



THE GANGUE

Mineral Deposits Division Geological Association of Canada No. 15 January 1983

MESSAGE FROM THE CHAIRMAN

THIS IS THE FIRST GANGUE OF THE NEW YEAR AND AN APPROPRIATE OPPORTUNITY TO WISH ALL THE MEMBERSHIP A PROSPEROUS AND PRODUCTIVE 1983. THERE ARE STILL DIFFICULT TIMES AHEAD FOR THE MINERALS INDUSTRY AND IT IS SOMEWHAT DISTURBING THAT SOME OF CANADA'S BETTER KNOWN CRYSTAL BALL-GAZING ECONOMISTS OF THE HUDSON INSTITUTE OF CANADA ARE FORECASTING THAT NON-FERROUS METAL PRODUCTS WILL BE RENDERED OBSOLETE BY CHANGE. WE ARE ALL AWARE THAT CARBON FIBRES, SILICON, CERAMICS AND FIBRE OPTICS ARE DEVELOPMENTS THAT CAN TAKE OVER USES PRESENTLY SATISFIED BY METALS, BUT TO PREDICT OBSOLESCENCE IS TO IGNORE THE CAPABILITY OF THE INDIVIDUAL, OUR OWN TECHNOLOGICAL INNOVATIONS AND THE ADDITIONAL USES FOR METALS THAT ARE TO BE WON THROUGH RESEARCH, DEVELOPMENT AND MARKETING. THIS IS A FORMIDABLE CHALLENGE TO THE INDUSTRY IN THESE RAPIDLY CHANGING TIMES DEMANDING ENLIGHTENED MANAGEMENT AND FORESIGHT. IT IS TO BE HOPED THAT THE POLITICAL AND OTHER REGULATORY AUTHORITIES WILL RECOGNIZE AND PROPERLY INTERPRET THE SIGNS OF CHANGE AND SUPPORT THE EXPERTISE IN THE MINERALS INDUSTRY AS THESE CHALLENGES ARE ADDRESSED.

EXPLORATION WILL BE AS IMPORTANT A KEY TO THIS SURVIVAL AS IT ALWAYS HAS BEEN AND THIS MEANS THAT OUR UNDERSTANDING OF MINERAL DEPOSITS AND THEIR GEOLOGICAL ENVIRONMENTS WILL BE A CRITICAL ELEMENT. THE MDD MEMBERSHIP MUST RECOGNIZE AND ACCEPT THIS PARTICULAR CHALLENGE AND BE PREPARED TO INTEGRATE SPECIALITIES AND SHARE FINDINGS IN OUR ASSAULT ON THE MYSTERIES OF THE NATURAL WORLD. MINERAL DEPOSIT GEOLOGISTS HAVE A VERY IMPORTANT ROLE TO FULFILL. SO LET US MAKE SURE THAT 1983 IS A PRODUCTIVE YEAR.

J. ALAN COOPE

PUBLICATIONS

MDD NEWSLETTER

THE GANGUE No. 14 ATTAINED A CIRCULATION OF 730 IN OCTOBER, AN ALL TIME HIGH. HOWEVER, AT TIME OF WRITING No. 15, THE INCOMPLETE 1983 MAILING LIST STOOD AT 321. MANY LATE DUES PAYMENTS ARE STILL BEING RECEIVED AT THE GAC OFFICES IN WATERLOO, AND AN UPDATED MAILING LIST CANNOT BE COMPILED UNTIL EARLY FEBRUARY. CONSEQUENTLY, WE ARE SENDING No. 15 TO ALL MDD MEMBERS ON THE 1982 LIST PLUS THE NEW MEMBERS WHO PAID THEIR DUES BY DECEMBER 31. MEMBERS WHO ARE IN ARREARS ARE CAUTIONED THAT THIS IS THE FINAL ISSUE THEY WILL RECEIVE IF DUES ARE NOT PAID PROMPTLY.

MDD FIELD & REFERENCE MANUALS

IN RECENT MONTHS, THE MDD EXECUTIVE HAS REVIEWED THE CONCEPT AND THE FEASIBILITY OF A SERIES OF MDD FIELD AND REFERENCE MANUALS COVERING CANADIAN MINING CAMPS. CONTENT GUIDELINES HAVE BEEN APPROVED AND TWO MANUALS - COVERING THE HIGHLAND VALLEY AND THE YELLOWKNIFE CAMP - ARE IN THE PREPARATION OR PLANNING STAGES. A HIGH QUALITY MANUAL SERIES IS ENVISAGED.

THE MDD MEMBERSHIP IS INVITED TO PARTICIPATE IN THE PRODUCTION OF THE MANUAL SERIES. THE CONCEPT AND CONTENT GUIDELINES ARE AS FOLLOWS:-

CONCEPT

CANADA'S GENEROUS MINERAL ENDOWMENT, ITS IMPRESSIVE MINERAL DEVELOPMENT HISTORY, THE VARIETY OF MINERAL DEPOSITS, THE EXTENSIVE RESEARCH COMPLETED AND THE HIGH LEVEL OF UNDERSTANDING OF THE ORIGIN OF THE DEPOSITS MAKES CANADA'S MINING CAMPS A FOCUS OF INTEREST AND A REFERENCE FOR ECONOMIC AND MINERAL DEPOSITS GEOLOGISTS IN ALL PARTS OF THE WORLD.

DESCRIPTIONS OF THE GEOLOGY OF THE MINERAL DEPOSITS AND THEIR ENVIRONMENT, THEIR EXPLORATION AND PRODUCTION HISTORIES AND OTHER, VALUABLE, REFERENCE INFORMATION IS OFTEN WIDELY DISTRIBUTED IN DIVERSE PUBLICATIONS AND DIFFICULT AND TIME CONSUMING TO COMPILE. THE AVAILABILITY OF THIS INFORMATION IN A SINGLE VOLUME WOULD BE WELL RECEIVED BY MINERAL DEPOSITS GEOLOGISTS AND GEOSCIENCE LIBRARIES. FURTHER, THE INCLUSION OF A WELL PREPARED STOP-BY-STOP DESCRIPTION AND MILEAGE GUIDE TO SIGNIFICANT EXPOSURES ILLUSTRATING IMPORTANT FEATURES OF THE CAMP WOULD SUPPLEMENT THE DOCUMENTED INFORMATION AND ALLOW THE VISITOR TO THE AREA TO CRITICALLY EXAMINE THE GEOLOGY WITH ACTUAL ON-THE-SPOT OBSERVATIONS.

WELL PREPARED AND ATTRACTIVELY PRICED FIELD AND REFERENCE MANUALS SHOULD HAVE A READY MARKET AMONG STUDENTS AND PROFESSIONALS OF ALL ESTATES. THEY WOULD REPRESENT AN INVALUABLE GUIDE AND INFORMATION SOURCE FOR THE VISITOR AS WELL AS A COMPREHENSIVE TEXT FOR THE STUDENT AND RESEARCHER.

CONTENTS

1. GENERAL GEOLOGY OF THE MINING CAMP TO INCLUDE GEOLOGIC SUCCESSION, DESCRIPTION OF FORMATIONS, GENERAL DESCRIPTION OF MINERAL DEPOSIT ENVIRONMENTS AND DISCUSSION OF THE GENESIS OF THE DEPOSITS. (CAN BE WRITTEN BY EXPERIENCED GOVERNMENT, UNIVERSITY OR INDUSTRY GEOLOGIST(S) WHOSE PRIME INTEREST IS MINERAL DEPOSIT GEOLOGY).
2. STOP-BY-STOP GUIDE AND MILEAGE LOG GUIDE TO OUTCROPS (WITH DESCRIPTIONS) ILLUSTRATING IMPORTANT FEATURES OF THE GEOLOGICAL ENVIRONMENT IN THE CAMP - LITHOLOGY, STRUCTURE, ALTERATION, MINERAL DEPOSIT GENESIS, ETC. (PROBABLY SAME AUTHORSHIP AS (1)).
3. SERIES OF SEPARATE PAPERS/DESCRIPTIONS OF GEOLOGY AND MINERAL DEPOSITS IN INDIVIDUAL MINES. (INDUSTRY GEOLOGISTS(S) INPUT ESSENTIAL. CAN BE CO-AUTHORED WITH OTHERS).
4. HISTORY OF THE MINING CAMP -
 - A) EXPLORATION HISTORY. METHODS USED AND DATES OF DISCOVERY OF THE MINERAL DEPOSITS.
 - B) PRODUCTION HISTORY. TABLE OF PRODUCTION, GRADES MINED AND RESERVES OF INDIVIDUAL DEPOSITS. YEAR BY YEAR IF POSSIBLE.
 - C) OTHER INFORMATION OF INTEREST RELATES TO PRODUCTION - EG. METALLURGICAL DEVELOPMENTS, MINING DEVELOPMENTS, ETC.

5. CASE-HISTORY DATA - AVAILABLE INFORMATION ON GEOCHEMICAL AND GEOPHYSICAL RESPONSE OVER ANY OF THE DEPOSITS - WHETHER AFTER THE FACT OR NOT. SEVERAL POSSIBLE SOURCES INCLUDING GOVERNMENT FILES AND PUBLICATIONS, GEOPHYSICAL CONTRACTORS LITERATURE, UNIVERSITY THESES, ETC. THIS WOULD BE RELEVANT INFORMATION FOR THOSE INTERESTED IN DESIGNING EXPLORATION PROGRAMMES.

6. COMPREHENSIVE BIBLIOGRAPHY.

GOOD MAPS AND CLEAR ILLUSTRATIONS (INCLUDING PHOTOGRAPHS) WILL FORM AN IMPORTANT AND ESSENTIAL PART OF THE MANUALS. AN 8½ x 11" PAGE SIZE WILL ALLOW GREATER FLEXIBILITY IN THE PRODUCTION AND PRESENTATION OF MAPS AND DIAGRAMS. POCKETS FOR FOLDED MAPS WILL BE NECESSARY AND THE MANUALS WILL INCLUDE RELEVANT, PUBLISHED FEDERAL OR PROVINCIAL GOVERNMENT MAPS. AN EVALUATION OF THE MOST SUITABLE AND ECONOMICAL COVER FORMAT IS STILL UNDERWAY. A PROVISION WILL ALSO BE MADE FOR UPDATING THE CONTENTS OF THE MANUALS FROM TIME TO TIME TO INCLUDE ANY NEW DEVELOPMENTS.

IT WILL BE APPARENT THAT EACH MANUAL WILL NEED A LOCAL EDITOR AND COORDINATOR WHO WILL CONTACT CONTRIBUTORS, DETERMINE CONTENT DETAILS, SET DEADLINES, MAINTAIN CONTACT WITH THE MDD GUIDEBOOK CHAIRMAN AND PUBLICATIONS CHAIRMAN AND ALSO ESTABLISH AND MAINTAIN LEVELS OF REFEREEING THAT WILL ENSURE THE HIGH SCIENTIFIC STANDARDS THAT WILL BE REQUIRED.

SHOULD ANY MEMBER, OR LOCAL GROUP OF MEMBERS, BE INTERESTED IN PRODUCING AN MDD FIELD AND REFERENCE MANUAL, THEY ARE INVITED TO CONTACT THE MDD PUBLICATIONS CHAIRMAN (A.L. BARKER) OR THE MDD GUIDEBOOK CHAIRMAN (A.J. SINCLAIR) WITH A PROPOSAL AND/OR SUGGESTIONS.

A LIBRARY OF FIELD AND REFERENCE MANUALS WOULD BE AN EXTREMELY EFFECTIVE AND CONVENIENT INITIAL REFERENCE TO CANADIAN MINERAL DEPOSIT GEOLOGY IN ADDITION TO FULFILLING THE FIELD HANDBOOK PURPOSE. IT REPRESENTS A WORTHY OBJECTIVE FOR THE MDD AND YOUR EXECUTIVE LOOKS FORWARD TO MEMBERSHIP PARTICIPATION IN THE PROGRAM.

J. ALAN COOPE

ACKNOWLEDGEMENT

THE GANGUE GRATEFULLY ACKNOWLEDGES THE ASSISTANCE IN MAILING ISSUE No. 14 BY NEWMONT EXPLORATION OF CANADA LTD. AND No. 15 BY ESSO RESOURCES CANADA LTD.

CALL FOR MDD EXECUTIVE NOMINATIONS

THE NOMINATING COMMITTEE OF THE MDD WELCOMES NOMINATIONS FOR ALL POSITIONS ON THE EXECUTIVE COMMITTEE FOR 1983-84, I.E. CHAIRMAN, VICE-CHAIRMAN, SECRETARY, TREASURER, PROGRAM CHAIRMAN AND PUBLICATION CHAIRMAN. IN ADDITION, FIVE DIRECTORS MUST BE ELECTED IN 1983 FOR TIMESPANS OF ONE TO THREE YEARS. THREE DIRECTORS WILL BE ELECTED FOR THE PERIOD 1983-1986, ONE FOR THE PERIOD 1983 TO 1984 AND ONE FOR THE PERIOD 1983 TO 1985. THE LAST TWO POSITIONS HAVE COME AVAILABLE BECAUSE OF RESIGNATIONS. NOMINATIONS SHOULD BE SUPPORTED BY THREE MDD MEMBERS. PLEASE SEND NOMINATIONS TO DR. I.A. PATERSON, CHAIRMAN, MDD NOMINATING COMMITTEE, COMINCO LTD., 7TH FLOOR, 409 GRANVILLE ST., VANCOUVER, B.C. V6C 1T8

ASSESSMENT OF THE NEED FOR SHORT COURSES

IN THE LAST ISSUE OF "THE GANGUE", READERS WERE ASKED FOR THEIR OPINION ON THE VALUE OF SHORT COURSES, HOW MANY SHOULD BE OFFERED THROUGHOUT THE YEAR, AND TO INDICATE THEIR PREFERENCE FOR TITLES. IT WAS STATED THAT THESE COURSES AND/OR WORKSHOPS WOULD LAST FOR UP TO ONE WEEK, BE GIVEN BY RECOGNIZED EXPERTS IN THEIR FIELD DRAWN FROM THE INTERNATIONAL SCIENTIFIC COMMUNITY, AND BE DESIGNED TO PRESENT "STATE-OF-THE-ART" SUBJECT MATTER ON PARTICULAR TOPICS.

TO DATE, THIRTY-THREE REPLIES HAVE BEEN RECEIVED. FOR THE QUESTION OF FREQUENCY, THE FOLLOWING REPLIES WERE OBTAINED:

2 OR LESS PER YEAR - 12
3 TO 6 PER YEAR - 16
7 TO 10 PER YEAR - 5

NO NEGATIVE REPLIES WERE SENT IN. SOME OF THOSE SUGGESTING THAT MORE THAN 2 COURSES PER YEAR WERE JUSTIFIED, SUGGESTED THAT THE SAME COURSE BE REPEATED AT DIFFERENT CENTERS ACROSS CANADA.

SOME TWENTY-TWO TITLES WERE PUT FORTH AS POSSIBLE TOPICS. OF THESE, FIVE WHICH RECEIVED MORE THAN HALF THE TOTAL SUGGESTIONS ARE:

1. EXPLORATION GEOPHYSICS
2. EXPLORATION GEOCHEMISTRY
3. ENVIRONMENTS OF ORE DEPOSIT FORMATION
4. MINERAL ECONOMICS (PLUS VARIATIONS THEREOF)
5. STRUCTURAL GEOLOGY IN EXPLORATION

FROM THE THIRTY-THREE REPLIES, THOSE WHO INDICATED THAT THEY HOLD A SENIOR GEOLOGIST OR MANAGEMENT POSITION WERE SEPARATED. OF THE FOURTEEN REPLIES OBTAINED IN THIS SUB-SET, SUGGESTED FREQUENCY WAS:

2 OR LESS PER YEAR - 4
3 TO 6 PER YEAR - 7
7 TO 10 PER YEAR - 3

SUGGESTED TOPICS FROM THIS SUB-SET WERE DISTRIBUTED SIMILARLY, WITH THE FOLLOWING FOUR TOPICS OUT OF 12 SUGGESTED RECEIVING OVER HALF THE VOTES:

1. ENVIRONMENTS OF ORE DEPOSIT FORMATION
2. EXPLORATION GEOPHYSICS
3. EXPLORATION GEOCHEMISTRY
4. EXPLORATION MANAGEMENT

REPLIES WERE RECEIVED FROM ACROSS CANADA AS WELL AS THE UNITED STATES AND AUSTRALIA. MANY VALUABLE SUGGESTIONS WERE RECEIVED AS WELL AS OFFERS TO HELP ORGANIZE ANY COURSES THE MDD MIGHT SPONSOR. BOTH SUGGESTIONS AND OFFERS OF HELP WERE CAREFULLY FILED.

HOWEVER, THESE REPLIES REFLECT THE VIEWS OF ONLY ABOUT 4 PERCENT OF THOSE WHO RECEIVE "THE GANGUE". WE WOULD APPRECIATE A WIDER SAMPLE BEFORE DECIDING WHETHER, AND ALONG WHICH LINES, TO PROCEED. FOR THOSE WHO HAVE NOT YET REPLIED, THE QUESTIONNAIRE IS REPEATED IN THIS ISSUE. PLEASE LET US KNOW YOUR VIEWS.

QUESTIONNAIRE

1. DO YOU SEE A NEED FOR SHORT COURSES IN CANADA AS OUTLINED ABOVE? Yes ___ No ___
2. WITH WHAT FREQUENCY SHOULD THEY BE OFFERED?
2 OR LESS PER YEAR ___
3 TO 6 PER YEAR ___
7 TO 10 PER YEAR ___
3. COULD YOU SPECIFY, IN DESCENDING ORDER OF PRIORITY, COURSE OR WORKSHOP TITLES THAT YOU BELIEVE TO BE APPROPRIATE?
(A) _____
(B) _____
(C) _____
(D) _____
(E) _____
4. OTHER COMMENTS AND SUGGESTIONS.

YOUR NAME (OPTIONAL), POSITION, AND LOCATION WOULD HELP IN ASSESSING YOUR RESPONSE TO THIS QUESTIONNAIRE. RESULTS WILL BE PUBLISHED IN THE GANGUE.

NAME
POSITION
LOCATION

PLEASE RETURN COMPLETED FORMS TO:

J.A. McDONALD
ESSO MINERALS CANADA
600 - 1281 W. GEORGIA STREET
VANCOUVER, B.C.
V6E 3J7

PROPOSAL TO CREATE A MINERAL DEPOSITS RESEARCH CENTRE

PROGRESS REPORT

AS MOST FAITHFUL READERS OF "THE GANGUE" ARE AWARE, I HAVE EXPRESSED, IN THIS MEDIUM, MY CONCERN THAT CANADA'S EFFORT IN FUNDAMENTAL RESEARCH IN MINERAL DEPOSITS GEOLOGY HAS FALLEN TO A LEVEL FAR BELOW THAT REQUIRED FOR THE FUTURE HEALTH OF OUR MINERAL INDUSTRY. THIS CONCERN CULMINATED IN A PROPOSAL, OUTLINED IN THE 1981 SPRING ISSUE (No. 9) OF "THE GANGUE", TO CREATE A "MINERAL DEPOSITS RESEARCH CENTRE" (MDRC) FOR CANADA. THE PROPOSAL WAS ALSO PRESENTED ORALLY TO THE CANADIAN GEOSCIENCE COUNCIL AND AT THE 1981 ANNUAL MEETING OF THE GEOLOGICAL ASSOCIATION OF CANADA. SINCE THAT TIME, I HAVE BEEN EXTREMELY PLEASED THAT MANY "GANGUE" READERS HAVE EXPRESSED SINCERE INTEREST IN SUBSEQUENT DEVELOPMENTS OF THE PROPOSAL AND THIS NOTE IS IN RESPONSE TO THESE INQUIRIES.

READERS WILL RECALL THAT THE PRINCIPAL FEATURES OF THE MDRC PROPOSAL ARE:

1. TO CREATE A CORE OF CENTRALIZED RESEARCH FACILITIES TO BE MADE AVAILABLE TO ALL CANADIAN GEOSCIENTISTS;
2. THE CENTRE WOULD BE STAFFED BY A RELATIVELY SMALL NUMBER OF PERMANENT RESEARCHERS (7 TO 10 WAS SUGGESTED);
3. THE BULK OF THE RESEARCH WOULD BE CONDUCTED BY VISITING SCIENTISTS;
4. RESEARCH AT MDRC WOULD BE PREDOMINANTLY OF THE "PROBLEM-ORIENTED" TYPE RATHER THAN THE "DEPOSIT-ORIENTED" AND SYNTHESIS APPROACHES, SO PREVALENT IN CANADA TODAY.

THE INTENT WAS TWOFOLD: 1. TO ESTABLISH A QUALITY RESEARCH FACILITY WHERE A SMALL CORE PROGRAM OF CONTINUING RESEARCH WOULD BE CARRIED OUT BY THE CENTRE STAFF SCIENTISTS; 2. THE CENTRE WOULD BE AVAILABLE TO ALL VISITING CANADIAN GEOSCIENTISTS WHO WOULD CARRY OUT SHORT RESEARCH PROGRAMS IN A "TOTALLY RESEARCH" ATMOSPHERE AND, UPON RETURNING TO THEIR OWN INSTITUTIONS ACROSS CANADA, DISSEMINATE THE RESULTS OF THEIR RESEARCH AND EXPERIENCE TO THEIR COLLEAGUES. THUS, AN ECONOMIC GEOLOGY PROFESSOR, ALONE IN A SMALL UNIVERSITY, A GOVERNMENT GEOLOGIST LACKING RESEARCH FACILITIES, OR AN INDUSTRY GEOLOGIST WISHING TO SHARPEN HIS APPRECIATION OF MODERN RESEARCH TECHNIQUES AND CONCEPTS, COULD ALL FEEL THAT, AT THE MDRC, THEY WOULD HAVE THE OPPORTUNITY TO WORK IN A RESEARCH ENVIRONMENT SURROUNDED BY EXPERTS IN MANY ASPECTS OF ECONOMIC GEOLOGY. THE

CONTACTS AND EXCHANGE OF IDEAS MADE BETWEEN GOVERNMENT, UNIVERSITY, AND INDUSTRY GEOLOGISTS, WORKING WITHIN THE COMMON ENVIRONMENT OF A RESEARCH CENTRE WOULD, I SUGGEST, GO A LONG WAY TOWARD INCREASING THE COMMUNICATION AND FLOW OF IDEAS AND CONCEPTS BETWEEN ALL MEMBERS OF CANADA'S ECONOMIC GEOLOGY COMMUNITY.

SO MUCH INTEREST WAS EXPRESSED, IN THE FUTURE OF CANADIAN MINERAL DEPOSITS RESEARCH, DURING LATE 1980 AND EARLY 1981, THAT THE CANADIAN GEOSCIENCE COUNCIL, AT THE REQUEST OF THE NATIONAL GEOLOGICAL SURVEYS COMMITTEE, ORGANIZED A WORKSHOP ON "FUTURE DIRECTIONS OF MINERAL DEPOSIT RESEARCH IN CANADA". THE TWO-DAY WORKSHOP, ORGANIZED BY J.M. FRANKLIN (GSC, OTTAWA), WAS HELD IN TORONTO, NOVEMBER 27-28, 1981. MORE DETAILS OF THIS WORKSHOP AND ITS RESULTS WILL BE ANNOUNCED BY JIM FRANKLIN IN THE NEAR FUTURE. THE MDRC PROPOSAL WAS ONE OF NINE PRESENTATIONS MADE AT THE WORKSHOP.

THE RESULTANT DISCUSSIONS TURNED OUT TO BE AN INTERESTING LESSON IN HUMAN NATURE. OF MOST CONCERN TO THE WORKSHOP PARTICIPANTS, WITH REGARD TO THE MDRC, WAS THE POSSIBLE LOCATION OF THE PROPOSED CENTRE. EVERY REGIONAL GROUP WANTED IT IN THE COMMUNITY (THE IMPLIED ENDORSEMENT OF THE MDRC CONCEPT DID NOT GO UNNOTICED); WESTERNERS DIDN'T WANT IT IN THE EAST; QUEBECERS DIDN'T WANT IT IN ONTARIO; AND TORONTONIANS DIDN'T WANT IT IN OTTAWA. ONE WESTERNER GRUMBLED "HELL, IF IT'S IN THE EAST, ALL THEY'LL STUDY IS MASSIVE SULPHIDES". WHAT HE, AND OTHERS WHO FELT LOCATION WAS ALL-IMPORTANT, FAILED TO REALIZE WAS THAT THE CENTRE MIGHT DEVOTE MOST OF ITS RESEARCH TO MASSIVE SULPHIDE PROBLEMS ONLY IF WESTERN GEOSCIENTISTS DIDN'T SUPPORT IT BY MAKING SURE THEY WERE AMONG THE VISITING RESEARCHERS. TO ACCURATELY BEAR ON CANADIAN RESEARCH PROBLEMS, IT SHOULD BE OBVIOUS THAT THE CENTRE MUST BE FILLED WITH A SPECTRUM OF VISITING CANADIAN GEOSCIENTISTS. I WAS DISAPPOINTED, ALTHOUGH NOT TOO SURPRISED, THAT A SMALL "P" PROVINCIAL ATTITUDE WOULD BLIND PEOPLE TO THE MUCH LARGER CHALLENGE OF PROVIDING THE NECESSARY SCIENTIFIC BASIS TO MAINTAIN, OR INCREASE, OUR MINERAL DISCOVERY RATE. AFTER ALL, CANADIANS SEEM TO HAVE ACCEPTED THE FACT THAT WE HAVE ONLY ONE LARGE RADIO-TELESCOPE, ONLY ONE NATIONAL RESEARCH COUNCIL, AND ONLY ONE CENTRE FOR REMOTE SENSING. THE CONCEPT OF ONLY ONE MINERAL DEPOSITS RESEARCH CENTRE SHOULD NOT COMPLETELY THROW US.

FOLLOWING FROM THE WORKSHOP, THE CANADIAN GEOSCIENCE COUNCIL HAS RECENTLY APPOINTED A "MINERAL DEPOSITS RESEARCH STEERING COMMITTEE" WHOSE OBJECTIVES ARE TO:

GOLD IN CENTRAL CANADA

THERE WILL BE A JOINT CIM-MDD SYMPOSIUM AT THE CIM ANNUAL MEETING IN WINNIPEG (APRIL 17-20, 1983) ON THE SUBJECT 'GOLD IN CENTRAL CANADA', AND WILL CONTRAST GOLD OCCURRENCES IN BOTH THE CHURCHILL AND SUPERIOR PROVINCES.

A LIST OF CONFIRMED SPEAKERS AND PROVISIONAL TITLES FOLLOWS:

- 1) METALLOGENY OF GOLD IN CENTRAL CANADA
- J. FRANKLIN (GSC)
- 2) FELSIC INTRUSION ASSOCIATED GOLD IN ABITIBI PROVINCE - M.E. CHERRY (O.G.S.)
- 3) GOLD ASSOCIATED WITH IRON FORMATION IN THE BEARDMORE-GERALDTOWN REGION - A.J. MACDONALD (O.G.S.)
- 4) GEOCHEMICAL HAYSTACKS AND GOLDEN NEEDLES, RED LAKE AREA, N.W., ONTARIO - J. PIRIE (Esso)
- 5) ALTERATION STUDIES IN THE RED LAKE AREA
- A.J. ANDREWS (O.G.S.)
- 6) GOLD METALLOGENY OF WESTERN WABIGOON SUB PROVINCE, NORTHWESTERN ONTARIO - C.E. BLACKBURN, D.A. JAMES (O.G.S.)
- 7) GOLD MINERALIZATION AT THE SAN ANTONIO JV LTD. MINE, BISSETT, MANITOBA - F. GENTILE (CHIEF GEOLOGIST)
- 8) GOLD MINERALIZATION IN THE ISLAND LAKE AREA, MANITOBA - P. THEYER (MANITOBA M.R.D.)
- 9) GOLD OCCURRENCES IN THE SOUTHEASTERN CHURCHILL PROVINCE - G. GALE (MANITOBA M.R.D.)
- 10) THE NOR ACME GOLD DEPOSIT, SNOW LAKE, MANITOBA
- D. ZIEHLKE (H.B.E.D.)
- 11) GEOLOGY AND GEOCHEMICAL ALTERATION AT THE AGASSIZ AU-AG DEPOSIT, LYNN LAKE, MANITOBA - M. FEDIKOW (MANITOBA M.R.D.), C. TAYLOR (SHERRITT GORDON)
- 12) GOLD MINERALIZATION IN THE FLIN FLON BELT (SASKATCHEWAN) - J. PIERSON (SASK. D.M.R.)
- 13) GOLD MINERALIZATION IN THE LA RONGE BELT, SASKATCHEWAN - W. COOMBS

TENTATIVE:

- 14) GEOLOGY OF THE DUPONT MINE, SHOAL LAKE.
D. DESNOYERS (SELCO)
- 15) LUPIN MINE, N.W.T. - J. KERSWILL (G.S.C.)

PLUS: TWO SPEAKERS STILL PROVISIONAL.

FIELD TRIP: PRECIOUS METALS DEPOSITS IN MEXICO

SPONSORS: MDD

LOCATION: PACHUCA, TAXCO, REAL DE ANGELES, FRESNILLO AND GUANAJUATO MINING CAMPS

DATE: FEBRUARY 23 TO MARCH 5, 1983

CONTACT: KEN DAWSON

GEOLOGICAL SURVEY OF CANADA,
100 WEST PENDER ST.,
VANCOUVER, B.C. V6B 1R8 (604)666-1260

NOTE: TRIP FULLY SUBSCRIBED.

DECEMBER 5-7

MINERAL DEPOSITS OF THE NORTHERN CORDILLERA

SPONSORS: MDD, CIM, DIAND

LOCATION: WHITEHORSE, YUKON

SYMPOSIUM: A NUMBER OF PAPERS WILL BE GIVEN DEALING WITH SPECIFIC PROPERTIES AND WITH SPECIFIC PROPERTIES AND WITH SPECIFIC COMMODITIES. A SPECIAL VOLUME FOR CIM WILL BE PREPARED.

ORGANIZERS: J. MORIN, G. ABBOTT, D. SINCLAIR,
I. PATERSON

CONTACT: J. MORIN,
PROGRAMME CHAIRMAN,
DEPT. OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT,
200 RANGE RD.,
WHITEHORSE, Y.T. Y1A 3V1 (403)668-5151

GAC/MAC/CGU JOINT ANNUAL MEETING

MAY 11-13, 1983, VICTORIA, B.C.

FOR DETAILS ON ALL GAC/MAC/CGU EVENTS WRITE:

VICTORIA '83
P.O. Box 880
POSTAL STATION E
VICTORIA, B.C. V8W 2R9

THE MINERAL DEPOSITS DIVISION LUNCHEON AND ANNUAL MEETING WILL BE HELD ON FRIDAY, MAY 13, 1983 AT THE COMMONS DINING ROOM, UNIVERSITY OF VICTORIA.

TIME: 12:00 NOON TO 2:00 P.M.; COST: \$10.00.
THE AGENDA INCLUDES REPORTS BY THE CHAIRMAN, SECRETARY, TREASURER AND INCOMING CHAIRMAN.

EVENTS OF INTEREST TO MINERAL EXPLORATION GEOLOGISTS INCLUDE:

- 1) AN MDD SPECIAL SESSION ENTITLED: "TIN AND TUNGSTEN DEPOSITS OF THE CANADIAN CORDILLERA", ORGANIZED BY K.M. DAWSON AND J.A. COOPE. TITLES OF PAPERS TO BE PRESENTED INCLUDE:

- A) CONTRASTING ENVIRONMENTS OF FORMATION OF TUNGSTEN AND TIN-BEARING SKARNS IN THE NORTH-EASTERN CANADIAN CORDILLERA
DICK, L.A. AND HODGSON, C.J.
- B) A TIN-TUNGSTEN GEOCHEMICAL CASE HISTORY: SURPRISE LAKE BATHOLITH, BRITISH COLUMBIA
BALLANTYNE, S.B.
- C) PARAGENESIS OF CASSITERITE AND ASSOCIATED MINERALS IN THE SURPRISE LAKE BATHOLITH, ATLIN, BRITISH COLUMBIA
LITTLEJOHN, A.L. AND BALLANTYNE, S.B.
- D) W-MO SKARN AND STOCKWORK MINERALIZATION, MT. REED-MT. HASKIN DISTRICT, CASSIAR, NORTHERN B.C.
BARNHILL, S., CLARK, A.H. AND HODGSON, C. JAY
- E) THE LOGTUNG W(SCHEELITE)-MO DEPOSIT, SOUTHERN YUKON: PETROLOGY AND GEOCHEMISTRY OF SPATIALLY ASSOCIATED FELSIC IGNEOUS ROCKS.
STEWART, J.P. AND EVENSEN, N.M.
- F) THE LOGTUNG W(SCHEELITE)-MO DEPOSIT, SOUTHERN YUKON: AN EXAMPLE OF LARGE TONNAGE, LOW GRADE, PORPHYRY-STYLE STOCKWORK AND SHEETED VEIN MINERALIZATION
NOBLE, S.R., SPOONER, E.T.C. AND HARRIS, F.R
- G) THE BOYA CLAIM GROUP: A TECTONICALLY TRANSPORTED W-MO STOCKWORK-SKARN OCCURRENCE, NORTHEASTERN B.C.
MORETON, E.P., CLARK, S.H. AND PEATFIELD, G.F.
- H) POTENTIAL OF SOUTHEAST SELWYN PLUTONIC SUITE FOR W-SKARN DEPOSITS
ANDERSON, R.G., ARMSTRONG, R.L., PARRISH, R. AND BOWMAN, J.R.
- I) HYDROGEN, CARBON AND OXYGEN ISOTOPE STUDIES OF THE CANTUNG SCHEELITE SKARN, TUNGSTEN, N.W.T., CANADA
BOWMAN, J.R., COVERT, J., MATHISON, G.A. AND CLARK, A.H.
- J) MINERALOGICAL AND CHEMICAL ZONATION IN THE SILENCE LAKE TUNGSTEN SKARN, CLEARWATER, B.C.
DAWSON, K.M., FRIDAY, S.J. AND McLAREN, M.
- K) GEOLOGY OF THE DUBLIN GULCH TUNGSTEN SKARN DEPOSITS, MAYO, YUKON TERRITORY
NORDIN G.D. AND ORSSICH, C.
- L) THE JC SN SKARN, SOUTHERN YUKON: A CONTACT METASOMATIC SN-Fe-F (Be-B-As) DEPOSIT RELATED TO THE SEAGULL BATHOLITH
LAYNE, G.D. AND SPOONER, E.T.C.
- M) GEOLOGY OF THE COAL CREEK TIN PROSPECT, SOUTH CENTRAL ALASKA
THUROW, G.
- N) GEOLOGY AND MINERALOGY OF THE EPD TIN DEPOSIT, McQUESTEN DISTRICT, YUKON TERRITORY
EMOND, D.S.
- 2) AN MDD SPECIAL SESSION ON "PRECIOUS METALS IN THE CANADIAN CORDILLERA" AND COMPARISON TO OTHER AREAS, ORGANIZED BY A. PANTELEYEV. A LIST OF TENTATIVE SPEAKERS AND TOPICS (NOT TITLES) INCLUDE:
- A) "A RE-EXAMINATION OF STRUCTURAL CONTROLS OF GOLD DEPOSITS"
C. JAY HODGSON ET AL. - QUEEN'S UNIVERSITY
- B) "MOSQUITO CREEK GOLD MINE", CARIBOO
D. ALLDRICK - B.C. MINISTRY OF ENERGY, MINES & PETROLEUM RESOURCES
- C) "CAROLIN GOLD MINE AND THE COQUIHALLA SERPENTINE BELT"
G. RAY - B.C. MINISTRY OF ENERGY, MINES & PETROLEUM RESOURCES
- D) "PLACER GOLD DEPOSITS OF THE YUKON"
R. DEBICKI - CONSULTANT TO D.I.A.N.D.
- E) "GEOLOGICAL SETTING OF YUKON GOLD DEPOSITS"
J. MORIN, - D.I.A.N.D.
- F) "GEOLOGICAL SETTING OF SOME PRECIOUS METALS DEPOSITS IN THE TOODOGONE DISTRICT"
D. FOSTER - UNIVERSITY OF B.C.
- G) "EQUITY SILVER'S SAM GOOSLY MINE"
R. PEASE, J. CYR - EQUITY SILVER + T.G. SCHROETER
- H) "ESPERANZA PROPERTY, TILLICUM MOUNTAIN"
M. SMITH - CONSULTANT
- I) "CINOLA DEPOSIT, QUEEN CHARLOTTE ISLANDS"
N. CHAMPIGNY - UNIVERSITY OF B.C.
- J) "ROSSLAND COPPER-GOLD CAMP"
J.T. FYLES - CONSULTANT
- K) "AYLWIN CREEK COPPER-GOLD BRECCIA PIPE"
K.B. HEATHER - QUEEN'S UNIVERSITY
- L) "A GEOCHEMICAL STUDY OF THE TRANSPORT OF GOLD AND SILVER BY FLUIDS"
S. ROMBERGER - COLORADO SCHOOL OF MINES
- M) "A COMPARISON AND OVERVIEW OF EPITHERMAL PRECIOUS METALS DEPOSITS IN THE U.S.A. AND MEXICO"
P.H. WETLAUFER - U.S.G.S.
- N) "GENETIC CLASSIFICATION AND STUDY OF HYDROTHERMAL ORE DEPOSITS BY GAS GEOCHEMISTRY"
C.G. CLIFTON - EXPLORATION RESEARCH LAB.
- O) "PRECIOUS METALS DEPOSITS IN THE MITCHEL-SULPHURETS AREA, NORTHWESTERN, B.C."
D. BRIDGE, ESSO RESOURCES

AN MAC SPECIAL SESSION ON "DEEP OCEAN MINERAL DEPOSITS AND THE CYPRUS PROJECT", ORGANIZED BY S. SCOTT (TORONTO), J.H. HALL (DALHOUSIE) AND R.L. CHASE (UBC). THE EMPHASIS OF THE SESSION WILL BE TO STUDY PRESENT-DAY SULPHIDE MINERALIZATION OCCURRING AT OCEANIC SPREADING CENTRES, IN COMPARISON TO THE ORE DEPOSITS OF THE TROODOS COMPLEX IN CYPRUS AS AN ANCIENT ANALOGUE.

A LIST OF INVITED SPEAKERS AND THEIR AREAS OF EXPERTISE, INCLUDES:

- A) MINERAL DEPOSITS OF CYPRUS
N. ADANIDES - HELLENIC MINING CO. CYPRUS AND
A. PANAYIOTOU - CYPRUS GEOL. SURVEY
- B) METALLIFEROUS DEPOSITS OF THE ATLANTIS II
DEEP IN THE RED SEA
H. BACHER - PREUSSAG MINING CO., GERMANY
- C) DEEP OCEAN SULPHIDES, 'BLACK SMOKERS', AND
OCEANIC SPREADING RIDGES
R.D. BALLARD - WOODS HOLE OCEANOGRAPHIC INST.
J. FRANCHETEAU - CNEXO (FRANCE)
P. LONSDALE - SCRIPPS OCEANOGRAPHIC INST.
A. MALAHOFF - NOAA
- D) MANGANESE NODULES
S. CALVERT - UBC AND R. HEATH - OREGON STATE
UNIVERSITY.
- E) TROODOS GEOLOGY
J. MALPAS - MEMORIAL UNIVERSITY
- F) COMPARISON OF CYPRUS AND CANADIAN SHIELD
DEPOSITS
J. LYDON - GEOLOGICAL SURVEY OF CANADA
- G) GEOCHEMISTRY OF EXHALATIVE FLUIDS
J. LUPTON - UNIV. OF CALIF (SANTA BARBARA)
H. CRAIG - SCRIPPS OCEANOGRAPHIC INST.
J. EDMOND - MASS. INST. OF TECHNOLOGY
- H) ROLE OF ANIMAL COMMUNITIES IN THE MODERN
SEAFLOOR "ORE" SYSTEMS
R.R. HESSLER - SCRIPPS OCEANOGRAPHIC INST.
- I) GEOPHYSICS AT JUAN DE FUCA AND CYPRUS
H.P. JOHNSON - UNIV. OF WASHINGTON
- J) CYPRUS REGIONAL ALTERATION
C. GILLIS - DALHOUSIE UNIVERSITY
- K) RESULTS OF THE CYPRUS DEEP-DRILLING PROJECT
H.P. ROBINSON - DALHOUSIE UNIVERSITY
- L) JUAN DE FUCA SULPHIDE DEPOSITS
J. DELANEY - UNIV. OF WASHINGTON
- M) JUAN DE FUCA
R. NORMARK - U.S.G.S. - MENLO PARK

4) AN MAC SHORT COURSE ENTITLED "SEDIMENT-HOSTED STRATIFORM LEAD-ZINC DEPOSITS", TO BE HELD ON MAY 9-10, 1983 (PRIOR TO THE MAIN MEETING). LECTURES TO BE GIVEN INCLUDE:

- A) SEDIMENT-HOSTED MASSIVE SULPHIDE LEAD-ZINC
DEPOSITS: AN EMPIRICAL MODEL
D. LARGE - BRAUNSCHWEIG, WEST GERMANY
- B) GEOLOGY OF THE SULLIVAN DEPOSIT, KIMBERLEY,
B.C., CANADA
J.M. HAMILTON, G.D. DELANEY, R.L. HAUSER, AND
P.W. RANSOM - COMINCO LTD.
- C) GEOLOGY AND MINERAL DEPOSITS OF THE GATAGA
DISTRICT, B.C.
D. MACINTYRE - B.C. MINISTRY OF ENERGY, MINES
AND PETROLEUM RESOURCES
- D) THE CIRQUE BARITE-SULPHIDE DEPOSITS, NORTH-
EASTERN BRITISH COLUMBIA
C.W. JEFFERSON, D.B. KILBY, L.C. PIGAGE,
W.J. ROBERTS - CYPRUS ANVIL MINING CORP.
- E) DEPOSITIONAL ENVIRONMENTS OF HOST ROCKS TO
NORTHERN AUSTRALIAN LEAD-ZINC DEPOSITS
M.J. MUIR - C.R.A. EXPLORATION PTY. LTD.,
AUSTRALIA
- F) CHEMICAL PARAMETERS CONTROLLING THE ORIGIN
AND DEPOSITION OF SEDIMENT-HOSTED STRATIFORM
LEAD-ZINC DEPOSITS
J.W. LYDON - GEOLOGICAL SURVEY OF CANADA, OTT
- G) GENESIS OF SEDIMENT-HOSTED STRATIFORM LEAD-
ZINC DEPOSITS BY DOWNWARD-PENETRATING CIRCUL-
ATION
M.J. RUSSELL - UNIVERSITY OF STRATHCLYDE,
SCOTLAND.
- H) DEFORMATION OF STRATIFORM LEAD-ZINC DEPOSITS
K. McCLAY - GOLDSMITHS' COLLEGE, LONDON

REGISTRATION FEE OF \$115 (CANADIAN) INCLUDES A BOUND SET OF LECTURE NOTES, ATTENDANCE AT ALL SESSIONS AND A WINE-AND-CHEESE SOCIAL. A SPECIAL REGISTRATION FEE OF \$75 IS AVAILABLE FOR 35 STUDENTS WHO INCLUDE WITH THEIR REGISTRATION A LETTER OF CERTIFICATION FROM THEIR DEPARTMENTAL CHAIRMAN. REGISTRANTS ARE RESPONSIBLE FOR THEIR OWN ACCOMMODATIONS AND MEALS DURING THE SHORT COURSE. A LIMITED NUMBER OF ROOMS AT VICTORIA UNIVERSITY RESIDENCE WILL BE AVAILABLE AND MAY BE RESERVED AT THE TIME OF REGISTRATION FOR THE SHORT COURSE.

REGISTRATION WILL BE LIMITED TO 200 (INCLUDING STUDENTS) AND WILL BE ACCEPTED ON A FIRST-COME, FIRST-SERVED BASIS. A LIMIT OF TWO REGISTRANTS PER INSTITUTION WILL BE APPLIED UNLESS SPACE PERMITS.

FIELD TRIP REPORT:

SAN JUAN VOLCANIC FIELD CONFERENCE, SEPT. 19-24/1982

GENERAL INFORMATION

D.F. SANGSTER, ORGANIZER
MAC SHORT COURSE
GEOLOGICAL SURVEY OF CANADA
601 BOOTH STREET
OTTAWA, ONTARIO, CANADA K1A 0E8
PH. (613)995-5500

REGISTRATION FORMS

D. MacINTYRE, CO-ORDINATOR
MAC SHORT COURSE
B.C. MINISTRY OF ENERGY, MINES & PET. RESOURCES
PARLIAMENT BUILDINGS
VICTORIA, B.C. V8V 1X4
PH. (604)387-5068

SHORT COURSE ENTITLED "COAL PETROGRAPHY: IT'S PRINCIPLES, METHODS AND APPLICATIONS". ORGANIZED BY M. BUSTIN, A. CAMERON, D. GRIEVE AND W. KALKREUTH, IN VANCOUVER AND VICTORIA, MAY 8 TO 10.

THE COURSE COVERS THE TOPICS: FORMATION OF COAL, NATURE OF COAL MACERALS, INORGANIC CONSTITUENTS AND OXIDATION OF COAL, SAMPLING AND PREPARATION, COAL MICROSCOPIC METHODS, RELATIONSHIP OF PETROGRAPHY TO OTHER COAL PROPERTIES.

FIELD EXCURSIONS

SOME GOLD DEPOSITS IN THE WESTERN CANADIAN CORDILLERA.

MAY 7-10. MAXIMUM: 35 PERSONS.

LEADERS: G.E. RAY, J. BELLAMY, L. CARLYLE,
J. SHEARER.

PORPHYRY DEPOSITS OF SOUTHERN BRITISH COLUMBIA.

MAY 14-18. MAXIMUM: 36 PERSONS.

LEADERS: W.J. McMILLAN, V.A. PRETO,
A.E. SOREGAROLI.

MOLYBDENUM, COPPER AND SILVER DEPOSITS OF NORTH CENTRAL BRITISH COLUMBIA.

MAY 6-9. MAXIMUM: 36 PERSONS.

LEADERS: N.C. CARTER, T.G. SCHROETER AND MINE STAFF.

MINERAL DEPOSITS OF VANCOUVER ISLAND: WESTMIN RESOURCES (AG, AU, ZN, CU, PB), ISLAND COPPER (CU, MO), NIMPKISH IRON (FE, CU).

MAY 13 (EVENING)-16. MAXIMUM: 36 PERSONS.

LEADERS: J. FLEMING, J. LAMB, R. WALKER.

THE SOCIETY OF ECONOMIC GEOLOGISTS HAS DONE IT AGAIN WITH AN EXCELLENT FIELD CONFERENCE, THIS TIME ON THE RELATIONSHIP OF MINERALIZATION TO THE VOLCANIC EVOLUTION OF THE SAN JUAN MOUNTAINS, COLORADO. LEADERS WERE PHILIP M. BETHKE, TOM C. CASADEVALL, PETER W. LIPMAN AND THOMAS A. STEVEN, ALL OF U.S. GEOLOGICAL SURVEY. I WAS ONE OF A HANDFUL OF CANADIANS LUCKY ENOUGH TO PARTICIPATE WITH THIS GROUP OF ALMOST 100 GEOLOGISTS. FIELD TRIPS DURING THE DAY WERE FOLLOWED BY TOPICAL AFTER DINNER LECTURE SESSIONS, A FORMAT WHICH RESULTED IN LONG GRUPELLING DAYS BUT WHICH REALLY GAVE US OUR MONEY'S WORTH.

THE SAN JUAN VOLCANIC FIELD CONSISTS OF A MIDDLE TERTIARY INTERMEDIATE STRATAVOLCANIC BASE UPON WHICH SEVERAL MIDDLE TO LATE TERTIARY CALDERAS FORMED AND RELATED RHYOLITIC PYROCLASTIC ROCKS WERE DEPOSITED. NUMEROUS EPITHERMAL PRECIOUS AND BASE METAL ORE DEPOSITS ARE ASSOCIATED WITH FRACTURED AND PERMEABLE ZONES IN THESE ROCKS. TWO DEPOSITS WITH DISSEMINATED PRECIOUS METAL MINERALIZATION - SUMMITVILLE AND CREEDE, WERE ESPECIALLY INTERESTING.

AT SUMMITVILLE, GOLD-SILVER-COPPER MINERALIZATION OCCURS IN THE UPPER PART OF A COMPOSITE QUARTZ LATITE PORPHYRY DOME LOCATED WHERE A NORTHWEST TRENDING FRACTURE ZONE INTERSECTS THE RING FRACTURE OF THE SUMMITVILLE CALDERA. THE MINERALIZATION IS ASSOCIATED WITH PIPES, PODS AND TABULAR MASSES OF SILICIFIED AND ALUNITIZED ROCK, AND LOCALIZED BY NORTHWEST-TRENDING FRACTURES AND CONTACTS BETWEEN PORPHYRY PHASES. ROCKS OUTBOARD OF THESE LOCI ARE Pervasively ARGILLIZED (ILLITE-KAOLINITE) AND PROPYLITIZED (CHLORITE-MONTMORILLONITE). WITH DEPTH, ALTERATION OF QUARTZ LATITE PORPHYRY GRADES INTO CLAY-SERICITE-PYRITE. THE ALTERATION IS INTERPRETED TO HAVE RESULTED FROM LOW PH-SOLFATARIC FLUIDS. ONLY THE ROCKS WITH SILICIFICATION CARRY GOLD WHEREAS THOSE WITH ARGILLIC ALTERATION ALONE ARE BARREN IN GOLD.

NEAR CREEDE, COLORADO, THE FAMOUS AMETHYST AND OH VEIN SYSTEMS ARE LOCALIZED ALONG FAULT ZONES THAT EXTEND RADIALLY NORTH-NORTHWESTWARD FROM THE CREEDE CALDERA. THE COARSE CLASTIC INTRACALDERA FILL FACIES OF THE CREEDE FORMATION IS INTERSECTED BY THESE FAULTS. A PALEO-CHANNEL IN THE CLASTIC ROCKS ENDS ABRUPTLY IN FAULT CONTACT WITH THE MINERALIZED AMETHYST FAULT. ACANTHITE (AG₂S) WITH ACCOMPANYING MANGANESE AND BARITE MINERALS IS DISSEMINATED IN GREY SILICIFIED ZONES IN THE CLASTIC ROCK HOST.

J.A. MORIN

ANNOUNCEMENTS

CALENDAR OF EVENTS (GENERAL) 1983

MARCH 6-9

51ST ANNUAL CONVENTION, PROSPECTORS AND DEVELOPERS ASSOCIATION, ROYAL YORK HOTEL, TORONTO, ONTARIO.
FOR DETAILS: PROSPECTORS AND DEVELOPERS ASSOCIATION, SUITE 219 - 159 BAY STREET, TORONTO, ONTARIO, M5J1J7.

APRIL 17-20

CANADIAN INSTITUTE OF MINING AND METALLURGY, ANNUAL GENERAL MEETING, WINNIPEG, MANITOBA.
FOR DETAILS: G.F. SKILLING, C.I.M.M., SUITE 400, 1130 SHERBROOKE ST. W., MONTREAL, QUEBEC, H3A 2M8.

APRIL 26-29

CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS NATIONAL CONVENTION HELD AT THE CALGARY CONVENTION CENTER, CALGARY, ALBERTA.

MAY 2-4

CORDILLERAN AND ROCKY MOUNTAIN SECTIONS, GEOLOGICAL SOCIETY OF AMERICA, ANNUAL MEETING, SALT LAKE CITY.
FOR DETAILS: JEAN M. LATULIPPE, GSC HEADQUARTERS, P.O. BOX 9140, BOULDER, COLORADO, 80301.

MAY 3-6

8TH CANADIAN SYMPOSIUM ON REMOTE SENSING AND THE 4TH CONGRESS OF THE ASSOCIATION QUÉBÉCOISE DE TÉLÉDETECTION, MONTREAL, QUEBEC.
FOR DETAILS: F.J. BONN, LABORATOIRE DE TÉLÉDETECTION, DÉPARTEMENT DE GÉOGRAPHIE, UNIVERSITÉ DE SHERBROOKE, P.Q.

AUGUST 29-SEPTEMBER 1

10TH IGES -3RD SMGP: HELSINKI, FINLAND

THE GEOLOGICAL SURVEYS OF SCANDINAVIA ARE HOSTING THE JOINT 10TH INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM AND THE 3RD SYMPOSIUM ON METHODS OF GEOCHEMICAL PROSPECTING WHICH WILL BE HELD IN HELSINKI. THE SYMPOSIUM IS SPONSORED BY THE ASSOCIATION OF EXPLORATION GEOCHEMISTS AND THE INTERNATIONAL ASSOCIATION OF GEOCHEMISTRY AND COSMOCHEMISTRY WORKING GROUP ON GEOCHEMICAL PROSPECTING. THE OFFICIAL LANGUAGE OF THE SYMPOSIUM WILL BE ENGLISH.
FOR INFORMATION CONTACT: DR. ALF BJÖRKLUND, 10TH IGES-3RD SMGP, GEOLOGICAL SURVEY OF FINLAND, SF-02150 ESPOO, FINLAND. TEL. (9)0-46931.

SEPTEMBER 16-17

CORRELATION OF CALEDONIAN STRATABOUND SULPHIDES SYMPOSIUM, OTTAWA, ONTARIO. ORGANIZED IN COLLABORATION WITH IGCP PROJECT 60.
FOR DETAILS: D.F. SANGSTER, GEOLOGICAL SURVEY OF CANADA, 601 BOOTH STREET, OTTAWA, ONTARIO K1A 0E8.

OCTOBER 31-NOVEMBER 3

GEOLOGICAL SOCIETY OF AMERICA, ANNUAL MEETING, INDIANAPOLIS, INDIANA.
FOR DETAILS: A. MIRSKY, DEPARTMENT OF GEOLOGY, INDIANA UNIVERSITY/PURDUE UNIVERSITY, 925 W. MICHIGAN ST., INDIANAPOLIS, INDIANA, 46202, U.S.A.

1984

APRIL 15-19

CANADIAN INSTITUTE OF MINING AND METALLURGY, ANNUAL GENERAL MEETING, OTTAWA, ONTARIO.
FOR DETAILS: G.F. SKILLING, C.I.M.M., SUITE 400, 1130 SHERBROOKE ST. W., MONTREAL, QUEBEC, H3A 2M8.

MAY 13-16

GEOLOGICAL ASSOCIATION OF CANADA - MINERALOGICAL ASSOCIATION OF CANADA, ANNUAL MEETING, UNIVERSITY OF WESTERN ONTARIO, LONDON, ONTARIO.
FOR DETAILS: W.S. FYFE, DEPARTMENT OF GEOLOGY, UNIVERSITY OF WESTERN ONTARIO, LONDON, ONTARIO, N6A 3K9.

LECTURES AND OTHER EVENTS

GAC-CORDILLERAN SECTION: 1982-83 LECTURE PROGRAM

THE SCHEDULED SPEAKERS AND THEIR TOPICS ARE AS FOLLOWS:

12 NOON, WEDNESDAY, FEBRUARY 2, COMBINED G.A.C./MEG. LUNCHEON, GEORGIA HOTEL

SPEAKER: L. ROGERS, PEGASUS MINE, ZORTMAN, MONTANA
SUBJECT: GEOLOGY OF THE PEGASUS DEPOSITS

4:00 PM, THURSDAY, FEBRUARY 10, ROBSON SQUARE MEDIA CENTRE

SPEAKER: DALE A. RUSSELL, NATIONAL MUSEUM OF NATURAL SCIENCES, OTTAWA

SUBJECT: IMPLICATIONS OF THE EXTINCTION OF THE DINOSAURS

12 NOON, WEDNESDAY, MARCH 2, COMBINED G.A.C./M.E.G. LUNCHEON, GEORGIA HOTEL

SPEAKER: LARRY J. BUCHANAN, FISCHER-WATT MINING COMPANY, RENO, NEVADA

SUBJECT: PRECIOUS METAL DEPOSITS ASSOCIATED WITH VOLCANIC ENVIRONMENTS IN THE SOUTHWEST, U.S.

4:00 PM, THURSDAY, MARCH 10, ROBSON SQUARE MEDIA CTR.

SPEAKERS: D.C. MURPHY, JENNIFER S. GETSINGER AND ANNE ANDREW, UNIVERSITY OF BRITISH COLUMBIA

SUBJECT: STRUCTURAL EVOLUTION AND LEAD ISOTOPE EVIDENCE FOR GENESIS OF VEIN ORES IN THE SOUTHERN AND WESTERN CARIBOO MOUNTAINS

12 NOON, WEDNESDAY, APRIL 6, COMBINED G.A.C./M.E.G. LUNCHEON, GEORGIA HOTEL

SPEAKER: D.E. ROBERTS, WESTERN MINING CORPORATION, SOUTH AUSTRALIA

SUBJECT: THE OLYMPIC DAM COPPER-URANIUM-GOLD DEPOSIT, ROXBURY DOWNS, SOUTH AUSTRALIA