORRELATION HYDROCARBON OCCURRENCES MACKENZIE DEL. 1974-1
559. GUNTHER, P. R., GEOL. SURV. CAN. 1
OPTICAL PROPERTIES OF COALS AND DISPERSED MATERIA, 1975-1

INVOLVES PALEOTEMPERATURES AND MAXIMUM DEPTHS OF BURIAL, WESTERN CANADA.
560. HACQUEBARD, P. A., GEOL. SURV. CAN. 1
PETROG. COAL SEAMS, ROCKY MOUNTAIN FOOTHILLS, 1968-1
561. HACQUEBARD, P. A., GEOL. SURV. CAN. 1
MICROSCOPIC STUDY PYRITE, SYDNEY COALFIELDS, N. S., 1975-1

A DETAILED STUDY OF MODE AND DISTRIBUTION OF PYRITE IN COAL TO ESTABLISH GEOLOGICAL TRENDS THAT MAY PERMIT PREDICTION OF HIGH SULPHUR AREAS AHEAD OF PRESENT (SUBMARINE) WORKINGS.
562. HACQUEBARD, P. A., AVERY, M. P., GEOL. SURV. CAN. 1
RANK STUDIES COAL-ORGANIC MATTER IN SEDIMENTS, 1968-1

SEE: CORRELATION BETWEEN COAL RANK, PALEOTEMPERATURE AND PETROLEUM RESOURCES IN ALBERTA; GEOL. SURV. CAN., PAPER 75-1B, P. 5-8, 1975.

WESTERN CANADA- CORRELATION OF COAL RANK, PALEOTEMPERATURE AND INITIAL RESERVES OF PRODUCING OIL AND GAS FIELDS IN ALBERTA; COMPLETED MS AND SUBMITTED FOR PUBLICATION. EASTERN CANADA- SETTING-UP A NEW CP LAB AT AGC IN DARTMOUTH.
563. HOLTER, M. E., YURKO, J. R., CHU, M., ALTA. RESEARCH COUNCIL, GEOL. 1
GEOL. & COAL RESOURCES ARDLEY COAL ZONE CENTR. ALTA., 1974-75:

SEE: GEOLOGY AND COAL RESOURCES, ARDLEY COAL ZONE, CENTRAL ALBERTA; ALTA. RESEARCH COUNCIL, REP. 75-7, 1975.
564. IRVINE, J. A., GEOL. SURV. CAN. 1
PREL. GEOLOGICAL MAPPING DOMINION COAL BLOCKS, 1975-75:
565. JORGENSEN, J. E., NANDI, B. N., BOTHAM, J. C., CANMET, EMR 1
APPLICATION OF PETROGRAPHY TO COAL EVALUATION:

COAL PETROGRAPHY ALLOWS USE OF SMALL SAMPLES FOR PETROGRAPHIC STUDY PERMITTING THE ASSESSMENT OF COOKING POTENTIALS OF EXPLORATION SAMPLES SUCH AS DRILL CORES.
566. MCLEAN, J. R., GEOL. SURV. CAN. 1
- SEDIMENTOL. BLAIRMORE GP., WEST. ALBERTA, 1975-78:

LITHOSTRATIGRAPHY AND SEDIMENTOLOGY OF COAL-BEARING BLAIRMORE GROUP WITH EMPHASIS ON CORRELATION AND ORIGIN OF COAL SEAMS AND THEIR RELATIONSHIP TO ASSOCIATED SEDIMENTS.
567. NANOI, B. N., BOTHAM, J. C., CANMET, EMR 1
DEPTH OF COVER RELATED TO REFLECTANCE AND COOKING:

SEE: REPORT NO. ERP/ERL 75/148 C, P. 9, 1975. 1

A STUDY OF THE PETROGRAPHIC, PHYSICAL, CHEMICAL, AND GEOLOGICAL PROPERTIES OF COAL UNDER DIFFERENT DEPTHS OF COVER, 96 TO 1000 FEET AND TO EVALUATE THE RESULTANT COKE FROM BLENDS OF THESE COALS.

MINERAL EXPLORATION/EVALUATION

568. ANDERSON, C. D., ANDERSON, D. T., LESAVAGE, S., UNIV. MANITOBA, EARTH 1
GEOPHYSICAL EVALUATION, NEEPAWA IRON DEPOSIT, 1973-77:

TO OUTLINE AND EVALUATE THE POTENTIAL ECONOMIC VALUE OF A VERY LARGE IRON DEPOSIT 2500 FT BELOW SURFACE USING MAGNETIC AND GRAVITY METHODS.
569. AYRES, L. D., UNIV. MANITOBA, EARTH 1
MISSI ISLAND VOLCANIC COMPLEX, MANITOBA, 1974-78:

SEE: MISSI ISLAND VOLCANIC CENTRE; CENTRE FOR PRECAMBRIAN STUDIES, UNIV. MAN., 1974 ANN. REP., P. 143-145, 1975.

LOW GRADE CHALCOPYRITE-PYRITE MINERALIZATION IS SPORADICALLY FOUND THROUGHOUT THE 75 SQUARE KILOMETRE ISLAND AND IS ASSOCIATED MAINLY WITH SUBVOLCANIC PORPHYRITIC DIKES. METAVOLCANICS IN THE MINERALIZED ZONES ARE STRONGLY ALTERED, BUT THE PORPHYRITIC DIKES ARE LESS ALTERED. PRELIMINARY FIELD WORK HAS BEEN DONE IN PREPARATION FOR A MAJOR PROJECT IN 1976.
570. AYRES, L. D., AVERILL, S. A., UNIV. MANITOBA, EARTH 1
ALTERATION IN SETTING NET LAKE PORPHYRY MO DEPOS., 1969-78:

SEE: SETTING NET LAKE STOCK; CENTRE FOR PRECAMBRIAN STUDIES, UNIV. MAN., 1974 ANN. REP., P. 202-205, 1975.

THE ALTERATION ASSEMBLAGE OF ALBITE-CHLORITE-MUSCOVITE-EPIDOTE-CARBONATE-ILMENITE-PYRITE ASSOCIATED WITH THE MO MINERALIZATION IS THE RESULT OF BOTH ALTERATION AND SUPERIMPOSED GREENSCHIST FACIES METAMORPHISM OF THE HOST GRANODIORITE-QUARTZ MONZONITE PLUTON. DETAILED SAMPLING HAS BEEN CARRIED OUT TO BETTER DELINEATE THE ALTERATION AND TO DIFFERENTIATE BETWEEN ALTERATION AND METAMORPHISM EFFECTS.
571. BECK, L. S., PARSLow, G. R., HOEVE, J., SASKATCHEWAN GEOL. SURV. 1
UNDERWATER URANIUM EXPLORATION, 1975-78:

SEE: SASK. GEOL. SURV., SUMM. REP., P. 120-122, 1975.

EVALUATION OF EXPLORATION TECHNIQUES DESIGNED TO LOCATE URANIUM DEPOSITS BENEATH LAKES- INCLUDES LAKE SEDIMENT GEOCHEMISTRY, ANALYSIS OF LAKE WATERS FOR URANIUM AND RADON, VLF SURVEYS AND THE USE OF UNDERWATER SCINTILLOMETERS.
572. BELL, R. T., GEOL. SURV. CAN. 1
GEOLOGY OF URANIUM RESOURCES CANADA, 1975-1

SEE: GEOLOGY OF URANIUM IN SANDSTONES IN CANADA AND URANIUM-BEARING BONE OCCURRENCES; GEOL. SURV. CAN., PAPER 76-1A, P. 337-340, 1976.
573. CHURCH, B. N., BARAKSO, J. J., BOWMAN, A. F., B. C. DEP. MINES PETR. RES., MINES 1
GEOCHEMISTRY IN THE GOOSLY-OWEN LAKE AREA, B. C., 1971-76:

SEE: GEOLOGY OF THE BUCK CREEK AREA; GEOLOGY EXPLORATION AND MINING, B. C. DEP. MINES PETROL. RES., P. 353-363, 1972.

AN EVALUATION OF MINERALIZATION IN THE GOOSLY-OWEN LAKE AREA OF CENTRAL BC IS THE RESULT OF A COMPREHENSIVE GEOCHEMICAL AND STATISTICAL STUDY OF ROCK SAMPLES OBTAINED FROM A REGIONAL GEOLOGICAL SURVEY.

574. COOMBE, W., PEARSON, W. J., SASKATCHEWAN GEOL. SURV.:
LA RONGE-HOLLASTON BASE METALS PROJECT, 1974-78:

SEE: LA RONGE-HOLLASTON BASE MINERALS PROJECT: SASK. GEOL.
SURV., SUMM. REP., P. 101-109, 1975.

ASSESS AND EVALUATE KNOWN MINERAL OCCURRENCES IN LA RONGE-
REINDEER AND HOLLASTON FOLD BELTS- TO DISCOVER ADDITIONAL
RESERVES IN KNOWN OCCURRENCES, TO LOCATE NEW MINERAL
DEPOSITS, TO STUDY METALLOGENIC RELATIONSHIPS TO
VOLCANISM, SEDIMENTATION, DEFORMATION AND METAMORPHISM,
AND TO COMPILE CASE HISTORIES OF GEOCHEMICAL PROSPECTING
METHODS.
575. DAWSON, K. M., GEOL. SURV. CAN.:
METALLOGENY N. CANADIAN CORDILLERA, 1974-:
576. DAWSON, K. R., GEOL. SURV. CAN.:
GEOLOGY OF BARIUM, FLUORINE AND STRONTIUM DEPOSITS, 1972-:

SEE: BARITE, FLUORITE, AND CELESTITE DEPOSITS AND
OCCURRENCES IN CANADA: GEOL. SURV. CAN., PAPER 76-1A, P. 335,
336, 1976.
577. ECKSTRAND, O. R., GEOL. SURV. CAN.:
GEOLOGY CANADIAN NICKEL-PLATINUM GROUP DEPOSITS, 1963-:
578. ENGLISH, P., MORTON, R. O., PADGHAM, W. A., SEATON, J. M. B., DEP. IAND:
GOLD OCCURRENCES CAMFRON-BEAULIEU RIVERS, NWT., 1975-:
579. FAVINI, G., UNIVERSITE LAVAL, GEOL.:
METHODOLOGIE DANS L'EXPLORATION MINERALE, 1975-76:

TO REDUCE THE DECISION UNCERTAINTY, WE ARE PROPOSING
GEOMATHEMATICAL TECHNIQUES BASED ON INFORMATION THEORY.
OPTIMUM DECISIONS CAN BE TAKEN WITH GREATLY REDUCED
UNCERTAINTY IF THE INFORMATION ABOUT THE PRESENCE OR
ABSENCE OF OREBODIES IS DECODED. THE CODED MESSAGE IS A
BLOCK OF INDEPENDANT SIGNALS TAKEN FROM CONTINUOUS
NUMERICAL CHANNELS. TO REALISE THE GREATEST INDEPENDANCE
BETWEEN SIGNALS THEY MUST BE PRODUCED BY EVER INCREASING
GEOLOGICAL ENVIRONMENTS AROUND THE OREBODIES.
580. FINDLAY, D. J., AYRES, L. D., UNIV. MANITOBA, EARTH:
LANG LAKE CU DEPOSIT, MANITOBA, 1975-77: M. SC. THESIS.

FIELD WORK IS PARTLY COMPLETED ON THIS DEPOSIT WHICH
CONSISTS OF DISSEMINATED AND VEIN CHALCOPYRITE IN
METAVOLCANICS AND PORPHYRYTIC DIKES. THE DEPOSIT HAS
BEEN METAMORPHOSED TO UPPER GREENSCHIST FACIES.
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PLANNED. ALL BOREHOLE AND OUTCROP DATA HAVE BEEN
COMPILED.
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THIS PROJECT ENTAILS DISPLAYING ON A MODIFIED GEOLOGIC MAP
ALL SIGNIFICANT DEPOSITS OF ECONOMIC MINERALS IN ALBERTA
OTHER THAN PETROLEUM AND NATURAL GAS. THE MINERALS ARE
CLASSIFIED INTO CATEGORIES BASED ON INDUSTRIAL USE,
RELATIVE SIZE OF DEPOSIT, AND GEOLOGIC ORIGIN.
PROSPECTIVE AREAS ARE OUTLINED. COMPILATION WORK IS
COMPLETE, MAP EDITING IS IN PROGRESS.
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ORE. PREVIOUS EXPLORATION WORK CONDUCTED ON IRON-
FORMATION & BARREN MASSIVE SULPHIDE DEPOSITS HAVE
INDICATED THAT THEY ARE EITHER TOO LOW GRADE OR TOO
REMOTE GEOGRAPHICALLY FOR EXPLOITATION. THEREFORE IT WAS
DESIRED TO EXAMINE ALL SIGNIFICANT IRON OCCURRENCES THAT
HAD NOT PREVIOUSLY BEEN INVESTIGATED FOR THEIR IRON
POTENTIAL. THESE STUDIES CONSISTED OF AN INTEGRATED
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BY TRENCHING & DIAMOND DRILLING.
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SOAPSTONE OCCURS IN SILICATED MG MARBLE AND ALTERED BASIC
AND ULTRABASIC ROCKS. FIVE MAJOR AND TEN MINOR
OCCURRENCES ARE KNOWN AT OR NEAR TIDENWATER, AND RESERVES
ARE SUFFICIENT FOR SEVERAL DECADES AT PRESENT RATE OF
MINING.
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MOLYBDENUM MINERALIZATION, EAGLE MT., GUYANA, 1972-75: M. SC.
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DISCORDANT GRANODIORITE, QUARTZ DIORITE AND QUARTZ
PORPHYRY OF TONALITIC AFFINITY. MINOR SCHEELITE AND GOLD
ARE ASSOCIATED. MOLYBDENITE IS PREFERENTIALLY
CONCENTRATED IN ROCK ROCKS, BUT IS ALSO IN CHILLED
MARGINAL FACIES. SEPECTIC AND PROPYLITIC ALTERATION
ARE ASSOCIATED WITH THE MOLYBDENITE ZONE.
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PH. D. THESIS.

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ENVIRONMENT OF DEPOSITION AND STRATIGRAPHY OF THE LITTLE
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MOUNTAINS, NWT. FIELD WORK, HELICOPTER SUPPORTED,
MEASURED AND SAMPLED FOR GEOCHEM. STRATIGRAPHIC SECTIONS
IN THE COATES LAKE AND NORTH REDSTONE TO THUYA RIVER
AREA. STROMATOLITES MAY BE USED FOR DETAILED
STRATIGRAPHIC CORRELATION.
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593. KRAMERS, J. W., BROWN, R. A. S., ALTA. RESEARCH COUNCIL, GEOL:
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MINERABLE AREA OF THE ATHABASCA OIL SANDS DEPOSIT WERE
ANALYZED FOR THEIR HEAVY MINERAL CONTENT. THE OVERALL
HEAVY MINERAL CONTENT VARIES FROM 0.24%-2.29% WITH A MEAN
OF 1.02%. MOST OF THE HEAVIES APPEAR TO BE CONCENTRATED
IN THE -140 MESH (<0.1MM) FRACTION. % TI IN THE -100
MESH VARIES FROM 1.5-17.8% WITH A MEAN OF 10.3%. % ZR IN
THE -100 MESH VARIES FROM 0.2-5.4% WITH A MEAN OF 2.9%.
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PARTS OF CANADA. BASED ON THE REGULARITY OF ORE
OCCURRENCE IN CORRESPONDING GEOLOGIC (ESPECIALLY
LITHOLOGIC) ENVIRONMENTS WORLDWIDE. DATA ARE STORED IN A
FILE (MANIFILE) AND A SET OF DOCUMENTATION PLATES WITH
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- THE GEOLOGY OF THE BATHOLITH AND ITS CONTAINED PORPHYRY COPPER DEPOSITS, PARTICULARLY WITH REGARD TO ORE CONTROLS, IS THE PRIMARY SUBJECT OF THE STUDY.
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AND TO DETERMINE THEIR RELATIONSHIP BY MULTIVARIATE
STATISTICAL ANALYSIS. THIS RELATIONSHIP WILL BE USED TO
PREDICT WHAT FURTHER MINERAL POTENTIAL REMAINS IN THE
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MINERALIZATION AND POSSIBLE EFFECTS ON PRIMARY SULFIDE
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RELATIONSHIPS OF THE CARBONATE BANKS AND REEFS, THEREBY
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ANALYTICAL WORK IS NEARLY COMPLETED ON SAMPLES OF OIL SAND TAILINGS, UNSATURATED MCMURRAY FORMATION SANDS, ALLUVIAL AND DUNE SANDS. ALL SAMPLES HAVE BEEN WASHED, SCREENED, EXAMINED MICROSCOPICALLY AND ANALYZED FOR SILICA AND VARIOUS IMPURITIES. FURTHER BENEFICIATION INVOLVING HEAVY LIQUID SEPARATION, MAGNETIC SEPARATION, ACID LEACHING AND/OR FLOTATION WERE PERFORMED ON SELECTED SAMPLES.
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FOLLOW-UP FIELD WORK ON 8 DEPOSITS IN 1975. FIVE NEW DEPOSITS ALSO SAMPLED. PARTICLE SIZE ANALYSIS AND XRD MINERALOGICAL STUDIES TO BE FOLLOWED BY FURTHER CERAMIC FIRING TESTS.

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DIFFERENT PEGMATITE TYPES CLOSE TO COMPLETION.
MINERALOGY-BERYL, POLLUCITE, FELDSPARS, ZIRCON-HAFNON,
AND THALLIUM ARE STUDIED IN THE TANGO PEGMATITE, AND
GENERAL CRYSTALLOCHEMICAL STUDIES INCLUDE TA, Nb-OXIDE
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ABSORPTION SPECTRA OF MANY SILICATE MINERALS ARE BEING
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TANGO PEGMATITE, BERNIC LAKE, MANITOBA. TANTALITE CATION
ORDERED, PSEUDO-TANTALITE CATION DISORDERED. WOODGEMITE
STRUCTURE MONOCLINIC C2/C, ORIGIN AT 0, 0, 0 OF TANTALITE,
CATIONS LARGELY ORDERED, CLOSE AGREEMENT IN MEASURED AND
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SILICIC HASTINGSITE AND TREMOLITE (XRAY & NEUTRON) HAVE
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IS IN PROGRESS.
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FUNCTION OF PARAGENESIS. THE STRUCTURE OF A CS-LI BERYL
IS COMPLETE AND THE FINDINGS HAVE ALLOWED AN IMPROVED
INTERPRETATION OF REFRACTIVE INDEX VARIATIONS IN BERYL.
TWO MANUSCRIPTS ON THESE SUBJECTS ARE NEAR COMPLETION AND
WORK IS CONTINUING ON A GENERAL STUDY AND REVIEW OF
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OF THE M3AL F6 STRUCTURES IS NOW FINISHED AND WORK IS
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PYROXENES HAVE BEEN SYNTHESIZED. STRUCTURE REFINEMENTS OF
ORTHOENSTATITE & MG-MN-CO ORTHOPYROXENE ARE COMPLETE AND
WORK IS PROGRESSING ON THE STRUCTURES OF MG-CO AND MG-MN
OPHTHOPYROXENES. THE STRUCTURES OF THE VANADATE PYROXENES
KV03, NH4V03, RBV03 AND CSV03 ARE COMPLETE AND A
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FELDSPAR, ORDERED YET RETAINING MONOCLINIC SYMMETRY.
STRUCTURE REFINED BY NEUTRON DIFFRACTION. ANHYDROUS ION
EXCHANGE EXPERIMENTS FAIL TO YIELD NA OR RB ANALOGUES:
WITH NaCl, PRODUCTION OF SODALITE INSTEAD. THIS
POLYMORPH OCCURS ONLY IN CENTRAL POCKETS IN PEGMATITIC
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WORK ON THEIR BATHOLITHIC COUNTERPARTS IS WELL ADVANCED.
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702. TRAILL, R.J., BONARDI, M., DELABO, R.N., PRINGLE, G.J., GEOL. SURV. CAN. I
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PALEONTOLOGY

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TO ARGO SALT. COMPARISONS ARE MADE WITH PREVIOUSLY
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PLAINS (SDH), JURASSIC-CRETACEOUS GREENLAND (RAF), TYPE
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THE PEACE RIVER DISTRICT OF NORTHWESTERN ALBERTA HAS BEEN
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STRATA OF THE EDMONTON GROUP AND SCOLLARD MEMBER HAS BEEN
COMPLETED. DISTRIBUTION OF MEGASPORE GENERA IS CURRENTLY
BEING RECORDED. COLUMNAR SECTIONS SHOWING CORRELATION OF
THE MAJOR COAL SEAMS IN THE 27 SECTIONS MEASURED ALONG
THE RED DEER RIVER FROM EAST COULEE TO ARDLEY HAVE BEEN
PREPARED.
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UNLIKE MOST OTHER 'ACADIAN' INTRUSIVE BODIES, ROCKS OF
THE WELSFORD 'APPENDAGE' DEFINE A NON-OROGENIC, ALKALINE
TO PERALKALINE GABBRO-SYENITE-GRANITE-FELSITE ASSOCIATION.
MINERALOGICAL STUDIES HAVE DOCUMENTED OCCURRENCES OF
FAYALITE, HEDENBERGITIC CPX, RIEBECKITE AND ANNITE.
ROCKS POSSESS HYPERSOLVUS CHARACTER AND SHOW VARIABLE
DEGREES OF BRIEF SUB-SOLIDUS RE-EQUILIBRATION WITH A
FLUID PHASE.
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FAVOURABLE LAKE GRANITIC BATHOLITHS, 1965-:

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FAVOURABLE LAKE METAVOLCANIC-METASEDIMENTARY BELT HAVE
BEEN MAPPED AND PETROGRAPHIC AND CHEMICAL WORK IS IN
VARIOUS STAGES OF COMPLETION. EACH BATHOLITH IS
COMPOSITE AND IS COMPOSED OF A LARGE NUMBER OF INTRUSIVE
PHASES THAT RANGE IN COMPOSITION FROM DIORITE TO GRANITE
AND CAN BE DISTINGUISHED BY MINERALOGICAL AND TEXTURAL
PARAMETERS.
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VOLCANOGENIC ALTERATION IN PRECAMBRIAN ROCKS, 1971-:

MANY PRECAMBRIAN VOLCANIC ROCKS WERE ALTERED BY VOLCANIC-
RELATED PROCESSES DURING OR SHORTLY AFTER ERUPTION. THE
ALTERATION VARIES GREATLY IN INTENSITY, BUT ONLY STRONGLY
ALTERED ROCKS CAN BE READILY IDENTIFIED BY NORMAL
PETROGRAPHIC TECHNIQUES. RECOGNITION OF WEAKLY ALTERED
ROCKS REQUIRES SOPHISTICATED GEOCHEMICAL WORK.
RECOGNITION OF ALTERATION IS HAMPERED BY THE FACT THAT
PRESENT MINERAL ASSEMBLAGES ARE THE RESULT OF
SUPERIMPOSED METAMORPHISM OF THE PRIMARY ALTERATION
MINERALS.
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RHYOLITIC BY MIDDLE DEVONIAN. THE NATURE OF THE
ASSOCIATED SEDIMENTS (SHALLOW WATER, ESTUARINE,
TERRESTRIAL) IN ADDITION TO THE CHARACTER OF THE
VOLCANISM DICTATES THAT THESE ROCKS WERE EMPLACED IN A
CONTINENTAL MARGIN OR ISLAND ARC ENVIRONMENT.
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GEOCHRONOLOGICAL STUDY OF 12 GRANITOID DIAPYRS PIERCING
THE HARBIGOOD BELT, NORTHWESTERN ONTARIO, WAS UNDERTAKEN
TO DETERMINE THEIR GENESIS & RELATION TO METAVOLCANICS
AND COMPLEX BATHOLITHS EMBAIYING THEM. MAJOR ELEMENTS,
TRACE ELEMENTS, & ISOTOPE ANALYSES ARE BEING PERFORMED ON
THE GRANITOIDS, THEIR APLITES & THE ENCLOSED ENCLAVES.

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- STUDY OF THE INTERRELATIONSHIPS OF PEGMATITIC
SEGREGATIONS IN THE LAYERED SERIES AND MARGINAL BORDER
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COMPOSITIONS INDICATE THAT THEY REPRESENT DIFFERENTIATION
PRODUCTS OF A MAGMA OF CRUSTAL ORIGIN. THE IGNEOUS ROCKS
OF WEST BUTTE ARE BEING STUDIED TO COMPARE THEM WITH
THOSE FROM EAST BUTTE.
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- DETAILED MAPPING OF PORTION OF BELL RIVER COMPLEX AS
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- A 400 METRE THICK, WELL EXPOSED SEQUENCE OF PILLOWED AND
MASSIVE, APHYRIC BASALT FLOWS IS BEING EXAMINED.
EMPHASIS IS ON FLOW MORPHOLOGY, AND THE NATURE AND ORIGIN
OF PILLOWS, MANY OF WHICH ARE INTERCONNECTED. QUENCH
TEXTURES ARE PRESENT IN MANY OF THE PILLOWS.
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- A STUDY OF THE REGIONAL GEOLOGY OF THE LEVACK MINE AREA.
EMPHASIS WILL BE PLACED UPON THE MINERALOGY, PETROLOGY
AND CHEMISTRY OF THE GRANITE BRECCIA, THE ROCK UNIT WHICH
CONTAINS MOST OF THE ECONOMIC SULFIDES. THE ORIGIN OF
THIS ROCK UNIT IS IN QUESTION. A MAIN OBJECTIVE WILL BE
TO OBTAIN EVIDENCE EITHER FOR A TECTONIC AND/OR A
METAMORPHIC DERIVATION OF THIS BRECCIA.
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DES APPALACHES DU QUEBEC PAR L'EQUIPE, ET ETABLISSEMENT
D'UN MODELE DE L'EVOLUTION THERMIQUE ET GEOCHIMIQUE DES
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ET DES MONTS OURALS.
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- ETUDE COMPARATIVE PETROLOGIE OPHIOLITES ACTUELLES
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STUDY INCLUDING THE RIVER VALLEY AND SHAWMERE BODIES.
PALEOMAGNETIC, GEOCHRONOLOGIC, AND GEOCHEMICAL ASPECTS OF
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THE NATURE AND PATTERNS OF THE VOLCANIC SUCCESSION AND
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WERE EMPLACED DURING THE LATTER PART OF THE FIRST PERIOD
OF DEFORMATION. SKARN-LIKE ASSEMBLAGES HAVE BEEN CREATED
BY SYNANTETIC CORONA FORMATION IN IJOLITE DURING POST-
EMPLACEMENT METAMORPHISM.
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PLUTON. THE VOLCANIC ROCKS HAVE BEEN DEFORMED BY THE
LATEST PHASE OF THE ACADIAN OROGENY WHEREAS THE ST.
GEORGE PLUTON IS UNDEFORMED. BOTH UNITS ARE BIMODAL IN
PETROLOGICAL CHARACTER. A DETAILED COMPARISON OF THE
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CHEMICAL CHARACTERISTICS.
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OF ENSIALIC ORIGIN. METAMORPHIC GRADE OF AVALON ROCKS
VARIES FROM PREHNITE-PUMPELLYITE IN THE EAST TO
GREENSCHIST IN THE WEST, INCREASING IN THE DIRECTION OF
GREATER TECTONIC STRESS. THE LOVE COVE GROUP, A
SCHISTOSE VOLCANIC-SEDIMENTARY BELT IN THE WESTERN PART
OF THE AVALON PLATFORM WILL BE STUDIED. IT INCLUDES
MASSIVE IGNIMBRITE BELT PREVIOUSLY UNKNOWN.
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INTRUSION WILL BE UNDERTAKEN. AIM IS TO ASSESS MINERAL
POTENTIAL (CU, NI) AND POSSIBLE RELATIONS TO THOMPSON
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PORPHYRY STOCK AND THE RELATIONSHIP OF MINERALIZATION TO
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DETAILED PETROGRAPHIC, PETROCHEMICAL AND MINERALOGICAL
STUDIES OF ARCHAEOAN ALKALINE COMPLEXES AT STURGEON
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NUMBER OF ARCHAEOAN COMPLEXES OF ALKALINE CHARACTER IN
THIS REGION-OTHERS INCLUDE POOHSAH LAKE. SIMILAR STUDIES
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SIGNIFICANCE TO FAILED ARM SITUATION AND RELATIONSHIP TO
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GABBRO UNIT, A GRANOPHYRIC GABBRO, AND AN OPHITIC GABBRO.
IN THE STRATIFIED UNIT, THE PYROXENITE-GABBRO SEQUENCE IS
REPEATED SEVERAL TIMES, WITH EACH SEQUENCE SEPARATED BY
THIN METASEDIMENTARY SEPTA.
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846. SCHAU, M., GEOL. SURV. CAN.:
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PROVINCE WILL BE DETERMINED. COMPARISONS WITH MORE
RECENT OROGENIC AND ANDROGENIC GRANITIC TERRAINS WILL BE
USED TO GAIN SOME INSIGHT INTO THE EVOLUTION OF THE EARLY
CRUST.
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DISCRETE BODIES WITHIN VARIOUS LINEAR ZONES. THE
ULTRAMAFIC ROCKS ARE LARGELY SERPENTINIZED BUT MOST
CONTAIN RELICT PRIMARY MINERALS. MINERALOGY AND
CHEMISTRY OF THESE ROCKS WILL BE INVESTIGATED USING
ELECTRON MICROPROBE AND XRF TECHNIQUES.
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ADDITIONAL SPECIMENS OF ONAPPING TUFF HAVE BEEN COLLECTED
FOR PETROGRAPHIC STUDY AND CHEMICAL ANALYSES BECAUSE OF
DIRECT RELEVANCE TO ORIGIN OF THE MICROPEGMATITE.
INFORMATION FROM THESE STUDIES WILL ALSO HELP IN DECIDING
WHAT MATERIAL EXACTLY SHOULD BE SELECTED FOR
DETERMINATION OF STRONTIUM ABUNDANCES RELATIVE TO ORIGIN
OF THE MICROPEGMATITE.
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RELATIONSHIP TO SYNGENETIC MASSIVE SULPHIDE ORE-BODIES IN
THE AREA. INCLUDES T.P.S. OF CORLESS, DENT MITCHELL,
KNOTT, SKINNER, GOODALL, HONEYWELL, MCNAUGHTON, AGNEW,
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PURSUED IN 1976 SEASON.
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OF METAVOLCANICS AND ARE UNCONFORMABLY OVERLAIN BY
METASEDIMENTS AND METAVOLCANIC ROCKS- INCLUDE FLOWS,
PILLOWED, CUMULATE & SPINIFEX, CHILLED AND FRACTURED TOPS,
AND PYROCLASTICS WITH SEDIMENTARY STRUCTURES. CHEMICALLY
ROCKS ARE MORE SIMILAR TO SOUTHERN AFRICAN THAN OTHER
OCCURRENCES.

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- STUDIES ARE IN PROGRESS ON THE MESOZONAL TO KATAZONAL PHENOMENA TERMED NEPHELINIZATION, SCAPOLITIZATION, FELDSPATHIZATION, GRANITIZATION AND SKARNIFICATION AND ON THE EPIZONAL PHENOMENA OF MAGNESIUM METASOMATISM. BESIDES THE GEOCHEMICAL PATTERNS PRESENT IN THE ROCKS ATTENTION IS BEING DEVOTED TO THE TIMING RELATIVE TO METAMORPHIC AND DIASTROPHIC EVENTS. A MAJOR CONCERN IS TO DEVELOP CRITERIA TO CONSTRAIN THE TYPES OF INTERPRETATIONS WHICH CAN BE MADE WITH THE BASIC GEOCHEMICAL DATA.
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859. BARAGAR, W. R. A., GEOL. SURV. CAN.: SEAL LAKE VOLCANIC PROVINCE, NEWFOUNDLAND, 1968-:
860. COLLIERSON, K. D., O'HARA, M. J., BADDSGAARD, H., MEMORIAL UNIV., GEOL.: ARCHEAN STUDIES, LABRADOR, 1974-79:
- STUDIES IN PROGRESS IN THE SAGLEK HEBRON AREA RELATED TO THE EVOLUTION OF THE EARLY ARCHEAN CRUST (PRE-3600MY). SPECIFIC ASPECTS BEING INVESTIGATED INCLUDE 1. STRUCTURAL DEVELOPMENT OF THE GNEISS COMPLEX, 2. PETROLOGY AND GEOCHEMISTRY OF THE UIVAK GNEISSES AND "PRE-UIVAK" META BASIC-ULTRABASIC AND METASEDIMENTARY INCLUSIONS, 3. METAMORPHIC AND STRUCTURAL RELATIONSHIP BETWEEN AMPHIBOLITE AND GRANULITE FACIES GNEISSES, AND 4. STRUCTURE AND GEOCHEMISTRY OF REMOBILIZATION OF GNEISSIC TERRAINS.
861. EMSLIE, R. F., GEOL. SURV. CAN.: GEOL., PETROL., ECONOMIC POTENTIAL ANORTHOSITE, LABR., 1975-:
- SEE: MAJOR ROCK UNITS OF THE MORIN COMPLEX, SOUTHWESTERN QUEBEC: GEOL. SURV. CAN., PAPER 74-48, 1975.
862. FRASER, J. A., GEOL. SURV. CAN.: METAMORPHISM IN THE CANADIAN SHIELD, 1974-:
863. FRISCH, T., GEOL. SURV. CAN.: GNEISSES OF THE PRINCE ALBERT BELT, NWT., 1972-:
864. FROESE, E., GEOL. SURV. CAN.: METAMORPHIC MAP, MANITOBA SOUTH OF 55, 1974-:
865. FROESE, E., GEOL. SURV. CAN.: PETROLOGY, SHERRIDON AREA, MANITOBA, 1974-:
- SEE: PETROLOGICAL STUDIES IN THE SHERRIDON AREA, MANITOBA: GEOL. SURV. CAN., PAPER 76-1A, P. 171, 172, 1976.
866. GITTINS, J., UNIV. TORONTO, GEOL.: PHASE EQUILIBRIUM, PETROGENESIS CARBONATITES, 1971-:
867. GITTINS, J., CUPPIS, L. W., UNIV. TORONTO, GEOL.: REGIONAL METAMORPHISM ALKALIC IGNEOUS ROCKS:
- AMPHIBOLITE FACIES CONDITIONS IN RED WINE, LABRADOR, AND KIPAWA, ONTARIO, COMPLEXES, WITH EMPHASIS ON PYROXENE DEVELOPMENT.
868. HERD, R. K., GEOL. SURV. CAN., REG.: NEW QUEBEC PROJECT I: REGIONAL SYNTHESIS, 1975-:
- COMPILATION OF PETROLOGIC DATA AS COMPONENT OF METAMORPHIC MAP OF CANADIAN SHIELD. REGIONAL DATA COMPILATION TO PROVIDE EXPERTISE: DELINEATE AREAS FOR SPECIAL STUDY.
869. HERD, R. K., GEOL. SURV. CAN.: STUDIES ON SAPPHIRINE AND KORNERUPINE, 1966-:
- SEE: SAPPHIRINE OCCURRENCES IN CANADA: ABSTR. PROGR. GEOL. SOC. AMER. ANN. MTGS., V. 7, NO. 6, P. 779, 1975.
- CONTINUING INVESTIGATION OF NATURAL OCCURRENCES OF SAPPHIRINE AND KORNERUPINE FROM GREENLAND, NORTH AMERICA, AFRICA AND ELSEWHERE. PETROLOGIC STUDIES, FIELD MAPPING, CRYSTAL CHEMISTRY, EXPERIMENTAL SYNTHESIS IN COOPERATION WITH SEVERAL INSTITUTIONS. COMPILATION OF BIBLIOGRAPHY, ANALYTICAL DATA. RELATED SUBJECT AREAS ARE GRANULITE/AMPHIBOLITE FACIES ROCKS, METASOMATISM, HIGH-ALUMINA SEDIMENTS, ELEMENT MOBILITY.
870. HOGARTH, D. D., GRIFFIN, W. L., UNIV. OTTAWA, GEOL.: GENESIS OF LAPIS LAZULI, 1973-76:
- SEE: FURTHER DATA ON LAPIS LAZULI FROM LATIUM ITALY: CAN. MINERAL., V. 13, P. 89-90, 1975.
- LAPIS LAZULI WAS STUDIED FROM TEN WORLD WIDE LOCALITIES. FIELD EXAMINATION, GEOCHEMISTRY AND RIGID PHASE ANALYSES SUGGEST THAT SOME DEPOSITS FORMED THROUGH ISOCHEMICAL PROCESSES DURING METAMORPHISM. OTHER DEPOSITS MUST HAVE INVOLVED EXCHANGE OF ELEMENTS BETWEEN SEDIMENTS AND IGNEOUS ROCKS.
871. KIPPEN, G. B., MOORE, R., MCKINSTRY, B., CARLETON UNIV., GEOL.: PETROLOGIC STUDY OF ROCKS NEAR MATTAWA, ONTARIO, 1972-76: PH.D. THESIS.
- FIELD MAPPING COMPLETED BETWEEN MATTAWA AND NORTH BAY: STRUCTURAL AND PETROLOGIC INTERPRETATION COMPLETED: STRATIGRAPHIC SECTION ESTABLISHED. TEMPERATURE FLUID DIAGRAM FOR CALCILICATE ROCKS CALCULATED FROM HYDROTHERMAL EXPERIMENTS.
872. LAFONTAINE, M., HOGARTH, D. D., UNIV. OTTAWA, GEOL.: PETROLOGY AND ORIGIN OF YATES URANIUM DEPOSIT, 1974-77: M. SC. THESIS.
- MINERALOGY-PETROLOGY ORIGIN OF URANIUM AND THORIUM RICH SKARNS.
873. LAPOINTE, P., HOGARTH, D. D., UNIV. OTTAWA, GEOL.: FENITES NEAR HAYCOCK MINE, QUEBEC, 1972-76: M. SC. THESIS.
- PETROLOGY OF NA-FE-MG METASOMATITES SURROUNDING IRON ORE BODIES, CONDITIONS OF DEVELOPMENT OF METASOMATITES, AND TYPES OF FENITIZATION.

874. MARTIGNOLE, J. G., BARRAUD, C., HOCQ, M., NANTEL, S., UNIV. MONTREAL, GEOL. 1
GRANULITES, 1965-1

ETUDE DES DOMES DE GRANULITE AU SUD DU MASSIF DE MORIN,
ET PROBLEMES DE GEOPHOMETRIE ET DE GEOTHERMOMETRIE DES
GRANULITES.
875. REESOR, J. E., GEOL. SURV. CAN. 1
PENRHYN GROUP METAMORPHIC COMPLEX, MELVILLE PEN., 1971-1
876. SCHWERTNER, W. M., ASBURY, B. J., DALES, G. R., SCOTT, S. D., UNIV.
TORONTO, GEOL. 1
DEFORMATION-METAMORPH. MASSIVE SULFIDE ORE BODIES, 1975-1; M. SC.
THESIS.
877. SCHWERTNER, W. M., BAU, A., GRUNSKY, E., THEMISTOCLEOUS, T., STONE,
D., UNIV. TORONTO 1
STRAIN DISTRIBUTIONS IN MYLONITIC BELTS, 1975-1; M. SC.
THESIS.

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M., V. 11, P. 500-509, 1975.
878. SHARPE, R. J., FAWCETT, J. J., UNIV. TORONTO, GEOL. 1
METAMORPHIC STUDIES, MINNISKA L., NW. ONTARIO, 1974-1; M. SC.
THESIS.

FIELD MAPPING (COMPLETED), DETAILED PETROGRAPHIC STUDY,
MICROPROBE ANALYSES, CHEMICAL ANALYSES (XRF AND AA) UGMI
VOLCANIC-PLUTONIC BELT.

879. TRZCIENSKI, W. E., GIRKETT, T., CHEVÉ, S., PELLETIER, M., ÉCOLE
POLYTECHNIQUE 1
METAMORPHIC AND IGNEOUS PROCESSES, 1973-1

THIS IS AN ONGOING STUDY OF METAMORPHIC AND IGNEOUS
PROCESSES IN THE EASTERN TOWNSHIPS OF QUEBEC AND THEIR
RELATIONSHIPS TO THE TECTONIC, STRATIGRAPHIC, AND
ECONOMIC GEOLOGY OF THE AREA. MINERALOGY SUGGESTIVE OF
BLUE-SCHIST-TYPE METAMORPHISM HAS BEEN FOUND AND
DESCRIBED.
880. WICKS, F. J., LAMARCHE, R. Y., ROYAL ONTARIO MUS. 1
SERPENTINE MINERALOGY OF ASBESTOS DEPOSITS, 1970-78 1

FIELD TRIPS HAVE BEEN TAKEN TO THE ASBESTOS DEPOSITS IN
THE EASTERN TOWNSHIPS QUEBEC, NORTHERN ONTARIO AND
CENTRAL MANITOBA. WORK HAS BEEN CONCENTRATED ON RELATING
THE SERPENTINE MINERALOGY TO THE STRUCTURAL ENVIRONMENT
OF THE ASBESTOS DEPOSITS IN THE EASTERN TOWNSHIPS. A
PROGRESS REPORT ON THIS WORK WAS PRESENTED AT THE
CONFERENCE ON THE PHYSICS AND CHEMISTRY OF ASBESTOS
MINERALS, HELD IN QUEBEC CITY IN AUGUST 1975, AND A
MANUSCRIPT ON THE EASTERN TOWNSHIP DEPOSITS IS UNDER
PREPARATION.

EXPERIMENTAL

881. TURNOCK, A. C., UNIV. MANITOBA, EARTH 1
STABILITY OF PYROXENES, 1965-1

EXPERIMENTAL DETERMINATION OF MELTING RELATIONS OF CA-MG-
FE PYROXENES. , USING SYNTHETIC PYROXENES, PRESSURE 1 ATM,
TEMPERATES AND SOLIDUS AND LIQUIDUS TIE-LINES ARE
DETERMINED BY QUENCH METHOD. REPORT WILL COMPARE EFFECTS
OF OTHER COMPONENTS, CHIEFLY AI, TI.

QUATERNARY GEOLOGY

ALBERTA

882. JACKSON, L. E., GEOL. SURV. CAN. 1
QUATERNARY GEOL.-TERRAIN INVENTORY, KANANASKIS L., 1976-1

SEE: QUATERNARY GEOLOGY AND TERRAIN INVENTORY, KANANASKIS
LAKES (82J), EAST OF THE CONTINENTAL DIVIDE, ALBERTA; GEOL.
SURV. CAN., PAPER 76-1A, P. 209-211, 1976.
883. RICHARD, S. H., GEOL. SURV. CAN. 1
SURFICIAL GEOL., TANATINAH AREA, ALBERTA, 1968-1
884. STALKER, A. M., GEOL. SURV. CAN. 1
QUATERNARY OF SOUTHERN ALBERTA, 1965-1
885. STALKER, A. M., GEOL. SURV. CAN. 1
GLACIALLY DISPLACED INTERTILL BEDROCK BLOCKS, 1974-1
886. YOUNG, R. V., NOWAK, R., ALTA. RESEARCH COUNCIL, GEOL. 1
URBAN GEOLOGY OF CALGARY, ALBERTA, 1975-77 1

A 20 MILE RADIUS AROUND THE CITY OF CALGARY WAS MAPPED AT
A SCALE OF 1:50000, AND THE GLACIAL HISTORY OF THE AREA
WAS DEDUCED. APPROXIMATELY 200 DRY AUGER HOLES WILL BE
DRILLED AROUND CALGARY AND THE DATA SHALL BE USED IN
PRODUCING CROSS-SECTIONS AND STRUCTURE MAPS OF ALL
SURFICIAL DEPOSITS ADJACENT TO THE CITY.

BRITISH COLUMBIA

887. ARMSTRONG, J. E., GEOL. SURV. CAN. 1
SURFICIAL GEOLOGY, FRASER LOWLAND, B. C., 1973-1

SEE: QUATERNARY LANDSCAPES-PRESENT AND PAST-AT MARY HILL,
COQUITLAM, BRITISH COLUMBIA; GEOL. SURV. CAN., PAPER 75-1B, P.
99-103, 1975.
888. CLAGUE, J. J., GEOL. SURV. CAN. 1
QUATERNARY GEOL., N. STRAIT OF GEORGIA, B. C., 1974-1

SEE: SURFICIAL SEDIMENTS OF THE NORTHERN STRAIT OF GEORGIA,
BRITISH COLUMBIA; GEOL. SURV. CAN., PAPER 75-1B, P. 151-156,
1975.

889. CLAGUE, J. J., GEOL. SURV. CAN. 1
QUATERNARY GEOL.-TERRAIN INVENTORY, PRINCE RUPERT, 1975-1

SEE: SAND AND GRAVEL RESOURCES OF KITIMAT, TERRACE, AND
PRINCE RUPERT, BRITISH COLUMBIA; GEOL. SURV. CAN., PAPER 75-
1A, P. 273-276, 1976.
890. FULTON, R. J., GEOL. SURV. CAN. 1
QUATERNARY GEOLOGY OF CANADIAN COQUITLAM, 1975-1

SEE: QUATERNARY WEATHERING OF BEDROCK, SOUTH-CENTRAL
BRITISH COLUMBIA; GEOL. SURV. CAN., PAPER 75-1C, P. 91-93, 1975.
891. HICOCK, S. R., MATHEWS, W. H., UNIV. BRITISH COLUMBIA, GEOL. 1
QUATERNARY GEOLOGY, PORT MOODY-COQUITLAM AREA, B. C., 1973-76;
M. SC. THESIS.

SEE: QUATERNARY LANDSCAPES-PRESENT AND PAST-AT MARY HILL,
COQUITLAM, BRITISH COLUMBIA; GEOL. SURV. CAN., PAPER 75-1B, P.
99-103, 1975.
892. RYDER, J. M., GEOL. SURV. CAN. 1
QUATERNARY GEOL.-TERRAIN INVENTORY, LYTTON, B. C., 1974-1

MANITOBA

893. KLASSEN, R. W., GEOL. SURV. CAN. 1
QUATERNARY GEOL., DUCK-RIDING MTNS., MAN.-SASK., 1964-1
894. KLASSEN, R. W., GEOL. SURV. CAN. 1
QUATERNARY GEOL.-TERRAIN INVENTORY, NE. MANITOBA, 1975-1
895. TELLER, J. T., UNIV. MANITOBA, EARTH 1
STRAT.-PETROL. GLACIAL SEDIMENTS, S. MANITOBA, 1971-1

SEE: LAKE AGASSIZ DEPOSITS IN THE MAIN OFFSHORE BASIN OF
SOUTHERN MANITOBA; CAN. J. EARTH SCI., V. 13, NO. 1, P. 27-43,
1976.

UNCONSOLIDATED QUATERNARY SEDIMENTS HAVE BEEN COLLECTED
FROM OUTCROPS AND POWER AUGER HOLES IN SOUTHERN MANITOBA.
THEY HAVE BEEN STUDIED FOR GRAIN SIZE AND MINERALOGY IN
ORDER TO IDENTIFY AND CHARACTERIZE MAJOR PLEIST. GLACIAL
AND LACUSTRINE EPISODES IN THE LAKE AGASSIZ BASIN. LONG
AND SHORT CORES WILL NOW BE COLLECTED AND ANALYZED FROM
LAKE MANITOBA WHERE A COMPLETE HOLOCENE STRATIGRAPHIC
RECORD PROBABLY EXISTS.

896. WELSTED, J.E., YOUNG, H.R., BRANDON UNIV., GEOG.:
QUATERNARY GEOL. AND GEOMORPH., BRANDON HILLS, 1972-77:

THE BRANDON HILLS HAVE BEEN MAPPED AS END MORAINES, BUT AT THEIR EAST END THEY SHOW CHARACTERISTICS OF FLUVIOGLACIAL DEPOSITION- DETERMINE THE VARIATION OF DEPOSITS WITHIN THE HILLS AND THE DEPOSITIONAL ENVIRONMENT.

NEWFOUNDLAND/LABRADOR

897. BROOKES, I.A., YORK UNIV., GEOG.:
QUATERNARY OF WESTERN NEWFOUNDLAND, 1974-77:

EVALUATION OF LATE QUATERNARY ENVIRONMENT OF WEST NEWFOUNDLAND WITH PARTICULAR REFERENCE TO RELATIVE SEA LEVEL CHANGE, LATE WISCONSIN MOUNTAIN TOP ICE COVER, AND POSTGLACIAL VEGETATION CHANGE VIA POLLEN ANALYSIS.

898. FULTON, R.J., GEOL. SURV. CAN.:
QUATERNARY GEOLOGY, S. LABRADOR, 1959-:

899. GRANT, D.R., GEOL. SURV. CAN.:
QUATERNARY GEOL., ST. ANTHONY-BLANC SABLON, Nfld., 1969-:

900. GRANT, D.R., GEOL. SURV. CAN.:
SURFICIAL GEOLOGY NEWFOUNDLAND, 1974-:

SEE: PRELIMINARY RESULTS OF TERRAIN MAPPING AND BASE METAL ANALYSIS OF TILL IN THE RED INDIAN AND GANDER LAKE MAP-AREAS OF CENTRAL NEWFOUNDLAND: GEOL. SURV. CAN., PAPER 76-1A, P. 283-285, 1976.

901. VANDERVEER, D.G., FLEMING, J., Nfld. DEP. MINS & ENERGY:
SURFICIAL GLAC. GEOL. GRANULAR RESOURCE INVENTORY, 1974-80:

TO MAP THE SURFICIAL GEOLOGY WITH EMPHASIS ON THE GRANULAR RESOURCES. AIRPHOTO INTERPRETATION, SCALE 1:50000, OF LANDFORM TYPES AND GLACIAL FLOW FEATURES IS USED IN CONJUNCTION WITH FIELD MAPPING. SIEVE ANALYSIS AND PEBBLE LITHOLOGY STUDIES ARE CONDUCTED ON GRAVEL AND OTHER OVERBURDEN MATERIALS. INFORMATION GATHERED IS OF USE TO (A). MINERAL EXPLORATION COMPANIES AND (B). THE CONSTRUCTION INDUSTRY AND ASSOCIATED GEOTECHNICAL FIRMS.

NORTHWEST TERRITORIES

902. ANDREWS, J.T., FEYLING HANSEN, R.W., MILLEP, G.H., STUIVER, M., SZABO, B.J., UNIV. COLORADO, INSTA:
AMINO ACID, RADIOMETRIC DATING, QUATERNARY DEPOSITS, 1974-78:

SEE: SUPPORT FOR STABLE LAURENTIDE ICE MARGIN (14000 TO 9000BP) TEST BASED ON GLACIOISOSTATIC REBOUND: GEOLOGY, V.3, P. 617-620, 1975.

INVOLVES MAPPING QUATERNARY DEPOSITS ALONG THE EASTERN COAST OF BAFFIN ISLAND AND POSS. N. LABRADOR. MAIN SEDIMENTS ARE GLACIAL TILLS, RAISED MARINE SANDS CLAYS, OUTWASH, EOLIAN SANDS. FOSSILS AND METHODS USED ARE FORAMS, MOLLUSCS, PALYNOLOGY AND PLANT REMAINS. DATING IS BEING CARRIED BY C14, TH230 AND PA231, AMINO ACID DIAGENESIS, PALEOMAG, SURFACE BOULDER WEATHERING AND SOILS. EMPHASIS ALSO PLACED ON THE RELATIVE SEA LEVEL HISTORY AND BIOSTRATIGRAPHY. DEPOSITS DATE FROM PRESENT TO CLOSE TO 70000BP (GUESS).

903. BARNETT, D.M., GEOL. SURV. CAN.:
SURFICIAL GEOL.-TERRAIN INVENTORY, BATHURST-CORNW., 1974-:

SEE: TERRAIN INVENTORY-BATHURST, CORNWALLIS, AND ADJACENT ISLANDS, NORTHWEST TERRITORIES: GEOL. SURV. CAN., PAPER 76-1A, P. 201-204, 1976.

904. BLAKE, W.JR., GEOL. SURV. CAN.:
QUATERNARY GEOCHRONOLOGY, ARCTIC ISLANDS, 1975-:

SEE: QUATERNARY GEOCHRONOLOGY, ARCTIC ISLANDS: GEOL. SURV. CAN., PAPER 76-1A, P. 259-264, 1976.

905. BORNHOLD, B.D., GEOL. SURV. CAN.:
OFFSHORE QUATERNARY GEOL., ARCTIC I. CHANNELS, 1973-:

SEE: MARINE SURFICIAL GEOLOGY: CENTRAL AND EASTERN ARCTIC: GEOL. SURV. CAN., PAPER 76-1A, P. 29-31, 1976.

906. DAVIS, P., ANDREWS, J.T., NICHOLS, H., RIRKLAND, P.W., UNIV. COLORADO, INSTA:
HOLOCENE HISTORY, PANGNIRTUNG-KINISNAIT FIORD AREA, 1975-78: PH.D. THESIS.

COMPARISON OF HOLOCENE CLIMATIC CHRONOLOGIES DERIVED FROM: 1) GLACIER MARGIN AND/OR MASS BALANCE VARIATIONS, AND 2) PALYNOLOGIC SEQUENCES RECORDED IN PEAT SECTIONS AND LACUSTRINE SEDIMENTS. TO TEST THE CONCEPT OF GLOBAL SYNCHRONY OF CLIMATIC CHANGE AND TO PROVIDE A BETTER UNDERSTANDING OF THE DYNAMIC INTERACTIONS (IE. TIME LAGS) INVOLVED IN THE ARCTIC CLIMATE-VEGETATION-GLACIER SYSTEM.

907. HODGSON, D.A., GEOL. SURV. CAN.:
SURFICIAL GEOL.-GEOMORPH., CENTRAL ELLFSMERE I., 1972-:

SEE: THE TERRAIN MAPPING AND EVALUATION SYSTEM ADOPTED FOR THE EASTERN QUEEN ELIZABETH ISLANDS: GEOL. SURV. CAN., PAPER 75-1C, P. 95-100, 1975.

908. LEWIS, C.F.M., GEOL. SURV. CAN.:
SURFICIAL GEOL.-GEOMORPHOLOGY, MACKENZIE BAY, 1970-:

909. LOCKE, W.W., ANDREWS, J.T., RIRKLAND, P.W., LARSON, E.E., UNIV. COLORADO, INSTA:
GLACIAL GEOLOGY OF CAPE DYER, BAFFIN ISLAND, 1975-78: PH.D. THESIS.

THE CAPE DYER AREA SHOULD REVEAL A QUATERNARY HISTORY INDEPENDENT OF LAURENTIDE ICE. BASALTS AT HIGH ELEVATIONS SHOULD SHOW MAXIMUM ICE THICKNESS BY PRESENCE OR ABSENCE OF ERRATICS. DATING BY U-SERIES, C14 AND AMINO ACID RATIOS, LICHENOMETRY, PALEOMAGNETISM, SOILS AND RELATIVE WEATHERING CRITERIA WILL BE USED TO DEVELOP A GLACIAL CHRONOLOGY FOR THIS AREA. DEPTH-SOUNDING MAY INDICATE MAXIMUM HORIZONTAL EXTENT OF WISCONSINAN ICE. IF SO, PROFILES CAN BE CONSTRUCTED FROM EXISTING MORAINES REMNANTS.

910. NELSON, A.R., ANDREWS, J.T., UNIV. COLORADO, INSTA:
GLACIAL STRAT., KIVITUBAK LOWLAND, BAFFIN ISLAND, 1975-78: PH.D. THESIS.

A MID, EARLY, AND PRE-WIS. CHRONOLOGY WILL BE DEVELOPED THROUGH A DETAILED STRATIGRAPHIC AND MORPHOLOGIC STUDY OF KIVITUBAK FORELAND, SITUATED TO RECORD RESPONSE OF LAURENTIDE AND LOCAL ICE. ORGANIC MATERIAL WILL BE COLLECTED FROM MARINE LIMITS AND 30KM CLIFFS FOR DATING BY ENRICHED C14, V-SERIES, AMINO ACIDS, AND BIOSTRATIGRAPHY USING MOLLUSCS, FORAMS, AND POLLEN. RELATIVE WEATHERING AND SOIL DATA, AMINO ACID DATING AND ABSOLUTE METHODS WILL BE EVALUATED BY DATING SAME STRATIGRAPHIC UNITS BY MULTIPLE METHODS.

911. NETTERVILLE, J.A., GEOL. SURV. CAN.:
QUATERNARY GEOL.-TERRAIN INVENTORY, BOOTHIA PEN., 1974-:

912. NETTERVILLE, J.A., GEOL. SURV. CAN.:
QUATERNARY GEOL.-TERRAIN INVENTORY, SOMERSET-WALES, 1975-:

SEE: TERRAIN INVENTORY AND QUATERNARY GEOLOGY, SOMERSET, PRINCE OF WALES AND ADJACENT ISLANDS: GEOL. SURV. CAN., PAPER 76-1A, P. 145-154, 1976.

913. RAMPTON, N., GEOL. SURV. CAN.:
QUATERNARY GEOL., BEAUFORT-MACKENZIE, 1969-:

914. SHILTS, W.W., GEOL. SURV. CAN.:
QUATERNARY GEOL.-GEOMORPHIC PROCESSES, MAGUSE R., 1973-:

SEE: TUNDRA FIRES IN THE DISTRICT OF KEEWATIN: GEOL. SURV. CAN., PAPER 76-1A, P. 511-515, 1976.

915. VINCENT, J.S., GEOL. SURV. CAN.:
SURFICIAL GEOL.-INVENTORY, BANKS ISLAND, ARCTIC, 1974-:

NOVA SCOTIA

916. GRANT, D.R., GEOL. SURV. CAN.:
SURFICIAL GEOL., CAPE BRETON ISLAND, NOVA SCOTIA, 1970-:

SEE: GLACIAL STYLE AND THE QUATERNARY STRATIGRAPHIC RECORD IN THE ATLANTIC PROVINCES, CANADA: GEOL. SURV. CAN., PAPER 75-13, P. 109, 1975.

917. MACNEILL, R.H., ACADIA UNIV., GEOL.:
GLACIAL FORMS AND DEPOSITS, MAINLAND NOVA SCOTIA, 1951-75:

ONTARIO

918. AALTONEN, R.A., DREIMANIS, A., QUIGLEY, R.M., UNIV. WESTERN ONTARIO, GEOL. 1
GEOLOGY OF THE CITY OF LONDON, 1970-77: PH.D. THESIS.
919. ANDERSON, T.W., GEOL. SURV. CAN. 1
QUATERNARY GEOL., GREAT LAKES, 1959-:
920. BURWASSER, G., ONTARIO DIVISION MINES 1
QTMRY. GEOL. GRLNR. RSRCs. ONION LAKE-SUNSHINE AREAS, 1975-76:
SUPPLY MAPS AND DATA ON QUATERNARY GEOLOGY AND GRANULAR RESOURCES OF TPS. OF FOWLER, JACQUES, WARE, GORHAM, MACGREGOR, OLIVER, MCINTYRE, AND CONTIGUOUS UNSURVEYED AREA.
921. COOPER, A.J., ONTARIO DIVISION MINES 1
QUATERNARY GEOLOGY GODERICH-SEAFORTH AREA, ONT., 1975-77:
1:50000 MAP FOR GODERICH-SEAFORTH AREAS: ASSOCIATED STRATIGRAPHIC, TILL AND HISTORICAL STUDIES.
922. COOPER, A.J., ONTARIO DIVISION MINES 1
QUATERNARY GEOLOGY STRATHROY AREA, ONTARIO, 1976-78:
1:50000 MAP FOR STRATHROY AREA-ASSOCIATED STRATIGRAPHIC, HISTORICAL AND TILL STUDIES.
923. COWAN, W.R., ONTARIO DIVISION MINES 1
QUATERNARY GEOLOGY SAULT STE. MARIE, ONTARIO, 1976-76:
924. DREIMANIS, A., MORGAN, A.V., BROSTER, B.E., UNIV. WESTERN ONTARIO, GEOL. 1
TILL LITHOLOGY BETWEEN LONDON AND LAKE HURON:
925. EDWARDS, D.A.D., DREIMANIS, A., UNIV. WESTERN ONTARIO, GEOL. 1
LITHOLOGIC VARIATIONS IN SOME ESKERS OF ONTARIO, 1974-76: M.SC. THESIS.
926. FEENSTRA, B.H., DREIMANIS, A., UNIV. WESTERN ONTARIO, GEOL. 1
LATE WISCONSIN STRAT., STRATFORD-COVESTOGO AREA, 1967-75: M. SC. THESIS.
927. FEENSTRA, B.H., ONTARIO DIVISION MINES 1
QUATERNARY GEOLOGY MARKDALE AREA, ONTARIO, 1975-:
SEE: QUATERNARY GEOLOGY OF THE MARKDALE AREA 41A7: ONTARIO DIVISION OF MINES, MISC. PAPER 63, P. 116-118, 1975.
928. FREY, E., KARROW, P.F., UNIV. WATERLOO, EASCI 1
PRECAMBRIAN CLASTS IN TILLS, 1973-76: M.SC. THESIS.
929. FRITZ, P., UNIV. WATERLOO, EASCI 1
LAKES ERIE AND ONTARIO PALEOENVIRONMENTS, 1974-77:
SEE: LATE QUATERNARY CLIMATIC TRENDS AND HISTORY OF LAKE ERIE FROM STABLE ISOTOPE STUDIES: SCIENCE, V. 190, P. 267-269, 1975.
THE PROJECT WAS INITIATED AS A STUDY OF THE PALEOENVIRONMENTS IN LAKES ERIE AND ONTARIO. ISOTOPE ANALYSES OF FRESH-WATER MOLLUSK SHELLS (O-18 AND C-13) PROVIDED THE BASIC INFORMATION. THESE DATA WERE COMPARED TO PALYNOLOGICAL AND SEDIMENTOLOGICAL DATA. AT PRESENT A DETAILED CARBON-14 AND C-13 PROGRAMME FOCUSSES ON THE ORGANIC MATTER, ITS ORIGIN AND DIAGENETIC HISTORY, IN THESE LAKES.
930. GEDDES, R.S., DREIMANIS, A., UNIV. WESTERN ONTARIO, GEOL. 1
PLEISTOCENE STRAT. IN MINERAL EXPLORATION, TIMMINS, 1975-77: PH.D. THESIS.
931. GOMBOS, F., PEACH, P.A., BROCK UNIV, GEOL. 1
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CHANNELS AND INTO INNER BAY OF MIRAMICHI (STUDY OF
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TYPE, AND BY SEDIMENTATION RATE. FEEDING ACTIVITY
PRODUCES LARGE AMOUNTS OF FECES AND PSEUDOFECES, WHICH
CONTRIBUTE TO THE SUSPENDED SEDIMENT BUDGET. POPULATION
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EXPECTED TO READILY SHOW THE EFFECTS OF THE PRESENT
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SEQUENCE OF GLACIAL RECESSION IN THE AREA.

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TURBIDITE GREYWACKES THAT ARE, AT LEAST IN PART,
VOLCANOGENIC, ARE AN INTEGRAL PART OF MOST GREENSTONE
BELTS. THE VOLCANOGENIC COMPONENT IS GENERALLY DACITIC
TO ANDESITIC, AND THE SANDSTONES REPRESENT MAJOR DACITIC
TO ANDESITIC ERUPTIVE EVENTS THAT ARE POORLY PRESERVED IN
THE VOLCANIC PILE. STUDY OF THE VOLCANIC ROCKS, WITHOUT
CONSIDERING THE ASSOCIATED SEDIMENTARY ROCKS, COULD GIVE
AN INCORRECT IMPRESSION OF THE RELATIVE VOLUMES OF MAGMA
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NORANDA, ABITIBI, QUEBEC (ARCHEEN). DES MODELES
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STUDY OF THESE AND OTHER FACTORS AFFECTING EXTRACTION OF
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CONTINUITY OF SAND BODIES WILL PROVIDE DATA FOR USE IN
PLANNING IN-SITU RECOVERY PROJECTS.
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MARINE TRANSITIONS WILL ALSO BE INVESTIGATED.
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POROSITY SHAPE & MINERALOGICAL COMPOSITION 5 ROCK FABRIC
6 SEISMIC CHARACTERISTICS 7 RESERVOIR CHARACTERISTICS OF
SANDSTONES. SIGNIFICANT AMOUNTS OF SECONDARY POROSITY
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BEING EVALUATED AS CONTROLS FOR SANDSTONE DIAGENESIS IN
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AND LORRAIN FORMATIONS. TWO DEEP PALEOTROUGHS IN THE
EARLY PRECAMBRIAN BASEMENT ARE INFILLED WITH GOWGANDA
FORMATION. AN UNCONFORMITY CONSISTING OF BASAL RUBBLE OF
UNTRANSPORTED FRAGMENTS DERIVED DIRECTLY FROM UNDERLYING
ROCKS IS EXPOSED ON FLANKS OF PALEOTROUGHS. DEPOSITION
OF GOWGANDA FORMATION TOOK PLACE ON ALLUVIAL FANS. THE
LORRAIN FORMATION, NOT CONFINED TO PALEOTROUGHS,
REPRESENTS FLUVIAL SEDIMENTATION ON THE ALLUVIUM PLANE.
1049. SONNENFELD, P., UNIV. WINDSOR, GEOL., 1
UPPER MIOCENE EVAPORITES, 1973-76:

SEE: THE SIGNIFICANCE OF UPPER MIOCENE (MESSINIAN)
EVAPORITES IN THE MEDITERRANEAN SEA: J. GEOL., V. 83, NO. 3, P.
287-311, 1975.

THE ORIGIN OF UPPER MIOCENE SEDIMENTS IN THE
MEDITERRANEAN REGION IS DISCUSSED.
1050. SOUAYA, F.J., BAILLIE, A.O., GULF OIL CANADA LTD., 1
TERTIARY HISTORY OFFSHORE LABRADOR, 1976-1:

PALEOENVIRONMENTAL RECONSTRUCTIONS AND DEPOSITIONAL
HISTORY OFFSHORE LABRADOR.
1051. TRETIN, H.P., GEOL. SURV. CAN., 1
STRAT.-SEDIMENT. SILURIAN-DEVONIAN CLASTICS ARCTIC, 1972-1:

AUTHORS DRAFT FOR TERMINAL REPORT (GSC. BULLETIN) ON
PART OF PROJECT COMPLETED-DEALS WITH MIDDLE ORDOVICIAN TO
LOWER DEVONIAN DEEP-WATER SUCCESSION EAST OF CANON FIORD.
1052. VESCEY, G.E., GULF OIL CANADA LTD., 1
CARBONATE ROCK PETROLOGY AND DIAGENESIS:

STUDY OF DEVONIAN CARBONATE ROCKS WITH A VIEW TO
INTERPRETATION OF PALEOENVIRONMENTS AND POROSITY
POTENTIAL IN WESTERN CANADA.
1053. WALKER, D.A., GEOL. SURV. CAN., 1
DISSOLUTION & EARLY DIAG. EFFECTS ON FORAM TESTS, 1975-1:

INVESTIGATE MODERN PROCESSES OF FOSSIL-FORMING
INVERTEBRATES AND SUBSEQUENT INTERPRETATION WITH RESPECT
TO PALEOENVIRONMENTS.

1054. WALLS, R.A., MOUNTJOY, E.W., MCGILL UNIV., GEOL.: REEF MARGIN DIAGENESIS, U. DEVONIAN REEFS, ALBERTA, 1973-77: PH.D. THESIS.

STUDY OF REEF AND FORE-REEF ZONES IN U. DEVONIAN BUILDUPS IN ALBERTA TO DETERMINE THE DIAGENETIC STAGES AND POROSITY DISTRIBUTION. THE PURPOSE OF THE STUDY IS TO DETERMINE THE NET INFLUENCE OF DIAGENESIS, PARTICULARLY MARINE DIAGENESIS AND CEMENTATION ON POROSITY, REEF STRUCTURE, AND REEF MARGIN DEVELOPMENT OF THESE U. DEVONIAN REEF COMPLEXES.

1055. WOOD, J., ONTARIO DIVISION MINES: ARCHEAN SEDIMENTATION, NORTH SPIRIT LAKE AREA, ONT., 1971-76:

METASEDIMENTS INCLUDE CONGLOMERATE, SANDSTONE, MUDSTONE AND CHEMICAL SEDS. THE CLASTICS DECREASE IN GRAIN SIZE WITH STRATIGRAPHIC HEIGHT AND SHOW FACIES CHANGES ALONG STRIKE. THE SANDSTONES AND MUDSTONES ARE TURBIDITES AND TOGETHER WITH THE CONGLOMERATES FORM PART OF A SUBMARINE FAN SYSTEM. SOME OF THE CHEMICAL IRON FORMATION (CHERT MAGNETITE) IS A DEEP WATER SEDIMENT ASSOCIATED WITH TURBIDITES.

1056. YEO, G.M., YOUNG, G.M., UNIV. WESTERN ONTARIO, GEOL.: STRAT. AND SEDIMENTOLOGY OF THE RAPITAN GP. N.W.T., 1974-78: PH.D. THESIS.

SEE: IRON-FORMATION AND GLACIOGENIC ROCKS OF THE RAPITAN GROUP, NORTHWEST TERRITORIES, CANADA: PRECAMBRIAN RESEARCH, V. 4, NO. 2, 1975.

TO INVESTIGATE THE STRATIGRAPHY AND SEDIMENTOLOGY OF THE UPPER PROTEROZOIC RAPITAN GP. THIS SEQUENCE INCLUDES MIXTITES THAT HAVE MANY OF THE ATTRIBUTES OF GLACIAL DEPOSITS. THESE CHARACTERS WILL BE DOCUMENTED. IRON-FORMATION IS INTIMATELY ASSOCIATED WITH THE MIXTITES AS IS ALSO THE CASE IN MANY OTHER UPPER PROTEROZOIC MIXTITE-BEARING SEQUENCES. THE SEDIMENTOLOGY AND GEOCHEMISTRY OF THE IRON-FORMATION WILL BE STUDIED IN DETAIL.

1057. YOUNG, F.G., GEOL. SURV. CAN.: ANCIENT AND MODERN SEDIMENTARY ENVIRONMENTS, 1970-:

STRATIGRAPHY

PRECAMBRIAN

1058. AITKEN, J.D., GEOL. SURV. CAN.: HELIKIAN-HADRYNIAN STRAT., E. CORDILLERA-INT. PLATF., 1973-:

1059. ALLARD, G.O., QUEBEC DEP. NAT. RES., MRN: COMPLEXE DU LAC DORE, CHIBOUGAMAU, 1966-76:

1060. AYRES, L.D., UNIV. MANITOBA, EARTH: VOLCANIC STRATIGRAPHY, FAVOURABLE LAKE AREA, 1965-:

SEE: VOLCANIC STRATIGRAPHY IN THE FAVOURABLE LAKE AREA: CENTRE FOR PRECAMBRIAN STUDIES, UNIV. MANITOBA, 1974 ANN. REP., P. 108-113, 1975.

A 9, 5 KM THICK, METAVOLCANIC-METASEDIMENTARY SEQUENCE COMPRISES 15 FORMATIONS REPRESENTING 5 CYCLES THAT DOCUMENT SUCCESSIVE STAGES IN THE EVOLUTION OF A COMPLEX VOLCANO. THE VOLCANO COMPRISES AN EARLY, SUBAERIAL DACITIC STRATOVOLCANO, ON THE NORTHWEST FLANK OF WHICH, 3 SUCCESSIVE BASALTIC SHIELDS DEVELOPED. EACH SHIELD COMPRISES A LOWER, SUBAQUEOUS BASALTIC COMPONENT AND AN UPPER, SUBAERIAL ANDESITIC TO DACITIC COMPONENT. UNCONFORMABLY OVERLYING THE SHIELDS IS A SUBAERIAL, HETEROGENEOUS UNIT.

1061. BEAKHOUSE, G.P., VAN DE KAMP, P.C., UNIV. MANITOBA, EARTH: ENGLISH RIVER SUBPROVINCE:

SEE: UNIV. MANITOBA, 1974 ANN. REP., P. 240-245, 1975.

ANALYSIS OF SEDIMENTOLOGY/STRATIGRAPHY OF THE INTENSELY METAMORPHOSED AND VARIABLY MIGMATIZED METAGREYNACKE-METASILTSTONE SEQUENCE WHICH UNDERLIES THE NORTHERN PORTION OF THE ENGLISH RIVER GNEISS BELT. THIS ANALYSIS INCLUDES INVESTIGATION OF THE METAMORPHISM, PLUTONISM AND REGIONAL GEOPHYSICAL ANOMALIES OF THE AREA.

1062. BUCK, P.S., AYRES, L.D., UNIV. MANITOBA, EARTH: AN EARLY PRECAMBRIAN DACITE CALDERA, 1974-77: M.SC. THESIS.

SEE: MANITOBA, 1974 ANN. REP., P. 121-127, 1975.

A 1, 4 KM THICK, SUBAERIAL, DACITIC TO ANDESITIC FLOW AND PYROCLASTIC SEQUENCE OCCUPIES A 5, 2 KM WIDE CALDERA AT THE TOP OF A BASALTIC SHIELD VOLCANO. BOTH PRIMARY AND REWORKED PYROCLASTIC ROCKS ARE PRESENT, BUT THEY ARE LARGELY VENT FACIES.

1063. CAR, D., AYRES, L.D., UNIV. MANITOBA, EARTH: FACIES RELATIONS IN DACITIC PYROCLASTIC UNIT, 1975-76: M. SC. THESIS.

A 4 KM THICK SEQUENCE OF DACITE BRECCIA, TUFF, AND DERIVED CONGLOMERATE AND SANDSTONE IS BEING EXAMINED IN THE NORTHERN PART OF LAKE OF THE WOODS. EMPHASIS IS ON FACIES ANALYSIS IN DETERMINING THE NATURE OF BOTH VOLCANISM AND OF THE VOLCANIC EFFLUX.

1064. CHRISTIE, R.L., GEOL. SURV. CAN.: STRAT.-AGE PRECAMBRIAN SEDIMENTS-DYKES, E. ARCTIC, 1967-:

PREPARATION OF PAPER ON STRATIGRAPHY OF THULE BASIN IN COOPERATION WITH GREENLAND SURVEY.

1065. EISBACHER, G.H., GEOL. SURV. CAN.: STRAT.-SEDIMENT. PROTEROZOIC RAPITAN GROUP, 1975-:

SEE: PROTEROZOIC RAPITAN GROUP AND RELATED ROCKS, REDSTONE RIVER AREA, DISTRICT OF MACKENZIE: GEOL. SURV. CAN., PAPER 76-1A, P. 117-125, 1976.

FIELD STUDIES IN MACKENZIE MOUNTAINS.

1066. HOFMANN, H.J., UNIV. MONTREAL, GEOL.: PRECAMBRIAN AND LOWER PALEOZOIC PAL. AND STRAT., 1969-:

SEE: STRATIFORM PRECAMBRIAN STROMATOLITES, BELCHER ISLANDS, CANADA: RELATIONS BETWEEN SILICIFIED MICROFOSSILS AND MICROSTRUCTURE: AM. J. SCI., V. 275, P. 1121-1132, 1975.

DISCOVERY OF NEW MICROFLORAS IN PRECAMBRIAN FORMATIONS. SYSTEMATIC STUDY OF APHEBIAN MICROFLORA IN BELCHER ISLANDS, AND COMPUTER-ASSISTED MORPHOMETRIC ANALYSIS OF STROMATOLITES AND APPLICATION TO BASIN ANALYSIS.

1067. IMREH, L., QUEBEC DEP. NAT. RES., MRN: EVALUATION ROCHES ULTRAMAFIQUES-MAFIQUES, 1972-:

ETUDE LITHO-STRATIGRAPHIQUE CENTREE SUR LES FORMATIONS ULTRAMAFIQUES DE LA MOTTE S'ETENDANT AUX FORMATIONS VOLCANO-SEDIMENTAIRES ENVIRONNANTES.

1068. JEFFERSON, C.W., YOUNG, G.M., UNIV. WESTERN ONTARIO, GEOL.: STRAT.-SEDIMENT., STROMATOLITES, SHALER GROUP, 1973-76: M.SC. THESIS.

SEE: LATE PRECAMBRIAN SHALLOW WATER DEPOSITS, BANKS AND VICTORIA ISLANDS, ARCTIC ARCHIPELAGO: CAN. J. EARTH SCI., V. 12, NO. 10, P. 1734-1748, 1975.

STROMATOLITES HAVE WIDE LATERAL RANGE AND NARROW VERTICAL RANGE IN THE SHALER GROUP, VICTORIA AND BANKS ISLAND. THE SEQUENCE IN ASCENDING STRATIGRAPHIC ORDER IS INTERPRETED AS CF. BASISPHAERA IRREGULARIS PREIS, CF. INZERIA F. INDET., FINGER STROMATOLITES CF. GYMNOSELEN AND BAICALIA, CF. BAICALIA BURRA AND CF. ACACIELLA F. INDET. IN THE GLENELG AND REYNOLDS POINT FORMATIONS. THIS ASSEMBLAGE IS USED FOR DETAILED INTRABASAL CORRELATION AS WELL AS FOR PALEOCURRENTS, PALEOENVIRONMENTS AND A POSSIBLE UPPER HELIKIAN AGE.

1069. JEFFERSON, C.W., YOUNG, G.M., UNIV. WESTERN ONTARIO, GEOL.: STRATIG. AND STROMATOLITES OF LOWER SHALER GROUP, 1974-76: M.SC. THESIS.

SEE: LATE PRECAMBRIAN SHALLOW WATER DEPOSITS, BANKS AND VICTORIA ISLANDS, ARCTIC ARCHIPELAGO: CANAD. EARTH SCI., V. 12, NO. 10, P. 1734-1748, 1975.

THIS IS PART OF A CONTINUING STUDY OF UPPER PROTEROZOIC STRATIGRAPHY IN NORTHWESTERN CANADA. DETAILED SYSTEMATIC STUDY OF STROMATOLITES IN THE GLENELG AND REYNOLDS POINT FORMATIONS HAS SHOWN MANY SIMILARITIES WITH LOWER UPPER RHEPHEAN FORMS OF THE USSR AND AUSTRALIA. THE STROMATOLITE SEQUENCE APPEARS TO BE A POWERFUL MEANS OF INTRABASAL CORRELATION. IT IS INTENDED THAT THIS WORK BE EXTENDED TO THE MACKENZIE MOUNTAINS REGION TO TEST PROPOSED CORRELATIONS WITH THE SHALER GROUP.

CAMBRIAN TO SILURIAN

1070. MCGLYNN, J.C., GEOL. SURV. CAN.:
STRAT., SEDIMENTOLOGY, CORRELATION NUNACHO GROUP, 1965-:
1071. MORGAN, W.C., GEOL. SURV. CAN.:
RAMAH GROUP, PROTEROZOIC-ARCHEAN RELATIONSHIPS, 1971-:

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ROCKS IN THE NACHVAK FIORD-SAGLEK FIORD AREA, NORTH
LABRADOR; GEOL. SURV. CAN., PAPER 74-54, 1975.
1072. MORRICE, M.G., WILSON, H.D.B., UNIV. MANITOBA, EARTH:
VOLCANIC STRATIGRAPHY, KENORA GREENSTONE BELT:

STRATIGRAPHY OF ARCHEAN GREENSTONE BELTS, ORIGIN OF
ARCHEAN CONTINENTS, RELATION OF ORE DEPOSITS TO POSITION
IN THE ARCHEAN VOLCANIC PILE.
1073. OKULITCH, A.V., GEOL. SURV. CAN.:
STRATIGRAPHY-STRUCTURE, MOUNT IDA GROUP, B.C., 1972-:

SEE: STRATIGRAPHIC REVISIONS OF THE NICOLA, CACHE CREEK, AND
MOUNT IDA GROUPS, BASED ON CONODONT COLLECTIONS FROM THE
WESTERN PART OF THE SHUSWAP MET. COMP.; CAN. J. EARTH SCI., V.
13, NO. 1, P. 44-53, 1975.
1074. PYKE, D.R., JENSEN, L.S., ONTARIO DIVISION MINES:
STRATIGRAPHY OF TIMMINS-KIRLAND LAKE AREA, ONT., 1975-78:
1075. RAMAEKERS, P.P., SASKATCHEWAN GEOL. SURV., MINRS:
ATHABASCA SANDSTONE PROJECT, 1975-80:

SEE: ATHABASCA FORMATION, SOUTHEAST EDGE (74H)- I.
RECONNAISSANCE GEOLOGICAL SURVEY; SASK. GEOL. SURV.,
SUMM. REP., P. 48-52, 1975.

RECONNAISSANCE GEOLOGY OF THE ATHABASCA SANDSTONE EDGE.
STUDY OF PALEOCURRENTS AND PALEODRAINAGE THAT SUPPLIED
THE SEDIMENTS TO THE BASIN. MAPPING OF SURFICIAL
PLEISTOCENE DEPOSITS. STUDY OF MINERALIZATION ASSOCIATED
WITH THE ATHABASCA FORMATION.
1076. RIDLER, R.H., GEOL. SURV. CAN.:
INTERRELATION ARCHEAN VOLCANICS-MINERAL DEPOSITS, 1966-:
1077. RIVE, M., MAURICE, O.D., QUEBEC DEP. NAT. RES., MRN:
GEOLOGIE REGION LACS SIMARD DECELLES MINAMIASH, 1975-76:
1078. RONDOT, J., QUEBEC DEP. NAT. RES., MRN:
STRATIGRAPHIE PRECAMBRIEN CHARLEVOIX, 1975-76:

ETABLISSEMENT DES GROUPES METASEDIMENTAIRES PRECAMBRIENS
DANS CHALEVOIX SITUATION STRATIGRAPHIQUE DES NIVEAUX A
PLUS DE 99, 5 POUR CENT DE S102.
1079. TROWELL, N.F., BLACKBURN, C.E., ONTARIO DIVISION MINES:
SAVANT-CROW LAKES VOLCANIC BELT, KENORA DIST., ONT., 1976-79:

SPECIAL STUDY TO DETERMINE AS FAR AS AVAILABLE MAPPING
WILL ALLOW THE GEOLOGIC HISTORY OF THE
METAVOLCANIC/METASEDIMENTARY SAVANT-CROW LAKES BELT.
STRATIGRAPHIC CORRELATION, EVOLUTIONARY TRENDS IN
PETROCHEMISTRY, DEPOSITIONAL ENVIRONMENTS WILL BE
ELUCIDATED AS MUCH AS POSSIBLE ACROSS THE ENTIRE AREA
WITH PARTICULAR ATTENTION TO THE PLACE OF MINERAL
CONCENTRATING PROCESSES.
1080. YOUNG, F.G., GEOL. SURV. CAN.:
STRAT. GOG AND CARIBOO GROUPS, MCBRIDE AREA, B.C., 1967-75:
1081. YOUNG, G.M., UNIV. WESTERN ONTARIO, GEOL.:
STRATIGRAPHY, SEDIMENTOLOGY OF THE SHALER GROUP, 1971-78:

SEE: LATE PRECAMBRIAN SHALLOW WATER DEPOSITS, BANKS AND
VICTORIA ISLANDS, ARCTIC ARCHIPELAGO; CAN. J. EARTH
SCI., V. 12, NO. 10, P. 1734-1748, 1975.

THIS PROJECT HAS INVOLVED STRATIGRAPHIC STUDIES IN
VICTORIA ISLAND AND ADJACENT PARTS OF THE CANADIAN
MAINLAND. STROMATOLITES IN THE LOWER PART OF THE SHALER
GROUP HAVE BEEN SYSTEMATICALLY STUDIED. CORRELATIONS
WITH THE RAE GROUP AND ROCKS OF BROCK INLIER AND S.
BANKS ISLAND APPEAR TO BE POSSIBLE ON A MORE REGIONAL
SCALE; COMPARISONS ARE BEING MADE WITH THE OLDER (SUB-
RAPITAN) PROTEROZOIC SEQUENCE IN THE MACKENZIE MOUNTAINS.
DETAILED SEDIMENTOLOGICAL ANALYSIS OF THE REYNOLDS POINT
FM. IS IN PROGRES.
1082. BOLTON, T.E., GEOL. SURV. CAN.:
ORD.-SILURIAN BIOSTRAT. SOUTHAMPTON I. MELVILLE PEN., 1970-:

SEE: ORDOVICIAN GEOLOGY OF AKPATOK ISLAND, UNGAVA BAY,
DISTRICT OF FRANKLIN; CAN. J. EARTH SCI., V. 13, NO. 1, P. 157-
178, 1976.

ON MELVILLE PENINSULA, AN EARLY MIDDLE ORDOVICIAN FAUNA
IN THE SHIP POINT FORMATION AND A LATE MIDDLE ORDOVICIAN
FAUNA IN THE BAD CACHE RAPIDS FORMATION HAS BEEN
DOCUMENTED. DETERMINATION OF MIDDLE AND LATE ORDOVICIAN
FAUNAS OF SOUTHAMPTON ISLAND HAS COMMENCED. SILURIAN
FAUNAS OF THE ISLAND ALSO UNDER STUDY. AN EARLIER STUDY
OF ORDOVICIAN FAUNAS HAS BEEN COMPLETED OF AKPATOK ISLAND.
1083. BOLTON, T.E., GEOL. SURV. CAN.:
SILURO-ORDOVICIAN MACROBIOSTRAT. ANTICOSTI ISLAND, 1974-:

THE PROZOAN FAUNA OF THE LATE ORDOVICIAN ELLIS BAY
FORMATION IS BEING STUDIED FOR ZONATION CONTRIBUTION TO
ORDOVICIAN-SILURIAN BOUNDARY DETERMINATION. SILURIAN
CONODONTS HAVE BEEN COLLECTED FROM THE UPPER 25 FEET OF
THIS FORMATION.
1084. BOURQUE, P.-A., SKIDMORE, W.B., QUEBEC DEP. NAT. RES., MRN:
STRATIGRAPHIE SIL-DEV. DU SUD-EST DE LA GASPESE, 1972-76:

SEE: STRATIGRAPHIE DU SILURIEN ET DU DEVONNIEN BASAL DE
L'EST DE LA GASPESE; COMPLEXE DE LA BAIE DES CHALEURS;
QUEBEC MRN, DP-315, 1975.

OBJECTIF - STRATIGRAPHIE DETAILLEE ET PALEOGEOGRAPHIE DU
SILURIEN ET DU DEVONNIEN BASAL DU SUD-EST DE LA GASPESE.
ETAT D'AVANCEMENT - TRAVAUX DE TERRAIN COMPLETS. RAPPORT
FINAL EN PREPARATION.
1085. BRUN, J., QUEBEC DEP. NAT. RES., MRN:
CARBONATES BLACK RIVER-TRENTON:

ETUDE STRATIGRAPHIQUE-PETROGRAPHIQUE DETAILLEE DES
CARBONATES DU BLACK RIVER ET TRENTON BUT-UTILISATION DES
CALCAIRES ET DOLOMITES.
1086. FRITZ, W.H., GEOL. SURV. CAN.:
CAMBRIAN BIOSTRAT. CANADIAN CORNILLERA, 1965-:
1087. GLORENSKY, Y., QUEBEC DEP. NAT. RES., MRN:
CARTOGRAPHIE DE LA REGION DE LACOLLE, QUEBEC, 1975-77:

CARTOGRAPHIE GEOLOGIQUE DE LA REGION DE LACOLLE EN VUE DE
LA PUBLICATION D'UN RAPPORT FINAL ACCOMPAGNE D'UNE CARTE
A L'ECHELLE DE 1 MILLE = 1 POUCE.
1088. KRAUSE, F.F., OLDERSHAW, A.E., UNIV. CALIF., GARY, GEOL:
STRATIGRAPHY & SEDIMENTATION OF THE SEKWI FM., 1975-77; PH.
D. THESIS.

DESCRIBE THE SEDIMENTOLOGIC & STRATIGRAPHIC PARAMETERS
THAT DEFINE THE SEKWI FORMATION, TO CONSTRUCT A DETAILED
DEPOSITIONAL & DIAGENETIC MODEL, TO ESTABLISH THE
SIGNIFICANCE OF THIS MODEL IN RELATIONSHIP TO THE
OCCURRENCE OF LEAD/ZINC MINERALIZATION IN THE LOWER
CAMBRIAN DEPOSITS OF THE SEKWI FORMATION.
1089. LUDVIGSEN, R., CHATTERTON, B.D.E., MILLER, A.N., UNIV. TORONTO-
ALBERTA, GEOL.:
SYSTEMATICS, BIOSTRAT., BIOFACIES ORJ. TRILOBITES, 1973-; PH.
D. THESIS.

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MOUNTAINS; CAN. J. EARTH SCI., V. 12, NO. 4, P. 663-697, 1975.
1090. NOBLE, J.P.A., UNIV. NEW BRUNSWICK, GEOL:
SILURIAN-DEV. STRATIGRAPHY-PALEOENVIRONMENTS, 1971-80:

SEE: SILURIAN STRATIGRAPHY AND PALEOGEOGRAPHY, POINTE VERTE
AREA, NEW BRUNSWICK, CANADA; CAN. J. EARTH SCI., V. 13, NO. 4, P.
537-546, 1976.

INTERPRETATION OF ENVIRONMENTS OF DEPOSITION FROM SEDS.
AND FAUNA. FITTING THESE ENVIRNMENTS INTO STRAT. FRAMEWORK
AND PALEOGEOGRAPHIC SYNTHESIS RELATING TO TECTONIC EVENTS
OF APPALACHIAN OROGEN. ALSO CONSTRUCTION OF A
GENERALIZED DYNAMIC MODEL OF FACTORS WHICH CONTROL THE
SPACE-TIME DISTRIBUTION OF VARIOUS LEVELS OF TAXA AND
ECOLOGIC UNITS.
1091. NORFORD, B.S., GEOL. SURV. CAN.:
ORD.-SIL. BIOSTRAT.-W. AND N. CANADA, 1961-:

SEE: CORRELATION BETWEEN CANADIAN ORDOVICIAN ZONATIONS
BASED ON GRAPTOLITES, CONODONTS AND BENTHIC MACROFOSSILS
FROM KEY SUCCESSIONS; UNIV. WALES PRESS & NAT. MUS. WALES,
ORDOVICIAN SYMP., P. 209-226, 1976.

DEVONIAN TO PERMIAN

MESOZOIC

1092. BENSON, D.G., GEOL. SURV. CAN.:
GEOLOGICAL STUDY ANTIGONISH BASIN, NOVA SCOTIA:
1093. BOEHNER, R., MOORE, R.G., COLWELL, J., ACADIA UNIV., GEOL.:
CARBONIFEROUS STRAT. MUSQUODOUIT VALLEY, N.S., 1974-76: M.
SC. THESIS.
1094. DANNER, W.R., UNIV. BRITISH COLUMBIA, GEOL.:
PLATE TECTONICS, UPPER PALEOZOIC, SOUTHERN B.C., 1971-:

CENTRAL AND WESTERN BRITISH COLUMBIA IS MADE UP OF AT
LEAST FOUR ELONGATE NORTH-SOUTH TRENDING ARCS AND RIDGES
WHICH WERE NOT PART OF NORTH AMERICAN CONTINENT UNTIL MID-
MESOZOIC TIME. FUSULINE FOSSILS HAVE PROVED TO BE THE
MOST USEFUL FOR DETERMINING PLATE ORIGIN. CACHE CREEK
GROUP HAS BEEN THE MAJOR STRATIGRAPHIC UNIT STUDIED.
1095. GELOSSETZER, H.H.J., GEOL. SURV. CAN.:
CARBONIFEROUS-TRIASSIC APPALACHIAN REGION, 1974-:

SEE: METALLIC MINERALIZATION OF CARBONIFEROUS TO TRIASSIC
STRATA IN THE APPALACHIAN REGION: GEOL. SURV. CAN., PAPER 76-
1A, P. 177, 1976.
1096. KENDALL, A.C., SASKATCHEWAN GEOL. SURV.:
MIDDLE DEVONIAN OF SOUTHERN SASKATCHEWAN, 1974-:

SEE: THE ASHERN, WINNIPEGOSIS AND LOWER PRAIRIE EVAPORITE
FORMATIONS OF THE COMMERCIAL POTASH AREAS: SASK. GEOL.
SURV., SUMM. REP., P. 61-65, 1975.

STRATIGRAPHY AND SEDIMENTOLOGY OF ASHERN, WINNIPEGOSIS
AND LOWER PRAIRIE EVAPORITE FORMATIONS OF SOUTHERN
SASKATCHEWAN, AND THEIR RELATIONS WITH POTASH-BEARING
STRATA OF THE UPPER PRAIRIE EVAPORITE.
1097. MACQUEEN, R.W., GEOL. SURV. CAN.:
MISSISSIPPIAN STRAT.-SEDIMENT.-CORRELATION, 1963-77:
1098. NASSICHUK, W.W., GEOL. SURV. CAN.:
CARBONIFEROUS BIOSTRAT., W. CANADA AND ALASKA, 1975-:

TO EXTEND THE CARBONIFEROUS BIOSTRATIGRAPHY OF SVERDRUP
BASIN, UTILIZING AMMONOIDS, INTO NORTHERN YUKON, ALASKA,
ALBERTA, AND BRITISH COLUMBIA.
1099. NORPIS, A.W., GEOL. SURV. CAN.:
DEVONIAN BIOSTRATIGRAPHY, S. MANITOBA, 1964-:

DETAILED REPORT ON DEVONIAN OF SOUTHERN MANITOBA IS BEING
PREPARED.
1100. NORRIS, A.W., GEOL. SURV. CAN.:
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FIELD WORK ON FOSSILIFEROUS LOWER DEVONIAN SECTIONS IN
SOUTH NAHANNI RIVER AREA PLANNED FOR SUMMER OF 1976.
1101. ROSENSTEIN, E.S., BRUCE, C.J., SHELL CANADA LTD.:
DEVONIAN CARBONATES-REGIONAL STUDY, 1975-:

AN EVALUATION OF THE HYDROCARBON POTENTIAL OF THE MIDDLE
DEVONIAN CARBONATE SECTION IN NORTH EAST BRITISH COLUMBIA
WILL BE CONTINUED USING SUBSURFACE CONTROL. PARTICULAR
EMPHASIS IS PLACED ON A CRITICAL EVALUATION OF KNOWN
HYDROCARBON ACCUMULATIONS IN THE SLAVE POINT FORMATION
WITH A VIEW TO INITIATING AN EXPLORATION PROGRAM OF OUR
OWN FOR LOCATING FURTHER GAS RESERVES.
1102. SMITH, R.E., GEOL. SURV. CAN.:
L. DEVONIAN BIOSTRAT.-BRACHIOPODS, CENTRAL ARCTIC, 1973-76:
PH.D. THESIS.
1103. TELFORD, P.G., ONTARIO DIVISION MINES:
PALEOZOIC GEOLOGY OF FORT ERIE TO SIMCOE AREAS, 1974-77:

SEE: PALEOZOIC GEOLOGY OF THE DUNNVILLE AREA, SOUTHERN
ONTARIO, AND PALEOZOIC GEOLOGY OF THE WELLAND-
FORT ERIE AREA, SOUTHERN ONTARIO: ONTARIO DIVISION OF
MINES, PREL. MAPS P988, P989, 1975.

REGIONAL MAPPING OF PALEOZOIC STRATA OF THE FORT ERIE,
WELLAND, DUNNVILLE, AND SIMCOE AREAS TO REDEFINE THE
SILURIAN AND DEVONIAN STRATIGRAPHIC UNITS EXPOSED IN THE
REGION, USING BOTH LITHOLOGICAL AND PALEONTOLOGICAL
CRITERIA. USING CONODONTS AND OTHER FOSSILS, PRECISE
CORRELATION OF THE NIAGARA PENINSULA DEVONIAN STRATA WILL
BE EFFECTED.
1104. TRETIN, H.P., GEOL. SURV. CAN.:
STRAT., STRUCTURE, CARBONATE PETROL. MARBLE CANYON, 1967-:

LABORATORY WORK (X-RAY DIFFRACTION STUDIES) CONTINUED.
1105. BEALES, F.W., LOZEJ, G.P., UNIV. TORONTO:
STRAT.-STRUCT. CONTROLS BASE METALS IN LIMESTONES:

SEE: LIMESTONE HOST-ROCK PALEOECOLOGICAL SETTING AND
CONTROLS OF ORE AT THREE N. MEXICAN SILVER MINES: XI
INTERNAT. SEDIMENT. CONGR., THEM 9, P. 9-16, 1975.

DETAILED PETROGRAPHIC AND MICROPALEONTOLOGIC STUDIES
MEXICAN AND HONDURAS CRETACEOUS BASE METAL DEPOSITS.
1106. ELIUK, L.S., SHELL CANADA LTD.:
ABENAKI FORMATION, NOVA SCOTIA SHELF, CANADA, 1973-76:

SEISMIC DATA AND 15 WELLS PERMIT PRELIMINARY MODELING OF
JURASSIC TO EARLY CRETACEOUS CARBONATES. CYCLES ARE
DESCRIBED IN THE OOLITIC SCATARIE LIMESTONE THAT
CULMINATE IN THE TRANSGRESSIVE MISAINÉ SHALE. THE
BACCARO LIMESTONE HAS MORE VARIOUS FACIES TYPICAL OF A
CARBONATE PLATFORM INCLUDING REEFS AT A WELL DEFINED
SHELF EDGE. THE EARLY SABLE ISLAND DELTA DIVIDES THIS
UPPER UNIT INTO 2 BANKS. COALS AND METEORIC DIAGENESIS
ON PALEOHIGHS WITH DOPAG DOLOMITIZATION SUGGEST A HUMID,
SUBTROPICAL PALEOCLIMATE.
1107. GIBSON, D.W., GEOL. SURV. CAN.:
STRAT.-SEDIMENT. CRETACEOUS GETTING FM., N.E. B.C., 1974-77:

TO DESCRIBE THE STRATIGRAPHIC SUCCESSION; TO DETERMINE
CRITERIA USEFUL IN DETERMINING THE SUBENVIRONMENTS IN
WHICH THE DELTAIC SEDIMENTS WERE DEPOSITED.
1108. GIBSON, D.W., GEOL. SURV. CAN.:
STRAT.-SEDIMENT. L. CRETACEOUS FOOTHILLS-FRONT RGE., 1975-78:

TO DESCRIBE THE LOWER CRETACEOUS STRATIGRAPHIC SUCCESSION
OF THE ROCKY MOUNTAIN FOOTHILLS AND FRONT RANGES, ALBERTA
AND BRITISH COLUMBIA, PROVIDE DATA ON DISTRIBUTION AND
CONTINUITY OF COAL SEAMS, AND DEVELOP CRITERIA USEFUL IN
DETERMINING THE SUB-ENVIRONMENTS IN WHICH DELTAIC
SEDIMENTS WERE DEPOSITED.
1109. JELETZKY, J.A., GEOL. SURV. CAN.:
MESOZOIC-TERTIARY VANCOUVER I.-QUATSINO SOUND, 1949-:

SEE: AGE AND DEPOSITIONAL ENVIRONMENT OF THE LOWER PART OF
ESCALANTE FORMATION, WESTERN VANCOUVER ISLAND, BRITISH
COLUMBIA: GEOL. SURV. CAN., PAPER 75-1C, P. 9-16, 1975.
1110. JELETZKY, J.A., GEOL. SURV. CAN.:
CRETACEOUS-JURASSIC RICHARDSON MTNS.-EAGLE PLAIN, 1955-:

SEE: SHARP MOUNTAIN FORMATION (NEW)-A SHORELINE FACIES OF
THE UPPER APTIAN-LOWER ALBIAN FLYSCH DIVISION, EASTERN
KEELE RANGE, YUKON TERRITORY: GEOL. SURV. CAN., PAPER 75-1B, P.
237-244, 1975.
1111. JELETZKY, J.A., GEOL. SURV. CAN.:
CRETACEOUS-U. JURASSIC BIOSTRAT. W. CORDILLERA, 1967-:
1112. MONGER, V.W.H., GEOL. SURV. CAN.:
STRATIGRAPHY TAKLA GROUP NC. BRITISH COLUMBIA, 1975-76:

SEE: LOWER MESOZOIC ROCKS IN MCCONNELL CREEK MAP-AREA (96E),
BRITISH COLUMBIA: GEOL. SURV. CAN., PAPER 76-1A, P. 51-55, 1976.

TAKLA GROUP IN NORTH-CENTRAL BRITISH COLUMBIA CONTAINS
NUMEROUS COPPER SHOWINGS. SETTING OF MANY OF THESE IN
DOUBT BECAUSE STRATIGRAPHY POORLY KNOWN. WORK HAS SHOWN
EXISTENCE OF VOLCANIC CENTRE, FLANKED BY DISTAL SEDIMENTS
IN LATE KARNIAN, EARLY NORIAN. CENTRE DOMINATED BY BASIC,
ALKALIC VOLCANISM THAT EVOLVED TO INTERMEDIATE ALKALIC
VOLCANISM. MINERALIZATION IN UPPER PART PERHAPS
EPIGENETICALLY DERIVED FROM LOWER PART DURING PERIOD OF
METAMORPHISM AND FAULTING.
1113. POULTON, T.P., GEOL. SURV. CAN.:
MESOZOIC BIOSTRAT.-JURASSIC PALFONT, N. YUKON, 1975-79:

BIOSTRATIGRAPHIC, LITHOSTRATIGRAPHIC, PALEOECOLOGIC, AND
PALEOEOGRAPHIC STUDY OF THE TRIASSIC TO LOWER OXFORDIAN
(UPPER JURASSIC) ROCKS OF YUKON NORTH OF 65°N AND
ADJACENT AREAS OF DISTRICT OF MACKENZIE. PROGRESS:
REVIEW OF AVAILABLE LITERATURE AND DATA COMPLETED, ONE
SUMMER FIELDWORK COMPLETED, DETAILED STUDY OF FOSSILS AND
LITHOLOGIC SAMPLES UNDERWAY.

1114. SMITH, R. B., DANNER, W. R., UNIV. BRITISH COLUMBIA, GEOL. & CARB. AND TRIAS. ROCKS, CACHE CREEK GP., KAMLOOPS, BC., 1975-76: M. SC. THESIS.
- ROCKS NEAR KAMLOOPS, B. C., MAPPED BY PREVIOUS WORKERS AS UPPER PALEOZOIC (CACHE CREEK GP.). I HAVE BEEN FOUND TO INCLUDE TRIASSIC AS WELL AS PENNSYLVANIAN TO PERMIAN ROCKS. THE CONTACT BETWEEN TRIASSIC AND UPPER PALEOZOIC ROCKS IS A STEEP FAULT WITH TRIASSIC ROCKS TO THE WEST. 90TH GROUPS CONSIST OF ARGILLITE, POORLY SORTED SANDSTONE, AND MINOR MAFIC VOLCANICS. LIMESTONE LENSES ARE CONFINED TO THE UPPER PALEOZOIC ROCKS. FURTHER WORK WILL ATTEMPT TO DETAIL SANDSTONE PROVENANCE, STRUCTURE, AND METAMORPHISM.
1115. STOTT, D. F., GEOL. SURV. CAN.: JURASSIC AND LOWER CRETACEOUS STRATIGRAPHY, 1961-78:
- LITHOSTRATIGRAPHY, CORRELATION, AND DEPOSITIONAL HISTORY OF UPPER JURASSIC TO LOWER CRETACEOUS MINNES GROUP OF NORTHEASTERN BRITISH COLUMBIA.
1116. STOTT, D. F., GEOL. SURV. CAN.: CRETACEOUS STRAT., PEACE RIVER TO 60 N. 1961-:
- SEE: THE CRETACEOUS SYSTEM IN NORTHEASTERN BRITISH COLUMBIA: GEOL. ASSOC. CAN., SP. PAPER 13, P. 427-440, 1975.
- LITHOSTRATIGRAPHY, CORRELATION, AND DEPOSITIONAL HISTORY OF LOWER CRETACEOUS FORT ST. JOHN GROUP AND DUNVEGAN FORMATION OF NORTHEASTERN BRITISH COLUMBIA.
1117. TELFORD, P. G., VOS, M. A., NORRIS, G., ONTARIO DIVISION MINES: MESOZ. PALYNOLOGY AND LIGNITE, MOOSE RIVER BASIN, 1975-:
- SEE: AN ALBIAN MICROFLORA FROM THE MATTAGAMI FORMATION, JAMES BAY LOWLANDS, ONTARIO: CAN. J. EARTH SCI., V. 13, NO. 2, P. 460-403, 1976.
- MIDDLE JURASSIC AND LOWER CRETACEOUS SEDIMENTS HAVE BEEN RECOGNIZED THROUGH DRILLING, GEOPHYSICAL, AND PALYNOLOGICAL STUDIES IN THE MOOSE RIVER BASIN, JAMES BAY LOWLAND. VARIOUS LIGNITE OCCURRENCES ARE BEING EVALUATED AND ANALYTICAL AND PALEONTOLOGICAL WORK IS CONTINUING WITH THE AIM OF ESTABLISHING THE STRATIGRAPHIC FRAMEWORK AND RESOURCE POTENTIAL OF THE BASIN.
1118. TIPPER, H. W., GEOL. SURV. CAN.: BIOSTRAT. MESOZOIC INTERMONTANE-INSULAR BELTS, B. C., 1975-:
- SEE: BIOSTRATIGRAPHIC STUDY OF MESOZOIC ROCKS IN INTERMONTANE AND INSULAR BELTS OF THE CANADIAN CORDILLERA, BRITISH COLUMBIA: GEOL. SURV. CAN., PAPER 76-1A, P. 57-61, 1976.
1119. MADE, J. A., GEOL. SURV. CAN.: SUBSURFACE GEOL. ATLANTIC CONTINENTAL SHELF, 1972-:
- SEE: GEOLOGY OF THE CONTINENTAL MARGIN OFF NOVA SCOTIA AND NEWFOUNDLAND: GEOL. SURV. CAN., PAPER 74-30, V. 2, P. 51-105, 1975.
1120. WILSON, D. G., GEOL. SURV. CAN.: MESOZOIC STRAT. EASTERN SVERDRUP BASIN, ARCTIC, 1975-:
- SEE: EUREKA SOUND AND BEAUFORT FORMATIONS, YELVERTON BAY, ELLESMERE ISLAND, DISTRICT OF FRANKLIN: GEOL. SURV. CAN., PAPER 76-1A, P. 453-455, 1976.
- TO PROVIDE A THOROUGH UNDERSTANDING OF THE GEOLOGICAL HISTORY OF THE EASTERN SVERDRUP BASIN, STRESSING THE INTER-RELATIONSHIP OF TECTONICS, SEDIMENTATION, BIOSTRATIGRAPHY, GEOCHEMISTRY AND HYDROCARBON DISTRIBUTION.
- CENOZOIC**
1121. BARNETT, D. M., GEOL. SURV. CAN.: SURFACE GEOL.-GEOMORPHOLOGY, TERRAIN, MELVILLE I., 1971-:
- SEE: INTERDISCIPLINARY ENVIRONMENTAL DATA PRESENTATION FOR EASTERN MELVILLE ISLAND-AN APPROACH: GEOL. SURV. CAN., PAPER 75-18, P. 105-107, 1975.
- GENERAL**
1122. AITKEN, J. O., GEOL. SURV. CAN.: L. PALEOZOIC STRAT. S. ROCKY MOUNTAINS, 1972-:
- A SUMMARY PAPER ON THE MIDDLE CAMBRIAN IS IN PREPARATION.
1123. CHRISTIE, R. L., GEOL. SURV. CAN.: RECCE. EASTERN DEVON ISLAND - SE. ELLESMERE ISLAND:
1124. DAVIES, G. R., GEOL. SURV. CAN.: U. PALEOZOIC SUBSURFACE STRAT., SVERDRUP BASIN, 1975-:
- UPPER PALEOZOIC GEOLOGICAL HISTORY OF SVERDRUP BASIN, STRESSING THE INTERRELATIONSHIPS OF TECTONICS, SEDIMENTATION, BIOSTRATIGRAPHY, GEOCHEMISTRY AND HYDROCARBON DISTRIBUTION. SUBSURFACE ANALYSIS OF UPPER PALEOZOIC OF SOUTHWESTERN SVERDRUP PLANNED AS NEXT PHASE.
1125. HOWIE, R. D., GEOL. SURV. CAN.: SUBSURFACE GEOL. PALEOZOIC BASINS, E. CANADA, 1971-:
- SEE: PALEO GEOGRAPHY AND SEDIMENTATION IN THE UPPER PALEOZOIC EASTERN CANADA: CAN. SOC. PETROL. GEOL., MEM. 4, P. 45-57, 1975.
1126. LIBERTY, B. A., BROCK UNIV., GEOL.: TRACE ELEMENTS PALEOZOIC CARBONATES, ONTARIO, 1967-77:
- PRELIMINARY INTERPRETATION INDICATES THAT VARIOUS CARBONATE FORMATIONS CAN BE IDENTIFIED BY A CHEMICAL ASSEMBLAGE OF TRACE ELEMENTS. MOREOVER THE MAKE-UP OF GLACIAL TILLS, BEING MECHANICAL DISINTEGRATES, CAN BE ANALYSED ACCORDINGLY. THE CONSTITUENT FORMATION'S MATERIAL, MAKING UP THE TILL, ARE CONSIDERED IDENTIFIABLE AT LEAST IN THE PEBBLE-COBBLE RANGE. A TEN PERCENT ERROR IS CONSIDERED PROBABLE.
1127. MAYR, U., GEOL. SURV. CAN.: STRAT. AND CORRELATION L. PALEOZ. SUBSURFACE ARCTIC, 1975-76:
- SEE: CORRELATION OF LOWER PALEOZOIC SUBSURFACE SECTIONS, DEVON, CORNWALLIS, AND SOMERSET ISLANDS, DISTRICT OF FRANKLIN: GEOL. SURV. CAN., PAPER 75-18, P. 255-256, 1975.
- COMPARE AND CONNECT DIFFERENT SETS OF STRATIGRAPHIC NOMENCLATURE OF THE LOWER PALEOZOIC OF SOUTHERN AND CENTRAL ARCTIC ISLANDS AND ELUCIDATE REGIONAL FACIES CHANGES AND PALEO GEOGRAPHY.
1128. MORROW, D. W., GEOL. SURV. CAN.: STRAT., SEDIMENT., DIAGENESIS PALEOZ. MACKENZIE MTS., 1975-:
- SEE: LOWER PALEOZOIC STRATIGRAPHY: SOUTHERN MACKENZIE MOUNTAINS, DISTRICT OF MACKENZIE: GEOL. SURV. CAN., PAPER 76-1A, P. 467-469, 1976.
- TO GAIN A CLEARER UNDERSTANDING OF DEVONIAN AND CARBONIFEROUS STRATIGRAPHY OF THE SOUTHERN MACKENZIE MOUNTAINS, INVOLVING CORRELATION, FACIES RELATIONSHIPS, SEDIMENTOLOGY, TECTONIC SETTING, PETROLOGY, GEOCHEMISTRY.
1129. MOUNTJOY, E. W., MCGILL UNIV., GEOL.: PROTEROZOIC-PALEOZOIC STRATIGRAPHY, ROCKY MTS., 1959-:
- SEE: A LATE PROTEROZOIC MICROBIOTA OF THE MIETTE GROUP, SOUTHERN BRITISH COLUMBIA: GEOL., V. 4, P. 111-119, 1976.
- STUDY OF STRATIGRAPHIC SECTIONS IN ROCHE MIETTE-JASPER-MOUNT ROBSON REGION, CONTINUING STUDY MAINLY ON CAMBRIAN AND DEVONIAN STRATA.
1130. MASSICHUK, W. W., GEOL. SURV. CAN.: STRAT., PALEONT. U. PALEOZOIC ELLESMERE-AXEL HEIBERG, 1968-:
- DURING YEAR MANUSCRIPTS COMPLETED ON FUSULINACEANS FROM BELCHER CHANNEL FORMATION AT BLIND FIORD AND ON PERMIAN SCAPHOPODS FROM ASSISTANCE FORMATION.
1131. PUGH, D. C., GEOL. SURV. CAN.: N. BASIN ANALYSIS: PEEL RIVER, MACKENZIE-YUKON, 1971-77:
- STRATIGRAPHIC CORRELATION NETWORK ESTABLISHED.
1132. REINSON, G. E., GEOL. SURV. CAN.: STRAT.-SEDIMENT. SOMERSET I., BOOTHIA PENINSULA, 1975-:
- SEE: STRATIGRAPHIC FIELD STUDIES, SOMERSET ISLAND, DISTRICT OF FRANKLIN (588 TO F): GEOL. SURV. CAN., PAPER 76-1A, P. 497-499, 1976.
1133. SANFORD, B. V., GEOL. SURV. CAN.: L. PALEOZOIC GEOLOGY EASTERN CANADA, 1975-:
- SEE: PALEOZOIC GEOLOGY OF NORTHEAST GULF OF ST. LAWRENCE: GEOL. SURV. CAN., PAPER 76-1A, P. 1-5, 1976.
1134. THOMPSON, R. I., GEOL. SURV. CAN.: STRUCTURE-STRAT. PALEOZ.-MESOZ., N. B. C., 1975-:
- SEE: SOME ASPECTS OF STRATIGRAPHY AND STRUCTURE IN THE HALFWAY RIVER MAP-AREA (948), BRITISH COLUMBIA: GEOL. SURV. CAN., PAPER 76-1A, P. 471-477, 1976.
- TO DETAIL THE STRUCTURE AND STRATIGRAPHY OF THE HALFWAY RIVER MAP-AREA AND ITS RELATION TO ADJACENT AREAS, AND DETERMINE THE REGIONAL STRATIGRAPHIC AND STRUCTURAL SETTING OF PB-2N MINERALIZATION.
1135. WHEELER, J. O., READ, P. B., GEOL. SURV. CAN.: LARDEAU WEST HALF, MAP-AREA, BRITISH COLUMBIA, 1965-:

STRUCTURAL GEOLOGY/TECTONICS

ALBERTA

1136. BARCOCK, E.A., ALTA. RESEARCH COUNCIL, GEOL. STRUCT. GEOL.-TECTONIC FRAME., ATHABASCA OIL SANDS, 1974-76:
STUDY OF JOINTING AND FRACTURE PHENOMENA IN ATHABASCA OIL SANDS.
1137. BARCOCK, E.A., ALTA. RESEARCH COUNCIL, GEOL. PREDICTION SURFACE FRACTURES FROM DIPMETER LOG, 1975-77:
1138. MOUNTJOY, E.W., MCGILL UNIV., GEOL. STRUCTURE - GEOLOGY ROCKY MTS. BETWEEN 52 & 54, 1965-:
SEE: WHITERABBIT E AND W HALF MAP AREAS 83C01 E & W; GEOL. SURV. CAN., MAPS 1398A, 13897, 1975.
CONTINUATION OF 90W-ATHABASCA PROJECT JOINTLY WITH R. PRICE, QUEEN'S UNIV. CURRENTLY PREPARING GEOLOGICAL MAPS AND CROSS SECTIONS FOR MEDICINE LAKE 93C13 E AND W, AND JASPER 83D16 E AND W.

BRITISH COLUMBIA

1139. CAMPBELL, R.B., GEOL. SURV. CAN. GEOLOGY CARIBOO MOUNTAINS, BRITISH COLUMBIA, 1968-:
MAP COMPILATION CONTINUING, MINOR FIELDWORK TO BE COMPLETED.
1140. CHASE, R.R., UNIV. BRITISH COLUMBIA, OGGY: PLATE MARGINS, WESTERN CANADA, 1959-99:
SEE: THE WESTERN CANADIAN CONTINENTAL MARGIN; CAN. SOC. PETROL. GEOL., MEM. 4, P. 701-722, 1975.
RESEARCH PROCEEDED ON ACTIVE PLATE MARGINS OF NE. PACIFIC. J. TUZO WILSON KNOLLS BASALT ANALYSED AND PROVED TO BE HAWAIIITE, INDICATING ASSOCIATION WITH KODIAK-BOWIE SEAMOUNT CHAIN. GENERATING HOTSPOT MAY NOW BE WEST OF QUEEN CHARLOTTE SOUND, CAUSING DIVERGENCE OF W. QUEEN CHARLOTTE ISLANDS NW. FROM VANCOUVER ISLAND.
1141. EISBACHER, G.H., GEOL. SURV. CAN. SUCCESSOR BASINS OF WESTERN CORDILLERA, 1975-:
SEE: SUCCESSOR BASINS OF THE WESTERN CORDILLERA; GEOL. SURV. CAN., PAPER 76-1A, P. 113-116, 1976.
STUDIES IN WESTERN BOWSER BASIN AND ST. ELIAS MOUNTAIN.
1142. PARRISH, R.R., ARMSTRONG, R.L., UNIV. BRITISH COLUMBIA, GEOL. STRUCTURE & GEOCHRONOLOGY, WOLVERINE COMPLEX, B.C., 1975-76; M.Sc. THESIS.
SEE: STRUCTURE AND METAMORPHISM IN SOUTHERN SWANSEL RANGES, BRITISH COLUMBIA; GEOL. SURV. CAN., PAPER 76-1A, P. 83-86, 1976.
TENAKIHI/INGENIKA GP. ROCKS (WINDEREMERE) ARE METAM. TO UPPER AMPHIBOLITE FACIES AND ARE INVOLVED IN A POLYPHASE STRUCTURAL HISTORY. F1 AND F2 FOLDS ARE SYN-METAMORPHIC, NW-TRENDING VERY TIGHT FOLDS; F3 FORMS A NW-TRENDING ELONGATE DOME. ALL ROCKS HAVE SUFFERED LATE BRITTLE/CATACLASTIC DEFORMATION. SYN-METAMORPHIC PEGMATITES ARE INVOLVED IN F1 & F2 FOLDS AND ARE PROBABLY <200MY OLD. A SMALL POST F1&F2 GRANITIC BODY IS 59 16W. Y. OLD, CATACLASTICALLY DEFORMED, AND HAS SR87/86I = 7506. K/AR AGES HAVE BEEN RESET IN THE AREA.

NEW BRUNSWICK

1143. RAST, N., BURKE, K.B.S., STRINGER, P., UNIV. NEW BRUNSWICK, GEOL. STRUCT. PROFILES INTERCONTINENTAL OROGENIC BELT, 1971-79:
TO PRODUCE CORRELATIONS BASED ON PROFILES ENCOMPASSING STRUCTURAL, STRATIGRAPHIC, PETROLOGICAL AND GEOTECTONIC DATA OF THE APPALACHIAN CALEDONIAN SYSTEM.

1144. STRINGER, P., RAST, N., UNIV. NEW BRUNSWICK, GEOL. CLEAVAGE AND FOLDING IN NORTHERN APPALACHIANS, 1975-78:

SEE: ACADIAN SLATY CLEAVAGE NONCOPLANAR WITH FOLD AXIAL SURFACES IN THE NORTHERN APPALACHIANS; CAN. J. EARTH SCI., V. 12, NO. 6, P. 949-961, 1975.

CLEAVAGE VARIES FROM COPLANAR TO NONCOPLANAR WITH FOLD AXIAL SURFACES OF ASSOCIATED FOLDS IN SILURIAN AND TRIASSIC STRATA OF NEW BRUNSWICK AND ADJACENT NORTHERN APPALACHIANS. POLYPHASE STRUCTURES IN ORDOVICIAN OCEAN FLOOR FOURNIER GROUP COMPLEX ARE RELATED TO PLATE TECTONICS. INVESTIGATION OF NATURE OF "SLATY" CLEAVAGE IN FOLDED SILURIAN AND "FRACTURE" CLEAVAGE IN FOLDED TRIASSIC AND VARIATION OF CLEAVAGE WITH LITHOLOGY AND POSITION IN FOLD; ORIGIN OF CLEAVAGE.

NEWFOUNDLAND/LABRADOR

1145. KENNEDY, M.J., BLACKWOOD, R.B., CHORLTON, L.B., WILSON, B.L., MEMORIAL UNIV., GEOL. STRUCTURE, METAMORPHISM, NEWFOUNDLAND APPALACHIANS, 1973-76:

SEE: REPETITIVE OROGENY IN THE NORTHEASTERN APPALACHIANS - NEW PLATE MODELS BASED UPON NEWFOUNDLAND EXAMPLES; TECTONOPHYS., V. 28, P. 39-87, 1975.

STRUCTURAL GEOMETRY, AGE OF DEFORMATION, METAMORPHIC GRADE AND INTRUSIVE HISTORY OF NORTHERN PART OF GANDER ZONE OF NEWFOUNDLAND AND ITS RELATIONSHIP TO ADJACENT ZONES HAVE BEEN ESTABLISHED. LARGE PRE-CARADOC RECUMBENT FOLDS AND EXTENSIVE GRANITIC PLUTONISM HAVE BEEN RECOGNISED. THIS SIDE OF THE APPALACHIAN SYSTEM HAS BEEN THE SITE OF REPEATED TECTONIC INSTABILITY FROM HADRYNIAN TO MID-ORDOVICIAN TIMES. ULTRAMAFIC ROCKS WHICH HAVE GENERALLY BEEN CONSIDERED TO INTRUDE ORD. ROCKS ARE AT LEAST IN PART OLDER.

1146. NEALE, E.R.W., MEMORIAL UNIV., GEOL. POST-OPHIOLITE SED.-VOLCANISM, NEWFOUNDLAND, 1973-76:

SEE: POST-OPHIOLITE UNCONFORMITY, TILT COVE - BETTS COVE AREA, NEWFOUNDLAND; CAN. J. EARTH SCI., V. 12, NO. 5, P. 880-887, 1975.

STUDY OF POST-OPHIOLITE SEQUENCES OF WESTERN NOTRE DAME BAY INCLUDING RELATIONSHIPS TO ADJACENT ROCKS AND THE PETROLOGY AND GEOCHEMISTRY OF THE POST-OPHIOLITE VOLCANIC ROCKS. A DETAILED MAP OF THE KINGS POINT AREA IS BEING PREPARED TO DEPICT RELATIONSHIPS. WORK IS ALSO CONTINUING ON THE EXTRAPOLATION OF NEWFOUNDLAND TECTONO-STRATIGRAPHIC ZONES THROUGH CAPE BRETON ISLAND.

1147. WILLIAMS, H., EINARSON, G.R., BAKER, D., MEMORIAL UNIV., GEOL. TECTONOSTRATIGRAPHIC DIVISION CAN. APPALACHIAN, 1970-80:

SEE: STRUCTURAL SUCCESSION NOMENCLATURE AND INTERPRETATION OF TRANSPORTED ROCKS IN WESTERN NEWFOUNDLAND; CAN. J. EARTH SCI., V. 12, NO. 11, P. 1874-1894, 1975.

INTERPRETED THE GEOLOGY OF THE WESTERN ZONES OF THE NORTHERN APPALACHIANS IN TERMS OF THE EVOLUTION OF A STABLE CONTINENTAL MARGIN OF EASTERN NORTH AMERICA. THIS ANCIENT MARGIN WAS DESTROYED WHEN OVERRUN BY TRANSPORTED SEDIMENTARY SEQUENCES FROM THE CONTINENTAL SLOPE AND RISE, AND OPHIOLITE SUITES FROM THE NEARBY OCEAN. FUTURE WORK INVOLVES SHARPER DEFINITION AND EXTENSION OF NORTHERN APPALACHIAN STRATIGRAPHIC-STRUCTURAL ZONES TO THE SOUTHERN APPALACHIANS AND BRITISH CALEDONIDES.

1148. WILLIAMS, H., HIBBARD, J.P., MEMORIAL UNIV., GEOL. DUNNAGE MELANGE, 1974-76:

SEE: THE DUNNAGE MELANGE, NEWFOUNDLAND (2E); GEOL. SURV. CAN., PAPER 76-1A, P. 183-185, 1976.

THE DUNNAGE MELANGE IS MAPPED AT 1-50000. IT IS THE LOCUS OF A VARIETY OF SMALL INTRUSIONS AND CONTAINS GABBRO AND PORPHYRY BLOCKS. THE DUNNAGE IS OVERLAIN BY THE CARADOCIAN DARK HOLE FM. AND IT INTERDIGITATES WESTWARD WITH THE NEW BAY FM. THE MELANGE IS SITED EAST OF AN ORDOVICIAN ISLAND ARC. IT MAY REPRESENT THE VESTIGE OF A CONVERGENT PLATE BOUNDARY. IT IS INTERPRETED AS A MELANGE RIDGE SITUATED EAST OF A MAGMATIC ARC AND WEST OF A SUBDUCTION ZONE.

NORTHWEST TERRITORIES

1149. BALKWILL, H. P., GEOL. SURV. CAN., 1
STRUCTURE-STRAT., RINGNES ISLANDS, 1971-76:

BEDROCK GEOLOGY RINGNES ISLANDS AND SYNTHESIS OF
STRATIGRAPHY STRUCTURE AND TECTONIC HISTORY CENTRAL
SVERDUP BASIN WITH APPLICATION TO HYDROCARBON POTENTIAL.
1150. COOK, D. G., GEOL. SURV. CAN., 1
STRUCTURAL STUDIES MACKENZIE ARC, 1975-:

TO DETERMINE THE GEOMETRY AND KINEMATICS OF DEFORMATION
WITHIN THE MACKENZIE MOUNTAINS, FRANKLIN MOUNTAINS AND
COLVILLE HILLS AREA.
1151. DYKE, L. D., GEOL. SURV. CAN., 1
CAMPBELL, BARN, WHITE AND ROMANZOF UPLIFTS, 1973-:

1152. EADE, K. E., GEOL. SURV. CAN., 1
STRUCTURAL-STRAT. PRECAMBRIAN ROCKS, S.W. KENYATIN, 1968-:

1153. WILLIAMS, G. K., GEOL. SURV. CAN., 1
N. BASIN ANALYSIS: SLAVE RIVER, MACKENZIE, 1971-76:

A SET OF 9 PRELIMINARY SUBSURFACE GEOLOGICAL MAPS HAVE
BEEN COMPLETED, ONE OR TWO MORE ARE PLANNED.
1154. YOUNG, F. G., MYHR, D. W., GEOL. SURV. CAN., 1
N. BASIN ANALYSIS: FIRTH RIVER, MACKENZIE-YUKON, 1971-:

SEE: LOWER CRETACEOUS (NEOCOMIAN) SANDSTONE SEQUENCE OF
MACKENZIE DELTA AND RICHARDSON MOUNTAINS AREA: GEOL. SUR.
CAN., PAPER 75-1C, P. 247-266, 1975.

NOVA SCOTIA

1155. JONES, B., STEVENS, G. R., ACADIA UNIV., GEOL.
STRUCT. GEOL. OF OWLS HEAD, HALIFAX CO., NOVA SCOTIA, 1973-75:
M.SC. THESIS.

THE STRUCTURAL GEOLOGY OF THE GOUDENVILLE FM. ON OWLS
HEAD PENINSULA, HALIFAX CO. NS, IS OUTLINED-FOLDS
CLEAVAGES, LINEATIONS, AND JOINTS ARE DESCRIBED AND ARE
QUALITATIVELY RELATED TO STRESS AND STRAIN AT THE TIME OF
FORMATION.
1156. LIEW, Y. C., STEVENS, G. R., ACADIA UNIV., GEOL.
TRIASSIC STRUCT.-VOLC. NORTH SHORE, MINAS BASIN NS., 1974-76:
M.SC. THESIS.

TRIASSIC BASALTS FROM TWO DISTINCT VOLCANIC EPISODES
OCCUR WITHIN THE FIVE ISLANDS GRABEN. GEOCHEMICAL
ANALYSIS REVEALS THEY ARE MEMBERS OF TWO INDEPENDENT
DIFFERENTIATION TRENDS. UPPER TRIASSIC SCOTTS BAY
FORMATION RESTS CONFORMABLY ON NORTH MOUNTAIN BASALT IN
THE VICINITY OF FIVE ISLANDS.
1157. STEVENS, G. R., ACADIA UNIV., GEOL.
FABRIC & MICROSTRUCTURES OF VOLCANICS & TECTONITES:

DETERMINATION OF PRIMARY FLOW DIRECTIONS IN VOLCANICS BY
ANALYSIS OF MICROSTRUCTURES AND FABRIC USING X-RAY
DIFFRACTION POLE-FIGURE DEVICE, GENERAL FABRIC ANALYSIS
OF QUARTZITES & OTHER TECTONITES USING X-RAY POLE FIGURE
DEVICE, AND UNIVERSAL STAGE METHODS, MID-PALEOZOIC TO
EARLY PALEOZOIC TECTONITES IN NOVA SCOTIA.

ONTARIO

1158. BROWN, B. A., BRISBIN, W. C., UNIV. MANITOBA, EARTH
STRUCTURAL STUDIES MANITOBA-NW. ONTARIO, 1974-77: PH.D.
THESIS.

SEE: MANITOBA, 1974 ANN. REP., 1975.

A STUDY OF THE DEFORMATIONAL EFFECTS OF THE EMPLACEMENT
OF THE AULNEAU AND DRYBERRY BATHOLITHS AND VIOLA LK STOCK
ON THE GREENSTONE-SEQUENCE, EASTERN LAKE OF THE WOODS.
1159. CURRIE, J. B., SCHWERDTNER, W. M., BAU, A. F. S., NWACHUKWU, S. O., UNIV.
TORONTO-NIGERIA, GEOL., 1

SEE: REMANENT MAGNETIZATION AND MAGNETIC SUSCEPTIBILITY
ANISOTROPY MEASUREMENTS IN LAC DES MILLES AREA OF
NORTHWESTERN ONTARIO: CAN. J. EARTH SCI., V. 12, NO. 5, P. 731-
744, 1975.

1160. EVERITT, R. A., ROUSELL, D. H., LAURENTIAN UNIV., GEOL.
FRACTURE AND LINEAMENT STUDY OF THE SUDBURY BASIN, 1975-77:
M.SC. THESIS.

PRELIMINARY ANALYSIS OF THE ORIENTATION AND INTENSITY OF
JOINT DEVELOPMENT AND AIRPHOTO LINEARS IN THE ONAPING AND
IRUPITIVE FMS, INDICATE THE LATTER IS MORE INTENSELY
FRACTURED, AND THAT NW. SETS, TENDING PARALLEL TO MAFIC
DYKES AND FAULTS, PREDOMINATE. FURTHER WORK WILL INVOLVE
MEASURING AND ANALYZING JOINTS IN THE ONWATIN AND
CHELMSFORD FMS. THE PURPOSE OF THIS STUDY IS TO
DETERMINE THE ORIENTATION, INTENSITY, AND RELATIVE AGE OF
THE FRACTURES, AND THE ORIENTATION OF THE RESPONSIBLE
STRESSES.
1161. KEMLENBECK, M. H., LAKEHEAD UNIV., GEOL.
TECTONIC EVOLUTION QUETICO BELT, ONTARIO, 1972-78:

STRUCTURAL AND PETROLOGICAL INVESTIGATIONS IN THE
SHEBANOOWAN, QUETICO AND WABIGOON BELTS NORTH OF THUNDER
BAY, INTERNAL AND BOUNDARY RELATIONSHIPS, TECTONIC
EVOLUTION OF THE ARCHEAN CRUST.
1162. STOTT, G. M., APPELYARD, E. C., UNIV. WATERLOO, EASCI
TECTONIC SEQUENCE CORRELATION IN HIGHATITES, 1973-76: M.SC.
THESIS.

SEE: GRENVILLE GNEISSES IN THE MAJAWASKA HIGHLANDS
(EASTERN ONTARIO): FIELD TRIPS GUIDE BROOK WATERLOO 1975,
GEOL. ASSOC. CAN., P. 26-62, 1975.

HIGHATITE GNEISSES IN PART OF THE MAJAWASKA AREA OF
EASTERN ONTARIO WERE STUDIED TO DECIPHER THE STRUCTURAL
AND INTRUSIVE EVENTS. THE TECTONIC SEQUENCE IS
CORRELATED WITH THAT PRESERVED IN THE SUPERINCUMBENT
GRENVILLE SUPERGROUP. THE SEQUENCE OF EVENTS RECORDED IN
THE HIGHATITES APPEARS TO REFLECT THE GRENVILLE OROGENY:
PREOROGENIC "BASEMENT" TECTONIC STRUCTURES ARE NOT
OBSERVED.

QUEBEC

1163. BAER, A. J., UNIV. OTTAWA, GEOL.
TEXTURES IN THE LAC ST JEAN ANORTHOSITE, 1974-77:

PRIMARY (PROTOCLASTIC) TEXTURES CAN BE DISTINGUISHED FROM
SECONDARY (CATACLASTIC) TEXTURES. FRACTURING,
DEFORMATION AND RECRYSTALLIZATION OF PLAGIOCLASE ARE
UNDER STUDY.
1164. BEAUDIN, J., SKIDMORE, W. B., ST-JULIEN, P., QUEBEC DEP. NAT. RES.,
MRN:
STRUCTURE DES MASSIFS ULTRAMAFIQUES - CHIC-CHOCS, 1975-77:

- A COMPRENDRE LES RELATIONS TECTONIQUES ENTRE LE GROUPE
DE SHOCKSHOCK ET LES MASSIFS ULTRAMAFIQUES Y ASSOCIES.
ETAT D'AVANCEMENT - L'ETUDE DU MASSIF PRINCIPAL, CELUI DU
MONT ALBERT, EST FAITE.
1165. BIRON, S., SKIDMORE, W. B., ST-JULIEN, P., QUEBEC DEP. NAT. RES., MRN:
GEOLOGIE DE LA REGION DE STE-ANNE-JES-MONTS, 1971-76:

SEE: GEOLOGIE DE LA REGION DES MECHINS-COMTE DE MATHIE:
QUEBEC MRN, DP-299, 1975.

- GEOLOGIE STRUCTURALE DE ROCHES DU CAMBRO-ORDOVICIEN
(SUPER-GROUPE DE QUEBEC) DU NW DE LA GASPE (APPALACHES
DU QUEBEC). ETAT D'AVANCEMENT - 1971-GEOLOGIE DE LA RIVE
DU ST-LAURENT DE CAP-CHAT A GROS-MORNE (MRN DP 240), 1972-
GEOLOGIE DE LA REGION DE STE-ANNE-JES-MONTS (MRN DP 243),
1973-GEOLOGIE DE LA REGION DE MARSOUI (MRN DP 244), 1974-
GEOLOGIE DE LA REGION DES MECHINS, 1975-GEOLOGIE DU FRONT
DES CHIC-CHOCS.
1166. BISSONNETTE, R., BAER, A. J., UNIV. OTTAWA, GEOL.
BOURGIA ANORTHOSITE NEAR LA TUQUE, QUEBEC, 1974-76: M.SC.
THESIS.

SEE: PRELIMINARY REPORT ON THE BOURGIA META-ANORTHOSITE (LA
TUQUE, QUEBEC, CANADA): CAN. J. EARTH SCI., V. 13, NO. 1, P. 84-91,
1976.

DETAILED STRUCTURAL MAPPING SHOWS CONCENTRIC STRUCTURE OF
HIGHLY RECRYSTALLIZED ANORTHOSITE. DEFORMATION PATTERN
IS PLANAR NEAR THE RIM BUT LINEAR IN THE CORE.
1167. CHARBONNEAU, J. M., ST-JULIEN, P., GLOBENSKY, Y., UNIV. LAVAL-
QUEBEC, MRN:
CARTOGRAPHIE DE LA REGION DE SUTTON, 1974-77: PH.D. THESIS.

SEE: RAPPORT INTERIMAIRE REGION DE FRELICLSBURG: QUEBEC
MRN, DP-340, 1975.

CARTOGRAPHIE DE LA REGION DE SUTTON EN VUE D'EN
DISTINGUER LES ASSEMBLAGES LITHOLOGIQUES ET DE DECELER
LES DIVERSES PHASES TECTONIQUES AYANT AFFECTE LA REGION.

1168. HUBERT, C., GARIEPY, C., UNIV. MONTREAL, GEOL. :
TECTONIQUE ET PETROLOGIE DES LAVES DU CALDWELL, 1975-77: M.
SC. THESIS.
- TECTONIQUE ET GEOCHIMIE DES LAVES CAMPRIENNES DU GROUPE
DE CALDWELL DANS LA REGION DU LAC ETCHEMIN, APPALACHES DU
QUEBEC. AFIN D'ETABLIR UNE COLONNE STRATIGRAPHIQUE,
D'ETUDIER LEURS CARACTERISTIQUES PETROLOGIQUES ET
GEOCHIMIQUES ET D'INTERPRETER CES LAVES DU LE CADRE D'UNE
EVOLUTION TECTONIQUE DE L'OROGENE TACONIQUE.
1169. HUBERT, C., SHALABY, M., UNIV. MONTREAL, GEOL. :
SLUMP CAMPRIEN DU FLYSCH DES NAPPES APPALACHES, 1975-77: M.
SC. THESIS.
- TECTONIQUE ET CARACTERISTIQUES SEDIMENTOLOGIQUES D'UN
GLISSEMENT SEDIMENTAIRE DANS LE FLYSCH DES NAPPES DU
LOWER ST. LAWRENCE VALLEY. AFIN DE COMPRENDRE LA NATURE
DE CES DEPOTS ET LEUR MODE DE MISE EN PLACE.
1170. RYNAL, M., BAER, A. J., UNIV. OTTAWA, GEOL. :
SOUTHERN PART OF CALUMET ISLAND, 1973-77: PH.D. THESIS.
1171. ST. JULIAN, P., LAURENT, R., SEGUIN, M. K., BOURQUE, P. A., RIVA, J. F.,
UNIVERSITE LAVAL, GEOL. :
OROGENIE DES APPALACHES DU QUEBEC, 1973-:
- SEE: EVOLUTION OF THE TACONIC OROGEN IN THE QUEBEC
APPALACHIANS: AM. J. SCI., V. 275A, P. 337-362, 1975.
- ETUDES STRATIGRAPHIQUES ET STRUCTURALES DES ASSISES DU
CAMBRO-ORDOVICIEN ET SILURO-DEVONNIEN, PETROGRAPHIQUES,
PETROLOGIQUES, GEOCHRONOLOGIE ET GEOPHYSIQUE DES
COMPLEXES OPHIOLITIQUES, ANALYSES STRUCTURALES DES
COMPLEXES OPHIOLITIQUES ET DES ROCHES ENCAISSANTES, ET
EVOLUTION DANS LE TEMPS ET DANS L'ESPACE DU VOLCANISME DU
CAMBRO-ORDOVICIEN ET SILURO-DEVONNIEN.
1172. VALLIERES, A., SKIDMORE, W. B., ST-JULIEN, P., QUEBEC DEP. NAT. RES.,
MRN :
GEOLOGIE DE LA REGION DE RIVIERE-DU-LOUP, QUEBEC, 1973-78:
- SEE: REGION DE L'ISLE VERTE A LA RIVIERE TROIS PISTOLES,
COMTE DE RIVIERE-DU-LOUP: QUEBEC MRN, DP-334, 1975.
- OBJECTIF - STRUCTURE ET STRATIGRAPHIE DU CAMBRO-
ORDOVICIEN ENTRE TROIS- PISTOLES ET KAMOURASKA, ETAT
D'AVANCEMENT - 1973-REGION DE ST-MODESTE QUART NORT-EST
(MRN DP-279), 1974-REGION ENTRE L'ISLE VERTE ET LA
RIVIERE TROIS PISTOLES (MRN DP-334), 1975-REGION ENTRE
L'ISLE VERTE ET RIVIERE-DU-LOUP.
- YUKON TERRITORY**
1173. NORRIS, D. K., GEOL. SURV. CAN. :
STRUCTURAL GEOLOGY N. YUKON-NW. MACKENZIE, 1969-:
- TWO OF 6 MAPS NOW ON OPEN FILE. 4 NEAR COMPLETION.
REPORTS IN PROGRESS.
1174. TEMPELMAN-KLUIT, D., GEOL. SURV. CAN. :
STRUCTURE, STRAT., METALLOGENY, PELLY MTS., YUKON, 1973-:
- GENERAL**
1175. CURPIE, J. B., RODRIGUEZ, A., UNIV. TORONTO, GEOL. :
STRUCTURAL STUDY FRACTURED TERTIARY UTAH BASIN, 1975-: M.
SC. THESIS.
1176. DIXON, J. M., QUEEN'S UNIV., GEOL. :
EXP. MODEL-FIELD STUDIES, FINITE STRAIN-DEFORM., 1974-77:
- SEE: FINITE STRAIN AND PROGRESSIVE DEFORMATION IN MODELS
OF DIAPYRIC STRUCTURES: TECTONOPHYS., V. 28, P. 89-124, 1975.
- EXPERIMENTAL MODEL STUDY OF FINITE STRAIN AND PROGRESSIVE
DEFORMATION IN GEOLOGIC STRUCTURES SUCH AS GNEISS DOMES,
GREENSTONE BELTS AND SUBDUCTION ZONES IS ACCOMPLISHED BY
DEFORMING SMALL SCALE MODELS IN A LARGE CENTRIFUGE. THE
FABRIC AND ESTIMATED FINITE STRAIN IN NATURAL STRUCTURES
IS COMPARED TO THOSE DERIVED FROM THE MODELS.
1177. GOODWIN, A. M., UNIV. TORONTO, GEOL. :
NATURE-ORIGIN ARCHEAN CRUST, CANADIAN SHIELD, 1972-:
1178. HARRIS, I. M., GEOL. SURV. CAN. :
STRUCTURE-STRATIGRAPHY PHANEROZOIC E. CANADA, 1973-:
- SEE: SEDIMENTOLOGICAL STUDY OF THE GOLDENVILLE FORMATION:
GEOL. SURV. CAN., PAPER 75-1A, P. 171-174, 1975.
- PREPARED PALEOGEOGRAPHIC AND FACIES MAPS TO BE
INCORPORATED IN REPORT ON PALEOZOIC EVOLUTION OF EASTERN
CANADA AND THREE ARTICLES ON LOWER PALEOZOIC SEDIMENTARY
ROCKS OF NOVA SCOTIA.
1179. HAWORTH, R. T., GEOL. SURV. CAN. :
TECTONIC ANALYSIS BAY OF FUNDY-SULF. OF MAINE, 1974-76:
1180. KING, L. H., GEOL. SURV. CAN. :
REGIONAL BEDROCK GEOLOGY, GRAND BANKS, 1973-80:
- SEE: STRATIGRAPHIC INTERPRETATION OF THE CENTRAL SPAND
BANKS FROM HIGH-RESOLUTION SEISMIC REFLECTION PROFILES:
GEOL. SURV. CAN., PAPER 74-30, V. 2, P. 175-186, 1975.
- CONDUCTED 15 MONTH SEISMIC AND MAGNETIC SURVEY EAST OF
AVOLON TO FLEMISH CAP, IN SUPPORT OF BOTH SURFICIAL AND
BEDROCK PROGRAM.
1181. LAJTHAI, E. Z., UNIV. NEW BRUNSWICK, GEOL. :
MECHANISMS OF DEFORMATION AND FRACTURE, 1974-78:
- SEE: THE COLLAPSE OF CAVITIES: INT. J. ROCK MECH. MIN. SCI., V.
12, P. 81-86, 1975.
- INVESTIGATION INTO THE MODE OF DEFORMATION AND FRACTURE
UNDER GEOLOGICAL CONDITIONS. EMPHASIS SO FAR ON BRITTLE
BEHAVIOUR AND ITS DESCRIPTION THROUGH TECHNIQUES OF
FRACTURE MECHANICS: ALSO PRELIMINARY RESEARCH INTO
DUCTILE FRACTURE IN SIMPLE AND PURE SHEAR RESULTS ARE
APPLIED IN A GEOMECHANICAL ANALYSIS OF JOINTING AND
INTRUSIONS.
1182. ROBINSON, J. E., CHARLESWORTH, H. A. K., UNION OIL CO. CAN. LTD. :
ANALYSIS OF TECTONIC PATTERNS OF WESTERN CANADA, 1974-75:
- TO ANALYZE BY RIGOROUS MATHEMATICAL METHODS, SUCH AS
SPATIAL FILTERING, A STRUCTURE CONTOUR MAP OF A
REPRESENTATIVE HORIZON IN THE WESTERN CANADA BASIN AND TO
INTERPRET RESULTANT DISPLAYED TECTONIC TRENDS.
1183. STANTON, M. S., CHEVRON STANDARD LTD. :
GEOTECTONICS, 1967-:
- REGIONAL MAPPING OF STRUCTURAL TRENDS AND RELATED
STRATIGRAPHY.
1184. WYNNE-EDWARDS, H. R., UNIV. BRITISH COLUMBIA, GEOL. :
TECTONICS OF THE GRENVILLE PROVINCE, -1965:
- A CONTINUING STUDY OF THE EVOLUTION OF THE GRENVILLIAN
OROGENIC BELT INVOLVING PETROLOGY STRUCTURE STRATIGRAPHY
AND GEOCHRONOLOGY. PRESENT MODEL IS THAT OF SLOW
MIGRATION OF A DUCTILE SIALIC PLATE OVER A FIXED MANTLE
THERMAL (SPREADING) SYSTEM. VECTORS OF MOTION INDICATED
BY ANORTHOSITE TRACK AND YOUNGING AGES SOUTHWARD.
TRANSFORMAL SHEAR ZONES SEPARATE MAJOR IGNEOUS CENTRES
THIS "MILLIPEDE MODEL" HAS IMPLICATIONS FOR PROTEROZOIC
TECTOGENESIS IN GENERAL.

ORGANIZATIONS REPORTING

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Hudson's Bay Oil and Gas Company Limited,
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LIST OF GRANT AWARDS IN THE EARTH SCIENCES FOR 1975

DEPARTMENT OF ENERGY, MINES AND RESOURCES, RESEARCH AGREEMENTS

BRITISH COLUMBIA

University of British Columbia

Clowes, R.M. (Geophysics and Astronomy)
Southern Trans-British Columbia Seismic
Profile, \$4000.00

Dragert, H. (Geophysics and Astronomy)
Local Earthquake Studies in the Canadian
Cordillera, \$2000.00

Finn, W.D. (Applied Science)
Stability of the Fraser River Delta Slope,
\$8500.00

Frost, D.C. (Chemistry)
X-Ray Photoelectron Spectroscopic Analysis
of Sulphur in Canadian Coals, \$5000.00

Nadeau, J.S. (Metallurgy)
Environmental Effects in Comminution and
Rock Drilling, \$10 000.00

Poling, G.W. (Mineral Engineering)
Reclamation of Water from Mill Tailings, \$6000.00

Wynne-Edwards, H.R., Sinclair, A.J. (Geological Sciences)
MINDEP Phase II: Use of MINDEP Computer-
Based Mineral Deposit Files to Examine
Statistical-Geological Approaches to Optimizing
Mineral Exploration Procedure, \$10 000.00

British Columbia Institute of Technology

Tupper, W.A. (Survey)
Fraser Delta Mass Transport Study, \$6000.00

British Columbia Research Council

McIntyre, A.D. (Applied Chemistry)
Pyrolysis-Gasification of Lignite, \$8000.00

ALBERTA

University of Alberta

Baadsgaard, H., Lambert, R. St.J. (Geology)
Crustal Chemistry and Isotope Geology near
Uranium City, \$5060.00

Burwash, R.A. (Geology)
Petrology and Geochemistry of Linear Zones of
Anomalous Radioactivity, \$5200.00

Lerbekmo, J.F. (Geology)

Paleomagnetic Correlations in Continental
Upper Cretaceous and Paleocene Sediments of
Alberta, \$1500.00

Morton, R.D., Muehlenbochs, K. (Geology)
Oxygen Isotope Fractionations and
Geothermometers among Minerals of Uranium
Deposits, \$5500.00

Stelck, C.R., Hedinger, A.S. (Geology)
Foraminifera of the Husky Formation, \$5550.00

University of Calgary

Bennion, D.W., Donnelly, J.K., and Moore, R.G.
(Chemical Engineering)
In Situ Recovery of Oil from the Alberta Oil
Sands, \$16 000.00

McGugan, A. (Geology)
Permian of southeastern British Columbia,
\$6600.00

Simony, P.S., Ghent, E.D. (Geology)
Metamorphic and Structural Evolution of a
Portion of the Southern Canoe River Area,
B.C., \$9000.00

SASKATCHEWAN

University of Saskatchewan

Braun, W.K., Caldwell, W.G.E. (Geological Sciences)
Biostratigraphy and Microfaunas of the
Mesozoic Rocks in Western Canada, \$6000.00

King, M.S. (Geological Sciences)
Underground Controlled-Pulse Acoustic
Measurements, \$7000.00

Saskatchewan Research Council

Husband, W.H.W. (Engineering)
Determination of Stresses in Potash Mines for
Application to Mine Design, \$10 000.00

Husband, W.H.W. (Engineering)
Recovery of Magnesium Sulphate from Saline
Lakes, \$10 000.00

MANITOBA

University of Manitoba

- Ayres, L.D. (Earth Sciences)
Precambrian Porphyry Copper and Molybdenum
Deposits in Ontario and Saskatchewan, \$12 200. 00
- Clark, G.S. (Earth Sciences)
Rubidium-Strontium Isotopic Age Study,
Oxford Lake Area, Central Manitoba, \$2400. 00
- Green, A.G., Hall, D.H. (Earth Sciences)
Investigation of the Precambrian Crustal
Structure using Observatory Seismic Records,
\$2000. 00
- Hall, D.H. (Geophysics)
Long-Wavelength Anomalies and Deep Crustal
Magnetization, \$3000. 00

ONTARIO

Brock University

- Terasmae, J. (Geological Sciences)
Late-Quaternary History and Man's Impact on
the Terrain of Magdalen Islands, Quebec,
\$2500. 00

Carleton University

- Brown, R.L. (Geology)
Structural Evolution of the Northern Selkirk
Mountains (Big Bend), B.C. \$12 000. 00
- Ranalli, G. (Geology)
Probabilistic Seismic Risk Analysis, \$1000. 00

University of Guelph

- Collins, S.H., Dickinson, T. (Engineering);
Oldacre, D. (Computer Science)
Maps and Parameters Derived Directly from a
Digital Terrain Model, \$8000. 00
- Kay, B.D., Thurtell, G.W. (Land Resource Science)
Instrumentation Development for *In Situ*
Measurement of Unfrozen Water and Ice Content
of Frozen Soils, \$18 000. 00

McMaster University

- Clifford, P.M., McNutt, R.H., Walker, R.G., Birk, D.,
Hyde, R., Longstaffe, F., Page, R., Teal, R., and
Wallace, P. (Geology)
Evolution of a "Greenstone" Belt, \$19 620. 00

Crocket, J.H. (Geology)

Gold Mineralization of Archean Greenstone
Belts: A Study of Genetic Relationships using
Neutron Activation Analysis, \$8000. 00

Ford, D.C., Schwarcz, H.P. (Geography)

Radiometric Geochronology and Geothermometry
of Pleistocene Cave Deposits, Canadian
Rockies and Mackenzie Mountains, N.W.T.,
\$15 500. 00

Middleton, G.V., Risk, M.J., Knight, J.,

Dalrymple, R., Craig, D., and Lambaise, J. (Geology)
Sediment in the Minas Basin, Bay of Fundy,
\$16 000. 00

Risk, M.J., Pemberton, S.G. (Geology)

Bioturbation Rates in the Strait of Canso,
\$4000. 00

University of Ottawa

Conway, B.E. (Chemistry)

Electrochemical Studies on Mineral Flotation,
\$10 000. 00

Queen's University

Berry, L.G., Theis, M.J. (Geological Sciences)
Mineralogical Study of Uranium-Bearing
Minerals from the Elliott Lake — Blind River
Area, Ontario, \$7000. 00

Calder, P.N. (Mining Engineering)

Application of Photogrammetric Terrain
Digitizing Systems, \$9000. 00

Carmichael, D.M. (Geological Sciences)

Metamorphism in the Grenville Province of
Ontario, \$6120. 00

Nichol, I. (Geological Sciences)

Factors Affecting Lake Sediment Composition
in the Canadian Shield, \$12 000. 00

Pearce, T.H. (Geological Sciences)

The Application of the Petrology of Archean
Volcanic Rocks to the Interpretation of
Geochemical Methods of Resource Evaluation,
\$11 500. 00

Price, R.A. (Geological Sciences)

Tectonic Analysis of the Southeastern Cordillera
in Canada, \$10 000. 00

University of Toronto

Beales, F., Carracedo, J.D. (Geology)

Paleomagnetic Studies of Mississippi Valley
River Type Ore Deposits and their Host Rocks,
\$7000. 00

- Currie, J.B., Fawcett, J.J. (Geology)
Midwest Superior Geotraverse: Metamorphism,
Structural Geometry and Paleostrain Analysis,
\$4000.00
- Dunlop, D.J. (Physics)
Paleomagnetic and Rock Magnetic Study of
Grenville and Superior Province Rocks in
Ontario, \$3500.00
- Edwards, R.N., Bailey, R.C. (Physics);
Greenhouse, J.P. (Earth Sciences) Waterloo
Geomagnetic and Magneto-Telluric Studies
of the Appalachian System, \$2000.00
- Garland, G.D. (Physics)
Heat Flow Through Lake Bottoms in the
Precambrian Shield, \$3250.00
- Gittins, J. (Geology)
Metamorphic Petrology of Very High Grade
Metamorphic Rocks: The Saphirine Granulites
of Wilson Lake, South-Central Labrador, \$2000.00
- Goodwin, A.M., Harris, N.B.W. (Geology)
Study of Migmatites in English River and
Quetico Gneiss Belts (Superior Geotraverse
Project), \$4000.00
- Norris, G. (Geology)
Jurassic-Cretaceous Palynostratigraphy of
Western and Arctic Canada: A Comparative
Study with European Stratotypes, \$4500.00
- Schwerdtner, W.M. (Geology)
Internal Structure and Emplacement of White
Otter Batholith Northwestern Ontario, \$6000.00
- Scott, S.D. (Geology)
Characterization and Geochemistry of Archean
Iron Formations in the Savant Lake — Sturgeon
Lake Greenstone Belt, \$2750.00
- Strangway, D.W., Redman, J.D. (Geology);
Olhoeft, G.R., Rossiter, J.R. (Physics)
Radio Frequency Interferometry as Applied to
Ice and Permafrost Sounding, \$14 000.00
- West, G.F. (Physics)
Midwest Superior Province Geotraverse —
Gravity, Magnetism, Seismic, \$8000.00 and
\$5500.00
- University of Waterloo
- Appleyard, E.C. (Earth Sciences)
Alteration Zones Associated with Volcanogenic
Sulphide Deposits in the Roberts Arm Group,
Central Newfoundland, \$2500.00
- Barnes, C.R. (Earth Sciences)
Lower Paleozoic Conodont Biostratigraphy of
the Canadian and Greenland Arctic, \$11 000.00
- Linders, J. (Computer Science)
Map Generalization, \$10 000.00
- Roberts, R.G. (Earth Sciences)
A Study of the Volcanic and Structural Setting
of Gold Deposits Associated with Volcanic
and Volcanic-Sedimentary Rocks in the
Canadian Precambrian Shield, \$4000.00
- University of Western Ontario
- Inculet, I.I., Bergougnou, M.A., Brown, J.D.
(Engineering Science)
Maceral Separation and Pyrite and Gangue
Removal from Canadian Coals by Means of
Fluidization and Electric Fields, \$10 000.00
- University of Windsor
- Gravenor, C.P., Stupavsky, M., Symons, D.T.A.
(Science and Mathematics)
Paleomagnetism of Till, \$4300.00
- Simpson, F., Turek, A., Smith, T.E., Davis, M.W.
(Geology)
Surficial Deposits of the Nova Scotian Shelf,
\$4000.00
- QUEBEC
- Ecole Polytechnique
- Becker, A. (Génie Métallurgique)
Essais d'un Magnétomètre Cryogénique,
\$5000.00
- Brown, A.C. (Génie Minéral)
A Study of Stratiform Copper Deposits of the
Carboniferous Rocks of New Brunswick, Nova
Scotia and P.E.I., \$1750.00
- Gélinas, L. (Génie Minéral); Brooks, C. (Geology)
Université de Montréal
Nature, Origin and Mineralization of the
Archean Ultramafic, \$7000.00
- Université Laval
- Seguin, M.K. (Géologie)
Paléomagnétisme des Roches Intrusives et
Effusives Basiques de la Fosse du Labrador,
\$4250.00
- St. Arnaud, R. (Géodésie et Cartographie)
Cartographie Urbaine, \$9000.00

McGill University

- Doig, R. (Geological Sciences)
The Interpretation of Rubidium-Strontium
Isotopic Data from Metasedimentary Rocks,
\$5000.00
- Hesse, R., Lalli, C. (Geological Sciences)
Labrador Sea Sediments, \$3000.00
- Jensen, O.G., Powell, B. (Mining and Metallurgical
Engineering)
Wave-Tilt EM Applications to Permafrost
Exploration, \$2850.00
- MacLean, W.H. (Geological Sciences)
Geology of the Radiore "A" Orebody, Orchan
Mines, Matagami, \$3400.00

Université du Québec à Chicoutimi

- Dimroth, E. (Sciences de la Terre)
Volcanologie Physique et Sédimentologie d'un
Bassin Volcano-Sédimentaire Archéen, \$7000.00

Université du Québec à Montreal

- Denis, R. (Géographie)
Les Glissements de Terrain au Québec,
\$9500.00

Université du Québec à Trois-Rivières

- Occhietti, S. (Géographie)
Dépôts et Faits Quaternaires du Bas St. Maurice,
\$3400.00

Université de Sherbrooke

- Dubois, J.M. (Géographie)
Géologie Quaternaire de la Côte Nord de
l'Estuaire Maritime du St. Laurent, \$10 500.00

Institut National de la Recherche Scientifique

- Achab, A.
Etude Palynologique du Paléozoïque
(Ordovicien) de l'est du Canada, \$4500.00

NEW BRUNSWICK

New Brunswick Research and Productivity Council

- Boorman, R.S. (Mineral Development and Processing)
Ore Mineralogy at the Anaconda Caribou
Primary Ore, \$7000.00

NOVA SCOTIA

Dalhousie University

- Aumento, F. (Geology)
Ferro-Manganese Exploitation of the Ocean
Floor (Basalt/Sea Water Interaction), \$2000.00
- Piper, D.J.W., Keen, M.J. (Geology)
Geological Study of Mahone Bay, Nova
Scotia, \$10 000.00
- Zentilli, M., Clark, D.B., Milligan, G.C.,
Muecke, G.K., and Schenk, P.E. (Geology)
Reynolds, R.H. (Physics)
Regional Metallogenic Analysis of Nova Scotia:
A Multi-Disciplinary Approach, \$14 000.00

NEWFOUNDLAND

Memorial University of Newfoundland

- Deutsch, E.R. (Physics)
Gravity Survey, Supplemented by Magnetic
Anomaly Interpretation in the Notre Dame Bay
Area, Newfoundland, \$3500.00
- Murthy, G.S. (Physics)
Paleomagnetic Investigations of Precambrian
and Younger Rock Units from the Island of
Newfoundland and their Bearing on the
Interpretation of Newfoundland Geologic
Structure and also on the Hypothesis of the
Rotation of Newfoundland, \$3000.00
- Rogerson, R.J. (Geography)
Geomorphological Research Between The
Backway and Sandwich Bay, Southern
Labrador, \$3800.00
- Stewart, I.C.F. (Physics)
Seismotectonic Studies of Newfoundland,
\$3000.00
- Williams, H., Stevens, R.K., and Hibbard, J. (Geology)
Mélange Terranes of Newfoundland and their
Significance in the Tectonic Development of
the Northern Appalachians, \$3000.00

- Wright, J.A. (Physics)
Heat Production and Heat Flow in Newfoundland,
\$2000.00

DEPARTMENT OF THE ENVIRONMENT, WATER RESOURCES RESEARCH SUPPORT PROGRAM,
RESEARCH AGREEMENTS

University of British Columbia

Clarke, G. K. G. (Geophysics and Astromny)
Thermal Study of a Surging Glacier, \$10 000.00

University of Alberta

Laycock, A. H. (Water Resources Centre)
Study Program of Lakes in Western Canada.
Cooking Lakes Moraine Studies, \$25 000.00

University of Saskatchewan

Gray, D. M. (Hydrology)
Hydrology of the Prairie Environment, \$130 000.00

McMaster University

Kramer, J. R. (Geology)
Geochemical Factors and Terrain Response to
Environmental Contaminants, \$16 700.00

Crocket, J. H. (Geology)

Geochemical Pathway Studies of Arsenic,
Selenium and Palladium in Freshwater Systems
by Neutron Activation Analyses, \$9 200.00

Ford, D. C. (Geography)

Hydrology of Canyon Basins in the Mackenzie
Mountains, Northwest Territories, \$7 300.00

Dalhousie University

Ogden, J. G. (Biology)

Stream Ecosystem Impact of Prospective Lead
and Zinc Mining at Gay's River, Nova Scotia,
\$8 500.00

Memorial University of Newfoundland

Rogerson, R. J. (Geography)

Medial moraines; their development and
effect on surface melt on the Berendon Glacier,
British Columbia, \$5 900.00

DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS, GRANTS IN THE NATURAL SCIENCES

University of British Columbia

Goodwin, C. (Geological Sciences)
To study and catalogue the zinc-lead deposits
of the northern Yukon and adjacent Northwest
Territories, \$8 000.00

Sinclair, A. J., Htoon, M. (Geological Sciences)
To study the genesis of the Clinton Yukon
Territory ultramafic body and associated
chrysotile deposits and quartz-carbonate
alteration, \$7 000.00

University of Alberta

Morton, R. D. (Geology)

Petrological and geochronological study of
Proterozoic volcanic rocks and related
sedimentary rocks of the East Arm, Great Slave
Lake, Northwest Territories, \$4 000.00

McGill University

Milner, M. (Geological Sciences)

To study the relationship amongst geomorphic
features, placer deposits and Lode Gold
occurrences to understand the origin of the
Klondike Placer Gold Deposits, Yukon Territory
\$13 000.00

NATIONAL RESEARCH COUNCIL OF CANADA EARTH SCIENCE OPERATING GRANTS

Adamowski, K. Civil Engineering Ottawa	Stochastic analysis of hydrologic cycle 3yr - 1st Inst.	Armstrong, R.L. Geological Sciences British Columbia	Geochronometry of cordilleran igneous and metamorphic rocks 3yr - 1st Inst.
Ade-Hall, J.M. Geology Dalhousie	Investigations of the nature and motion of crustal plates as determined from magnetic studies and deep drilling investigations 3yr - 2nd Inst.	Aumento, F. Geology Dalhousie	Detailed geological investigation of the oceanic crust 3yr - 2nd Inst.
Aitcin, P.C. Génie civil Sherbrooke	(Perspective d'utilisation des déchets industriels et naturels en génie)	Ayres, L.D. Earth Sciences Manitoba 2706 OPER A8996	Early precambrian volcanism and granitic plutonism in the western part of the superior province, Ontario and Manitoba - a contribution to early crustal evolution
Anderson, C.D. Earth Sciences Manitoba	Research on methods for mineral exploration in the Canadian shield	Azzaria, L.M. Géol./minéralogie Laval	1) Le mercure dans le sol et dans les roches comme guide de minéralisation en Gaspésie, Québec. 2) Essai de restauration de la qualité biologique de la région minière de Rouyn-Noranda, Québec
Anderson, D.T. Earth Sciences Manitoba	1) integration of remote sensing techniques for study of Precambrian terrane. 2) the Neepawa iron deposit - A study of the economic minerals contained in the first exploration hole Tex #1	Baadsgaard, H. Geology Alberta	Isotope geology of Western Canadian geologic events 3yr - 3rd Inst.
Anderson, G.M. Geology Toronto	Geological applications of solution chemistry and electrochemistry 3yr - 3rd Inst.	Babcock, E.A. Geology Alberta	Structural geology and tectonic framework of the Athabasca oil sands region
Anderson, M.M. Biology Memorial	Contributions to palaeontology and stratigraphy, mainly Newfoundland	Bachinski, D.J. Geology New Brunswick	Metamorphism of sulfide - rich rocks
Appleyard, E.C. Earth Sciences Waterloo	Studies of metasomatic and altered rocks	Bachinski, S.L.W. Geology New Brunswick	1) Devonian volcanic rocks of northern New Brunswick 2) Crystallization history of granitic pegmatites
Archambault, G. Sc. appliquées Québec-Chicoutimi	- Mineralisation et problèmes d'exploitation dans la région de Chibougamau	Baer, A.J. Geology Ottawa	1) Relationships between anorthosites and granulite facies 2) Structural studies in the Grenville Province 3yr - 1st Inst.
Archibold, O.W. Geography Saskatchewan	Water balance and revegetation studies in the strip-mined areas of Southern Saskatchewan	Bailey, R.C. Physics Toronto	Geomagnetic variation interpretation and tectonic structures
Armbrust, G.A. Geology Ottawa	Distribution of major and trace elements as a guide to mineral exploration in the Bachelor Lake area, northwestern Quebec	Barnes, C.R. Earth Sciences Waterloo	Lower Paleozoic conodont biostratigraphy, paleoecology and ultrastructure

Barnes, W.C. Geological Sciences British Columbia	Organic geochemistry and sedimentology of lacustrine and shallow marine sediments of southwestern British Columbia	Beswick, A.E. Geology Laurentian	1) Experimental determination of trace metal partition coefficients. 2) Trace-major element distributions in precambrian volcanic belts. 3) A computer model for element distributions in multiphase assemblages
Bartlett, G.A. Geology Queen's	Biostratigraphy, environments of deposition and economic potential of the Canadian continental margins and adjoining coastal zone 3yr - 2nd Inst.	Bettany, J.R. Soil Science Saskatchewan	Sulphur fractions and sulphur relationships in grassland, forest, and associated transitional soils
Bauer, A. Mining Eng. Queen's	Factors affecting the sensitivity of slurried explosives 3yr - 1st Inst.	Bird, J.B. Geography McGill	Late quaternary events and associated geomorphic processes along the Manitoba escarpment
Bayliss, P. Geology Calgary	Geothermometry by order-disorder relationships	Bonn, F.J. Géographie Sherbrooke	Estimation de la quantité d'énergie d'origine externe utilisée dans l'érosion, sur parcelles expérimentales
Beales, F.W. Geology Toronto	Limestones: petrology, paleoecology and strata-bound mineral deposits 3yr - 3rd Inst.	Bourbeau, G.A. Sols Laval	Micromorphologie et genèse des histosols du Québec en relation avec leur classification
Beck, A.E. Geophysics Western	1) Geothermal investigations 2) Exploration methods 3yr - 3rd Inst.	Bourque, P.A. Géol./minéralogie Laval	Etude des ensembles carbonatés "récifaux" du Siluro-Dévonien de la Gaspésie. Leur paléogéographie et paléoécologie
Becker, A. Génie minéral Polytechnique	Nouvelles techniques de la prospection électromagnétique au sol 3yr - 2nd Inst.	Bowen, A.J. Oceanography Dalhousie	Nearshore dynamics
Bell, K. Geology Carleton	Application of Sr isotopes to the petrogenesis of igneous rocks 3yr - 1st Inst.	Braun, W.K. Geological Sciences Saskatchewan	Microfaunas and biostratigraphy of western Canada 3yr - 2nd Inst.
Bell, R.T. Geological Sciences Brock	Stratigraphy and sedimentology of early proterozoic sediments of the Belcher Islands	Brisbin, W.C. Earth Sciences Manitoba	Gravity and structural studies in the precambrian shield of Manitoba and Northwestern Ontario
Berger, A.R. Geology Memorial	Studies on plutonic and associated metamorphic rocks of Newfoundland	Bristol, C.C. Geology Brandon	1) Ore mineralogy, orebody zoning and FeS, CdS, MnS contents of sphalerites from the Ruttan Lake Mine. 2) Alteration and metamorphic history of the Ruttan Lake orebody 3yr - 1st Inst.
Berry, L.G. Geological Sciences Queen's	Crystal structure studies of minerals	Brookfield, M.E. Land Resource Sc Guelph	1) Stratigraphy, structure and paleontology of the Mesozoic rocks (mainly Jurassic) of Harrison Lake and the Cascade Mountains 2) Jurassic evolution of the Pacific margins

Brooks, C. Géologie Montréal	The evolution of Precambrian Shields (with special reference to Canada) as determined by geochemical, isotopic and geochronologic analysis 3yr - 2nd Inst.	Burwash, R.A. Geology Alberta	Relationships of metamorphic to metallogenic belts in precambrian rocks of western Canada 3yr - 3rd Inst.
Broughton, R.S. Agric. Eng. Macdonald Coll.	Development of more precise relationships for estimating discharges for municipal drainage channels and small rivers in the Ottawa-St. Lawrence Lowlands Region	Byrne, P.M. Civil Engineering British Columbia	Stability and deformation analysis of earth structures
Brown, A.C. Génie minéral Polytechnique	Etude métallogénique des gisements stratiformes de métaux non-ferreux 3yr - 1st Inst.	Calder, P.N. Mining Eng. Queen's	Evaluation of strength characteristics of rock masses 3yr - 2nd Inst.
Brown, M.C. Geography Alberta	River spectra; Karst hydrology; Ice fogs	Caldwell, W.G.E. Geological Sciences Saskatchewan	Biostratigraphic studies in western Canada 3yr - 2nd Inst.
Brown, R.L. Geology Carleton	Analysis of rock fabrics 3yr - 3rd Inst.	Cameron, R.A. Geology Laurentian	Correlation of precambrian rocks using their physical properties
Brown, T.H. Geological Sciences British Columbia	Solution chemistry of silicate melts and mass transfer calculations of hydrothermal ore deposits	Campanella, R.G. Civil Engineering British Columbia	Engineering behaviour of natural and stabilized soils 3yr - 2nd Inst.
Bryan, R.B. Geography Toronto 6602 OPER A9143	Interaction of surface flow and intense rainfall in entrainment of soil particles 3yr - 1st Inst.	Cannon, W.H. Physics York	1) Application of long baseline radio Interferometry to geophysics and planetary science. 2) terrestrial time keeping and theories of general relativity
Bunting, B.T. Geography McMaster	Changes in soil fabrics in relation to applied environmental or man-induced stress with particular reference to septic pollution of compacted hydromorphic soils	Carmichael, C.M. Geophysics Western	Geomagnetism
Burke, K.B.S. Geology New Brunswick	The development of seismic reflection techniques for shallow investigations 3yr - 2nd Inst.	Carmichael, D.M. Geological Sciences Queen's	Metamorphic studies in eastern Canada
Burley, B.J. Geology McMaster	1) Study of alkaline intrusions by experimental and field techniques. 2) Study of mineralogy of minerals commonly occurring in and associated with alkaline rocks 3yr - 1st Inst.	Carroll, R.L. Redpath Museum McGill	Origin and early evolution of reptiles 3yr - 2nd Inst.
		Cerny, P. Earth Sciences Manitoba	Mineralogy and petrology of pegmatites 3yr - 2nd Inst.
		Chao, G.Y. Geology Carleton	Descriptive, comparative and structural studies of rare minerals from Mont St. Hilaire, Quebec 3yr - 1st Inst.

Chapman, C.H. Physics Toronto	Seismic body wave theory 3yr - 1st Inst.	Clark, G.S. Earth Sciences Manitoba	Isotopic age studies of Precambrian rocks in Manitoba and N.W. Ontario. Sulphur isotope studies in Precambrian sulphides 3yr - 3rd Inst.
Charbonneau, R. INRS Québec-Québec	Etude comparative sur l'application de différentes méthodes de calcul de formation et de la fonte du manteau neigeux	Clarke, D.B. Geology Dalhousie	Petrogenesis of igneous rocks 3yr - 2nd Inst.
Chase, R.L. Geological Sciences British Columbia	Geology of active plate margins: western Canadian margin and northeast Pacific	Clarke, G.K.C. Geophysics British Columbia	Research in earth mechanics, applied geophysics and communication theory 3yr - 2nd Inst.
Chatterton, B.D.E. Geology Alberta	Conodont and trilobite systematics and biostratigraphy in western and northwestern Canada 3yr - 1st Inst.	Clement, P.M.J. Géographie Sherbrooke	Evaluation de l'érosion sur un bassin-versant des Appalaches du Québec 3yr - 2nd Inst.
Cherry, J.A. Earth Sciences Waterloo	Geochemical processes in shallow groundwater flow systems in southern Ontario 3yr - 3rd Inst.	Clifford, P.M. Geology McMaster	1) Rock deformation and model studies in field and laboratory 2) Ancient and modern volcanicity 3yr - 2nd Inst.
Chesworth, W. Land Resource Sc Guelph	Studies of granite and rock-weathering 3yr - 2nd Inst.	Clowes, R.M. Geophysics British Columbia	Explosion seismology
Chisholm, P.S. Engineering Guelph	The detailed response of components of earth resource (soil/water) systems to climate	Cluis, D.A. INRS Québec-Québec	Modèle d'apports sur un bassin permettant le couplage quantité - qualité
Church, M.A. Geography British Columbia	Studies of the hydraulics of gravel rivers	Collerson, K.D. Geology Memorial	Structural, petrological and geochemical studies in the Main Province, Labrador
Church, W.R. Geology Western	Pre-Mesozoic Crustal Evolution of the North Atlantic region: Ophiolites, eclogites, diabase dyke swarms, and peralkaline granite	Collins, S.H. Engineering Guelph	Physical basis of earth resource imagery
Churcher, C.S. Zoology Toronto	Investigation and description of the quaternary mammalian faunas of Canada and comparison with those from other continents 3yr - 2nd Inst.	Cooke, H.B.S. Geology Dalhousie	1) Studies on the quaternary in Nova Scotia and P.E.I. 2) Studies on the neogene of Africa and the near East 3yr - 1st Inst.
Clark, A.H. Geological Sciences Queen's	The origin and delimitation of metallogenetic provinces at Phanerozoic consuming plate margins 3yr - 2nd Inst.	Cooke, R.C. Oceanography Dalhousie	Halmyrolytic phase phenomena as a function of pressure in the sea
		Copper, P. Geology Laurentian	Paleoecology, evolution and morphology of Ordovician to Devonian atrypoid brachiopods on a global basis 3yr - 1st Inst.

Corlett, M.I. Geological Sciences Queen's	Chemistry and stability of naturally-occurring minerals in the copper (-iron)-sulphur system	David, M. Génie minéral Polytechnique	Informatique géologique 3yr - 2nd Inst.
Cormier, R.F. Geology St. F. Xavier	Rubidium-strontium dating of rocks and minerals from the northern Appalachians 3yr - 1st Inst.	Davis, M.W. Geology Windsor	Depositional and diagenetic history of Black River and Trereton (Ordovician) sediments in Essex and Kent counties, Ontario
Crampton, C.B. Geography Simon Fraser	Shear patterns in permafrost terrain soils	Day, J.C. Geography Western	The Ogoki Reservoir: physical and biological impacts
Crocket, J.H. Geology McMaster	Application of isotopic and minor element distributions to geological problems 3yr - 3rd Inst.	De Albuquerque, C.A.R. Geology Saint Mary's	Studies on the geochemistry of igneous and metamorphic rocks 3yr - 1st Inst.
Cruden, D.M. Geology Alberta	Stability of natural slopes in rock	De Cayeux, A.P. Etudes nordiques Laval	Filons, pergélisol et quaternaire
Cumming, G.L. Physics Alberta	Geophysical investigations in western Canada 3yr - 2nd Inst.	De Lory, F.A. Civil Engineering Toronto	Behavioural characteristics of some Ontario clays with special reference to shearing strength and lateral earth pressure
Currie, J.B. Geology Toronto	Mechanics and development of fractures in sedimentary strata: fracture porosity in carbonate and sandstone rocks 3yr - 2nd Inst.	De Vries, J. Soil Science British Columbia	Hydrologic behaviour of soils of the urban-rural fringe area of the lower Fraser Valley
D'Anglejan, B.F. Marine Sci. Centre McGill	1. Particulate suspended matter in coastal waters. 2. Sedimentation in estuaries. 3. Trace elements geochemistry in the marine environment 3yr - 2nd Inst.	Deutsch, E.R. Physics Memorial	Rock magnetism and geological structure in the Newfoundland region
Danner, W.R. Geological Sciences British Columbia	Plate tectonics and the upper paleozoic of southern British Columbia 3yr - 2nd Inst.	Dickinson, W.T. Engineering Guelph	Development and use of hydrologic models 3yr - 2nd Inst.
Darling, R.G. Génie minéral Polytechnique	Lithogéochimie appliquée 3yr - 2nd Inst.	Dimroth, E. Sc. appliquées Québec-Chicoutimi	Volcanologie physique et sédimentologie d'un bassin volcano-sédimentaire Archéen 3yr - 1st Inst.
Davar, K.S. Civil Engineering New Brunswick	1) Resistance and dispersion mechanics of flow under ice cover on streams. 2) Development of an integrated hydrological model for the north Nashwaaksis research basin, N.B.	Dixon, J.M. Geological Sciences Queen's	Experimental model and field study of finite strain and progressive deformation in large and small-scale geological structures
		Dixon, O.A. Geology Ottawa	1) Ordovician-Silurian faunas and sedimentary facies, Somerset and Prince of Wales Islands (Boothia Arch) 2) Ordovician-Silurian faunas and paleoecological studies, Anticosti Island 3yr - 2nd Inst.

Djamgouz, O.T. Mining/Metallurgy McGill	Flow of frozen bulk solids	Dunlop, D.J. Physics Toronto	Magnetism of terrestrial and lunar rocks and their synthetic equivalents 3yr - 1st Inst.
Doig, R. Geological Sciences McGill	Geological applications of isotopic analysis 3yr - 2nd Inst.	Durand, M. Sciences de la terre Québec-Montréal	Etude des implications de la géologie urbaine pour l'aménagement et la construction à Montréal
Domaschuk, L. Civil Engineering Manitoba	Nonlinear load-deformation solutions for Lake Agassiz clays; interaction between freezing soil and foundations	Eakins, P.R. Geological Sciences McGill	Significance of Ni-rich pillowed olivine basalts in northwestern Quebec
Donaldson, J.A. Geology Carleton	Comparative studies of Precambrian sedimentary rocks	Edgar, A.D. Geology Western	Geochemical and experimental studies of igneous rocks and minerals 3yr - 3rd Inst.
Donnay, G. Geological Sciences McGill	The relation of crystal structure to physical and chemical properties of minerals 3yr - 3rd Inst.	Edwards, R.N. Physics Toronto	Magneto-telluric & magnetic resistivity studies
Dosso, H.W. Physics Victoria	Geomagnetic micropulsations and magneto-telluric modelling 3yr - 2nd Inst.	Eisenstein, Z. Civil Engineering Alberta	1) Deformations of earth and earth-supported structures 2) Predictions of foundation behaviour using pressurometer technique 3yr - 2nd Inst.
Dragert, H. Geophysics British Columbia	High-frequency geomagnetic induction	Ek, C.M. Géologie Montréal	Les variations de la teneur en CO ₂ de l'air et de l'eau dans des régions calcaires du Québec
Drake, J.J. Geography McGill	Snowmelt system and water quality investigations in Quebec	El-Sabh, M. Sciences Québec-Rimouski	Circulation and transport in the maritime estuary of the St. Lawrence River
Drapeau, G. INPS Québec-Rimouski	Sédimentologie et chronologie des sédiments marins dans la région L'Île-Verte - Saguenay 3yr - 1st Inst.	Ellis, R.M. Geophysics British Columbia	Seismology and tectonophysics 3yr - 2nd Inst.
Dreimanis, A. Geology Western	Studies of glacial deposits in east-central Canada and their correlations with other areas 3yr - 2nd Inst.	Elrick, D.E. Land Resource Sc Guelph	Transport phenomena in natural porous media 3yr - 2nd Inst.
Du Berger, R. Sc. appliquées Québec-Chicoutimi	Etudes sismiques dans la région du Haut-Saguenay 3yr - 1st Inst.	Emery, J.J. Civ Eng/Eng Mech McMaster	Dynamic interface behaviour of foundation - soil systems, simulation of creep and creep rupture in cohesive soils, rock and ice 3yr - 2nd Inst.
Duckworth, K. Geology Calgary	Development of electromagnetic, induced polarization and radiometric equipment and techniques in mineral prospecting 3yr - 3rd Inst.	Evans, M.E. Physics Alberta	Palaeomagnetism of western Canadian rocks and rock magnetic studies 3yr - 1st Inst.

Fahraeus, L.F. Geology Memorial	Studies of Paleozoic conodonts and depositional environments of Paleozoic sedimentary rocks with particular reference to Newfoundland material 3yr - 2nd Inst.	Fletcher, W.K. Geological Sciences British Columbia	Development and utilization of regional geochemical techniques 3yr - 2nd Inst.
Falconer, A. Geography Guelph	Applications of ERTS imagery to determination of variability in physical geography	Flint, J.J. Geology Brock	Stream gradient variability in relation to the downstream hydraulic geometry
Farquhar, R.M. Physics Toronto	Geochronology and isotope studies 3yr - 3rd Inst.	Folinssee, R.E. Geology Alberta	Geochemistry of ore deposits and meteorites; geochronology; economic geology 3yr - 3rd Inst.
Farquharson, R.B. Geology Calgary	Rb-Sr geochronology and isotope geochemistry studies in the Canadian Cordillera 3yr - 1st Inst.	Ford, D.C. Geography McMaster	Groundwater flow and the development of limestone caves; the karst geomorphology of the Canadian cordillera; quaternary dating and palaeo-thermometric studies in the western cordillera of N. America 3yr - 3rd Inst.
Farrar, E. Geological Sciences Queen's	Potassium-argon geochronology 3yr - 2nd Inst.	Forester, R.W. Geological Sciences Saskatchewan	Oxygen isotope studies of igneous and metamorphic rocks
Farvolden, R.N. Earth Sciences Waterloo	Hydrogeology and groundwater flow systems in southern Ontario 3yr - 3rd Inst.	Fortescue, J.A.C. Geological Sciences Brock	Landscape geochemistry studies in glacial terrain
Fawcett, J.J. Geology Toronto	Experimental and field studies in igneous and metamorphic petrology 3yr - 2nd Inst.	Fortin, J.P. INRS Québec-Québec	Etude des processus énergétiques régissant les relations entre les valeurs d'ETP à l'échelle locale et l'estimation d'ETR à l'échelle régionale
Ferguson, R.B. Earth Sciences Manitoba	Crystal-chemical studies of rock-forming and ore minerals 3yr - 2nd Inst.	Fortin, M. Sciences Québec-Chicoutimi	Bilan énergétique pour quelques types de sols dans le moyen nord québécois
Finn, W.D. Applied Science British Columbia	1) Yielding and deformation of soils. 2) Seismic response of ground slopes and earth dams. 3) Simulated earthquake testing of soils. 4) Seismic water pressures against dams 5) Soil-structure interaction 3yr - 3rd Inst.	Fox, R.C. Geology/Zoology Alberta	Late cretaceous and early tertiary non-marine vertebrates from western Canada 3yr - 3rd Inst.
Fitzpatrick, M.M. Geological Sciences Queen's	Model investigations of a pulsed EM system	Francis, D.M. Geological Sciences McGill	Spinel lherzolites and other ultramafic rocks and the nature of the upper mantle
Fleet, M.E.L. Geology Western	Crystal chemistry and structure of ore minerals 3yr - 3rd Inst.	Franklin, J.M. Geology Lakehead	1) Metallogenic studies, Sturgeon Lake volcano sedimentary belt. 2) Sedimentological studies, Sibley and Osler Groups. 3) Comparative study of Michipicoten and Sturgeon Lake volcanic sequences

Freeze, R.A. Geological Sciences British Columbia	Applications of mathematical models of subsurface flow in geological engineering 3yr - 1st Inst.	Gelinas, L. Génie minéral Polytechnique	Géochimie des éléments majeurs et mineurs des roches volcaniques de la Ceinture Volcanique de l'Abitibi
French, H.M. Geography Ottawa	Thermokarst processes, Eastern Banks Island, western Arctic 3yr - 3rd Inst.	Gelinas, P.J. Geology Ottawa	Fissuration and permeability of banded sediments, Lower Ottawa Valley
Frind, E.O. Earth Sciences Waterloo	Digital modelling of groundwater flow systems 3yr - 1st Inst.	Gendzwill, D.J. Geological Sciences Saskatchewan	1) Geophysical study of salt collapse structures in Saskatchewan 2) Gravity studies in Saskatchewan 3) Interpretation of aeromagnetic maps 3yr - 3rd Inst.
Fritz, P. Earth Sciences Waterloo	1) Stable and radioactive isotopes in hydrological systems 2) Paleoenvironmental studies with 18O and 13C in freshwater mollusca 3yr - 2nd Inst.	Ghent, F.D. Geology Calgary	Petrologic and geochemical studies in the cordillera and electron microprobe study of minerals 3yr - 3rd Inst.
Fryer, B.J. Geology Western	Igneous and sedimentary geochemistry of the early Precambrian	Gill, D.E. Génie minéral Polytechnique	1) Le poinçonnement des roches dans les trous de sonde. 2) Résistance des roches à long terme en atmosphères corrosives. 3) Théorie de chargement des revêtements des souterrains 3yr - 1st Inst.
Fyfe, W.S. Geology Western	Geochemical and field studies of the interaction of salt solutions and volcanic rocks at elevated P-T conditions 3yr - 3rd Inst.	Gittins, J. Geology Toronto	Petrogenesis of alkalic rocks and carbonatite complexes
Fyson, W.K. Geology Ottawa	Structural patterns in metamorphic rocks 3yr - 3rd Inst.	Goodwin, A.M. Geology Toronto	Origin of crust: nature and tectonic development of primitive earth's crust 3yr - 2nd Inst.
Gangloff, P. Géographie Montréal	Paléogéographie de la région de Montréal entre 11 000 et 9 000 BP	Gorman, W.A. Geology Queen's	Hydrogeochemistry, sediment geochemistry and geochronology of the Kingston area
Gardner, J.S. Geography Waterloo	Magnitude and frequency characteristics of the mass transfer of debris on mountain slopes	Gough, D.I. Physics Alberta	Magnetometer array studies and paleomagnetism 3yr - 3rd Inst.
Garland, G.D. Physics Toronto	Study of electrical and thermal properties of the earth 3yr - 2nd Inst.	Govett, G.J.S. Geology New Brunswick	Geochemical exploration for deeply buried sulphide deposits and processes of element migration associated with sulphide deposits 3yr - 1st Inst.
Garrett, C.J.R. Oceanography Dalhousie	Physical oceanography 3yr - 1st Inst.	Gravenor, C.P. Geology Windsor	The deposition of till from the base of moving ice 3yr - 2nd Inst.
Gaskin, P.W. Civil Engineering Queen's	Stress-strain characteristics of frozen soils		

Gray, D.M. Agric. Eng. Saskatchewan	Simulation of the hydrologic cycle 3yr - 2nd Inst.	Guha, J. Sc. appliquées Québec-Chicoutimi	1) Minéralisation et problèmes d'exploitation de gisements dans la région de Chibougamau. 2) Etude de la minéralisation Pb-Zn dans le bassin de Mistassini 3yr - 2nd Inst.
Green, A.G. Earth Sciences Manitoba	Common depth point reflection surveys of the granite greenstone belts of western Ontario and Manitoba. Part 1 The Aulneau granite dome and the Sioux narrows greenstone belt. Part 2 The granites and greenstones near Flin Flon	Gunn, B.M. Géologie Montréal	Analytical geochemistry 3yr - 2nd Inst.
Greenhouse, J.P. Earth Sciences Waterloo	1) Geomagnetic induction 2) Groundwater and environmental geophysics	Hajnal, Z. Geological Sciences Saskatchewan	1) Seismic investigation of deep-seated structures in Saskatchewan 2) Seismic investigation of Precambrian contact zones 3yr - 3rd Inst.
Greenwood, B. Geography Toronto	Coastal sedimentation: morphology and process in a microtidal, storm-surge, barred coastline 3yr - 1st Inst.	Hall, D.H. Earth Sciences Manitoba	Synthesis of crustal geophysics in studying the evolution of the earth's crust - Manitoba and northwestern Ontario 3yr - 2nd Inst.
Greenwood, H.J. Geological Sciences British Columbia	Geological phase equilibrium studies 3yr - 3rd Inst.	Halls, H.C. Geology Toronto	Paleomagnetism of Precambrian rocks
Greggs, R.G. Geological Sciences Queen's	1. Sedimentology and paleocurrent analysis of the Lower Paleozoic succession, southeastern Ont. 2. Conodont biostratigraphy of the Durness Formation, northwestern Scotland 3yr - 1st Inst.	Harris, S.A. Geography Calgary	1) "Late glacial and postglacial geomorphology and climate in the southeastern Rocky Mountains." 2) Frost boils and patterned ground in the front ranges of the Rocky Mountains. 3) Nature of soil movement and soil moisture balance in S.W. Alberta
Greiner, H.R. Geology New Brunswick	Biostratigraphy and paleoecology of the Devonian-early Carboniferous spirifer brachiopods and ichthyofauna of the Atlantic realm	Harrison, R.S. Earth Sciences Manitoba	Early subaerial diagenesis and porosity evolution in carbonate sequences
Grice, R.H. Geological Sciences McGill	Engineering geology of Montreal	Hayatsu, A. Geophysics Western	1) Study of initial argon by K-Ar isochron method 2) Uranium determination by gamma rays from ²³⁴ Th
Grill, E.V. Inst. Oceanography British Columbia	The geochemistry of trace metals in British Columbia coastal waters and sediments	Helmstaedt, H. Geological Sciences Queen's	Controls of fabrics of metamorphic minerals and sulphides
Grundy, H.D. Geology McMaster	The crystallography of the silicate minerals 3yr - 2nd Inst.	Hendry, H.E. Geological Sciences Saskatchewan	Studies in clastic sedimentology

Heroux, Y. INRS Québec-Québec	Etude stratigraphique, sedimentologique et geologie petroliere des sequences calcaires siluro-devonienne dans la region de Matapedia-Temisouata (Quebec)	Hogarth, D.D. Geology Ottawa	1) Igneous and metamorphic history of S. Gatineau region. 2) Metamict minerals. 3) Genesis and nature of sodalite group minerals. 4) Petrology of "soapstone", S. Baffin Island
Hesse, F.R. Geological Sciences McGill	Processes and environments of deposition, diagenesis and lithification of clastic sedimentary sequences 3yr - 2nd Inst.	Hooper, K. Geology Carleton	3yr - 1st Inst. 1) Cenozoic microfauna of Fiji 2) selected Mesozoic & Cenozoic microfaunas of Iberia 3) Selected Australian Cretaceous & Cenozoic microfauna
Hickin, E.J. Geography Simon Fraser	Flood-plain formation, lateral stream-migration and channel form and pattern of the Beatton River, N.E. British Columbia	Howarth, P.J. Geography McMaster	Remote sensing in geomorphological and hydrological studies 3yr - 2nd Inst.
Hill, P.A. Geology Carleton	1) Palaeomagnetic age determinations of certain Pb-Zn ores and their host rocks. 2) Metallogenic Pb isotope zones around certain Pb-Zn ores	Hron, F. Physics Alberta	Seismic numerical modelling
Hillaire-Marcel, C. Sciences de la terre Québec-Montréal	Etablissement d'une courbe des variations eustatiques, pour l'Est du Canada, de -8 000 ans (BP) à aujourd'hui	Hubert, C. Géologie Montréal	Lithostratigraphie et propriétés pétrophysiques des carbonates cambro-ordoviciens des basses terres du St-Laurent et de la région limitrophe dans les appalaches du Québec
Hills, L.V. Geology Calgary	Palynological and pleistocene research 3yr - 2nd Inst.	Hucka, V. Mines & métallurgie Laval	Estimation de la stabilité de la pente de la roche dans une fosse à ciel ouvert
Hodder, R.W. Geology Western	Determination of economic potential of copper occurrences using volcanic-plutonic relationships in host rocks 3yr - 3rd Inst.	Hughes, C.J. Geology Memorial	Volcanic and granitic rocks of eastern Newfoundland 3yr - 2nd Inst.
Hodgson, C.J. Geological Sciences Queen's	Metallogenic studies of Canadian ore-bearing environments	Huntley, D.A. Oceanography Dalhousie	Field measurement of nearshore and surf zone hydrodynamics
Hodych, J.P. Physics/Geology Memorial 3843 OPFR A8377	Magnetic properties of rock under stress; magnetic properties of serpentinized peridotite	Hutchinson, R.W. Geology Western	Origin and metallogenic relationships of mineral deposits: especially of precambrian nickel and base metal sulfide, gold, iron and pegmatite deposits 3yr - 1st Inst.
Hofmann, H.J. Géologie Montréal	Precambrian and lower paleozoic paleontology and stratigraphy 3yr - 2nd Inst.	Hyndman, R.D. Oceanography Dalhousie	Marine geophysical studies 3yr - 1st Inst.
		Hynes, A.J. Biolog. Sciences McGill	Nature of ordovician volcanic belt in northern Maine and Quebec

Ingram, R.G. Marine Sci. Centre McGill	Circulation and mixing in the St. Lawrence estuary and their relation to distribution of non-physical oceanographic variables	Jull, R.K. Geology Windsor	1) Corallite development and microstructures in rugose and tabulate corals 2) Taxonomy and stratigraphy of Upper Devonian corals from Western Canada, and of Siluro-Devonian faunas of Ontario 3yr - 1st Inst.
James, N.P. Geology Memorial	Facies anatomy and diagenetic evolution of paleozoic shelf carbonates: northern Maritime Appalachians	Kalin, M. Geological Sciences Queen's	Predictability of mechanical properties of soil
James, R.S. Geology Laurentian	Petrology and geochemistry of igneous and metamorphic rocks	Kanasewich, E.R. Physics Alberta	Geophysical investigation of the crust and upper mantle 3yr - 2nd Inst.
Japp, R.D. Civ Eng/App Mech McGill	Dynamic performance of sensitive clays	Karrow, P.F. Earth Sciences Waterloo	Stratigraphic and paleontologic studies of Quaternary sediments in southern Ontario 3yr - 2nd Inst.
Jensen, O.G. Mining/Metallurgy McGill	1) Earth mechanics - response of earth to gravitational radiation 2) Seismology - non-linear communications theory applied in seismology	Keen, M.J. Geology Dalhousie	Seismic studies and earth tides 3yr - 3rd Inst.
Jeremic, M. Mineral Eng. Alberta	Natural stress pattern caused by deformation and failure of rock mass	Kehlenbeck, M.M. Geology Lakehead	Structural investigations leading to the tectonic evolution of part of the Superior Province
Johnson, P.G. Geography Ottawa	Mass movement and degradation processes in a mountain environment 3yr - 2nd Inst.	Kennedy, M.J. Geology Memorial	Appalachian structural sequence and metamorphism: its relevance to late precambrian-early paleozoic plate movements 3yr - 3rd Inst.
Jolly, W.T. Geological Sciences Brock	Chemical and metamorphic petrology of Canadian Archean and other volcanic provinces, with emphasis on the prehnite-pumpellyite ' facies of regional metamorphism	Kenney, T.C. Civil Engineering Toronto	1) Properties and behaviour of natural soils 2) Post-stressed rock as a means of increasing the load of socketed piles 3yr - 3rd Inst.
Jones, F.W. Physics Alberta	Electromagnetic induction in the earth 3yr - 1st Inst.	Kent, D.M.J. Geological Sciences Regina 4046 OPER A8380	Evaporites and related carbonate environments in phanerozoic rocks of the interior plains
Jones, J.M. Engineering Memorial	Electro-mechanical development of marine impact cone-penetrometer	Kesik, A. Geography Waterloo	1) Geomorphological map, sheet Davson 1:2.5M 2) Hydrographical map 1:50.000 sheet Galt 3yr - 3rd Inst.
Jopling, A.V. Geography Toronto	Continuous monitoring of density flows in a lacustrine environment 3yr - 1st Inst.	Kesler, S.E. Geology Toronto	Geology and geochemistry of island arc ore deposits and related intrusive rocks 3yr - 1st Inst.

Kimberley, M.M. Geology Toronto	Diagenesis and the origins of sedimentary ores	Ladanyi, B. Génie minéral Polytechnique	1) Résistance au poingonnement des sols gelés. 2) Résistance mécanique du mélange silt-glaise. 3) Stabilité des butées de fondations en rocher 3yr - 2nd Inst.
King, A.F. Geology Memorial	Eo-Cambrian studies on the Avalon and western platforms of Newfoundland 3yr - 1st Inst.	Lajoie, J. Géologie Montréal	Sédimentologie du flysch cambro-ordovicien des Appalaches du Québec 3yr - 3rd Inst.
King, M.S. Geological Sciences Saskatchewan	Mechanical state of rock approaching failure 3yr - 3rd Inst.	Lajtai, E.Z. Geology New Brunswick	Mechanisms of deformation and fracture 3yr - 2nd Inst.
King, R.H. Geography Western	Differential weathering of aeolian material containing volcanic ash and its role in alpine and subalpine pedogenesis	Lambert, R.S.J. Geology Alberta	Isotopic and geochemical researches applied to continental margin plate tectonics and Archean continental structure 3yr - 1st Inst.
Klován, J.E. Geology Calgary	Morphometric applications to paleozoic fossils 3yr - 1st Inst.	Langham, E. J. INRS Québec-Québec	1) Effets de la glace sur les polluants et produits chimiques naturels. 2) Exploitation des données de ERTS dans l'étude du Lac St-Jean
Kretz, R. Geology Ottawa	Petrology of metamorphic rocks	Langleben, M.P. Physics McGill	Drift and thermal regime of sea ice 3yr - 2nd Inst.
Krouse, H.R. Physics Calgary	Stable isotope fractionation studies 3yr - 3rd Inst.	Laurent, R. Géologie Laval	Etude géochronométrique et géochimique des complexes ophiolitiques des cantons de l'est et de Gaspésie, Quebec 3yr - 3rd Inst.
Krupicka, J. Geology Alberta	Petrology of reworked crystalline rocks 3yr - 1st Inst.	Lavender, J.O.C. Géographie Montréal	Etudes écologiques (niveau minérotrophique) dans le cadre du programme intégré de recherches en écologie dynamique aux Iles de la Madeleine
Ku, C.C. Mining/Metallurgy McGill	1) Numerical magnetotelluric methods 2) Telluric fault and dike problems 3) Gravity, magnetic, and resistivity anomalies due to arbitrary shape	Lawson, D.E. Earth Sciences Waterloo	Physical and chemical sedimentation at the mouth of the Grand River
Kubler, B. INRS Québec-Québec	Comparaison diagénèse organique-diagénèse minérale sur les séries primaires (subsurface) du Golfe St. Laurent	Laznicka, P. Earth Sciences Manitoba	Study of the worldwide metallogenesis of base and precious metals and its application to selected mineralized areas in Canada
Kumarapeli, P.S. Geology Concordia	Age of the Grenville dike swarm - a key indicator of the age of the St. Lawrence Rift system 3yr - 3rd Inst.	Le Blond, P.H. Inst. Oceanography British Columbia	Long waves and coastal oceanography 3yr - 1st Inst.
La Rochelle, P. Génie civil Laval	1) Propriété fondamentales des argiles sensibles 2) Stabilité des pentes naturelles 3) Gel dans les sols		

Lebrun, A. Sciences Québec-Chicoutimi	Limnologie chimique: Lac St-Jean; Etude des eaux du bouclier Laurentien	Lunardini, V.J. Mechanical Eng. Ottawa	Thermal regime and properties of permafrost
Lefebvre, G. Génie civil Sherbrooke	Etude des argiles de la Baie James	MacLean, W.H. Geological Sciences McGill	Phase relations and field studies pertaining to ore deposits
Lenz, A.C. Geology Western	Lower and middle paleozoic paleontology, biostratigraphy and fossil community analyses 3yr - 1st Inst.	MacRae, N.D. Geology Western 4296 OPER A5539	Geochemistry of sulfur in mafic rocks
Lerhokmo, J.F. Geology Alberta	1. Composition and fall characteristics of White River Ash, Yukon. 2. Sedimentation models and correlation of Edmonton Formation, Alta. 3. Genesis of petroleum reservoir rocks, Alta. 3yr - 3rd Inst.	Mackay, J.R. Geography British Columbia	Permafrost and the growth of ground ice, western Arctic Coast and western Canadian cordillera 3yr - 3rd Inst.
Lesperance, P.J. Géologie Montréal	Biostratigraphie du Silurien et Dévonien inférieur des Appalaches du Québec 3yr - 3rd Inst.	Mahaney, W.C. Geography York	Genesis, agricultural modification, and pollution of grey-brown podzolic soils (luvisols) in Southern Ontario
Levinson, A.A. Geology Calgary	Exploration and environmental geochemistry 3yr - 1st Inst.	Malpas, J.G. Geology Memorial	A petrochemical and field study of the Long Range mafic/ultramafic complex of S. W. Newfoundland
Liberty, B.A. Geological Sciences Brock	Detailed carbonate study 3yr - 2nd Inst.	Mamet, B.L. Géologie Montréal	Microfaciès carbonatés du paléozoïque. Etude de la microfaune et de la microflore 3yr - 3rd Inst.
Lo, K.Y. Fac. of Eng. Sci. Western	Structural defects and residual stresses in clays 3yr - 2nd Inst.	Mansinha, L. Geophysics Western	Rotational dynamics of the earth
Logan, A. Geology New Brunswick	1) Ecology of argyrotheca bermudana from Bermuda platform. 2) Recent brachiopod ecology, Bay of Fundy 3yr - 3rd Inst.	Mantuani, M.A. Zoology Toronto	Nutrient partitioning in lake systems: the dynamics of transfer of silicon among organisms, sediment, and water
Loubat, H. Sciences de la terre Québec-Montréal	1) Pétrologie des Ophiolites archéennes. 2) Pétrologie des ultramafites draguées 3yr - 1st Inst.	Marsh, J.S. Geography Trent	Glacier change in the Selkirk Mountains, British Columbia since 1885
Luckman, B.H. Geography Western	Debris accumulation on scree slopes Neoglacial landforms at the ramparts, Tonquin Valley Urban fluvial systems in London, Ontario	Martignole, J. Géologie Montréal	Etude pétrologique et tectonique de la partie sud de la province de Grenville 3yr - 3rd Inst.
		Martin, R.F. Geological Sciences McGill	Magmatic and metasomatic processes in the genesis of "igneous" rocks 3yr - 3rd Inst.

Martini, I.P. Land Resource Sc Guelph	Quantitative studies of sands and sandstones 3yr - 1st Inst.	McTaggart, K.C. Geological Sciences British Columbia	To test and calibrate various geothermometers and geobarometers; to test melting hypotheses in the laboratory; to investigate the origin of hornblendites
Mathews, W.H. Geology British Columbia	1) Geochronology 2) Limnology and sedimentology 3yr - 3rd Inst.	Meagher, E.P. Geological Sciences British Columbia	Crystal structure and chemistry of minerals 3yr - 2nd Inst.
Maurice, Y.T. Géol./minéralogie Laval	Geochemical investigation of uranium occurrences in the Province of Quebec	Medioli, F. Geology Dalhousie	Study of recent microfossils in the North Atlantic and in the Canadian Arctic
McAllister, A.L. Geology New Brunswick	The nature and distribution of ore horizon strata, Lower Nepisiguit F. Section, Bathurst Mining Camp, N.B.	Mereu, R.P. Geophysics Western	Deep and shallow seismic sounding research 3yr - 1st Inst.
McCann, S.B. Geography McMaster	1) Beach and nearshore environments in the Eastern Arctic archipelago 2) Barrier Islands and sand spits in the Southern Gulf of St. Lawrence 3yr - 2nd Inst.	Michel, B. Génie civil Laval	Modèles rhéologiques et physiques de la glace 3yr - 3rd Inst.
McCaughey, J.H. Geography Queen's	Radiation and energy balance components in a forested watershed prior and post logging - Montmorency P.Q.	Middleton, G.V. Geology McMaster	Field and experimental studies of clastic sediments 3yr - 3rd Inst.
McGowan, C. Zoology Toronto	Systematics, evolution, growth and functional morphology in the Ichthyosauria (Reptilia) together with an investigation into systematics and differential growth in Moas (Aves)	Mitchell, R.H. Geology Lakehead	1) Archean geochronology and strontium isotope geochemistry. 2) Petrology and geochemistry of kimberlites and alkaline rocks
McGugan, A. Geology Calgary	1) Cretaceous micropaleontology (foraminifera) 2) Upper Paleozoic micropaleontology (conodonts) 3) Cambrian micropaleontology (problematica) 3yr - 1st Inst.	Mitchell, R.J. Civil Engineering Queen's	1) Behaviour of sensitive clays under repeated loadings. 2) Landslide control and prevention 3yr - 2nd Inst.
McKyes, E. Civil Engineering McGill	1) Micromechanics of soils 2) Traction of lugged tires 3yr - 3rd Inst.	Monette, H. Mines & métallurgie Laval	Stabilité des piliers de mines compte tenu de la sécurité et d'un meilleur recouvrement des réserves de minerai"
McNutt, R.H. Geology McMaster	Geochemical and petrologic studies on selected field areas 3yr - 2nd Inst.	Moore, J.M. Geology Carleton	1) Stratigraphy, structure and metamorphism of the Grenville Supergroup 2) Metamorphism of Precambrian volcanic rocks and ores 3yr - 2nd Inst.
		Morgan, A.V. Earth Sciences Waterloo	Palaeoentomology - an analysis of recent climatic change. A prediction for the future
		Morgan, M.A. Biology Waterloo	Palaeoentomology - an analysis of recent climatic change

Morgenstern, N.R. Civil Engineering Alberta	1) Geotechnical behaviour of frozen ground and ice 2) Geotechnical behaviour of Athabasca tar sand 3) Geotechnical behaviour of stiff clays and shales 3yr - 1st Inst.	Murray, J.W. Inst. Oceanography British Columbia	The marine geology of the inland waterway of southwestern British Columbia 3yr - 2nd Inst.
Morin, G. INRS Québec-Québec	Modèle stochastique pluie-débit transposable à l'aide des caractéristiques physiographiques	Murthy, G. Physics Memorial	Remanent magnetism of anorthosites as an additional tool in tracing the past positions of continents
Morris, P.G. Earth Sciences Waterloo	Geotechnical study of the modern Great Gorge, Niagara River to evaluate joint development rock weathering and slope stability	Naldrett, A.J. Geology Toronto	Field and experimental studies relating to the origin of ultramafic and related mafic rocks and their associated Ni-Cu ore deposits 3yr - 1st Inst.
Morton, R.D. Geology Alberta	Studies on uraniferous deposits in Saskatchewan and the NW Territories 3yr - 3rd Inst.	Neale, E.R.W. Geology Memorial	1) Mid Paleozoic volcanism and sedimentation in Newfoundland. 2) Extent of hermitage flexure lithologies 3yr - 3rd Inst.
Mossman, D.J. Geological Sciences Saskatchewan	Petrology of ore deposits in the precambrian shield and environs 3yr - 1st Inst.	Nelson, S.J. Geology Calgary	Geological history of western Canada
Mothersill, J.S. Geology Lakehead	Determination of adsorption and ion-exchange on clay particles and organic matter at the water-sediment interface and the migration of ions during diagenesis in a fresh-water environment (Lake Superior)	Nichol, I. Geological Sciences Queen's	Geochemical exploration in Canada 3yr - 1st Inst.
Mountjoy, E.W. Geological Sciences McGill	Carbonate sedimentation and diagenesis of ancient and modern reef and shelf margins 3yr - 3rd Inst.	Nicholls, J.W. Geology Calgary	Petrology and geochemistry of peralkaline and related rocks from British Columbia and Arizona; Chemical analyses of rocks and minerals
Muecke, G.K. Geology Dalhousie	1) Development of a computerized neutron activation analysis and radiometric laboratory for geochemical studies on rocks and minerals. 2) Petrochemical, isotopic and mineralogical studies on metamorphic and igneous rocks	Nicholson, F.H. Geography McGill	Permafrost studies in the Schefferville area - thermal amelioration, supra permafrost groundwater, and effects of snowcover
Muehlenbachs, K. Geology Alberta	Stable isotope exchange experiments and their application to geological problems	Noble, J.P.A. Geology New Brunswick	1) Silurian-Devonian stratigraphy and paleoenvironments-New Brunswick 2) Recent shallow-water brachiopod communities-Eastern Canada 3yr - 2nd Inst.
Muller, P. Geography McGill	Glaciological research on Axel Heiberg Island (N.W.T.)	Norris, G. Geology Toronto	Mesozoic stratigraphic palynology, paleoecology, and floral provincialism 3yr - 2nd Inst.

Norum, D.I. Agric. Eng. Saskatchewan	Heat and mass transfer in soil profiles under frozen and unfrozen conditions	Parslow, G.R. Geological Sciences Regina	Chemical study of the Flin Flon volcanics and nearby "granodiorites"
Nuffield, E.W. Geology Toronto	Crystal chemistry of the ore minerals 3yr - 2nd Inst.	Pearce, G.W. Earth Sciences Toronto	Magnetic properties of lunar and meteorite samples
Nyland, E. Physics Alberta	Automated geophysical data analysis and interpretation 3yr - 1st Inst.	Pearce, T.H. Geological Sciences Queen's	Petrology of archaean igneous rocks
Oke, T.R. Geography British Columbia	Comparison of rural and urban energy balance components 3yr - 2nd Inst.	Perrault, G. Génie minéral Polytechnique	Recherche en minéralogie et en cristallographie 3yr - 1st Inst.
Oldershaw, A.E. Geology Calgary	Genesis and diagenesis of sedimentary rocks 3yr - 3rd Inst.	Peters, H.R. Geology Memorial	Studies of the Upper Devonian rhyolite and fragmental flows, North Central Newfoundland
Ongley, E.D. Geography Queen's	Geomorphology of small, semiarid watersheds, southeastern Alberta	Pham, V.N. Génie minéral Polytechnique	Mise au point d'une nouvelle méthode de prospection magnéto-tellurique
Osborn, G.D. Geology Calgary	Pleistocene geology, geomorphology, engineering geology	Pickard, G.L. Inst. Oceanography British Columbia	B.C. inlet study 3yr - 2nd Inst.
Osborn, T.R. Inst. Oceanography British Columbia 4658 OPER A7722	Direct measurement of the turbulent stress in a salt wedge estuary	Piper, D.J.W. Geology Dalhousie	1) Processes of deposition of fine clastic sediments in the ocean. 2) Marine quaternary of Atlantic Canada 3yr - 1st Inst.
Ouellet, M. INRS Québec-Québec	Aspects physiques, chimiques et biologiques des sédiments du Lac St-Jean	Pittion, J.L. INRS Québec-Québec	Mise au point de techniques d'emploi d'une résine synthétique très fluide: le méthacrylate de méthyle
Pagéau, Y.N. Sciences de la terre Québec-Montréal	Paléo ichthyologie - Gaspé 3yr - 3rd Inst.	Platt, R.G. Geology Lakehead	Petrogenetic studies of certain pre-Keweenaw alkaline igneous complexes of N.W. Ontario
Pajari, G.E. Geology New Brunswick	The geology and petrochemistry of Silurian and Devonian volcanic rocks, southwestern New Brunswick	Pounder, E.R. Physics McGill	Ice drift 3yr - 3rd Inst.
Palmer, H.C. Geophysics Western	Paleomagnetism of Canadian and South American rock units 3yr - 1st Inst.	Price, R.A. Geological Sciences Queen's	Cordilleran tectonics, and the nature and significance of variations in tectonic style 3yr - 3rd Inst.
Papezik, V.S. Geology Memorial	Petrology stratigraphy and mineral deposits of the Harbour Main Group and associated rocks of the Avalon Peninsula, Newfoundland 3yr - 3rd Inst.		

Prichonnet, G.P. Sciences de la terre Québec-Montréal	Preuves géologiques et géomorphologiques du retrait glaciaire Wisconsinien, au nord de la région montréalaise	Reynolds, P.H. Physics/Geology Dalhousie	1) Potassium-argon dating of Nova Scotian granites, metamorphic rocks, and mineral deposits. 2) Argon-40/argon-39 dating of upper Precambrian volcanic rocks from Atlantic Canada. 3) Metallogenesis in Nova Scotia: a sulphur isotope study 3yr - 1st Inst.
Protz, F. Land Resource Sc Guelph	1) Quantification of soil variability (Northern Ontario) 2) Quantification of initial chemical changes in various soils. 3) Quantification of soil structure. 4) Computer modelling of soil development 3yr - 2nd Inst.	Risk, M.J. Geology McMaster	1) Bioerosion of carbonates. 2) Benthic fauna of the Thorold Sandstone
Quigley, R.M. Fac. of Eng. Sci. Western	1) Permeability, diffusion, leachate reaction mineralogy & bonding in soils. 2) Completion of coastal erosion & bluff instability, Lakes Erie & Huron 3yr - 2nd Inst.	Riva, J.F. Geology Laval	Study and zonation of middle and late ordovician graptolites of North America 3yr - 1st Inst.
Padforth, N.W. Biology New Brunswick	Classification of muskeg (peat and peatlands) as related to geotechnical properties and user requirements as based on environmental influences 3yr - 3rd Inst.	Robin, P.Y.F. Geology Toronto	Physical properties and phase changes in rocks and minerals under high pressure and triaxial stress
Panalli, G. Geology Carleton	Global tectonics and the rheology of the earth 3yr - 1st Inst.	Rochester, M.G. Physics Memorial	Theoretical solid-earth geophysics and planetary physics 3yr - 1st Inst.
Rankin, D. Physics Alberta	Geomagnetic micropulsations and magnetotellurics 3yr - 3rd Inst.	Rochon, G. Ctr. sc. de l'eau Laval	Développement et application de la télédétection à la mesure de paramètres hydrodynamiques et limnologiques
Rast, N. Geology New Brunswick	Structural profiles across the Caledonian-Appalachian intercontinental orogenic belt 3yr - 3rd Inst.	Roeder, P. Geological Sciences Queen's	Electron probe and experimental studies of basaltic rocks 3yr - 1st Inst.
Raymond, G.P. Civil Engineering Queen's	1) Stability and settlements of buried footings in clay; 2) Stability and settlements of surface footings on sands	Roegiers, J.C. Civil Engineering Toronto	Influence of the permeability factor in hydraulic fracturing
Reardon, E.J. Earth Sciences Waterloo	1) Thermodynamic properties of ion pairs in natural waters 2) ¹³ C isotope fractionation factors for carbonate and bicarbonate ion pairs	Ross, J.V. Geological Sciences British Columbia	A) Structural stratigraphic and metamorphic studies in south central British Columbia. b) Structural and mechanical properties of common silicate minerals 3yr - 2nd Inst.
		Rouse, G.E. Botany British Columbia	Palynology of late cretaceous and cenozoic sediments from British Columbia and Arctic Canada 3yr - 2nd Inst.

Rouse, W.R. Geography McMaster	Radiation heat and water budgets of high latitude surfaces. Radiation and temperature in polluted urban atmospheres	Sauer, E.K. Civil Engineering Saskatchewan	"Landslides in urban fringe areas of Saskatoon and Regina-identification of high risk areas"
	3yr - 1st Inst.	Scarfe, C.M. Geology Alberta	Geochemical and geophysical properties of rocks and magmas at elevated temperatures and pressures
Rousell, D.H. Geology Laurentian	Fracture and lineament analysis of Sudbury basin rocks	Scheidegger, A.E. Geology Windsor	The geophysical stress field, ancient and present
Roy, M. Génie civil Laval	1) Etude des pieux flottants dans les argiles sensibles. 2) Mesure in situ de la résistance au cisaillement des argiles sensibles à l'aide du pressiomètre auto-fcreur	Schenk, P.E. Geology Dalhousie	Sedimentologic-stratigraphic studies of the early through late paleozoics of Nova Scotia
	3yr - 1st Inst.		3yr - 2nd Inst.
Rucklidge, J.C. Geology Toronto	Geological studies with X-ray spectroscopy and diffraction	Schloessin, H.H. Geophysics Western	Physical properties of earth materials at mantle conditions
	3yr - 3rd Inst.		3yr - 2nd Inst.
Russell, L.S. Geology Toronto	Correlation of the lower cretaceous formations and faunas between Alberta and Montana	Schroeder, J.M. Géographie Moncton	Cartographie géomorphologique et spéléogénèse de grottes du 1er Canyon de la Nahanni Sud (TNO)
			3yr - 2nd Inst.
Russell, R.D. Geophysics British Columbia	1) Isotope ratio studies 2) Geophysical instrumentation	Schuepp, P.H. Agric. Physics Macdonald Coll.	Micrometeorological model experiments
	3yr - 3rd Inst.		3yr - 1st Inst.
Rust, B.R. Geology Ottawa	Studies of alluvial sediments, ancient and modern	Schwarcz, H.P. Geology McMaster	Isotopic geochemistry
	3yr - 3rd Inst.		3yr - 2nd Inst.
Rutherford, G.K. Geography Queen's	Systemmatic investigations of the pedogenesis and micromorphology of soils and sediments in S.E. Ontario	Schwartz, F.W. Geology Alberta	Investigation of regional water quality
	3yr - 2nd Inst.		3yr - 1st Inst.
Sarjeant, W.A.S. Geological Sciences Saskatchewan	Dinoflagellates and acritarchs of the mesozoic: stratigraphical application in Western and Arctic Canada and use in intercontinental correlation	Schwerdtner, W.M. Geology Toronto	Paleo-strain analysis in mylonitic belts
	3yr - 3rd Inst.		3yr - 3rd Inst.
		Scott, S.D. Geology Toronto	Physical geochemistry of sulfide ores
			3yr - 2nd Inst.
Sassano, G. Geology Concordia	Studies on the uraniferous deposits of the Charlebois lake area, northern Sask.	Seguin, M.K. Géologie Laval	Etude paléomagnétique des roches de la fosse du Labrador, d'un segment des Appalaches et de l'Abitibi
			3yr - 2nd Inst.

Serodes, J.B. Génie civil Laval	Rôle et importance de la matière humique dans le milieu aquatique	Slaymaker, H.O. Geography British Columbia	River sedimentation and erosional processes in southwestern British Columbia
Shaw, D.M. Geology McMaster	Geochemical studies of minerals and rocks 3yr - 3rd Inst.	Smith, D.G.W. Geology Alberta	Applications of electron microprobe analysis in mineralogy, economic geology and petrology 3yr - 1st Inst.
Shaw, J. Geography Alberta	Processes of deposition from turbidity currents in pro-glacial lakes 3yr - 1st Inst.	Smith, D.L. Geological Sciences Queen's	Diagenetic and post-diagenetic cementation phases in the development of the Guelph (Middle Silurian) reefs, southwestern Ontario
Sheehan, P.M. Géologie Montréal	Paleobiogeography and biostratigraphy of late Ordovician and early Silurian brachiopods in eastern Canada	Smith, F.G. Geology Toronto	Computer programs for statistical processing and compilation of mineral compositions 3yr - 1st Inst.
Siddiqui, Q.A. Geology Saint Mary's	Ostracoda from the continental shelf of Nova Scotia and from the Mid-Atlantic Ridge 3yr - 3rd Inst.	Smith, T.E. Geology Windsor	Paleosubduction zones bounding the Superior Province: a geochemical and palaeomagnetic study. - Geochemistry, an XRF investigation
Silverberg, N. Science Québec-Rimouski	1) Detailed sedimentology - St. Lawrence Estuary Shelf 2) Natural sedimentation of oil	Smylie, D.F. Physics York	Dynamics of the earth 3yr - 2nd Inst.
Simony, P.S. Geology Calgary	Volcanics to gneiss contact NW of Trail, B.C. 3yr - 2nd Inst.	Sonnenfeld, P. Geology Windsor	Evaporite formation
Simpson, P. Geology Windsor	1) Stratigraphy and sedimentology of cretaceous deposits in the western interior 2) Deep-well injection of fluid, industrial wastes	Spang, J.H. Geology Calgary 5185 OPER A8714	Mechanical behaviour of the thrust plates in the front ranges of the Rocky Mountains
Sinclair, A.J. Geological Sciences British Columbia	Mineral deposits in the Canadian cordillera--geology and geostatistics	St-Julien, P. Géol./minéralogie Laval	Contexte structural des complexes ophiolitiques des Appalaches du Québec
Skippen, G.B. Geology Carleton	A field and experimental study of metamorphic rocks from the Grenville Province of eastern Ontario and the Snow Lake district of Manitoba 3yr - 2nd Inst.	Starkey, J. Geology Western	The study of crystal orientation patterns in deformed rocks and the determination of the structures of deformed crystals and of plagioclase feldspars 3yr - 2nd Inst.
Slatt, R.M. Geology Memorial	Sedimentological/sedimentary geochemical investigations on the Newfoundland continental shelf and adjacent coastal areas 3yr - 1st Inst.		
Slawson, W.F. Geophysics British Columbia	Geochronology and the time of lead ore mineralization		

Stauffer, M.R. Geological Sciences Saskatchewan	1) Study of the Proterozoic/Archean boundary between Flin Flon, Manitoba, and Hanson Lake, Saskatchewan 2) Stratigraphy and structural synthesis of the Missi Group near Flin Flon, Manitoba 3yr - 3rd Inst.	Sutterlin, P.G. Geology Western	The investigation of geological data structures and their effect in determining the potential of geological data files (particularly those in computer-processable form) to generate information
Stearn, C.W. Geological Sciences McGill	Paleoecology of paleozoic reefs of Canada 3yr - 3rd Inst.	Symons, D.T.A. Geology Windsor	Paleosubduction zones bounding the Superior Province - Paleomagnetism
Steiner, D. Geography Waterloo	Digital image processing for the automatic mapping of terrain cover types and ground parameters	Tanquay, M.G. Génie minéral Polytechnique	Etude de la spectroréflectance des matériaux terrestres
Steiner, J. Geology Alberta	Periodicities and episodicities in geological history and the galactic model	Tavenas, F.A. Génie civil Laval	1. Etude du comportement des fondations sur les argiles sensibles. 2. Détermination au laboratoire et in situ de la densité relative des sables 3yr - 2nd Inst.
Stevens, P.K. Geology Memorial	Paleozoic evolution of Newfoundland	Taylor, C.H. Geography Trent	Runoff production in an inter-drumlin swale
Stevenson, J.S. Geological Sciences McGill	Mineralogical investigations using the electron microprobe	Telford, W.M. Mining/Metallurgy McGill	Studies in applied geophysics
Stewart, I.C.F. Physics Memorial	Seismotectonic studies of Newfoundland	Teller, J.T. Earth Sciences Manitoba	Origin of The Belair "end moraine" of southeastern Manitoba
Strangway, D.W. Geology Toronto	Magnetic and electrical properties of rocks and minerals 3yr - 3rd Inst.	Terasmae, J. Geological Sciences Brock	Quaternary paleoecology, geochronology, and climatic changes in eastern and northeastern Canada 3yr - 1st Inst.
Stringer, P. Geology New Brunswick	Cleavage noncoplanar with fold axial surfaces in the Caledonian-Appalachian orogenic belt and its relation to regional structure	Tessier, A. INRS Québec-Québec	Etude des différentes formes de zinc, plomb, cuivre et cadmium liés aux sédiments en suspension
Strong, D.F. Geology Memorial	Geochemical, petrological and metallogenetic studies in the Appalachian-Caledonian orogen 3yr - 1st Inst.	Thomson, S. Civil Engineering Alberta	Investigations of laboratory and in-situ properties and behaviour of overconsolidated clays and soft rocks (pleistocene and upper cretaceous) of Western Canada 3yr - 1st Inst.
Sundby, B. Sciences Québec-Rimouski	Estuarine geochemical processes	Tiphane, M. Géologie Montréal	Océanographie dynamique et géologie des dunes et lagunes des Iles-de-la-Madeleine. Partie d'un projet interdisciplinaire: Recherche écologique aux Iles-de-la-Madeleine

Torrance, J.K. Geography Carleton	1) The Influence of geochemical and physical factors on the behaviour of the Leda clays and other marine clays. 2) specific ion effects on the remoulded behaviour of Leda clay. 3) water movement in frozen soils in response to a temperature gradient	Van de Poll, H.W. Geology New Brunswick	1) Economic geology and basin analysis of the carboniferous basin of Eastern Canada. 2) sedimentation and coastal stability along the Northumberland Strait, New Brunswick
Tourigny, G. Chemistry Saskatchewan	Matric suction measurements in unsaturated soils	Vanicek, P. Surveying Eng New Brunswick	Earth tides and crustal movement research
Trembath, L.T. Geology New Brunswick	Factors affecting the crystallization of feldspars in synthetic and natural systems	Veizer, J. Geology Ottawa	1) Variations in chemical composition of carbonate rocks during geologic history. 2) Geochemistry and sedimentology of the lower paleozoic carbonate sequences of Somerset and Cornwallis Islands
Tremblay, G. Géographie Laval	Cartographie et géomorphologie des dépôts de surface de la Haute Côte-Nord entre Tadoussac et Sept-Îles en vue de l'établissement d'un projet d'aménagement et dans une perspective de protection de l'environnement	Von Bitter, P.H. Earth Sciences Waterloo	Palaeoenvironments and the distribution of conodonts, Windsor Group (Lower Carboniferous), Atlantic Provinces, Canada
Trenhaile, A.S. Geography Windsor	1) Shore platforms in Newfoundland; 2) Shore platforms in the Canadian Maritimes 3yr - 1st Inst.	Wacker, A.G. Electrical Eng. Saskatchewan	Computer analysis of multispectral imagery 3yr - 1st Inst.
Trzcienski, W.E. Génie minéral Polytechnique	Études minéralogiques et pétrologiques à l'aide de la microsonde	Wangersky, P.J. Oceanography Dalhousie	The carbon cycle in the open ocean 3yr - 1st Inst.
Tupper, W.M. Geology Carleton	Structural material resources of eastern Ontario	Wardlaw, N.C. Geology Calgary	1) Reservoir properties of sedimentary rocks. 2) Petrology and geochemistry of sedimentary rocks 3yr - 3rd Inst.
Turek, A. Geology Windsor	Paleosubduction zones bounding the superior province--geochemistry atomic absorption investigation of trace element variations	Warkentin, B.P. Renewable Dev. Res Macdonald Coll.	Forces holding water in clay soils 3yr - 1st Inst.
Turnock, A.C. Earth Sciences Manitoba	Stability of pyroxenes 3yr - 1st Inst.	Warnock, R.G. Civil Engineering Ottawa	Study of snow melt production and suspended sediments in spring runoff
Ulrych, T.J. Geophysics British Columbia	1) Application of communication theory to geophysics and astronomy. 2) Interpretation and reduction of potential field data. 3) Uranium lead isotopic studies 3yr - 2nd Inst.	Warren, H.V. Geological Sciences British Columbia	Biogeochemical vs. pedogeochemical techniques in mineral exploration
		Watkinson, D.H. Geology Carleton	Relation of ore deposits to igneous rocks 3yr - 1st Inst.

Watt, W.E. Civil Engineering Queen's	Design flows on intermediate drainage basins 3yr - 3rd Inst.	Wigley, T.M.L. Mechanical Eng. Waterloo	Modelling of environmental diffusion processes 3yr - 1st Inst.
Weaver, J.T. Physics Victoria	Electromagnetic induction in the earth and oceans 3yr - 2nd Inst.	Williams, H. Geology Memorial	Tectonic-stratigraphic analysis of the northern Appalachians, with emphasis on ophiolite terranes 3yr - 3rd Inst.
Webber, G.R. Geological Sciences McGill	Investigations in applied geochemistry	Williams, P.J. Geography Carleton	Hydrologic conditions and slope instability in earth materials around OoC. Scientific principles applied to land form and process
Weber, L.R. Land Resource Sc Guelph	Groundwater pollution 3yr - 2nd Inst.	Willington, R.P. Forestry British Columbia	Forest land use hydrology - coastal B.C.
Welch, D.M. Geography Winnipeg	Ground truth for resource mapping from ERTS images, Manitoba	Wilson, H.D.B. Earth Sciences Manitoba	1) A model of the igneous cycle of the Precambrian, and more detailed models of specific portions of the cycle including the relationships to sedimentation and ore deposits. 2) Continental distribution of ore deposits and earth geometry 3yr - 2nd Inst.
West, G.F. Physics Toronto	Regional and applied geophysics 3yr - 1st Inst.	Wilson, J.T. Physics Toronto	Tectonics research with special reference to plume mechanisms 3yr - 3rd Inst.
Westermann, G.E.G. Geology McMaster	Jurassic ammonites and cephalopod shell function 3yr - 2nd Inst.	Wilson, M.V.H. Biology Queen's	Freshwater teleostei from the British Columbia eocene
Westgate, J.A. Geology Alberta	1) Quaternary geology of central and southern Alberta 2) Quaternary tephrochronology (volcanic ash chronology) of Western Canada 3yr - 3rd Inst.	Wilson, M.V.H. Zoology Alberta	Freshwater teleostei from the British Columbia Eocene
White, O.L. Civil Engineering Waterloo	Residual stresses in rock at shallow depths	Wilson, N.E. Civ Eng/Eng Mech McMaster	Shear strength and consolidation characteristics of soils under cyclic loading 3yr - 1st Inst.
Whitehead, R.E.S. Geology Laurentian	A study of the origin of trace element halos surrounding sulphide deposits in the Precambrian Shield and the application of these halos to mineralogical exploration	Wilson, R.G. Geography McGill	Micrometeorological studies of snowmelt and evaporation in a sub-arctic environment
Wiens, J.H. Soil Science British Columbia	Water quality in relation to land use activities, soil properties and soil distributions		
Wiggins, R.A. Geophysics British Columbia	Interpretation techniques for seismological observations 3yr - 2nd Inst.		

Winder, C.G. Geology Western 5593 OPER A2136	Paleozoic stratigraphy of southern Ontario	York, D. Physics Toronto 2465 OPER A3566	Isotope studies and age determinations 3yr - 3rd Inst.
Woo, M.K. Geography McMaster 5611 OPER A8542	Hydrologic modelling of two experimental basins	Young, G.M. Geology Western 2468 OPER A3567	Studies of precambrian supracrustal rocks 3yr - 2nd Inst.
Woussen, G. Sc. appliquées Québec-Chicoutimi 5624 OPER A8444	Minéralisation et problèmes d'exploitation de gisements dans la région du Chibougamau	Zentilli, M. Geology Dalhousie 5664 OPER A9036	1) Metallogenetic studies in Nova Scotia 2) Petrochemistry of igneous rocks from the Central Andes
Wright, J.A. Physics Memorial 5628 OPER A7505	Geomagnetic identification of an ancient plate margin in Newfoundland	Zodrow, E.L. Geology St. F. Xavier 5673 OPER	Investigation of substitution in orthopyroxene from norite at the Strathcona Mine, Sudbury, Ont.
Wynne-Edwards, H.R. Geological Sciences British Columbia 2447 OPER A8302	Geological evolution of Canadian Continental Crust 3yr - 2nd Inst.	Zwack, P. Physique Québec-Montréal 5677 OPER A9038	The climatology of air pollution in Montreal
Yong, R. Civ Enq/App Mech McGill 2462 OPER A0882	Fundamental investigation of engineering properties and behaviour of soils in relation to environmental constraints 3yr - 3rd Inst.	Zwarich, M.A. Soil Science Manitoba 5678 OPER	Fate of nitrate nitrogen in soils to which high rates of sewage sludge have been applied

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