



**GEOLOGICAL SURVEY OF CANADA**

**OPEN FILE 2915b**

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# Global distribution of sediment-hosted stratiform copper deposits and occurrences

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Compiled by

**R.V. Kirkham, J.J. Carrière,  
R.M. Laramée, D.F. Garson**

**1994**





# GLOBAL DISTRIBUTION OF SEDIMENT-HOSTED STRATIFORM COPPER DEPOSITS AND OCCURRENCES

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Kirkham, R.V., Carrière, J.J.,  
Laramée, R.M., and Garson, D.F.

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Global Distribution of Sediment-Hosted Stratiform Copper Deposits and Occurrences .....	Map at Scale 1:35 000 000
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## **ABSTRACT**

SEDCU is an index-level digital database for sediment-hosted stratiform copper deposits and occurrences. It was developed to improve the understanding of the distribution, geological setting and genesis of this important type of copper deposit, but should also be useful as a guide to mineral exploration. The database contains information on 904 deposits and occurrences in 59 countries, including location, deposit subtype, geological province, age and lithology of host rocks, formation name, and bibliographic references. Production and reserve figures for more than 130 deposits are included.

## **INTRODUCTION**

Sediment-hosted stratiform (SSC) or "diagenetic sedimentary" copper deposits account for 15 to 20% of world copper production and reserves. Production has come primarily from a few large districts including Zambia and Zaire, in the central African Copperbelt, Lubin in Poland and Dzhezkazgan in Kazakhstan. Although SSC deposits are known in Canada, none have yet proven to be economically exploitable. SEDCU, the index-level digital database included in this report, was developed in an attempt to better understand the distribution, geological setting and genesis of this important type of copper deposit (Kirkham, 1989).

The SEDCU database was based on CANMINDEX, the Geological Survey of Canada's index-level file of Canadian mineral deposits and occurrences (Picklyk et al., 1978). The CANMINDEX database structure was expanded to include additional fields for continent, country, deposit subtype, age and lithology of host rocks, formation name, production and reserves. The SEDCU database contains information on 904 deposits and occurrences in 59 countries, including a bibliography of 680 references. There are more than 350 individual production and reserve figures. Symbols representing the subtype and location of the deposits and occurrences from SEDCU are plotted on the accompanying map. The geology base is a simplified version of the Generalized Geological Map of the World to be released separately as Geological Survey of Canada, Open File 2915a (Kirkham et al., 1994). The digital form of this map is being released as part of Geological Survey of Canada, Open File 2915d.

## **NOTES ON THE DATABASE**

SEDCU was compiled in the period 1982-1991 which spanned the transition from mainframe to microcomputer-based database management systems. The database includes some artifacts of the limited text handling capabilities of the earlier system. For example:

- all data have been coded in capital letters;
- some abbreviated or incomplete words were used in order to include as much information as possible in fixed-length fields;

- in the Bibliography, only the first author of a multiple-authored reference is listed in some cases whereas all authors are listed in others.

Gaps in the deposit numbering are explained by deletion from the file of those deposits which, on closer examination, did not fit the sediment-hosted stratiform deposit type.

The accompanying diskette (MS-DOS format) contains the digital version of all data printed in this report. The text file "README.1ST" contains the description of the database components and fields.

## **ACKNOWLEDGMENTS**

Cartography by the Geoscience Information and Communications Division of the Geological Survey of Canada, and L.B. Chorlton, GIS-Regional Geology contractor. The manuscript was critically reviewed by C.D. Anglin.

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- 1989: The distribution, setting and genesis of sediment-hosted stratiform copper deposits; in Sediment-hosted Stratiform Copper Deposits, ed. R.W. Boyle, A.C. Brown, C.W. Jefferson, E.C. Jowett and R.V. Kirkham; Geological Association of Canada, Special Paper 36, p. 3-38.

Kirkham, R.V., Chorlton, L.B. and Carrière, J.J.

- 1994: Generalized Geological Map of the World; Geological Survey of Canada, Open File 2915a, 1 map, scale 1:35 000 000

- 1994: Generalized Geological Map of the World, Open File 2915a: in Map Folio of Generalized Geological Maps of the World and Linked Databases; Geological Survey of Canada, Open File 2915d, 1 CD-ROM

Picklyk, D.D., Rose, D.G. and Laramée, R.M.

- 1978: Canadian Mineral Occurrence Index (CANMINDEX) of the Geological Survey of Canada; Geological Survey of Canada, Paper 78-8, 27 p.

## EXPLANATION OF THE LISTING

COUNTRY-MAP NUMBER (COMPONENT) (country name - number of the deposit **within that country** as it appears on the map; the component, such as (A), (B) or (C), identifies an entity, such as an ore zone, within a larger deposit)

NAME (Name of the deposit with the alternate name(s) in brackets)

COMMODITIES (The commodities present)

(SEE RESERVE/PRODUCTION REPORT) (This statement, after the commodities listed, indicates that Reserve and/or Production data appear in the separate Reserve/ Production Listing)

LATITUDE & LONGITUDE (Location given in degrees, minutes and seconds; the single character indicates N or S for latitude and E or W for longitude)

ENTITY COMMENT (States what the location represents and/or general or reference information)

GEOGRAPHICAL SUBDIVISION (Province, State or Kingdom)

GEOLOGICAL PROVINCE (Name of the geological province in which the deposit occurs)

CU SUBTYPE (Paralic Marine ("Kupferschiefer type"), Continental Redbed ("redbed type") or Undifferentiated)

GEOLOGY (Concise description of the geology of the deposit)

REMARKS (General remarks about the deposit)

AGE OF HOST (Age of the host rock)

LITHOLOGY (Details about the rock units which host the deposit)

FORMATION (Specific Formation and Group names)

GEOREMARKS (Specific remarks about the geology of the deposit)

REFERENCES (References are listed in the Bibliography, and describe the deposit or the geology of the area; they are listed in order, from the most detailed (i.e., deposit geology) to the most general (i.e., regional geology). Each reference has a unique bibliographic reference number which appears in brackets after the name of the author and the year. The Bibliography is ordered by this unique number.)



**SEDIMENT-HOSTED STRATIFORM  
COPPER DEPOSITS AND OCCURRENCES**

**Listed Alphabetically by Continent,  
Country and Map Number.**

## AFRICA

### ALGERIA-1

AIN-SEFRA  
CU

32 45 00 N 0 35 00 W

ENTITY COMMENT (AIN SEFRA/ TIMES WORLD ATLAS)

GEOLOGICAL PROVINCE (SAHARAN ATLAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARENITES ASSOCIATION WITH ORGANIC  
MATERIAL)

REMARKS (FOUR MAIN DEPOSITS/ MINERALIZATION  
CONTROLLED BY PALEOCHANNEL)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (GREEN ARGILLITE/WHITE SANDSTONE)  
GEOREMARKS (HOST DELTAIC-TYPE SEDIMENTS WERE  
DEPOSITED ON VAST FLOOD PLAINS)

KOLLI, O. 1983 (224)  
CAIA, J. 1976 (70)  
IMREH, L. 1962 (195)  
CAILLEUX, A. 1962 (71)  
KOLLI, O. 1986 (653)

### ALGERIA-1(A)

GARAT DEBBA  
CU

32 46 12 N 0 40 00 W

ENTITY COMMENT (NO 4/ FIG 2 IN KOLLI 1983)

GEOGRAPHICAL SUBDIVISION (WEST)  
GEOLOGICAL PROVINCE (WEST SAHARIAN ATLAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (WITH VEGETAL DEBRIS IN ARGILLITE OR DISSEM IN  
SS)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (GREEN ARGILLITE/WHITE SANDSTONE)  
FORMATION (AISSA/ TILOULA/ TIOUT FORMATIONS)  
GEOREMARKS (IN SOME LENSES TREE TRUNKS/ BRANCHES/  
TWIGS ARE EASILY RECOGNIZABLE)

KOLLI, O. 1983 (224)  
CAIA, J. 1976 (70)  
CAILLEUX, A. 1962 (71)

### ALGERIA-2

TILOULA  
CU

32 51 00 N 0 27 00 W

ENTITY COMMENT (NO 5/ FIG 2 IN KOLLI 1983)

GEOGRAPHICAL SUBDIVISION (WEST)  
GEOLOGICAL PROVINCE (WEST SAHARIAN ATLAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (LOCALIZED IN 4 SMALL ARGILLITE/SANDY SILT  
BANKS)  
REMARKS (CU ONLY SEEN AT CONTACT BETWEEN ARGILLITES  
AND VEGETAL DEBRIS THEREIN)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (GREEN ARGILLITE INTERCALATED WITH SS  
LENSES)  
FORMATION (AISSA/ TILOULA/ TIOUT FORMATION)

KOLLI, O. 1983 (224)  
CAIA, J. 1976 (70)

### ALGERIA-3

DJEBEL DJARA  
CU

32 50 00 N 0 14 30 W

ENTITY COMMENT (NO 8/ FIG 2 IN KOLLI 1983)

GEOGRAPHICAL SUBDIVISION (WEST)  
GEOLOGICAL PROVINCE (WEST SAHARIAN ATLAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (LENTICULAR BODIES EMBEDDED INTO FINE-GR  
SANDSTONE)  
REMARKS (CU DEPOSIT CONTROLLED BY PALEO CHANNELS IN  
DELTAIC/LAGOONAL ENVIRONMEN)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (SANDSTONE/SANDY ARGILLACEOUS  
CONGLOMERATE)  
FORMATION (AISSA/ TILOULA/ TIOUT FORMATIONS)  
GEOREMARKS (THE LENTICULAR CU-BEARING SEDIMENTS  
OCCUR ON NW FLANKS OF AN ANTICLINE)

KOLLI, O. 1983 (224)  
CAIA, J. 1976 (70)

### ALGERIA-4

MEHIRIZE  
CU

32 50 50 N 0 13 00 W

ENTITY COMMENT (NO 7/ FIG 2 IN KOLLI 1983)

GEOGRAPHICAL SUBDIVISION (WEST)  
GEOLOGICAL PROVINCE (WEST SAHARIAN ATLAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOCIATED WITH GREEN ARGILLITES)  
REMARKS (MINERALIZED LENSES LOCATED ON FLANKS OF  
SMALL ANTICLINAL STRUCTURES)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (GREEN ARGILLITE)  
FORMATION (TILOULA FM)  
GEOREMARKS (DEPOSIT OF CONSIDERABLE GEOGRAPHIC  
EXTENT WITH THICKNESS UP TO 6M)

KOLLI, O. 1983 (224)  
CAIA, J. 1976 (70)

### ANGOLA-1

ZENZA  
CU

9 20 00 S 14 15 00 E

ENTITY COMMENT (ZENZA/ FIG 1 BIBL 2 PG 410)

CU SUBTYPE (PARALIC MARINE)



GEOLOGY (IN TOP PART OF THICK SEQUENCE OF SS & MUDSTONE)  
REMARKS (SUBECONOMIC/ FOUND ON SURFACE OVER MORE THAN 1 KM ALONG STRIKE)

AGE OF HOST (CRETACEOUS)  
LITHOLOGY (REDDISH CONGLOMERATIC SS/MICACEOUS MUDSTONES)  
FORMATION (UPPER CUVO)  
GEOREMARKS (OXIDES CONTAIN UP TO 2% CU BUT EXTEND TO A DEPTH OF ONLY 80 METRES)

VAN EDEN, J.G. 1978 (378)  
CAIA, J. 1976 (70)

#### **ANGOLA-2**

CACHOEIRAS DE BINGA  
CU (SEE RESERVE/PRODUCTION REPORT)

10 59 00 S 14 00 00 E

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN FINELY BEDDED MUDSTONE AND SILTSTONE)

AGE OF HOST (CRETACEOUS)  
LITHOLOGY (MUDSTONE & SILTSTONE JUST BELOW MASSIVE LMSN)  
FORMATION (UPPER CUVO)

CAIA, J. 1976 (70)  
VAN EDEN, J.G. 1978 (378)

#### **ANGOLA-3**

ENGLISH (BENGUELA)  
CU

12 34 00 S 13 24 00 E  
ENTITY COMMENT (NEAR BENGUELA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ARENITES AND ARGILLITES AS CARBONATES & OXIDES)  
REMARKS (PRODUCED ESTIMATED 2000 TONS OF CU ORE DURING LATE 19TH CENTURY)

AGE OF HOST (CRETACEOUS)  
LITHOLOGY (CONGLOMERATES/GRITS/FELDSPATHIC SS/SILTSTONES)  
GEOREMARKS (THE CLASTIC SEQUENCE THICKENS RAPIDLY TO THE WEST)

VAN EDEN, J.G. 1978 (378)  
VAN EDEN, J.G. 1978 (378)

#### **BOTSWANA-1**

BUSHMAN GROUP  
CU (SEE RESERVE/PRODUCTION REPORT)

20 30 00 S 26 33 30 E  
ENTITY COMMENT (CU 5 BUSHMAN/ FIG 2 BIBL 2)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN LENSES OF GRAPHITIC QUARTZITE WITHIN LIMESTONE)  
REMARKS (THREE ORE ZONES-(FROM SOUTH TO NORTH)-ERASMUS/ BUSHMAN/ MAPANIPANI)

AGE OF HOST (PROTEROZOIC)  
LITHOLOGY (GRAPHITIC QUARTZITES & SCHISTS)  
GEOREMARKS (INTENSE SHEARING RESPONSIBLE FOR PRESENT CONFIGURATION OF OREBODIES)

BALDOCK, J.W. 1977 (21)  
BALDOCK, J.W. 1976 (20)

#### **BOTSWANA-2**

NGWAKO PAN (LAKE NGAMI AREA)  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

20 45 00 S 23 06 00 E  
ENTITY COMMENT (CU 6/ FIG 1 BIBL 2)

GEOLOGICAL PROVINCE (DAMARAN MOBILE BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ONE PERSISTENT HORIZON OF CALAREOUS ARGILLITE)  
REMARKS (MAIN DEPOSIT IN AREA CONTAINING SEVERAL DEPOSITS)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (CALCAREOUS ARGILLITE)  
FORMATION (GHANZI FORMATION/ DAMARA SYSTEM)  
GEOREMARKS (CU HORIZON FOLDED & THRUST/ TRACED OVER 300 KM STRIKE LENGTH)

BALDOCK, J.W. 1976 (20)  
MODISI, M.P. 1983 (274)  
RUXTON, P.A. 1981 (329)  
BALDOCK, J.W. 1977 (21)

#### **BOTSWANA-3**

LOGOLO (MATSITAMA)  
CU (SEE RESERVE/PRODUCTION REPORT)

20 58 00 S 26 45 00 E  
ENTITY COMMENT (JUST NORTH OF MAKALA)

GEOLOGICAL PROVINCE (MATSITAMA SCHISTBELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SILICEOUS LIMESTONES/ QUARTZ-SCHISTS/ PHYLLITES)  
REMARKS (STRATIGRAPHICALLY SOME 90M BELOW MAKALA DEPOSIT/ 500M STRIKE LENGTH)

AGE OF HOST (PRECAMBRIAN (LOWER PROTEROZOIC ?))  
LITHOLOGY (SILICEOUS LIMESTONE TO CALCAREOUS QUARTZITES)  
GEOREMARKS (ZONE COMPRISES 2 OR MORE THIN HORIZONS IMPERSISTENT IN DEPTH)

BALDOCK, J.W. 1977 (21)  
BALDOCK, J.W. 1976 (20)

#### **BOTSWANA-4**

MAKALA (MATSITAMA)  
CU, ZN (SEE RESERVE/PRODUCTION REPORT)

21 00 00 S 26 45 00 E  
ENTITY COMMENT (2 KM NORTHWEST OF THAKADU)

GEOLOGICAL PROVINCE (MATSITAMA SCHISTBELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SILICEOUS LIMESTONES/ QUARTZ-SCHISTS/  
PHYLLITES)  
REMARKS (NEAR SURFACE MINERALIZATION POORLY  
DEVELOPED/ OXIDES NOT IMPORTANT)  
  
AGE OF HOST (PRECAMBRIAN (LOWER PROTEROZOIC ?))  
LITHOLOGY (SILICEOUS LIMESTONE TO CALCAREOUS  
QUARTZITES)  
GEOREMARKS (TRACED OVER 1200 M ALONG STRIKE  
DOWNDIP EXTENSION TO AT LEAST 650 M)

BALDOCK, J.W. 1976 (20)  
BALDOCK, J.W. 1977 (21)

#### **BOTSWANA-5**

THAKADU (MATSITAMA)  
CU (SEE RESERVE/PRODUCTION REPORT)

21 02 30 S 26 50 00 E  
ENTITY COMMENT (NEAR MATSITAMA VILLAGE)

GEOLOGICAL PROVINCE (MATSITAMA SCHISTBELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SILICEOUS LIMESTONES/ QUARTZ-SCHISTS/  
PHYLLITES)  
REMARKS (THAKADU/ MAKALA/ LOGOLO/ PEOLANE-NOKO  
COLLECTIVELY KNOWN AS MATSITAMA)

AGE OF HOST (PRECAMBRIAN (LOWER PROTEROZOIC ?))  
LITHOLOGY (SILICEOUS LIMESTONE TO CALCAREOUS  
QUARTZITES)  
GEOREMARKS (400 M STRIKE LENGTH AT  
SURFACE/SULPHIDES GRADE UPWARDS INTO OXIDE  
ZONE)

BALDOCK, J.W. 1977 (21)  
BALDOCK, J.W. 1976 (20)

#### **BOTSWANA-6**

GHANZI  
CU

21 43 00 S 21 37 00 E  
ENTITY COMMENT (DISTRICT/GEOL MAP BOTSWANA1973)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (GHANZI FORMATION/ DAMARA SYSTEM)  
GEOREMARKS (HOST ROCKS ARE SINCLAIR SEQUENCE  
CORRELATIVES)

MAIDEN, K.J. 1984 (547)

#### **BOTSWANA-7**

LAKE NGAMI  
CU (SEE RESERVE/PRODUCTION REPORT)

20 30 00 S 23 00 00 E  
ENTITY COMMENT (DISTRICT/GEOL MAP BOTSWANA1973)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN SANDSTONE)  
REMARKS (SEVERAL DEPOSITS OVER 180 KM STRIKE LENGTH/  
MAIN DEPOSIT-NGWAKO PAN)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (GHANZI FORMATION/ DAMARA SYSTEM)  
GEOREMARKS (HOST ROCKS ARE SINCLAIR SEQUENCE  
CORRELATIVES)

MAIDEN, K.J. 1984 (547)

#### **CONGO-1**

MINDULI AND MT PASSA  
CU

4 14 00 S 15 14 00 E  
ENTITY COMMENT (BRAZZAVILLE/ TIMES WORLD ATLAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONES AND SHALES)  
REMARKS (TWO DEPOSITS/ HAVE SIMILARITIES WITH THE  
COPPER BELT)

AGE OF HOST (PROTEROZOIC)  
LITHOLOGY (SANDSTONE AND SHALE)

GOOSSENS, P.J. 1983 (164)

#### **EGYPT-1**

W ARABA  
CU

29 15 00 N 32 28 00 E

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IMPREGNATIONS IN SANDSTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
GEOREMARKS (CU CONTENT RANGE IS 0.5-3.7%)

HABASHI, F. 1982 (177)

#### **EGYPT-2**

SARABIT AL KHADMIN  
CU

28 58 00 N 33 30 00 E

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONES IN CLEAVAGES & BEDDING  
PLANES)  
REMARKS (MINERALOGY-MALACHITE-AZURITE-CHRYSOCOLLA/  
DEPOSITS COVER 120 SQUARE KM)

AGE OF HOST (LOWER CARBONIFEROUS)  
LITHOLOGY (SANDSTONES & CLAYS)  
GEOREMARKS (CU CONTENT 0.04-0.2% RANGE/ 0.05-1.54% CU  
IN ENRICHED PARTS)

HABASHI, F. 1982 (177)

#### **EGYPT-3**

RAS BANAS

CU

23 59 00 N 35 40 00 E

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IMPREGNATIONS IN SANDSTONE)  
REMARKS (ORE MINERALS ARE MALACHITE/ AZURITE/  
CHRYSOCOLLA)

AGE OF HOST (MIOCENE)  
LITHOLOGY (SANDSTONE)

HABASHI, F. 1982 (177)

**GABON-1**

N TOUM  
CU

1 05 00 N 9 59 00 E

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)

CAIA, J. 1976 (70)

**MALI-1**

NIAMI  
CU

15 10 00 N 9 45 00 W  
ENTITY COMMENT (OCCUR/SW OF NIORO (APPROX LOC))

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (MINERALIZED BEDS 0.3 TO 8 M THICK/ CU CONTENT  
RARELY EXCEEDS 1%)

AGE OF HOST (EOCAMBRIAN)  
LITHOLOGY (SANDSTONES)  
FORMATION (KIFFA SERIES)  
GEOREMARKS (MINERALIZED BEDS ARE OF LIMITED  
EXTENTION)

ANON. 1987 (693)

**MALI-2**

GANGONTERY  
CU

14 05 00 N 10 55 00 W  
ENTITY COMMENT (AREA/N-BAFOULABE & SE OF KAYES)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BLACK SHALES)  
REMARKS (SEVERAL OTHER OCCURRENCES IN AREA/SEVERAL  
CM THICKNESS/MAXIMUM CU 0.5%)

AGE OF HOST (EOCAMBRIAN)  
LITHOLOGY (SHALES)  
FORMATION (KIFFA SERIES)

ANON. 1987 (693)

**MALI-3**

FALEA (COGEMA FIND)  
CU, U

12 16 00 N 11 21 00 W  
ENTITY COMMENT (AREA/ CENTERED ON FALEA)

GEOGRAPHICAL SUBDIVISION (SOUTHWEST)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (DRILL HOLE SAMPLES ASSAYED 1.46% CU  
(ILLIMATO 1) TO 4.7% CU (BODILO 1))

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (KANIA FM)  
GEOREMARKS (KANIA FORMATION OCCURS AT BASE OF  
TAOUDENI BASIN SEDIMENTARY PILE)

ANON. 1987 (693)

**MOROCCO-1**

MERIJA  
CU, PB

31 30 00 N 2 58 00 W  
ENTITY COMMENT (MERIDJA/ TIMES WORLD ATLAS)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (MARGINAL FOLD REGION)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN TERRIGENOUS DETRITAL SED RXS IN  
PALEOCHANNELS)  
REMARKS (MINERALIZATION ASSOCIATED W CARBONATE  
CEMENT/SURROUNDS DETRITAL GRAINS)

AGE OF HOST (CRETACEOUS)  
LITHOLOGY (CONGLOMERATES/WHITE  
SANDSTONES/SILTSTONES)  
GEOREMARKS (HOST DEPOSITED IN LAGUNO-DELTAIC  
CONDITIONS-CONTINENT & BASIN BOUNDARY)

CAIA, J. 1976 (70)

**MOROCCO-2**

ARGANA  
CU

30 47 00 N 9 06 00 W  
ENTITY COMMENT (14.5 KM SW OF TIMEZGADOUINE)

GEOGRAPHICAL SUBDIVISION (WEST)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN BLEACHED BEDS OF RED ARGILLACEOUS  
SANDSTONE)  
REMARKS (LITTLE OR NO ORGANIC MATERIAL ASSOCIATED  
WITH THIS REDBED-TYPE DEPOSIT)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (ARGILLACEOUS SANDSTONE)  
GEOREMARKS (ROCK CEMENT IS CALCAREOUS/ FOSSILS  
(OSTRACODES) ARE PRESENT)

IMREH, L. 1962 (195)  
POUIT, G. 1962 (304)

**MOROCCO-3**

TAMARIFT (TANSRIFT (?))  
CU (SEE RESERVE/PRODUCTION REPORT)

30 45 00 N 4 15 00 W  
ENTITY COMMENT (TANSRIFT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IMPREGNATIONS IN RED SANDSTONE)

AGE OF HOST (CRETACEOUS)  
LITHOLOGY (RED SANDSTONE)

HABASHI, F. 1982 (176)  
CAIA, J. 1976 (70)

**MOROCCO-4**

TALAT N OUAMANE  
CU (SEE RESERVE/PRODUCTION REPORT)

30 05 40 N 8 21 00 W  
ENTITY COMMENT (NEAR AGADIR)

GEOGRAPHICAL SUBDIVISION (WEST)  
GEOLOGICAL PROVINCE (WESTERN ANTI-ATLAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IMPREGNATIONS IN SILTSTONE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SILTSTONE/LIMESTONE/DOLOMITE)

HABASHI, F. 1982 (176)  
POUIT, G. 1966 (305)  
CHAZAN, W. 1962 (79)  
CHAZAN, W. 1963 (78)  
ELSASS, P. 1974 (130)  
ROUTHIER, P. 1983 (646)

**MOROCCO-5**

AGOUJGAL  
CU, U (SEE RESERVE/PRODUCTION REPORT)

29 23 00 N 9 02 00 W  
ENTITY COMMENT (75 KM SOUTH-EAST OF TIZNIT)

GEOGRAPHICAL SUBDIVISION (WEST)  
GEOLOGICAL PROVINCE (WESTERN ANTI-ATLAS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN ARKOSE BETWEEN  
DOLOMITE(ABOVE)&SILTSTONE (BELOW)  
REMARKS (GYPSUM WIDESPREAD IN MARLS OVERLYING CU)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (PHYLLITE/ARKOSE/SCHIST/SHALE/DOLOMITE/SS)  
FORMATION (FORMATION DE BASE/TAMJOUT SERIES)  
GEOREMARKS (MINERALIZATION-WITH VARYING  
GRADES-OCCURS UP TO 20M THICK)

CHAZAN, W. 1962 (79)  
DAVIDSON, C.F. 1965 (102)  
HABASHI, F. 1982 (176)  
POUIT, G. 1966 (305)

**MOROCCO-6**

TIRZZIT (TIRZITT)  
CU

30 28 00 N 7 30 00 W  
ENTITY COMMENT (DEPOSIT/ NEAR TAZOULT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREEN SANDSTONE AND RED AND GREEN  
MUDSTONE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (RED & GREEN SANDSTONE AND MUDSTONE)  
FORMATION (FORMATION DE BASE)

ROUTHIER, P. 1983 (646)  
ELSASS, P. 1975 (647)

**MOROCCO-7**

IMINIRFI  
CU

30 03 45 N 8 24 30 W

GEOLOGICAL PROVINCE (WESTERN ANTI-ATLAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (DOLOMITES/LIMESTONES)  
FORMATION (ADOUDOUNIAN SERIES)

ROUTHIER, P. 1983 (646)  
CHAZAN, W. 1962 (79)  
POUIT, G. 1966 (305)

**MOROCCO-8**

ADRAR OUANAS  
CU

29 16 00 N 9 14 00 W  
ENTITY COMMENT (20 KM ENE OF VILLAGE OF IFRANE)

GEOLOGICAL PROVINCE (WESTERN ANTI-ATLAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (BEDDED MINERALIZATION IN DOLOMITE)  
REMARKS (20 LAYERS OF BROWN GRAINY DOLOMITE 0.5-2M  
THICK WITHIN 150M SEQUENCE)

AGE OF HOST (EARLY CAMBRIAN)  
LITHOLOGY (DOLOMITE/LIME-SHALE/CALCSCHIST/MUDSTONE)  
FORMATION (RED PATINA LIMESTONE SERIES)  
GEOREMARKS (EXTENSIVE ANCIENT WORKINGS OVER  
SEVERAL KILOMETERS)

CHAZAN, W. 1962 (79)

**NAMIBIA-1**

WITVLEI  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

22 23 00 S 18 32 00 E  
ENTITY COMMENT (WITVLEI/ TIMES WORLD ATLAS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN CALCAREOUS ARGILLITE OVERLYING OPDAM  
LAVAS)  
REMARKS (3 PROSPECTS-POS-5.2/ CU CAUSEWAY-8.2/  
MALACHITE PAN-14 KM N OF WITVLEI)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DARK-GREENISH GREY OR DULL RED  
CALC-ARGILLITE)  
FORMATION (KLEIN AUB FM/SINCLAIR SEQUENCE  
EQUIVALENT)  
GEOREMARKS (CU DERIVED FROM UNDERLYING  
LAVA/SOLUTIONS REACT WITH DIAGENETIC PYRITE)

ANHAEUSSER, C.R. 1973 (546)  
MAIDEN, K.J. 1984 (547)

#### **NAMIBIA-2**

OAMITES (S)  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

23 00 00 S 17 00 00 E  
ENTITY COMMENT (45 KM SOUTH OF WINDHOIEK)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN LAGOONAL FACIES FORMED IN REDUCING  
ENVIRONMENT)  
REMARKS (DEPOSIT METAMORPHOSED-UPPER GREENSCHIST  
FACIES & STRUCTURALLY DEFORMED)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARKOSIC QUARTZITES & SCHISTOSE  
CONGLOMERATES)  
FORMATION (DAMARA SUPERGROUP/ OAMITES FORMATION)  
GEOREMARKS (DEPOSIT MAY OCCUR IN POSSIBLE THRUST  
BLOCK OF MIDDLE PROTEROZOIC AGE)

LEE, J.E. 1976 (238)

#### **NAMIBIA-3**

KLEIN AUB  
CU (SEE RESERVE/PRODUCTION REPORT)

23 48 00 S 16 38 00 E  
ENTITY COMMENT (70 KM SOUTH-WEST OF REHOBOTH)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (FINELY DISSEMINATED IN DARK ARGILLITES)  
REMARKS (7 KNOWN MINERALIZED BEDS 1-2M THICK/TO 1M  
ALONG STRIKE/ 500M DOWN DIP)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/CALCAREOUS ARGILLITE)  
FORMATION (KLEIN AUB FM/SINCLAIR SEQUENCE  
EQUIVALENT)

ANHAEUSSER, C.R. 1973 (546)  
MAIDEN, K.J. 1984 (256)  
MAIDEN, K.J. 1984 (547)  
BORG, G. 1987 (680)  
MILLER, R.M. 1980 (613)

#### **NAMIBIA-4**

DORDABIS  
CU

23 00 00 S 17 48 00 E  
ENTITY COMMENT (DEPOSIT/100 KM SE OF WINDHOEK)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARGILLITE AND CALCAREOUS ARGILLITE)  
REMARKS (RESERVE DATA COMBINED WITH WITVLEI DEPOSIT)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/ CALCAREOUS ARGILLITE)  
FORMATION (KLEIN AUB FM/ SINCLAIR SEQUENCE  
EQUIVALENT)

MAIDEN, K.J. 1984 (547)

#### **NAMIBIA-5**

GEELKOP DOME  
CU

23 06 00 S 17 00 00 E  
ENTITY COMMENT (DOME/25 KM NORTH OF REHOBOTH)

GEOLOGICAL PROVINCE (DAMARA OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN PELITES OF A META-PLAYA SEQUENCE)  
REMARKS (NUMEROUS SMALL DEPOSITS OCCUR IN AREA OF  
GEELKOP DOME)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (PELITES WITH CRYPTALGAL LAMINATIONS)  
FORMATION (DURUCHAUS FORMATION)

BEHR, H.J. 1983 (615)

#### **NIGERIA-1**

AGADEZ  
CU, U

16 59 00 N 7 56 00 E

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (OF DIAGENETIC ORIGIN IN CONTINENTAL  
SEDIMENTS)  
REMARKS (MINERALIZATION OCCURS AT THREE DISTINCT  
STRATIGRAPHIC LEVELS)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (CONGLOMERATE/ARGILLITE/SANDSTONE)  
FORMATION (ASSAOUAS & IRHAZER FORMATIONS)  
GEOREMARKS (COMPARED TO CU-U DEPOSITS OF  
COLORADO-PENECONCORDANT RED-BED TYPE)

IMREH, L. 1962 (195)  
NICOLINI, P. 1962 (287)  
IMREH, L. 1962 (194)

#### **SOUTH AFRICA-1**

DUITSCHLAND/ NEDERLAND (POTGIETERSRUS AREA)  
CU, PB, MO, AG, HG, SN

24 20 00 S 29 00 00 E  
ENTITY COMMENT (20 KM SE OF POTGIETERSRUS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN STROMATOLITIC LIMESTONE  
BED)

REMARKS (LOW GRADE CU OCCURS OVER MOST OF 100 KM STRIKE LENGTH OF BED)

AGE OF HOST (EARLY PROTEROZOIC)  
LITHOLOGY (LIMESTONE/CHERT/CONGLOMERATE/DOLOMITE)  
FORMATION (DUITSCHLAND FM/PRETORIA GROUP (BASAL PART OF))  
GEOREMARKS (CU-BEARING BED INTERCALATED IN UPPER PART OF DUITSCHLAND FM)

MARTINI, J.E. 1979 (260)

#### **UGANDA-1**

KILEMBE  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

0 13 00 N 30 03 00 E  
ENTITY COMMENT (KILEMBE/ TIMES WORLD ATLAS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN BANDED QTZ SCHIST+QTZ-FELDSPATHIC AMPHIBOLITES)  
REMARKS (5 DEPOSITS-NORTHERN/EASTERN & STREAM/BUKANGAMA/NAMHUGA)

AGE OF HOST (LOWER PROTEROZOIC)  
LITHOLOGY (BIOTITIC-EPIDOTIC QUARTZ SCHIST/AMPHIBOLITES)  
FORMATION (MIDDLE KILEMBE FM (MK5)/BUGANDA-TORO SYSTEM)  
GEOREMARKS (HIGHLY METAMORPHOSED/HOST ORIGINALLY LIME BEARING SHALES & GREYWACKES)

BARNES, J.W. 1962 (29)  
DAVIS, G.R. 1969 (105)  
TOSSON, S. 1980 (373)  
TANNER, P.W. 1972 (364)  
WARDEN, A.J. 1985 (549)  
ANON. 1980 (448)  
BARNES, J.W. 1958 (28)

#### **ZAIRE-1**

KALONGWE  
CU, CO

11 01 36 S 25 12 30 E  
ENTITY COMMENT (MINE/NO 1 FIG 6.7b BIB 1/P 226)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE ASSOCIATED WITH STROMATOLITES)  
REMARKS (MINERALIZATION SITUATED MAINLY BELOW AND ABOVE STOMATOLITIC UNIT)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

CAILTEAUX, J. 1986 (644)  
BOWEN, R. 1977 (54)  
FRANCOIS, A. 1974 (517)

#### **ZAIRE-2**

DIKULUWE AND MASHUMBA PITS

CU, CO, U (SEE RESERVE/PRODUCTION REPORT)

10 44 00 S 25 22 00 E  
ENTITY COMMENT (DIKULUWE/NO 37 USBM MP-84/P142)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)  
REMARKS (TWO DEPOSITS)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALE)

BOWEN, R. 1977 (54)

#### **ZAIRE-3**

KAMOTO  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 42 30 S 25 24 00 E

GEOGRAPHICAL SUBDIVISION (SHABA)  
GEOLOGICAL PROVINCE (KATANGAN SUBPROVINCE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOST/CHERT/SHALE EMPLACED DURING DIAGENESIS)  
REMARKS (7 OREBODIES-PRINCIPAL/ETANG/SOUTH/NORTH/EAST/WEST/ OLIVEIRA-VIRGULE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOSTONE/CHERT/SHALE)  
FORMATION (KAMOTO FM/ MINES GROUP/ ROAN SUPERGROUP)  
GEOREMARKS (ORE OCCURS AT TRANSITION/HEMATITE TO ORGANIC-RICH SULFIDE-BEARING BEDS)

BARTHOLOME, P. 1973 (32)  
BROWN, A.C. 1979 (42)  
BINDA, P.L. 1972 (45)  
SNELLING, N.J. 1964 (352)  
CAILTEAUX, J. 1986 (644)

#### **ZAIRE-4**

MUPINE  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 41 00 S 25 24 00 E  
ENTITY COMMENT (MINE/NO 2 FIG 6.7b BIB 1/P 226)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

BOWEN, R. 1977 (54)

#### **ZAIRE-5**

MUSONOI  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 42 00 S 25 26 00 E

ENTITY COMMENT (MINE/ NO 34 USBM MP-84/ P 142)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

BOWEN, R. 1977 (54)  
ANON. 1984 (645)

#### **ZAIRE-6**

KOLWEZI

CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 43 50 S 25 28 36 E  
ENTITY COMMENT (MINE/NO 36 USBM MP-84/P 142)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

BOWEN, R. 1977 (54)  
ANON. 1984 (645)

#### **ZAIRE-7**

MUTOSHI

CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 40 00 S 25 31 00 E  
ENTITY COMMENT (MINE/NO 32 USBM MP-84/P 142)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

BOWEN, R. 1977 (54)  
ANON. 1984 (645)

#### **ZAIRE-8**

MENDA-MINDIPI

CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 58 36 S 25 55 30 E  
ENTITY COMMENT (MENDA/NO 5 FIG 6.7b BIB 1/P226)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)  
REMARKS (TWO DEPOSITS)

AGE OF HOST (MIDDLE PROTEROZOIC)

LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

BOWEN, R. 1977 (54)  
FRANCOIS, A. 1974 (517)

#### **ZAIRE-9**

TENKE

CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 34 48 S 26 09 12 E  
ENTITY COMMENT (FWALU/ FIG 1 BIBL 5/ PG 399)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALES AND LAMINITES)  
REMARKS (THREE DEPOSITS WITHIN TENKE DISTRICT - GOMA/  
FWALU/ KWATEBALA)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)  
GEOREMARKS (HOST RKS ENCLOSE STROMATOLITIC MASSES  
FORMED IN INTERTIDAL ENVIRONMENT)

ANON. 1973 (440)  
ANON. 1972 (433)  
OOSTERBOSCH, R. 1951 (416)

#### **ZAIRE-10**

FUNGURUME DISTRICT

CU (SEE RESERVE/PRODUCTION REPORT)

10 36 00 S 26 18 03 E  
ENTITY COMMENT (MINE/NO 4 FIG 6.7b BIB 1/P 226)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)  
REMARKS (NUMEROUS DEPOSITS (OREBODIES) WITHIN  
DISTRICT)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

BOWEN, R. 1977 (54)  
ANON. 1984 (645)  
CAILTEAUX, J. 1986 (644)

#### **ZAIRE-11**

KAKANDA

CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 43 30 S 26 24 25 E  
ENTITY COMMENT (KAKANDA NORTH/FIG 1 BIB 1/P399)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)  
REMARKS (THREE OREBODIES-NORTH/ SOUTH/ EAST)

AGE OF HOST (MIDDLE PROTEROZOIC)

LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

CAILTEAUX, J. 1986 (644)  
BOWEN, R. 1977 (54)

**ZAIRE-12**  
KAMFUNDWA  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 48 30 S 26 35 26 E  
ENTITY COMMENT (MINE/ FIG 1 BIBL 1/ P399)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ALTERATION POCKETS BETWEEN RESIDUAL  
DLMT MOUNDS)  
REMARKS (OXIDIZED DEPOSIT/ OREBODY FORMED DURING  
EARLY DIAGENESIS)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

ANON. 0 (503)

**ZAIRE-13**  
KABOLELA  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 50 24 S 26 28 50 E  
ENTITY COMMENT (MINE/ FIG 2 BIBL 1/ PG 400)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

CAILTEAUX, J. 1986 (644)

**ZAIRE-14**  
KAMBOVE AND KAMBOVE WEST  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 52 45 S 26 36 23 E  
ENTITY COMMENT (KAMBOVE/ FIG 1 BIBL 2/ PG 90)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN STRATIFIED SILICEOUS DOLOMITE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITE/DOLOMITIC SHALES & SILTSTONES)  
FORMATION (KATANGAN SYSTEM/ROAN SUPERGROUP/MINES  
GROUP)

CAHEN, L. 1974 (516)  
FRANCOIS, A. 1974 (517)  
CAILTEAUX, J. 1986 (644)

**ZAIRE-15**  
KAMATANDA  
CU (SEE RESERVE/PRODUCTION REPORT)

10 56 59 S 26 46 36 E  
ENTITY COMMENT (MINE/ FIG 1 BIBL 1/ PG 399)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

CAILTEAUX, J. 1986 (644)

**ZAIRE-16**  
SESA (MSESA)  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

10 50 42 S 26 37 07 E  
ENTITY COMMENT (OPEN PIT/NO 24 USBM MP-84/P142)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

BOWEN, R. 1977 (54)  
ANON. 1984 (645)

**ZAIRE-17**  
LUIISHIA  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

11 10 08 S 27 00 33 E  
ENTITY COMMENT (MINE/ FIG 1 BIBL 1/ P399)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

CAILTEAUX, J. 1986 (644)  
BOWEN, R. 1977 (54)

**ZAIRE-18**  
KIMBWE  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

11 08 30 S 27 30 38 E  
ENTITY COMMENT (MINE/NO 11 FIG 6.7b BIB 1/P226)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)



GEOLOGY (IN DOLOMITIC SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

BOWEN, R. 1977 (54)  
FRANCOIS, A. 1974 (517)

**ZAIRE-19**

LUKUNI-LUISWISHI-KISWISHI DIST  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

11 30 50 S 27 25 14 E  
ENTITY COMMENT (LUKUNI/NO 22 USBM MP-84/ P 142)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)  
REMARKS (DISTRICT HAS SEVERAL DEPOSITS)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

BOWEN, R. 1977 (54)  
ANON. 1984 (645)  
FRANCOIS, A. 1974 (517)

**ZAIRE-20**

LUPATO  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

11 37 16 S 27 15 42 E  
ENTITY COMMENT (MINE/NO 13 FIG 6.7b BIB 1/P226)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALES/ LAMINITES)  
FORMATION (MINES GROUP/ ROAN SUPERGROUP)

BOWEN, R. 1977 (54)  
FRANCOIS, A. 1974 (517)

**ZAIRE-21**

ETOILE  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

11 38 54 S 27 34 38 E  
ENTITY COMMENT (DEPOSIT/12 KM NE OF LUBUMBASHI)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LAMINATED SILTSTONE SHALES & DOLOMITIC SHALES)  
REMARKS (SYNGENETIC-DIAGENETIC MINERALIZATION OCCURS IN CENTRAL PART OF ROAN GP)

AGE OF HOST (LATE PRECAMBRIAN)  
LITHOLOGY (SILTSTONE SHALE/ DOLOMITIC SHALE)

FORMATION (ROAN GROUP (MINE SERIES))  
GEOREMARKS (POST ORE MODIFICATIONS INCLUDE HYDROTHERMAL PHENOMENA & METAMORPHISM)

LEFEBVRE, J.J. 1975 (514)  
GARLICK, W.G. 1964 (515)  
BOWEN, R. 1977 (54)  
CAILTEAUX, J. 1986 (644)

**ZAIRE-22**

MUSOSHI  
CU, CO, U (SEE RESERVE/PRODUCTION REPORT)

12 15 57 S 27 42 49 E  
ENTITY COMMENT (MUSOSHI/1956 TIMES WORLD ATLAS)

GEOGRAPHICAL SUBDIVISION (SHABA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ORE SHALE OF DOMINANTLY SILTY ARGILLITE)  
REMARKS (EXTENSION OF KONKOLA DEPOSIT OVER ZAMBIAN-ZAIRE BORDER)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (SILTY ARGILLITE)  
FORMATION (LOWER ROAN GROUP)

BINDA, P.L. 1974 (46)  
VAES, J.F. 1962 (376)  
ANON. 1973 (440)  
ANON. 1984 (645)  
CAILTEAUX, J. 1986 (644)

**ZAIRE-23**

KINSEDA  
CU (SEE RESERVE/PRODUCTION REPORT)

12 16 31 S 27 58 02 E  
ENTITY COMMENT (MINE/NO 17 FIG 6.7b BIB 1/P226)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ORE SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
FORMATION (LOWER KATANGA SEQUENCE (ROAN SUPERGROUP))

BOWEN, R. 1977 (54)  
ANON. 1984 (645)  
FRANCOIS, A. 1974 (517)

**ZAMBIA-1**

KALENGWA  
CU (SEE RESERVE/PRODUCTION REPORT)

13 24 00 S 24 59 30 E  
ENTITY COMMENT (400 KM WEST OF THE COPPERBELT)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (SUPERGENE CU REPLACES CARBONATE MATRIX OF CONGLOM)  
REMARKS (PRODUCTION BEGAN IN 1967)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (CONGLOMERATE)  
FORMATION (KATANGA SYSTEM)

GEOREMARKS (CONGLOM UNIT INTERBEDDED IN STEEPLY  
OVERTURNED SEQUENCE OF CLASTIC RXS)

ANON. 1981 (451)  
VAN EDEN, J.G. 1972 (377)  
ELLIS, M.W. 1967 (125)

#### **ZAMBIA-2**

KONKOLA (BANCROFT) (KONKOLA DIVISION)  
CU (SEE RESERVE/PRODUCTION REPORT)

12 23 24 S 27 49 35 E  
ENTITY COMMENT (APPROX 10K NW OF CHILILABOMBWE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ORE-SHALE OF DOMINANTLY DARK GREY  
SILTSTONE)  
REMARKS (4 MAIN OREBODIES-KIRILA BOMWE SOUTH &  
NORTH/ FITWAOLA/ KONKOLA)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SILTSTONE)  
FORMATION (LOWER ROAN GROUP/ KATANGA SEQUENCE)

BINDA, P.L. 1974 (46)  
BOWEN, R. 1977 (54)  
FLEISCHER, V.D. 1976 (135)

#### **ZAMBIA-3**

KIRILA BOMBWE NORTH & SOUTH (KONKOLA DIVISION)  
CU

12 19 38 S 27 45 33 E  
ENTITY COMMENT (JUST WEST OF CHILILABOMBWE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ORE-SHALE OF DOMINANTLY SILTY ARGILLITE)  
REMARKS (PRODUCTION FROM SOUTH OREBODY BEGAN IN  
1957 & FROM NORTH OREBODY-1963)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SILTY ARGILLITE)  
FORMATION (LOWER ROAN GROUP/ KATANGA SEQUENCE)

BINDA, P.L. 1974 (46)

#### **ZAMBIA-4**

FITWAOLA (KONKOLA DIVISION)  
CU (SEE RESERVE/PRODUCTION REPORT)

12 24 50 S 27 51 07 E  
ENTITY COMMENT (NEAR CHILILBOMBWE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SILTSTONE AND SHALE)  
REMARKS (RELATIVELY SMALL TWIN OREBODY)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITIC SILTSTONES/SHALES)  
FORMATION (LOWER ROAN/ ORE-SHALE)  
GEOREMARKS (L ROAN BEDS OCCUR IN DOUBLY PLUNGING  
SYNCLINE ENCLOSED IN BASEMENT RXS)

BINDA, P.L. 1974 (46)  
CLUTTEN, J.M. 1974 (91)

#### **ZAMBIA-5**

NCHANGA AREA  
CU (SEE RESERVE/PRODUCTION REPORT)

12 32 30 S 27 49 50 E  
ENTITY COMMENT (CHINGOLA OPEN PIT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LOWER BANDED SHALE/ QUARTZITE/ ARKOSE)  
REMARKS (AT LEAST 12 OREBODIES ALONG A STRIKE OF  
24KM)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARGILLITIC WITH EVAPORITE ASSOCIATION)  
FORMATION (LOWER ROAN GROUP)  
GEOREMARKS (BULK OF ORE IN TRANSITION ZONE & SHALE/  
ALSO EXTENDS INTO SS & ARKOSE)

BRUGGEN, J.W. 1972 (58)  
VOET, H.W. 1972 (381)  
GOOSSENS, P.J. 1983 (164)  
BOWEN, R. 1977 (54)  
FLEISCHER, V.D. 1976 (137)  
BINDA, P.L. 1974 (46)  
ANON. 1982 (456)

#### **ZAMBIA-5(A)**

CHINGOLA (NCHANGA DIVISION)  
CU (SEE RESERVE/PRODUCTION REPORT)

12 32 20 S 27 49 50 E  
ENTITY COMMENT (OPEN PIT/ 5KM SW OF NCHANGA OP)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN VARIOUS LEVELS OF BASAL CONGLOMERATE/  
ARKOSE FM)  
REMARKS (7 OREBODIES-A TO F AND BLOCK A/ A-OREBODY  
PRODUCED FROM 1957 TO 1970)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (CONGLOMERATE / ARKOSE)  
FORMATION (LOWER ROAN-ARKOSE/ TRANSITION/ L BANDED  
SHALE)

MASON, C.F. 1971 (261)  
BINDA, P.L. 1974 (46)  
BOWEN, R. 1977 (54)  
FLEISCHER, V.D. 1976 (137)  
VOET, H.W. 1972 (381)  
DIEDERIX, D. 1977 (110)

#### **ZAMBIA-6**

LUANO (NCHANGA DIVISION)  
CU (SEE RESERVE/PRODUCTION REPORT)

12 30 00 S 27 56 00 E  
ENTITY COMMENT (DEPOSIT/ 2500M E OF RIVER LODE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LOWER BANDED SHALE AND FOOTWALL  
ARKOSE)  
REMARKS (DEPOSIT LIES ON NORTH LIMB OF NCHANGA  
SYNCLINE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SHALE / ARKOSE)  
FORMATION (LOWER ROAN)

DIEDERIX, D. 1977 (110)  
BOWEN, R. 1977 (54)  
FLEISCHER, V.D. 1976 (137)

#### **ZAMBIA-7**

RIVER LODGE (NCHANGA DIVISION)  
CU (SEE RESERVE/PRODUCTION REPORT)

12 30 15 S 27 55 30 E  
ENTITY COMMENT (OPEN PIT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LOWER BANDED SHALE)  
REMARKS (ORE PRODUCTION COMMENCED IN APRIL 1968 BY  
OPEN PIT/ ALSO U/G OREBODY)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SHALE)  
FORMATION (LOWER ROAN/ LOWER BANDED SHALE)

FLEISCHER, V.D. 1976 (137)  
MASON, C.F. 1971 (261)  
BINDA, P.L. 1974 (46)  
BOWEN, R. 1977 (54)  
DIEDERIX, D. 1977 (110)

#### **ZAMBIA-8**

NCHANGA (NCHANGA DIVISION)  
CU (SEE RESERVE/PRODUCTION REPORT)

12 30 16 S 27 51 30 E  
ENTITY COMMENT (OPEN PIT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN FELDSPATHIC QUARTZITE/ BANDED SHALE/  
ARKOSE)  
REMARKS (3 OREBODIES IN AREA OF PIT-UPPER/  
INTERMEDIATE/ LOWER/ PROD BEGAN 1955)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITE / SHALE / ARKOSE)  
FORMATION (LOWER ROAN)  
GEOREMARKS (UNIQUE CU MINERALIZATION IN MICACEOUS  
SANDSTONE IN CORE OF SYNCLINE)

DIEDERIX, D. 1977 (110)  
MASON, C.F. 1971 (261)  
BINDA, P.L. 1974 (46)  
BOWEN, R. 1977 (54)  
FLEISCHER, V.D. 1976 (137)

#### **ZAMBIA-9**

MIMBULA (NCHANGA DIVISION)  
CU (SEE RESERVE/PRODUCTION REPORT)

12 38 44 S 27 51 56 E  
ENTITY COMMENT (APPROX LOCATION OF OPEN PIT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN FELDSPATHIC SS WITHIN  
ARKOSE)  
REMARKS (MINING BEGAN IN 1968 FROM MIMBULA NO 1/  
MIMBULA NO 2 PROD TO FOLLOW)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (FELDSPATHIC QUARTZITE)

FORMATION (LOWER ROAN/ FOOTWALL FM)

BINDA, P.L. 1974 (46)  
DIEDERIX, D. 1977 (110)

#### **ZAMBIA-10**

FITULA (NCHANGA DIVISION)  
CU (SEE RESERVE/PRODUCTION REPORT)

12 40 55 S 27 56 40 E  
ENTITY COMMENT (OPEN PIT/ 9.5MI S OF NCHANGA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSIMINATED IN FELDSPATHIC SS WITHIN  
ARKOSE)  
REMARKS (PRODUCTION COMMENCED IN MAY 1968 & ENDED  
EARLY 1981/ PIT DEPTH 130M)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (FELDSPATHIC SANDSTONE WITH QUARTZOSE  
MATRIX)  
FORMATION (LOWER ROAN/ FOOTWALL FM)  
GEOREMARKS (TABULAR DEPOSIT OCCURS IN CENTRAL  
PART-EAST LIMB OF FITULA SYNCLINE)

DIEDERIX, D. 1977 (110)  
CORNWALL, F.W. 1969 (96)  
BINDA, P.L. 1974 (46)

#### **ZAMBIA-11**

CHAMBISHI  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

12 39 54 S 28 02 15 E  
ENTITY COMMENT (OPEN PIT/ MIN MAP ZAMB 1973)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN FINE-GR/ DARK GREEN/ SANDY CALCAREOUS  
ARGILLITE)  
REMARKS (2 OREBODIES MAIN & WEST/ ORE SHALE AVG 75 FT  
WIDE/OPEN PIT/UNDERGROUND)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SILTY ARGILLITE RICH IN CARBONATE TOWARD  
BASE)  
FORMATION (LOWER ROAN/ ORE SHALE)  
GEOREMARKS (OVER 70% OF MINERALIZATION IS BORNITE/  
OTHERS ARE CP/ CC/ MALACHITE)

BINDA, P.L. 1974 (46)  
BOWEN, R. 1977 (54)  
FLEISCHER, V.D. 1976 (137)  
ANON. 1981 (451)  
ANNELS, A.E. 1983 (11)  
NOTEBAART, C.W. 1972 (290)  
BRUGGEN, J.W. 1972 (58)

#### **ZAMBIA-12**

NKANA (ROKANA) DIVISION  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

12 48 16 S 28 10 17 E  
ENTITY COMMENT (MINDOLA/MIN LOCATION MAP/GSZ)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LOWER ROAN ORE SHALE OF ARGILLITE &

DOLOMITE)  
REMARKS (3 DEPOSITS-NKANA SOUTH/ NKANA NORTH/  
MINDOLA OCCUR OVER 14 KM DISTANCE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/DOLOMITE)  
FORMATION (LOWER ROAN/ KATANGA SYSTEM)

**ZAMBIA-12(A)**

MINDOLA  
CU

12 48 16 S 28 10 17 E  
ENTITY COMMENT (DEPOSIT NO 15/ FIG 1 BIBL1/P77)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ARGILLITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/ DOLOMITE)  
FORMATION (LOWER ROAN GROUP/ ORE SHALE)

ANNELS, A.E. 1984 (600)  
LEGG, C.A. 1973 (601)

**ZAMBIA-13**

CHIBULUMA AND CHIBULUMA WEST  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

12 49 32 S 28 07 30 E  
ENTITY COMMENT (CHIBULUMA/MIN MAP ZAMB 1973)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN AQUEOUS ARENITE ABOVE BARREN AEOLIAN  
QUARTZITE)  
REMARKS (WITHIN 3.2 KM OF KALULISHI/ 13 & 15 KM WEST OF  
NKANA RESPECTIVELY)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARKOSE ON MARGIN & ARENITE IN OREBODY)  
FORMATION (LOWER ROAN/ KATANGA SYSTEM)  
GEOREMARKS (MAIN OREBODY OCCUPIES A PROBABLE  
ABANDONED RIVER CHANNEL)

BINDA, P.L. 1974 (46)  
WHYTE, R.J. 1971 (394)  
BOWEN, R. 1977 (54)  
FLEISCHER, V.D. 1976 (137)  
ANNELS, A.E. 1983 (11)

**ZAMBIA-14**

BULUBA-UPPER OREBODY (LUANSHYA AREA)  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

13 03 00 S 28 20 17 E  
ENTITY COMMENT (13 KM NW OF TOWN OF LUANSHYA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SILTY ARGILLITE & DOLOMITIC SCHIST)  
REMARKS (OLDEST LOWER ROAN SED ROCKS DEPOSITED  
PARTLY MARINE/PARTLY CONTINENTAL)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SILTY ARGILLITE (GREEN TREMOLITIC DOLOMITE))  
FORMATION (LOWER ROAN GROUP/ ORE-SHALE)

GEOREMARKS (MOST MINERALIZATION OCCURS IN DOLOMITIC  
SCHIST/ PRODUCTION BEGAN 1973)

ANNELS, A.E. 1983 (11)  
VINK, B.W. 1972 (380)  
BOWEN, R. 1977 (54)  
FLEISCHER, V.D. 1976 (137)  
ANON. 1981 (452)  
BINDA, P.L. 1974 (46)

**ZAMBIA-15**

MULIASHI SOUTH (MULIASHI-LOWER OREBODY)  
CU, CO

13 04 45 S 28 16 30 E  
ENTITY COMMENT (DEPOSIT NO 23/FIG 1 BIBL 1/P77)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (ORE IN BOTH CALC SCHIST & OVERLYING CALC  
ARGILLITE)  
REMARKS (ORE-SHALE 55M THICK-MOSTLY PYRITIC WITH  
MANY DOLOMITIC LAMINAE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (TREMOLITE-BIOTITE-CARBONATE SCHIST)  
FORMATION (LOWER ROAN/ ORE-SHALE & FOOTWALL  
CONGLOMERATE)

BINDA, P.L. 1974 (46)

**ZAMBIA-16**

LUANSHYA (ROAN ANTELOPE)  
CU, CO (SEE RESERVE/PRODUCTION REPORT)

13 07 50 S 28 23 00 E  
ENTITY COMMENT (LUANSHYA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LOWER ROAN DARK GREY DOLOMITIC  
ARGILLITE)  
REMARKS (DEPOSIT FEATURES UNIFORM GRADE/ THICKNESS/  
STRATIGRAPHIC POSITION)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARGILLITE-ARENITIC WITH EVAPORITE  
ASSOCIATION)  
FORMATION (LOWER ROAN)  
GEOREMARKS (FROM FOOTWALL TO HANGING WALL  
SULPHIDE SEQUENCE IS PY/ CP/ BN/ CC)

DAVIS, G.R. 1954 (104)  
BOWEN, R. 1977 (54)  
MENDELSON, F. 1962 (265)  
SCHMITZ, J.C. 1962 (334)  
BRUMMER, J.J. 1955 (59)  
FLEISCHER, V.D. 1976 (137)

**ZAMBIA-17**

BWANA MKUBWA  
CU (SEE RESERVE/PRODUCTION REPORT)

13 01 15 S 28 41 07 E  
ENTITY COMMENT (6 MILES SE OF NDOLA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ARENITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARENITE/ARKOSE)  
FORMATION (LOWER ROAN GROUP)

FLEISCHER, V.D. 1976 (137)  
BOWEN, R. 1977 (54)  
BINDA, P.L. 1974 (46)  
PIENAAR, P.J. 1961 (298)

#### **ZAMBIA-18**

MUFULIRA

CU (SEE RESERVE/PRODUCTION REPORT)

12 31 22 S 28 14 10 E  
ENTITY COMMENT (WEST SIDE OF MUFULIRA BASIN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LOWER ROAN ARENITES)  
REMARKS (CU OCCURS AT 21 DISTINCT LITHOLOGICAL  
HORIZONS/ 5 BROAD MINING UNITS)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (CARBONACEOUS ARENITES)  
FORMATION (LOWER ROAN)  
GEOREMARKS (BARREN INTERBEDS CONTAIN 19-31%  
ANHYDRITE/ OREBEDS-LITTLE OR NONE)

GARLICK, W.G. 1982 (153)  
GARLICK, W.G. 1981 (152)  
GARLICK, W.G. 1979 (151)  
ANNELS, A.E. 1979 (10)  
FLEISCHER, V.D. 1967 (136)  
FLEISCHER, V.D. 1976 (137)  
BOWEN, R. 1977 (54)

#### **ZAMBIA-19**

MOKAMBO

CU (SEE RESERVE/PRODUCTION REPORT)

12 28 38 S 28 22 47 E  
ENTITY COMMENT (MINE/ 1956 TIMES WORLD ATLAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ARGILLITE)  
REMARKS (PROPERTY READIED FOR PRODUCTION/ FLOODED  
BY RAINS 1976/ NOT REOPENED)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (DOLOMITE/ ARGILLITE)  
FORMATION (UPPER ROAN GROUP)

BOWEN, R. 1977 (54)  
ELLIS, M.W. 1981 (126)

#### **ZAMBIA-20**

KANSANSHI

CU (SEE RESERVE/PRODUCTION REPORT)

12 05 00 S 26 25 00 E  
ENTITY COMMENT (MINE/ 1956 TIMES WORLD ATLAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SEDIMENTARY ROCKS)  
REMARKS (MINING COMMENCED IN JUNE 1977/ LOCATED 160  
KM WEST OF CHINGOLA)

AGE OF HOST (PROTEROZOIC)

ELLIS, M.W. 1982 (127)  
ELLIS, M.W. 1981 (126)  
GLOVER, T. 1983 (158)  
BOWEN, R. 1977 (54)

#### **ZAMBIA-21**

CHIBULUMA SOUTH (KALULUSHI EAST)

CU, CO (SEE RESERVE/PRODUCTION REPORT)

12 50 00 S 28 03 00 E  
ENTITY COMMENT (MINE/ 1956 TIMES WORLD ATLAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ARGILLITE)  
REMARKS (LOCATED 7 MILES SOUTH OF CHIBULUMA)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/ CONGLOMERATE/ ARGILLITE)  
FORMATION (LOWER ROAN GROUP)

BOWEN, R. 1977 (54)

#### **ZAMBIA-22**

LUMWANA

CU

12 10 00 S 25 48 00 E  
ENTITY COMMENT (AREA/240KM WEST OF COPPERBELT)

GEOGRAPHICAL SUBDIVISION (NORTHWEST)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (COARSE BLEBBY DISSEMINATIONS IN MUSCOVITE  
SCHIST)  
REMARKS (DOME CONTAINS 2 MAJOR DEPOSITS-MALUNDWE &  
CHIMIWUNGO (PLUS MINOR ONES))

AGE OF HOST (PROTEROZOIC (MIDDLE?))  
LITHOLOGY (MUSCOVITE-PHLOGOPITE-KYANITE SCHIST)  
GEOREMARKS (ORIGINAL SLIGHTLY CARBONACEOUS SHALE  
METAMORPHOSED MEDIUM-HIGH GRADE)

#### **ZAMBIA-22(A)**

MALUNDWE (LUMWANA)

CU (SEE RESERVE/PRODUCTION REPORT)

12 09 42 S 25 45 15 E  
ENTITY COMMENT (DEPOSIT/ FIG 1 BIBL 1/PG 434)

GEOGRAPHICAL SUBDIVISION (NORTHWEST)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (COARSE BLEBBY DISSEMINATIONS IN MUSCOVITIC  
SCHIST)

AGE OF HOST (PROTEROZOIC (MIDDLE?))  
LITHOLOGY (MUSCOVITE-PHLOGOPITE-KYANITE SCHIST)  
GEOREMARKS (ORIGINAL SLIGHTLY CARBONACEOUS SHALE  
METAMORPHOSED MEDIUM-HIGH GRADE)

BENHAM, D.G. 1976 (592)  
LEGG, C.A. 1973 (601)

**ZAMBIA-23**

CHIMIWUNGO (LUMWANA)

CU (SEE RESERVE/PRODUCTION REPORT)

12 10 44 S 25 51 05 E

ENTITY COMMENT (DEPOSIT/ FIG 1 BIBL 1/PG 434)

GEOGRAPHICAL SUBDIVISION (NORTHWEST)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (COARSE BLEBBY DISSEMINATIONS IN MUSCOVITIC SCHIST)

AGE OF HOST (PROTEROZOIC (MIDDLE?))

LITHOLOGY (MUSCOVITE-PHLOGOPITE-KYANITE SCHIST)

GEOREMARKS (ORIGINAL SLIGHTLY CARBONACEOUS SHALE METAMORPHOSED MEDIUM-HIGH GRADE)

BENHAM, D.G. 1976 (592)

LEGG, C.A. 1973 (601)

**ZAMBIA-24**

LUBWE

CU (SEE RESERVE/PRODUCTION REPORT)

12 03 07 S 25 57 30 E

ENTITY COMMENT (DEPOSIT/15 KM N OF CHIMIWUNGO)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (COARSE BLEBBY DISSEMINATIONS IN MUSCOVITIC SCHIST)

AGE OF HOST (PROTEROZOIC (MIDDLE?))

LITHOLOGY (MUSCOVITE-PHLOGOPITE-KYANITE SCHIST)

GEOREMARKS (ORIGINAL SLIGHTLY CARBONACEOUS SHALE METAMORPHOSED MEDIUM-HIGH GRADE)

ANON. 0 (606)

LEGG, C.A. 1973 (601)

**ZAMBIA-25**

MWAMBASHI B

CU, CO (SEE RESERVE/PRODUCTION REPORT)

12 45 33 S 28 00 17 E

ENTITY COMMENT (DEPOSIT NO 10/ FIG 1 BIBL1/P77)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN ARENITE)

REMARKS (CU-CO FOUND AT TOP OF FOOTWALL SEQUENCE IMMEDIATELY BENEATH ORE-SHALE)

AGE OF HOST (LATE PROTEROZOIC)

LITHOLOGY (ARENITE/QUARTZITE/CONGLOMERATE)

FORMATION (LOWER RAON GROUP/ FOOTWALL FM)

ANNELS, A.E. 1984 (600)

**ZAMBIA-26**

PITANDA SOUTH (MWAMBASHI A)

CU (SEE RESERVE/PRODUCTION REPORT)

12 42 48 S 27 58 36 E

ENTITY COMMENT (DEPOSIT NO 11/FIG 1 BIBL 1/P77)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN ARENITE)

AGE OF HOST (LATE PROTEROZOIC)

LITHOLOGY (ARENITE/ QUARTZITE/ CONGLOMERATE)

FORMATION (LOWER ROAN GROUP/ FOOTWALL FM)

ANNELS, A.E. 1984 (600)

**ZAMBIA-27**

PITANDA

CU (SEE RESERVE/PRODUCTION REPORT)

12 39 33 S 27 59 15 E

ENTITY COMMENT (DEPOSIT NO 12/FIG 1 BIBL 1/P77)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN ARENITE)

AGE OF HOST (LATE PROTEROZOIC)

LITHOLOGY (ARENITE/ QUARTZITE/ CONGLOMERATE)

FORMATION (LOWER ROAN GROUP/ FOOTWALL FM)

ANNELS, A.E. 1984 (600)

**ZAMBIA-28**

NKANA NORTH LIMB (CHAMBISHI SE)

CU, CO (SEE RESERVE/PRODUCTION REPORT)

12 49 55 S 28 10 30 E

ENTITY COMMENT (DEPOSIT NO 14/ FIG 1 BIBL1/P77)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN ARGILLITE)

AGE OF HOST (LATE PROTEROZOIC)

LITHOLOGY (ARGILLITE/ DOLOMITE)

FORMATION (LOWER ROAN/ ORE SHALE)

ANNELS, A.E. 1984 (600)

**ZAMBIA-29**

NKANA SOUTH LIMB PROSPECT

CU

12 51 33 S 28 12 40 E

ENTITY COMMENT (DEPOSIT NO 17/ FIG 1 BIBL1/P77)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN ARGILLITE)

AGE OF HOST (LATE PROTEROZOIC)

LITHOLOGY (ARGILLITE/ DOLOMITE)

FORMATION (LOWER ROAN GROUP/ ORE SHALE)

ANNELS, A.E. 1984 (600)

**ZAMBIA-30**

CHIFUPU

CU (SEE RESERVE/PRODUCTION REPORT)

12 55 00 S 28 03 15 E

ENTITY COMMENT (DEPOSIT NO 21/FIG 1 BIBL 1/P77)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN ARENITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/CONGLOMERATE/ARGILLITE)  
FORMATION (LOWER ROAN GROUP/ FOOTWALL FORMATION)

ANNELS, A.E. 1984 (600)  
LEGG, C.A. 1973 (601)

**ZAMBIA-31**  
LUFUBU SOUTH  
CU

13 02 30 S 28 15 00 E  
ENTITY COMMENT (DEPOSIT NO 22/ FIG 1 BIBL1/P77)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ARGILLITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/CONGLOMERATE/ARGILLITE)  
FORMATION (LOWER ROAN GROUP)

ANNELS, A.E. 1984 (600)

**ZAMBIA-32**  
ROAN EXTENSION  
CU

13 09 00 S 28 17 00 E  
ENTITY COMMENT (DEPOSIT NO 24/ FIG 1 BIBL1/P77)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARGILLITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/CONGLOMERATE/ARGILLITE)  
FORMATION (LOWER ROAN GROUP)

ANNELS, A.E. 1984 (600)

**ZAMBIA-33**  
SAMBA  
CU (SEE RESERVE/PRODUCTION REPORT)

12 44 11 S 27 48 53 E  
ENTITY COMMENT (DEPOSIT NO 28/ FIG 1 BIBL1/P77)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARENITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARENITE)  
FORMATION (LOWER ROAN GROUP/ FOOTWALL FORMATION)

ANNELS, A.E. 1984 (600)  
LEGG, C.A. 1973 (601)

**ZAMBIA-34**  
LUBEMBE  
CU

12 35 11 S 28 21 56 E  
ENTITY COMMENT (DEPOSIT NO 30/ FIG 1 BIBL1/P77)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARENTIE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARENITES)  
FORMATION (LOWER ROAN GROUP)

ANNELS, A.E. 1984 (600)

**ZAMBIA-35**  
KASARIA  
CU (SEE RESERVE/PRODUCTION REPORT)

12 44 27 S 28 06 23 E  
ENTITY COMMENT (DEPOSIT NO 31/FIG 1 BIBL 1/P77)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARENITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARENITES)  
FORMATION (LOWER ROAN GROUP)

ANNELS, A.E. 1984 (600)

**ZAMBIA-36**  
LUANSOBE (NSATO)  
CU (SEE RESERVE/PRODUCTION REPORT)

12 25 54 S 28 18 53 E  
ENTITY COMMENT (DEPOSIT NO 32/FIG 1 BIBL 1/P77)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARENITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARENITES)  
FORMATION (LOWER ROAN GROUP)

ANNELS, A.E. 1984 (600)

**ZAMBIA-37**  
MWEKERA  
CU (SEE RESERVE/PRODUCTION REPORT)

12 48 16 S 28 30 30 E  
ENTITY COMMENT (DEPOSIT NO 34/ FIG 1 BIBL1/P77)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARENTIE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARENITES)  
FORMATION (LOWER ROAN GROUP)

ANNELS, A.E. 1984 (600)  
LEGG, C.A. 1973 (601)

**ZAMBIA-38**  
ITAWA  
CU (SEE RESERVE/PRODUCTION REPORT)

13 00 00 S 28 36 40 E  
ENTITY COMMENT (DEPOSIT NO 36/ FIG 1 BIBL1/P77)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARENTIE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (ARENITES)  
FORMATION (LOWER ROAN GROUP)

ANNELS, A.E. 1984 (600)

**ZAMBIA-39**

KALUMBILA

CU, NI (SEE RESERVE/PRODUCTION REPORT)

12 14 47 S 25 22 34 E

ENTITY COMMENT (DEPOSIT/ 17.5 KM S OF MUSELE)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)

AGE OF HOST (LATE PROTEROZOIC)

LEGG, C.A. 1973 (601)

**ZAMBIA-40**

MUFUMBWE

CU (SEE RESERVE/PRODUCTION REPORT)

13 37 30 S 24 47 00 E

ENTITY COMMENT (DEPOSIT/ OF MUFUMBWE VILLAGE)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)

AGE OF HOST (LATE PROTEROZOIC)

LEGG, C.A. 1973 (601)

**ZAMBIA-41**

MUFUKUSHI

CU (SEE RESERVE/PRODUCTION REPORT)

13 58 30 S 28 26 40 E

ENTITY COMMENT (DEPOSIT/ AT HEAD OF MUFUKUSHIR)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)

AGE OF HOST (LATE PROTEROZOIC)

LEGG, C.A. 1973 (601)

**ZAMBIA-42**

SEBEMBERE

CU (SEE RESERVE/PRODUCTION REPORT)

14 17 00 S 28 22 30 E

ENTITY COMMENT (DEPOSIT/ 12 KM NW OF KABWE)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)

AGE OF HOST (LATE PROTEROZOIC)

LEGG, C.A. 1973 (601)

**ZIMBABWE-1**

SHAMROCKE

CU

16 25 33 S 30 00 27 E

ENTITY COMMENT (MINE/RHODESIA GEOL 7TH ED 1977)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN META-ARKOSE LENSES INTERCALATED IN  
SCHIST)

REMARKS (CU IS OF HYDROTHERMAL-SEDIMENTARY ORIGIN)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (QUARTZITE/DOLOMITE/GRAPHITIC  
SCHIST/ARKOSE)

FORMATION (MCHEKA FM/ LOMAGUNDI GROUP)

GEOREMARKS (HOST ROCK DEPOSITED IN BRACKISH WATER  
NEAR-SHORE ENVIRONMENT)

VON RAHDEN, H.V. 1984 (550)

THOLE, R.H. 1976 (558)

THOLE, R.H. 1976 (559)

ANON. 1977 (560)

**ZIMBABWE-2**

MANGULA

CU (SEE RESERVE/PRODUCTION REPORT)

16 52 46 S 30 09 00 E

ENTITY COMMENT (53 KILOMETRES NORTH OF SINOIA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (DISSEMINATED IN

CALC-ARGILLITES/QUARTZITES/SS)

REMARKS (ORE BODIES ARE LIMBS OR ROLLS OF ONE  
INTENSELY FOLDED STRATIFORM LAYER)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (CALC-ARGILLITE/QUARTZITE/ARKOSIC  
SS/GRIT/CGLM)

FORMATION (DEWERAS GROUP/LOMAGUNDI SUPERGROUP)

GEOREMARKS (DEPOSITED IN ALLUVIAL FAN BRAIDED  
STREAM & LUCUSTRINE ENVIRONMENTS)

ANON. 1971 (427)

DAVIDSON, C.F. 1965 (102)

JACOBSEN, W.B. 1963 (197)

JACOBSEN, W.B. 1964 (198)

VON RAHDEN, H.V. 1984 (550)

**ZIMBABWE-3**

NORAH

CU (SEE RESERVE/PRODUCTION REPORT)

16 55 38 S 30 09 00 E

ENTITY COMMENT (6 KILOMETRES SOUTH OF MANGULA)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN ARKOSE/ GRIT/ QUARTZITE/ SOME SHIST)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (ARKOSE/GRITS/QUARTZITE)

FORMATION (DEWERAS GROUP)

ANON. 1971 (427)

ANON. 1973 (438)

DAVIDSON, C.F. 1965 (102)

VON RAHDEN, H.V. 1984 (550)



**ZIMBABWE-5**

SILVERSIDE

CU (SEE RESERVE/PRODUCTION REPORT)

16 56 40 S 30 17 45 E

ENTITY COMMENT (17 KILOMETRES SE OF MANGULA)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SEDIMENTARY ROCKS)

REMARKS (MINED AS OPEN PIT UNTIL MARCH 1975/ THEN  
MINED UNDERGROUND)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (ARKOSE/GRIT/QUARTZITE)

FORMATION (LOWER LOMAGUNDI SERIES)

DAVIDSON, C.F. 1965 (102)

ANON. 1971 (427)

ANON. 1973 (438)

VON RAHDEN, H.V. 1984 (550)

**ZIMBABWE-6**

SHACKLETON

CU (SEE RESERVE/PRODUCTION REPORT)

17 15 40 S 30 02 40 E

ENTITY COMMENT (MINE/RHODESIA GEOL 7TH ED 1977)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (AS DISS GRAINS/BLEBS/STRINGERS IN  
ARENACEOUS ROCK)REMARKS (BRAIDED STREAM DEPOSIT AT EDGE OF  
SEDIMENTARY BASIN UNDER ARID CLIMATE)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (META-ARKOSE/ META-GREYWACKE/ IMPURE  
DOLOMITE)

FORMATION (DEWARAS GROUP)

VON RAHDEN, H.V. 1984 (550)

THOLE, R.H. 1976 (558)

THOLE, R.H. 1976 (559)

ANON. 1977 (560)

**ZIMBABWE-7**

AVONDALE

CU (SEE RESERVE/PRODUCTION REPORT)

17 15 36 S 30 04 00 E

ENTITY COMMENT (MINE/RHODESIA GEOL 7TH ED 1977)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN META-ARKOSE)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (META-ARKOSE)

FORMATION (DEWARAS GROUP)

VON RAHDEN, H.V. 1984 (550)

THOLE, R.H. 1976 (558)

THOLE, R.H. 1976 (559)

ANON. 1977 (560)

**ZIMBABWE-8**

ALASKA

CU (SEE RESERVE/PRODUCTION REPORT)

17 24 56 S 30 00 27 E

ENTITY COMMENT (20 KILOMETRES WEST OF SINOIA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN META-ARKOSE)

REMARKS (ORE ZONE 1400 FT LONG ON SURFACE/  
SECONDARY ENRICHED OREBODY)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (ARENACEOUS ARKOSE/FELDSPATHIC SS &  
GREYWACKE)

FORMATION (DEWERAS GROUP)

GEOREMARKS (THESE CARBONATE ROCKS ARE ENCLOSED IN  
BRECCIA IN AN OVAL-SHAPED BASIN)

JACOBSEN, W.B. 1964 (505)

ANON. 1971 (427)

DAVIDSON, C.F. 1965 (102)

VON RAHDEN, H.V. 1984 (550)

MAIDEN, K.J. 1984 (547)

**ZIMBABWE-9**

ANGWA

CU

17 25 00 S 30 03 00 E

ENTITY COMMENT (MINE/RHODESIA GEOL 7TH ED 1977)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN META-ARKOSE)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (META-ARKOSE)

FORMATION (DEWERAS GROUP)

VON RAHDEN, H.V. 1984 (550)

THOLE, R.H. 1976 (558)

THOLE, R.H. 1976 (559)

ANON. 1977 (560)

**ZIMBABWE-10**

HANS

CU

17 25 00 S 30 00 00 E

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN META-ARKOSE)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (META-ARKOSE)

FORMATION (DEWERAS GROUP)

VON RAHDEN, H.V. 1984 (550)

MAIDEN, K.J. 1984 (547)

**ZIMBABWE-11**

COPPER QUEEN (SANYATI)

CU, PB, ZN (SEE RESERVE/PRODUCTION REPORT)

17 28 47 S 29 20 00 E

ENTITY COMMENT (MINE/RHODESIA GEOL 7TH ED 1977)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN PHYLITE &amp; QUARTZITE)

REMARKS (ORE BODIES OCCUR IN HIGHLY FOLDED &amp;

STRUCTURALLY COMPLEX ENVIRONMENT)	FORMATION (MONGOLOHWE FM & NYANGADZE FM/ SIJARIRA GROUP)
AGE OF HOST (EARLY PROTEROZOIC)	GEOREMARKS (AT ONE LOCALITY TRACES OF CU OCCUR ON JOINTS IN OVERLYING RED GRIT)
LITHOLOGY (PHYLLITE/ QUARTZITE)	
FORMATION (PIRIWIRI GROUP)	
VON RAHDEN, H.V. 1984 (550)	HARPER, G. 1970 (520)
THOLE, R.H. 1976 (558)	
THOLE, R.H. 1976 (559)	
ANON. 1977 (560)	
<b>ZIMBABWE-12</b>	<b>ZIMBABWE-15</b>
COPPER KING	GANDEROWE FALLS
CU, PB, ZN	CU
17 32 30 S 29 16 00 E	17 15 00 S 29 12 00 E
ENTITY COMMENT (MINE/RHODESIA GEOL 7TH ED 1977)	ENTITY COMMENT (CENTRE OF BELT/9 KM E OF FALLS)
CU SUBTYPE (UNDIFFERENTIATED)	CU SUBTYPE (UNDIFFERENTIATED)
GEOLOGY (IN PHYLLITE & QUARTZITE)	GEOLOGY (DISS/JOINT FILLINGS/CONC ON SHEAR PLANES IN GRITS)
AGE OF HOST (EARLY PROTEROZOIC)	REMARKS (SEVERAL OCC (GANDEROWE/GANDEROWE EAST/KUDU/TENGWE) FORM 10-KM BELT)
LITHOLOGY (PHYLLITE/ QUARTZITE)	
FORMATION (PIRIWIRI GROUP)	AGE OF HOST (LATE PROTEROZOIC)
VON RAHDEN, H.V. 1984 (550)	LITHOLOGY (GREY & GREEN GREYWACKE/ GRIT/ SANDSTONE/SHALE)
THOLE, R.H. 1976 (558)	FORMATION (NYANGADZE FORMATION/ SIJARIRA GROUP)
THOLE, R.H. 1976 (559)	
ANON. 1977 (560)	HARPER, G. 1970 (520)
<b>ZIMBABWE-13</b>	<b>ZIMBABWE-16</b>
UMNIATI RIVER	BADZE RIVER
CU	CU
17 30 00 S 29 00 00 E	17 09 30 S 29 10 00 E
ENTITY COMMENT (IN EAST PORTION OF SIJARIRA GP)	CU SUBTYPE (UNDIFFERENTIATED)
CU SUBTYPE (PARALIC MARINE)	GEOLOGY (DISSEMINATED IN GREY SHALES LENS WITHIN MAUVE SHAL)
GEOLOGY (IN FLAGSTONE AND GRITTY TURBIDITE)	REMARKS (PENECONCORDANT DEPOSIT/CU MINERALS REDISTRIBUTED DURING TECTONICS)
REMARKS (ANALOGOUS TO KATANGAN COPPER-IN ROCKS OF FIRST MARINE TRANSGRESSION)	AGE OF HOST (LATE PROTEROZOIC)
AGE OF HOST (LATE PROTEROZOIC)	LITHOLOGY (GREY SHALE)
LITHOLOGY (GREYWACKE/ GRIT/ SILTSTONE)	FORMATION (JINGA FM/ SIJARIRA GROUP)
FORMATION (SIJARIRA GROUP/ NYANGADZE & MASSORRO FMS)	GEOREMARKS (JINGA FM OCCURS AT BASE OF SIJARIRA GP DEPOSITED IN A SUBMARINE VALLEY)
GEOREMARKS (CU OCCURS AT INTERFACE OF FORMATIONS-DELTAIC DEPOSITS TO TURBIDITE)	HARPER, G. 1970 (520)
MANN, A.G. 1979 (519)	<b>ZIMBABWE-17</b>
HARPER, G. 1970 (520)	DEVULI
<b>ZIMBABWE-14</b>	CU
MTSHOWE (RIVER) BLOCK	
CU	20 05 00 S 32 13 00 E
17 17 30 S 29 20 00 E	ENTITY COMMENT (DEPOSIT/ IN CHIPINGA AREA)
ENTITY COMMENT (NE OF CHIWI RAPIDS/NEAR RIVER)	GEOLOGICAL PROVINCE (UMKONDO BASIN)
CU SUBTYPE (UNDIFFERENTIATED)	CU SUBTYPE (PARALIC MARINE)
GEOLOGY (ON JOINT PLANES IN RED SHALE)	GEOLOGY (IN ARGILLITE/DOLOMITE/ARKOSE)
REMARKS (TWO MALACHITE OCCURRENCES OF VERY LIMITED LATERAL EXTENT)	REMARKS (REPRESENTATIVE OF SEVERAL OCCURRENCES CONFINED TO N-NW 50KM WIDE BELT)
AGE OF HOST (LATE PROTEROZOIC)	AGE OF HOST (MIDDLE PROTEROZOIC)
LITHOLOGY (RED SHALE/ GRIT)	LITHOLOGY (ARGILLITE/ DOLOMITE/ ARKOSE)
	FORMATION (UMKONDO SYSTEM)
	GEOREMARKS (BELT REPRESENTS MINERALIZED ZONE FORMED IN MIGRATING SEBKHA ENVIRONMEN)

## ASIA

### AFGHANISTAN-1

AYNAK

CU (SEE RESERVE/PRODUCTION REPORT)

34 15 58 N 69 18 02 E

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (CONFORMABLE SULPHIDE BANDS MAINLY IN SANDSTONE)

REMARKS (UPWARD & DOWNWARD MINERAL ZONING VERY SIMILAR TO ZAMBIAN CU DEPOSITS)

AGE OF HOST (INFRACAMBRIAN TO LOWER CAMBRIAN)

LITHOLOGY (SANDSTONE/QTZITE/DOLOMITE/CARBONACEOUS SHALE)

GEOREMARKS (HOST ROCKS TO GREENSCHIST-METASSED/DOLOMITIC MARBLE/CARBONACEOUS SCHIST)

SILLITOE, R.H. 1980 (346)

ABDULLAH, S. 1977 (1)

### AFGHANISTAN-2

KHUNDARA

CU

34 13 55 N 69 15 40 E

ENTITY COMMENT (OCCURRENCE-NO 103/BIBL 1/ P119)

GEOLOGICAL PROVINCE (CENTRAL TECTON BLOCK)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SLATE AND MARBLE)

REMARKS (3 CUPRIFEROUS ZONES/200-500M LONG & 10-20M THICK/GRADING 0.8-1.6% CU)

AGE OF HOST (VENDIAN-CAMBRIAN)

LITHOLOGY (SLATE/ MARBLE)

ABDULLAH, S. 1977 (1)

### AFGHANISTAN-3

DARBAND

CU (SEE RESERVE/PRODUCTION REPORT)

34 16 00 N 69 24 00 E

ENTITY COMMENT (DEPOSIT/ BIBL 1/ P 103-104)

GEOLOGICAL PROVINCE (CENTRAL TECTON BLOCK)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (DISSEM/VEINLETS IN SILICIFIED MICACEOUS MARBLE BED)

REMARKS (3 MINERALIZED

AREAS-EASTERN/CENTRAL/WESTERN IN ZONE 7000 METRES LONG)

AGE OF HOST (VENDIAN-CAMBRIAN)

LITHOLOGY (MARBLE/INTERBEDDED BIOTITE-AMPHIBOLE SCHIST)

GEOREMARKS (CU CONCENTRATIONS ASSOC WITH UPPER BEDS OF INSHORE MARINE FORMATIONS)

ABDULLAH, S. 1977 (1)

**AFGHANISTAN-4**

JAWKHAR  
CU

34 18 57 N 69 18 10 E

ENTITY COMMENT (DEPOSIT-NO 2/BIBL 1/ P 102)

GEOLOGICAL PROVINCE (CENTRAL TECTON BLOCK)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN METAMORPHOZED ALBITIZED SILICIFIED CALC  
SED RXS)

REMARKS (CU ZONE 2000 M LONG BY 300 M THICK ENCLOSES  
22 LENTICULAR OCCURRENCES)

AGE OF HOST (VENDIAN-CAMBRIAN)

LITHOLOGY (CALCAREOUS SEDIMENTARY  
ROCKS/AMPHIBOLITE/QTZT)

GEOREMARKS (LENSES RANGE FROM 100-150 M LONG BY  
1.5-32 M THICK/ASSAY 0.33-2.56% CU)

ABDULLAH, S. 1977 (1)

**AFGHANISTAN-5**

ZAKHEL-1  
CU

34 20 05 N 69 16 00 E

ENTITY COMMENT (OCCURRENCE-NO 85/BIBL 1/ P 117)

GEOLOGICAL PROVINCE (CENTRAL TECTON BLOCK)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN MARBLE)

REMARKS (2 MINERALIZED ZONES EACH 1000M LONG &  
20-100M THICK/ 0.53% CU OVER 90M)

AGE OF HOST (VENDIAN-CAMBRIAN)

LITHOLOGY (MARBLE)

GEOREMARKS (OTHER ASSAYS GAVE 0.34 % CU OVER 25 M &  
1.06 % CU OVER 40 M THICKNESS)

ABDULLAH, S. 1977 (1)

**AFGHANISTAN-6**

KHURDKABUL  
CU

34 22 20 N 69 22 40 E

ENTITY COMMENT (OCCURRENCE-NO 77/ BIBL 1/P 116)

GEOLOGICAL PROVINCE (CENTRAL TECTON BLOCK)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (AS VEINLETS AND DISSEMINATIONS IN HOST  
ROCKS)

REMARKS (3 CU-BEARING ZONES 800-900M LONG & 5-50M  
THICK/0.18-0.36%CU OVER 5-37M)

AGE OF HOST (VENDIAN-CAMBRIAN)

LITHOLOGY (CARBONATE/PHYLLITE/GARNET-MICA  
SCHIST/MARBLE)

ABDULLAH, S. 1977 (1)

**AFGHANISTAN-7**

GHULDARRA-I & GHULDARRA-II  
CU

34 23 53 N 69 18 20 E

ENTITY COMMENT (GHULDARRA-I/OCCURRENCE/BIBL 1)

GEOLOGICAL PROVINCE (CENTRAL TECTON BLOCK)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (DISSEMINATED IN MARBLE)

REMARKS (2 OCCURRENCES CLOSE BY/I HAS TWO  
MINERALIED ZONES & II HAS ONE ZONE)

AGE OF HOST (VENDIAN-CAMBRIAN)

LITHOLOGY (MARBLE)

ABDULLAH, S. 1977 (1)

**AFGHANISTAN-8**

TAGHAR  
CU

34 25 53 N 69 22 43 E

ENTITY COMMENT (OCCURRENCE-NO 69/BIBL 1/ P 115)

GEOLOGICAL PROVINCE (CENTRAL TECTON BLOCK)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (AS VEINLETS PODS & DISSEMINATIONS IN HOST  
ROCKS)

REMARKS (19 DISCONTINUOUS CU ZONES 300 TO 6000  
METRES LONG & 3 TO 200 M THICK)

AGE OF HOST (VENDIAN-CAMBRIAN)

LITHOLOGY (MICACEOUS CARBONATE/ PHYLLITE/ SCHIST/  
MARBLE)

GEOREMARKS (MINERALIZED SECTIONS BETWEEN 3-15 M &  
40-70 M THICK ASSAY 0.1-0.9 % CU)

ABDULLAH, S. 1977 (1)

**AFGHANISTAN-9**

SURKH-I-PARSO  
CU

34 51 00 N 68 39 00 E

ENTITY COMMENT (OCCURRENCE-NO 57/BIBL 1/ P 113)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN MARBLED LIMESTONE AND QUARTZITE)

REMARKS (DISSEMINATED MINERALIZATION OCCURS OVER 9  
SQ KM AREA)

AGE OF HOST (CARBONIFEROUS-LOWER PERMIAN)

LITHOLOGY (MARBLED LIMESTONE/ QUARTZITE)

ABDULLAH, S. 1977 (1)

**CHINA-1**

YIMEN DISTRICT  
CU, CO, AG

24 38 00 N 102 00 00 E

ENTITY COMMENT (YIMEN/ TIMES WORLD ATLAS)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

GEOLOGICAL PROVINCE (KANGDIAN GEOAXIS)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN DOLOMITE NEAR BRECCIA WITH PURPLE HMTT MATRIX)

REMARKS (3 DEPOSITS-SHIXHISHAN  
(PRODUCER)/SHISHAN/SENGSHAN - 80 KM W OF KUNMING)

AGE OF HOST (MIDDLE PROTEROZOIC)

LITHOLOGY

(SLATE/PHYLLITE/SANDSTONE/QUARTZITE/DOLOMITE)

FORMATION (KUNYANG GP/YINMIN PURPLE BEDS/LAOXUE DOLOMITE)

GEOREMARKS (DEPOSITS FOUND IN SAME STRATA AS DONGCHUAN BUT DIFFERENT FAULT BLOCK)

WANG, K. 1982 (384)

FAN, POW-FOONG 1984 (611)

#### CHINA-2

KUANG-TUNG

CU

25 04 00 N 102 41 00 E

ENTITY COMMENT (KUN-MING/GAZETTEER OF CHINA/79)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (CU-BEARING SHALE)

REMARKS (NEAR MINING CENTRE OF KUN-MING)

AGE OF HOST (CRETACEOUS)

LITHOLOGY (SHALE)

CHU, H.J. 1935 (84)

ANON. 1973 (437)

KUO, W.K. 1963 (230)

MCMAHON, A.D. 1965 (264)

LI, H. 1968 (245)

#### CHINA-3

GEYIZHA (GE YIZHA)

CU, AG, PB, ZN, MO, SE, U

23 35 00 N 104 05 00 E

ENTITY COMMENT (APPROX/PLATE 38 16TH IGC VOL 2)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

GEOLOGICAL PROVINCE (KANGDIAN GEOAXIS)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

AGE OF HOST (UPPER CRETACEOUS)

LITHOLOGY (SANDSTONE)

FORMATION (MATOUSHAN FORMATION)

LI, H. 1968 (245)

CHU, H.J. 1935 (84)

CHEN, W. 1977 (80)

LIU, C.-L. 1977 (676)

CHEN, W. 1988 (684)

#### CHINA-4

LIUJU (LIU ZU)

CU, AG, PB, ZN, MO, SE, U

25 25 00 N 103 15 00 E

ENTITY COMMENT (APPROX/PLATE 38 16TH IGC VOL 2)

GEOLOGICAL PROVINCE (KANGDIAN GEOAXIS)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN PALE-COLOURED ROCKS IN TRANSITIONAL REGION)

REMARKS (TRANSITIONAL REGION BETWEEN PURPLE-COLOURED & PALE-COLOURED SANDSTONES)

AGE OF HOST (UPPER CRETACEOUS)

LITHOLOGY (GREY SANDSTONE/PURPLE SANDSTONE & MUDSTONE)

FORMATION (MATOUSHAN FORMATION)

GEOREMARKS (MINERALIZATION PRINCIPALLY CONC WITHIN MEDIUM-FINE-GRAINED SANDSTONE)

CHEN, W. 1977 (80)

LI, H. 1968 (245)

CHU, H.J. 1935 (84)

LIU, C.-L. 1977 (676)

CHEN, W. 1988 (684)

#### CHINA-5

HAOJIAHE (HAU JIAHE)

CU, AG, PB, ZN, MO, SE, U

23 45 00 N 103 35 00 E

ENTITY COMMENT (ON WESTERN SIDE OF YM OLD LAND)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

GEOLOGICAL PROVINCE (KANGDIAN GEOAXIS)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN PALE-COLOURED ROCKS IN TRANSITIONAL REGION)

REMARKS (TRANSITIONAL REGION BETWEEN PURPLE-COLOURED & PALE-COLOURED SANDSTONES)

AGE OF HOST (UPPER CRETACEOUS)

LITHOLOGY (GREY SANDSTONE/ARENACEOUS CONGLOMERATE)

FORMATION (MATOUSHAN FORMATION)

GEOREMARKS (AGE OF STRATIGRAPHIC POSITION CHANGES FROM OLD TO NEW-EAST TO WEST)

CHU, H.J. 1935 (84)

LI, H. 1968 (245)

CHEN, W. 1977 (80)

LIU, C.-L. 1977 (676)

CHEN, W. 1988 (684)

#### CHINA-6

LAOQINGSHAN (LAOQLIN SHAN)

CU, AG, PB, ZN, MO, SE, U

23 30 00 N 103 55 00 E

ENTITY COMMENT (APPROX/PLATE 38 16TH IGC VOL 2)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

GEOLOGICAL PROVINCE (KANGDIAN GEOAXIS)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN BLUISH-GREY SANDSTONE)

AGE OF HOST (UPPER CRETACEOUS)

LITHOLOGY (BLUISH-GREY

SANDSTONE/MARLITE/DOLOMITE/MARBLE)

FORMATION (MATOUSHAN FORMATION)

GEOREMARKS (BLUISH-GREY CU-BEARING SS CONTAINS  
ESPECIALLY NUMEROUS ACTINOMYCETES)

CHEN, W. 1977 (80)

LI, H. 1968 (245)

CHU, H.J. 1935 (84)

LIU, C.-L. 1977 (676)

CHEN, W. 1988 (684)

#### CHINA-7

TONGCHANGJING (TONG CHANGQING)

CU, AG, PB, ZN, MO, SE, U

24 20 00 N 103 33 00 E

ENTITY COMMENT (APPROX/PLATE 38 16TH IGC VOL 2)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

GEOLOGICAL PROVINCE (KANGDIAN GEOAXIS)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

AGE OF HOST (UPPER CRETACEOUS)

LITHOLOGY

(SS/PHYLLITE/SLATE/QUARTZITE/QTZ-MICA-SCHIST)

FORMATION (MATOUSHAN FORMATION)

CHU, H.J. 1935 (84)

CHEN, W. 1977 (80)

LI, H. 1968 (245)

LIU, C.-L. 1977 (676)

CHEN, W. 1988 (684)

#### CHINA-8

DONGCHUAN

CU (SEE RESERVE/PRODUCTION REPORT)

26 10 00 N 103 02 00 E

ENTITY COMMENT (DONGCHUAN/ GAZETTEER OF CHINA)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN ALGAL DOLOMITE WITHIN RIPPLED

STROMATOLITES)

REMARKS (3 DEPOSITS-YINMIN/LAOXUE/TANDAN APPROX 2-8  
KM APART/SOME METAMORPHISM)

AGE OF HOST (MIDDLE PROTEROZOIC (LATE ?))

LITHOLOGY (ALGAE-BEARING DOLOMITES/ARENACEOUS

DLMT/SLATE)

FORMATION (KUNYANG GP/ YINMIN PURPLE BEDS/ LUOXUE  
FM)

GEOREMARKS (CU IN TRANSITIONAL BEDS BETWEEN PURPLE  
BEDS AND DOLOMITES)

LI, H. 1968 (245)

CHONGYING, R. 1981 (82)

WANG, K. 1982 (384)

GONG, L. 1981 (162)

FAN, POW-FOONG 1984 (611)

#### CHINA-9

TIANZHONG

CU

26 16 00 N 104 01 00 E

ENTITY COMMENT (HSUAN-WEI/ GAZETTEER OF CHINA)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN MOTTLED FM BETWEEN COAL & SALINE

FORMATIONS)

REMARKS (NEAR MINING CENTRE OF HSUNA-WEI (ALSO  
SPELLED XUANWEI))

AGE OF HOST (CRETACEOUS)

LITHOLOGY (MUDSTONE/SILTSTONE/SANDSTONE/PEA GRAVEL  
ROCK)

FORMATION (YUNLONGZHEN & MATOU-JIANGDI SHAN FHE  
FMS)

CHU, H.J. 1935 (84)

LI, H. 1968 (245)

CHEN, W. 1977 (80)

#### CHINA-10

TUANSHAN (TUAN SHUAN)

CU

26 00 00 N 103 07 00 E

ENTITY COMMENT (NO 1/ FIG 1 BIBL 1)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

AGE OF HOST (UPPER CRETACEOUS)

LITHOLOGY (SANDSTONE)

FORMATION (MATOUSHAN FORMATION)

CHEN, W. 1977 (80)

LI, H. 1968 (245)

CHU, H.J. 1935 (84)

CHEN, W. 1988 (684)

#### CHINA-11

DACUN (DA CUN)

CU, AG, PB, ZN, MO, SE, U

25 45 00 N 103 00 00 E

ENTITY COMMENT (APPROX/PLATE 38 16TH IGC VOL 2)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

AGE OF HOST (UPPER CRETACEOUS)

LITHOLOGY (SANDSTONE)

FORMATION (MATOUSHAN FORMATION)

CHU, H.J. 1935 (84)

CHEN, W. 1977 (80)

LI, H. 1968 (245)

CHEN, W. 1988 (684)

**CHINA-12**

TONGGUTANG (CHEJIANG AREA)  
CU

26 15 00 N 112 10 00 E  
ENTITY COMMENT (APPROX/PLATE 38 16TH IGC VOL 2)

GEOGRAPHICAL SUBDIVISION (HUNAN)  
GEOLOGICAL PROVINCE (HENGYANG BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (LOWER TERTIARY (EARLY PALEOCENE))  
LITHOLOGY (SANDSTONE)  
FORMATION (CHEJIANG FORMATION)

CHU, H.J. 1935 (84)  
CHEN, W. 1977 (80)  
SHICONG, G. 1985 (605)

**CHINA-13**

CHEJIANG  
CU, AG

26 47 00 N 112 34 00 E  
ENTITY COMMENT (CHEJIANG/GAZETTEER OF CHINA/79)

GEOGRAPHICAL SUBDIVISION (HUNAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN MOTTLED FM BETWEEN COAL & SALINE  
FORMATIONS)

AGE OF HOST (CRETACEOUS)  
LITHOLOGY (SANDSTONE AND MUDSTONE)

CHEN, W. 1977 (80)  
CHU, H.J. 1935 (84)

**CHINA-14**

JIUQUWAN  
CU, AG

26 15 00 N 113 05 00 E  
ENTITY COMMENT (APPROX/PLATE 38 16TH IGC VOL 2)

GEOGRAPHICAL SUBDIVISION (HUNAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREYISH-GREEN TO GREYISH-WHITE  
SANDSTONE)  
REMARKS (SEVERAL DEPOSITS AT SOUTHWESTERN RIM OF  
JIANGNANLAND NEAR CH'EN-HSIEN)

AGE OF HOST (UPPER CRETACEOUS)  
LITHOLOGY (PURPLISH  
SANDSTONE/SLATES/MUDSTONES/SILTSTONE)  
GEOREMARKS (CU-BEARING STRATA ARE FLUVIATILE  
LUCISTRINE & DELTAIC FACIES DEPOSITS)

CHU, H.J. 1935 (84)  
CHEN, W. 1977 (80)  
CHEN, W. 1977 (80)  
THE THIRD LABORATORY OF THE HUBEI INSTITUTE OF  
GEOLOGICAL SCIENCES GEOLOGY TEAM NO. 407 OF THE

**CHINA-15**

TUNGKUNG & HSIKU  
CU

31 22 00 N 111 46 00 E  
ENTITY COMMENT (ABOUT 80 KM S OF NANCHANG)

GEOGRAPHICAL SUBDIVISION (HUPEH)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (CHALCOCITE & MALACHITE IN MIDDLE LIMESTONE  
FM)  
REMARKS (TWO DEPOSITS)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (LIMESTONE)  
FORMATION (PATUNG SERIES)  
GEOREMARKS (HAS SOME COLUMNAR CHALCOCITE &  
MALACHITE DEPOSITS AT BASE OF LIMESTONE)

CHU, H.J. 1935 (84)

**CHINA-16**

WEST SINKIANG  
CU

35 35 00 N 111 15 00 E  
ENTITY COMMENT (SINKIANG)

GEOGRAPHICAL SUBDIVISION (SHANTUNG)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE AND SHALE)

LITHOLOGY (SANDSTONE & SHALE)

CHU, H.J. 1935 (84)

**CHINA-17**

DATONGCHANG (DA TONGCHANG)  
CU, AG, SE, PB, ZN, MO, U

30 40 00 N 105 04 00 E  
ENTITY COMMENT (APPROX/PLATE 38 16TH IGC VOL 2)

GEOGRAPHICAL SUBDIVISION (SICHUAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN MOTTLED FM BETWEEN COAL & SALINE  
FORMATIONS)  
REMARKS (HIGH COPPER CONTENT IN FRAGMENTS OF  
CU-BEARING ARENACEOUS CONGLOMERATE)

AGE OF HOST (CRETACEOUS)  
LITHOLOGY  
(MUDSTONE/SILTSTONE/SANDSTONE/CONGLOMERATE)  
FORMATION (XIAOTA FM)  
GEOREMARKS (AGE OF STRATIGRAPHIC POSITION CHANGES  
FROM OLD TO NEW-WEST TO EAST)

CHU, H.J. 1935 (84)  
CHEN, W. 1977 (80)  
CHEN, W. 1988 (684)

**CHINA-18**  
HUILI  
CU

26 41 00 N 102 15 00 E  
ENTITY COMMENT (HUILI/ TIMES WORLD ATLAS)

GEOGRAPHICAL SUBDIVISION (SICHUAN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (CU-BEARING SHALE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (SHALE)  
FORMATION (KUNYANG GROUP)

MCMAHON, A.D. 1965 (264)  
CHU, H.J. 1935 (84)  
COX, D. 0 (677)

**CHINA-19**  
WEI-NING  
CU

26 51 00 N 104 12 00 E  
ENTITY COMMENT (NO 36/PLATE 38 16TH IGC VOL 2)

GEOGRAPHICAL SUBDIVISION (KWEICHOW)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (CU-BEARING SHALE)

LITHOLOGY (SHALE)

CHU, H.J. 1935 (84)  
MCMAHON, A.D. 1965 (264)

**CHINA-20**  
DSCHURGER  
CU

41 48 00 N 81 50 00 E  
ENTITY COMMENT (NEAR PAICHENG-NO 50/ PLATE 38)

GEOGRAPHICAL SUBDIVISION (SINKIANG)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (MALACHITE-AZURITE IN SHALE INTERBEDDED WITH SANDST)  
REMARKS (COPPER-BEARING SHALE 4 TO 5 METERS THICK/MANY SHAFTS SUNK FOR MINING)

LITHOLOGY (IN SHALE INTERBEDDED WITH SANDSTONE)

CHU, H.J. 1935 (84)

**CHINA-21**  
DAHU  
CU

24 00 00 N 114 00 00 E  
ENTITY COMMENT (APPROX CENTRE OF PROVINCE)

GEOGRAPHICAL SUBDIVISION (GUANGDONG)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

AGE OF HOST (UPPER CRETACEOUS & LOWER TERTIARY)  
LITHOLOGY (SANDSTONE)  
FORMATION (DENGTA GROUP)

CHEN, W. 1977 (80)

**CHINA-22**  
QAMDO & ZHANGDU  
CU

31 10 00 N 97 14 00 E  
ENTITY COMMENT (QAMDO/ GAZETTEER OF CHINA 1979)

GEOGRAPHICAL SUBDIVISION (XIZANG)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SANDSTONE)  
REMARKS (6.48 & 6.4 MILLION TONS OF ORE RESPECTIVELY-REPORTED WITH NO CU GRADE)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (SANDSTONE)

CHEN, W. 1977 (80)  
WANG, Y. 1981 (385)  
CHIN, E. 1983 (81)

**CHINA-23**  
CHIENCHUPA  
CU

30 00 00 N 103 00 00 E  
ENTITY COMMENT (APPROX/PLATE 38 16TH IGC VOL 2)

GEOGRAPHICAL SUBDIVISION (SICHUAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS NODULES IN SANDY SHALE REPLACING CHARRED WOOD)  
REMARKS (COPPER ORE FOUND NEAR CHIENCHUPA ABOUT 10KM NORTH OF YUNGCHING CITY)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (GRAYISH-BLACK SANDY SHALE)  
GEOREMARKS (DEPOSITED IN SHALLOW WATER BORDERING OLDLAND COVERED BY PERMIAN BASALT)

CHU, H.J. 1935 (84)

**CHINA-24**  
OMEIHSIEN  
CU

29 17 00 N 106 12 00 E  
ENTITY COMMENT (NEAR LUNGMAN-NO 29/ PLATE 38)

GEOGRAPHICAL SUBDIVISION (SICHUAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS NODULES IN SANDY SHALE REPLACING CHARRED WOOD)  
REMARKS (OMEIHSIEN IS AN ADMINISTRATIVE DIVISION NAME)

AGE OF HOST (TRIASSIC)



LITHOLOGY (GRAYISH-BLACK SANDY SHALE)  
GEOREMARKS (DEPOSITED IN SHALLOW WATER BORDERING  
OLDLAND COVERED BY PERMIAN BASALT)

CHU, H.J. 1935 (84)

**CHINA-25**  
TANGTANG  
CU

26 29 00 N 104 12 00 E  
ENTITY COMMENT (TANGTANG/GAZETTEER OF CHINA/79)

GEOGRAPHICAL SUBDIVISION (YUNNAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE WITHIN COAL-BEARING  
FORMATION)  
REMARKS (GEOGRAPHICALLY WIDELY DISTRIBUTED & IS  
ESPECIALLY THICK NEAR TANGTANG)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (COAL BEDS & REDDISH COARSE SANDSTONE)  
GEOREMARKS (GRADE OF ORE ABOUT 4% CU)

CHU, H.J. 1935 (84)

**CHINA-26**  
GAUDAN  
CU

39 43 00 N 74 02 00 E  
ENTITY COMMENT (OCCURRENCE/NEAR KASHGARG 397)

GEOGRAPHICAL SUBDIVISION (XINJIANG)  
GEOLOGICAL PROVINCE (TARIM BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (TERTIARY (EARLY))  
LITHOLOGY (SANDSTONE)

CHENG, S. 1986 (608)  
POPOV, V.M. 1962 (301)

**CHINA-27**  
KUNGITANG  
CU

39 44 00 N 74 56 00 E  
ENTITY COMMENT (OCCURRENCE/NEAR KASHGAR)

GEOGRAPHICAL SUBDIVISION (XINJIANG)  
GEOLOGICAL PROVINCE (TARIM BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (TERTIARY (EARLY))  
LITHOLOGY (SANDSTONE)

CHENG, S. 1986 (608)  
POPOV, V.M. 1962 (301)

**CHINA-28**  
NAYKATSKOYE  
CU

40 00 00 N 74 45 00 E  
ENTITY COMMENT (OCCURRENCE/NEAR KASHGAR)

GEOGRAPHICAL SUBDIVISION (XINJIANG)  
GEOLOGICAL PROVINCE (TARIM BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (TERTIARY (EARLY))  
LITHOLOGY (SANDSTONE)

CHENG, S. 1986 (608)  
POPOV, V.M. 1962 (301)

**CHINA-29**  
AKSU  
CU

41 36 00 N 80 18 00 E  
ENTITY COMMENT (OCCURRENCE/APPROX 50KM N AKSU)

GEOGRAPHICAL SUBDIVISION (XINJIANG)  
GEOLOGICAL PROVINCE (TARIM BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (TERTIARY (EARLY))  
LITHOLOGY (SANDSTONE)  
FORMATION (KONCHAN FORMATION)

CHENG, S. 1986 (608)

**CHINA-30**  
DISUEI-1  
CU

41 30 00 N 81 15 00 E  
ENTITY COMMENT (DEPOSIT/APPROX 90KM NE OF AKSU)

GEOGRAPHICAL SUBDIVISION (XINJIANG)  
GEOLOGICAL PROVINCE (TARIM BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (TERTIARY (EARLY))  
LITHOLOGY (SANDSTONE)  
FORMATION (KONCHAN FORMATION)  
GEOREMARKS (MAIN ORE LAYER GENERALLY 0.85 METRES  
THICK/AVERAGE CONTENT-1.08% CU)

CHENG, S. 1986 (608)

**CHINA-31**  
DISUEI-2  
CU

41 34 00 N 82 00 00 E  
ENTITY COMMENT (DEPOSIT/APPROX 90KM NE OF AKSU)

GEOGRAPHICAL SUBDIVISION (XINJIANG)  
GEOLOGICAL PROVINCE (TARIM BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (TERTIARY (EARLY))  
LITHOLOGY (SANDSTONE)  
FORMATION (KONCHAN FORMATION)  
GEOREMARKS (MAIN ORE LAYER GENERALLY 0.85 METRES  
THICK/AVERAGE CONTENT-1.08% CU)

CHENG, S. 1986 (608)

**CHINA-32**  
KUCHA (KUQA)  
CU

41 45 00 N 82 45 00 E  
ENTITY COMMENT (OCCURRENCE/APPROX 50KM NW KUQA)

GEOGRAPHICAL SUBDIVISION (XINJIANG)  
GEOLOGICAL PROVINCE (TARIM BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (TERTIARY (EARLY))  
LITHOLOGY (SANDSTONE)  
FORMATION (KONCHAN FORMATION)

CHENG, S. 1986 (608)

**CHINA-33**  
HADILIK  
CU

37 38 00 N 87 00 00 E  
ENTITY COMMENT (OCC/APPROX 90KM SE OF HADILIK)

GEOGRAPHICAL SUBDIVISION (XINJIANG)  
GEOLOGICAL PROVINCE (ALTUN SHAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (OCCURRENCE LOCATED IN ALTUN MOUNTAINS)

AGE OF HOST (TERTIARY (EARLY))  
LITHOLOGY (SANDSTONE)

CHENG, S. 1986 (608)

**CHINA-34**  
LAKE AYAKKUM  
CU

37 25 00 N 89 10 00 E  
ENTITY COMMENT (OCC/APPROX 25KM S OF LAKE)

GEOGRAPHICAL SUBDIVISION (XINJIANG)  
GEOLOGICAL PROVINCE (ALTUN SHAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (OCCURRENCE FOUND APPROX 25 KM SOUTH OF  
LAKE AYAKKUM IN ALTUN MOUNTAINS)

AGE OF HOST (TERTIARY (EARLY))  
LITHOLOGY (SANDSTONE)

CHENG, S. 1986 (608)

**CHINA-35**  
NIUTOUSHAN AREA  
CU

25 45 00 N 111 30 00 E  
ENTITY COMMENT (HENGYANG BASIN/MAP/BIBL 1 PG 3)

GEOGRAPHICAL SUBDIVISION (HUNAN)  
GEOLOGICAL PROVINCE (HENGYANG BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (LOWER TERTIARY (EARLY PALEOCENE))  
LITHOLOGY (SANDSTONE)  
FORMATION (CHEJIANG FORMATION)  
GEOREMARKS (TWO LAYERS OF CU-BEARING BEDS OF LOW  
TENOR ORE)

SHICONG, G. 1985 (605)

**INDIA-1**  
BANDALAMOTTU (AGNIGUNDALA BELT  
PB, CU (SEE RESERVE/PRODUCTION REPORT)

16 13 15 N 79 39 47 E

GEOGRAPHICAL SUBDIVISION (GUNTUR)  
GEOLOGICAL PROVINCE (CUDDAPAH BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AS VEINS ALONG BEDDING PLANES IN (CHERTY)  
DOLOMITE)  
REMARKS (COPPER ZONE OCCURS BELOW LODGE NO 1 OF  
MAIN OREBODY/ UPPER DOLO-HORIZON)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (DOLOMITE/DOLOMITIC LIMESTONE/PHYLLITE)  
FORMATION (CUMBUM FN/ NALLAMALAI GP/ CUDDAPAH  
SUPERGROUP)  
GEOREMARKS (4 OREBODIES-MAIN/EASTERN/WESTERN &  
SOUTHERN WITH LOW GRADE CU/ PB ZONE)

NANDAN, K.R. 1981 (281)  
KURIEN, T.K. 1980 (231)

**INDIA-1(A)**  
AGNIGUNDALA BELT (BANDALAMOTTU/DHUKONDA/NALLAKON)  
CU, PB, CO, NI, AG, MO (SEE RESERVE/PRODUCTION  
REPORT)

16 13 15 N 79 39 47 E  
ENTITY COMMENT (BANDALAMOTTU/RAO 1976/ PG 105)

GEOGRAPHICAL SUBDIVISION (GUNTUR)  
GEOLOGICAL PROVINCE (CUDDAPAH BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITE/CHERTY DOLOMITE/CALCAREOUS  
QUARTZITE)  
REMARKS (3

DEPOSITS-BANDALAMOTTU/DHUKONDA/NALLAKONDA  
NEAR EAST MARGIN OF BASIN)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (DOLOMITE/CHERTY DOLOMITE/CALCAREOUS  
QUARTZITE)  
FORMATION (CUMBUM FM/ NALLAMALAI GP/ CUDDAPAH  
SUPERGROUP)  
GEOREMARKS (PB ORE MAINLY CONFINED TO DOLOMITIC  
ROCKS/ CU ORE TO QUARTZITE)

KURIEN, T.K. 1980 (231)  
SIVADAS, K.M. 1985 (309)  
SEN, S.N. 1975 (337)  
RAO, J.S. 1974 (308)  
BANERJEE, P.K. 1972 (24)  
PATWARDHAN, A.M. 1984 (552)  
NANDAN, K.R. 1981 (281)

**INDIA-2**

DHUKONDA (AGINGUNDALA BELT)  
CU, PB (SEE RESERVE/PRODUCTION REPORT)

16 13 15 N 79 43 13 E

GEOGRAPHICAL SUBDIVISION (GUNTUR)  
GEOLOGICAL PROVINCE (CUDDAPAH BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AS DISSEMINATIONS IN CALCAREOUS QUARTZITE)  
REMARKS (CU IS DOMINANT & CONFINED TO COARSE  
GRAINED QUARTZITE/ PB IN DOLOMITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/DOLOMITE)  
FORMATION (CUMBUM FM/ NALLAMALAI GP/ CUDDAPAH  
SUPERGROUP)  
GEOREMARKS (FORMATIONS HAVE SUFFERED INTENSE  
TECTONIC DISTURBANCE)

NANDAN, K.R. 1981 (281)  
KURIEN, T.K. 1980 (231)

**INDIA-3**

NALLAKONDA (AGNIGUNDALA BELT)  
CU, AG, AU, NI, CO (SEE RESERVE/PRODUCTION REPORT)

16 12 27 N 79 42 11 E

GEOGRAPHICAL SUBDIVISION (GUNTUR)  
GEOLOGICAL PROVINCE (CUDDAPAH BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AS DISSEMINATIONS IN CALCAREOUS QUARTZITE)  
REMARKS (STRIKE LENGTH OF MINERALIZED ZONE LOCALIZED  
IN COARSE-GR QTZITE-1300M)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/ CHLORITIC PHYLLITE/ GREY  
ARGILLITE)  
FORMATION (CUMBUM FM/ NALLAMALAI GP/ CUDDAPAH  
SUPERGROUP)

NANDAN, K.R. 1981 (281)  
KURIEN, T.K. 1980 (231)

**INDIA-4**  
NETANAR  
CU

18 52 00 N 82 03 00 E  
ENTITY COMMENT (OCCURRENCE/INDIAN MINERALS P27)

GEOGRAPHICAL SUBDIVISION (MADHYA PRADESH)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AS SPECKS/ STRINGERS/ BLEBS/ STAINS IN SHALE)  
REMARKS (MALACHITE-RICH POCKETS SELDOM EXCEED HALF  
A METRE IN LENGTH OR WIDTH)

AGE OF HOST (PROTEROZOIC)  
LITHOLOGY (GREY-GREEN SHALE)  
FORMATION (JAGDALPUR FM/ INDRAVATI GROUP)  
GEOREMARKS (PURPLE SHALE INTERCALATED WITH  
BIOHERMAL ALGAL MICRITE & GREY-GR SHALE)

SEN, S. 1975 (338)

**INDIA-5**  
BARAUD  
CU

27 54 00 N 76 23 00 E  
ENTITY COMMENT (OUTCROP/1 KM EAST OF BARAUD)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITIC MARBLE ASSOCIATED WITH  
STROMATOLITES)  
REMARKS (COPPER VALUES VARY BETWEEN 300 PPM TO  
MORE THAN 0.1%)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (IMPURE SILICEOUS MARBLE/CHERTS/QUARTZITE)  
FORMATION (KUSHALGARH & SERISKA FMS/DELHI  
SUPERGROUP)

NEGI, R.S. 1980 (583)  
VERMA, K.K. 1980 (584)

**KAZAKHSTAN-1**

MANGYSHLAK PENINSULA-TARTALA  
CU

44 28 00 N 50 45 00 E  
ENTITY COMMENT (PENINSULA/ W COAST CASPIAN SEA)

GEOLOGICAL PROVINCE (MANGYSHLAK ZONE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SILICEOUS-FELDSPATHIC SANDSTONE)  
REMARKS (FORMATION CONTAINS SEVERAL MINOR  
OCCURRENCES OF COPPER MINERALIZATION)

AGE OF HOST (EARLY TRIASSIC)  
LITHOLOGY  
(LIMESTONE-SILTSTONE/SILTSTONE/SANDSTONE-SILTS)  
FORMATION (TARTALA FORMATION)  
GEOREMARKS (SANDSTONE HAS CALCAREOUS AND  
ARGILLECEOUS CEMENT)

BOGDANOV, Y.V. 1973 (51)  
STRAKHOV, N.M. 1962 (361)  
POPOV, V.M. 1962 (301)

**KAZAKHSTAN-2**

MANGYSHLAK PENINSULA-KARADUAN  
CU

44 30 00 N 51 00 00 E

ENTITY COMMENT (PENINSULA/ W COAST CASPIAN SEA)

GEOLOGICAL PROVINCE (MANGYSHLAK ZONE)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN INTRAFORMATIONAL CONGLOMERATE WITHIN  
SANDSTONE)

REMARKS (SCATTERED OCCURRENCES OF COPPER  
MINERALIZATION)

AGE OF HOST (MIDDLE TRIASSIC)

LITHOLOGY (POLYMIC TIC RED SS/ GREY SS/  
CONGLOMERATES)

FORMATION (KARADUAN FORMATION)

GEOREMARKS (LENSES OF CONGLOMERATE RANGE 0.5-3.0  
M/POORLY ROUNDED PEBBLES MAX 4 CM)

BOGDANOV, Y.V. 1973 (51)

**KAZAKHSTAN-3**

AKTYUBINSK  
CU

50 16 00 N 57 20 00 E

ENTITY COMMENT (ORE FIELD/ NO 6 FIG 39 BIBL 1)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)

GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

REMARKS (OVER 2800 OCCURRENCES IN  
ORENBURG-AKTYUBINSK REGION 350 KM W OF URALS)

AGE OF HOST (LATE PERMIAN)

LITHOLOGY (SANDSTONE)

GEOREMARKS (OCCURRENCES OCCUR WITHIN STRIP 600 KM  
BY 100 KM)

BOGDANOV, Y.V. 1973 (51)

**KAZAKHSTAN-4**

ATBASAR-1  
CU, PB

51 49 50 N 68 27 00 E

ENTITY COMMENT (SHOWING/FIG 2 BIBL 2/PG 403)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE OF REDBED SERIES)

REMARKS (FOUND AT INTERVALS THROUGHOUT 10000 FT OF  
SAME BASIN/3-4 ORE HORIZONS)

AGE OF HOST (DEVONIAN (LATE))

LITHOLOGY (RED BED SERIES)

GEOREMARKS (STRATIFORM CU WITH PB IN OVERLYING  
HORIZONS)

DAVIDSON, C.F. 1965 (102)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-5**

ATBASAR-2  
CU

51 55 00 N 68 02 00 E

ENTITY COMMENT (SHOWING/FIG 2 BIBL 1/ PG 403)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE OF RED BED SERIES)

REMARKS (LOCATED JUST NORTH AND OUTSIDE OF TENIZ  
BASIN BOUNDARY)

AGE OF HOST (DEVONIAN (LATE))

LITHOLOGY (RED BED SERIES)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-6**

ATBASAR-3  
CU

52 10 00 N 68 40 00 E

ENTITY COMMENT (SHOWING/FIG 2 BIBL 1/PG 403)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE OF RED BED SERIES)

REMARKS (LOCATED JUST OUTSIDE OF TENIZ BASIN  
BOUNDARY)

LITHOLOGY (RED BED SERIES)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-7**

ATBASAR GULF  
CU

51 40 00 N 67 42 00 E

ENTITY COMMENT (W SHOWING/FIG 2 BIBL 1/PG 403)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

REMARKS (TWO SHOWINGS-ONE 5 KM WSW OF OTHER ONE)

AGE OF HOST (PERMIAN (EARLY))

LITHOLOGY (CUPRIFEROUS SANDSTONE)

FORMATION (KIYMA RED BED SUITE)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-8**

TURGAN GULF (TERS-AKKAN RIVER)  
CU

51 10 00 N 67 43 00 E

ENTITY COMMENT (N SHOWING/FIG 2 BIBL/ PG 403)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

REMARKS (TWO SHOWINGS STRADDLE TERS-AKKAN  
(TERISAKKAN) RIVER N-S OF EACH OTHER)

AGE OF HOST (PERMIAN (EARLY))  
LITHOLOGY (CUPRIFEROUS SANDSTONE)  
FORMATION (KIYMA RED BED SUITE)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-9**

USHKARASU  
CU, RE, MO

50 50 00 N 67 00 00 E  
ENTITY COMMENT (SHOWING/NO 13 FIG 2 BIB 1/P416)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDY SHALE)  
REMARKS (55 KM NNE OF ARKALYK)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDY SHALE)  
FORMATION (VLADIMIROVSKAYA SUITE)

SEYFULLIN, S.S. 1974 (590)  
BOGDANOV, Y.V. 1972 (591)

**KAZAKHSTAN-10**

KYZYLOBA  
CU, RE, MO

50 49 30 N 68 26 00 E  
ENTITY COMMENT (SHOWING/NO 12 FIG 2 BIB 1/ P46)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDY SHALE)  
REMARKS (37 KM SW OF LAKE KOZHAKOL)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDY SHALE)  
FORMATION (VLADIMIROVSKAYA SUITE)

SEYFULLIN, S.S. 1974 (590)  
BOGDANOV, Y.V. 1972 (591)

**KAZAKHSTAN-11**

KOKPEKTY  
CU, RE, MO

50 48 12 N 68 10 00 E  
ENTITY COMMENT (SHOWING/NO 10 FIG 2 BIB 1/P416)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDY SHALE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDY SHALE)  
FORMATION (VLADIMIROVSKAYA SUITE)

SEYFULLIN, S.S. 1974 (590)

BOGDANOV, Y.V. 1972 (591)

**KAZAKHSTAN-12**

AKKEN  
CU, RE, MO

50 45 00 N 68 30 00 E  
ENTITY COMMENT (SHOWING/NO 11 FIG 2 BIB1/P416)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDY SHALE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDY SHALE)  
FORMATION (VLADIMIROVSKAYA SUITE)

SEYFULLIN, S.S. 1974 (590)  
BOGDANOV, Y.V. 1972 (591)

**KAZAKHSTAN-13**

KOPKAZGEN  
CU, RE, MO

50 37 30 N 68 08 00 E  
ENTITY COMMENT (DEPOSIT/NO 9 FIG 2 BIBL 1/P416)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDY SHALE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDY SHALE)  
FORMATION (VLADIMIROVSKAYA SUITE)

SEYFULLIN, S.S. 1974 (590)  
BOGDANOV, Y.V. 1972 (591)

**KAZAKHSTAN-14**

ASHCHILIN BAY (TERS-AKKAN RIV)  
CU

50 30 00 N 68 07 00 E  
ENTITY COMMENT (SE SHOWING/FIG 2 BIBL 1/PG 403)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (TWO SHOWINGS JUST EAST OF TERS-AKKAN RIVER  
NW-SE OF EACH OTHER)

AGE OF HOST (PERMIAN (EARLY))  
LITHOLOGY (CUPRIFEROUS SANDSTONE)  
FORMATION (KIYMA RED BED SUITE)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-15**

KENEN  
CU, RE, MO

50 20 30 N 68 00 00 E

ENTITY COMMENT (DEPOSIT/NO 8 FIG 2 BIBL 1/P416)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDY SHALE)

REMARKS (ON THE TERISAKKAN RIVER 50 KM WEST OF  
SOUTHERN END OF LAKE TENGIZ)

AGE OF HOST (CARBONIFEROUS (MIDDLE))

LITHOLOGY (SANDY SHALE)

FORMATION (VLADIMIROVSKAYA SUITE)

SEYFULLIN, S.S. 1974 (590)

BOGDANOV, Y.V. 1972 (591)

#### **KAZAKHSTAN-16**

TENIZ-SARYSU DIVIDE-1

CU

50 25 00 N 67 53 00 E

ENTITY COMMENT (SHOWING/FIG 2 BIBL 1/PG 403)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE OF RED BED SERIES)

REMARKS (LOCATED APPROX 20 KM NORTH OF TERS-AKKAN  
RIVER/SOUTH.OF TENIZ BASIN)

AGE OF HOST (DEVONIAN (LATE))

LITHOLOGY (RED BED SERIES)

POPOV, V.M. 1962 (301)

#### **KAZAKHSTAN-17**

TENIZ-SARYSU DIVIDE -2

CU

50 14 00 N 67 41 00 E

ENTITY COMMENT (SHOWING/FIG 2 BIBL 1/PG 403)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE OF RED BED SERIES)

REMARKS (LOCATED APPROX 5 KM NORTH OF TERS-AKKAN  
RIVER/ SOUTH OF TENIZ BASIN)

AGE OF HOST (DEVONIAN (LATE))

LITHOLOGY (RED BED SERIES)

POPOV, V.M. 1962 (301)

#### **KAZAKHSTAN-18**

ZHOLYMBET

CU

51 49 00 N 71 32 00 E

ENTITY COMMENT (SHOWING/ FIG 2 BIBL 1/ PG 403)

GEOLOGICAL PROVINCE (TENIZ BASIN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE OF RED BED SERIES)

REMARKS (NEAR ZHOLYMBET-50 KM NORTH OF AKMOLINSK AT  
NE EXTREMITY OF TENIZ BASIN)

AGE OF HOST (DEVONIAN (LATE))

LITHOLOGY (RED BED SERIES)

POPOV, V.M. 1962 (301)

#### **KAZAKHSTAN-19**

AKMOLISK-ISHIM (ISHIMO) RIVER

CU, PB

50 50 00 N 72 21 00 E

ENTITY COMMENT (GROUP OF DEPOSITS/ FIG 1 BIBL1)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

REMARKS (GROUP OF 6 DEPOSITS STRADDLES ISHIMO RIVER  
30 KM SE OF AKMOLINSK)

AGE OF HOST (DEVONIAN)

LITHOLOGY (SANDSTONE)

POPOV, V.M. 1962 (301)

#### **KAZAKHSTAN-20**

OLENTY RIVER

CU

50 55 00 N 73 30 00 E

ENTITY COMMENT (SHOWINGS/ FIG 1 BIBL 1/PG 397)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE OF RED BED SERIES)

REMARKS (3 SHOWINGS LOCATED S OF HEAD OF OLENTY  
RIVER/APPROX 150KM E AKMOLINSK)

AGE OF HOST (DEVONIAN (LATE))

LITHOLOGY (RED BED SERIES)

POPOV, V.M. 1962 (301)

#### **KAZAKHSTAN-21**

DZHEZKAZGAN (JESKESGAN)

CU, PB, ZN, RE, MO (SEE RESERVE/PRODUCTION REPORT)

47 52 00 N 67 18 00 E

ENTITY COMMENT (DEPOSIT/NO 1 FIG 2 BIBL7/P416)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (ORE MINERALS REPLACE MATRIX OF GREY SS AND  
CONGL)

REMARKS (MAIN DEPOSIT OF DZHEZKAZGAN COPPER BELT)

AGE OF HOST (CARBONIFEROUS (MIDDLE TO LATE))

LITHOLOGY (GREY & RED

SANDSTONE/SILTSTONE/CONGLOMERATE)

FORMATION (DZHEZKAZGAN GP/DZHEZKAZGAN & TASKUDUK  
SUITES)

GEOREMARKS (GROUP CONSISTS OF 51 RHYTHMICALLY  
ALTERNATING LAYERS OF GREY & RED RXS)

GABLINA, I.F. 1981 (148)

LURYE, A.M. 1978 (255)

SAMONOV, I.Z. 1977 (332)

SHCHERBA, G.N. 1971 (341)

SHTREM, E.A. 1969 (344)

DRUZHININ, I.P. 1970 (119)

SEYFULLIN, S.S. 1974 (590)

**KAZAKHSTAN-22**

ULUTAU (NORTH)  
CU

49 06 00 N 67 00 00 E

ENTITY COMMENT (SHOWINGS/FIG 2 BIBL 1/PG403)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE OF RED BED SERIES)

REMARKS (GROUP OF 7 SHOWINGS STRADDLES EAST  
LONGITUDE 67/APPROX 20 KM N ULUTAU)

AGE OF HOST (DEVONIAN (LATE))

LITHOLOGY (RED BED SERIES)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-23**

ULUTAU (SOUTH)  
CU

48 31 40 N 67 00 00 E

ENTITY COMMENT (SHOWINGS/FIG 2 BIBL 1/PG 403)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE OF RED BED SERIES)

REMARKS (GROUP OF 3 SHOWINGS STRADDLES EAST  
LONGITUDE 67/ APPROX 20 KM S ULUTAU)

AGE OF HOST (DEVONIAN (LATE))

LITHOLOGY (RED BED SERIES)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-24**

ITAUZ  
CU, RE, MO

48 16 00 N 67 20 00 E

ENTITY COMMENT (DEPOSIT/NO 4 FIG 2 BIBL 2/P416)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (ORE MINERALS REPLACE MATRIX OF GREY SS AND  
CONGL)

REMARKS (PART OF TASKUDUK COPPER BELT LOCATED JUST  
NORTH OF DZHEZKAZGAN BELT)

AGE OF HOST (CARBONIFEROUS (MIDDLE TO LATE))

LITHOLOGY (GREY & RED

SANDSTONE/SILTSTONE/CONGLOMERATE)  
FORMATION (DZHEZKAZGAN GROUP/TASKUDUK SUITE)

BOGDANOV, Y.V. 1972 (591)

SEYFULLIN, S.S. 1974 (590)

POPOV, V.M. 1962 (301)

SAMONOV, I.Z. 1977 (332)

**KAZAKHSTAN-25**

SARY OBA  
CU, RE, MO

48 17 00 N 67 26 00 E

ENTITY COMMENT (DEPOSIT/NO 5 FIG 2 BIBL 2/P416)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (ORE MINERALS REPLACE MATRIX OF GREY SS AND  
CONGL)

REMARKS (PART OF TASKUDUK COPPER BELT LOCATED JUST  
NORTH OF DZHEZKAZGAN BELT)

AGE OF HOST (CARBONIFEROUS (MIDDLE TO LATE))

LITHOLOGY (GREY & RED

SANDSTONE/SILTSTONE/CONGLOMERATE)

FORMATION (DZHEZKAZGAN GROUP/TASKUDUK SUITE)

BOGDANOV, Y.V. 1972 (591)

SEYFULLIN, S.S. 1974 (590)

POPOV, V.M. 1962 (301)

SAMONOV, I.Z. 1977 (332)

**KAZAKHSTAN-26**

KIPSHAKPAY  
CU, RE, MO

48 18 00 N 67 34 00 E

ENTITY COMMENT (DEPOSIT/NO 6 FIG 2 BIBL 2/P416)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (ORE MINERALS REPLACE MATRIX OF GREY SS AND  
CONGL)

REMARKS (PART OF TASKUDUK COPPER BELT LOCATED JUST  
NORTH OF DZHEZKAZGAN BELT)

AGE OF HOST (CARBONIFEROUS (MIDDLE TO LATE))

LITHOLOGY (GREY & RED

SANDSTONE/SILTSTONE/CONGLOMERATE)

FORMATION (DZHEZKAZGAN GROUP/TASKUDUK SUITE)

BOGDANOV, Y.V. 1972 (591)

SEYFULLIN, S.S. 1974 (590)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-27**

KARASHOSHA  
CU, RE, MO

48 20 28 N 67 43 25 E

ENTITY COMMENT (DEPOSIT/NO 7 FIG 2 BIBL 2/P416)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (ORE MINERALS REPLACE MATRIX OF GREY SS AND  
CONGL)

REMARKS (PART OF TASKUDUK COPPER BELT LOCATED JUST  
NORTH OF DZHEZKAZGAN BELT)

AGE OF HOST (CARBONIFEROUS (MIDDLE TO LATE))

LITHOLOGY (GREY & RED

SANDSTONE/SILTSTONE/CONGLOMERATE)

FORMATION (DZHEZKAZGAN GROUP/TASKUDUK SUITE)

BOGDANOV, Y.V. 1972 (591)

SEYFULLIN, S.S. 1974 (590)

POPOV, V.M. 1962 (301)

SAMONOV, I.Z. 1977 (332)

**KAZAKHSTAN-28**

DZHARTAS  
CU, RE, MO

48 07 36 N 67 32 30 E

ENTITY COMMENT (DEPOSIT/NO 3 FIG 2 BIBL 1/P416)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDY SHALE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDY SHALE)  
FORMATION (DZHEZKAZGAN GROUP/DZHEZKAZGAN SUITE)

SEYFULLIN, S.S. 1974 (590)

**KAZAKHSTAN-29**

KENGIR  
CU

48 11 00 N 68 00 00 E

ENTITY COMMENT (DEPOSITS/FIG 2 BIBL 1/ PG 403)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE OF RED BED SERIES)  
REMARKS (2 DEPOSITS IN AREA OF KENGIR ANTICLINE  
OUTSIDE DZHEZKAZ-SARY SU BASIN)

AGE OF HOST (DEVONIAN (LATE))  
LITHOLOGY (RED BED SERIES)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-30**

SORKUDUK  
CU, RE, MO

48 01 00 N 67 32 25 E

ENTITY COMMENT (DEPOSIT/NO 2 FIG 2 BIBL 1/P416)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDY SHALE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDY SHALE)  
FORMATION (DZHEZKAZGAN GROUP)

SEYFULLIN, S.S. 1974 (590)

**KAZAKHSTAN-31**

SHIPISAI  
CU, PB, ZN, AG, RE

47 48 00 N 67 08 00 E

ENTITY COMMENT (DEPOSIT/FIG 59 BIBL 1/PG 165)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM IN GREY  
SANDSTONE/SILTSTONE/CONGLOMERATE)  
REMARKS (PART OF DZHEZKAZGAN COPPER BELT)

AGE OF HOST (CARBONIFEROUS (MIDDLE TO LATE))  
LITHOLOGY (GREY & RED  
SANDSTONE/SILTSTONE/COGLOMERATE)  
FORMATION (DZHEZKAZGAN GROUP/TASKUDUK SUITE)

SAMONOV, I.Z. 1977 (332)

**KAZAKHSTAN-32**

AKCHII  
CU, PB, ZN, AG, RE

47 45 00 N 67 15 00 E

ENTITY COMMENT (DEPOSIT/FIG 59 BIBL 1/PG 165)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ORE MINERALS REPLACE MATRIX OF GREY SS AND  
CONGL)  
REMARKS (PART OF DZHEZKAZGAN COPPER BELT)

AGE OF HOST (CARBONIFEROUS (MIDDLE TO LATE))  
LITHOLOGY (GREY & RED  
SANDSTONE/SILTSTONE/CONGLOMERATE)  
FORMATION (DZHEZKAZGAN GROUP/TASKUDUK SUITE)  
GEOREMARKS (GROUP CONSISTS OF 51 RHYTHMICALLY  
ALTERNATING LAYERS OF GREY & RED RXS)

SAMONOV, I.Z. 1977 (332)

**KAZAKHSTAN-33**

SPASSKI  
CU, PB, ZN, AG, RE

47 49 00 N 67 18 00 E

ENTITY COMMENT (DEPOSIT/FIG 59 BIBL 1/PG 165)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ORE MINERALS REPLACE MATRIX OF GREY SS AND  
CONGL)  
REMARKS (PART OF DZHEZKAZGAN COPPER BELT)

AGE OF HOST (CARBONIFEROUS (MIDDLE TO LATE))  
LITHOLOGY (GREY & RED  
SANDSTONE/SILTSTONE/CONGLOMERATE)  
FORMATION (DZHEZKAZGAN GROUP/ TASKUDUK SUITE)

SAMONOV, I.Z. 1977 (332)

**KAZAKHSTAN-34**

DZHEZDY  
CU

47 35 30 N 66 52 00 E

ENTITY COMMENT (DEPOSITS/FIG 1 BIBL 1/PG 397)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GRAY SANDSTONE)  
REMARKS (GROUP OF 4 DEPOSITS LOCATED APPROX 40 KM  
SW OF DZHEZKAZGAN)

AGE OF HOST (CARBONIFEROUS)



LITHOLOGY (SANDSTONE)  
FORMATION (DZHEZKAZGAN GROUP/LOWER DZHEZKAZGAN  
SUITE)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-35**  
NAUKATSKIE  
CU

44 52 00 N 65 28 00 E  
ENTITY COMMENT (KZYL-ORDA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (7 ORE ZONES/ 0.5 TO 3 METRES THICK/ 20 KM  
LONG/ AVG GRADE 0.27-0.45%CU)

AGE OF HOST (TERTIARY)  
FORMATION (ARKOZOVY SANDSTONE)

NEKRASOFF, B. 1933 (286)

**KAZAKHSTAN-36**  
MIRGALIM-SAI  
CU, PB, ZN

43 27 00 N 68 29 00 E  
ENTITY COMMENT (MIRGALIMSAY)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)  
REMARKS (CHAIN OF STRATIFORM PB-ZN ORES/ MINERALIZED  
ZONE 15-20 KM LONG)

AGE OF HOST (EARLY CARBONIFEROUS)

KHOLODOV, V.N. 1972 (211)  
SHCHERBA, G.N. 1971 (512)

**KAZAKHSTAN-37**  
ZHANATAS  
CU

43 30 00 N 69 50 00 E  
ENTITY COMMENT (DEPOSITS/FIG 1 BIBL 1/PG 397)

GEOLOGICAL PROVINCE (NORTHERN TIEN SHAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (GROUP OF 3 DEPOSITS LOCATED APPROX 20 KM  
SOUTH OF ZHANATASROX LOCATION)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-38**  
DZHAMBUL  
CU

42 45 00 N 71 30 00 E  
ENTITY COMMENT (DEPOSITS/FIG 1 BIBL 1/PG 397)

GEOLOGICAL PROVINCE (NORTHERN TIEN SHAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (TWO DEPOSITS LOCATED APPROX 35 KM SSE OF  
DZHAMBUL)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-39**  
CHU RIVER  
CU

45 00 00 N 70 00 00 E  
ENTITY COMMENT (DEPOSITS/FIG 1 BIBL 1/PG 397)

GEOLOGICAL PROVINCE (DZHEZK-SARY SU BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (GROUP OF 3 DEPOSITS LOCATED JUST NORTH OF  
CHU RIVER AT APPROX LOCATION)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)

POPOV, V.M. 1962 (301)

**KAZAKHSTAN-40**  
MAIKAIN DEPOSIT  
CU

51 27 00 N 75 52 00 E  
ENTITY COMMENT (MAIKAIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (CONCORDANT DEPOSIT IN SEDIMENTARY ROCKS)

ANON. 1960 (419)

**KYRGYZSTAN-1**  
KZYL-BEL  
CU

42 30 00 N 72 00 00 E

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS TWO THIN HORIZONS IN ORGANIC-BEARING  
ARGILLITE)  
REMARKS (CU-BEARING GREY-GREEN ARGILLITE LENSES LAY  
CONFORMABLY AMONG RED ARGIL)

AGE OF HOST (UPPER PROTEROZOIC)  
LITHOLOGY (ARGILLITES (GREYISH-GREEN)/ARGILLITES (RED))  
FORMATION (RASPBERRY SUITE)  
GEOREMARKS (RASPBERRY SUITE FORMS CORE OF LARGE  
SYNCLINE)

BOGDANOV, Y.V. 1973 (51)

**KYRGYZSTAN-2**

TALASS ALATAU  
CU

42 15 00 N 72 30 00 E  
ENTITY COMMENT (MOUNTAIN LRANGE/APPROX CENTRE)

GEOLOGICAL PROVINCE (NORTHERN TIEN SHAN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SCHISTS)  
REMARKS (SEVERAL RATHER LARGE OCCURRENCES OF  
COPPER-BEARING SCHIST)

AGE OF HOST (CAMBRIAN (EARLY))  
LITHOLOGY (SCHISTS)  
FORMATION (MALINOV SERIES)

POPOV, V.M. 1962 (301)

### **KYRGYZSTAN-3**

KARA BALTY  
CU

42 31 00 N 73 50 00 E  
ENTITY COMMENT (DEPOSITS/FIG 1 BIBL 1/PG 397)

GEOLOGICAL PROVINCE (NORTHERN TIEN SHAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (GROUP OF 3 DEPOSITS LOCATED APPROX 45 KM  
SSW OF KARA BALTY)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)

POPOV, V.M. 1962 (301)

### **KYRGYZSTAN-4**

FRUNZEUL  
CU

42 32 00 N 74 55 00 E  
ENTITY COMMENT (DEPOSITS/FIG 1 BIBL 1/PG 397)

GEOLOGICAL PROVINCE (NORTHERN TIEN SHAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (GROUP OF 5 DEPOSITS LOCATED APPROX 50 KM  
SSE OF FRUNZE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)

POPOV, V.M. 1962 (301)

### **KYRGYZSTAN-5**

DZHERGALANSK  
CU

42 38 00 N 79 00 00 E  
ENTITY COMMENT (DZHIRGALAN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARINE SEDIMENTS)

GEOREMARKS (OVERLAIN BY MIDDLE TO UPPER  
CARBONIFEROUS GYPSUM BEARING ROCKS)

DAVIDSON, C.F. 1965 (102)  
STRAKHOV, N.M. 1962 (361)

### **KYRGYZSTAN-6**

NORTHERN KIRGIZIA  
CU

42 38 00 N 75 14 00 E  
ENTITY COMMENT (KIRGIZ RANGE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SANDSTONE LYING ON GYPSUM-BEARING  
ROCKS)  
REMARKS (4  
DEPOSITS-ATDZHAYLY/DALEN-DZHILUBULAK-SKOYE/UTOR  
-TUYUK/KEGETINSKOYE)

AGE OF HOST (LOWER CARBONIFEROUS)  
LITHOLOGY (RED BED  
CONGLOMERATES/SS/SILTSTONES/ARGILLITE)  
FORMATION (ATDZHAY-UTORTU GROUP/ MALINOV SUITE)  
GEOREMARKS (NUMBER OF ORE-BEARING HORIZONS RANGES  
FROM 3 TO 6 OVER 10KM DISTANCE)

POPOV, V.M. 1962 (301)

### **KYRGYZSTAN-7**

RYBACHYE  
CU

42 30 00 N 75 40 00 E  
ENTITY COMMENT (DEPOSITS/FIG 1 BIBL 1/PG 397)

GEOLOGICAL PROVINCE (NORTHERN TIEN SHAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (GROUP OF 4 DEPOSITS APPROX 45 KM WEST OF  
RYBACHYE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)

POPOV, V.M. 1962 (301)

### **KYRGYZSTAN-8**

PRZHEVAL  
CU

42 31 30 N 78 40 00 E  
ENTITY COMMENT (SHOWINGS/FIG 1 BIBL 1/PG 397)

GEOLOGICAL PROVINCE (NORTHERN TIEN SHAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (GROUP OF SHOWNGS APPROX 30 KM EAST OF  
PRZHEVAL)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)

POPOV, V.M. 1962 (301)

**LAOS-1**

HOUEI PHAI  
CU

14 28 00 N 105 41 00 E  
ENTITY COMMENT (4 KM SOUTH OF BAN SOUKHOUMA)

GEOLOGICAL PROVINCE (CHAMPASSAK PLAIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN GREEN SANDSTONE OVERLYING BARREN RED  
BEDS)  
REMARKS (CU MINERALIZATION EXTENDS DISCONTINUOUSLY  
OVER AREA 15 KM BY 5 KM)

AGE OF HOST (JURASSIC)  
LITHOLOGY (SANDSTONE/SHALE/CLAYSTONE/CARBONACEOUS  
MUD)  
GEOREMARKS (GREEN CUPRIFEROUS LAYERS OCCUR  
IMMEDIATELY BELOW LATERITE HORIZON)

WORKMAN, D.R. 1972 (407)  
FONTAINE, H. 1978 (656)

**LAOS-2**

NONG KHOUM THONG  
CU

14 20 00 N 105 38 00 E  
ENTITY COMMENT (22 KM SOUTH OF BAN SOUKHOUMA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE WITH INTERSTRATIFIED ANDESITE)  
REMARKS (INTERLAYERED GREY & RED SANDSTONE  
UNDERLIE PERSISTENT LATERITE HORIZON)

AGE OF HOST (JURASSIC)  
LITHOLOGY (SANDSTONE)

WORKMAN, D.R. 1972 (407)  
FONTAINE, H. 1978 (656)

**PAKISTAN-1**

JHAKKAR KOT  
CU

32 33 33 N 72 28 00 E  
ENTITY COMMENT (NEAR JHAKKAR KOT)

GEOLOGICAL PROVINCE (CENTRAL SALT RANGE)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARKOSIC & PARTLY CONGLOMERATIC  
(SPECKLED) SS)  
REMARKS (MINERALIZED ZONE IS 65 CM THICK IN UPPER PART  
OF WARCHHA SANDSTONE)

AGE OF HOST (LOWER PERMIAN)  
LITHOLOGY (ARKOSIC SANDSTONE/SHALE/CONGLOMERATIC  
BEDS)  
FORMATION (WARCHHA SANDSTONE FM/ NILAWAHAN GROUP)  
GEOREMARKS (THIN COAL SEAMS & CU MINERALS LOCALLY  
PRESENT IN WARCHHA SANDSTONE FM)

SHAH, S.M. 1980 (339)

**PHILIPPINES-1**

BAGACAY (BAGAYCAY)  
CU, ZN, AG, AU (SEE RESERVE/PRODUCTION REPORT)

11 50 00 N 125 15 00 E  
ENTITY COMMENT (CENTRAL PART OF SAMAR ISLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN COALY BED OFTEN AS REPLACEMENT OF WOOD  
CELLS)  
REMARKS (IN 1956 3 AREAS WERE KNOWN WITH COALY BEDS  
CONTAINING HIGH CU VALUES)

AGE OF HOST (TERTIARY (PLIOCENE))  
LITHOLOGY (COALY BEDS/SANDSTONE/MUDSTONE)  
GEOREMARKS (CU ERRATIC BOTH VERTICALLY &  
HORIZONTALLY OVER GREAT LATERAL EXTENT)

KINKEL JR. 1958 (528)  
KINKEL JR. 1956 (527)

**RUSSIA-1**

VYAZOVKA  
CU

51 47 00 N 55 51 00 E  
ENTITY COMMENT (RAVINE/ 50KM EAST OF ORENBURG)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN DELTAIC AND FLUVIAL SANDSTONES)  
REMARKS (CU IN BOTH CEMENT OF SS & IN FORM OF  
PSEUDOMORPHS AFTER PLANT REMAINS)

AGE OF HOST (LATE PERMIAN (TATARIAN))  
LITHOLOGY (SANDSTONE/ GREYWACKE)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-2**

BOLSHOI BOGDO MOUNTAINS  
CU, PB, ZN

51 15 00 N 55 00 00 E  
ENTITY COMMENT (MOUNTAIN RANGE/VERY APPROX LOC)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (STRATIFORM CU WITH PB&ZN STRATIGRAPHICALLY  
HIGHER)  
REMARKS (SEVERAL SMALL CU OCCURRENCES)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (SANDY CLAY/ CARBONATE)  
GEOREMARKS (CU CONCENTRATED MAINLY IN SANDY CLAY/  
PB + ZN OCCUR IN CARBONATE)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-3**

KARGALA  
CU

51 45 00 N 56 51 00 E  
ENTITY COMMENT (DEPOSIT/ VERY APPROX LOCATION)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREENISH GREY SANDSTONE WITH PLANT  
REMAINS)

REMARKS (CU IN CEMENT OF SS & AS CONCRETIONS &  
PSEUDOMORPHS AFTER ORGANIC SUBST)

AGE OF HOST (LATE PERMIAN (KAZANIAN-TATARIAN))  
LITHOLOGY (SANDSTONE)  
GEOREMARKS (TWO ORE HORIZONS-OREBODIES 100S OF M  
LONG/10S OF M WIDE/METRES THICK)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-4**  
SAKMARA  
CU

52 00 00 N 55 20 00 E  
ENTITY COMMENT (SAKMARA/TIMES WORLD ATLAS)

GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN CEMENT OF SS WHERE ORGANIC REMAINS  
CONCENTRATED)

REMARKS (SAKMARA FIELD-IN EASTERN PART OF URAL  
TROUGH-60KM E OF VYAZOVKA RAVINE)

AGE OF HOST (LATE PERMIAN (TATARIAN))  
LITHOLOGY (SANDSTONE)  
GEOREMARKS (CU ASSOC WITH COARSELY FRAGMENTAL FAN  
DEPOSITS & FINER LAKE SEDIMENTS)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-5**  
SALMYSH  
CU

52 30 00 N 55 07 00 E  
ENTITY COMMENT (RIVER/ TIMES WORLD ATLAS)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARINE KAZANIAN SEDIMENTS ABOVE THE RED  
BEDS)

REMARKS (MANSFELD TYPE/ CU CONFINED TO BASAL  
SANDSTONE & LIMESTONE)

AGE OF HOST (LATE PERMIAN (KAZANIAN-TATARIAN))  
LITHOLOGY (GRAY SANDSTONE/ 10-30 CM LMSN PARTINGS AT  
TOP)  
FORMATION (TATAR BEDS)  
GEOREMARKS (LINGULA UNIT OVERLIES KAZANIAN SEQUENCE  
WHICH OVERLIES UFIMIAN STAGE)

LURYE, A.M. 1972 (253)  
DAVIDSON, C.F. 1965 (102)  
LUR'YE, A.M. 1972 (254)

**RUSSIA-6**  
FEDEROVO-STERLIBASHEVO  
CU

53 30 00 N 55 05 00 E  
ENTITY COMMENT (APPROX CENTRE OF AREA)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARINE BEDS OF GRAY SANDSTONE ABOVE  
RED BEDS)  
REMARKS (MANSFELD TYPE/ CU CONFINED TO BASAL  
SANDSTONE & LIMESTONE)

AGE OF HOST (LATE PERMIAN (KAZANIAN))  
LITHOLOGY (GRAY SANDSTONE/ 10-30 CM LMSN PARTINGS AT  
TOP)  
GEOREMARKS (LINGULA UNIT OVERLIES KAZANIAN SEQUENCE  
WHICH OVERLIES U UFIMIAN STAGE)

LURYE, A.M. 1972 (253)  
DAVIDSON, C.F. 1965 (102)  
LUR'YE, A.M. 1972 (254)

**RUSSIA-7**  
BELEBEY (BELEBEI (KURSAK-RUDNIKI))  
CU

54 05 00 N 54 07 00 E  
ENTITY COMMENT (ORE FIELD/NO 2 FIG 39 BIBL 5)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARINE BEDS OF GRAY SANDSTONE ABOVE  
RED BEDS)  
REMARKS (53 BOREHOLES IN AREA REVEAL OVER 0.1% CU AT  
BASE OF KAZANIAN STAGE)

AGE OF HOST (LATE PERMIAN (KAZANIAN))  
LITHOLOGY (GRAY SANDSTONE/ 10-30 CM LMSN PARTINGS AT  
TOP)  
GEOREMARKS (LINGULA UNIT OVERLIES KAZANIAN SEQUENCE  
WHICH OVERLIES UFIMIAN STAGE)

LURYE, A.M. 1972 (253)  
DAVIDSON, C.F. 1965 (102)  
MALYUGA, V.I. 1967 (257)  
LUR'YE, A.M. 1972 (254)

**RUSSIA-8**  
URSHAK  
CU

53 55 00 N 54 55 00 E  
ENTITY COMMENT (APPROX CENTRE OF AREA)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARINE BEDS OF GRAY SANDSTONE ABOVE  
RED BEDS)

REMARKS (MANSFELD TYPE/ CU CONFINED TO BASAL  
SANDSTONE & LIMESTONE)

AGE OF HOST (LATE PERMIAN (KAZANIAN))  
LITHOLOGY (GRAY SANDSTONE/ 10-30 CM LMSN PARTINGS AT  
TOP)  
GEOREMARKS (LINGULA UNIT OVERLIES KAZANIAN SEQUENCE  
WHICH OVERLIES UFIMIAN STAGE)

LURYE, A.M. 1972 (253)  
DAVIDSON, C.F. 1965 (102)  
LUR'YE, A.M. 1972 (254)  
LUR'YE, A.M. 1986 (657)

**RUSSIA-9**

AKSAKOVSKAYA  
CU

54 00 00 N 54 14 00 E  
ENTITY COMMENT (ORE FIELD/NO 7 FIG 39 BIBL 1)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN NEARSHORE-MARINE SEDIMENTS)  
REMARKS (ORE FIELD)

AGE OF HOST (LATE PERMIAN)  
LITHOLOGY (CLAYSTONE/ MARL/ DOLOMITIZED LIMESTONE)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-10**

BUGULMA  
CU

54 32 00 N 52 46 00 E  
ENTITY COMMENT (ORE FIELD/ NO 1 FIG 39 BIBL 1)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN NEARSHORE-MARINE SEDIMENTS)  
REMARKS (700 OCCURRENCES IN BASHKIR-TATAR REGION  
FORMING STRIP 400 KM BY 200 KM)

AGE OF HOST (LATE PERMIAN)  
LITHOLOGY (CLAYSTONE/ MARL/ DOLOMITIZED LIMESTONE)  
GEOREMARKS (STRIP OF OCCURRENCES FOLLOWS  
NORTHWEST TREND)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-11**

KANDRYKUL  
CU

55 25 00 N 53 00 00 E  
ENTITY COMMENT (APPROX CENTRE OF AREA)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN MARINE BEDS OF GRAY SANDSTONE ABOVE  
RED BEDS)

REMARKS (MANSFELD TYPE/ CU CONFINED TO BASAL  
SANDSTONE & LIMESTONE)

AGE OF HOST (LATE PERMIAN (KAZANIAN))  
LITHOLOGY (GRAY SANDSTONE/ 10-30 CM LMSN PARTINGS AT  
TOP)  
GEOREMARKS (LINGULA UNIT OVERLIES KAZANIAN SEQUENCE  
WHICH OVERLIES UFIMIAN STAGE)

LURYE, A.M. 1972 (253)  
DAVIDSON, C.F. 1965 (102)  
LUR'YE, A.M. 1972 (254)

**RUSSIA-12**

PERM-VYATKA  
CU

56 30 00 N 50 45 00 E  
ENTITY COMMENT (CENTRED 300 KM WEST OF URALS)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE ENRICHED IN CARBONIZED  
ORGANIC MATTER)

REMARKS (4000 OCCURRENCES IN PERM-VYATKA PRIURALYE  
IN STRIP 450 KM X 120 KM)

AGE OF HOST (UPPER PERMIAN (UFIAN) (UFIMIAN))  
LITHOLOGY (GRAY SANDSTONE WITH ABUNDANT CALCITE  
CEMENT)

FORMATION (SHESHMA SANDSTONE)  
GEOREMARKS (THE SANDSTONE CONTAINS ABUNDANT BASIC  
ROCK FRAGMENTS & ORGANIC REMAINS)

NECHAYEV, Y. 1906 (284)  
NECHAYEV, Y.A. 1967 (285)

**RUSSIA-13**

KIROV REGION  
CU

58 20 00 N 49 50 00 E  
ENTITY COMMENT (APPROX CENTRE OF KIROV REGION)

GEOGRAPHICAL SUBDIVISION (URAL MOUNTAINS)  
GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS THIN HORIZONS IN DARK & GREENISH GREY  
SHALES)

REMARKS (CU AS  
DISSEMINATIONS/CONCRETIONS/PSEUDOMORPHS AFTER  
ORGANIC REMAINS)

AGE OF HOST (LATE PERMIAN)  
LITHOLOGY (CLAYSTONE/ MARL/ DOLOMITIZED LIMESTONE)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-14**

NIDYSEI SYNCLINE  
CU

65 15 00 N 60 00 00 E  
 ENTITY COMMENT (AREA/ VERY GENERAL LOCATION)

GEOGRAPHICAL SUBDIVISION (KOMI)

CU SUBTYPE (UNDIFFERENTIATED)  
 GEOLOGY (IN SANDSTONE AND SHALE)  
 REMARKS (CU ACCUMULATED IN LAGOONAL EMBAYMENT  
 CONDITIONS)

AGE OF HOST (LATE CAMBRIAN AND ORDOVICIAN)  
 LITHOLOGY (SANDSTONE/ SHALE)  
 FORMATION (MANITANYRD FORMATION)  
 GEOREMARKS (ORE-BEARING HORIZON RESTRICTED TO BASE  
 OF FOURTH CYCLE OF FORMATION)

DEMBOVSKII, D.Y. 1983 (522)

**RUSSIA-15**  
 IGYADEI-YUGAN RIVER  
 CU

65 30 00 N 60 30 00 E  
 ENTITY COMMENT (UPPER REACHES OF RIVER/ APPROX)

GEOGRAPHICAL SUBDIVISION (KOMI)

CU SUBTYPE (UNDIFFERENTIATED)  
 GEOLOGY (IN SANDSTONE)

AGE OF HOST (LOWER ORDOVICIAN)  
 LITHOLOGY (ARKOSIC SANDSTONE/ PHYLLITIC SCHIST/  
 CONGLOM)  
 FORMATION (GRUBEYU FORMATION)

DEMBOVSKII, D.Y. 1983 (522)

**RUSSIA-16**  
 PADYAGIN  
 CU

67 00 00 N 65 00 00 E  
 ENTITY COMMENT (W FLANK OF PADYAGIN/APPROX LOC)

GEOGRAPHICAL SUBDIVISION (KOMI)

CU SUBTYPE (UNDIFFERENTIATED)  
 GEOLOGY (IN SANDSTONE AND SHALE)

AGE OF HOST (LATE CAMBRIAN AND ORDOVICIAN)  
 LITHOLOGY (SANDSTONE/ SHALE)

DEMBOVSKII, D.Y. 1983 (522)

**RUSSIA-17**  
 PAD-YAGA-MUSYUR RANGE  
 CU

67 30 00 N 65 30 00 E  
 ENTITY COMMENT (ON E FLANK OF RANGE/APPROX LOC)

GEOGRAPHICAL SUBDIVISION (KOMI)

CU SUBTYPE (CONTINENTAL REDBED)  
 GEOLOGY (AS IMPREGNATIONS IN GRAY TO GREEN  
 SANDSTONE)

REMARKS (CU ACCUMULATED IN DELTAIC CONDITIONS)

AGE OF HOST (LATE CAMBRIAN AND ORDOVICIAN)  
 LITHOLOGY (SANDSTONE)

DEMBOVSKII, D.Y. 1983 (522)

**RUSSIA-18**  
 MOUNT SAURI-PE  
 CU

68 00 00 N 65 50 00 E  
 ENTITY COMMENT (ON E SLOPES OF SAURI-PE/APPROX)

GEOGRAPHICAL SUBDIVISION (KOMI)

CU SUBTYPE (CONTINENTAL REDBED)  
 GEOLOGY (IN PINK/GREENISH/GREENISH-GRAY/GRAY  
 SANDSTONES)  
 REMARKS (ORE HORIZON DEVELOPED IN BOTH UPPER PART  
 OF 3RD CYCLE & LOWER OF 4TH)

AGE OF HOST (LATE CAMBRIAN AND ORDOVICIAN)  
 LITHOLOGY (SANDSTONE)  
 FORMATION (MANITANYRD FORMATION)  
 GEOREMARKS (CU ACCUMULATED IN DELTAIC CONDITIONS IN  
 3RD & 4TH CYCLES-MANITANYRD FM)

DEMBOVSKII, D.Y. 1983 (522)

**RUSSIA-19**  
 KAZYNGOL & SOROI  
 CU

51 00 00 N 90 00 00 E  
 ENTITY COMMENT (GENERAL REGION/VERY APPROX LOC)

GEOLOGICAL PROVINCE (ALTAI-SAYAN REGION)

CU SUBTYPE (CONTINENTAL REDBED)  
 GEOLOGY (IN FINE-GRAINED SS ENRICHED WITH FLORAL  
 REMAINS)  
 REMARKS (2 VERY MINOR OCCURRENCES)

AGE OF HOST (UPPER DEVONIAN)  
 LITHOLOGY (SANDSTONE)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-20**  
 PECHISHCHI-RAISINO  
 CU

52 00 00 N 92 00 00 E  
 ENTITY COMMENT (GENERAL REGION/VERY APPROX LOC)

GEOLOGICAL PROVINCE (ALTAI-SAYAN REGION)

CU SUBTYPE (UNDIFFERENTIATED)  
 GEOLOGY (IN COARSE-PEBBLED TO FINE-PEBBLED  
 CONGLOMERATE)  
 REMARKS (2 DEPOSITS/ PECHISHCHI WITH 11 ORE BEDS &  
 RAISINO WITH 14 ORE BEDS)

AGE OF HOST (MIDDLE DEVONIAN)  
 LITHOLOGY (CONGLOMERATE & SANDSTONE)

FORMATION (TOLSTAKOVSKAYA FORMATION)  
GEOREMARKS (CONGLOMERATE UNITS INTERLAYERED WITH  
SANDSTONE WITH BARITE & CELESTITE)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-21**  
TUSTUZHUL  
CU

53 00 00 N 94 00 00 E  
ENTITY COMMENT (GENERAL REGION/VERY APPROX LOC)

GEOLOGICAL PROVINCE (ALTAI-SAYAN REGION)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM IN GREY DENSE SANDSTONES WITH PLANT  
DEBRIS)  
REMARKS (THE GREY DENSE SS ARE INTERLAYERED WITH  
THIN-BEDDED & WAVY-BEDDED SS)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (RED & GREY SANDSTONE & CONGLOMERATE)  
FORMATION (TUSTUZHUL FM)  
GEOREMARKS (INCLUSIONS OF ARGILLACEOUS MATERIAL &  
PLANT DEBRIS IN HOST ARE TYPICAL)

**RUSSIA-22**  
BAZA  
CU

53 40 00 N 96 48 00 E

GEOLOGICAL PROVINCE (ALTAI-SAYAN REGION)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM IN FELDSPATHIC SS WITH CARBONATE  
CEMENT)  
REMARKS (DEPOSIT OF LIMITED EXTENT)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (FELDSPATHIC REDDISH-CINNAMON SANDSTONES)  
FORMATION (KAZANOVSKAYA FORMATION)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-23**  
SAYAN REGION  
CU

54 00 00 N 98 00 00 E  
ENTITY COMMENT (APPROX AREA/ TAGUL-UDA RIVERS)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DELTAIC SEDIMENTS OF SANDSTONE & SHALE)  
REMARKS (BEST MINERALIZATION IN MID-UPPER AYSINKAYA  
SERIES IN REGRESSIVE BEDS)

AGE OF HOST (LATE PROTEROZOIC TO LOWER CAMBRIAN  
(WENDIAN))  
LITHOLOGY (SANDSTONE/ SILTSTONE/ SHALE)  
FORMATION (OSELKOVAYA SERIES/ AYSINKAYA SUITE)  
GEOREMARKS (MINERALIZED HORIZONS PERSISTENT ALONG

STRIKE-TRACED FOR TENS OF KM)

SALIKHOV, V.S. 1975 (331)  
BEZRODNYKH, Y.P. 1969 (44)

**RUSSIA-24**  
KAN-TASEYEVA BASIN  
CU

57 30 00 N 95 00 00 E

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREY SANDSTONE/ MARL/ ALEUROLITE/  
ARGILLITE)

AGE OF HOST (UPPER CAMBRIAN)  
LITHOLOGY (SANDSTONE/ MARL/ ALEUROLITE/ ARGILLITE)  
FORMATION (VERKHOLENSK SERIES)  
GEOREMARKS (HOST ROCK INTERCALATED WITH  
LIMESTONE/DOLOMITE & LENSES OF GYPSUM)

MIROSHNIKOV, A.Y. 1981 (272)  
NARKELYUN, L.F. 1969 (282)

**RUSSIA-25**  
YENISEI RIDGE  
CU

58 30 00 N 94 00 00 E  
ENTITY COMMENT (CENTRAL PORTION OR RIDGE)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE AND ALEUROLITE)  
REMARKS (CU & FE SULFIDES FORM IRREGULAR  
INTERGROWTHS IN DOLOMITE CEMENT)

AGE OF HOST (MIDDLE TO LATE PROTEROZOIC (UPPER  
RIPHEAN))  
LITHOLOGY (FINE-GRAINED GRAY SANDSTONE & ALEUROLITE)  
FORMATION (CHISTYAKOV FORMATION OF THE TASEEVO  
SERIES)  
GEOREMARKS (GRAY BEDS ARE SATURATED WITH ORGANIC  
MATTER IN FORM OF VERY THIN SEAMS)

ZLOBIN, V.A. 1975 (414)

**RUSSIA-26**  
VELMO RIVER (VELMA BASIN)  
CU

60 45 00 N 92 30 00 E  
ENTITY COMMENT (AREA BTWN CHAPA & TEYA RIVERS)

GEOGRAPHICAL SUBDIVISION (SIBERIA)  
GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE/ OCCASIONALLY IN SANDSTONE)  
REMARKS (MANY OCCURRENCES ALONG 250 KM LENGTH OF  
VELMO RIVER)

AGE OF HOST (MIDDLE TO UPPER CAMBRIAN)

LITHOLOGY  
(LIMESTONE/MARL/SILTSTONE/SANDSTONE/DOLOMITE)  
FORMATION (EVENKI FORMATION (UPPER & MIDDLE  
SUBFORMATION)  
GEOREMARKS (LIMESTONE VERY-CLAYEY DOLOMITIC/  
OOLITIC/ ALGAL OR FLINTY CONCRETIONS)

MIROSHNIKOV, A.Y. 1981 (272)  
BOGDANOV, Y.V. 1973 (51)

**RUSSIA-27**

BEDOBA RIVER (ANGARA REGION)  
CU

58 50 00 N 97 15 00 E

ENTITY COMMENT (BEDOBA COPPER HORIZON)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (MAXIMAL CU CONC IN ALGAL & SANDY  
LIMESTONES)

REMARKS (SEVERAL OCCURRENCES IN ANGARA-STONY  
TUNGUSKA-CHUNIA INTERFLUVE AREA)

AGE OF HOST (MIDDLE TO UPPER CAMBRIAN)

LITHOLOGY  
(MARL/SILTSTONE/SANDSTONE/LIMESTONE/DOLOMITE)  
FORMATION (EVENKI FORMATION/ MIDDLE & UPPER  
MEMBERS)  
GEOREMARKS (CU RESTRICTED TO TEN STRATIGRAPHIC  
LEVELS/ MANY WITH ALGAL STRUCTURES)

NARKELYUN, L.F. 1969 (282)  
KUTYREV, E.I. 1969 (232)  
DAVIDSON, C.F. 1965 (102)  
BORZENKO, G.F. 1971 (53)  
SALIKHOV, V.S. 1975 (331)

**RUSSIA-28**

IRKINEEVA RIVER  
CU

59 30 00 N 98 15 00 E

ENTITY COMMENT (UPPER REACHES OF IRKINEEVA RIV)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM IN SILICIFIED CALCAREOUS DOLOMITE  
WITH LS)  
REMARKS (MINERAL OCCURRENCES CONFINED TO OUTCROPS  
OF TWO CALCAREOUS HORIZONS)

AGE OF HOST (MIDDLE TO UPPER CAMBRIAN)

LITHOLOGY (LIGHT-GREY DOLOMITES/ ALGAL LIMESTONES)  
FORMATION (EVENKI FORMATION (MIDDLE SUBFORMATION))

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-29**

KAMO RIVER  
CU

60 30 00 N 97 30 00 E

ENTITY COMMENT (AREA NEAR MOUTH OF KAMO RIVER)

GEOGRAPHICAL SUBDIVISION (SIBERIA)  
GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN LIMESTONE/DOLOMITIC LMST/ARGILLACEOUS  
DOLOMITE)

REMARKS (MANY OCCURRENCES ALONG 135 KM LENGTH OF  
NORTH FLOWING KAMO RIVER)

AGE OF HOST (MIDDLE TO UPPER CAMBRIAN)

LITHOLOGY (LIMESTONE/ DOLOMITE/ SILTSTONE)  
FORMATION (EVENKI FORMATION)

BOGDANOV, Y.V. 1973 (51)

**RUSSIA-30**

KATANGA-CHADOBETS BASIN  
CU

59 30 00 N 100 45 00 E

ENTITY COMMENT (AREA CENTERED ON CHADOBETS RIV)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN 6.5 METRE UNIT OF ALGAL-OOLITIC LIMESTONE)  
REMARKS (SEVERAL OCCURRENCES KNOWN IN PERIPHERAL  
PARTS OF CHADOBETS UPLIFT)

AGE OF HOST (UPPER CAMBRIAN)

LITHOLOGY (GREY LIMESTONE)  
FORMATION (EVENKI FORMATION (LOWER SUBFORMATION))

MIROSHNIKOV, A.Y. 1981 (272)

**RUSSIA-31**

BRYANSK RAPIDS (ANGARA REGION)  
CU, PB

55 00 00 N 103 00 00 E

ENTITY COMMENT (BRYANSK CU-BEARING HORIZON)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS PHENOCRYSTS IN DOLOMITE)  
REMARKS (SEVERAL OCCURRENCES IN GRAY/DARK GRAY  
ROCKS WITH ALTERNATING RED BEDS)

AGE OF HOST (LOWER ORDOVICIAN)

LITHOLOGY (RED  
SANDSTONE/LIMESTONE/DOLOMITE/ARGILLITE/CG)  
FORMATION (IYA & UST-KUT SUITES)

NARKELYUN, L.F. 1969 (282)  
BORZENKO, G.F. 1971 (53)  
KULAKOV, M.K. 1976 (229)

**RUSSIA-32**

IRKUTSK AMPHITHEATER  
CU

58 00 00 N 107 30 00 E

ENTITY COMMENT (ALONG LENA R/NW OF LAKE BAIKAL)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)



CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN ALEUROLITE/ GREY SANDSTONE/ ARGILLITE)  
REMARKS (SEVERAL OCCURRENCES IN AREA/ROCKS  
RECONSTITUTED BY REGIONAL EPIGENESIS)

AGE OF HOST (MIDDLE TO UPPER ORDOVICIAN)  
LITHOLOGY (ALEUROLITE/ ARGILLITE/ GREY & RED  
SANDSTONE)  
FORMATION (KRIVOLUTSK (MIDDLE) & MAKAROV (UPPER)  
SUITES)

NARKELYUN, L.F. 1969 (282)  
SALIKHOV, V.S. 1975 (331)  
KULAKOV, M.K. 1976 (229)

**RUSSIA-33**  
ILIKTINSK SUITE  
CU, CO

53 30 00 N 107 55 00 E  
ENTITY COMMENT (WEST CENTRAL SHORE-LAKE BAIKAL)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AS LOCAL PHENOCRYSTS IN BLACK PHYLLITE  
SHALES)

AGE OF HOST (LOWER PROTEROZOIC)  
LITHOLOGY (BLACK PHYLLITE SHALES/DARK GRAY  
SANDSTONES)  
FORMATION (ILIKTINSK SUITE)

SALIKHOV, V.S. 1975 (331)  
NARKELYUN, L.F. 1969 (282)

**RUSSIA-34**  
MALAYA KOSA (MALOKOS)  
CU, AG, CO

53 45 00 N 108 00 00 E  
ENTITY COMMENT (WEST CENTRAL SHORE-LAKE BAIKAL)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN GREY SANDSTONE)  
REMARKS (ROCKS ARE WEAKLY METAMORPHOSED)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (RED & GREY  
SANDSTONE/GRAVELLITE/CONGLOMERATE)  
FORMATION (MALAYA KOSA (MALOKOS) SUITE)

NARKELYUN, L.F. 1969 (282)

**RUSSIA-35**  
LENA ZONE  
CU

56 46 00 N 106 30 00 E  
ENTITY COMMENT (LENA-KIRENGA INTERSTREAM AREA)

GEOGRAPHICAL SUBDIVISION (SIBERIA)  
GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SILICATE-CARBONATE UNDERWATER CHANNEL  
SANDSTONE)  
REMARKS (CU RESTRICTED TO SIX STRATIGRAPHIC LEVELS)

AGE OF HOST (UPPER CAMBRIAN)  
LITHOLOGY (SANDSTONE/ SANDY LIMESTONE/ DOLOMITE)  
FORMATION (ILGA FORMATION)  
GEOREMARKS (CU CONC HIGHER WHERE MOLASSE GRADES  
DIRECTLY INTO VARIEGATED DEPOSITS)

NARKELYUN, L.F. 1969 (282)  
KUTYREV, E.I. 1969 (232)  
DAVIDSON, C.F. 1965 (102)  
SALIKHOV, V.S. 1975 (331)  
NARKELYUN, L.F. 1971 (508)

**RUSSIA-36**  
BUTUN SUITE  
CU

55 00 00 N 116 00 00 E  
ENTITY COMMENT (IN WESTERN PART-UDOKAN RANGE)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN NEARSHORE MARINE SEDIMENTS)  
REMARKS (VERY SPARSE MINERALIZATION)

AGE OF HOST (LOWER PROTEROZOIC)  
LITHOLOGY (SILTY SANDSTONES/SILTSTONES/ARGILLITES)  
FORMATION (UDOKAN SERIES/ BUTUN SUITE)

BOGDANOV, Y.V. 1973 (51)  
NARKELYUN, L.F. 1969 (282)

**RUSSIA-37**  
NAMINGA SUITE  
CU

56 00 00 N 117 00 00 E  
ENTITY COMMENT (IN WESTERN PART-UDOKAN RANGE)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (THIN HORIZONS OF COPPER SANDSTONE &  
SILTSTONE)  
REMARKS (SEDIMENTS DEPOSITED IN CLOSED &  
SEMI-CLOSED BASINS (BAYS OR LAGOONS))

AGE OF HOST (LOWER PROTEROZOIC)  
LITHOLOGY (SILTSTONE/ ARGILLITE/ SANDSTONE)  
FORMATION (UDOKAN SERIES/ NAMINGA SUITE)  
GEOREMARKS (CC/BN-CC MINERALIZATION SUCCEEDED FROM  
WEST TO EAST BY PY-CP)

BOGDANOV, Y.V. 1973 (51)  
NARKELYUN, L.F. 1969 (282)

**RUSSIA-38**  
BURPALA  
CU

56 30 00 N 115 00 00 E

ENTITY COMMENT (IN WESTERN PART-UDOKAN RANGE)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN CROSS-BEDDED DELTAIC SANDSTONE)  
REMARKS (DEPOSIT TRACED FOR 5KM  
DISTANCE/STRATIGRAPHICALLY HIGHER THAN  
KRASNOYE)

AGE OF HOST (LOWER PROTEROZOIC)  
LITHOLOGY (SANDSTONE CONTAINING CALCAREOUS LENSES)  
FORMATION (UDOKAN SERIES/ TALAKAN SUITE)

BOGDANOV, Y.V. 1971 (50)  
BOGDANOV, Y.V. 1973 (51)

**RUSSIA-39**

SOUTH MUYA RANGE  
CU

57 15 00 N 113 30 00 E

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE AND SILTSTONE HORIZON)  
REMARKS (VISIBLE PART OF CUPRIFEROUS HORIZON IS 9KM  
LONG IN METAMORPHOSED ROCK)

AGE OF HOST (LOWER PROTEROZOIC)  
LITHOLOGY (SANDSTONE & SILTSTONE)  
FORMATION (SAMODUROVKA SUITE)  
GEOREMARKS (MODE OF ORIGIN OF VITIM & UDOKAN  
CUPRIFEROUS ROCKS ARE SIMILAR)

NARKELYUN, L.F. 1969 (282)  
SALIKHOV, V.S. 1975 (331)

**RUSSIA-40**

OLEKMA BRANCH  
CU

57 20 00 N 119 55 00 E

ENTITY COMMENT (BTWN CHARA BLOCK/ ALDAN SHIELD)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS PHENOCRYSTS IN LIMY INTERBEDDED  
SANDSTONES)  
REMARKS (SEDIMENTS OF SUBPLATFORMAL FACIES  
COMPARABLE TO UDOKAN SERIES)

AGE OF HOST (LOWER PROTEROZOIC)  
LITHOLOGY (DARK GREY & CHERRY-BROWN SANDSTONE)  
FORMATION (KEBEKTA SUITE)  
GEOREMARKS (KEBEKTA SUITE STRATIGRAPHICALLY  
ANALOGOUS TO SAKUKAN SUITE)

NARKELYUN, L.F. 1969 (282)

**RUSSIA-41**

KRASNOYE  
CU, CO, MO, AG, BI

57 30 00 N 121 00 00 E

ENTITY COMMENT (IN EASTERN PART-UDOKAN RANGE)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS PHENOCRYSTS IN MARINE SANDSTONES AND  
SILTSTONES)  
REMARKS (CUPRIFEROUS SEDS ARE 1000 M LONG & 200 M  
THICK/ 17 CUPRIFEROUS MEMBERS)

AGE OF HOST (LOWER PROTEROZOIC)  
LITHOLOGY (LIMY SANDSTONE  
(GREY/GREENISH-GRAY)/SILTSTONE)  
FORMATION (UDOKAN SERIES/ CHITKANDA SUITE)  
GEOREMARKS (DEPOSITED UNDER SHALLOW MARINE AND  
DELTAIC CONDITIONS)

BOGDANOV, Y.V. 1971 (50)  
BOGDANOV, Y.V. 1973 (51)  
NARKELYUN, L.F. 1969 (282)

**RUSSIA-42**

ALEKSANDROVKA SUITE  
CU

57 00 00 N 120 00 00 E

ENTITY COMMENT (IN EASTERN PART-UDOKAN RANGE)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS FINE DISSEMINATIONS IN SILTSTONE & SILTY SS)  
REMARKS (SEDIMENTS DEPOSITED IN CLOSED &  
SEMI-CLOSED BASINS (BAYS OR LAGOONS))

AGE OF HOST (LOWER PROTEROZOIC)  
LITHOLOGY (SILTSTONE/ SILTY SANDSTONE)  
FORMATION (UDOKAN SERIES/ ALEKSANDROVKA SUITE)

BOGDANOV, Y.V. 1973 (51)  
NARKELYUN, L.F. 1969 (282)

**RUSSIA-43**

UDOKAN  
CU (SEE RESERVE/PRODUCTION REPORT)

56 30 00 N 118 10 00 E

ENTITY COMMENT (IN WESTERN PART-UDOKAN RANGE)

GEOGRAPHICAL SUBDIVISION (SIBERIA)  
GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DELTAIC & SHALLOW WATER CARBONATE  
SEDIMENTS)  
REMARKS (4 DEPOSITS COVER 300 SQUARE KM AREA IN  
TAIGA REGION)

AGE OF HOST (EARLY PALEOZOIC)  
LITHOLOGY (QUARTZITIC CALCAREOUS SANDSTONE/  
SILTSTONE)  
FORMATION (UDOKAN SERIES/ SAKUKAN SUITE/ CHINEY  
SERIES)  
GEOREMARKS (THICKNESS OF INDIVIDUAL ORE LAYERS &  
SEAMS VARIES-0.2 TO A FEW METERS)

BEZRODNYKH, Y.P. 1967 (43)  
SUTULOV, A. 1973 (363)  
BOGDANOV, Y.V. 1971 (50)  
BAKUN, N.N. 1964 (19)  
BOGDANOV, Y.V. 1962 (49)  
SALIKHOV, V.S. 1975 (331)  
VOLFSON, F.I. 1972 (382)

**RUSSIA-44**

BILYAKCHAN SERIES  
CU

58 45 00 N 139 00 00 E  
ENTITY COMMENT (NUDYMA RIVER BASIN)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN GREY PYRITITE-BEARING FACIES OF  
METASANDSTONE)  
REMARKS (CUPRIFEROUS SANDSTONE OCCUR IN BASINS OF  
NUDYMA/INIKAN/NELBACHAN RIVS)

AGE OF HOST (LOWER PROTEROZOIC)  
LITHOLOGY (GREY & RED SANDSTONE & CONGLOMERATE)  
FORMATION (BILYAKCHAN SERIES)  
GEOREMARKS (THIN BEDS OF DOLOMITIC MARBLE &  
METASPILITE OCCUR ABOVE & BELOW)

KOGEN, V.S. 1976 (223)

**RUSSIA-45**

USPENSKOYE  
CU

44 50 00 N 41 23 00 E

CU SUBTYPE (UNDIFFERENTIATED)

ANON. 1960 (419)

**RUSSIA-46**

URUP SANDSTONE  
CU

43 42 00 N 40 58 00 E

GEOLOGICAL PROVINCE (NORTHERN CAUCASUS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS CU HALOS ON ORE CLASTS & CU  
CONCRETIONS IN SS)  
REMARKS (SOURCE OF REDEPOSITED CU & ORE CLASTS  
CORES FROM UNDERLYING URUP MINE)

AGE OF HOST (JURASSIC)  
LITHOLOGY (LIGHT GREY MARINE QUARTZ SANDSTONE)  
GEOREMARKS (JURASSIC SS RESTS ON PALEOZOIC  
VOLCANO-SEDIMENTARY URUP MINE SEQUENCE)

ZHABIN, A.G. 1973 (623)

**RUSSIA-47**

GRAVYISK

CU, PB, ZN

66 31 00 N 87 33 00 E  
ENTITY COMMENT (DEPOSIT/IGARKA AREA)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS SHEET-LIKE & LENTICULAR DEPOSITS IN  
SANDSTONE)  
REMARKS (2 ORE HORIZONS/1) AT BASE OF IZLUCHINSK  
SERIES 2)IN LOWER SUKHARINSK)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (GREY ARKOSIC SANDSTONE)  
FORMATION (IZLUCHINSK SERIES/ SUKHARINSK SERIES)  
GEOREMARKS (COMPLEX REDOX CONTROLS ON METAL  
PRECIPITATION/ SOME REDBED CU FEATURES)

BOGDANOV, Y.V. 1984 (624)  
RZHEVSKII, V.F. 1988 (686)

**RUSSIA-48**

IZLUCHINSK  
CU

67 36 00 N 86 45 00 E  
ENTITY COMMENT (OCCURRENCES/ JUST N OF IGARKA)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN HIGHLY PERMEABLE RIVER CHANNEL  
CONGLOMERATES)

AGE OF HOST (UPPER PROTEROZOIC (VENDIAN))  
LITHOLOGY (ARGILLITE/ARGILLACEOUS  
LIMESTONE/MARL/SHALE)  
FORMATION (IZLUCHINSKAYA FORMATION)

GABLINA, I.F. 1986 (658)  
KRENDELEV, F.P. 1986 (659)

**RUSSIA-49**

SUKHARIKHA  
CU

67 40 00 N 87 00 00 E

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS PORE FILLINGS IN GREY MARINE QUARTZ  
SANDSTONE)  
REMARKS (MEAGER CU CONTENT PERSISTANT ALONG ENTIRE  
EXTENT OF HORIZON)

AGE OF HOST (UPPER PROTEROZOIC (VENDIAN))  
LITHOLOGY (SILTY ARENACEOUS SANDSTONE)  
FORMATION (SUKHARIKHINSKAYA FORMATION)  
GEOREMARKS (ORE HORIZON MEASURES 10-30 METRES  
THICK)

GABLINA, I.F. 1986 (658)  
KRENDELEV, F.P. 1986 (659)

**RUSSIA-50**

RUDNII  
CU

67 50 00 N 86 48 00 E

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN ZONE BTWN REDBEDS & UNDERLYING MARINE  
SED RXS)

REMARKS (MEAGER CU CONTENT PERSISTANT ALONG ENTIRE  
EXTENT OF HORIZON)

AGE OF HOST (UPPER PROTEROZOIC (VENDIAN))

LITHOLOGY (GREY LIMESTONES/ RED SILTSTONE & ARGILLITE)

FORMATION (CHERNORECHENSKAYA FM/ISLUCHINSKAYA FM)

GEOREMARKS (MINERALIZATION UNIFORM ALONG STRIKE  
WITH LOW METAL CONTENT)

GABLINA, I.F. 1986 (658)

KRENDELEV, F.P. 1986 (659)

**RUSSIA-51**

CHERNORECHENSKAYA  
CU

68 15 00 N 87 15 00 E

ENTITY COMMENT (AREA/ NE OF GRAVIKA ORE LOCUS)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN BASAL GREY FLOOD-PLAIN LAGOONAL FACIES)

REMARKS (SEVERAL ORE OCCURRENCES IN AREA/HOST  
ROCKS HAVE HIGH ORGANIC-C CONTENT)

AGE OF HOST (UPPER PROTEROZOIC (VENDIAN))

LITHOLOGY (DOLOMITE/ LIMESTONE/ ARGILLITE)

FORMATION (SUKHARIKHINSKAYA FORMATION)

GEOREMARKS (ORE IN TRANSITION ZONE-CONTINENTAL RED  
BEDS TO GREY LAGOONAL FACIES)

GABLINA, I.F. 1986 (658)

KRENDELEV, F.P. 1986 (659)

**RUSSIA-52**

UGUI GRABEN  
CU

59 00 00 N 119 59 00 E

GEOGRAPHICAL SUBDIVISION (YAKU)

GEOLOGICAL PROVINCE (SIBERIAN PLATFORM)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN SANDY-CARBONATE TRANS-BAR LAGOON  
FACIES)

REMARKS (SEVERAL OCCURRENCES CONTAINED IN 3 LEVELS  
OF CHORUODINSKII FORMATION)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (DOLOMITIC SANDSTONE/SANDY BRECCIATED  
DOLOMITE)

FORMATION (CHORUODINSKII FORMATION (CHORUOD SUITE))

DAVYDOV, YU.V. 1986 (661)

DAVYDOV, YU.V. 1986 (660)

**RUSSIA-53**

KURPANDZHA  
CU

61 15 00 N 137 30 00 E

ENTITY COMMENT (SETTE-DABAN MOUNTAIN RANGE)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN SANDSTONE (CARBONATE-TERRIGENOUS  
SEDIMENTS))

REMARKS (NATIVE CU OCCURS IN AMYGDALOIDAL BASALTS IN  
LOWER PART OF SECTION)

AGE OF HOST (DEVONIAN-CARBONIFEROUS)

LITHOLOGY (RED & GREY SANDSTONE/ GRITSTONE/  
CONGLOMERATE)

FORMATION (MENKUYLINSK SERIES/PERELOMNAYA SERIES)

GEOREMARKS (SHARP FACIES TRANSITION FROM  
SUBCONTINENTAL TO LITTORAL MARINE OCCURS)

BOGDANOV, Y.V. 1984 (624)

**TAJIKISTAN-1**

GISSAR RANGE  
CU

39 00 00 N 68 00 00 E

ENTITY COMMENT (GISSAR RANGE/TIMES WORLD ATLAS)

GEOLOGICAL PROVINCE (SOUTH TIEN-SHAN)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SANDSTONE WITH HIGH ORGANIC CONTENT)

REMARKS (NUMEROUS OCCURRENCES OF COPPER-BEARING  
ROCKS WITHIN 300 M THICK FM)

AGE OF HOST (LOWER CRETACEOUS)

LITHOLOGY (VIOLET TO GREY SANDSTONE INTERLAYERED/  
CLAYST)

FORMATION (OBIGARM FORMATION)

GEOREMARKS (CU CONC IN TRANSITIONAL CONTINENTAL TO  
MARINE LAGOONAL-DELTAIC ROCKS)

BOGDANOV, Y.V. 1973 (51)

**TAJIKISTAN-2**

KHOZRETISHI RANGE  
CU

39 15 00 N 70 15 00 E

ENTITY COMMENT (RANGE/ APPROX-FIG 28 (V) BIBL1)

GEOLOGICAL PROVINCE (SOUTH TIEN-SHAN)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN CROSS-BEDDED SS WITH CARBONACEOUS  
PARTICLES)

REMARKS (76 OCCURRENCES WITHIN CU HORIZONS  
TRACEABLE FOR HUNDREDS OF KILOMETRES)

AGE OF HOST (LOWER CRETACEOUS)

LITHOLOGY (GREY SANDSTONE/ CONGLOMERATE/ GREEN  
CLAYST)

FORMATION (KARAKUZ FORMATION)

GEOREMARKS (SS INTERLAYERED WITH FINE-PEBBLED  
CONGLOM/ CLAYST CONTAINS AMMONITES)

BOGDANOV, Y.V. 1973 (51)

**TAJIKISTAN-3**  
VAKHSH RANGE  
CU

38 15 00 N 69 10 00 E  
ENTITY COMMENT (RANGE CENTRE/TIMES WORLD ATLAS)

GEOLOGICAL PROVINCE (SOUTH TIEN-SHAN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONES CONTAINING CARBONACEOUS  
PARTICLES)  
REMARKS (NUMEROUS OCCURRENCES FOLLOW NORTH  
NORTH-EAST TREND OF MOUNTAIN RANGE)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (VIOLET SANDSTONE/SILTSTONE/GYPSIFEROUS  
CLAYST)  
FORMATION (YAVAN FORMATION)  
GEOREMARKS (CU CONC IN TRANSITIONAL CONTINENTAL TO  
MARINE LAGOONAL-DELTAIC ROCKS)

BOGDANOV, Y.V. 1973 (51)

**THAILAND-1**  
PHU WIANG (PRATU TEEMA)  
U, CU, V, MN, PB

16 40 00 N 102 15 00 E  
ENTITY COMMENT (NEAR W EDGE OF KHORAT PLATEAU)

GEOLOGICAL PROVINCE (PHU WIANG BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM & AS COATINGS IN SS WITH ORGANIC  
REMAINS)  
REMARKS (DEPOSIT COVERS AREA OF 2 SQUARE KM NEAR  
WESTERN EDGE OF KHORAT PLATEAU)

AGE OF HOST (UPPER JURASSIC)  
LITHOLOGY (ARKOSIC SANDSTONE/ SILTSTONE/ MUDSTONE)  
FORMATION (SAO KHUA FM/KHORAT GROUP(SERIES BEFORE  
1964))  
GEOREMARKS (GEOLOGY SIMILAR TO COLORADO PLATEAU/  
PENECONCORDANT LENTICULAR DEPOSIT)

GOCHT, W. 1981 (161)  
TANTISUKRIT, C. 1978 (655)

**THAILAND-2**  
NAM PHAT & FAK THA OCCURRENCES  
CU

18 00 00 N 100 48 00 E  
ENTITY COMMENT (FAT THA/ FIG 6 BIBL 1 PG 33)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (NUMEROUS SECONDARY COPPER INDICATIONS  
OCCUR IN ZONE 120 KM LONG)

AGE OF HOST (JURASSIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (KHORAT GROUP)  
GEOREMARKS (SANDSTONE LIES ON LACCOLITH-SHAPED  
BODIES OF PORPHYRY IN MANY PLACES)

WORKMAN, D.R. 1972 (407)

**THAILAND-3**  
LAMPANG  
CU

18 34 00 N 99 55 00 E  
ENTITY COMMENT (OCC/APPROX 60 KM NE OF LAMPANG)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY ( IN SANDSTONE AND SHALE)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (SANSTONE/ SHALE)  
FORMATION (LAMPANG GROUP)

ASNACHINDA, P. 1986 (654)  
TANTISUKRIT, C. 1978 (655)

**THAILAND-4**  
NAN  
CU

18 45 00 N 100 50 00 E  
ENTITY COMMENT (OCCURRENCE/ 35 KM ENE OF NAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE AND SHALE)  
REMARKS (SEVERAL LOCALITIES)

AGE OF HOST (JURASSIC)  
LITHOLOGY (SANDSTONE/ SHALE)  
FORMATION (KHORAT GROUP)

TANTISUKRIT, C. 1978 (655)

**UZBEKISTAN-1**  
CHIMBAI-SALUK  
CU

40 15 00 N 72 00 00 E  
ENTITY COMMENT (FERGANA CITY/TIMES WORLD ATLAS)

GEOLOGICAL PROVINCE (TIEN-SHAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM & LENTICULAR ORE STRUCTURES IN  
SANDSTONE)  
REMARKS (7 OUT OF 24 CUPRIFEROUS BEDS CONTAIN  
ECONOMIC ORES)

AGE OF HOST (TERTIARY (NEOGENE))  
LITHOLOGY (SANDSTONES)  
GEOREMARKS (CU DISPOSED UNEVENLY/CONFINED MAINLY  
TO LOWER COARSELY FRAGMENTED BEDS)

BOGDANOV, Y.V. 1973 (51)

**UZBEKISTAN-2**

NAUKAT  
CU

40 50 00 N 71 36 00 E  
ENTITY COMMENT (DEPOSIT/ALONG SYR-DARYA RIVER)

GEOLOGICAL PROVINCE (TIEN-SHAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN DARK GREY SANDSTONE WITH CALCAREOUS  
CEMENT)  
REMARKS (ORE MINERALS FORM CONCRETIONS AND  
PSEUDOMORPHS AFTER PLANT REMAINS)

AGE OF HOST (TERTIARY (NEOGENE))  
LITHOLOGY (RED MARLS INTERLAYERED WITH ARKOSIC  
SANDST)  
GEOREMARKS (7 CU BEDS 0.2-1 M THICK OCCUR IN SOUTH  
FLANK OF LARGE ANTICLINAL FOLD)

### UZBEKISTAN-3

RAVNOU  
CU, AG, BI

40 12 00 N 72 24 00 E  
ENTITY COMMENT (OCCURRENCE/ IN WESTERN DARVAZ)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SANDSTONE)  
REMARKS (SANDSTONE LOCALIZED IN VICINITY OF  
PALEOTECTONIC UPLIFTS)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (KHATARMINSK SERIES)  
GEOREMARKS (IN ZONE OF TRANSITION FROM CONTINENTAL  
RED BEDS TO LAGOON-DELTAIC SS)

BOGDANOV, Y.V. 1984 (624)  
VOL'NOV, B.A. 1978 (643)

### UZBEKISTAN-4

DARAITANG  
CU, AG, PB, ZN

39 20 00 N 72 30 00 E  
ENTITY COMMENT (OCCURRENCE/ IN WESTERN DARVAZ)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SANDSTONE)  
REMARKS (ORE CONFINED TO ZONE OF GRADUAL CONTACT  
BTWN CONTINENTAL-MARINE FACIES)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (SANDSTONE/ CONGLOMERATE/ SANDY  
LIMESTONE)  
FORMATION (DARAITANG SERIES)  
GEOREMARKS (VARIEGATED LITTORAL-MARINE SED RXS  
OVERLIE THICK CONTINENTAL RED BEDS)

BOGDANOV, Y.V. 1984 (624)  
VOL'NOV, B.A. 1978 (643)

## AUSTRALIA

### AUSTRALIA-1

MOUNT OXIDE  
CU (SEE RESERVE/PRODUCTION REPORT)

19 30 00 S 139 24 00 E

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN CRUSH-ZONE IN BED OF CONCRETIONARY  
SANDY SHALE)  
REMARKS (DEPOSIT TYPE UNCERTAIN)

AGE OF HOST (PROTEROZOIC)  
LITHOLOGY (CARBONACEOUS-SILICEOUS SHALES)  
FORMATION (GUNPOWDER CREEK FM)  
GEOREMARKS (ON WESTERN LIMB OF MAJOR SYNCLINE IN  
SLIGHTLY METAMORPHOSED SED ROCKS)

GUY, B.B. 1975 (173)  
PLUMB, K.A. 1975 (300)  
CARTER, E.K. 1961 (75)

### AUSTRALIA-3

MOUNT KELLY  
CU

19 51 00 S 139 08 00 E

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOSTONE CONTAINING MINOR  
CARBONACEOUS MATTER)  
REMARKS (DEPOSIT TYPE UNCERTAIN/CU LOCALIZED DURING  
SEDIMENTATION OR DIAGENESIS)

AGE OF HOST (PROTEROZOIC)  
LITHOLOGY (DOLOMITIC-CARBONACEOUS SILTSTONE/  
MUDSTONE)  
FORMATION (GCH UNIT-GUNPOWDER CREEK FM/PARADISE  
CREEK FM)  
GEOREMARKS (CU RESTRICTED MAINLY TO DOLOMITIC UNITS  
BUT ALSO IN CHERT HORIZONS-PCZ)

GUY, B.B. 1975 (173)  
BAMPTON, K.F. 1977 (687)

### AUSTRALIA-4

WAVE HILL  
CU

17 20 00 S 131 02 00 E  
ENTITY COMMENT (10 KM WEST-NW OF WAVE HILL)

GEOGRAPHICAL SUBDIVISION (NORTHERN TERRITORY)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (MALACHITE STAINING OCCURS IN CHERT OF  
WICKHAM FM)

AGE OF HOST (PROTEROZOIC (CARPENTARIAN OR  
ADELAIDEAN))  
LITHOLOGY (CHERT/CONGLOMERATE)  
FORMATION (WICKHAM FM/ WATITE GROUP)

BULTITUDE, R.J. 1973 (65)

**AUSTRALIA-5**  
WATERHOUSE RANGE  
CU

24 03 00 S 133 16 00 E

GEOGRAPHICAL SUBDIVISION (NORTHERN TERRITORY)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SILTSTONE)  
REMARKS (5 CHANNEL SAMPLES-WEIGHTED AVERAGE 4.96%  
CU OVER 8.5 FT THICKNESS)

LITHOLOGY (SILTSTONE)

ANON. 1970 (422)

**AUSTRALIA-6**  
BOORLOO  
CU

29 40 00 S 137 55 00 E

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN COARSE CLASTICS OF BOORLOO BEDS)  
REMARKS (SEDIMENTS DEPOSITED IN SMALL CONSTRUCTIVE  
RIVER-DOMINATED DELTA)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY  
(RUDITE/ARENITE/GRAVELITE/SILTSTONE/MUDSTONE)  
FORMATION (UMBERATANA GP/ ADELAIDE SUPERGROUP)

RAYNER, R.A. 1980 (310)  
DELGARN, C.R. 1981 (108)  
RAYNER, R.A. 1981 (311)

**AUSTRALIA-7**  
WARRA WARRA  
CU

29 53 00 S 137 49 00 E

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SHALE, SANDST AND DOLOSILTS (ARENITE))  
REMARKS (STRATIFORM COPPER HOSTED BY SUBMERGENT  
HETEROLITE CYCLES)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDIAN))  
LITHOLOGY (ARENITE (CARBONACEOUS AND  
DOLOCARBONACEOUS))  
FORMATION (BURRA GROUP/ WARRA WARRA BEDS)  
GEOREMARKS (CYCLICALLY DEPOSITED  
SILICICLASTICS/CARBONACEOUS MUDS &  
STROM-DOLOMITE)

ROWLANDS, N.J. 1979 (321)

**AUSTRALIA-8**

YUDNAMUTANA  
CU

30 00 00 S 139 20 00 E  
ENTITY COMMENT (NO 1/ LIEGE 1974/ FIG 1/PG 420)

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN METAMORPHOSED DOLO-ARGILLITE)  
REMARKS (BEDS DEPOSITED ON EPI-CONTINENTAL  
STABLE-SHELF ZONE NEAR TO CRATON)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))  
LITHOLOGY (DOLO-ARGILLITE)  
FORMATION (CALLANNA BEDS/ WILLOURAN SERIES)  
GEOREMARKS (CALLANNA BEDS HAVE BEEN  
METAMORPHOSED TO AMPHIBOLITE GRADE)

ROWLANDS, N.J. 1974 (319)  
DREW, G.H. 1980 (116)  
ROWLANDS, N.J. 1978 (320)  
ROWLANDS, N.J. 1973 (318)

**AUSTRALIA-9**  
MOUNT COFFIN  
CU

30 36 00 S 138 30 00 E

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED SECONDARY CU IN WEATHERED  
SILTSTONE)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))  
LITHOLOGY (SILTSTONE/ BRECCIA/ DOLOMITE)  
FORMATION (UMBERATANA GROUP)

BORCH VON DER, C.C. 1980 (52)  
DREW, G.H. 1980 (116)  
ANON. 1970 (423)

**AUSTRALIA-10**  
BLINMAN  
CU

31 06 00 S 138 45 00 E

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITE AND SHALE UNIT)  
REMARKS (CU CONTENT IN PLACES AT LEAST 2000 PPM/  
TRACES OF CU SULPHIDES PRESENT)

AGE OF HOST (LOWER CAMBRIAN)  
LITHOLOGY (DOLOMITE/SHALE)  
FORMATION (WEARING DOLOMITE MEMBER/ BUNYEROO  
FORMATION)  
GEOREMARKS (WEARING PART OF UPPER MARINOAN  
LUTITE/MAPPED OVER A STRIKE OF 40 MILES)

THOMSON, B.P. 1967 (369)  
ANON. 1971 (430)

**AUSTRALIA-11**

MOUNT GUNSON

CU, AG (SEE RESERVE/PRODUCTION REPORT)

31 27 00 S 137 15 00 E

ENTITY COMMENT (NEAR WOOMERA/ NO 6/ LIEGE 1974)

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN FRACTURED AND BRECCIATED QUARTZITIC SANDSTONE)

REMARKS (SEVERAL OREBODIES-MAIN OPEN CUT/ CATTLE GRID/ EAST &amp; WEST LAGOON)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))

LITHOLOGY (MUDSTONE/SANDSTONE/BRECCIA)

FORMATION (WHYALLA SANDSTONE/ WOOCALLA DOLOMITE MEMBERS)

GEOREMARKS (ORE OCCURS AT INTERFACE BETWEEN PANDURRA FM &amp; WHYALLA SANDSTONE)

MAIDEN, K.J. 1984 (256)

PREISS, W.V. 1981 (306)

ROWLANDS, N.J. 1974 (319)

GERSTELING, R.W. 1975 (155)

JOHNS, R.K. 1974 (203)

JOHNS, R.K. 1968 (202)

DONNELLY, T.H. 1972 (112)

**AUSTRALIA-12**

YADLAMALKA

CU

31 45 00 S 137 18 00 E

ENTITY COMMENT (NO 3/ LIEGE 1974/ FIG 1/PG 420)

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN FINE GRAINED ARKOSIC ARENITES)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))

LITHOLOGY (ARKOSIC ARENITES)

GEOREMARKS (HALITE &amp; ANHYDRITE CASTS/ MUD CRACKS/ MINOR AEOLIANITES PRESENT)

ROWLANDS, N.J. 1974 (319)

**AUSTRALIA-13**

DUTCHMANS

CU

31 45 00 S 137 45 00 E

ENTITY COMMENT (NO 5/ LIEGE 1974/ FIG 1/PG 420)

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN LENTICULAR ARENACEOUS SILTSTONES)

REMARKS (MINERALIZATION OCCURS IN HIGHLY STROMATOLITIC STRATIGRAPHIC UNIT)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))

LITHOLOGY (ARENACEOUS SILTSTONES (GREY BEDS))

GEOREMARKS (DOLOMITIC ROCKS WITH CU ARE LITHIFIED ORGANIC-RICH CARBONATE MUDS)

ROWLANDS, N.J. 1974 (319)

**AUSTRALIA-14**

PRINCE ALFRED

CU (SEE RESERVE/PRODUCTION REPORT)

32 25 00 S 138 34 00 E

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SILTSTONE AND SHALE)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))

LITHOLOGY (SILTSTONE/SHALE)

DREW, G.H. 1980 (116)

**AUSTRALIA-15**

KANYAKA

CU

32 25 00 S 138 18 00 E

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SILTSTONE AND SHALE)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))

LITHOLOGY (SILTSTONE/SHALE)

DREW, G.H. 1980 (116)

**AUSTRALIA-16**

RED HILL

CU

32 20 00 S 138 45 00 E

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SILTSTONE AND SHALE)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))

LITHOLOGY (SILTSTONE/SHALE)

DREW, G.H. 1980 (116)

**AUSTRALIA-17**

MOUNT ARDEN

CU

32 36 00 S 137 00 00 E

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SILTSTONE AND SHALE)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))

LITHOLOGY (SILTSTONE/SHALE)

DREW, G.H. 1980 (116)



**AUSTRALIA-18**

COPPER CLAIM  
CU

34 00 00 S 138 15 00 E

ENTITY COMMENT (NO 2/ LIEGE 1974/ FIG 1/PG 420)

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)  
GEOLOGICAL PROVINCE (ADELAIDE GEOSYNCLINE)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN DOLO-ARENITE &  
DOLO-SILTSTONE)  
REMARKS (BEDS DEPOSITS IN INTRACRATONIC  
HALF-GRABENS IN MARINE GULF-LAGOON)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))  
LITHOLOGY  
(DOLOMITE/LIMESTONE/ARGILLITE/SILTSTONE/ARENITE)  
FORMATION (EURELIA BEDS)

ROWLANDS, N.J. 1978 (320)  
PREISS, W.V. 1981 (306)  
ROWLANDS, N.J. 1974 (319)  
LAMBERT, T. 1984 (542)

**AUSTRALIA-19**

MYALL CREEK  
CU, PB, ZN

32 15 00 S 137 36 00 E

ENTITY COMMENT (PROSPECT/30 KM N OF WHYALLA)

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)  
GEOLOGICAL PROVINCE (STUART SHELF)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS REPLACEMENT OF PYRITE & CLASTIC GRAINS  
IN SS)  
REMARKS (MINERALIZATION COVERS AREA OF 3 SQUARE  
KM/CU IN BASAL FEW METRES OF FM)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))  
LITHOLOGY (CARBONACEOUS DOLOSILTSTONE & WHITE  
SANDSTONE)  
FORMATION (TAPLEY HILL FORMATION)  
GEOREMARKS (SULPHIDES FORMED BY BIOGENIC SULPHATE  
REDUCTION IN QUASI-CLOSED SYSTEM)

LAMBERT, I.B. 1984 (555)

**AUSTRALIA-21**

GIPPSLAND  
CU

37 45 00 S 147 30 00 E

ENTITY COMMENT (REGION/ TIMES WORLD ATLAS)

GEOGRAPHICAL SUBDIVISION (VICTORIA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (REDBED-TYPE CU MINERALIZATION)

AGE OF HOST (UPPER DEVONIAN TO LOWER  
CARBONIFEROUS)  
LITHOLOGY (SEDIMENTARY ROCKS)

DOUGLAS, J.G. 1976 (504)

**AUSTRALIA-23**

CHAMBERLAIN VALLEY  
CU

16 45 00 S 127 45 00 E

ENTITY COMMENT (APPROX CENTRE OF OUTCROPS)

GEOGRAPHICAL SUBDIVISION (WESTERN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN GREEN TO GREY FISSILE SHALE AND  
SILTSTONE)  
REMARKS (COPPER OCCURRENCES TRACEABLE FOR 128 KM)

AGE OF HOST (MIDDLE TO LATE PROTEROZOIC  
(CARPENTARIAN))  
LITHOLOGY (SILTSTONE/SANDSTONE WITH ALGAL  
DOLOSTONE)  
FORMATION (KIMBERLEY GP/ TERONIS MEMBER/ ELGEE  
SILTSTONE)

KLARIC, R. 1975 (220)  
MARSTON, R.J. 1979 (259)  
GELLATLY, D.C. 1975 (154)  
OWEN, D.E. 1971 (292)

**AUSTRALIA-24**

AMELIA DOLOMITE  
CU

16 10 00 S 135 26 00 E

ENTITY COMMENT (BAUHINIA DOWNS/ATLAS OF WORLD)

GEOGRAPHICAL SUBDIVISION (NORTHERN TERRITORY)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN SILTSTONE/DOLOSTONE &  
QUARTZITE)  
REMARKS (VICINITY OF MOUNTAIN HOME ON BUKALARA  
PLATEAU ON BAUHINIA DOWNS)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (SILTSTONE/DOLOSTONE/QUARTZITE)  
FORMATION (AMELIA DOLOMITE overlain by TATOOLA  
SANDSTONE)  
GEOREMARKS (DISSEM MALACHITE & CHALCOPYRITE OCCUR  
IN TWO STRATIGRAPHIC HORIZONS)

JACKSON, M.J. 1984 (523)

**AUSTRALIA-25**

WOLLOGORANG FORMATION  
CU

17 12 00 S 137 20 00 E

ENTITY COMMENT (CALVERT HILLS/TIME WORLD ATLAS)

GEOGRAPHICAL SUBDIVISION (NORTHERN TERRITORY)  
GEOLOGICAL PROVINCE (MCARTHUR BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AS VUG-INFILLINGS IN COARSE-GRAINED  
DOLOMITIC SS)  
REMARKS (MINERALIZATION OCCURS IN THE GENERAL

VICINITY OF CALVERT HILLS)  
AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SILTSTONE/ SANDSTONE/ SHALE)  
FORMATION (WOLLOGORANG FORMATION)  
  
JACKSON, M.J. 1981 (524)  
JACKSON, M.J. 1984 (523)

**AUSTRALIA-29**  
LAWN HILL AREA  
CU

18 32 00 S 138 35 00 E  
ENTITY COMMENT (AREA/ NEAR TOWN OF LAWN HILL)

GEOGRAPHICAL SUBDIVISION (QUEENSLAND)  
GEOLOGICAL PROVINCE (LAWN HILL PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN QUARTZITE)  
REMARKS (MINOR MINERALIZATION/ GENERALLY SHOWS AS  
MALACHITE STAINING)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZITE)  
FORMATION (TORPEDO CREEK QUARTZITE/ MCNAMARA  
GROUP)

HUTTON, L.J. 1982 (685)  
HUTTON, L.J. 1982 (685)

**AUSTRALIA-30**  
PENTECOST SANDSTONE  
CU

17 15 00 S 126 45 00 E  
ENTITY COMMENT (OCCURRENCE/ APPROX LOCATION)

GEOGRAPHICAL SUBDIVISION (WESTERN)  
GEOLOGICAL PROVINCE (KIMBERLEY BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN CARBONATE-REDBED FACIES)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))  
LITHOLOGY (QUARTZ & FELDSPATHIC SANDSTONE/  
SILTSTONE)  
FORMATION (MENDENA FORMATION/ PENTECOST  
SANDSTONE)

PLUMB, K.A. 1975 (300)

**AUSTRALIA-31**  
ELGEE SILTSTONE  
CU

16 45 00 S 127 00 00 E  
ENTITY COMMENT (OCCURRENCE/ APPROX LOCATION)

GEOGRAPHICAL SUBDIVISION (WESTERN)  
GEOLOGICAL PROVINCE (KIMBERLEY BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN CARBONATE-REDBED FACIES)

AGE OF HOST (LATE PROTEROZOIC (ADELAIDEAN))  
LITHOLOGY (RED  
SILTSTONE/SANDSTONE/LIMESTONE/DOLOMITE)  
FORMATION (TERONIS MEMBER/ ELGEE SILTSTONE)  
GEOREMARKS (STROMATOLITES IN TERONIS MEMBER)

PLUMB, K.A. 1975 (300)

**AUSTRALIA-32**  
ILMARS  
CU

17 00 00 S 126 30 00 E  
ENTITY COMMENT (PROSPECT/ VERY APPROX LOCATION)

GEOGRAPHICAL SUBDIVISION (WESTERN)  
GEOLOGICAL PROVINCE (KIMBERLEY BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (ASSOCIATED WITH DOLOMITIC SHALE)

AGE OF HOST (LOWER (EARLY) PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALE)  
FORMATION (BISCAY FORMATION/ HALLS CREEK GROUP)

PLUMB, K.A. 1975 (300)  
PLUMB, K.A. 1975 (300)

**AUSTRALIA-33**  
SAUNDERS CREEK  
CU

16 30 00 S 127 30 00 E  
ENTITY COMMENT (PROSPECT/ VERY APPROX LOCATION)

GEOGRAPHICAL SUBDIVISION (WESTERN)  
GEOLOGICAL PROVINCE (KIMBERLEY BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (ASSOCIATED WITH DOLOMITIC SHALE)

AGE OF HOST (LOWER (EARLY) PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALE)  
FORMATION (BISCAY FORMATION/ HALLS CREEK GROUP)

PLUMB, K.A. 1975 (300)

**AUSTRALIA-34**  
ANGELO  
CU

16 15 00 S 127 15 00 E  
ENTITY COMMENT (PROSPECT/ VERY APPROX LOCATION)

GEOGRAPHICAL SUBDIVISION (WESTERN)  
GEOLOGICAL PROVINCE (KIMBERLEY BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (ASSOCIATED WITH DOLOMITIC SHALE)

AGE OF HOST (LOWER (EARLY) PROTEROZOIC)  
LITHOLOGY (DOLOMITIC SHALE)  
FORMATION (BISCAY FORMATION/ HALLS CREEK GROUP)

PLUMB, K.A. 1975 (300)

## **EUROPE**

### **BELGIUM-1**

DOLEMBREUX  
CU, PB, ZN, BA, FL

50 32 00 N 5 37 00 E  
ENTITY COMMENT (DEPOSIT/ FIG 4 BIBL 1/ P 106)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN LIMESTONE)

AGE OF HOST (MIDDLE DEVONIAN (GIVETIAN))  
LITHOLOGY (LIMESTONE)

DEJONGHE, L. 1986 (669)

### **BELGIUM-2**

ROUVEROY  
CU (SEE RESERVE/PRODUCTION REPORT)

50 22 00 N 4 04 00 E  
ENTITY COMMENT (DEPOSIT/ FIG 4 BIBL 1/ P 106)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (CU OXIDES FILL FISSURES & SEDIMENTARY  
PARTINGS)

AGE OF HOST (LOWER DEVONIAN)  
LITHOLOGY (SHALY SANDSTONE/ CONGLOMERATE)  
FORMATION (BURNOT FORMATION)  
GEOREMARKS (HOST ROCKS PREDOMINANTLY RED COLOURS)

DEJONGHE, L. 1986 (669)

### **CZECH REPUBLIC-1**

HORNI VERNEROVICE (WERNERSDORF)  
CU

50 34 00 N 16 10 00 E  
ENTITY COMMENT (DEPOSIT/13 KM EAST OF TRUTNOV)

GEOGRAPHICAL SUBDIVISION (BOHEMIA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED & AS CONCRETIONS IN GREYISH  
CLAYSTONE)  
REMARKS (MINE OPENED IN 1853 AND PRODUCED COPPER  
SPORATICALLY UNTIL 1966)

AGE OF HOST (PERMIAN (LOWER AUTUNIAN))  
LITHOLOGY (GREY GREENISH CLAYSTONE)

CADKOVA, Z. 1971 (68)  
CADKOVA, Z. 1971 (69)  
SLAVIK, F. 1933 (349)

### **CZECH REPUBLIC-2**

HORNI KALNA  
CU, V, U

50 28 00 N 15 32 00 E  
ENTITY COMMENT (DEPOSIT/ NEAR NOVA PAKA)

GEOGRAPHICAL SUBDIVISION (BOHEMIA)  
GEOLOGICAL PROVINCE (BOHEMIAN MASSIF)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN DOLOMITIC NODULES WITHIN CLAYST/SILTST  
HORIZONS)  
REMARKS (3 NODULE-BEARING HORIZONS OUTCROP IN &  
AROUND QUARRY NEAR HORNÍ KALNA)

AGE OF HOST (PERMIAN (LOWER AUTUNIAN))  
LITHOLOGY (GREY CLAYSTONE/ BROWN-RED CLAYST &  
SILTSTONE)

**CZECH REPUBLIC-3**  
KOSTALOV  
CU, V

50 37 00 N 15 40 00 E  
ENTITY COMMENT (DEPOSIT/ NEAR SEMILY)

GEOGRAPHICAL SUBDIVISION (BOHEMIA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SILTSTONE ASSOCIATED WITH PLANT  
REMNANTS)  
REMARKS (ONE OF NUMEROUS SMALL DEPOSITS FOUND IN  
SED RXS OF GIANT MTN FOOTHILLS)

AGE OF HOST (PERMO-CARBONIFEROUS)  
LITHOLOGY (GREY SILTSTONE/ GREY SANDSTONE/ RED  
CLAYSTONE)  
GEOREMARKS (COARSE-GRAINED CONGLOMERATE OVERLAY  
SYSTEM OF MINERALIZED ROCK LAYERS)

JOHAN, Z. 1959 (681)

**FRANCE-1**  
LODEVE  
CU

43 44 00 N 3 19 00 E

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN CONGLOMERATE)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (CONGLOMERATE)

NICOLINI, P. 1962 (287)

**FRANCE-2**  
UBINE  
CU

46 18 15 N 6 44 00 E

GEOGRAPHICAL SUBDIVISION (HAUTE-SAVOIE)  
GEOLOGICAL PROVINCE (PREALPES CHABLAIS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY ( SPARCELY DISSEMINATED IN MARL)  
REMARKS (NON-ECONOMIC/ POSSIBLY RED BED TYPE  
MINERALIZATION)

AGE OF HOST (TERTIARY (PALAEOCENE))  
LITHOLOGY (MARL)

MARTINI, J. 1971 (691)

**FRANCE-3**  
LE BIOT  
CU

46 15 00 N 6 39 00 E  
ENTITY COMMENT (OCC/BTWN LEBIOT & CORBIER PASS)

GEOGRAPHICAL SUBDIVISION (HAUTE-SAVOIE)  
GEOLOGICAL PROVINCE (PREALPES CHABLAIS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN SLIGHTLY SILICEOUS  
LIMESTONE)  
REMARKS (THIN LIMESTONE BED(SEVERAL CMS) LIES IN  
MIDDLE OF THICKER RED MARL BED)

AGE OF HOST (TERTIARY (PALAEOCENE))  
LITHOLOGY (LIMESTONE/RED MARL/CALCAREOUS MARLY  
SANDSTONE)  
GEOREMARKS (LIMESTONE FORMED FROM ACCUMULATION  
OF FORAMINIFERA)

MARTINI, J. 1971 (691)

**FRANCE-4**  
JAMBAZ  
CU

46 12 30 N 6 31 00 E  
ENTITY COMMENT (OCCUR/1KM SOUTH OF JAMBAZ PASS)

GEOGRAPHICAL SUBDIVISION (HAUTE-SAVOIE)  
GEOLOGICAL PROVINCE (PREALPES CHABLAIS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (CU SULPHIDES FORM DISCONTINUOUS TRAILS IN  
MARL)  
REMARKS (MINERALIZATION OBSERVED MAINLY ABOUT 12M  
ABOVE BASE OF MARL BED)

AGE OF HOST (TERTIARY (PALAEOCENE))  
LITHOLOGY (RED MARL)  
GEOREMARKS (LIGHTLY OVERTURNED MARL BEDS REST ON  
GREY CALCAREOUS MARLY SANDSTONE)

MARTINI, J. 1971 (691)

**FRANCE-5**  
LA RIOLLE  
CU

46 05 06 N 6 32 30 E  
ENTITY COMMENT (OCCUR/400M E OF RIOLLE FARMS)

GEOGRAPHICAL SUBDIVISION (HAUTE-SAVOIE)  
GEOLOGICAL PROVINCE (PREALPES CHABLAIS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (CU SULPHIDES FORM DISCONTINUOUS TRAILS IN  
MARL)  
REMARKS (MINERALIZATION OCCURS NEAR TOP OF 40-50M OF  
MARL EXPOSED IN A REVINE)

AGE OF HOST (TERTIARY (PALAEOCENE))  
LITHOLOGY (REDISH MARL/MARLY LIMESTONE)  
GEOREMARKS (MINERALIZATION ASSOCIATED WITH PLANT

REMAINS)

MARTINI, J. 1971 (691)

**FRANCE-6**  
GORDOLASQUE  
CU, U

44 05 00 N 7 25 00 E

GEOLOGICAL PROVINCE (ALPES MARITIMES)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN QUARTZ LENSES & DISSEMINATED IN  
SANDSTONE)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (BEGO SERIES)  
GEOREMARKS (U/PB AGE DATE FOR DEPOSIT GAVE JURASSIC  
(185-191 MA))

VINCHON, C. 1984 (692)

**FRANCE-7**  
PONT DES ROBERTS  
CU

44 04 30 N 6 51 30 E  
ENTITY COMMENT (OCCURR/ 1.5 KM S OF GUILLAUMES)

GEOLOGICAL PROVINCE (ALPES MARITIMES)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS IMPREGNATIONS IN BASAL TRIASSIC  
CONGLOMERATE)  
REMARKS (MINERALIZATION OCCURS IN SMALL FRACTURES &  
INSIDE GEODES WITHIN CGLM)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (CONGLOMERATE)  
GEOREMARKS (MINERALIZATION OCCURS AT CONTACT OF  
TRIASSIC OVERLYING PERMIAN)

VINCHON, C. 1984 (692)

**FRANCE-8**  
BANCAIROUN  
CU

44 03 15 N 6 51 36 E  
ENTITY COMMENT (OCCUR/3.2 KM SSE OF GUILLAUMES)

GEOLOGICAL PROVINCE (ALPES MARITIMES)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN VEINLETS OR IN MATRIX OF CONGLOMERATES)  
REMARKS (MINERALIZATION OCCURS AT CONTACT OF  
TRIASSIC OVERLYING PERMIAN)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (CONGLOMERATE)

VINCHON, C. 1984 (692)

**FRANCE-9**  
HUBAC DE JOURDAN EST  
CU, GE

44 02 30 N 6 51 30 E  
ENTITY COMMENT (OCCURR/ 5.7 KM S OF GUILLAUMES)

GEOLOGICAL PROVINCE (ALPES MARITIMES)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS FLAKES & VEINLETS ASSOCIATED WITH  
DOLOMITE)  
REMARKS (PLANT DEBRIS ABUNDANT IN THE ENCLOSING  
SANDSTONE)

AGE OF HOST (PERMIAN)  
LITHOLOGY (PALE GREY SANDSTONE/SILTSTONE/(RED  
SANDSTONE))  
FORMATION (LEOUVE FORMATION/ROUA & (LA PLACETTE)  
MEMBERS)

VINCHON, C. 1984 (692)

**FRANCE-10**  
GIORDANNET  
CU, GE

44 02 00 N 6 52 30 E  
ENTITY COMMENT (OCCURR/ 6.2 KM S OF GUILLAUMES)

GEOLOGICAL PROVINCE (ALPES MARITIMES)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS ZONED COLLOFORM STRUCTURES WITHIN  
FAULTS IN SS)  
REMARKS (SULPHIDES FORMED DURING DIAGENESIS THEN  
REMOBILIZED INTO SMALL FAULTS)

AGE OF HOST (PERMIAN)  
LITHOLOGY (PALE GREY SANDSTONE/SILTSTONE/(RED  
SANDSTONE))  
FORMATION (LEOUVE FORMATION/ROUA & (LA PLACETTE)  
MEMBERS)  
GEOREMARKS (ENCLOSING SANDSTONE SEPARATED FROM  
SULPHIDES BY SPARRY DOLOMITE LAYER)

VINCHON, C. 1984 (692)

**FRANCE-11**  
LIOUC  
CU, U

44 01 45 N 6 50 00 E  
ENTITY COMMENT (OCCUR/6.7 KM SSW OF GUILLAUMES)

GEOLOGICAL PROVINCE (ALPES MARITIMES)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN CONGLOMERATE/SS ASSOCIATED WITH  
ORGANIC MATTER)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (CONGLOMERATE/SANDSTONE)

VINCHON, C. 1984 (692)

**FRANCE-12**  
CERISIER  
CU

43 59 12 N 6 53 30 E  
ENTITY COMMENT (OCCURR/11 KM SSE OF GUILLAUMES)

GEOLOGICAL PROVINCE (ALPES MARITIMES)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS IMPREGNATIONS IN CONGLOMERATE &  
SANDSTONE)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (CONGLOMERATE/CONGLOMERATIC SANDSTONE)  
GEOREMARKS (DEPOSIT OCCURS AT CONTACT OF THE  
TRIASSIC OVERLYING THE PERMIAN)

VINCHON, C. 1984 (692)

**FRANCE-13**  
LE LUC  
CU

43 24 00 N 6 19 00 E

GEOLOGICAL PROVINCE (ALPES DE PROVENCE)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE ASSOCIATED WITH CARBONATE  
CEMENT)  
REMARKS (MINERALIZATION CONCENTRATED IN AXIS OF  
FLUVIATILE CHANNEL)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (SANDSTONE)

VINCHON, C. 1984 (692)

**FRANCE-14**  
CAP GARONNE  
CU, PB, ZN

43 04 00 N 6 03 00 E

GEOLOGICAL PROVINCE (ALPES DE PROVENCE)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS CEMENT IN BASAL CONGLOMERATIC BEDS)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (CONGLOMERATE)  
GEOREMARKS (BASAL BEDS OF FINE-GR SS ARE REDUCED  
FOR SEVERAL METRES IN THIS ZONE)

VINCHON, C. 1984 (692)

**GERMANY-1**  
IMSBACH AND GOLLHEIM  
CU

49 30 00 N 8 00 00 E  
ENTITY COMMENT (APPROX /S & SE OF DONNERS BERG)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE & SLATE MAINLY AS CONCRETIONS)

REMARKS (POOR CU MINERALIZATION-TWO LOCATIONS)

AGE OF HOST (PERMIAN)  
LITHOLOGY (BLEACHED SANDSTONE AND SLATE)  
FORMATION (UPPER ROTLIEGENDES)  
GEOREMARKS (CONCRETIONS OF CHALCOCITE & MALACHITE  
IRREGULARLY DISTRIBUTED IN SEDS)

WALTHER, H.W. 1980 (383)

**GERMANY-2**  
RICHELSDORF  
CU (SEE RESERVE/PRODUCTION REPORT)

50 59 00 N 9 54 00 E  
ENTITY COMMENT (MINE/ NO 1-FIG 42 BIBL 4/P 247)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN THE KUPFERSCHIEFER (BITUMINOUS MARL))  
REMARKS (DEPOSIT OCCURS 40 KM SOUTHEAST OF KASSEL  
BETWEEN SONTRA AND BEBRA)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (CLAYEY  
MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)  
FORMATION (GRAULIEGENDE & KUPFERSCHIEFER  
BEDS/ZECHSTEIN1)  
GEOREMARKS (MINES CLOSED DOWN AFTER 1950)

RENTZSCH, J. 1974 (312)  
JUNG, W. 1976 (208)  
KREBS, W. 1976 (227)  
WALTHER, H.W. 1986 (665)

**GERMANY-3**  
HELGOLAND  
CU

54 09 00 N 7 52 00 E  
ENTITY COMMENT (ISLAND/NORTH SEA-OFF GERMANY)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (VUGLIKE INCLUSIONS & IMPREGNATIONS IN  
SANDSTONES)  
REMARKS (BRICK-RED SS DISCOLOURED TO GREY-GREEN  
WHERE CU MINERALIZATIONS OCCURS)

AGE OF HOST (LOWER TRIASSIC)  
LITHOLOGY (ARGILLACEOUS SANDSTONE)  
FORMATION (MIDDLE BUNTER)  
GEOREMARKS (SS BEDS OF THE ROET (UPPER STAGE OF  
LOWER TRIAS)HAVE CALCAREOUS CEMENT)

SCHREITER, R. 1932 (335)  
WALTHER, H.W. 1986 (665)

**GERMANY-4**  
BURGSINN  
CU, AG

50 12 38 N 9 38 26 E  
ENTITY COMMENT (AREA/ 5-10KM NORTH OF BURGSINN)

GEOGRAPHICAL SUBDIVISION (SOUTHWEST)  
GEOLOGICAL PROVINCE (FULDA-WERRA BASIN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BLACK SHALE)

AGE OF HOST (LATE PERMIAN)  
LITHOLOGY (SHALE/SANDSTONE/CONGLOMERATE/LIMESTONE)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)

SCHUMACHER, C. 1985 (648)  
SCHMIDT, F.-P. 1986 (671)

**GERMANY-5**  
BRUCKENAU  
CU, AG

50 18 50 N 9 46 57 E  
ENTITY COMMENT (AREA/ 4 KM NNW OF BRUCKENAU)

GEOGRAPHICAL SUBDIVISION (SOUTHWEST)  
GEOLOGICAL PROVINCE (FULDA-WERRA BASIN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BLACK SHALE)

AGE OF HOST (LATE PERMIAN)  
LITHOLOGY (SHALE/SANDSTONE/CONGLOMERATE/LIMESTONE)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)

SCHUMACHER, C. 1985 (648)  
SCHMIDT, F.-P. 1986 (671)

**GERMANY-6**  
FULDA  
CU, AG

50 28 30 N 9 51 18 E  
ENTITY COMMENT (AREA/CENTERED 12KM SE OF FULDA)

GEOGRAPHICAL SUBDIVISION (SOUTHWEST)  
GEOLOGICAL PROVINCE (FULDA-WERRA BASIN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BLACK SHALE)

AGE OF HOST (LATE PERMIAN)  
LITHOLOGY (SHALE/SANDSTONE/CONGLOMERATE/LIMESTONE)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)

SCHUMACHER, C. 1985 (648)  
SCHMIDT, F.-P. 1986 (671)

**GERMANY-7**  
SCHOLLKRIPPEN  
CU

50 05 00 N 9 18 00 E  
ENTITY COMMENT (OCCURRENCE/NO 15-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARL)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (CLAYEY  
MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)

FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)

WALTHER, H.W. 1986 (665)

**GERMANY-8**  
BIEBER  
CU

50 10 00 N 9 20 00 E  
ENTITY COMMENT (MINE/ NO 14-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARL)  
REMARKS (INTENSIVE MINING NEAR BIEBER-18TH CENTURY  
UNTIL SHUT DOWN EARLY 1900S)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (CLAYEY  
MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)

WALTHER, H.W. 1986 (665)

**GERMANY-9**  
HUTTENGESESS  
CU

50 15 00 N 9 10 00 E  
ENTITY COMMENT (OCCURRENCE/NO 13-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARL)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (CLAYEY  
MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)

WALTHER, H.W. 1986 (665)

**GERMANY-10**  
BAUMBACH  
CU

51 03 00 N 9 37 00 E  
ENTITY COMMENT (DEPOSIT/ NO 2-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARL)  
REMARKS (NEAR BAUMBACH ON FULDA RIVER CU MINED  
SINCE MIDDLE AGES INTERMITTENTLY)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (CLAYEY  
MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)

WALTHER, H.W. 1986 (665)

**GERMANY-11**  
STATEBERG

CU, PB

51 04 00 N 8 46 00 E

ENTITY COMMENT (DEPOSIT/ NO 11-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN FINE CLASTIC CARBONATE SEAM 2-10 CM THICK)

REMARKS (MINERALIZATION ONLY WORKABLE IN THE LOWEST PARTS OF THE SEAM)

AGE OF HOST (UPPER PERMIAN)

LITHOLOGY (CLAYEY

MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)

FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1 SEQUENCE)

WALTHER, H.W. 1986 (665)

#### GERMANY-12

GEISMAR

CU, AG

51 05 00 N 8 52 00 E

ENTITY COMMENT (MINE/ NO 12-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (SEAM OF GREY CALCAREOUS CLAYS WITH PLANT REMAINS)

REMARKS (CU SEAM 1-2 M THICK MINED FROM 1590-1818 & FOR SHORT TIME POST 1850)

AGE OF HOST (UPPER PERMIAN)

LITHOLOGY (CLAY MARL/ GYPSUM)

FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 2 SEQUENCE)

GEOREMARKS (ORE AVERAGED 1% CU AND 11 PPM AG)

WALTHER, H.W. 1986 (665)

#### GERMANY-13

KORBACH

CU

51 13 00 N 8 47 00 E

ENTITY COMMENT (MINE/ NO 10-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (MARL LAYERS INTERCALATED BETWEEN LIMESTONES)

REMARKS (MINING DECLINED IN 19TH CENTURY & WAS HALTED IN 1867 WITH NO REVIVAL)

AGE OF HOST (UPPER PERMIAN)

LITHOLOGY (CLAYEY

MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)

FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1 SEQUENCE)

GEOREMARKS (SOME 12-15 MARL LAYERS FROM 30-75 CM THICK CONTAIN UP TO 4% CU)

WALTHER, H.W. 1986 (665)

#### GERMANY-14

ALBUNGEN

CU

51 14 00 N 9 56 00 E

ENTITY COMMENT (DEPOSIT/ NO 3-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN MARL)

REMARKS (NEAR ALBUNGEN CU MINED SINCE MIDDLE AGES INTERMITTENTLY UNTIL 1849)

AGE OF HOST (UPPER PERMIAN)

LITHOLOGY (MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)

FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1 SEQUENCE)

WALTHER, H.W. 1986 (665)

#### GERMANY-15

WITZENHAUSEN

CU

51 20 00 N 9 52 00 E

ENTITY COMMENT (DEPOSIT/ NO 4-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN MARL)

REMARKS (NEAR WITZENHAUSEN CU MINED SINCE MIDDLE AGES INTERMITTENTLY UNTIL 1849)

AGE OF HOST (UPPER PERMIAN)

LITHOLOGY (MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)

FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1 SEQUENCE)

WALTHER, H.W. 1986 (665)

#### GERMANY-16

LEITMAR

CU

51 24 00 N 8 51 00 E

ENTITY COMMENT (DEPOSIT/ NO 9-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN CLAY SEAM WITHIN BITUMINOUS LIMESTONE)

REMARKS (IN ADORF BAY 8 KM SOUTH OF MARSBERG/ SMALL-SCALE MINING ENDED IN 1924)

AGE OF HOST (UPPER PERMIAN)

LITHOLOGY (CLAYEY

MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)

FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 2 SEQUENCE)

GEOREMARKS (COPPER CLAY SEAM 30-60 CM THICK)

WALTHER, H.W. 1986 (665)

#### GERMANY-17

MARSBERG

CU, AG, PB (SEE RESERVE/PRODUCTION REPORT)

51 28 00 N 8 53 15 E

ENTITY COMMENT (MINE/ NO 8-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN MARL)

REMARKS (COPPER MARL WORKED UNTIL 1945)



AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (MARL/ BITUMINOUS LIMESTONE)  
FORMATION (KUPFERSCHIEFER BEDS/ ZECHSTEIN 1 & 2  
SEQUENCE)

WALTHER, H.W. 1986 (665)

**GERMANY-18**  
WALKENRIED  
CU

51 36 00 N 10 30 00 E  
ENTITY COMMENT (OCCURRENCE/ NO 5-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARL)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)

WALTHER, H.W. 1986 (665)

**GERMANY-19**  
OSTERODE  
CU

51 44 00 N 10 16 00 E  
ENTITY COMMENT (OCCURRENCE/ NO 6-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MARL)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)

WALTHER, H.W. 1986 (665)

**GERMANY-20**  
HAHAUSEN (NEUEKRUG-HAHAUSEN)  
CU

51 59 00 N 10 12 30 E  
ENTITY COMMENT (OCCURRENCE/ NO 7-FIG 42 BIBL 1)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SHALE)  
REMARKS (10 KM NNE OF SEESEN SHALE 30 CM THICK  
LOCALLY CARRIES 1-3% CU)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (SHALE/CONGLOMERATE/SANDSTONE/SILTSTONE)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)

WALTHER, H.W. 1986 (665)

**GERMANY-21**  
SPREMBERG  
CU

51 35 00 N 14 22 00 E

ENTITY COMMENT (SPREMBERG/ TIMES WORLD ATLAS)

GEOLOGICAL PROVINCE (HARZ FORELAND)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN COALY BITUMINOUS CLAYSTONE (MARL))  
REMARKS (DEPOSIT ASSOCIATED WITH MULKWITZ  
STRUCTURE AT SPREMBERG)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (CLAYEY  
MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)  
GEOREMARKS (CLAYEY MARL IS FINE-GR/ FINELY LAMINATED/  
CONTAINS CARBONACEOUS MATTER)

JUNG, W. 1976 (208)  
KREBS, W. 1976 (227)  
RENTZSCH, J. 1974 (312)

**GERMANY-22**  
MANSFELD-SANGERHAUSEN  
CU (SEE RESERVE/PRODUCTION REPORT)

51 36 00 N 11 28 00 E  
ENTITY COMMENT (MANSFELD/ TIMES WORLD ATLAS)

GEOLOGICAL PROVINCE (HARZ FORELAND)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ZECHSTEIN SEQUENCE-CONGLOM/ SS/ MARL/  
LS/ SALT)  
REMARKS (MANY SMALL MINES/ SYNGENETIC DEPOSITS IN  
ANOXIC BOTTOM WATERS OF K SEA)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (CONGLOMERATE/SANDSTONE/(CARBONACEOUS)  
MARL)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)  
GEOREMARKS (VERTICAL ZONING IN DECREASING SULPHIDE  
SOLUBILITY)

WEDEPOHL, K.H. 1971 (389)  
WEDEPOHL, K.H. 1964 (388)  
NICOLINI, P. 1962 (287)  
TRASK, P.D. 1925 (375)  
JUNG, W. 1976 (208)  
RENTZSCH, J. 1974 (312)

**GERMANY-23**  
WANDERSLEBENER GLEICHE  
CU

50 56 00 N 10 53 00 E  
ENTITY COMMENT (OCCURRENCE/FIG 10 BIBL 1/P 87)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (MALACHITE IMPREGNATIONS IN FRIABLE  
DOLOMITE)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (ARGILLACEOUS DOLOMITE)  
FORMATION (ROCK MARL KEUPER)

KUHN, W. 1976 (666)

KUHN, W. 1976 (666)

**GERMANY-24**

LEHRBERG  
CU

51 02 00 N 10 58 00 E

ENTITY COMMENT (GISPERSLEBEN/FIG 10 BIBL1/P 87)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITE ASSOCIATED WITH FOSSIL RELICTS)  
REMARKS (3 SUBECONOMIC  
OCCURRENCES-GISPERSLEBEN/SCHWELLENBURG/WITTE  
RDA CLOSE BY)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (DOLOMITE/ARENITIC DOLOMITE-MICRITE)  
FORMATION (LEHRBERG LAYER/LOWER-MIDDLE GYPSUM  
KEUPER)

KUHN, W. 1976 (666)

KUHN, W. 1976 (666)

**GERMANY-25**

SCHILLINGSTEDT  
CU, PB

51 16 00 N 11 15 00 E

ENTITY COMMENT (OCCURRENCE/FIG 6 BIBL 1/P 83)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITE ASSOCIATED WITH FOSSIL RELICTS)  
REMARKS (SUBECONOMIC MINERALIZATION MOST INTENSIVE  
IN PARTS RICHEST IN FOSSILS)

AGE OF HOST (TRIASSIC)  
LITHOLOGY  
(DOLOMITE/DOLOMITE-MICRITE/DOLOMITE-ARENITE)  
FORMATION (LEHRBERG LAYER/LOWER-MIDDLE GYPSUM  
KEUPER)  
GEOREMARKS (DETECTABLE BARITE OCCURS IN CELLULAR &  
POROUS STRATA RICH IN FOSSILS)

KUHN, W. 1976 (666)

**HUNGARY-1**

DARNO-HEGY  
CU

48 20 00 N 21 30 00 E

ENTITY COMMENT (HEGYALIA MTS/TIMES WORLD ATLAS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SHALE)  
REMARKS (CU-RICH SHALE DISCOVERED WHEN 3 DEEP  
STRATIGRAPHIC HOLES WERE DRILLED)

AGE OF HOST (PALEO-MESOZOIC)  
LITHOLOGY (SHALE)

BAKSA, C. 1981 (18)

**ITALY-1**

SOUTH TYROL (GROEDEN SANDSTONE  
CU, PB, ZN, U

46 23 00 N 11 26 00 E

ENTITY COMMENT (BLETTERBACH/FIG 1 & 3 BIBL 1)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN CHANNEL SANDS OF GREY MICACEOUS  
SANDSTONE)  
REMARKS (SEVERAL OCCURRENCES IN AREA/TYPICAL RED  
BED-TYPE MINERAL CONCENTRATION)

AGE OF HOST (MIDDLE PERMIAN)  
LITHOLOGY (FINE GRAINED GREY SANDSTONE/ ASSOC RED  
BEDS)  
FORMATION (GROEDEN SANDSTONE)  
GEOREMARKS (REPLACED PLANT DEBRIS/ MINERAL  
EMPLACEMENT DURING EARLY DIAGENESIS)

WOPFNER, H. 1983 (406)

**KALAALLIT NUNAAT-1**

LIVERPOOL LAND HIGH  
CU, ZN, PB, AG

71 05 00 N 22 15 00 W

ENTITY COMMENT (SUB-BASIN S OF CARLSBERG FJORD)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (FORMS PART OF CEMENT IN GREY CALCAREOUS  
SANDSTONE)  
REMARKS (MINERALIZED BED UP TO 0.5M THICK OF MARGINAL  
LACUSTRINE SANDSTONE)

AGE OF HOST (MIDDLE TRIASSIC)  
LITHOLOGY (GREY CALCAREOUS SS overlain by black  
MUDSTONE)  
FORMATION (GIPSDALEN FORMATION-KAP SEAFORTH  
MEMBER)  
GEOREMARKS (MINERALIZED SED CONTAIN CARBONACEOUS  
MATTER/ AVG 0.3% CU+MINOR ZN & PB)

THOMASSEN, B. 1982 (368)

CLEMMENSEN, L.B. 1980 (88)

STENDAL, H. 1979 (357)

NIELSEN, B.L. 1973 (288)

**KALAALLIT NUNAAT-2**

PINGEL DAL BEDS (KAP BIOT-CARLSBERG FJORD)  
CU

71 25 00 N 22 40 00 W

ENTITY COMMENT (GENERAL AREA OF MINERALIZATION)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SILTY MUDSTONE/ SANDSTONE/ DOLOMITIC  
MUDSTONE)  
REMARKS (CU OVER 1000 SQUARE KM AREA FROM KAP BIOT  
TO HEAD OF CARLSBERG FJORD)

AGE OF HOST (UPPER TRIASSIC)  
LITHOLOGY (VARIEGATED CYCLIC BEDDED SANDSTONE &  
MUDSTONE)  
FORMATION (FLEMING FJORD FM-EDDERFUGLEDAL MEMBER)

GEOREMARKS (ORE MINERALS MAINLY IN COARSE-GRAINED  
LAMINAE/ STRATIFORM/DISSEMINATED)

THOMASSEN, B. 1982 (368)  
CLEMMENSEN, L.B. 1980 (88)  
STENDAL, H. 1979 (357)  
NIELSEN, B.L. 1973 (288)

**KALAALLIT NUNAAT-3**

DEVONDAL  
CU, PB, AG

71 30 45 N 22 47 00 W  
ENTITY COMMENT (DEPOSIT/LOC B FIG 69 BIB 5/P92)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ORE MINERALS FORM PART OF CEMENT OF THE  
ARKOSE)  
REMARKS (4 LOCALITIES OVER LATERAL DISTANCE-1.6KM/AG  
IN LATTICES OF CU MINERALS)

AGE OF HOST (LOWER TRIASSIC)  
LITHOLOGY (PINK ARKOSE & CONGLOMERATE)  
FORMATION (PINGO DAL FM/KLITDAL & PARADIGMABJERG  
MEMBERS)  
GEOREMARKS (MINERALIZATION CONFINED TO BELT OF  
DISTAL ALLUVIAL FAN SEDIMENTS)

THOMASSEN, B. 1982 (368)  
CLEMMENSEN, L.B. 1980 (88)  
STENDAL, H. 1979 (357)  
NIELSEN, B.L. 1973 (288)  
HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-4**

ORSTED DAL MEMBER  
CU

71 42 00 N 23 05 00 W  
ENTITY COMMENT (GENERAL AREA OF MINERALIZATION)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN CROSS-LAMINATED CARBONATE-RICH CHANNEL  
SS BEDS)  
REMARKS (MINERALIZATION HOSTED IN A FEW  
APPROXIMATELY 0.5 METRE-THICK BEDS)

AGE OF HOST (UPPER TRIASSIC)  
LITHOLOGY (GREY SS BEDS INTERCALATED IN RED  
MUDSTONES)  
FORMATION (FLEMING FJORD FM-ORSTED DAL MEMBER)  
GEOREMARKS (TYPICAL RANGE OF CU CONTENT -0.01% TO  
0.1%)

THOMASSEN, B. 1982 (368)  
CLEMMENSEN, L.B. 1980 (88)  
STENDAL, H. 1979 (357)  
NIELSEN, B.L. 1973 (288)

**KALAALLIT NUNAAT-5**

STRINDBERGS LAND  
CU

73 41 54 N 24 50 21 W  
ENTITY COMMENT (OCCURRENCE/ NO 38 MAP 1 BIBL 4)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREEN SHALE AND QUARTZITE)  
REMARKS (5 OCCURRENCES SCATTERED IN AREA NNE OF  
GEOLOGFJORD)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/SHALE/LIMESTONE/DOLOMITE)  
FORMATION (ELEONORE BAY GP/ QTZITE & MULTICOLOURED  
SERIE)  
GEOREMARKS (CU SULFIDES (0.05-0.5% CU) CONCENTRATED  
MAINLY BY DIAGENETIC PROCESSES)

STENDAL, H. 1984 (585)  
STENDAL, H. 1980 (358)  
GHISLER, M. 1980 (156)  
HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-6**

YMERS  
CU

73 08 35 N 24 56 15 W  
ENTITY COMMENT (OCCURRENCE/ NO 29 MAP 1 BIBL 4)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREEN SHALE AND QUARTZITE)  
REMARKS (4 OCCURRENCES WITHIN 10 KM OF EACH  
OTHER-NEAR KEJSER FRANZ JOSEPH FJORD)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/SHALE/LIMESTONE/DOLOMITE)  
FORMATION (ELEONORE BAY GP/QTZITE & MULTICOLOURED  
SERIES)  
GEOREMARKS (CU CONTENT 0.05 TO 0.5% FOUND AT 8  
DIFFERENT STRATIGRAPHIC LEVELS)

STENDAL, H. 1984 (585)  
STENDAL, H. 1980 (358)  
GHISLER, M. 1980 (156)  
HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-7**

ANDREES LAND (EREMITDAL)  
CU

73 27 36 N 25 21 08 W  
ENTITY COMMENT (OCCURRENCE/ NO 35 MAP 1 BIBL 4)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREEN SHALE & QTZITE (SLIGHTLY  
METAMORPHOSED))  
REMARKS (2 OCC-E & W OF EREMITDAL/4 OCC NEAR N SHORE)

KEJSER FRANZ HOSEPHS FJORD)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/SHALE/LIMESTONE/DOLOMITE)  
FORMATION (ELEONORE BAY GP/QTZITE & MULTICOLOURED  
SERIES)  
GEOREMARKS (CU SULFIDES PROBABLY CONCENTRATED  
MAINLY BY DIAGENETIC PROCESSES)

STENDAL, H. 1984 (585)  
STENDAL, H. 1980 (358)  
GHISLER, M. 1980 (156)  
HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-8**

LYELLS LAND (KAP ALFRED)  
CU

72 44 20 N 25 34 00 W  
ENTITY COMMENT (EAST OCCURRENCE/FIG 1 BIBL 1)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREEN SHALE AND QUARTZITE)  
REMARKS (2 OCCURRENCES 3 KM APART AT N END OF LYELLS  
LAND-SOUTH OF KEMPES FJORD)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (QUARTZITIC SHALE/SHALE/LIMESTONE/DOLOMITE)  
FORMATION (ELEONORE BAY GP/QTZITE & MULTICOLOURED  
SERIES)

STENDAL, H. 1984 (585)  
STENDAL, H. 1980 (358)  
GHISLER, M. 1980 (156)  
HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-9**

LADDERBJERG (GIESECKE BJERGE)  
CU, AG, PB, ZN (SEE RESERVE/PRODUCTION REPORT)

73 29 45 N 22 01 45 W  
ENTITY COMMENT (DEPOSIT/ SE OF LADDERBJERG)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS STAIN/COATINGS OF CLASTS & AS PART OF  
CEMENT)  
REMARKS (DEPOSIT COVERS AREA 1000 X 400  
M/PRONOUNCED LATERAL METAL ZONATION)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (BRAIDED ALLUVIAL PLAIN CONGLOMERATES)  
FORMATION (HULEDAL FORMATION)  
GEOREMARKS (ROUNDED QRTZ PEBBLES/COBBLES-SAND  
MATRIX & CARBONATE CEMENT FORM CGLM)

HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-10**

RUBJERG KNUDE (TRAILL O)  
CU, AG, PB, ZN (SEE RESERVE/PRODUCTION REPORT)

72 37 02 N 23 40 50 W  
ENTITY COMMENT (DEPOSIT/ NO 128 MAP 1)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM WITHIN CEMENT & AS ENCRUSTATION ON  
PEBBLES)  
REMARKS (CONGLOMERATE & SANDSTONE ARE OF BRAIDED  
ALLUVIAL PLAIN ORIGIN)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (QUARTZITIC PEBBLE  
CONGLOMERATE/SANDSTONE)  
FORMATION (HULEDAL FORMATION)  
GEOREMARKS (VERTICAL ZONATION-CU AT LOWER & PB(ZN)  
AT HIGHER STRATIGRAPHIC LEVELS)

HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-11**

PARADIGMABJERG  
CU, PB

71 36 26 N 22 41 08 W  
ENTITY COMMENT (DEPOSIT/INSET FIG 69 BIB 1/P92)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARKOSE)  
REMARKS (ARKOSE SEQUENCE UP TO 5 M THICK/ DISTINCT  
LATERAL MINERAL ZONATION)

AGE OF HOST (LOWER TRIASSIC)  
LITHOLOGY (PINK ARKOSE & CONGLOMERATE)  
FORMATION (PINGO DAL FM/KLITDAL-PARADIGMABJERG  
MEMBERS)

HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-12**

WEGENER HALVO  
CU, PB

71 34 00 N 22 44 00 W  
ENTITY COMMENT (OCCURRENCE/ GENERAL LOCATION)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS THICK VEINLETS & BRECCIA-FILLINGS WITH  
GANGUE)  
REMARKS (SULPHIDES OCCUR SCATTERED OVER THE WHOLE  
PENINSULA)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (BIOHERMAL LIMESTONE & DOLOMITE)  
FORMATION (FOLDVIK CREEK FM/LIMESTONE-DOLOMITE  
MEMBER)  
GEOREMARKS (PB/CU MINERALS FOUND NEAR TOP OF  
BIOHERMS AS MM-DECIM THICK VEINLETS)

THOMASSEN, B. 1982 (368)

**KALAALLIT NUNAAT-13**

KASSEN  
CU, PB

71 31 00 N 22 58 00 W  
ENTITY COMMENT (DEPOSIT/LOC F FIG 69 BIB 1/P92)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARKOSE)  
REMARKS (IN A SEQUENCE OF SEVERAL MINERALIZED BEDS  
5-20 M BELOW GRAKLINT BEDS)

AGE OF HOST (LOWER TRIASSIC)  
LITHOLOGY (PINK ARKOSE & CONGLOMERATE)  
FORMATION (PINGO DAL FM/KLITDAL-PARADIGMABJERG  
MEMBERS)

HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-14**

MYALINADAL  
CU, PB

71 26 15 N 23 00 00 W  
ENTITY COMMENT (DEPOSIT/LOC H FIG 69 BIB 1/P92)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARKOSE)  
REMARKS (IN METRE-SIZED ARKOSE BLOCKS FROM 30-60 M  
BELOW GRAKLINT MARKER BEDS)

AGE OF HOST (LOWER TRIASSIC)  
LITHOLOGY (PINK ARKOSE & CONGLOMERATE)  
FORMATION (PINGO DAL FM/KLITDAL-PARADIGMABJERG  
MEMBERS)

HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-15**

JAMESON LAND (GRAKLINT BEDS)  
PB, ZN, CU

71 04 00 N 22 27 24 W  
ENTITY COMMENT (OCCURRENCE/ NO 131 MAP 1)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN LAGOONAL MUDSTONE & BARRIER BEACH  
CALCARENITE)  
REMARKS (POSSIBLY MISSISSIPPI VALLEY TYPE  
MINERALIZATION)

AGE OF HOST (MIDDLE TRIASSIC)  
LITHOLOGY (DARK GRAY-BLACK LIMESTONE & MUDSTONE)  
FORMATION (GIPSDALEN FORMATION/ GRAKLINT BEDS)  
GEOREMARKS (PB/CU MINERALS FOUND NEAR TOP OF  
BIOHERMS AS MM-DECIM THICK VEINLETS)

THOMASSEN, B. 1982 (368)  
CLEMMENSEN, L.B. 1980 (88)

**KALAALLIT NUNAAT-16**

CANNING LAND  
CU

71 40 11 N 22 15 39 W  
ENTITY COMMENT (OCCURRENCE/ NO 23 MAP 1 BIBL 1)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREEN INTERCALATIONS OF RED  
CARBONACEOUS SHALE)  
REMARKS (CU SULPHIDES OCCUR AS FINE-GRAINED  
DISSEMINATIONS & LOCALLY AS BLEBS)

AGE OF HOST (UPPER PROTEROZOIC)  
LITHOLOGY (CALCAREOUS & DOLOMITIC RED SHALE/  
LIMESTONE)  
FORMATION (ELEONORE BAY GP/QTZITE & MULTICOLOURED  
SERIES)

HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-17**

SUESS LAND-1  
CU

72 49 50 N 25 41 30 W  
ENTITY COMMENT (OCCURRENCE/ NO 26 MAP 1 BIBL 1)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN QUARTZITIC SHALE)

AGE OF HOST (UPPER PROTEROZOIC)  
LITHOLOGY (QUARTZITIC SHALE)  
FORMATION (UPPER ELEONORE BAY GP/QUARTZITE  
SERIES-BED 5)

HARPOTH, O. 1986 (689)

**KALAALLIT NUNAAT-18**

SUESS LAND-2  
CU

73 01 36 N 25 52 12 W  
ENTITY COMMENT (OCCURRENCE/ NO 27 MAP 1 BIBL 1)

GEOGRAPHICAL SUBDIVISION (EAST)  
GEOLOGICAL PROVINCE (CALEDONIAN FOLD BELT)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN QUARTZITIC SHALE)

AGE OF HOST (UPPER PROTEROZOIC)  
LITHOLOGY (QUARTZITIC SHALE)  
FORMATION (UPPER ELEONORE BAY GP/QUARTZITE  
SERIES-BED 5)

HARPOTH, O. 1986 (689)

**NORWAY-1**

REPPARFJORD

CU, AG (SEE RESERVE/PRODUCTION REPORT)

70 26 00 N 24 13 00 E

ENTITY COMMENT (MINE/50 KM SE OF HAMMERFEST)

GEOLOGICAL PROVINCE (CALEDONIDES)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (DIFFUSE LENTICULAR BODIES IN FINING-UPWARD CYCLES)

REMARKS (DEPOSIT MINED FROM 4 OPEN PITS/ WITH 1.8 KM STRIKE LENGTH &amp; 50M WIDTH)

AGE OF HOST (LATE PROTEROZOIC)

LITHOLOGY (WHITE-GREY LITHIC SANDSTONE/ POLYMICT CONGLOM)

FORMATION (ULVERYGG FM/ SALT VATN GROUP)

GEOREMARKS (GENESIS UNCERTAIN/ POSSIBLE RED BED TYPE OF ORE DEPOSITION)

BJORLYKKE, A. 1985 (649)

WYLLIE, R.J. 1973 (412)

BUGGE, T.A. 1978 (64)

PHARAOH, T.C. 1983 (650)

**POLAND-1**

LUBICHOW

CU, PB, ZN

51 16 30 N 15 34 00 E

ENTITY COMMENT (DEPOSIT/NO 9-FIG 1B BIBL4/P 58)

GEOLOGICAL PROVINCE (NORTH SUDETIC SYNCLI)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (SEAM IN LIMESTONE &amp; IMPREGNATED IN COALY MARLS)

REMARKS (SEAM ZONED-CU AT BOTTOM/ ZN ABOVE CU/ PB AT TOP)

AGE OF HOST (PERMIAN)

LITHOLOGY (BITUMINOUS MARLY SHALE/ MARLY LIMESTONE/ SS)

FORMATION (GERVILIA LIMESTONE (TOP OF LOWER ZECHSTEIN))

GEOREMARKS (CU/PB IS 6 TO 1 IN CU DEPOSIT &amp; IS REVERSED AT PERIPHERIES)

LISIAKIEWICZ, S. 1969 (243)

KONSTANTYNOWICZ, E. 1965 (226)

KONSTANTYNOWICZ, E. 1964 (225)

OSIKA, R. 1986 (668)

**POLAND-2**

OKRZESZYN

CU

50 33 15 N 16 30 00 E

ENTITY COMMENT (OCCURR/NO 8-FIG 1B BIBL 1/P 58)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (AS CONCRETIONS OR INCRUSTATIONS IN SHALES)

REMARKS (UNECONOMIC-CONSIDERABLE VARIABILITY IN ORE THICKNESS AND CU CONTENT)

AGE OF HOST (LOWER PERMIAN)

LITHOLOGY (ANTHRACITIC SHALE/ SANDSTONE)

FORMATION (ROT LIEGENDES SEQUENCE)

GEOREMARKS (SHALES FROM 0.18 TO 1 M THICK/CU CONTENT 0.1 TO 2.25%/OFTEN BITUMINOUS)

OSIKA, R. 1986 (668)

**POLAND-3**

KONRAD

CU, PB (SEE RESERVE/PRODUCTION REPORT)

51 13 00 N 15 43 00 E

ENTITY COMMENT (MINE/ NO 10-FIG 1B BIBL 4/P 58)

GEOLOGICAL PROVINCE (NORTH SUDETIC SYNCLI)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN CLAY-MARLY SHALE WITHIN MARLY-LIMY BEDS)

REMARKS (CUPRIFEROUS MARL CHARACTERIZED BY INCREASED RESIDUAL ORGANIC CARBON)

AGE OF HOST (UPPER PERMIAN)

LITHOLOGY (ILLITIC &amp; DOLOMITIC SHALES/MARLY DOLOMITE/LS)

FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1 SEQUENCE)

GEOREMARKS (SHEETLIKE OREBODY AVG 1.2 M THICK WITH GRADE 1.5% CU NEAR ROTE FAULE)

JUNG, W. 1976 (208)

DZIDOWSKA, K. 1980 (122)

RENTZSCH, J. 1974 (312)

OSIKA, R. 1986 (668)

**POLAND-4**

ZARY

CU

51 38 30 N 15 05 30 E

ENTITY COMMENT (DEPOSIT/ FIG 1 BIBL 2/ P 2018)

GEOLOGICAL PROVINCE (FORE-SUDETIC MONOCLI)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN MARL)

AGE OF HOST (UPPER PERMIAN)

LITHOLOGY (CLAYEY MARL/CONGLOMERATE/SANDSTONE/SILTSTONE)

FORMATION (KUPFERSCHIEFER BED/ZECHSTEIN 1 SEQUENCE)

ANON. 0 (616)

JOWETT, E.C. 1987 (667)

**POLAND-5**

LUBIN AREA

CU, AG, PB, V, NI, CO, MO, ZN, RE (SEE RESERVE/PRODUCTION REPORT)

51 24 00 N 16 08 00 E

ENTITY COMMENT (LUBIN MINE/ TIMES WORLD ATLAS)

GEOLOGICAL PROVINCE (FORE-SUDETIC MONOCLI)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (AS FINE IMPREGNATIONS IN SS/ SHALE/  
DOLOMITE-LMST)  
REMARKS (5 MINES ALONG CIS-SUDETEN ARCH FOR 40 KM &  
TRACED ALONG DIP FOR 10 KM)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (CLAYEY-LIMY SS/BITUMINOUS  
SHALE/DOLO-LIMESTON)  
FORMATION (KUPFERSCHIEFER BED/ ZECHSTEIN 1  
SEQUENCE)  
GEOREMARKS (ORE MINERALIZATION CONFINED TO SED  
ROCKS ENRICHED IN ORGANIC MATTER)

JOWETT, E.C. 1987 (667)

**POLAND-5(A)**  
LUBIN  
CU, AG, PB, ZN

51 24 00 N 16 08 00 E  
ENTITY COMMENT (MINE/ NO 2-FIG 2 BIBL 1/P 2019)

GEOLOGICAL PROVINCE (FORE-SUDETIC MONOCLI)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS DISSEMINATIONS & REPLACEMENT LENSES IN  
HOST RXS)

AGE OF HOST (PERMIAN)  
LITHOLOGY (LIMESTONE/SANDSTONE)  
FORMATION (ZECHSTEIN/KUPFERSCHIEFER/WEISSLIEGENDES  
BEDS)  
GEOREMARKS (BEDS BELONG TO ZECHSTEIN 1 SEQUENCE &  
ROTLIEGENDES SEQUENCE)

JOWETT, E.C. 1987 (667)  
OSIKA, R. 1986 (668)

**POLAND-6**  
POLKOWICE  
CU, AG, PB, ZN

51 29 30 N 16 02 30 E  
ENTITY COMMENT (MINE/ NO 3-FIG 2 BIBL 1/P 2019)

GEOLOGICAL PROVINCE (FORE-SUDETIC MONOCLI)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS DISSEMINATIONS & REPLACEMENT LENSES IN  
HOST RXS)

AGE OF HOST (PERMIAN)  
LITHOLOGY (LIMESTONE/SANDSTONE)  
FORMATION (ZECHSTEIN/KUPFERSCHIEFER/WEISSLIEGENDES  
BEDS)  
GEOREMARKS (BEDS BELONG TO ZECHSTEIN 1 SEQUENCE &  
ROTLIEGENDES SEQUENCE)

JOWETT, E.C. 1987 (667)  
OSIKA, R. 1986 (668)

**POLAND-7**  
SIEROZOWICE  
CU, AG, PB, ZN

51 33 00 N 15 54 00 E

ENTITY COMMENT (MINE/ NO 5-FIG 2 BIBL 1/P 2019)

GEOLOGICAL PROVINCE (FORE-SUDETIC MONOCLI)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS DISSEMINATIONS & REPLACEMENT LENSES IN  
HOST RXS)

AGE OF HOST (PERMIAN)  
LITHOLOGY (LIMESTONE/SANDSTONE)  
FORMATION (ZECHSTEIN/KUPFERSCHIEFER/WEISSLIEGENDES  
BEDS)  
GEOREMARKS (BEDS BELONG TO ZECHSTEIN 1 SEQUENCE &  
ROTLIEGENDES SEQUENCE)

JOWETT, E.C. 1987 (667)  
OSIKA, R. 1986 (668)

**POLAND-8**  
RUDNA  
CU, AG, PB, ZN

51 25 00 N 16 08 00 E  
ENTITY COMMENT (MINE/ NO 15-FIG 1B BIBL 2/P 58)

GEOLOGICAL PROVINCE (FORE-SUDETIC MONOCLI)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS DISSEMINATIONS & REPLACEMENT LENSES IN  
HOST RXS)

AGE OF HOST (PERMIAN)  
LITHOLOGY (LIMESTONE/SANDSTONE)  
FORMATION (ZECHSTEIN/KUPFERSCHIEFER/WEISSLIEGENDES  
BEDS)  
GEOREMARKS (BEDS BELONG TO ZECHSTEIN 1 SEQUENCE &  
ROTLIEGENDES SEQUENCE)

JOWETT, E.C. 1987 (667)  
OSIKA, R. 1986 (668)

**POLAND-9**  
MALOMICE  
CU, AG, PB, ZN

51 23 30 N 16 11 00 E  
ENTITY COMMENT (MINE/ NO 1-FIG 2 BIBL 1/P 2019)

GEOLOGICAL PROVINCE (FORE-SUDETIC MONOCLI)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AS DISSEMINATIONS & REPLACEMENT LENSES IN  
HOST RXS)

AGE OF HOST (PERMIAN)  
LITHOLOGY (LIMESTONE/SANDSTONE)  
FORMATION (ZECHSTEIN/KUPFERSCHIEFER/WEISSLIEGENDES  
BEDS)  
GEOREMARKS (BEDS BELONG TO ZECHSTEIN 1 SEQUENCE &  
ROTLIEGENDES SEQUENCE)

JOWETT, E.C. 1987 (667)

**POLAND-10**  
NOWY KOSCIOL  
CU

51 06 00 N 15 54 00 E  
ENTITY COMMENT (MINE/ NO 12-FIG 1B BIBL 2/P 58)

GEOLOGICAL PROVINCE (NORTH SUDETIC SYNCLI)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BED OF ALTERNATING MARL & LIMESTONE  
LAMINAE)  
REMARKS (ORE BED 3 M THICK AVERAGING 0.55 % CU)

AGE OF HOST (LOWER PERMIAN)  
LITHOLOGY (MARLY DOLOMITIC SHALE)

JOWETT, E.C. 1987 (667)  
OSIKA, R. 1986 (668)

**POLAND-11**  
LENA  
CU

51 06 30 N 15 49 00 E  
ENTITY COMMENT (MINE/ NO 11-FIG 1B BIBL 2/P 58)

GEOLOGICAL PROVINCE (NORTH SUDETIC SYNCLI)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BED OF ALTERNATING MARL & LIMESTONE  
LAMINAE)

AGE OF HOST (LOWER PERMIAN)  
LITHOLOGY (MARLY DOLOMITIC SHALE)

JOWETT, E.C. 1987 (667)  
OSIKA, R. 1986 (668)

**SLOVAK REPUBLIC-1**  
POVAZSKY INOVEC MOUNTAINS  
U, CU, PB, MO

48 30 00 N 17 20 00 E  
ENTITY COMMENT (APPROX 40KM NNE OF BRATISLAVA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN CEMENT & AS LENSES IN GREYWACKE &  
CONGLOMERATE)  
REMARKS (SED AREA OCCURS NORTH OF VARISCAN  
STABILIZED CRYSTALLINE OF VEPORIDES)

AGE OF HOST (PERMIAN)  
LITHOLOGY (GREEN GREY GREYWACKE, SHALE/  
CONGLOMERATE)  
FORMATION (VERRUCANO FACIES)  
GEOREMARKS (2 MINERALIZED HORIZON-UPPER IN PSAMMITIC  
RKS/LOWER IN UNSORTED CGLM-SS)

ROJKOVIC, I. 1980 (316)

**SLOVAK REPUBLIC-2**  
NOVOVESKA HUTA  
U, CU, MO

48 54 15 N 20 18 30 E  
ENTITY COMMENT (NO 4/ FIG 1 ECON GEOL VOL 71)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (BROAD IMPREGNATION ZONES OF DISSEMINATED

CU IN SS)  
REMARKS (ASSOCIATED WITH U-MO-CU ORES IN TUFFITE AS  
LATERAL FACIES)

AGE OF HOST (PERMIAN)  
LITHOLOGY (TUFFITIC SANDSTONE/SANDY  
SLATES/ANHYDRITE)  
FORMATION (VERRUCANO SERIES)  
GEOREMARKS (SERIES FOLDED INTO JUTA ANTICLINE AND  
HNILCIK SYNCLINE)

ILAVSKY, J. 1976 (193)  
RUZICKA, V. 1971 (330)

**SLOVAK REPUBLIC-3**  
SANKOVCE  
CU

48 34 00 N 20 18 00 E  
ENTITY COMMENT (NO 7/ FIG 1 ECON GEOL VOL 71)

GEOLOGICAL PROVINCE (GEMERIDE ZONE)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN HEMATITE OREBODIES/ IN ANHYDRITE-GYPSUM  
BODIES)  
REMARKS (2 HORIZONS OF CU OCC-HEMATITE OCC-TRIASSIC/  
ANHYDRITE & GYPSUM-PERMIAN)

AGE OF HOST (TRIASSIC AND UPPER PERMIAN)  
LITHOLOGY (MARLY SCHIST/ SANDSTONE/ GYPSUM/  
ANHYDRITE)  
GEOREMARKS (DEPOSITS OCCUR AT TOP OF EVAPORITIC  
SEQUENCE MORE THAN 1000 M THICK)

ILAVSKY, J. 1976 (193)

**SLOVENIA-1**  
SKOFJE  
CU, AG, PB, ZN, AS

46 05 00 N 14 15 00 E  
ENTITY COMMENT (AREA/ WEST OF LJUBLJANA)

GEOLOGICAL PROVINCE (PANONIEN BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS DETRITAL GRAINS/ COATINGS/FILLINGS IN SED  
ROCKS)  
REMARKS (1 DEPOSIT-PRODUCED A SMALL AMOUNT OF CU  
AND 12 OCCURRENCES IN ONE AREA)

AGE OF HOST (PERMIAN)  
LITHOLOGY (GREY SANDSTONE/GREY & GREEN SILTSTONE/  
SHALE)  
FORMATION (VAL GARDENA SEQUENCE/ GRODEN BEDS)  
GEOREMARKS (ORE BEDS ALTERNATE WITH RED COLOURED  
BARREN ONES/ ASSOCIATED WITH COAL)

DROVENIK, M. 1980 (117)  
DROVENIK, M. 1983 (118)  
HOLL, R. 1976 (189)

**SPAIN-1**  
ZARAGOZA  
CU



41 35 00 N 0 55 00 W

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (8 LAYERS CONTAINING OXIDES & CARBONATES OF  
CU VARY FROM 1.5-3.0M THICK)

AGE OF HOST (OLIGOCENE(?))  
LITHOLOGY (SANDSTONE)  
FORMATION (SOS Y BIEL FORMATION)  
GEOREMARKS (MINERALIZATION TRACED ALONG STRIKE FOR  
70M/AVG GRADE HAND SAMPLE 4% CU)

PHILLIPS, J.S. 1960 (297)  
ANON. 1933 (417)

## **SPAIN-2**

MENORCA ISLAND  
CU

39 59 00 N 4 05 00 E  
ENTITY COMMENT (AREA BTWN MERCADAL & MT TORO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN MG-RICH MARLS ASSOCIATED WITH PLANT  
REMAINS)  
REMARKS (DEPOSITS OCCUR OVER DISTANCE OF 28 KM IN  
CENTRAL PART OF ISLAND)

AGE OF HOST (LOWER TRIASSIC)  
LITHOLOGY (MARL)  
GEOREMARKS (VARIOUS CU OREBODIES OCCUR WITHIN MARL  
INTERCALATED WITH SANDY BEDS)

PHILLIPS, J.S. 1960 (297)  
ANON. 1933 (417)

## **SPAIN-3**

SANTOMERA  
CU

38 03 00 N 1 03 00 W  
ENTITY COMMENT (IN SEGURA VALLEY)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (LIMESTONE)  
FORMATION (KEUPER LIMESTONE)  
GEOREMARKS (DEPOSIT ORIGIN SIMILAR TO MANSFELD IN  
EAST GERMANY)

PHILLIPS, J.S. 1960 (297)  
ANON. 1933 (417)

## **SPAIN-4**

GRANADA  
CU, PB, AG

37 18 00 N 1 20 00 W  
ENTITY COMMENT (ON ROAD BTWN GRANADA & GUADIX)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN LACUSTRINE FACIES CONTAINING PLANT  
REMAINS)

REMARKS (VERY MINOR OCCURRENCES)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (MARL/ SANDSTONE)  
GEOREMARKS (CU ASSOCIATED WITH FERRIC NODULES)

PHILLIPS, J.S. 1960 (297)  
ANON. 1933 (417)

## **SWEDEN-1**

AITIK  
CU, AU, AG (SEE RESERVE/PRODUCTION REPORT)

67 07 00 N 21 00 00 E  
ENTITY COMMENT (ABOUT 15 KM EAST OF GALLIVARE)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AS DISSEMINATIONS AND STRINGERS IN  
METASEDIMENTS)  
REMARKS (66 MILLION TONNES OF ORE GRADING 0.4% CU/0.3  
PPM AU/5 PPM AG PRODUCED)

AGE OF HOST (PROTEROZOIC)  
LITHOLOGY (BIOTITE  
SCHIST/GNEISS/QUARTZITE/AMPHIBOLITE)  
GEOREMARKS (OCCURS ON WESTERN FLANK OF ANTIFORM  
AND DOME STRUCTURE/POSSIBLE SED CU)

GRIP, E. 1978 (170)  
ZWEIFEL, H. 1976 (415)

## **SWEDEN-2**

OSTERGOTLAND  
CU, CO, U, NI, MO, V

58 33 00 N 15 15 00 E  
ENTITY COMMENT (BORENSBERG/ APPROX AREA CENTRE)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN ALUM SHALES)  
REMARKS (SEVERAL OCCURRENCES INDICATED BY BORINGS  
THROUGH THE ALUM SHALE BEDS)

AGE OF HOST (CAMBRIAN)  
LITHOLOGY (ALUM SHALES)  
FORMATION (PELTURA ZONE)  
GEOREMARKS (SHALES HAVE 1-5% OF CONCRETION-LIKE  
HYDROCARBONS CALLED KOLM)

BAIN, G.W. 1960 (17)  
ANON. 1977 (447)

## **SWEDEN-3**

STORA STRAND  
CU

58 59 30 N 12 30 00 E  
ENTITY COMMENT (NO 11/ FIG 2 BIBL 3)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (STRATABOUND CU IN PHYLLITIC  
MICA-CHLORITE-SCHIST)  
REMARKS (DEPOSIT HAS MANY FEATURES IN COMMON WITH  
THE MANSFIELD ORES)

AGE OF HOST (LATE PROTEROZOIC)

LITHOLOGY (PHYLLITIC MICA-CHLORITE SCHIST)  
FORMATION (DALSLAND GROUP)  
GEOREMARKS (UP TO 1% CU IN SCHIST MAX WIDTH 1 METRE/  
HORIZON FOLLOWED ABOUT 20 KM)

FRIETSCH, R. 1980 (147)  
FRIETSCH, R. 1975 (146)  
GRIP, E. 1978 (170)

#### **SWEDEN-4**

VISTINGSO (VISINGSO)  
CU

58 23 00 N 14 30 00 E  
ENTITY COMMENT (ISLAND IN LAKE VATTEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IMPREGNATION OR REPLACEMENT OF CEMENT IN  
SANDSTONE)  
REMARKS (DEPOSIT SIMILAR TO REDBED ORES IN WESTERN  
USA & OTHER PARTS OF WORLD)

AGE OF HOST (EOCAMBRIAN (LATE PROTEROZOIC))  
LITHOLOGY (REDDISH OR YELLOWISH SANDSTONES)  
FORMATION (VISINGSO FM)

FRIETSCH, R. 1980 (147)  
FRIETSCH, R. 1975 (146)

#### **SWITZERLAND-1**

LEYSIN  
CU

46 21 00 N 7 01 00 E  
ENTITY COMMENT (SHOWING/NO 2-FIG 1 BIBL 1/P 43)

GEOLOGICAL PROVINCE (CALCAREOUS ALPS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (SPARSELY DISSEMINATED IN MARLS)  
REMARKS (NON-ECONOMIC)

AGE OF HOST (TERTIARY (PALAEOCENE))  
LITHOLOGY (MARL)  
GEOREMARKS (HOST ROCKS CONTAINED IN PREALPES  
MEDIANES NAPPE)

JAFFE, F.C. 1986 (670)

#### **SWITZERLAND-2**

MURTSCHENALP  
CU

47 04 00 N 9 15 00 E  
ENTITY COMMENT (AREA/ NO 18-FIG 1 BIBL 1/ P 43)

GEOLOGICAL PROVINCE (CALCAREOUS ALPS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SMALL CONCORDANT LENSES WITHIN PERMIAN  
SED RKS)  
REMARKS (18 SHOWINGS IN AREA/ IN ONE SHOWING URANIUM  
OCCURS WITH CU)

AGE OF HOST (PERMIAN)  
LITHOLOGY (BRECCIA/ SANDSTONE/ SILTSTONE)

GEOREMARKS (POSSIBLE RED BED TYPE/ HOST ROCKS PART  
OF HELVETIC GLARNER NAPPE)

JAFFE, F.C. 1986 (670)  
JAFFE, F.C. 1986 (670)  
BACHTIGER, K. 1963 (679)

#### **UKRAINE-1**

DNESTR  
CU, REE

48 30 00 N 27 00 00 E  
ENTITY COMMENT (APPROX CENTRE OF REGION)

GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREY QUARTZITE-LIKE SANDSTONE)  
REMARKS (ORE MINERALS FORM ENCRUSTATIONS ON  
BEDDING PLANES OF THIN-BEDDED SEDS)

AGE OF HOST (LOWER DEVONIAN)  
LITHOLOGY (SANDSTONES/CARBONACEOUS SILTSTONE &  
ARGILLITE)  
GEOREMARKS (SEDIMENTS FORMED IN ALLUVIAL-DELTAIC  
PLAIN CHANNELS AND STREAMS)

BOGDANOV, Y.V. 1973 (51)

#### **UKRAINE-2**

KAL MIUS-TORETS BASIN  
CU

47 30 00 N 37 30 00 E  
ENTITY COMMENT (KALMIUS RIVER/TIME WORLD ATLAS)

GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (CONFINED TO LAYERS WITH CARBONIZED PLANT  
REMAINS)  
REMARKS (3 CU OCCURRENCES IN BASIN)

AGE OF HOST (LOWER PERMIAN)  
LITHOLOGY (RED ARGILLITE/ SILTSTONE/ FINE-GR  
SANDSTONE)  
FORMATION (KARTAMYSH FORMATION)

BOGDANOV, Y.V. 1973 (51)

#### **UKRAINE-3**

DONBASS  
CU

48 22 00 N 38 07 00 E  
ENTITY COMMENT (YAMA/ TIMES WORLD ATLAS)

GEOLOGICAL PROVINCE (RUSSIAN PLATFORM)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SEDIMENTS OF  
SILTY-ARGILLACEOUS-CARBONATE-TYPE)  
REMARKS (EASTERN LIMB OF BAKHMUT BASIN-IN VICINITY OF  
YAMA/8 SEDIMENTARY CYCLES)

AGE OF HOST (LOWER PERMIAN)

LITHOLOGY  
(SANDSTONE/SILTST/MUDSTONE/LIMESTONE/DOLOMITE)  
FORMATION (KARTAMYSH FORMATION)  
GEOREMARKS (RED-BROWN SANDSTONE INTERLAYERED  
WITH GREY SANDSTONE & MUDSTONE)

STRAKHOV, N.M. 1962 (361)

**UKRAINE-4**

BAKHUT BASIN  
CU

48 30 00 N 36 00 00 E

ENTITY COMMENT (GENERAL AREA/TIMES WORLD ATLAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (CONFINED TO LAYERS WITH CARBONIZED PLANT  
REMAINS)  
REMARKS (28 OCCURRENCES-RANGING FROM 3-200M ALONG  
STRIKE/30-100M DOWN DIP)

AGE OF HOST (LOWER PERMIAN)  
LITHOLOGY  
(SANDSTONE/SILTSTONE/ARGILLITE/CONGLOMERATE/LS)  
FORMATION (KARTAMYSH FORMATION)  
GEOREMARKS (FACIES-CONFINEMENT OF CU ORE TO  
LAGOONAL-FLOODPLAIN OR BARS & CHANNELS)

DAVIDSON, C.F. 1965 (102)  
LURYE, A.M. 1969 (543)  
LURYE, A.M. 1970 (544)  
KANANA, Y.F. 1974 (545)

**UKRAINE-5**

ARTEMOVSK BASIN  
CU, PB, ZN

48 36 00 N 38 02 00 E

ENTITY COMMENT (ARTEMOVSK)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (STRATIFORM CU WITH PB+ZN STRATIGRAPHICALLY  
HIGHER)

LITHOLOGY (SANDY CLAYS/CARBONATES)  
GEOREMARKS (CU CONCENTRATED MAINLY IN SANDY CLAYS/  
PB + ZN OCCUR IN CARBONATES)

STRAKHOV, N.M. 1962 (361)

**UNITED KINGDOM-1**

ALDERLY EDGE  
CU (SEE RESERVE/PRODUCTION REPORT)

53 18 00 N 2 15 00 W

ENTITY COMMENT (1 MI SSE OF ALDERLY EDGE STA)

GEOGRAPHICAL SUBDIVISION (ENGLAND)  
GEOLOGICAL PROVINCE (CHESHIRE BASIN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (CU CARBONATE AS CEMENT IN SANDSTONE)  
REMARKS (KUPFERSCHIEFER TYPE/ 3 MINES-WEST/ WOOD/  
ENGINE MINE)

AGE OF HOST (TRIASSIC)

LITHOLOGY (SANDSTONE & CONGLOMERATIC SANDSTONE)  
FORMATION (HELSEBY SANDSTONE FM (FORMERLY KEUPER  
FM))

GEOREMARKS (BEDS DIP SW 15-22 DEGREES)

IXER, R.A. 1982 (196)  
ALLEN, P.M. 1980 (8)  
DUNHAM, K. 1978 (120)  
DAVIDSON, C.F. 1965 (102)  
DEWEY, H. 1925 (109)  
BATESON, J.H. 1982 (612)

**UNITED KINGDOM-2**

EARDISTON  
CU

52 50 00 N 2 59 00 W

ENTITY COMMENT (5.5 MI SOUTH-EAST OF OSWESTRY)

GEOGRAPHICAL SUBDIVISION (ENGLAND)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (MALACHITE IN BASAL BEDS OF KEUPER FM)  
REMARKS (MINERALIZED BEDS STRIKE 012-018 DEGREES/ DIPS  
30-40 DEGREES WEST)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (WHITE SANDSTONE)  
FORMATION (HELSEBY SANDSTONE FM (FORMERLY KEUPER  
FM))

DEWEY, H. 1925 (109)  
BATESON, J.H. 1982 (612)

**UNITED KINGDOM-3**

GRINSHILL COPPER  
CU

52 45 00 N 2 40 00 W

ENTITY COMMENT (7-25 MILES NNE OF SHREWSBURY)

GEOGRAPHICAL SUBDIVISION (ENGLAND)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN CURRENT BEDDED GREY SS AT BASE OF  
KEUPER FM)  
REMARKS (MINE WORKED IN VARIOUS PLACES FOR SEVERAL  
CENTURIES)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (GREY SANDSTONE)  
FORMATION (HELSEBY SANDSTONE FM (FORMERLY KEUPER  
FM))

DEWEY, H. 1925 (109)  
BATESON, J.H. 1982 (612)

**UNITED KINGDOM-4**

MOTTRAM ST ANDREWS  
CU, PB, CO, BA, MN, V

53 18 00 N 2 13 00 W

ENTITY COMMENT (2 MILES E OF ALDERLEY EDGE STA)

GEOGRAPHICAL SUBDIVISION (ENGLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN CEMENT OF SANDSTONE AND CONGLOMERATE)  
REMARKS (CU CARBONATE/ GALENA/ PYROMORPHITE/  
VANADINITE/ BARITE OCCUR)

AGE OF HOST (TRIASSIC)  
FORMATION (HELSBY SANDSTONE FM (FORMERLY KEUPER  
FM))  
GEOREMARKS (DIP W 6 DEGREES)

LINDGREN, W. 1933 (241)  
DEWEY, H. 1925 (109)  
BATESON, J.H. 1982 (612)

**UNITED KINGDOM-5**  
SHORE HILL  
CU, PB

52 45 00 N 2 01 00 W  
ENTITY COMMENT (1 MILE NORTH OF CANNOCK)

GEOGRAPHICAL SUBDIVISION (ENGLAND)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (CU/PB IN CONGLOMERATE WITH MALACHITE IN  
MATRIX)  
REMARKS (ORE HAS NO DEFINITE POSITION OR HORIZON)

AGE OF HOST (TRIASSIC)  
FORMATION (BUNTER CONGLOMERATES)

DEWEY, H. 1925 (109)

**UNITED KINGDOM-6**  
EXMOUTH  
CU, U

50 31 20 N 3 30 00 W

GEOGRAPHICAL SUBDIVISION (ENGLAND)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AS CONCRETIONS IN SANDSTONE)  
REMARKS (VERY MINOR OCCURRENCES)

AGE OF HOST (LATE PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (LOWER MARLS/ NEW RED SANDSTONE SERIES)

ALLEN, P.M. 1980 (8)  
DEWEY, H. 1925 (109)

**UNITED KINGDOM-7**  
SOUTHWEST CORK  
CU

51 40 00 N 8 52 00 W  
ENTITY COMMENT (APPROX CENTRE OF AREA)

GEOGRAPHICAL SUBDIVISION (IRELAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREENISH GREY/GREY FACTIONS OF SS  
SEQUENCE)  
REMARKS (DISSEM CU THROUGHOUT AREA CONC IN  
CONTINENTAL ALLUVIAL & DELTAIC SEDS)

AGE OF HOST (UPPER DEVONIAN)  
LITHOLOGY (GREENISH-GREY/GREY COARSER-GRAINED  
SANDSTONE)  
FORMATION (WEST CORK SANDSTONE FM/ LOWER  
COOMHOLA FM)  
GEOREMARKS (RED-BED TYPE CU DEPOSITS-SUBECONOMIC  
GRADE LESS THAN 0.2% CU)

SNODIN, S.R. 1971 (530)  
ANON. 1971 (426)  
SNODIN, S.R. 1971 (353)

**UNITED KINGDOM-8**  
WILD GOAT  
CU

51 53 30 N 9 57 30 W  
ENTITY COMMENT (.75 MILE EAST OF DERIANA LOUGH)

GEOGRAPHICAL SUBDIVISION (IRELAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM IN GREY ARKOSIC MED GRAINED  
CROSS-BEDDED SS)  
REMARKS (SANDSTONE APPROX 75 FT THICK/ UNDERLAIN &  
OVERLAIN BY SHALEY MUDSTONE)

AGE OF HOST (UPPER DEVONIAN)  
LITHOLOGY (GREY ARKOSIC MEDIUM-GR CROSS-BEDDED  
SANDSTONE)  
GEOREMARKS (MINERALIZATION IS MALACHITE)

SNODIN, S.R. 1971 (530)  
ANON. 1971 (426)  
SNODIN, S.R. 1971 (353)

**UNITED KINGDOM-9**  
MALLOW  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

52 07 00 N 8 39 00 W

GEOGRAPHICAL SUBDIVISION (IRELAND)  
GEOLOGICAL PROVINCE (CENTRAL PLAIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (STRUCTURALLY CONTROLLED IN LIMESTONES &  
SHALES)

AGE OF HOST (LOWER CARBONIFEROUS)  
LITHOLOGY (ARGILLACEOUS LIMESTONE & SHALE)  
GEOREMARKS (OCCURS AT CREST & ON NORTHERN FLANK  
OF ANTICLINAL FLEXURE/ GENESIS?)

HOLLAND, C.H. 1981 (188)  
WILLIAMS, C.E. 1978 (397)

**UNITED KINGDOM-10**  
BALLYVERGIN  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

52 53 00 N 8 55 00 W

GEOGRAPHICAL SUBDIVISION (IRELAND)  
GEOLOGICAL PROVINCE (CENTRAL PLAIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SHALE & LIMESTONE ABOVE OLD RED  
SANDSTONE)  
  
AGE OF HOST (LOWER CARBONIFEROUS)  
LITHOLOGY (SHALE & LIMESTONE)  
GEOREMARKS (GENESIS QUESTIONABLE/ LOCALIZED IN A  
SMALL ELONGATED DOME)

HOLLAND, C.H. 1981 (188)  
WILLIAMS, C.E. 1978 (397)

**UNITED KINGDOM-11**

ORKNEY ISLANDS  
CU, PB, ZN, AG

58 51 00 N 2 56 00 W  
ENTITY COMMENT (BURRAY IS/TIME WORLD ATLAS)

GEOGRAPHICAL SUBDIVISION (SCOTLAND)  
GEOLOGICAL PROVINCE (ORCADIAN BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN BITUMINOUS & DOLOMITIC SILTSTONE & SHALE)  
REMARKS (4 OCCURRENCES-BURRAY ISLAND/ROUSAY  
ISLAND/2 ON ORKNEY MAINLAND)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (DOLOMITIC (STROMATOLITIC) SILTSTONE &  
SHALE)  
FORMATION (MIDDLE OLD RED SANDSTONE)  
GEOREMARKS (SULPHIDE DEPOSITION OCCURED DURING  
DOLOMITIZATION OF STROMATOLITES)

MUIR, R.O. 1975 (525)

**UNITED KINGDOM-11(A)**  
ORKNEY-BURRAY ISLAND  
CU

58 51 00 N 2 56 00 W  
ENTITY COMMENT (OCCURRENCE/BURRAY ISLAND)

GEOGRAPHICAL SUBDIVISION (SCOTLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN BITUMINOUS & DOLOMITIC SILTSTONE & SHALE)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (DOLOMITIC (STROMATOLITIC) SILTSTONE &  
SHALE)  
FORMATION (MIDDLE OLD RED SANDSTONE)

MUIR, R.O. 1975 (525)

**UNITED KINGDOM-12**  
ORKNEY-ROUSAY ISLAND  
PB, CU, AG

59 10 00 N 3 07 00 W  
ENTITY COMMENT (OCCURRENCE/ROUSAY ISLAND)

GEOGRAPHICAL SUBDIVISION (SCOTLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN BITUMINOUS & DOLOMITIC SILTSTONE & SHALE)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (DOLOMITIC (STROMATOLITIC) SILTSTONE &  
SHALE)  
FORMATION (MIDDLE OLD RED SANDSTONE)

MUIR, R.O. 1975 (525)

**UNITED KINGDOM-13**  
ORKNEY MAINLAND-STROMNESS  
PB, CU, ZN

58 57 00 N 3 20 00 W  
ENTITY COMMENT (OCCURR/JUST WEST OF STROMNESS)

GEOGRAPHICAL SUBDIVISION (SCOTLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN BITUMINOUS & DOLOMITIC SILTSTONE & SHALE)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (DOLOMITIC (STROMATOLITIC) SILTSTONE &  
SHALE)  
FORMATION (MIDDLE OLD RED SANDSTONE)

MUIR, R.O. 1975 (525)

**UNITED KINGDOM-14**  
ORKNEY MAINLAND-YESCANABY (YESNABY)  
PB, CU, MN, NI, ZN, SR, BA

59 02 00 N 3 21 00 W  
ENTITY COMMENT (YESCANABY/VILLAGE ON W COAST)

GEOGRAPHICAL SUBDIVISION (SCOTLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN BITUMINOUS & DOLOMITIC (STROMATOLITIC)  
SILTST)  
REMARKS (SEDIMENT-BINDING ALGAE DEVELOPED VARIETY  
OF STROMATOLITIC MOUNDS)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (DOLOMITIC SILTSTONE (STROMATOLITIC  
CARBONATE))  
FORMATION (MIDDLE OLD RED SANDSTONE)

MUIR, R.O. 1975 (525)

**UNITED KINGDOM-15**  
FIRTH OF FORTH  
CU

56 03 48 N 3 13 30 W  
ENTITY COMMENT (BURNTISLAND/ TIMES WORLD ATLAS)

GEOGRAPHICAL SUBDIVISION (SCOTLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN NON-MARINE ALGAL (STROMATOLITIC)  
LIMESTONE)  
REMARKS (TWO COASTAL EXPOSURES OF LOW-GRADE  
SULPHIDES OF LIMITED EXTENT)

AGE OF HOST (LOWER CARBONIFEROUS (DINANTIAN))  
LITHOLOGY (LIMESTONE)  
FORMATION (OIL SHALE GROUP/ BURDIEHOUSE LIMESTONE)

GEOREMARKS (OIL SHALE GP ROCKS INTERPRETED AS  
FLUVIODELTAIC DEPOSITS)

PARNELL, J. 1983 (518)

**UNITED KINGDOM-16**  
DRUMSHANTIE (GOUROCK)  
CU

55 56 00 N 4 47 00 W  
ENTITY COMMENT (SHAFT/1KM SE OF GOUROCK/BIBL 3)

GEOGRAPHICAL SUBDIVISION (SCOTLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN WELL-BEDDED QUARTZOSE  
SANDSTONE)  
REMARKS (OPENCAST WORKINGS BEFORE 1810/SHAFT SUNK  
20M 1873/MINE WORKED TO 1875)

AGE OF HOST (LOWER CARBONIFEROUS)  
LITHOLOGY (PINK & WHITE QUARTZOSE SANDSTONE)  
FORMATION (CLYDE SANDSTONE FORMATION)  
GEOREMARKS (MALACHITE ASSOCIATED WITH CARBONIZED  
PLANT REMAINS/ALSO BORNITE)

ALLEN, P.M. 1980 (8)  
DEWEY, H. 1925 (109)  
STEPHENSON, D. 1983 (614)

**UNITED KINGDOM-17**  
LARKFIELD (GOUROCK)  
CU

55 53 00 N 4 42 00 W  
ENTITY COMMENT (PIT/1KM ESE OF DRUMSHANTIE)

GEOGRAPHICAL SUBDIVISION (SCOTLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREY SANDSTONE WITH PEBBLY BANDS &  
PLANT DEBRIS)  
REMARKS (SMALL OPENCAST WORKINGS LONG-ABANDONED  
BY 1873)

AGE OF HOST (LOWER CARBONIFEROUS)  
LITHOLOGY (GREY CALCAREOUS SANDSTONE)  
FORMATION (CLYDE SANDSTONE FORMATION)  
GEOREMARKS (CU OCCURS AS SEGREGATIONS & THIN VEINS  
OF MALACHITE & GREY OXIDE OF CU)

STEPHENSON, D. 1983 (614)

**UNITED KINGDOM-18**  
BALLYMACARBRY  
CU

52 16 00 N 7 12 00 W  
ENTITY COMMENT (VILLAGE/TIMES WORLD ATLAS)

GEOGRAPHICAL SUBDIVISION (IRELAND)  
GEOLOGICAL PROVINCE (MUNSTER BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN GREEN SANDSTONE)  
REMARKS (DEPOSIT LOCATED NEAR VILLAGE OF

BALLYMACARBRY)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (GREEN SANDSTONE)  
FORMATION (OLD RED SANDSTONE/TOE HEAD FORMATION)

EMO, G.T. 1981 (622)

**UNITED KINGDOM-19**  
WELL 49/20-1  
CU, V, CO

53 24 24 N 2 54 03 E  
ENTITY COMMENT (BOREHOLE/FIGURE 1 BIBL 1/PG 22)

GEOGRAPHICAL SUBDIVISION (ENGLAND)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BLACK CARBONACEOUS SEDIMENTARY ROCK)  
REMARKS (SAMPLE 56 FROM 3-INCH THICK BED AT 7908 FT  
CONTAINS 3000 PPM CU/1500 V)

AGE OF HOST (PERMIAN)  
LITHOLOGY (MUDSTONE)  
FORMATION (MARL SLATE/KUPFERSCHIEFER EQUIVALENT)

HASLAM, H.W. 1982 (625)

**UNITED KINGDOM-20**  
WELL 48/12-2  
CU, V

53 31 00 N 1 17 00 E  
ENTITY COMMENT (BOREHOLE/FIGURE 1 BIBL 1/PG 22)

GEOGRAPHICAL SUBDIVISION (ENGLAND)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DARK GREY MUDSTONE)  
REMARKS (SAMPLE 60 FROM 1 FT THICK SECTION OF BASE OF  
KUPFERSCHIEFER-7000PPM CU)

AGE OF HOST (PERMIAN)  
LITHOLOGY (MUDSTONE)  
FORMATION (MARL SLATE/KUPFERSCHIEFER EQUIVALENT)

HASLAM, H.W. 1982 (625)

**UNITED KINGDOM-21**  
WELL 41/25A-1  
CU, PB, ZN, V, CO, NI, MO, AS

54 15 00 N 0 05 30 W  
ENTITY COMMENT (BOREHOLE/FIGURE 1 BIBL 1/PG 22)

GEOGRAPHICAL SUBDIVISION (ENGLAND)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BLACK CARBONACEOUS MUDSTONE)  
REMARKS (SAMPLE 51 FROM 5654 FT CONTAINS 750 PPM  
CU/340 PB/116 ZN/ 1650 V/230CO)

AGE OF HOST (PERMIAN)  
LITHOLOGY (MUDSTONE)  
FORMATION (MARL SLATE/KUPFERSCHIEFER EQUIVALENT)

HASLAM, H.W. 1982 (625)

**YUGOSLAVIA-1**

SUVA PLANINA MOUNTAIN  
CU

43 10 00 N 22 15 00 E

ENTITY COMMENT (GENERAL AREA OF OCCURRENCES)

GEOGRAPHICAL SUBDIVISION (SERBIA)

GEOLOGICAL PROVINCE (CARPATHO-BALKAN ARCH)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN INNER BELT OF CLASTIC ROCKS OF CARP-BALK  
ARCH)

REMARKS (ABOUT 20 CU OCCURRENCES HAVE BEEN FOUND  
ON SUVA PLANTINA MOUNTAIN)

AGE OF HOST (PERMIAN)

LITHOLOGY (RED ARKOSIC SANDSTONE & SILTSTONE)

GEOREMARKS (OCCUR IN UPPER PART OF A LITHOLOGIC  
COLUMN IN BLEACHED REDBEDS)

DROVENIK, M. 1980 (117)

JANKOVIC, S. 1965 (199)

**MIDDLE EAST**

**IRAN-1**

CHEHEL KUREH  
CU

30 00 11 N 59 59 55 E

ENTITY COMMENT (OLD MINE/45KM N-NE NOSRATABAD)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SANDSTONE & IN LENSES IN SANDSTONE AND  
TUFF)

REMARKS (ABUNDANT ANCIENT SLAGS REPRESENT  
EXTENDED PERIOD OF MINING & SMELTING)

AGE OF HOST (TERTIARY)

LITHOLOGY (SANDSTONE/LIMESTONE/SHALE/TUFF)

GEOREMARKS (VOLCANIC & SED ROCKS IN AREA HIGHLY  
FOLDED & CUT BY FAULT NETWORK)

BAZIN, D. 1969 (35)

**IRAN-2**

KHANEGAH  
CU

31 00 02 N 51 20 06 E

ENTITY COMMENT (3 KM WEST OF MOUNT KUH-E-DENA)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (AS LOCAL CONCENTRATION ZONES IN LIMESTONE)

REMARKS (KHANEGAH MINE LOCATED AT 2060 M ALTITUDE/  
MINE OPERATED ONLY 6 MONTHS)

AGE OF HOST (LATE CAMBRIAN)

LITHOLOGY (LIMESTONE/DOLOMITIC LIMESTONE)

GEOREMARKS (MINERALIZED OUTCROPS LIMITED TO 2  
HORIZONS-ONE 50M ABOVE LOWER ONE)

BAZIN, D. 1969 (35)

**IRAN-3**

NASAR  
CU

35 35 14 N 59 50 08 E

ENTITY COMMENT (NO 176/ MIN DIST MAP OF IRAN)

GEOLOGICAL PROVINCE (ALPINE FOLDED REGION)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN TUFFACEOUS SANDSTONE)

REMARKS (OCCURRENCE LOCATED ABOUT 130 KM SOUTH  
SOUTHEAST OF CITY OF MASHHAD)

AGE OF HOST (TERTIARY (EOCENE))

LITHOLOGY (TUFFACEOUS SANDSTONE)

GEOREMARKS (EOCENE SEQUENCE DEPOSITED ON  
PRE-EOCENE FOLDED SUBSTRATUM)

TAGHIZADEH, N. 1976 (663)

MOMENZADEH, M. 1986 (664)

**ISRAEL-1**

NUQEIB AREA  
CU

32 45 00 N 35 40 00 E  
ENTITY COMMENT (2 MILES NORTH OF ENGEV)  
  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN CONGLOMERATE HORIZON WITHIN  
CALCAREOUS SS)  
REMARKS (MINERALIZATION NEAR MAIN FAULT OF GRABEN)  
  
AGE OF HOST (NEOGENE)  
FORMATION (HEROD FM)  
GEOREMARKS (SS USUALLY SILTY OR CLAYEY/ CGLT  
COMPOSED OF LS/ CHALK/ FLINT/ BASALT)

MICHELSON, H. 1971 (270)

**ISRAEL-2**  
TIMNA  
CU, MN (SEE RESERVE/PRODUCTION REPORT)

29 46 00 N 34 57 00 E  
ENTITY COMMENT (DEPOSIT/ 25 KM NORTH OF ELAT)

GEOLOGICAL PROVINCE (TIMNA BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN SANDSTONE AND SHALY  
SANDSTONE)  
REMARKS (3 DEPOSITS/CU ASSOCIATED WITH PHOSPHORITE  
LENSES & LAMINAE IN SHALY SS)

AGE OF HOST (LOWER CAMBRIAN)  
LITHOLOGY (WHITE-BLACK SANDSTONE/GREENISH-REDISH  
SHALES)  
FORMATION (NEHUSHTAN AND MIKHROT MEMBERS/TIMNA  
FORMATION)  
GEOREMARKS (MN-RICH LAMINAE ALTERNATE WITH  
PHOSPHATIC- CU- & DETRITAL-RICH LAMINAE)

BAR-MATTHEWS, M. 1987 (662)  
BARTURA, Y. 1974 (33)

**ISRAEL-2(A)**  
HAR (MOUNT) TIMNA  
CU, U, ZN

29 47 00 N 34 58 30 E  
ENTITY COMMENT (OCCURRENCE/ NORTH OF MT TIMNA)

GEOLOGICAL PROVINCE (TIMNA BASIN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN MICRITIC LENSES IN SANDSTONE)  
REMARKS (IN STRATIFORM-LAMINATED MANGANESE  
ASSEMBLAGES)

AGE OF HOST (LOWER CAMBRIAN)  
LITHOLOGY (BLACK/WHITE MOTTLED FINE TO GRITTY  
SANDSTONE)  
FORMATION (NEHUSHTAN MEMBER/ TIMNA FORMATION)  
GEOREMARKS (MN-RICH LAMINAE ALTERNATE WITH  
PHOSPHATIC- CU- & DETRITAL-RICH LAMINAE)

BAR-MATTHEWS, M. 1987 (662)

**ISRAEL-2(B)**  
HAR (MOUNT) MIKHROT

CU

29 48 00 N 34 59 00 E  
ENTITY COMMENT (OCCURRENCE/NORTH OF MT MIKHROT)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (ASSOC WITH PHOSPHORITE LENSES & LAMINAE IN  
SHALES)

AGE OF HOST (LOWER CAMBRIAN)  
LITHOLOGY (GREENISH-REDISH SHALES)  
FORMATION (MIKHROT MEMBER/ TIMNA FORMATION)

BAR-MATTHEWS, M. 1987 (662)

**ISRAEL-3**  
HARE HAKHLIL (AMIR FM)  
CU

29 44 00 N 34 58 00 E  
ENTITY COMMENT (OCCURRENCE/ APPROX LOCATION)

GEOLOGICAL PROVINCE (TIMNA BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN COARSELY BEDDED KAOLINITIC WHITE  
SANDSTONE)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (AMIR FORMATION (NUBIAN SANDSTONE))

BAR-MATTHEWS, M. 1987 (662)  
BAR-MATTHEWS, M. 1987 (662)  
BAR-MATTHEWS, M. 1987 (662)  
BARTURA, Y. 1974 (33)

**ISRAEL-4**  
HATIRA FORMATION  
CU

29 46 00 N 34 56 00 E  
ENTITY COMMENT (OCCURRENCE/VERY APROX LOCATION)

GEOLOGICAL PROVINCE (TIMNA BASIN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (HATIRA FORMATION (NUBIAN SANDSTONE))

BAR-MATTHEWS, M. 1987 (662)  
BAR-MATTHEWS, M. 1987 (662)  
BARTURA, Y. 1974 (33)  
BARTURA, Y. 1974 (33)

**JORDAN-1**  
ABU KASHABIA  
CU

30 25 00 N 35 15 00 E  
ENTITY COMMENT (CENTRE OF REGION)

CU SUBTYPE (UNDIFFERENTIATED)



GEOLOGY (AS DISSEM IN SAND BED OR CAVITY FILLINGS IN CLAY)  
REMARKS (RESERVES ARE 18 MILLION TONNES OF 0.53% CU IN SAND/1.87%CU IN CLAY)

AGE OF HOST (EARLY CAMBRIAN)  
LITHOLOGY (ARKOSE overlain by clay/silt/variegated sand)  
GEOREMARKS (ORE IS FORMED OF CHRYSOCOLLA/ MALACHITE/ AZURITE)

HABASHI, F. 1982 (175)  
BENDER, F. 1974 (36)

#### **JORDAN-2**

FENAN  
CU (SEE RESERVE/PRODUCTION REPORT)

30 36 00 N 35 25 00 E  
ENTITY COMMENT (DEPOSIT/ MAP 6.1)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AS DISSEM IN SAND BED OR CAVITY FILLINGS IN CLAY)  
REMARKS (RESERVES ARE 110 M TONNES OF 0.53% CU IN SANDY/ 1.87% IN CLAYEY BEDS)

AGE OF HOST (EARLY CAMBRIAN)  
LITHOLOGY (ARKOSE overlain by clay/silt/variegated ss)  
GEOREMARKS (ORE IS FORMED OF CHRYSOCOLLA/ MALACHITE/ AZURITE)

HABASHI, F. 1982 (175)  
BENDER, F. 1974 (36)

#### **SAUDI ARABIA-1**

AL QUWAYYIAH  
CU

24 05 00 N 45 15 00 E  
ENTITY COMMENT (AL QUWAYYIAH/TIMES WORLD ATLAS)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN CARBONATE HORIZONS AT BASE OF KHUFF FORMATION)  
REMARKS (SEVERAL COPPER SHOWINGS IN AREA)

AGE OF HOST (PHANEROZOIC)  
FORMATION (KHUFF FM)

ANON. 1982 (454)

#### **SAUDI ARABIA-2**

JABAL DHAYLAN (JM 6 AND JM 10  
PB, ZN, CU

25 30 30 N 37 14 00 E  
ENTITY COMMENT (JM 10)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AS IMPREGNATIONS & REPLACEMENT OF CEMENT IN ARKOSE)  
REMARKS (TWO VERY MINOR OCCURRENCES-SAME AREA/IN NORMAL OR CONGLOMERATIC ARKOSE)

AGE OF HOST (TERTIARY (OLIGOCENE))  
LITHOLOGY (BROWN BEIGE ARKOSE INTERBEDDED WITH RED SHALE)  
FORMATION (UMM LAJJ RED BED SEQUENCE)  
GEOREMARKS (MINERALIZED ZONES OCCUR AS INDISTINCT PATCHES FROM SEVERAL CM TO 20 M)

DADET, P. 1970 (98)  
DADET, P. 1970 (99)

#### **SAUDI ARABIA-3**

WADI RAYSH  
CU

18 38 00 N 42 00 00 E  
ENTITY COMMENT (OCCURRENCE/FIG 1 BIBL 1/PG 331)

GEOLOGICAL PROVINCE (ARABIAN SHIELD)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM IN THIN MARBLE INTERLAYERED WITH SCHIST)  
REMARKS (UP TO 640PPM CU IN ROCK-CHIP SAMPLES OVER 5M/NEARBY SAMPLES MAX 8.4%CU)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (MARBLE/CHLORITE SCHIST/CALC-QTZ-MUSC SCHIST)  
FORMATION (ABLAH GROUP)  
GEOREMARKS (HOST RKS DERIVED FROM FINE-GRAINED EPICLASTIC ROCKS/VOLC RED BED TYPE?)

JOHNSON, P.R. 1984 (626)

#### **SAUDI ARABIA-4**

WADI HALI  
CU

18 30 00 N 42 01 00 E  
ENTITY COMMENT (OCCURRENCE/FIG 1 BIBL 1/PG 331)

GEOLOGICAL PROVINCE (ARABIAN SHIELD)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM IN FERRUGINOUS DOLOMITE-MUSCOVITE SCHIST)  
REMARKS (POSSIBLY VOLCANIC RED BED TYPE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (DOLOMITE-MUSCOVITE SCHIST)  
FORMATION (ABLAH GROUP)

JOHNSON, P.R. 1984 (626)

#### **SAUDI ARABIA-5**

UM AR RUMF  
CU

18 28 00 N 42 03 00 E  
ENTITY COMMENT (OCCURRENCE/FIG 1 BIBL 1/PG331)

GEOLOGICAL PROVINCE (ARABIAN SHIELD)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM IN MASSIVE TO LAYERED (EPICLASTIC) ROCK)

REMARKS (RXS DERIVED FROM MASSIVE MED-FINE GR  
EPICLASTIC RXS/VOLC RED BED TYPE?)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (EPIDOTE-BIOTITE-QUARTZ-FELDSPAR ROCK)  
FORMATION ('ABLAH GROUP EQUIVALENT)  
GEOREMARKS (HOST ROCK CONTAINS EVAPORITIC NODULES  
& PORPHYROBLASTS)

JOHNSON, P.R. 1984 (626)

**SAUDI ARABIA-6**

ASH SHA IB  
ZN, CU, AG, BA (SEE RESERVE/PRODUCTION REPORT)

19 17 00 N 43 43 00 E  
ENTITY COMMENT (DEPOSIT/FIG 1 BIBL 1/PG 331)

GEOLOGICAL PROVINCE (ARABIAN SHIELD)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM IN MAGNETITE-RICH HORNFELS &  
DOLO-MARBLE)  
REMARKS (SULPHIDES DISPLAY METAMORPHIC TEXTURES/  
METAMORPHOSED WITH HOST ROCK)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (MASSIVE TO SCHISTOSE HORNFELS/DOLOMITIC  
MARBL)  
GEOREMARKS (HOST ROCKS ORIGINALLY CALCAREOUS  
SHALE/ARKOSE/DOLOMITIC LIMESTONE)

JOHNSON, P.R. 1984 (626)

**SAUDI ARABIA-7**

JABAL MUWAYGIRAH  
ZN, CU, PB (SEE RESERVE/PRODUCTION REPORT)

19 14 00 N 43 35 00 E  
ENTITY COMMENT (DEPOSIT/FIG 1 BIBL 1/PG 331)

GEOLOGICAL PROVINCE (ARABIAN SHIELD)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (SUPERGENE MINERALIZATION IN DOLOMITIC  
MARBLE)  
REMARKS (SULPHIDE MINERALS NOT DETECTED/ VARIANT OF  
ASH SHA IB TYPE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (DOLOMITIC MARBLE)  
GEOREMARKS (MARBLE OCCURS WITH AMPHIBOLITE &  
AMPHIBOLE-FELDSPAR-QUARTZ GNEISS)

JOHNSON, P.R. 1984 (626)

**SAUDI ARABIA-8**

HANASH  
ZN, CU

19 33 00 N 43 41 00 E  
ENTITY COMMENT (OCCURRENCE/FIG 1 BIBL 1/PG 331)

GEOLOGICAL PROVINCE (ARABIAN SHIELD)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (MINOR CU IN MEDIUM TO COARSE-GRAINED  
GRANOFELS)  
REMARKS (ORIGINALLY STRATABOUND SED HOSTED/0.7-12%  
ZN & 0.1-0.4% CU OVER 1-1.5M)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (AMPHIBOLE-FELDSPAR-QUARTZ GRANOFELS)  
GEOREMARKS (HOST POSSIBLY SIMILAR TO ASH SHA IB BUT  
MORE INTENSELY METAMORPHOSED)

JOHNSON, P.R. 1984 (626)

**SAUDI ARABIA-9**

AL MUNAYZIR  
CU

19 12 00 N 41 47 00 E  
ENTITY COMMENT (OCCURRENCE/FIG 1 BIBL 1/PG 331)

GEOLOGICAL PROVINCE (ARABIAN SHIELD)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM IN QUARTZ-MICA-CHLORITE SCHIST &  
QUARTZITE)  
REMARKS (UP TO 0.3% CU OVER 15-METRE STRIKE  
LENGTH/POSSIBLY VOLC RED BED TYPE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (COARSE-GRAINED SCHIST/CROSS-BEDDED  
QUARTZITE)  
FORMATION (ABLAH GROUP)  
GEOREMARKS (WITHIN BASAL CLASTIC MEMBER OF ABLAH  
GROUP/MINOR EVAPORITES INDICATED)

JOHNSON, P.R. 1984 (626)

**SAUDI ARABIA-10**

JABAL SHARBON  
CU

18 53 00 N 41 52 00 E  
ENTITY COMMENT (OCCURRENCE/FIG 1 BIBL 1/PG 331)

GEOLOGICAL PROVINCE (ARABIAN SHIELD)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM IN INTRAFORMATIONAL  
CGLM/MARBLE/AMPHIBOLITE)  
REMARKS (PYRITE & CHALCOPYRITE UP TO 1.4% CU  
EXPRESSED AS MALACHITE & LIMONITE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (CONGLOMERATE/MARBLE/AMPHIBOLITE)  
FORMATION (ABLAH GROUP)  
GEOREMARKS (WITHIN BASAL CLASTIC MEMBER OF ABLAH  
GROUP/ POSSIBLY VOLC RED BED TYPE)

JOHNSON, P.R. 1984 (626)

## **NORTH AMERICA**

### **CANADA-1**

ELLIS POND MINERAL OCC NO 26 (ELLIS PROSPECT)  
CU, AG, BA

54 18 50 N 61 57 59 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISS & SEAMS IN GREEN-GREY SHALE)  
REMARKS (THIS PROPERTY IS ONE OF 250 SHOWINGS IN THE AREA)

AGE OF HOST (MIDDLE PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREEN-GREY SHALE INTERLENSED WITH QUARTZITE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

GANDHI, S.S. 1975 (150)  
BRUMMER, J.J. 1961 (62)  
MANN, E.L. 1959 (258)

### **CANADA-4**

LOCHABER LAKE  
CU, PB, ZN (SEE RESERVE/PRODUCTION REPORT)

45 24 15 N 62 03 00 W  
ENTITY COMMENT (DEPOSIT/ NMI)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISS & ALONG BEDDING PLANES & FRACS IN SILTSTONE)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (MAROON SHALE/ GREEN SILTSTONE/ LIMESTONE)  
FORMATION (KNOYDART FM)  
GEOREMARKS (STRATA-CONTROLLED)

BENSON, D.G. 1974 (40)  
BENSON, D.G. 1974 (40)  
ANON. 1971 (429)  
ANON. 0 (533)  
ANON. 1972 (428)  
HOOPER, M.J. 1972 (534)  
WHITE, W.S. 1966 (532)  
HOOPER, M.J. 1972 (534)  
MCMULLIN, J.M. 1972 (535)  
MCMULLIN, J.M. 1972 (535)  
ANON. 1972 (536)

### **CANADA-9**

COBRE LAKE  
CU

46 37 45 N 82 48 00 W  
ENTITY COMMENT (OCC/ ADJACENT TO BI-ORE MINE)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN SANDSTONE)  
REMARKS (CU OCCURS AT CONTACT OF LORRAIN FM & OVERLYING GORDON LAKE FM)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (SANDSTONE)  
FORMATION (GORDON LAKE FM/ COBALT GP/HURONIAN SUPERGROUP)  
GEOREMARKS (CONTACT OCCURS AT TRANSITION FROM FLUVIAL TO TIDAL MARINE CONDITIONS)

CHANDLER, F.W. 1984 (548)  
PEARSON, W.N. 1979 (295)

### **CANADA-23**

CAP MOUNTAIN  
CU

63 25 20 N 123 13 30 W  
ENTITY COMMENT (MEASURED SECTION/ NMI)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (FRACS/DISS/BED PLANES IN SS/DOLO/SILTSTONE/MUDSTON)  
REMARKS (TRACES OF CU MINERALIZATION OCCUR THROUGHOUT 3500-FOOT THICK STRATA)

AGE OF HOST (LATE PROTEROZOIC (HELIKIAN?))  
LITHOLOGY (SS/DOLOMITIC SILTSTONE/HEMATITIC MUDSTONES)  
GEOREMARKS (MALACHITE-FROM 1200FT BELOW MAP UNIT 1 TO 650 FT ABOVE BASE MAP UNIT 3)

AITKEN, J.D. 1973 (2)  
DOUGLAS, R.J. 1963 (115)

### **CANADA-25**

ENNADAI LAKE (NUELTIN PROJECT) (PROSPECTING PERMIT 136)  
CU

60 36 50 N 101 12 00 W  
ENTITY COMMENT (DINA MIR 69-70 VOL 2/ PG 50)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (MINOR DISSEMINATED SULPHIDES IN GREYWACKE)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY ( )  
FORMATION (HURWITZ GROUP)  
GEOREMARKS (GREYWACKE DERIVED FROM QUARTZ-MICA SCHIST)

LAPORTE, P.J. 1974 (237)  
WRIGHT, G.M. 1967 (408)  
KIRKHAM, R.V. 1974 (218)

### **CANADA-26**

ESCAPE RAPIDS (ESC 37/38)

CU

67 35 05 N 115 33 00 W  
ENTITY COMMENT (BULL 214 PG 57)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (BEAR)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN THIN BEDS OF COARSE  
SANDSTONE)

AGE OF HOST (PROTEROZOIC (HADRYNIAN))  
LITHOLOGY (GREY GLAUCONITIC SANDSTONE AND BLACK  
SHALES)  
FORMATION (RAE GROUP/COPPERMINE RIVER GROUP)  
GEOREMARKS (RAE GROUP OVERLIES COPPERMINE RIVER  
GROUP)

KINDLE, E.D. 1972 (214)  
BARAGAR, W.R.A. 1973 (27)  
KIRKHAM, R.V. 1970 (217)

#### **CANADA-27**

HOTTAH LAKE (FNS) (FNS/ OS/ ZEB CLAIMS)  
CU

64 52 30 N 118 35 00 W  
ENTITY COMMENT (OCC/ FNS CLAIM 28/ 1967)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (INTERIOR PLATFORM)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & FRACTURE FILLINGS IN BITUMINOUS  
DOLOMITE)  
REMARKS (NUMEROUS LOW-GRADE OCCURRENCES)

AGE OF HOST (PALEOZOIC (ORDOVICIAN?))  
LITHOLOGY (BITUMINOUS DOLOMITE)

THORPE, R.I. 1966 (371)  
PADGHAM, W.A. 1975 (293)  
PADGHAM, W.A. 1976 (294)  
KIDD, D.F. 1936 (212)

#### **CANADA-28**

POORFISH LAKE (NUELTIN PROJECT) (PROSPECTING PERMIT  
132)  
CU, AU, AG

60 11 08 N 100 31 25 W  
ENTITY COMMENT (NO 1/ DINA MIN OCC OVERLAY 65C)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ZONES OF DISSEM SULPHIDES IN SEDIMENTARY  
ROCKS)  
REMARKS (TWO ZONES 10-15 FT WIDE AND 82 & 78 FT LONG)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (ARGILLITE/PHYLLITE/GREYWACKE/MINOR  
DOLOMITE)  
FORMATION (HURWITZ GROUP)  
GEOREMARKS (LITHOLOGIES GIVEN FORM THE OLDEST UNIT

OF THE HURWITZ GROUP)

LAPORTE, P.J. 1974 (237)  
WRIGHT, G.M. 1967 (408)  
KIRKHAM, R.V. 1974 (218)

#### **CANADA-29**

STARK LAKE-WILSON LAKE (PAR 3/ 56/ 57)  
CU

62 28 00 N 110 09 30 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN DOLOMITE IN  
IRREGULAR-SHAPED ZONES)  
REMARKS (APPROX 12 ZONES/ ZONES UP TO 100 FT LONG &  
10 FT WIDE)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (LIGHT GREY DOLOMITE)  
FORMATION (STARK FM/ GREAT SLAVE GROUP)  
GEOREMARKS (ALONG A STRIKE LENGTH OF 1200 FT)

MCGLYNN, J.C. 1971 (263)

#### **CANADA-30**

TAWU ANTICLINE  
CU

65 19 00 N 131 42 00 W  
ENTITY COMMENT (OCCURRENCE/ GSC MEMOIR 388)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN VERY THIN SANDSTONE BEDS)  
REMARKS (MINERALS ARE MALACHITE AND AZURITE)

AGE OF HOST (PROTEROZOIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (TSEZOTENE FORMATION)

AITKEN, J.D. 1982 (3)

#### **CANADA-33**

GLEN ROAD  
CU, ZN, PB, AG

45 33 04 N 62 01 40 W  
ENTITY COMMENT (DRILL HOLE-GLEN ROAD 83-1/BIB1)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN GREEN CONGLOMERATE  
BRECCIA)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (GREEN CONGLOMERATE/BRECCIA/ ANHYDRITE/  
GYPSUM)  
FORMATION (MACUMBER FORMATION/ WINDSOR GROUP)

BOEHNER, R. 1985 (589)  
KIRKHAM, R.V. 1985 (577)

**CANADA-34**

ADELINE ISLAND PROSPECT  
CU, AG, ZN

54 17 53 N 62 03 30 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (VEINS&DISS IN SCHISTOSE SHALE/ALSO FRACS IN  
QTZITE)  
REMARKS (WIDESPREAD BUT ERRATIC MINERALIZATION  
ALONG THE SAME HORIZON)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE/ QUARTZITE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

BRUMMER, J.J. 1961 (62)  
MANN, E.L. 1959 (258)  
ROBINSON, W.G. 0 (314)  
BRUMMER, J.J. 0 (63)  
HALE, W.E. 0 (179)  
GANDHI, S.S. 1975 (150)

**CANADA-35**

ADELINE LAKE EAST-SHOWING NO 7  
CU

54 16 50 N 61 59 42 W  
ENTITY COMMENT (NO 36/ NFLD MIN LOC MAP 7643)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (VEINLETS AND CU-STAINING IN ARGILLITE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (ARGILLITE)  
FORMATION (WHISKEY LAKE FORMATION/ SEAL LAKE GROUP)

MOORE, J.C. 0 (276)  
BRUMMER, J.J. 1961 (62)  
BRUMMER, J.J. 1960 (61)  
GANDHI, S.S. 1975 (150)  
GREENE, B.A. 1974 (169)  
ROY, J.L. 1973 (132)  
DOUGLAS, C. 1976 (113)

**CANADA-36**

ADELINE LAKE-3  
CU

54 18 00 N 62 01 50 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN SHALE AND SLATE)  
REMARKS (2 OCCURRENCES)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE/ SLATE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

BRUMMER, J.J. 1961 (62)  
DOUGLAS, C. 1976 (113)

**CANADA-37**

BALD MOUNTAIN  
CU

48 01 30 N 58 51 22 W  
ENTITY COMMENT (OCC/ 4.5 KM SW OF BALD MTN)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN BLACK POINT - LIKE LIMESTONE)

AGE OF HOST (CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (LIMESTONE)  
FORMATION (CODROY ROAD FORMATION/ CODROY LGROUP)

KNIGHT, I. 1983 (586)

**CANADA-38**

BOSWARLOS (PORT AU PORT PENIN)  
PB, ZN, CU, SR, BA

48 34 07 N 58 48 51 W  
ENTITY COMMENT (APPROX CENTRE OF OUTCROP)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE)  
REMARKS (MINERALIZATION OCCURS ALONG OUTCROP 0.3KM  
LONG NEAR SHORE OF COSTA BAY)

AGE OF HOST (CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (FOSSILIFEROUS BUFF  
LIMESTONE/GYPSUM/SANDSTONE)  
FORMATION (CODROY GROUP (EQUIVALENT TO WINDSOR  
GROUP))

KIRKHAM, R.V. 1985 (575)

**CANADA-39**

BRANDY LAKE PROSPECT-A ZONE  
CU

54 18 11 N 61 36 02 W  
ENTITY COMMENT (PLATE 6/ GSA BULL VOL 72 NO 9)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM IN SHALE/ VEINLETS IN QTZITE & DIABASE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (SHLAE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

BRUMMER, J.J. 1961 (62)  
GANDHI, S.S. 1975 (150)  
GREENE, B.A. 1974 (169)  
MANN, E.L. 1959 (258)  
BRUMMER, J.J. 1960 (61)  
DOUGLAS, C. 1976 (113)

**CANADA-40**

BRANDY LAKE PROSPECT-B ZONE  
CU

54 18 17 N 61 35 42 W  
ENTITY COMMENT (PLATE 6/ GSA BULL VOL 72 NO 9)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & QTZ VEINLETS IN SHALE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (SHALE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

BRUMMER, J.J. 1961 (62)  
GANDHI, S.S. 1975 (150)  
GREENE, B.A. 1974 (169)  
MANN, E.L. 1959 (258)  
BRUMMER, J.J. 1960 (61)  
DOUGLAS, C. 1976 (113)

**CANADA-41**

BRIAN PROSPECT (A)  
CU

54 18 40 N 61 52 10 W  
ENTITY COMMENT (PG 153/ ECON GEOL VOL 70 NO 1)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM IN SHALE/ QTZ VEINLETS IN UNDERLYING  
QTZITE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

GANDHI, S.S. 1975 (150)  
BRUMMER, J.J. 1961 (62)  
GREENE, B.A. 1974 (169)  
MANN, E.L. 1959 (258)  
BRUMMER, J.J. 1960 (61)  
DOUGLAS, C. 1976 (113)

**CANADA-42**

BRIAN PROSPECT (B)  
CU, AG

54 18 49 N 61 52 06 W  
ENTITY COMMENT (PG 153/ ECON GEOL VOL 70 NO 1)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & VEINLETS IN SHEARED GREY SHALE)  
REMARKS (SHOWING TRUNCATED BY THRUST FAULT TO EAST)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

GANDHI, S.S. 1975 (150)  
BRUMMER, J.J. 1961 (62)  
GREENE, B.A. 1974 (169)  
MANN, E.L. 1959 (258)  
BRUMMER, J.J. 1960 (61)  
DOUGLAS, C. 1976 (113)

**CANADA-43**

BRIAN PROSPECT (C)  
CU

54 18 42 N 61 51 47 W  
ENTITY COMMENT (PG 153/ ECON GEOL VOL 70 NO 1)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (STRINGERS & FRACTURE FILLINGS IN SHALES)  
REMARKS (3 OCCURRENCES)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

GANDHI, S.S. 1975 (150)  
BRUMMER, J.J. 1961 (62)  
GREENE, B.A. 1974 (169)  
MANN, E.L. 1959 (258)  
BRUMMER, J.J. 1960 (61)  
DOUGLAS, C. 1976 (113)

**CANADA-44**

BRIAN PROSPECT (D)  
CU

54 18 49 N 61 51 59 W  
ENTITY COMMENT (PG 153/ ECON GEOL VOL 70 NO 1)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (QTZ-CALCITE VEINLETS & DISSEM IN SHALE)  
REMARKS (4 OCCURRENCES)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

GANDHI, S.S. 1975 (150)  
BRUMMER, J.J. 1961 (62)  
GREENE, B.A. 1974 (169)  
MANN, E.L. 1959 (258)  
BRUMMER, J.J. 1960 (61)  
DOUGLAS, C. 1976 (113)

**CANADA-45**

BRIAN PROSPECT (E)  
CU

54 18 47 N 61 52 22 W  
ENTITY COMMENT (PG 153/ ECON GEOL VOL 70 NO 1)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (STRINGERS & FRACTURE FILLINGS IN SHALE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

GANDHI, S.S. 1975 (150)  
BRUMMER, J.J. 1961 (62)  
GREENE, B.A. 1974 (169)  
MANN, E.L. 1959 (258)  
BRUMMER, J.J. 1960 (61)  
DOUGLAS, C. 1976 (113)

#### **CANADA-46**

DUCK LAKE EAST SHOWING (SEAL LAKE)  
CU, AG

54 18 15 N 61 45 30 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & QTZ VEINLETS IN SHEARED SHALES &  
QTZITE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE/ QUARTZITE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

GANDHI, S.S. 1975 (150)  
GREENE, B.A. 1974 (169)  
MANN, E.L. 1959 (258)  
BRUMMER, J.J. 1960 (61)  
BRUMMER, J.J. 1961 (62)  
DOUGLAS, C. 1976 (113)

#### **CANADA-47**

DUCK LAKE SOUTH  
CU

54 18 25 N 61 47 42 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (QTZ-CARB VEINLETS & ALONG CLEAVAGE PLANES  
IN SHALE)  
REMARKS (ALSO A FEW SIMILAR SMALL SHOWINGS BTWN  
DUCK LAKE & BRIAN PROSPECT)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

GANDHI, S.S. 1975 (150)  
GREENE, B.A. 1974 (169)  
MANN, E.L. 1959 (258)  
BRUMMER, J.J. 1960 (61)  
BRUMMER, J.J. 1961 (62)  
DOUGLAS, C. 1976 (113)

#### **CANADA-48**

FISCHELLS BROOK  
CU

48 18 14 N 58 33 00 W  
ENTITY COMMENT (DDH/ 10.8 KM ESE OF FISCHELLS)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOC WITH PLANT TRASH IN COARSE BASAL SS  
BEDS)  
REMARKS (DISSEM MINERALIZATION OCCURS OVER 45 CM  
INTERVAL AT 575 M DEPTH IN DDH)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (GREEN-GREY & RED SANDSTONE/ PEBBLY  
SS/SILTST)  
FORMATION (BARACHOIS GROUP)

KNIGHT, I. 1983 (586)

#### **CANADA-49**

GRAND CODROY RIVER -S BRANCH  
U, CU

47 54 22 N 59 04 24 W  
ENTITY COMMENT (OCC/ 3 KM WSW OF SOUTH BRANCH)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREY PLANAR-STRATIFIED SANDSTONE)  
REMARKS (U GRADES 30-34 PPM/ CU 775 PPM)

AGE OF HOST (CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (MICACEOUS SANDSTONE)  
FORMATION (MOLLICHIGNICK MEMBER/CODROY GROUP)  
GEOREMARKS (SANDSTONE OF ROBINSONS RIVER  
FORMATION/ FINE PLANT MATERIAL COMMON)

KNIGHT, I. 1983 (586)

#### **CANADA-50**

GRAND CODROY RIVER-CN RAILWAY  
CU, U

47 50 50 N 59 11 05 W

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN THICK CROSSBEDDED GRAY ROBINSONS RIVER  
FM SS)  
REMARKS (GRADES-U 7.4 PPM/ CU 1650 PPM)

AGE OF HOST (CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (GREY SANDSTONE WITH ABUNDANT GREY  
MUDCLASTS)

FORMATION (MOLLICHIGNICK MEMBER/CODROY GROUP)  
GEOREMARKS (ASSOC WITH MUDCLASTS & PLANT FOSSILS  
ABOVE SCOUR AT BASE OF SANDSTONE)

KNIGHT, I. 1983 (586)

**CANADA-51**

GRAND CODROY RIVER-HIGHWAY ONE  
CU, U

47 52 08 N 59 06 56 W

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREY CARBONACEOUS MUDSTONE AND  
SILTSTONE)  
REMARKS (U GRADES 23-323 PPM/ CU 3000 PPM)

AGE OF HOST (CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (MUDSTONE/ SILTSTONE/ ARKOSIC PEBBLY GRIT/  
SS)  
FORMATION (OVERFALL BROOK MEMBER/ CODROY GROUP)  
GEOREMARKS (HOST ROCKS BELONG TO ROBINSON RIVER  
FORMATION)

KNIGHT, I. 1983 (586)

**CANADA-52**

GULL LAKE  
CU

54 18 40 N 61 53 35 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SHALES & SLATES)  
REMARKS (3 OCCURRENCES)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (SHALE/ SLATE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

BRUMMER, J.J. 1961 (62)

**CANADA-53**

JEFFREYS VILLAGE  
CU

48 14 32 N 58 49 24 W  
ENTITY COMMENT (OCC/ 1.1 KM NW OF CARTYVILLE)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (VERY MINOR OCCURRENCE/ NEAR COAST  
BETWEEN MCKAYS & BARACHOIS BROOKS)

AGE OF HOST (CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (RED SILTSTONE/ RED & GREY SANDSTONE)  
FORMATION (JEFFREYS VILLAGE MEMBER/ CODROY GROUP)

KNIGHT, I. 1983 (586)

**CANADA-54**

NO MANS LAKE-2  
CU

54 16 01 N 61 46 35 W  
ENTITY COMMENT (NO 65/ NFLD MIN LOC MAP 7643)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN QUARTZITE & ARGILLITE OF WHISKEY LAKE  
FORMATION)  
REMARKS (SCATTERED MINERALIZATION IN ZONE 300 FT LONG  
AND 3 TO 8 FT WIDE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (QUARTZITE/ ARGILLITE)  
FORMATION (WHISKEY LAKE FM/ SEAL LAKE GROUP)

ROBINSON, W.G. 0 (510)  
DOUGLAS, C. 1976 (113)

**CANADA-55**

SEAL LAKE-18  
CU

54 17 45 N 61 40 50 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SHALE & SLATE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

BRUMMER, J.J. 1961 (62)  
GREENE, B.A. 1974 (169)  
DOUGLAS, C. 1976 (113)

**CANADA-56**

SEAL LAKE-19  
CU

54 18 10 N 61 41 28 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SHALE & SLATE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE)  
FORMATION (ADELINE ISLAND FM/ SEAL LAKE GROUP)

BRUMMER, J.J. 1961 (62)  
GREENE, B.A. 1974 (169)  
DOUGLAS, C. 1976 (113)



**CANADA-57**  
SEAL LAKE-20  
CU

54 17 38 N 61 40 20 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SHALE & SLATE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREY SHALE/ SLATE)  
FORMATION (ADELINE ISLAND FM/ SEAL ALKE GROUP)

BRUMMER, J.J. 1961 (62)  
GREENE, B.A. 1974 (169)  
DOUGLAS, C. 1976 (113)

**CANADA-58**  
SEARSTON  
CU

47 49 25 N 59 19 48 W  
ENTITY COMMENT (NORTH OCC/MAP 82-1 NFLD-CANADA)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (TWO OCCURRENCES ON COAST-ONE 0.5 KM  
NORTH OF THE OTHER)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (GREEN-GREY AND RED SANDSTONE)  
FORMATION (SEARSTON FORMATION/BARACHOIS GROUP)

KNIGHT, I. 1983 (586)

**CANADA-59**  
SPRIGGS LAKE  
CU, U

54 29 35 N 61 41 00 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (VEINLETS & BLEBS IN QUARTZITE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (QUARTZITE)  
FORMATION (SEAL LAKE GROUP)

SPRIGGS, M.J. 1969 (355)

**CANADA-60**  
WHISKEY LAKE SOUTH SHOWING (MOUNT PISA)  
CU

54 15 30 N 61 34 18 W

ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)  
GEOLOGICAL PROVINCE (GRENVILLE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (PODS & SEAMS IN QTZ STRINGERS & IN  
QUARTZITE)

AGE OF HOST (PROTEROZOIC (NEOHELIKIAN))  
LITHOLOGY (GREEN-GREY QUARTZITE)  
FORMATION (WHISKEY LAKE FM/ SEAL LAKE GROUP)

BRUMMER, J.J. 1961 (62)  
ROBINSON, W.G. 0 (511)  
GREENE, B.A. 1974 (169)  
BRUMMER, J.J. 1960 (61)  
ROY, J.L. 1973 (132)  
DOUGLAS, C. 1976 (113)

**CANADA-61**  
GALLAS POINT  
U, CU, BA

46 07 57 N 62 57 57 W  
ENTITY COMMENT (H DUNSMORE VERIFIED/GSC P77-1B)

GEOGRAPHICAL SUBDIVISION (PRINCE EDWARD ISLAND)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (U WITH PLANT DEBRIS IN GREY-GREEN FLUVIATILE  
SST.)

DUNSMORE, H.E. 1977 (121)  
BARSS, M.S. 1963 (30)

**CANADA-62**  
BALFRON  
CU

45 40 25 N 63 13 30 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SILTSTONE)  
FORMATION (PICTOU GROUP)

BARSS, M.S. 1975 (31)  
LITTLE, H.W. 1971 (244)  
BRUMMER, J.J. 1958 (60)  
GROSS, G.A. 1957 (171)  
SHUMWAY, G. 1951 (345)  
ANON. 0 (470)

**CANADA-63**  
BALFRON-1  
U, CU

45 40 22 N 63 13 40 W  
ENTITY COMMENT (H DUNSMORE VERIFIED/GSC P77-1B)  
  
GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)  
  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (U WITH PLANT DEBRIS IN GREY-GREEN FLUVIATILE  
SST.)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SILTSTONE)  
FORMATION (PICTOU GROUP)

DUNSMORE, H.E. 1977 (121)

**CANADA-64**

BALLANTYNES COVE  
CU

45 50 46 N 61 55 06 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 59)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (AT LIMESTONE - CONGLOMERATE CONTACT)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (CONGLOMERATE)  
FORMATION (MCARAS BROOK FORMATION)

ELLS, R.W. 1904 (129)  
BINNEY, W.P. 1975 (47)

**CANADA-65**

BALMORAL BROOK (MATHESON BROOK)  
CU

45 39 08 N 63 13 14 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOC WITH COAL IN SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
ANON. 0 (473)

**CANADA-66**

BEAR COVE  
CU

45 41 40 N 60 21 22 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 92)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE + SANDSTONE/ WINDSOR-HORTON  
CONTACT)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ SANDSTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-67**

BIG MARSH (WALLACE BROOK)  
CU

45 44 22 N 62 00 21 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 60)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISS IN LMST/ ALSO MALACHITE STAINING IN  
CONGLOM)  
REMARKS (ASSOCIATED WITH WINDSOR-HORTON CONTACT)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-68**

BIZ BROOK  
U, CU

45 41 43 N 63 10 10 W  
ENTITY COMMENT (H DUNSMORE VERIFIED/GSC P77-1B)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (U WITH PLANT DEBRIS IN GREY-GREEN FLUVIATILE  
SST.)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SILTSTONE)  
FORMATION (PICTOU GROUP)

DUNSMORE, H.E. 1977 (121)

**CANADA-69**

BLACK RIVER  
PB, CU, ZN

45 41 25 N 61 07 46 W  
ENTITY COMMENT (GSC OF 281/ PG 147)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (GALENA IN LMST)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)

FORMATION (WINDSOR GROUP)

ANON. 0 (493)  
BINNEY, W.P. 1975 (47)

**CANADA-70**

BLACK RIVER (BLACK BROOK)  
CU, U

45 40 38 N 63 12 37 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC WITH PLANT REMAINS IN  
SANDSTONE)  
REMARKS (240 TONS OF ORE AVG 3.35% CU WAS SHIPPED  
1907-1908)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

BRUMMER, J.J. 1958 (60)  
SHUMWAY, G. 1951 (345)  
ANON. 0 (486)  
ELLS, R.W. 1904 (129)  
GROSS, G.A. 1957 (171)

**CANADA-71**

BLOCKHOUSE CLAIM GROUP  
CU, U

45 44 14 N 63 20 02 W  
ENTITY COMMENT (CTR CLAIM/ LOC MAP NSDM MOD)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOCIATED WITH COALY MATERIAL IN  
SANDSTONE)  
REMARKS (TWO AREAS- NO 1 & NO 2)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE)  
FORMATION (PICTOU GROUP)

BRUMMER, J.J. 1958 (60)  
SHUMWAY, G. 1951 (345)  
ANON. 0 (469)

**CANADA-72**

BLOCKHOUSE POINT/ NO 1  
CU, U

45 44 18 N 63 20 21 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOCIATED WITH COALY MATERIAL IN

SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE)  
FORMATION (PICTOU GROUP)

BRUMMER, J.J. 1958 (60)  
SHUMWAY, G. 1951 (345)  
ANON. 0 (486)

**CANADA-73**

BLOCKHOUSE/ NO 2  
CU, U

45 44 17 N 63 19 55 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOCIATED WITH COALY MATERIAL IN  
SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE)  
FORMATION (PICTOU GROUP)

BRUMMER, J.J. 1958 (60)  
SHUMWAY, G. 1951 (345)  
ANON. 0 (486)

**CANADA-74**

BOISDALE  
PB, AG, ZN, CU

46 01 36 N 60 26 42 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITIC-LIMESTONE NEAR CONGLOMERATE  
CONTACT)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)

ALCOCK, F.J. 1930 (4)  
ANON. 1952 (418)  
MESSERVEY, J.P. 1929 (268)  
FLETCHER, H. 1900 (138)  
ANON. 0 (471)

**CANADA-75**

BRIERLY BROOK-2  
CU

45 36 44 N 62 03 46 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 71)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN LIMESTONE & CONGLOMERATE  
(WINDSOR-HORTON CONT))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (ARGILLACEOUS LIMESTONE/GREY-RED BOULDER  
CONGL)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-76**

BROOKFIELD COPPER SHOWING  
CU

45 16 32 N 63 13 07 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 50)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATIONS IN CARBONACEOUS LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (CARBONACEOUS LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-77**

CAMPBELL S BROOK  
CU

46 02 12 N 61 28 06 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN SHALE AND SANDSTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (SHALE/ SANDSTONE)  
FORMATION (WINDSOR GROUP)

SHAW, W.S. 1974 (340)

**CANADA-78**

CANFIELD DOME  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

45 48 00 N 63 40 00 W  
ENTITY COMMENT (DD HOLES/ESSO MINERALS CANADA)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE/SILTSTONE/MUDSTONE)  
FORMATION (CANFIELD CREEK FM/ PICTOU GROUP)

ANON. 1982 (576)

**CANADA-79**

CAPE BLUE  
CU, PB

45 40 08 N 61 35 32 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 77)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISS IN BASAL PART OF LMST (WINDSOR-HORTON  
CONT))  
REMARKS (MALACHITE STAINING IN HORTON SILTSTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BENSON, D.G. 1970 (39)  
BINNEY, W.P. 1975 (47)

**CANADA-80**

CAPE JACK  
PB, ZN, CU

45 41 20 N 61 33 44 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 80)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (CU IN LMST SANDST & SILTST/PB-ZN IN VEINS IN  
LMST)  
REMARKS (WINDSOR-HORTON CONTACT)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ SANDSTONE/ SILTSTONE)  
FORMATION (WINDSOR GROUP)

BENSON, D.G. 1970 (39)  
BINNEY, W.P. 1975 (47)

**CANADA-81**

CARIBOU RIVER (LOGAN POINT)  
CU

45 45 02 N 62 48 16 W  
ENTITY COMMENT (NSDM OPEN FILE 599)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC WITH PLANT REMAINS IN  
SANDSTONE)  
REMARKS (EXPLORED BY SEVERAL PITS - ONE SAID TO BE 90  
FEET DEEP)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

MESSERVEY, J.P. 1929 (267)  
FLETCHER, H. 1892 (140)

ELLS, R.W. 1904 (129)

**CANADA-82**  
CARR BROOK  
CU

46 03 24 N 60 21 08 W  
ENTITY COMMENT (OCCURRENCE/R V KIRKHAM PERSCOM)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (577)

**CANADA-83**  
CATALONE LAKE  
LST, CU

45 59 25 N 59 59 30 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 136)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-84**  
CENTRAL NEW ANNAN  
CU, FE

45 38 09 N 63 18 44 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
ANON. 0 (487)

**CANADA-85**  
CHISHOLM BROOK (WA MCPHERSONS MINE)  
CU, U

45 49 10 N 63 41 03 W

ENTITY COMMENT (NSDM OPEN FILE 599)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC WITH PLANT REMAINS IN ARKOSIC  
SANDST)  
REMARKS (4 OR 5 TONS OF ORE SHIPPED IN 1900)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (ARKOSIC SANDSTONE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
BRUMMER, J.J. 1958 (60)  
MESSERVEY, J.P. 1940 (269)  
MESSERVEY, J.P. 1929 (267)  
ELLS, R.W. 1904 (129)

**CANADA-86**  
CHRISTMAS ISLAND-1  
CU, PB, ZN

45 58 31 N 60 44 22 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 113)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL PART OF LMST + IN CONGLOM (W-H  
CONTACT))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-87**  
CHRISTMAS ISLAND-2  
CU, PB, ZN

45 57 48 N 60 46 05 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 113)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL PART OF LMST & IN CONGLOM (W-H  
CONTACT))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-88**  
CHRISTMAS ISLAND-3  
CU, PB, ZN

45 57 43 N 60 46 45 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 113)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL PART OF LMST & IN CONGLOM (W-H  
CONTACT))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-89**  
CHURCHVILLE ROAD  
ZN, CU

45 30 34 N 62 38 54 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BLACK & DARK GREY OOLITIC LIMESTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (BLACK & DARK GREY OOLITIC LIMESTONE)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (575)

**CANADA-90**  
COXHEATH-CONTACT ZONE  
CU

46 04 17 N 60 23 10 W  
ENTITY COMMENT (AREA OF DRILLING/OLDALE 1967)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREY CONGLOMERATE ALONG  
WINDSOR-HORTON CONTACT)  
REMARKS (CU OCCURS IN SEVERAL OUTCROPS OF  
CONGLOMERATE ALONG 7.5 MILES STRIKE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (GREY CONGLOMERATE)  
FORMATION (WINDSOR GROUP/ GRANTMIRE FM-HORTON  
GROUP)  
GEOREMARKS (CONGLOMERATE HAS CALCAREOUS TO  
LIMESTONE MATRIX)

OLDALE, H.R. 1967 (578)

**CANADA-91**  
DELHANTY BROOK  
CU

46 01 18 N 61 27 48 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (DISSEMINATIONS IN SHALE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (SHALE)  
FORMATION (WINDSOR GROUP)

SHAW, W.S. 1974 (340)

**CANADA-92**  
DINGWALL (MAC DONALD BROOK)  
CU

46 55 48 N 60 29 54 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN ARGILLITE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (ARGILLITE)

ANON. 0 (472)

**CANADA-93**  
DURHAM  
CU

45 37 56 N 62 47 45 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (REPLACING PLANT REMAINS IN CONGL PATCHES IN  
SANDST)  
REMARKS (MINED PRIOR TO 1882-NO PRODUCTION FIGURES  
GIVEN)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREENISH GREY CONGLOM/RED SANDSTONE)  
FORMATION (POSSIBLY BOSS POINT FM/ RIVERDALE GROUP)

FLETCHER, H. 1892 (140)  
ELLS, R.W. 1904 (129)

**CANADA-94**  
EAST BAY  
CU, ZN

46 00 03 N 60 25 38 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 129)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL LIMESTONE & UPPER CONGLOM (W-H  
CONTACT))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-95**

EAST RIVER NEAR THE ISLAND  
PB, ZN, CU

45 29 02 N 62 39 48 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN CRYSTALLINE DOLOMITE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (CRYSTALLINE DOLOMITE)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (575)

**CANADA-96**

EAST WALLACE RIVER (HIGGINS BROOK)  
CU

45 37 55 N 63 31 21 W  
ENTITY COMMENT (NSDM OPEN FILE 599)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC WITH CARBONACEOUS MATERIAL  
IN SANDST)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE)  
FORMATION (BOSS POINT FM)

SHUMWAY, G. 1951 (345)

**CANADA-97**

ELGIN/ BLACK ROCK  
CU

45 24 00 N 62 38 00 W  
ENTITY COMMENT (LOC MAP/ NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BEDDING PLANES & MINUTE FRACTURES IN SED  
ROCKS)

AGE OF HOST (EARLY CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (ARGILLACIOUS LIMESTONE)  
FORMATION (WINDSOR GROUP)

ANON. 0 (480)

**CANADA-98**

EUREKA (FERRONA JUNCTION)  
CU, AG

45 30 11 N 62 40 45 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN CRYSTALLINE DOLOMITE & DOLOMITIC SHALE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (CRYSTALLINE DOLOMITE/DOLOMITIC SHALE)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (575)

**CANADA-99**

EUREKA HOLE 1  
CU, ZN

45 28 50 N 62 39 42 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREY LIMY SILTSTONE/OOLITIC  
LIMESTONE/SHALE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (OOLITIC & STROMATOLITIC  
LIMESTONE/SILT/SHALE)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (575)

**CANADA-100**

FEELEY MINE (WENTWORTH CENTRE)  
CU

45 41 24 N 63 33 09 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (CONCRETIONS & REPL OF PLANT REMAINS IN  
SANDSTONE)  
REMARKS (LIMITED MINERALIZATION OUTLINED BY TUNNELS &  
DRIFTS)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE)  
FORMATION (PICTOU GROUP)

BANCROFT, M.F. 1944 (23)  
ELLS, R.W. 1904 (129)  
SHUMWAY, G. 1951 (345)

**CANADA-101**

FINLAY BEACH  
CU

46 07 53 N 61 27 38 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 101)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN CONGLOMERATE AT WINDSOR-HORTON)

CONTACT)  
REMARKS (ONLY TRACE OF CU FOUND)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-102**

FLEMING BROOK MINE (LOWER WENTWORTH)  
CU

45 43 07 N 63 33 41 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (CHALCOCITE IN BLUE-GREY SHALE & SILTY SHALE)  
REMARKS (UNKNOWN AMOUNT OF ORE REMOVED /UNKNOWN  
WHEN IT WAS WORKED)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (BLUE-GREY SHALE/ SILTY SHALE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)

**CANADA-103**

FRENCH RIVER MOUTH (TATAMAGOUCHE)  
CU

45 43 09 N 63 18 07 W  
ENTITY COMMENT (CENTROID/LOC MAP NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLFDS ASSOC W CARBONACEOUS LAYERS IN  
SANDST& SHALE)  
REMARKS (TWO OCCURRENCES ONE ON EACH BANK/ POSS  
PART OF SAME BED/LOC IS AVERAGE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/SHALE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)

**CANADA-104**

FRENCH RIVER MOUTH NO 2 (TATAMAGOUCHE)  
CU

45 43 09 N 63 18 07 W  
ENTITY COMMENT (ARROW/ LOCATION MAP SHUMWAY-51)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC W CARBONACEOUS LAYERS IN SS  
& SHALE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/SHALE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)

**CANADA-105**

FRENCH RIVER MOUTH/ NO 1 (TATAMAGOUCHE)  
CU

45 43 09 N 63 18 07 W  
ENTITY COMMENT (ARROW/ LOCATION MAP SHUMWAY-51)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC W CARBONACEOUS LAYERS IN SS  
& SHALE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/SHALE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)

**CANADA-106**

FRENCHVALE- LEITCHES CREEK  
CU

46 10 00 N 60 18 00 W  
ENTITY COMMENT (LEITCHES CREEK/ GAZETTEER)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM IN SEDS)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

ANON. 0 (479)  
FLETCHER, H. 1900 (138)

**CANADA-107**

GARBARUS LAKE  
CU, ZN

45 49 00 N 60 13 00 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATIONS IN LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

SHAW, W.S. 1974 (340)



**CANADA-108**  
GILLISDALE  
CU

46 13 43 N 61 08 54 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 95)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN CALCITE-VEINED BASAL LIMESTONE (W-H  
CONTACT))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-109**  
GLEN MORRISON (GM-1)  
CU

45 59 00 N 60 19 00 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 135)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE &  
CONGLOMERATE/WINDSOR-HORTON CONTACT)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-110**  
GRANT BROOK  
CU

45 44 26 N 63 34 24 W  
ENTITY COMMENT (OCCURRENCE/EAST END OF BROOK)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (TWO OCCURRENCES 1.75 KM APART ALONG WEST  
TO EAST FLOWING GRANT BROOK)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ARKOSE/GREYWACKE/QUARTZITE)  
FORMATION (BOSS POINT FORMATION/RIVERSDALE GROUP)

PONSFORD, M. 1984 (580)

**CANADA-111**  
GUYSBOROUGH AREA 2-03-ABCD  
CU

45 22 35 N 61 35 20 W

ENTITY COMMENT (AREA 2-03-ABCD/NSDM ASSESS FIL)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (CHALCO DISSEM IN SLATE & QTZITE)

AGE OF HOST (DEVONIAN-CARBONIFEROUS)  
LITHOLOGY (SLATE/ QUARTZITE)

ANON. 0 (500)

**CANADA-112**  
GUYSBOROUGH AREA 2-03-F  
CU

45 26 20 N 61 34 05 W  
ENTITY COMMENT (AREA 2-03-F/ NSDM ASSESS FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (CHALCO DISSEM IN SLATE & QTZITE)

AGE OF HOST (DEVONIAN-CARBONIFEROUS)  
LITHOLOGY (SLATE/ QUARTZITE)

ANON. 0 (500)

**CANADA-113**  
GUYSBOROUGH AREA 2-03-K  
CU

45 26 28 N 61 40 13 W  
ENTITY COMMENT (AREA 2-03-K/ NSDM ASSESS FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (CHALCO DISSEM IN SLATE & QTZITE)

AGE OF HOST (DEVONIAN-CARBONIFEROUS)  
LITHOLOGY (SLATE/ QUARTZITE)

ANON. 0 (500)

**CANADA-114**  
HIGHWAY SHOWING  
CU

46 14 16 N 60 16 00 W  
ENTITY COMMENT (ROAD CUT/R V KIRKHAM-PERS COMM)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
REMARKS (SHOWING ON WEST SIDE OF TRANS-CANADA  
HIGHWAY AT JUNCTION OF HWY 125)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (MORIEN GROUP)

KIRKHAM, R.V. 1985 (577)

**CANADA-115**

HOPEWELL (EAST RIVER)  
CU

45 28 56 N 62 39 55 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES/SEAMS/LAYERS/ASSOC W PLANT  
REMAINS IN SS)

AGE OF HOST (CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (SANDSTONE/ ARKOSE/ GREYWACKE/ QUARTZITE)  
FORMATION (WINDSOR GROUP)

FLETCHER, H. 1892 (140)  
MESSERVEY, J.P. 1929 (507)  
ELLS, R.W. 1904 (129)  
HOW, H. 1969 (191)  
BENSON, D.G. 1967 (38)

**CANADA-116**

IONA (IONA RIVER)  
PB, ZN, CU

45 57 45 N 60 48 36 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

ANON. 0 (497)

**CANADA-117**

JAMES RIVER STATION  
CU, ZN, PB

45 34 40 N 62 07 15 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 67 & 73)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN ARGILLACEOUS LIMESTONE)

AGE OF HOST (CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (ARGILLACEOUS LIMESTONE)  
FORMATION (WINDSOR GROUP)

ANON. 0 (491)  
BINNEY, W.P. 1975 (47)

**CANADA-118**

JOHNSTOWN  
CU

45 48 18 N 60 43 18 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATIONS & FEW STRINGERS IN  
LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

SHAW, W.S. 1974 (340)

**CANADA-119**

KEATON POINT  
CU

45 37 35 N 61 23 22 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 81)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE (WINDSOR-HORTON CONTACT))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-120**

KERRS MILLS (WALLACE RIVER)  
CU

45 46 22 N 63 34 15 W  
ENTITY COMMENT (GSC MAP 795/NSDM OPEN FILE 599)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES & REPLACEMENTS OF PLANT REMAINS IN  
SS)  
REMARKS (NMI DESCRIPTION SHOULD READ SOUTHEAST)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
ANON. 0 (476)

**CANADA-121**

KING MINE (OXFORD)  
CU, U, AG

45 45 02 N 63 10 13 W

ENTITY COMMENT (NSDM OPEN FILE 599)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES & REPLACEMENT OF PLANT REMAINS IN  
SLATY-SS)  
REMARKS (IN 1899 SHAFT SUNK TO 40 FEET WITH 30-FT DRIFT)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SLATY SANDSTONE)  
FORMATION (PICTOU GROUP)

MESSERVEY, J.P. 1929 (267)  
GOUDGE, M.G. 1947 (167)  
ELLS, R.W. 1904 (129)

**CANADA-122**

KIRKWOOD  
CU, PB, ZN

46 10 00 N 61 09 00 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (SLFDS ASSOC WITH PLANT REMAINS IN  
SANDSTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (ARKOSE SANDSTONE)

JONES, B.E. 1969 (206)  
ANON. 1970 (425)

**CANADA-123**

KNOYDART POINT & BROOK  
CU, PB, ZN, AS, AG

45 43 19 N 62 14 10 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SULPHIDE REPLACING COAL FRAGMENTS IN  
SANDSTONE)  
REMARKS (5 OCCURRENCES)

AGE OF HOST (UPPER MISSISSIPPIAN)  
LITHOLOGY (SHALE LIMY SANDSTONE)  
FORMATION (ARDNESS FORMATION/ CANSO GROUP)  
GEOREMARKS (MINERALIZATION CONCENTRATED IN BED 1  
FOOT THICK)

MESSERVEY, J.P. 1929 (267)  
WIESE, R.G. 1957 (395)

**CANADA-124**

LAKEVALE  
CU

45 47 12 N 61 54 38 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 62)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL PART OF LIMESTONE/ WINDSOR-HORTON  
CONTACT)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-125**

LIMEROCK  
CU, PB

45 33 00 N 62 51 00 W  
ENTITY COMMENT (OCC/NEAR VILLAGE OF LIMEROCK)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM IN BLACK FOSSILIFEROUS LIMESTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (DARK GREY FENESTRAL & BLACK FOSSILIFEROUS  
LS)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (575)

**CANADA-126**

LITTLE JUDIQUE  
PB, CU

45 55 29 N 61 26 15 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE AND SHALE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ SHALE)  
FORMATION (CANSO GROUP)

ANON. 0 (481)

**CANADA-127**

LOWER NORTH GRANT  
CU

45 38 49 N 61 59 26 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 66)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL PART OF LIMESTONE/ WINDSOR-HORTON

CONTACT)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-128**

MABOU (MACKINNON BROOK)  
CU, ZN, PB

46 09 53 N 61 26 11 W  
ENTITY COMMENT (MABOU/ GAZETTEER)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (SANDSTONE AND SANDSTONE-CONGLOMERATE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ CONGLOMERATE)

ANON. 0 (483)

**CANADA-129**

MACBETH BROOK  
CU

46 04 20 N 60 19 38 W  
ENTITY COMMENT (OCCURRENCE/R V KIRKHAM PERSCOM)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE)  
REMARKS (SEVERAL OCCURRENCE WITHIN DISTANCE OF 0.33  
KM ALONG MACBETH BROOK)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (577)

**CANADA-130**

MACKAY SHOWING  
CU

46 07 12 N 60 21 24 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

SHAW, W.S. 1974 (340)  
FLETCHER, H. 1900 (138)

**CANADA-131**

MACMULLIN BROOK (FRENCHVALE BROOK)  
CU

46 06 14 N 60 23 05 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 127)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATIONS IN LIMESTONE &  
CONGLOMERATE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

SHAW, W.S. 1974 (340)  
FLETCHER, H. 1900 (138)  
BINNEY, W.P. 1975 (47)

**CANADA-132**

MALAGASH (NORTH SHORE)  
CU

45 47 56 N 63 20 56 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ARKOSE/GREYWACKE/QUARTZITE)  
FORMATION (RIVERDALE)

PONSFORD, M. 1984 (580)

**CANADA-133**

MALAGASH CENTRE (MALAGASH-SOUTH SHORE)  
CU

45 46 10 N 63 19 25 W  
ENTITY COMMENT (NSDM OPEN FILE 599)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC WITH PLANT REMAINS IN  
SANDSTONE)  
REMARKS (MINED FOR CU PRIOR TO 1890 BUT NO  
PRODUCTION FIGURES GIVEN)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
ELLS, R.W. 1904 (129)  
FLETCHER, H. 1892 (140)

**CANADA-134**

MALAGASH POINT

CU, COL

45 48 14 N 63 14 24 W  
ENTITY COMMENT (NSDM OPEN FILE 599)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOC WITH PLANT REMAINS IN SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREENISH-GREY COARSE SANDSTONE)  
FORMATION (PICTOU GROUP)

FLETCHER, H. 1892 (140)  
SHUMWAY, G. 1951 (345)  
ELLS, R.W. 1904 (129)

#### **CANADA-135**

MATHESON PROSPECT (LOWER WAUGH RIVER)  
CU

45 41 15 N 63 14 20 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES IN CONGLOMERATE & SHALE)  
REMARKS (VERY MINOR MINERALIZATION)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (CONGLOMERATE/ SHALE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
ANON. 0 (486)

#### **CANADA-136**

MCINTYRE LAKE  
CU, PB, ZN, FE

45 47 24 N 60 15 24 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM IN CONGLOMERATE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (CONGLOMERATE)

ANON. 0 (492)  
SHAW, W.S. 1974 (340)  
BINNEY, W.P. 1975 (47)

#### **CANADA-137**

MCLELLAN BROOK (STEWART BROOK)  
CU

45 32 18 N 62 35 50 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN OOLITIC & MICRITIC STROMATOLITIC  
LIMESTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (DARK GREY OOLITIC & STROMATOLITIC  
LIMESTONE)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (575)

#### **CANADA-138**

MCLELLAN BROOK HOLES 1 2 & 3  
CU

45 31 28 N 62 36 51 W  
ENTITY COMMENT (DRILL HOLE 1/CU 10 FIG 69.9)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN OOLITIC & STROMATOLITIC LIMESTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (OOLITIC LIMESTONE/STROMATOLITIC LIMESTONE)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (575)

#### **CANADA-139**

MCLEOD POINT (ST ANNS HARBOUR)  
CU

46 14 07 N 60 36 41 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 123)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (MALACHITE IN LIMESTONE & CONGLOMERATE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

#### **CANADA-140**

MCPHERSON  
CU

45 31 42 N 61 54 26 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 74)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL PART OF LIMESTONE/ WINDSOR-HORTON  
CONTACT)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)

FORMATION (WINDSOR GROUP)

BENSON, D.G. 1970 (39)  
BINNEY, W.P. 1975 (47)

**CANADA-141**

MEADOW GREEN (KENNCO HOLE 6)  
CU

45 33 04 N 61 48 50 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 76)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL PART OF LIMESTONE/ WINDSOR-HORTON  
CONTACT)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BENSON, D.G. 1970 (39)  
BINNEY, W.P. 1975 (47)

**CANADA-142**

MIDDLE STEWIAKKE  
PB, ZN, CU, FL, BA

45 11 41 N 63 11 53 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM & BLEBS IN SANDSTONE)

AGE OF HOST (CARBONIFEROUS (PENNSYLVANIAN))  
LITHOLOGY (SANDSTONE/ARKOSE/GREYWACKE/QUARTZITE)  
FORMATION (SCOTCH VILLAGE FORMATION)

ANON. 0 (478)  
STEVENSON, I.M. 1959 (359)  
ANON. 0 (490)  
ANON. 0 (489)  
ANON. 0 (488)

**CANADA-143**

MINE HOLE BROOK  
CU

45 40 47 N 63 14 51 W  
ENTITY COMMENT (NO 1/ NSDM OPEN FILE 599)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES IN SANDSTONE)  
REMARKS (TWO AREAS MINES/ DIGGINGS NOW FILLED IN AND  
OVERGROWN)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)

FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
ANON. 0 (469)

**CANADA-144**

MINE HOLE BROOK/ NO 1  
CU

45 40 47 N 63 14 51 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES IN SANDSTONE)  
REMARKS (DIGGINGS FROM WHICH CU WAS MINED NOW  
FILLED IN AND OVERGROWN)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
ANON. 0 (486)

**CANADA-145**

MINE HOLE BROOK/ NO 2  
CU

45 40 54 N 63 14 14 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES IN SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
ANON. 0 (486)

**CANADA-146**

MONASTERY (MEADOWS BROOK)  
PB, CU

45 35 50 N 61 38 45 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SMALL FRACTURES IN SANDSTONE &  
LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/LIMESTONE)  
FORMATION (WINDSOR GROUP)

ANON. 0 (495)

BENSON, D.G. 1970 (39)  
ANON. 0 (494)

**CANADA-147**

MUSGRAVE SHOWING (FRENCHVALE ROAD)  
CU

46 07 48 N 60 20 30 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 127)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN LIMESTONE & CONGLOMERATE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

SHAW, W.S. 1974 (340)  
FLETCHER, H. 1900 (138)  
BINNEY, W.P. 1975 (47)

**CANADA-148**

NAPPAN  
CU, PB, AU, AG

45 44 00 N 64 15 00 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AGGREGATIONS & DISSEMINATIONS IN  
SANDSTONE)  
REMARKS (UNKNOWN AMT OF ORE SHIPPED (1897))

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE)  
FORMATION (CUMBERLAND GROUP)  
GEOREMARKS (SANDSTONE CONTAINS CONSIDERABLE  
CARBONIZED PLANT REMAINS)

PIERS, H. 1903 (299)  
DAWSON, G.M. 1898 (106)

**CANADA-149**

OHIO (MACLEAN SHOWING)  
CU, PB

45 30 33 N 62 04 39 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN LIMESTONE (WINDSOR-HORTON  
CONT))  
REMARKS (CU/PB OCCUR ERRATICALLY DISSEM IN  
CONGLOMERATE INTERLAYERED WITH LMSN)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

GEOREMARKS (LMSN SEQUENCE MAY BE MARGINAL BASIN  
BEDS FROM HIGHER IN THE WINDSOR GR)

BOEHNER, R.C. 1982 (579)  
PONSFORD, M. 1984 (580)  
BINNEY, W.P. 1974 (581)

**CANADA-150**

OLIVER (FRENCH RIVER)  
CU

45 40 06 N 63 19 20 W  
ENTITY COMMENT (CENTROID/LOC MAP NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES IN SANDST/ALSO REPL PLANT REMAINS  
IN CONGL)  
REMARKS (IN 1877 18.5 TONS ORE SHIPPED/ SEVERAL  
PROSPECTS)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE/ CONGLOMERATE)  
FORMATION (PICTOU GROUP)

BANCROFT, M.F. 1944 (23)  
ELLS, R.W. 1904 (129)

**CANADA-151**

OLIVER NORTH PROSPECT  
CU

45 40 55 N 63 19 01 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOC WITH PYRITE NODULES IN SANDSTONE)  
REMARKS (CU ALSO REPLACES PLANT REMAINS IN  
CONGLOMERATE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE/ CONGLOMERATE)  
FORMATION (PICTOU GROUP)

**CANADA-152**

OLIVER SOUTH (MILLER BROOK)  
CU

45 38 44 N 63 18 49 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARKOSIC CONGLOMERATE/ SANDSTONE  
REPLACING COAL)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE/ CONGLOMERATE/ SHALE)

FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
ANON. 0 (484)

**CANADA-153**

OLIVER-NO 1 (FRENCH RIVER)  
CU

45 39 44 N 63 19 34 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES IN SANDST/ALSO REPL PLANT REMAINS  
IN CONGL)  
REMARKS (ALSO REPLACING PLANT REMAINS IN UNDERLYING  
CONGLOMERATE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ CONGLOMERATE)  
FORMATION (PICTOU GROUP)

BANCROFT, M.F. 1944 (23)  
MESSERVEY, J.P. 1929 (267)  
ELLS, R.W. 1904 (129)

**CANADA-154**

OLIVER-NO 2 (FRENCH RIVER)  
CU

45 39 41 N 63 19 24 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES IN SANDST/ALSO REPL PLANT REMAINS  
IN CONGL)  
REMARKS (ALSO REPLACING PLANT REMAINS IN UNDERLYING  
CONGLOMERATE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ CONGLOMERATE)  
FORMATION (PICTOU GROUP)

BANCROFT, M.F. 1944 (23)  
MESSERVEY, J.P. 1929 (267)  
ELLS, R.W. 1904 (129)

**CANADA-155**

PALMER MINE (WENTWORTH CENTRE)  
CU

45 40 02 N 63 36 19 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN CRUMPLED LAMINAE & CRUSTS/ THROUGH  
SHALES)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SHALES)  
FORMATION (PICTOU GROUP)

BRUMMER, J.J. 1958 (60)  
BANCROFT, M.F. 1944 (23)  
MESSERVEY, J.P. 1929 (267)  
ELLS, R.W. 1904 (129)

**CANADA-156**

PITCHERS FARM-1 (DUNMORE BROOK)  
CU

45 32 14 N 61 59 06 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATIONS IN SANDSTONE AND SHALE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ SHALE)  
FORMATION (CANSO GROUP)

ANON. 0 (496)

**CANADA-157**

PITCHERS FARM-2 (DUNMORE BROOK)  
CU

45 32 04 N 61 57 45 W  
ENTITY COMMENT (NSDM AF 11-F-12B/ 13-B-30(01))

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATIONS IN SHALE AND SANDSTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SHALE/ SANDSTONE)  
FORMATION (CANSO GROUP)

ANON. 0 (499)

**CANADA-158**

PLAINFIELD BROOK (MACKAY BROOK)  
CU

45 38 03 N 62 57 27 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (CHALCOCITE NODULES ASSOC WITH COAL/ IN  
SANDSTONE)

AGE OF HOST (DEVONIAN)  
LITHOLOGY (SANDSTONE/ARKOSE/GREYWACKE/QUARTZITE)  
FORMATION (FALLS FORMATION)

ELLS, R.W. 1904 (129)



FLETCHER, H. 1892 (140)  
ANON. 0 (485)

**CANADA-159**  
POINT EDWARD  
PB, CU

46 10 02 N 60 16 20 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 128)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-160**  
POMQUET RIVER  
CU

45 34 14 N 61 49 56 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM IN CRYSTALLINE OOLITIC LIMESTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (MOTTLED PALE TO DARK BROWN OOLITIC  
LIMESTONE)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (575)

**CANADA-161**  
RIGHTS RIVER-MAIN SHOWING (SYLVAN GLEN)  
CU

45 38 00 N 62 01 13 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 68)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & VEINS IN LMST/DISSEM IN UNDERLYING  
CONGL)  
REMARKS (CU ERRATICALLY DISSEM ALONG BEDDING  
LAMINATE & IN SMALL CARBONATE VEINS)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (DARK GREY LIMESTONE/GREEN CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-162**  
RIGHTS RIVER-RAILWAY SHOWING (SYLVAN GLEN)  
CU

45 37 46 N 62 02 01 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 68)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN CONGLOMERATE + LIMESTONE  
(WINDSOR-HORTON CONT))  
REMARKS (CU ERRATICALLY DISSEM ALONG BEDDING  
LAMINAE & IN SMALL CARBONATE VEINS)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (CONGLOMERATE/ LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-163**  
RIVER JOHN (EAST BRANCH)  
CU

45 41 44 N 63 02 51 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES & REPLACEMENT OF PLANT REMAINS IN  
SANDST)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE)  
FORMATION (PICTOU GROUP)

SHUMWAY, G. 1951 (345)  
FLETCHER, H. 1892 (140)  
WILSON, M.E. 1927 (401)  
ELLS, R.W. 1904 (129)

**CANADA-164**  
RIVERSIDE MINE (KING BROOK (OXFORD))  
CU, AG

45 44 59 N 63 50 44 W  
ENTITY COMMENT (NSDM OPEN FILE 599)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (REPLACEMENT OF PLANT REMAINS IN  
CONGLOMERATE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (CONGLOMERATE)  
FORMATION (PICTOU GROUP)

ANON. 0 (475)  
ANON. 0 (474)

**CANADA-165**  
ROCKLEY  
CU

45 49 06 N 63 45 15 W  
ENTITY COMMENT (OCCURENCE/WEST SIDE PHILIP R)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/SILTSTONE/MUDSTONE)  
FORMATION (PICTOU GROUP)

ANON. 1982 (576)

**CANADA-166**  
SALMON RIVER  
CU, ZN

45 54 45 N 60 18 30 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATIONS IN LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

ANON. 0 (498)

**CANADA-167**  
SCOTCH HILL (SUNDRIDGE)  
CU

45 41 35 N 62 49 45 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS REPLACING PLANT REMAINS IN  
SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (RIVERDALE GROUP)

**CANADA-168**  
SCOTSBURN BROOK (STEWART BROOK)  
CU

45 39 22 N 62 52 44 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (CHALCOCITE ASSOCIATED WITH COAL IN  
SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (RIVERDALE GROUP)

ELLS, R.W. 1904 (129)  
FLETCHER, H. 1892 (140)  
ANON. 0 (485)

**CANADA-169**  
SOLDIER COVE NORTH  
CU, FL

45 43 00 N 60 44 49 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 144)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL PART OF LIMESTONE/ WINDSOR-HORTON  
CONTACT)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-170**  
SOUTH PUGWASH (PUGWASH SOUTH BAY)  
CU, U

45 49 21 N 63 39 41 W  
ENTITY COMMENT (CENTROID/LOC MAP NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLFDS ASSOC WITH PLANT REMAINS IN  
SANDSTONE)  
REMARKS (3 AREAS/RADIOACTIVITY ASSOC WITH PLANT  
REMAINS/ UNECONOMIC/ LOC IS AVG)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

BRUMMER, J.J. 1958 (60)  
SHUMWAY, G. 1951 (345)

**CANADA-171**  
SOUTH PUGWASH/ NO 1 (PUGWASH SOUTH BAY-NO 1)  
CU, U

45 49 10 N 63 41 12 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC WITH PLANT REMAINS IN  
SANDSTONE)  
REMARKS (RADIOACTIVITY ASSOCIATED WITH PLANT  
REMAINS)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

BRUMMER, J.J. 1958 (60)  
SHUMWAY, G. 1951 (345)

**CANADA-172**

SOUTH PUGWASH/ NO 2 (PUGWASH SOUTH BAY-NO 2)  
CU, U

45 49 36 N 63 40 38 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC WITH PLANT REMAINS IN  
SANDSTONE)  
REMARKS (RADIOACTIVITY ASSOCIATED WITH PLANT  
REMAINS)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

BRUMMER, J.J. 1958 (60)  
SHUMWAY, G. 1951 (345)

**CANADA-173**

SOUTH PUGWASH/ NO 3 (PUGWASH SOUTH BAY-NO 3)  
CU, U

45 49 41 N 63 38 07 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC WITH PLANT REMAINS IN  
SANDSTONE)  
REMARKS (RADIOACTIVITY ASSOCIATED WITH PLANT  
REMAINS)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (PICTOU GROUP)

BRUMMER, J.J. 1958 (60)  
SHUMWAY, G. 1951 (345)

**CANADA-174**

SOUTHWEST MABOU RIVER  
CU

45 59 24 N 61 24 54 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 104)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDY LIMESTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDY LIMESTONE)

BINNEY, W.P. 1975 (47)

**CANADA-175**

SPRINGHILL (HOLMES BROOK)  
CU

45 27 39 N 62 36 39 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 52)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR)

BINNEY, W.P. 1975 (47)

**CANADA-176**

SQUIRE POINT (ST ANNS)  
CU, PB, ZN

46 13 04 N 60 35 23 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 123)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE &  
CONGLOMERATE(WINDSOR-HORTON CONTC))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-177**

ST JOSEPH-1  
CU

45 32 31 N 62 05 51 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (AT CONTACT OF WINDSOR SEDS & EARLIER  
SED-VOLCS)

AGE OF HOST (EARLY CARBONIFEROUS)  
FORMATION (LIMESTONE)  
GEOREMARKS (WINDSOR GROUP)

FLETCHER, H. 1887 (139)

**CANADA-178**

ST JOSEPHS-2  
CU

45 32 04 N 62 05 04 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-179**  
STEELE CROSSING  
PB, ZN, CU, AG

46 02 30 N 60 28 00 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN LIMESTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)

ANON. 0 (482)  
FLETCHER, H. 1900 (138)

**CANADA-180**  
STEEP CREEK  
CU

45 33 58 N 61 21 17 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 82)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE + CLASTIC ROCKS (W-H CONTACT))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-181**  
SYLVAN GLEN AREA (SYLVAN VALLEY)  
CU

45 37 01 N 62 03 27 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (DISSEMINATED IN LIMESTONE 7 UNDERLYING  
CONGLOM)  
REMARKS (7 OCCURRENCES NOTED IN OPEN FILE 599 (TWO  
ARE CODED AS -RIGHTS RIVER))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (DARK GREY LAMINATED LIMESTONE/GREEN  
CONGLOM)  
FORMATION (WINDSOR GROUP)  
GEOREMARKS (APPROX 46 CM OF LIMESTONE OVER 1.5M OF  
CONGLOMERATE CONTAIN VISIBLE CU)

BOEHNER, R.C. 1982 (579)  
PONSFORD, M. 1984 (580)

**CANADA-182**  
TATAMAGOUCHE  
CU, U

45 41 47 N 63 16 51 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN SHALE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SHALE)  
FORMATION (PICTOU GROUP)

PONSFORD, M. 1984 (580)

**CANADA-183**  
TELFORD  
PB, ZN, CU, FE

45 34 52 N 62 29 22 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (POSSIBLE REPLACEMENT OF PLANT REMAINS IN  
GREYWACKE)  
REMARKS (2 OCCURRENCES 0.5 MILES APART/ 2ND  
OCCURRENCE IN SANDSTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (GREYWACKE/ SANDSTONE)  
FORMATION (CANISO GROUP)

BENSON, D.G. 1965 (37)  
BENSON, D.G. 1970 (39)

**CANADA-184**  
THE ISLAND ROADCUT  
CU

45 28 36 N 62 39 06 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DARK GREY & BLACK OOLITIC & MICRITIC

LIMESTONE)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (OOLITIC LIMESTONE/GREY & GREEN LIMY SHALES)  
FORMATION (WINDSOR GROUP)

KIRKHAM, R.V. 1985 (575)

**CANADA-185**

TREEN POINT (TREEN BLUFF)  
CU

45 48 34 N 63 17 47 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLFDS ASSOC WITH PLANT REMAINS IN  
SANDSTONE)  
REMARKS (CU MINERALIZATION ASSOCIATED WITH PYRITE  
REPLACEMENT)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREYISH SANDSTONE)  
FORMATION (BOSS POINT FM/ RIVERDALE GROUP)

SHUMWAY, G. 1951 (345)

**CANADA-186**

UNION CENTRE (MIDDLE RIVER)  
CU

45 32 54 N 62 45 18 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS ASSOC WITH PLANT REMAINS IN  
SANDSTONE)

AGE OF HOST (CARBONIFEROUS (MISSISSIPPIAN))  
LITHOLOGY (SANDSTONE/ ARKOSE/ GREYWACKE/ QUARTZITE)  
FORMATION (CUMBERLAND GROUP)

FLETCHER, H. 1892 (140)

**CANADA-187**

WASHABUCK  
CU, PB, ZN

46 03 15 N 60 48 08 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 112)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM IN LIMESTONE & CONGLOMERATE (W-H  
CONTACT))

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ CONGLOMERATE)

FORMATION (WINDSOR GROUP/ HORTON GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-188**

WASHABUCK-CROW POINT  
CU, AU, AG, PB

46 04 30 N 60 46 00 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN CONGLOMERATE)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (CONGLOMERATE)  
FORMATION (HORTON GROUP)

HOW, H. 1969 (191)  
ELLS, R.W. 1904 (129)  
KELLEY, D.G. 1967 (210)

**CANADA-189**

WATERSIDE  
CU

45 45 10 N 62 47 00 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SS & CONGL / CEMENTED WITH LIME & CU  
SOLUTION)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/CONGLOMERATE)  
FORMATION (PICTOU GROUP)

ANON. 0 (477)

**CANADA-190**

WENTWORTH  
CU, U

45 41 28 N 63 33 08 W  
ENTITY COMMENT (H DUNSMORE VERIFIED/GSC P77-1B)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (U WITH PLANT DEBRIS IN GREY-GREEN FLUVIATILE  
SST.)  
REMARKS (WORKED FOR CU SAMPLES FROM ORE-DUMP  
0.016-0.035%U308(EQV)/5.3-13.88%CU)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY-GREEN SILTSTONE)  
FORMATION (PICTOU GROUP)

DUNSMORE, H.E. 1977 (121)

BRUMMER, J.J. 1958 (60)

**CANADA-191**  
WHYCOCOMAGH  
CU

45 57 43 N 61 06 05 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 109)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL PART OF LMST + UPPER PART OF  
CONGLOM)  
REMARKS (WINDSOR-HORTON CONTACT)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (LIMESTONE/ CONGLOMERATE)  
FORMATION (WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-192**  
WILLIES BROOK  
CU

45 38 02 N 62 03 01 W  
ENTITY COMMENT (GSC OPEN FILE 281/ PG 69)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN FRACTURES + DISSEMINATIONS IN  
CONGLOMERATE)

AGE OF HOST (DEVONIAN-CARBONIFEROUS)  
LITHOLOGY (CONGLOMERATE)

BINNEY, W.P. 1975 (47)

**CANADA-193**  
WOODLOCK BROOK PROSPECT (MCCULLOUGH PROSPECT)  
CU, U

45 41 40 N 63 17 00 W  
ENTITY COMMENT (NSDM MOD FILE)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (THIN LAYERS & NODULES IN SANDSTONE)  
REMARKS (RADIOACTIVE COALY MATERIAL FOUND IN SOME  
CHALCOCITE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (GREY SANDSTONE)  
FORMATION (PICTOU GROUP)

BRUMMER, J.J. 1958 (60)  
SHUMWAY, G. 1951 (345)  
COLE, E.J. 1951 (93)  
ELLS, R.W. 1904 (129)  
ANON. 0 (468)

**CANADA-194**  
YANKEE LINE ROAD  
PB, CU

46 07 59 N 60 55 00 W  
ENTITY COMMENT (ROAD CUT/GSC OPEN FILE 281/117)

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN CONGLOMERATE & LIMEST (WINDSOR-HORTON  
CONTACT))  
REMARKS (GREY CONGLOMERATE HEAVILY STAINED BY  
MALACHITE/ GALENA DISSEM IN LMSN)

AGE OF HOST (EARLY CARBONIFEROUS)  
LITHOLOGY (CONGLOMERATE/LIMESTONE)  
FORMATION (HORTON GROUP/WINDSOR GROUP)

BINNEY, W.P. 1975 (47)

**CANADA-195**  
YELLOW BROOK  
CU

45 39 39 N 63 11 17 W

GEOGRAPHICAL SUBDIVISION (NOVA SCOTIA)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN SANDSTONE)

AGE OF HOST (LATE CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ARKOSE/GREYWACKE/QUARTZITE)  
FORMATION (PICTOU GROUP)

PONSFORD, M. 1984 (580)

**CANADA-196**  
DORCHESTER (COLONIAL COPPER MINE)  
CU, AG, U, ZN, PB (SEE RESERVE/PRODUCTION REPORT)

45 55 43 N 64 28 35 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (REPL FOSSIL PLANT FRAGS & PY & CEMENT IN SS  
& CONG)  
REMARKS (PB-ZN IN BEDS ABOVE CU ZONE/ ALSO NATIVE CU  
IN UNDERLYING RED SEDS)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/CONGLOMERATE)  
FORMATION (MARINGOUIN/SHEPODY FORMATIONS-HOPEWELL  
GROUP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

BROWN, A.C. 1975 (57)  
WRIGHT, W.J. 1951 (513)  
SMITH, A.Y. 1960 (350)

BALL, F.D. 1975 (22)  
POTTER, R.R. 1967 (303)  
KIRKHAM, R.V. 1974 (218)  
ANON. 1981 (450)

**CANADA-197**

GOSHEN (UPPER GOSHEN)  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

45 46 00 N 65 10 00 W  
ENTITY COMMENT (NBMR BR TOPICAL REPT 75-22)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM/FAC FILLS/ PEBBLE COATINGS IN  
CONGLOMERATE)  
REMARKS (MAP REFS ALSO NB PLATES 64-2/ 33-3A/ 40-28)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (CONGLOMERATE)  
FORMATION (MONCTON GROUP)

BALL, F.D. 1975 (22)  
HAWKINS, W.H. 1958 (185)  
POTTER, R.R. 1967 (303)  
WILSON, M.E. 1927 (401)  
ANON. 0 (467)  
ANON. 1983 (537)

**CANADA-198**

HOPEWELL CAPE (THE ROCKS)  
CU, ZN

45 49 30 N 64 34 55 W

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM IN STROMATOLITIC LIMESTONE & LIMY  
SANDST)  
REMARKS (MINOR CHALCOPYRITE & SPHALERITE (?)/ ALSO  
RED BED CU IN AREA)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (STROMATOLITIC & OOLITIC LIMESTONE/  
SANDSTONE)  
FORMATION (DEMOISELLE CREEK BEDS/ WINDSOR GROUP)

KIRKHAM, R.V. 1985 (575)

**CANADA-199**

LITTLE RIDGE-PIT 13 (NEW HORTON BELT)  
CU

45 38 50 N 64 44 15 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOC W CARBONIZED PLANT REMAINS IN SANDST  
& CONGL)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ CONGLOMERATE)  
FORMATION (MARINGOUIN/ SHERPODY  
FORMATIONS-HOPEWELL GRP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

WRIGHT, W.J. 1951 (411)  
POTTER, R.R. 1967 (303)

**CANADA-200**

MIDWAY COPPER BELT-OCC 7  
CU

45 41 31 N 64 44 31 W  
ENTITY COMMENT (NB MIN RES BR PLATE 51-3)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM REPLACEMENT OF PLANT REMAINS IN  
GREY SS)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/CONGLOMERATE)  
FORMATION (MARINGOUIN/SHERPODY  
FORMATIONS-HOPEWELL GROUP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

WRIGHT, W.J. 1951 (411)  
BALL, F.D. 1975 (22)  
POTTER, R.R. 1967 (303)  
BOYD, R.T. 1978 (55)  
KIRKHAM, R.V. 1974 (218)

**CANADA-201**

MIDWAY COPPER BELT-PIT 1  
CU

45 39 05 N 64 48 36 W  
ENTITY COMMENT (NB MIN RES BR PLATE 51-3)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM REPLACEMENT OF PLANT REMAINS IN  
GREY SS)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ CONGLOMERATE)  
FORMATION (MARINGOUIN/SHERPODY FORMATIONS-HOPEWELL  
GROUP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

WRIGHT, W.J. 1951 (411)  
BALL, F.D. 1975 (22)  
POTTER, R.R. 1967 (303)  
BOYD, R.T. 1978 (55)  
KIRKHAM, R.V. 1974 (218)

**CANADA-202**

MIDWAY COPPER BELT-PIT 2

CU, AG

45 39 24 N 64 48 07 W

ENTITY COMMENT (NB MIN RES BR PLATE 51-3)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM REPLACEMENT OF PLANT REMAINS IN  
GREY SS)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ CONGLOMERATE)  
FORMATION (MARINGOUIN/SHEPODY FORMATIONS-HOPEWELL  
GROUP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

WRIGHT, W.J. 1951 (411)  
BALL, F.D. 1975 (22)  
POTTER, R.R. 1967 (303)  
BOYD, R.T. 1978 (55)  
KIRKHAM, R.V. 1974 (218)

#### **CANADA-203**

MIDWAY COPPER BELT-PIT 3 (COPP FARM)  
CU, AG, AU

45 40 12 N 64 47 24 W

ENTITY COMMENT (NB MIN RES BR PLATE 51-3)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM REPLACEMENT OF PLANT REMAINS IN  
GREY SS)  
REMARKS (DDH NO 1 DRILLED TO INTERSECT BEDS EXPOSED  
IN PIT 3)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/CONGLOMERATE)  
FORMATION (MARINGOUIN/SHEPODY FORMATIONS-HOPEWELL  
GROUP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

WRIGHT, W.J. 1951 (411)  
BALL, F.D. 1975 (22)  
POTTER, R.R. 1967 (303)  
BOYD, R.T. 1978 (55)  
KIRKHAM, R.V. 1974 (218)

#### **CANADA-204**

MIDWAY COPPER BELT-PIT 5  
CU, AG

45 40 48 N 64 46 19 W

ENTITY COMMENT (NB MIN RES BR PLATE 51-3)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM REPLACEMENT OF PLANT REMAINS IN  
GREY SS)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ CONGLOMERATE)  
FORMATION (MARINGOUIN/SHEPODY FORMATIONS-HOPEWELL  
GROUP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

WRIGHT, W.J. 1951 (411)  
BALL, F.D. 1975 (22)  
POTTER, R.R. 1967 (303)  
BOYD, R.T. 1978 (55)  
KIRKHAM, R.V. 1974 (218)

#### **CANADA-205**

MIDWAY COPPER BELT-PIT 6  
CU, AG, AU

45 41 31 N 64 45 29 W

ENTITY COMMENT (NB MIN RES BR PLATE 51-3)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM REPLACEMENT OF PLANT REMAINS IN  
GREY SS)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/ CONGLOMERATE)  
FORMATION (MARINGOUIN/SHEPODY FORMATIONS-HOPEWELL  
GROUP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

WRIGHT, W.J. 1951 (411)  
BALL, F.D. 1975 (22)  
POTTER, R.R. 1967 (303)  
BOYD, R.T. 1978 (55)  
KIRKHAM, R.V. 1974 (218)

#### **CANADA-206**

MIDWAY COPPER BELT-SHAFT NO 1 (COPP FARM)  
CU

45 40 21 N 64 47 08 W

ENTITY COMMENT (NB MIN RES BR PLATE 51-3)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM REPLACEMENT OF PLANT REMAINS IN  
GREY SS)  
REMARKS (DDH NO 3 DRILLED TO INTERSECT BEDS EXPOSED  
IN SHAFT NO 1)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/CONGLOMERATE)  
FORMATION (MARINGOUIN/SHEPODY FORMATIONS-HOPEWELL  
GROUP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

WRIGHT, W.J. 1951 (411)  
BALL, F.D. 1975 (22)  
POTTER, R.R. 1967 (303)  
BOYD, R.T. 1978 (55)



KIRKHAM, R.V. 1974 (218)

**CANADA-207**

NEPISIGUIT RIVER COPPER (CARNEY CREEK)  
CU

47 34 15 N 65 37 15 W

ENTITY COMMENT (PROJ APPALACHIA)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOC WITH ORGANIC MATTER & COAL SEAMS IN  
SEDS)  
REMARKS (20 TO 30 TONS ORE REMOVED IN 1859)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE)

BAILEY, L.W. 1898 (16)  
ALCOCK, F.J. 1941 (6)  
ALCOCK, F.J. 1936 (5)

**CANADA-208**

NEW HORTON MINE (GORMLEY/ VERNON)  
CU, AG, AU, SN

45 41 12 N 64 42 42 W

ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (REPLAC OF PLANT REMAINS IN SS/ & VEINS ALONG  
FAULT)  
REMARKS (50 TONS ORE SHIPPED PRE 1898#MAP REFS ALSO  
NB PL 51-3/30-3/30-8/51-1)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/CONGLOMERATE)  
FORMATION (MARINGOUIN/SHEPODY FORMATIONS-HOPEFUL  
GROUP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

WRIGHT, W.J. 1951 (411)  
WRIGHT, W.J. 1931 (409)  
WRIGHT, W.J. 1948 (410)  
BALL, F.D. 1975 (22)  
POTTER, R.R. 1967 (303)  
KIRKHAM, R.V. 1974 (218)

**CANADA-209**

NEW HORTON-PIT 12  
CU

45 39 30 N 64 43 42 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOC W CARBONIZED PLANT REMAINS IN SANDST

& CONGL)

AGE OF HOST (CARBONIFEROUS)  
LITHOLOGY (SANDSTONE/CONGLOMERATE)  
FORMATION (MARINGOUIN/SHEPODY FORMATIONS-HOPEWELL  
GROUP)  
GEOREMARKS (CU OCCURS ALONG REGRESSIVE TRANSITION  
FROM MARINE TO CONTINENTAL ROCKS)

WRIGHT, W.J. 1951 (411)  
POTTER, R.R. 1967 (303)

**CANADA-210**

BACON LAKE  
CU

56 16 16 N 67 47 45 W

GEOGRAPHICAL SUBDIVISION (QUEBEC)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN TENSION CRACKS & DISSEM IN ALGAL  
DOLOMITE)

AGE OF HOST (EARLY PROTEROZOIC)  
LITHOLOGY (DOLOMITE)  
FORMATION (DUNPHY FORMATION)

CHEVE, S.R. 1983 (587)  
DIMROTH, E. 1964 (588)  
CHEVE, S.R. 1985 (642)

**CANADA-211**

DUNPHY LAKE  
CU

56 03 30 N 67 43 00 W

ENTITY COMMENT (OCC/ NORTH SHORE DUNPHY LAKE)

GEOGRAPHICAL SUBDIVISION (QUEBEC)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITE)

AGE OF HOST (EARLY PROTEROZOIC)  
LITHOLOGY (DOLOMITE)  
FORMATION (DUNPHY FORMATION)

CHEVE, S.R. 1983 (587)  
CHEVE, S.R. 1985 (642)

**CANADA-212**

ROMANET LAKE  
CU

56 16 56 N 67 49 55 W

ENTITY COMMENT (OCC/ 1 KM W OF BELLEFLEUR LAKE)

GEOGRAPHICAL SUBDIVISION (QUEBEC)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITE)  
REMARKS (4 OCCURRENCES WEST OF ROMANET LAKE (2  
OCC-1 KM W OF BELLEFLEUR LAKE))

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (DOLOMITE)  
FORMATION (DUNPHY FORMATION)

CHEVE, S.R. 1983 (587)  
DIMROTH, E. 1964 (588)  
CHEVE, S.R. 1985 (642)

**CANADA-213**  
SWAMPY BAY RIVER  
CU

56 39 20 N 68 35 00 W

GEOGRAPHICAL SUBDIVISION (QUEBEC)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITE)

AGE OF HOST (EARLY PROTEROZOIC)  
LITHOLOGY (DOLOMITE)  
FORMATION (DUNPHY FORMATION)

CHEVE, S.R. 1983 (587)  
CHEVE, S.R. 1985 (642)

**CANADA-214**  
DESBARATS  
CU

46 21 33 N 83 58 00 W  
ENTITY COMMENT (NO 1 ZONE/ PEARSON VERIF 1977)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS DISSEMINATED IN PINK LORRAIN  
QUARTZITE)  
REMARKS (SEVERAL SHOWINGS/ POSSIBILITY OF  
WIDESPREAD LOW GRADE MINERALIZATION)

AGE OF HOST (PROTEROZOIC (HURONIAN))  
LITHOLOGY (PINK AND PURPLE QUARTZITES)  
FORMATION (LOWER LORRAIN FM/ COBALT GROUP)  
GEOREMARKS (MINERALIZED QUARTZITE IS  
HEMATITIC/FELDSPATHIC/SLIGHTLY RADIOACTIVE)

SHKLANKA, R. 1969 (343)  
ANON. 0 (501)  
FRAREY, M.J. 1977 (145)  
PEARSON, W.N. 1979 (295)

**CANADA-215**  
DESBARATS NO 1 (MCFARLEN)  
CU

46 21 33 N 83 58 00 W  
ENTITY COMMENT (TRENCH/W PEARSON VERIFIED 1977)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS DISSEMINATED IN PINK LORRAIN  
QUARTZITE)  
REMARKS (MINERALIZATION WIDESPREAD BUT LOW GRADE/

SOME SAMPLES UP TO 3%)

AGE OF HOST (PROTEROZOIC (HURONIAN))  
LITHOLOGY (PINK AND PURPLE QUARTZITES)  
FORMATION (LOWER LORRAIN FM/ COBALT GROUP)  
GEOREMARKS (MINERALIZED QUARTZITE IS  
HEMATITIC/FELDSPATHIC/SLIGHTLY RADIOACTIVE)

SHKLANKA, R. 1969 (343)  
ANON. 0 (501)  
FRAREY, M.J. 1977 (145)  
PEARSON, W.N. 1979 (295)

**CANADA-216**  
DESBARATS NO 2  
CU

46 21 24 N 83 57 28 W  
ENTITY COMMENT (SHOWING/W PEARSON VERIFIED 1977)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS DISSEMINATED IN PINK LORRAIN  
QUARTZITE)  
REMARKS (LOW GRADE MINERALIZATION)

AGE OF HOST (PROTEROZOIC (HURONIAN))  
LITHOLOGY (PINK AND PURPLE QUARTZITES)  
FORMATION (LOWER LORRAIN FM/ COBALT GROUP)  
GEOREMARKS (MINERALIZED QUARTZITE IS  
HEMATITIC/FELDSPATHIC/SLIGHTLY RADIOACTIVE)

SHKLANKA, R. 1969 (343)  
ANON. 0 (501)  
FRAREY, M.J. 1977 (145)  
PEARSON, W.N. 1979 (295)

**CANADA-217**  
DESBARATS NO 3  
CU

46 21 16 N 83 57 48 W  
ENTITY COMMENT (SHOWING/W PEARSON VERIFIED 1977)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLPHDS DISSEMINATED IN PINK LORRAIN  
QUARTZITE)  
REMARKS (LOW GRADE MINERALIZATION)

AGE OF HOST (PROTEROZOIC (HURONIAN))  
LITHOLOGY (PINK AND PURPLE QUARTZITE)  
FORMATION (LOWER LORRAIN FM/ COBALT GROUP)  
GEOREMARKS (MINERALIZED QUARTZITE IS HEMATITIC/  
FELDSPATHIC/SLIGHTLY RADIOACTIVE)

SHKLANKA, R. 1969 (343)  
ANON. 0 (501)  
FRAREY, M.J. 1977 (145)  
PEARSON, W.N. 1979 (295)

**CANADA-218**

DESBARATS NO 4  
CU

46 21 00 N 83 57 51 W  
ENTITY COMMENT (CASING/W PEARSON VERIFIED 1977)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SLFDS DISSEMINATED IN PINK LORRAIN  
QUARTZITE)

AGE OF HOST (PROTEROZOIC (HURONIAN))  
LITHOLOGY (PINK AND PURPLE QUARTZITE)  
FORMATION (LOWER LORRAIN FM/ COBALT GROUP)  
GEOREMARKS (MINERALIZED QUARTZITE IS  
HEMATITIC/FELDSPATHIC/SLIGHTLY RADIOACTIVE)

SHKLANKA, R. 1969 (343)  
ANON. 0 (501)  
FRAREY, M.J. 1977 (145)  
PEARSON, W.N. 1979 (295)

**CANADA-219**  
DESBARATS NO 5  
CU

46 21 44 N 83 57 23 W  
ENTITY COMMENT (GSC MAP 1414A)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM SLFDS IN PINK LORRAIN QUARTZITE)

AGE OF HOST (PROTEROZOIC (HURONIAN))  
LITHOLOGY (PINK AND PURPLE QUARTZITE)  
FORMATION (LOWER LORRAIN FM/ COBALT GROUP)  
GEOREMARKS (MINERALIZED QUARTZITE IS  
HEMATITIC/FELDSPATHIC/SLIGHTLY RADIOACTIVE)

THOMSON, J.E. 1957 (370)  
SHKLANKA, R. 1969 (343)  
ANON. 0 (501)  
FRAREY, M.J. 1977 (145)  
PEARSON, W.N. 1979 (295)

**CANADA-220**  
LEWIS LAKE  
CU

46 00 52 N 81 48 02 W  
ENTITY COMMENT (WNP FIELD DATA)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (SLFDS IN DOLOMITE AT PALEOZOIC/PRECAM  
UNCONFORMITY)  
REMARKS (LOCATED ON HIGHWAY 68/ 0.8 KM EAST OF LEWIS  
LAKE)

AGE OF HOST (ORDOVICIAN(?))  
LITHOLOGY (DOLOMITE)

GEOREMARKS (LIMITED SULPHIDES CONFINED TO  
SMALL/SANDY/ DOLOMITE-FILLED DEPRESSIONS)

PEARSON, W.N. 1978 (128)

**CANADA-221**  
MOREDOLPHTON WAREHOUSE&LANDING (BIRCH ISLAND)  
CU

46 03 56 N 81 47 08 W  
ENTITY COMMENT (WNP FIELD DATA)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (TRACES OF CU IN PYRITIC QUARTZ SANDSTONE)

AGE OF HOST (PALEOZOIC (CAMBRIAN))  
LITHOLOGY (QUARTZ SANDSTONE)

PEARSON, W.N. 1978 (128)

**CANADA-222**  
SOUTH MARCH-1  
U, CU

45 21 00 N 75 56 00 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITIC SANDSTONE OF MARCH FM)

AGE OF HOST (PALEOZOIC (ORDOVICIAN))  
LITHOLOGY (SANDSTONE/SANDY DOLOMITE)  
FORMATION (MARCH FM)

WILSON, A.E. 1946 (398)  
GRASTY, R.L. 1973 (168)  
STEACY, H.R. 1973 (356)  
JONASSON, I.R. 1974 (204)  
CHARBONNEAU, B.W. 1975 (76)  
FORD, K.L. 1975 (141)  
JONASSON, I.R. 1977 (205)

**CANADA-223**  
SOUTH MARCH-2  
U, CU

45 23 09 N 75 57 20 W  
ENTITY COMMENT (ODM LOC MAP 1976-5)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITIC SANDSTONE OF MARCH FM)

AGE OF HOST (PALAEOZOIC (ORDOVICIAN))  
LITHOLOGY (SANDSTONE/SANDY DOLOMITE)  
FORMATION (MARCH FM)

CHARBONNEAU, B.W. 1975 (76)

**CANADA-224**

SOUTH MARCH-3  
U, CU

45 22 28 N 75 58 16 W  
ENTITY COMMENT (ODM LOC MAP 1976-5)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITIC SANDSTONE OF MARCH FM)

AGE OF HOST (PALAEOZOIC (ORDOVICIAN))  
LITHOLOGY (SANDSTONE/SANDY DOLOMITE)  
FORMATION (MARCH FM)

CHARBONNEAU, B.W. 1975 (76)

**CANADA-225**

STAG LAKE  
CU

46 35 10 N 82 36 15 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISS SLPHD IN QUARTZITE AND ARGILLITE)  
REMARKS (LOW GRADE DISSEMINATED CU OCCURS OVER  
STRIKE LENGTH OF 3.2 KM)

AGE OF HOST (PROTEROZOIC (HURONIAN))  
LITHOLOGY (QUARTZITE/ ARGILLITE)  
FORMATION (UPPER LORRAIN FM/ COBALT GROUP)  
GEOREMARKS (CU ALSO IN ARGILLITE UNIT OF OVERLYING  
GORDON LAKE FM)

SHKLANKA, R. 1969 (343)  
ANON. 1967 (420)  
ANON. 0 (502)  
WOOD, J. 1975 (405)  
PEARSON, W.N. 1979 (295)

**CANADA-226**

ELIZABETH LAKE (NEMEIBEN LAKE)  
CU, ZN, AU, PB

55 19 52 N 105 22 00 W  
ENTITY COMMENT (DDH S-1/NMI)

GEOGRAPHICAL SUBDIVISION (SASKATCHEWAN)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISS & VEINS IN LENTICULAR ZONES IN METASED  
GNEISS)  
REMARKS (DEPOSIT TYPE QUESTIONABLE)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (METASED GNEISS BAND/ MAINLY BIOTITE GNEISS)  
GEOREMARKS (NUMEROUS LOW-GRADE ZONES & 3 SMALL  
MEDIUM-GRADE ZONES)

FORSYTHE, L.H. 1976 (582)

**CANADA-227**

JANICE LAKE  
CU

56 52 30 N 104 58 25 W  
ENTITY COMMENT (NO 1 TRENCH/NMI)

GEOGRAPHICAL SUBDIVISION (SASKATCHEWAN)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (MAINLY NATIVE CU IN DEFORMED  
META-CONGLOMERATE)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (META-CONGLOMERATE (SS PEBBLES IN ARKOSE  
MATRI))  
FORMATION (DALY LAKE GROUP)  
GEOREMARKS (NATIVE CU WITH TRACE MC-AZ-CC-CP-BN)

SCOTT, B.P. 1973 (572)  
RATH, U. 1969 (573)  
MONEY, P.L. 1968 (567)  
RATH, U. 1969 (566)  
COOMBE, W. 1977 (568)  
CUMMING, G.L. 1976 (569)

**CANADA-228**

JOHNSON LAKE AREA  
PB, ZN, CU, AG

57 27 30 N 104 10 10 W  
ENTITY COMMENT (DRILLED AREA (MARINA/NMI))

GEOGRAPHICAL SUBDIVISION (SASKATCHEWAN)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (GALENA IN QUARTZITE ALONG METASED-GRANITIC  
CONTACT)  
REMARKS (GALENA MINERALIZATION FOR 17000(?) FT ALONG  
CONTACT)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (QUARTZITE)  
GEOREMARKS (GALENA (MINOR CU) ALONG  
METASED-GRANITIC CONTACT FOR 17000(?) FT)

SCOTT, B.P. 1969 (564)  
BAER, A.J. 1969 (565)  
RATH, U. 1969 (566)  
MONEY, P.L. 1968 (567)

**CANADA-229**

JUNO LAKE  
CU

56 52 38 N 104 54 58 W  
ENTITY COMMENT (OCCURRENCE 1 KM SOUTH OF JUNO)

GEOGRAPHICAL SUBDIVISION (SASKATCHEWAN)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN A POSSIBLE OUTCROP OF PINK META-ARKOSE)  
REMARKS (MINERALIZATION QUITE LIKELY STRATIFORM IF  
NOT ESSENTIALLY STRATABOUND)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (META-ARKOSE)  
FORMATION (DALY LAKE GROUP)  
GEOREMARKS  
(COVELLITE/CHALCOCITE/BORNITE/MALACHITE/ILMENITE/H  
EMATITE/SPINEL OCCURR)

KIRKHAM, R.V. 1974 (218)  
COOMBE, W. 1977 (568)

**CANADA-230**  
KAZ LAKE  
CU

56 53 10 N 104 57 45 W  
ENTITY COMMENT (0.1 KM WEST OF KAZ LAKE)

GEOGRAPHICAL SUBDIVISION (SASKATCHEWAN)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN ARKOSIC  
META-CONGLOMERATES)  
REMARKS (MINERALIZED ZONES-1 METRE THICK/PARALLEL TO  
BEDDING/CONTAIN 1-2% CU)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (ARKOSIC META-CONGLOMERATES)  
FORMATION (DALY LAKE GROUP)  
GEOREMARKS (VISIBLE CHALCOCITE/NATIVE CU/  
AZURITE-MALACHITE(?)/COVELLITE/BORNITE)

KIRKHAM, R.V. 1974 (218)  
COOMBE, W. 1977 (568)

**CANADA-231**  
NEKWEAGA BAY (MORELL LAKE BELT)  
CU

57 47 00 N 103 44 00 W  
ENTITY COMMENT (S. END OF NEKWEAGA BAY/NMI)

GEOGRAPHICAL SUBDIVISION (SASKATCHEWAN)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (CONFORMABLE CP-PO IN GREY META-QUARTZITE)  
REMARKS (GRADES 1% CU OVER 8 FT WIDTH)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (GREY META-QUARTZITE)

PYKE, M.W. 1967 (563)

**CANADA-232**  
RAFUSE LAKE  
CU, PB

56 54 30 N 104 56 36 W  
ENTITY COMMENT (0.34 KM WEST OF RAFUSE LAKE)

GEOGRAPHICAL SUBDIVISION (SASKATCHEWAN)

GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN META-CONGLOMERATE/IN MAFIC BIOTITE  
GRANULITE)  
REMARKS (IN PLACE CHALCOCITE-NATIVE CU/IN BOULDERS  
GALENA/CC/MALACHITE/AZURITE)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (META-CONGLOMERATE)  
FORMATION (DALY LAKE GROUP)  
GEOREMARKS (MINERALIZATION QUITE LIKELY STRATIFORM)

KIRKHAM, R.V. 1974 (218)  
COOMBE, W. 1977 (568)

**CANADA-233**  
TOSI (FABLE LAKE-FOSTER RIVER AREA)  
CU

56 14 00 N 105 43 00 W

GEOGRAPHICAL SUBDIVISION (SASKATCHEWAN)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN GRAPHITIC QUARTZITE NEAR SHEARED  
BASEMENT CONT)

LITHOLOGY (GRAPHITIC QUARTZITE)  
GEOREMARKS (CHALCOPYRITE-CHALCOCITE MINERALIZATION)

POTTER, D. 1977 (562)  
KIRKHAM, R.V. 1974 (218)

**CANADA-234**  
WOLLASTON LAKE FOLD BELT (KAZ/JANICE/JUNO/RAFUSE  
LAKES)  
CU

56 53 30 N 104 56 00 W  
ENTITY COMMENT (CENTRE OF MINERALIZED AREA)

GEOGRAPHICAL SUBDIVISION (SASKATCHEWAN)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN ARKOSIC  
META-CONGLOMERATE)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (ARKOSIC META-CONGLOMERATE)  
FORMATION (DALY LAKE GROUP)  
GEOREMARKS (ROCKS ARE HIGHLY DEFORMED AND  
METAMORPHOSED)

KIRKHAM, R.V. 1974 (218)  
COOMBE, W. 1977 (568)  
CUMMING, G.L. 1976 (569)  
MONEY, P.L. 1970 (570)  
SANGSTER, D.F. 1974 (571)

**CANADA-235**  
BARNABY RIDGE  
CU

49 19 57 N 114 21 58 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SIYEH FORMATION SED ROCKS)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARENITE)  
FORMATION (SIYEH FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-236**  
BLIND CANYON-2 (BIGHORN?)  
CU

49 12 54 N 114 00 16 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GRINNELL FORMATION ARGILLITE AND  
SANDSTONE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/SANDSTONE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)  
GOBLE, E. 0 (160)

**CANADA-237**  
BOVIN LAKE  
CU

49 13 15 N 114 08 14 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GATEWAY FORMATION SEDIMENTARY ROCKS)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE)  
FORMATION (GATEWAY FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-238**  
DRYWOOD CREEK (DRYWOOD MOUNTAIN)  
CU

49 17 47 N 114 02 16 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN GRINNELL FORMATION SANDSTONE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

ANON. 1970 (424)  
ANON. 0 (466)

**CANADA-239**  
GRIZZLY CREEK  
CU

49 18 29 N 114 20 36 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GRINNELL QUARTZITE)  
REMARKS (SULPHIDES OCCUR INTERGROWN WITH SILICA  
CEMENT)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZITE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

ANON. 0 (466)  
COLLINS, J.A. 1977 (95)

**CANADA-240**  
LOAF MOUNTAIN  
CU

49 12 57 N 114 07 30 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GATEWAY FORMATION SEDIMENTARY ROCKS)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE)  
FORMATION (GATEWAY FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-241**  
MIDDLE KOOTENAY PASS  
CU

49 15 00 N 114 22 30 W  
ENTITY COMMENT (CPG BULL VOL 25 NO 4/ PG 713)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATIONS IN QUARTZ ARENITE AND  
SANDSTONE)  
REMARKS (SULPHIDES OCCUR INTERGROWN WITH SILICA  
CEMENT)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZ ARENITE/ SANDSTONE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

COLLINS, J.A. 1977 (95)

**CANADA-242**

NORTH KOOTENAY PASS  
CU

49 23 11 N 114 34 33 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ARGILLITE (GATEWAY FORMATION))

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (ARGILLITE)  
FORMATION (GATEWAY FM/ PURCELL (BELT) SUPERGROUP)

ANON. 0 (466)

**CANADA-243**

NORTH KOOTENAY PASS AREA-1 (CARBONDALE RIVER)  
PB, ZN, CU

49 23 46 N 114 33 50 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISS AND FRACTURES IN SED ROCKS NEAR VOLC  
CONTACT)  
REMARKS (CU OCCURS ADJACENT TO FAULT ZONES &  
CONTACTS OF DIORITE INTRUSIONS)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (QUARTZITES)  
FORMATION (UPPER GRINNELL FM/ PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-244**

NORTH KOOTENAY PASS AREA-2 (NORTH LOST CREEK AREA)  
PB, ZN, CU

49 24 21 N 114 33 53 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISS AND FRACTURES IN SED ROCKS NEAR VOLC  
CONTACT)  
REMARKS (CU OCCURS ADJACENT TO FAULT ZONES &  
CONTACTS OF DIORITE INTRUSIONS)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (QUARTZITES)

FORMATION (UPPER GRINNELL FM/PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-245**

NORTH KOOTENAY PASS AREA-3 (NORTH LOST CREEK AREA)  
PB, ZN, CU

49 25 19 N 114 34 31 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISS AND FRACTURES IN SED ROCKS NEAR VOLC  
CONTACT)  
REMARKS (CU OCCURS ADJACENT TO FAULT ZONES &  
CONTACTS OF DIORITE INTRUSIONS)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (QUARTZITES)  
FORMATION (UPPER GRINNELL FM/ PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-246**

NORTH KOOTENAY PASS AREA-4 (NORTH LOST CREEK AREA)  
PB, ZN, CU

49 26 14 N 114 34 07 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISS AND FRACTURES IN SED ROCKS NEAR VOLC  
CONTACT)  
REMARKS (CU OCCURS ADJACENT TO FAULT ZONES &  
CONTACTS OF DIORITE INTRUSIONS)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (QUARTZITE)  
FORMATION (UPPER GRINNELL FM/ PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-247**

NORTH KOOTENAY PASS AREA-6 (NORTH LOST CREEK AREA)  
PB, ZN, CU

49 26 47 N 114 34 23 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISS AND FRACTURES IN SED ROCKS NEAR VOLC  
CONTACT)  
REMARKS (CU OCCURS ADJACENT TO FAULT ZONES &  
CONTACT OF DIORITE INTRUSIONS)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (QUARTZITE)  
FORMATION (UPPER GRINNELL FM/ PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-248**  
PANTHER CREEK  
CU

51 28 00 N 115 52 00 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)

AGE OF HOST (CAMBRIAN)  
LITHOLOGY (DOLOMITE-MOTTLED LIMESTONE)  
FORMATION (ELDON FORMATION)

KINDLE, E.D. 0 (215)

**CANADA-249**  
SPIONKOP CREEK (BIGHORN)  
CU

49 13 40 N 114 01 00 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GRINNELL FORMATION ARGILLITE AND  
SANDSTONE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/SANDSTONE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)  
GOBLE, E. 0 (160)

**CANADA-250**  
SPIONKOP CREEK- SPIONKOP RIDGE (BIGHORN)  
CU, AG

49 13 36 N 114 00 16 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GRINNELL FORMATION QUARTZITE)  
REMARKS (CU OCCURS ALSO IN UNDERLYING DIABASE  
INTRUSION)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (WHITE & GREEN QUARTZITE/GREEN ARGILLITE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)  
GOBLE, E. 0 (160)

**CANADA-251**  
TABLE MOUNTAIN (MILL CREEK AREA)  
PB, CU, ZN

49 22 00 N 114 15 00 W  
ENTITY COMMENT (ALBERTA GAZETTEER)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SILTY DOLOMITE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (SILTY DOLOMITE)  
FORMATION (SIYEH FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-252**  
WHISTLER MOUNTAIN-1  
CU

49 19 57 N 114 18 17 W  
ENTITY COMMENT (CU FILE)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GRINNELL QUARTZITE & ARGILLITE)  
REMARKS (SULPHIDES OCCUR INTERGROWN WITH SILICA  
CEMENT)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZ ARENITE WITHIN RED SILTSTONE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)  
GEOREMARKS (MORE THAN 25 MINERALIZED QUARTZ ARENITE  
UNITS)

COLLINS, J.A. 1977 (95)  
ANON. 0 (466)

**CANADA-253**  
YARROW CREEK  
CU, AG, ZN

49 12 04 N 113 58 57 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 167)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN APPEKUNNY FORMATION QUARTZITES)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZITE)  
FORMATION (APPEKUNNY FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)  
GOBEL, R.J. 1970 (159)



**CANADA-254**

YARROW CREEK-MAIN ZONE (BIGHORN)  
CU, AG

49 11 43 N 113 59 54 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GRINNELL FORMATION QUARTZITE)  
REMARKS (CU ALSO OCCURS IN UNDERLYING DIABASE  
INTRUSIONS)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/SANDSTONE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)  
GORIE, E. 0 (165)  
GOBEL, R.J. 1970 (159)

**CANADA-255**

AKAMINA/FLATHEAD VALLEY  
CU, AG

49 02 24 N 114 16 06 W  
ENTITY COMMENT (BC MMAR 1968/PG 270 DESCRIPTIN)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM BETWEEN GRAINS OF QUARTZ IN  
SANDSTONE)  
REMARKS (ALSO AS CLOTS ASSOCIATED WITH SHALE  
FRAGMENTS & AS FRACTURE FILLINGS)

AGE OF HOST (HELIKIAN)  
LITHOLOGY (QUARTZITE (SANDSTONE))  
FORMATION (PURCELL SERIES/GRINNELL (& SIYEH &  
APPEKUNNY))

ANON. 1969 (574)

**CANADA-256**

CALLISON (CHISCHA RIVER)  
CU

58 20 21 N 124 32 32 W  
ENTITY COMMENT (BCDM MINFILE)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM IN QUARTZITE)  
REMARKS (DISSEM CHALCOPYRITE OCCURS IN 30-FT BED OF  
WELL-SORTED WHITE QTZITE)

AGE OF HOST (PROTEROZOIC)  
LITHOLOGY (FELDSPATHIC QUARTZITES)  
FORMATION (TUCHODI FM)  
GEOREMARKS (OCC WITHIN 5000-FT UNIT OF FELDSPATHIC  
QTZITE & ARGILLACEOUS DOLOMITES)

PRETO, V.A. 1972 (307)  
TAYLOR, G.C. 1973 (366)

**CANADA-257**

COMMERCE CREEK  
CU, AG, AU

49 10 11 N 114 23 17 W  
ENTITY COMMENT (ZONE H/ MINDEP)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN DOLOMITE & REDBEDS/ ALSO AS VEINS IN SEDS)  
REMARKS (SEVERAL ZONES & SHOWINGS/ RESERVES FOR A  
DOLOMITE BED)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARENITE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

OLSON, P.E. 1968 (291)  
ANON. 0 (459)  
ANON. 0 (457)  
ANON. 0 (458)  
ANON. 1972 (432)  
ANON. 1973 (436)  
ANON. 1976 (443)

**CANADA-258**

ML (MOREHEAD LAKE)  
CU

52 35 29 N 121 46 40 W  
ENTITY COMMENT (BCMI MAP 93A)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATIONS IN LIMESTONE & SANDSTONE)  
REMARKS (SYENITE DYKES CUT ALL SEDIMENTARY ROCK  
TYPES IN THE AREA)

AGE OF HOST (LOWER JURASSIC)  
LITHOLOGY (LIMESTONE/MAROON TO GREY SANDSTONE)

ANON. 1976 (444)  
BAILEY, D.G. 1975 (15)

**CANADA-259**

GILLESPIE LAKE  
CU, ZN, PB

64 47 00 N 133 55 52 W  
ENTITY COMMENT (NO 9008/GSC PAPER 79-1A PG 335)

GEOGRAPHICAL SUBDIVISION (YUKON TERRITORY)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN DOLOSILTSTONE)  
REMARKS (NUMEROUS MINOR SHOWINGS IN GILLESPIE LAKE  
AREA)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOSILTSTONE)  
FORMATION (GILLESPIE LAKE GROUP)  
GEOREMARKS (CU AS COATING ON FRACTURE SURFACES  
INTERSECTING LAMINATED STROMATOLITE)

GOODFELLOW, W.D. 1979 (163)

**CANADA-260**

18 MILES NW OF DAL LAKE  
CU

63 15 50 N 127 02 50 W

ENTITY COMMENT (CENTRE OF COPPER ZONE/ NMI)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (CU IN CLASTIC SED RKS INTERBEDDED WITH  
LIMESTONE)  
REMARKS (THIS LOCATION IS THE CTR OF A MINERALIZED  
ZONE TRENDING NE FOR 5 MILES)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY  
(SILTSTONE/SLATE/CONGLOMERATE/LIMESTONE/DLMT)  
FORMATION (RAPITAN FM/LITTLE DAL FM)

ANON. 1975 (442)  
EISBACHER, G.H. 1976 (123)  
EISBACHER, G.H. 1977 (124)  
GABRIELSE, H. 1973 (149)

**CANADA-261**

BUD 942-947  
CU

67 32 05 N 115 53 45 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (BEAR)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS FINE DISSEMINATIONS IN  
SS/QTZITE/SILTST/CONGLOM)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (SANDST/QTZITE/SILTST/PEBBLE  
CONGLOM/MUDSTONE)  
FORMATION (RAE GROUP)

BARAGAR, W.R.A. 1973 (27)  
BARAGAR, W.R.A. 1970 (26)  
KINDLE, E.D. 1972 (214)  
KINDLE, E.D. 1970 (213)  
KIRKHAM, R.V. 1970 (217)

**CANADA-262**

CC LAKE  
CU

65 24 34 N 118 52 36 W

ENTITY COMMENT (PERS COMM NORANDA CO OFFICIALS)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (INTERIOR PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM IN QTZ SANDSTONE IN BASE OF  
PALEOZOIC SEQ)  
REMARKS (MINERALIZATION OCCURS IN SALINE RIVER FM)

AGE OF HOST (PALEOZOIC (CAMBRIAN?))  
LITHOLOGY (SANDSTONE)  
FORMATION (SALINE RIVER FM)

ANON. 0 (460)

**CANADA-263**

COATES LAKE (REDSTONE/LITTLE DAL/PLATEAU LK)  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

62 41 39 N 126 37 12 W

ENTITY COMMENT (CTR MIN BELT/FIG8 KIRKHAM 1974)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (STRATIFORM DISSEM SLPHDS IN CALCAREOUS  
SILTSTONE)  
REMARKS (CU MIN TRACED CONTINUOUSLY FOR 4 TO 5 MILES  
WITHIN 4 TO 7 BEDS)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (CRYPTALGAL LAMINITES)  
FORMATION (COPPERCAP FM/ MACKENZIE MTNS  
SUPERGROUP)  
GEOREMARKS (CU CONFINED TO TRANSITION ZONE BTWN  
COPPERCAP FM & REDSTONE RIVER FM)

GABRIELSE, H. 1973 (149)  
KIRKHAM, R.V. 1974 (218)  
COATES, J.A. 1964 (92)  
LORD, C. 1978 (250)  
PADGHAM, W.A. 1975 (293)  
JEFFERSON, C.W. 1978 (200)  
WATSON, I.M. 1973 (386)

**CANADA-264**

EXTENSION (KVALE)  
CU, AG

62 53 30 N 126 36 20 W

ENTITY COMMENT (NORTH OCC/ FIG 8 KIRKHAM 1974)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (STRATIFORM DISSEM SLPHDS IN CALCAREOUS  
SILTSTONE)  
REMARKS (3 CU-MINERALIZED BEDS TRACED ABOUT 1 MILE  
ALONG STRIKE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SILTSTONE)  
FORMATION (REDSTONE RIVER FM/MACKENZIE MTNS  
SUPERGROUP)

ANON. 0 (462)

GABRIELSE, H. 1973 (149)  
EISBACHER, G.H. 1977 (124)  
KIRKHAM, R.V. 1974 (218)

**CANADA-265**

FA GP-2/ STRAT SECTION BB 76-1  
CU

63 46 47 N 127 27 50 W  
ENTITY COMMENT (NO 42/DINA MIN OCC OVERLAY 95M)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (ALONG CONTACT OF RAPITAN FM & LITTLE DAL FM)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SILTSTONE/LIMESTONE)  
FORMATION (RAPITAN FM & LITTLE DAN FM)

GABRIELSE, H. 1973 (149)

**CANADA-266**

FA GP-3/ STRAT SECTION BB 76-1  
CU

63 47 16 N 127 28 00 W  
ENTITY COMMENT (NO 43/DINA MIN OCC OVERLAY 95M)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (ALONG CONTACT OF RAPITAN FM & LITTLE DAL FM)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SILTSTONE/LIMESTONE)  
FORMATION (RAPITAN FM & LITTLE DAL FM)

GABRIELSE, H. 1973 (149)

**CANADA-267**

FRANK (KEELE RIVER-BACKBONE PROJECTS)  
CU

63 52 33 N 128 05 48 W  
ENTITY COMMENT (FRANK/ SHELL 1/50000 MAP)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & FILLING FENESTRAL FABRICS IN  
DOLOSTONE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (DOLOSTONE)  
FORMATION (COPPERCAP FM/ MACKENZIE MTNS  
SUPERGROUP)

RUELLE, J.C.L. 1982 (322)

**CANADA-268**

HAYHOOK (CL/ DM)

CU

63 28 10 N 127 04 07 W  
ENTITY COMMENT (NO 39/DINA MIN OCC OVERLAY 95M)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & FILLING FENESTRAE IN DOLOSTONE)  
REMARKS (THIS LOCATION REPRESENTS ONLY ONE PART OF  
THE CU BELT IN HAYHOOK AREA)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (CRYPTALGAL LAMINITES)  
FORMATION (REDSTONE RIVER FM/MACKENZIE MTNS  
SUPERGROUP)

EISBACHER, G.H. 1977 (124)  
GABRIELSE, H. 1973 (149)  
LORD, C. 1978 (249)  
LORD, C. 1978 (250)  
JEFFERSON, C.W. 1978 (200)  
RUELLE, J.C.L. 1982 (322)

**CANADA-269**

HUTCH EAST (KEELE RIVER-BACKBONE PROJECTS)  
CU

63 49 00 N 127 43 00 W  
ENTITY COMMENT (HUTCH EAST/ SHELL 1/50000 MAP)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & FILLING FENESTRAE IN DOLOSTONE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (CRYPTALGAL LAMINITES)  
FORMATION (COPPERCAP FM/MACKENZIE MTNS  
SUPERGROUP)

RUELLE, J.C.L. 1982 (322)

**CANADA-270**

JASPER VALLEY (WK CLAIMS/ NORTH REDSTONE GP)  
CU

63 05 30 N 126 54 00 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISS IN SANDSTONE/ FRACTURE FILLS IN  
DOLOMITE)  
REMARKS (THE SHOWING IN DOLOMITE LIES .5 MILE  
UPSTREAM FROM SANDSTONE SHOWING)

AGE OF HOST (PALEOZOIC)  
LITHOLOGY (SANDSTONE)

GABRIELSE, H. 1973 (149)  
ANON. 0 (461)

**CANADA-271**

JAY (KEELE RIVER) (KEELE RIVER-BACKBONE PROJECTS)  
CU (SEE RESERVE/PRODUCTION REPORT)

63 46 20 N 127 49 47 W

ENTITY COMMENT (JAY/ SHELL 1/50000 MAP)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & FILLING FENESTRAE IN DOLOSTONE)  
REMARKS (CU SULPHIDES OCCUR AS DIAGENETIC  
REPLACEMENTS OF ANHYDRITE NODULES)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (CRYPTALGAL LAMINITES)  
FORMATION (COPPERCAP FM/ MACKENZIE MTNS  
SUPERGROUP)

EISBACHER, G.H. 1977 (124)

GABRIELSE, H. 1973 (149)

JEFFERSON, C.W. 1978 (200)

LORD, C. 1978 (250)

LORD, C. 1978 (249)

RUELLE, J.C.L. 1982 (322)

**CANADA-272**

JUNE CREEK (KEELE RIVER) (KEELE RIVER-BACKBONE  
PROJECTS)  
CU (SEE RESERVE/PRODUCTION REPORT)

63 49 18 N 127 58 20 W

ENTITY COMMENT (JUNE CREEK/ SHELL 1/50000 MAP)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & FILLING FENESTRAE IN DOLOSTONE)  
REMARKS (JUNE CREEK NORTH LOCATED 1 MILE N/ KEELE  
WEST & TRUDY CREEK 3/4 MILE E)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (CRYPTALGAL LAMINITES)  
FORMATION (COPPERCAP FM/MACKENZIE MTNS  
SUPERGROUP)

RUELLE, J.C.L. 1982 (322)

**CANADA-273**

KENT PENINSULA-1  
CU

68 12 00 N 108 11 00 W

ENTITY COMMENT (CU COMMODITY FILE)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (BEAR)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISS SLFDS IN MUDSTONE & SHALE)

AGE OF HOST (PROTEROZOIC (HELIKIAN))  
LITHOLOGY (BLACK MUDSTONE/SHALE)  
FORMATION (PARRY BAY FM)  
GEOREMARKS (FM MAINLY MADE UP OF

DOLOARENITE/DOLOSILTITE/STROMATOLITIC DOLOMITE)

CAMPBELL, F.H. 1978 (72)

**CANADA-274**

LISA (KEELE RIVER) (BACKBONE PROJECT)  
CU

63 43 20 N 127 18 12 W

ENTITY COMMENT (LISA/ SHELL 1/50000 MAP)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & FILLING FENESTRAE IN DOLOSTONE)  
REMARKS (CU SULPHIDES OCCUR AS DIAGENETIC  
REPLACEMENTS OF ANHYDRITE NODULES)

AGE OF HOST (LATE PROTEROZOIC)

LITHOLOGY (CRYPTALGAL LAMINITES)

FORMATION (COPPERCAP FM/ MACKENZIE MTNS  
SUPERGROUP)

RUELLE, J.C.L. 1982 (322)

**CANADA-275**

NITE  
CU, AG

63 49 00 N 128 12 00 W

ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (VEINLETS & DISSEM IN DOLOMITIC UNITS IN  
LIMESTONE)  
REMARKS (7 ZONES OVER A 2000 FT STRATIGRAPHIC  
INTERVAL)

AGE OF HOST (LATE PROTEROZOIC)

LITHOLOGY (LIMESTONE)

FORMATION (COPPERCAP FM/MACKENZIE MTNS  
SUPERGROUP)

ANON. 1974 (441)

ANON. 1973 (439)

PADGHAM, W.A. 1976 (294)

BLUSSON, S.L. 1971 (48)

HELMSTAEDT, H. 1979 (186)

**CANADA-276**

RAMAH (BLOW-ME-DOWN MOUNTAIN)  
CU

58 44 20 N 63 06 52 W

ENTITY COMMENT (FEW KM S OF MT BLOW-ME-DOWN)

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (MINOR CHALCOPYRITE IN SEDIMENTARY PYRITIC  
UNIT)

AGE OF HOST (PROTEROZOIC (NEOHELKIAN))  
LITHOLOGY (SLATE/QUARTZITE/MICA  
SCHIST/ARKOSE/CGLM/DLMT)  
FORMATION (RAMAH GROUP)

KIRKHAM, R.V. 1985 (577)  
MORGAN, W.C. 1975 (610)

**CANADA-277**

REG (CENTRAL REDSTONE)  
CU

63 03 00 N 126 46 00 W  
ENTITY COMMENT (NMI)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISS IN SILTY & SANDY BEDS/ALSO IN BASAL  
CONGLOMER)  
REMARKS (ELSEWHERE ON CLAIM GROUP SECONDARY CU IN  
DOLOMITE TALUS)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (SILTSTONE/MUDSTONE/CONGLOMERATE)  
FORMATION (RAPITAN FM)

GABRIELSE, H. 1973 (149)  
ANON. 0 (463)

**CANADA-278**

SCHOLTES-2/3/4 (KEELE RIVER-BACKBONE PROJECTS)  
CU

63 46 30 N 127 26 00 W  
ENTITY COMMENT (SCHOLTES-3/ SHELL 1/50000 MAP)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEM & FILLING FENESTRAL FABRICS IN  
DOLOSTONE)  
REMARKS (SCHOLTES-2 IS 0.7 MILE NE & SCHOLTES-4 IS 1.15  
MILES SE OF SCHOLTES-3)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (DOLOSTONE)  
FORMATION (COPPERCAP FM/MACKENZIE MTNS  
SUPERGROUP)

RUELLE, J.C.L. 1982 (322)

**CANADA-279**

SH GROUP-3  
CU

63 06 00 N 126 53 30 W  
ENTITY COMMENT (NO 13/DINA MIN OCC OVERLAY 95M)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (ALONG CONTACT OF RAPITAN FM & LITTLE DAL FM)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY  
(SILTSTONE/SLATE/CONGLOMERATE/LIMESTONE/DOLOM)  
FORMATION (RAPITAN FM/ LITTLE DAL FM)

GABRIELSE, H. 1973 (149)

**CANADA-280**

SH GROUP-4  
CU

63 06 30 N 126 53 00 W  
ENTITY COMMENT (NO 14/DINA MIN OCC OVERLAY 95M)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (ALONG CONTACT OF RAPITAN FM & LITTLE DAL FM)

AGE OF HOST (LATE PROTEROZOIC)  
FORMATION  
(SILTSTONE/SLATE/CONGLOMERATE/LIMESTONE/DOLOM)  
GEOREMARKS (RAPITAN FM/ LITTLE DAL FM)

GABRIELSE, H. 1973 (149)

**CANADA-281**

SH GROUP-5  
CU, AG

63 07 15 N 126 52 00 W  
ENTITY COMMENT (NO 15/DINA MIN OCC OVERLAY 95M)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (ALONG CONTACT OF RAPITAN FM & LITTLE DAL FM)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY  
(SILTSTONE/SLATE/CONGLOMERATE/LIMESTONE/DLMT)  
FORMATION (RAPIAN FM/LITTLE DAL FM)

GABRIELSE, H. 1973 (149)

**CANADA-282**

UT GROUP-1  
CU

63 14 58 N 127 01 35 W  
ENTITY COMMENT (NO 36/DINA MIN OCC OVERLAY 95M)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (ALONG CONTACT OF RAPITAN FM & LITTLE DAL FM)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY  
(SILTSTONE/SLATE/CONGLOMERATE/LIMESTONE/DLMT)  
FORMATION (RAPITAN FM/LITTLE DAL FM)

GABRIELSE, H. 1973 (149)

**CANADA-283**

Y-12  
CU

62 34 10 N 98 48 23 W

ENTITY COMMENT (PERS COMM NORANDA CO OFFICIALS)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN FELDSPATHIC PINK KAZAN  
QUARTZITE)

AGE OF HOST (PROTEROZOIC (APHEBIAN))  
LITHOLOGY (QUARTZITE)  
FORMATION (KAZAN FM)

ANON. 0 (460)

**CANADA-284**

ROMANET RIVER (CANADA TUNGSTEN  
CU

56 23 36 N 67 53 40 W

GEOGRAPHICAL SUBDIVISION (NEWFOUNDLAND)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITE)

AGE OF HOST (EARLY PROTEROZOIC)  
LITHOLOGY (DOLOMITE)  
FORMATION (DUNPHY FORMATION)

CHEVE, S.R. 1983 (587)  
DIMROTH, E. 1964 (588)  
CHEVE, S.R. 1985 (642)

**CANADA-285**

LUCKY JOE (B/ SUNEP/ BJB/ ASH/ PAX)  
CU, MO

63 35 00 N 139 30 00 W

ENTITY COMMENT (DEPT INA EGS 1976-15/ PG 80)

GEOGRAPHICAL SUBDIVISION (YUKON TERRITORY)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISS & FRACS PARALLEL FOLIATION IN METASED  
SCHIST)

AGE OF HOST (LOWER CAMBRIAN TO MIDDLE DEVONIAN)  
LITHOLOGY (QUARTZ-MUSCOVITE & BIOTITE SCHISTS)  
FORMATION (NASINA FACIES/ YUKON CATACLASTIC COMPLEX)  
GEOREMARKS (DEPOSIT OCCURS IN VERY DEFORMED AND  
TECTONICALLY COMPLEX AREA)

SINCLAIR, W.D. 1976 (594)  
MORIN, J.A. 1977 (595)

**CANADA-286**

LA LOCHE  
CU, PB, ZN

56 22 00 N 109 15 00 W

ENTITY COMMENT (DDH DMR LA LOCHE 9-77/ FIG 1)

GEOGRAPHICAL SUBDIVISION (SASKATCHEWAN)  
GEOLOGICAL PROVINCE (INTERIOR PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM IN SS LOCALLY INTERBEDDED WITH  
DOLOMITE)

REMARKS (BASAL SS PRESENT IN 9 OF 12 BOREHOLES  
DRILLED BTWN LA RONGE & LA LOCHE)

AGE OF HOST (CAMBRIAN)  
LITHOLOGY (GREY FINE TO V COARSE QUARTZOSE  
SANDSTONE)  
FORMATION (BASAL SANDSTONE FORMATION/ ELK POINT  
GROUP)  
GEOREMARKS (HOST ROCK POSSIBLY AS YOUNG AS LOWER  
DEVONIAN/MAX SS THICKNESS 56.4 M)

FUZESY, L.M. 1977 (593)

**CANADA-287**

CASTLE RIVER/LOAF MOUNTAIN-1  
CU, AG

49 10 49 N 114 06 42 W

ENTITY COMMENT (OCCUR/JUST E OF HEAD OF RIVER)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN ARGILLITE/ARGILLACEOUS  
SILTST/DOL)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/SILTSTONE/DOLOMITE/DOLOMITIC  
SANDST)  
FORMATION (GATEWAY-BOOSVILLE FORMATIONS/MISSOULA  
GROUP)

MORTON, R. 1973 (277)

**CANADA-288**

CASTLE RIVER/LOAF MOUNTAIN-2  
CU, AG

49 11 08 N 114 05 49 W

ENTITY COMMENT (OCCURR/JUST E OF HEAD OF RIVER)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN ARGILLITE/ARGILLACEOUS  
SILTST/DOL)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/SILTSTONE/DOLOMITE/DOLOMITIC  
SANDST)  
FORMATION (GATEWAY-BOOSVILLE FORMATIONS/MISSOULA  
GROUP)

MORTON, R. 1973 (277)

**CANADA-289**

CASTLE RIVER/LOAF MOUNTAIN-3  
CU, AG

49 11 33 N 114 06 11 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN ARGILLITE/ARGILLACEOUS  
SILTST/DOL)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/SILTSTONE/DOLOMITE/DOLOMITIC  
SANDST)  
FORMATION (GATEWAY-BOOSVILLE FORMATIONS/MISSOULA  
GROUP)

MORTON, R. 1973 (277)

**CANADA-290**

BLAKISTON CREEK  
CU, AG

49 07 57 N 114 00 57 W  
ENTITY COMMENT (OCCURR/NE OF MOUTH OF CREEK)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARGILLITE AND SANDSTONE (GRINNELL FMTN))

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/SANDSTONE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-291**

MOUNT LINEHAM  
CU, AG

49 04 51 N 114 00 28 W  
ENTITY COMMENT (OCCURR/3 KM NE OF MT LINEHAM)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARGILLITE AND SANDSTONE (GRINNELL FMTN))  
REMARKS (NEAR THRUST FAULT)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITES/SANDSTONES)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-292**

CAMERON BROOK  
CU, AG

49 03 54 N 114 00 54 W

ENTITY COMMENT (OCCUR/NORTH SIDE CAMERON BROOK)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARGILLITE AND SANDSTONE (GRINNELL FM))

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/SANDSTONE)  
FORMATION (GRINNELL FM/ PURCELL (BELT) SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-293**

WEST CASTLE RIVER-1  
CU, AG

49 12 31 N 114 21 01 W  
ENTITY COMMENT (OCCURRENCE/AT HEAD OF RIVER)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN QUARTZITIC & DOLOMITIC  
SANDSTONE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (SANDSTONE/DOLOMITE/ARGILLITE/SILTSTONE)  
FORMATION (SHEPPARD FORMATION/PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-294**

WEST CASTLE RIVER-2  
CU, AG

49 16 26 N 114 20 17 W  
ENTITY COMMENT (OCCUR/E SIDE-7KM N OF RIV HEAD)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LIMESTONE/DOLOMITE/ARGILLITE/SANDY  
LIMESTONE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (LIMEST/DOLOMITE/ARGILLITE/STROMATOLITIC  
LMSN)  
FORMATION (SIYEH FORMATION/PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-295**

WHISTLER MOUNTAIN-2  
CU, AG

49 19 47 N 114 18 32 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARGILLITE AND SANDSTONE (GRINNELL FM))

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/ SANDSTONE/ SILTSTONE/ QUARTZITE)  
FORMATION (GRINNELL FORMATION/ PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-296**  
WHISTLER MOUNTAIN-3  
CU, AG

49 19 43 N 114 18 10 W  
ENTITY COMMENT (BELT SYMPOSIUM VOL 1/ PG 165)

GEOGRAPHICAL SUBDIVISION (ALBERTA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARGILLITES AND SANDSTONES (GRINNELL FM))

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/ SANDSTONE/ SILTSTONE/ QUARTZITE)  
FORMATION (GRINNELL FORMATION/ PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-297**  
DUMAS LAKE  
CU, AG, PB, U

66 29 56 N 116 12 00 W

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (BEAR)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN QUARTZ WACKE/LITHIC  
WACKE/CONGLOM)  
REMARKS (HOSTED BY 2 DISCRETE SEDIMENTARY HORIZONS  
IN S & N LIMBS OF ANTICLINE)

AGE OF HOST (EARLY PROTEROZOIC)  
LITHOLOGY (QTZ WACKE/MAROON MUDST/LITHIC  
WACKE/CONGLOM)  
FORMATION (DUMAS GROUP)  
GEOREMARKS (HOST ROCKS REPRESENT LACUSTRINE &  
FLUVIAL RED BED SEQUENCE)

GOSSE, M. 1986 (629)

**CANADA-298**  
WALL LAKE  
CU

49 00 50 N 114 05 45 W  
ENTITY COMMENT (OCCURRENCE/ SE OF WALL LAKE)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED & INTERSTITIAL IN ARENITES)

REMARKS (SEVERAL OCCURRENCES OF VERY LOW GRADE  
(ABOUT 0.07% CU))

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZITIC & DOLOMITIC  
SANDSTONE/DOLOMITE)  
FORMATION (SHEPPARD FORMATION/PURCELL (BELT)  
SUPERGROUP)  
GEOREMARKS (CU CONTAINED MAINLY IN  
UNMETAMORPHOSED ARENITES OF THE LOWER  
SHEPPARD)

MORTON, R. 1973 (277)

**CANADA-299**  
WALL LAKE-AKAMINA CREEK  
CU

49 01 30 N 114 04 00 W  
ENTITY COMMENT (OCC/NE OF WALL L NEAR CK HEAD)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISSEMINATED IN CALCAREOUS SILTSTONES)  
REMARKS (SEVERAL OCCURRENCES IN 5-7 FT THICK SILTST  
BEDS GRADE 0.32 TO 0.54% CU)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (CALCAREOUS SILTSTONE/ARGILLITE/DOLOMITE)  
FORMATION (MIDDLE GATEWAY FM/ PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-300**  
KISHINENA CREEK  
CU, AG

49 02 00 N 114 16 20 W  
ENTITY COMMENT (OCCURR/ AT HEADWATERS OF CREEK)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN ARENTIE AS INTERSTITIAL EPIGENETIC BN +/-  
CP)  
REMARKS (NUMEROUS SHOWINGS WITH GRADES AROUND  
0.3% CU & 14 PPM AG)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (ARGILLITE/ SANDSTONE/ SILTSTONE/ ARENITE)  
FORMATION (MIDDLE-UPPER GRINNELL FM/ PURCELL  
SUPERGROUP)  
GEOREMARKS (CONSIDERABLE CU ENRICHMENT EFFECTED  
ADJACENT TO NORMAL FAULTS)

MORTON, R. 1973 (277)

**CANADA-301**  
SAGE CREEK-COMMERCE PEAK  
CU, AG

49 09 10 N 114 20 45 W



ENTITY COMMENT (OCC/N OF CK-E OF COMMERCE PEAK)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ARENITE OF THE MISSOULA GROUP)  
REMARKS (ARENITE UP TO 10 FT THICK CARRY 0.27 TO 1.57%  
CU & 0.3 TO 5 PPM AG)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (GR  
ARGILLITE/SILTST/SANDST/DOLOMITE/ARENITES)  
FORMATION (ROOSVILLE FORMATION/PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-302**

SAGE CREEK  
CU, AG

49 09 00 N 114 17 10 W  
ENTITY COMMENT (OCCURR/NORTH OF SAGE CREEK)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ARENITE OF THE MISSOULA GROUP)  
REMARKS (ARENITE UP TO 10 FT THICK CARRY 0.27 TO 1.57%  
CU & 0.3 TO 5 PPM AG)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (GR ARGILLITE/SILTST/SANDST/ DOLOMITE/  
ARENITE)  
FORMATION (ROOSVILLE FORMATION/PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-303**

SAGE CREEK-LANGEMARCK MTN-1  
CU

49 08 00 N 114 22 40 W  
ENTITY COMMENT (OCC/N OF CK-N OF LANGEMARCK MT)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARENITES OF THE UPPER AND LOWER  
GRINNELL FM)  
REMARKS (1-2 FT THICK BEDS OF LOWER GRINNELL CARRY 2.5  
TO 5.0% CU)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY  
(ARGILLITE/SANDSTONE/SILTSTONE/QTZITE/ARENITES)  
FORMATION (GRINNELL FORMATION/PURCELL (BELT)  
SUPERGROUP)  
GEOREMARKS (CU OCCURS AS INTERSTITIAL BORNITE &  
COVELLITE IN 2 IN-20 FT THICK BEDS)

MORTON, R. 1973 (277)

**CANADA-304**

SAGE CREEK-LANGEMARCK MTN-2  
CU

49 08 15 N 114 20 05 W  
ENTITY COMMENT (OC/S OF CR-NE OF LANGEMARCK MT)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ARENITE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (LIMESTONE/DOLOMITE/ARGILLITE/ARENITES)  
FORMATION (SIYEH FORMATION/PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-305**

STARVATION CREEK-1  
CU, AG

49 00 36 N 114 13 20 W  
ENTITY COMMENT (OCCUR/NEAR CREEK HEADWATERS)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARENITE)  
REMARKS (WHITE ARENITE 4 TO 7 FT THICK/GRAB SAMPLES  
UP TO 0.41% CU)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY  
(ARENITE/ARGILLITE/SANDSTONE/SILTSTONE/QTZITE)  
FORMATION (UPPER GRINNELL FM/ PURCELL (BELT)  
SUPERGROUP)

MORTON, R. 1973 (277)

**CANADA-306**

STARVATION CREEK-2  
CU

49 00 30 N 114 10 00 W  
ENTITY COMMENT (OCCUR/EAST OF CREEK HEADWATERS)

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLOMITIC ARGILLITE)  
REMARKS (TWO OCCURRENCES CARRY LOW CU VALUES  
(AVERAGE 0.01 TO 0.08% CU))

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (LIMESTONE/DOLOMITE/ARGILLITE/SANDY  
LIMESTONE)  
FORMATION (MIDDLE-UPPER STYEH FM/PURCELL (BELT)  
SUPERGP)

MORTON, R. 1973 (277)

**CANADA-307**  
FLACK LAKE AREA  
CU

46 36 00 N 82 46 00 W  
ENTITY COMMENT (SHOWINGS/N OF FLACK LAKE FAULT)

GEOGRAPHICAL SUBDIVISION (ONTARIO)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASAL BEDS OF THE GORDON LAKE  
FORMATION)  
REMARKS (SPARSE SABKHA-RELATED CU LIES AT BOUNDARY  
BTWN LORRAIN & GORDON LK FMS)

AGE OF HOST (EARLY PROTEROZOIC (EARLY APHEBIAN))  
LITHOLOGY (SANDSTONE/SILTSTONE/QUARTZ ARENITE)  
FORMATION (GORDON LAKE FORMATION/COBALT GROUP)

CHANDLER, F.W. 1986 (630)

**CANADA-308**  
BRODEUR PENINSULA  
CU

73 48 00 N 86 00 00 W  
ENTITY COMMENT (OCCUR/APPROX-FIG 17 BIBL 1/P38)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (ARCTIC PLATFORM)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN STRATIFIED BRECCIAS WITH HIGH VUGGY  
POROSITY)  
REMARKS (LOCALY TRACES OF MALACHITE OCCUR/  
BITUMINOUS MATTER INVARIABLY PRESENT)

AGE OF HOST (MIDDLE SILURIAN (NIAGARAN))  
LITHOLOGY (BRECCIAS (MICROCRYSTALLINE DOLOMITE &  
LIMEST))  
FORMATION (CAPE CRAUFORD FORMATION/MEMBER  
A/ASSEMBLAGE 3)  
GEOREMARKS (BRECCIAS FORMED BY SOLUTION OF  
ORIGINALLY INTERLAMINATED EVAPORITES)

TRETTIN, H.P. 1969 (631)

**CANADA-309**  
COPPER COVE (RICHMOND GULF)  
CU

56 21 00 N 76 26 56 W  
ENTITY COMMENT (OCCURR/IN COVE W SHORE OF GULF)

GEOGRAPHICAL SUBDIVISION (QUEBEC)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARKOSE)  
REMARKS (MINERALIZED ZONE 150 M LONG BY 6 M WIDE  
OUTCROPS ALONG CLIFF-FACE)

AGE OF HOST (EARLY PROTEROZOIC (LATE APHEBIAN))  
LITHOLOGY (ARKOSE)  
FORMATION (QINGAALUK FORMATION/RICHMOND GILD  
GROUP)  
GEOREMARKS (ZONE LIES WITH PYRITIC ZONE 25M BENEATH

UNCONFORMITY WITH NASTAPOKA GP)

CHANDLER, F.W. 1979 (633)  
CHANDLER, F.W. 1978 (632)  
CHANDLER, F.W. 1980 (634)  
STEVENSON, I.M. 1968 (636)  
CHANDLER, F.W. 1984 (635)

**CANADA-310**  
RICHMOND GULF-1 (LAC GUILLAUME-DELISLE (1))  
CU

56 26 30 N 76 26 00 W

GEOGRAPHICAL SUBDIVISION (QUEBEC)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN LAMINATED AND STROMATOLITIC CARBONATE)

AGE OF HOST (EARLY PROTEROZOIC (LATE APHEBIAN))  
LITHOLOGY (CARBONATE/QUARTZ ARENITE/ARKOSE/SHALE)  
FORMATION (NASTAPOKA GROUP)  
GEOREMARKS (CARBONATE WITH INTERCALATED 4 METRE  
THICK PYRITIC BRECCIA ZONE)

CHANDLER, F.W. 1979 (633)  
CHANDLER, F.W. 1978 (632)  
CHANDLER, F.W. 1980 (634)  
CHANDLER, F.W. 1984 (635)

**CANADA-311**  
RICHMOND GULF-2 (LAC GUILLAUME-DELISLE (2))  
CU

56 20 45 N 76 25 40 W

GEOGRAPHICAL SUBDIVISION (QUEBEC)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN FRACTURES IN INTERBEDDED PINK & GREEN  
ARKOSE)  
REMARKS (OCCURS 100 M BENEATH UNCONFORMITY WITH  
NASTAPOKA GROUP)

AGE OF HOST (EARLY PROTEROZOIC (LATE APHEBIAN))  
LITHOLOGY (GREY PYRITIC SANDSTONE/CHLORITIC ARKOSE)  
FORMATION (QINGAALUK FORMATION/RICHMOND GULF  
GROUP)

CHANDLER, F.W. 1979 (633)  
CHANDLER, F.W. 1978 (632)  
CHANDLER, F.W. 1980 (634)  
CHANDLER, F.W. 1984 (635)

**CANADA-312**  
RICHMOND GULF-3 (LAC GUILLAUME-DELISLE (3))  
CU, CO

56 24 20 N 76 27 50 W  
ENTITY COMMENT (OCCURRENCE/WEST SIDE OF GULF)

GEOGRAPHICAL SUBDIVISION (QUEBEC)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITE)

AGE OF HOST (EARLY PROTEROZOIC (LATE APHEBIAN))  
LITHOLOGY (DOLOMITE/QUARTZ ARENITE/ARKOSE/SHALE)  
FORMATION (NASTAPOKA GROUP)  
GEOREMARKS (CARBONATE WITH INTERCALATED 4 METRE  
THICK PYRITIC BRECCIA ZONE)

CHANDLER, F.W. 1979 (633)  
CHANDLER, F.W. 1978 (632)  
CHANDLER, F.W. 1980 (634)  
STEVENSON, I.M. 1968 (636)  
CHANDLER, F.W. 1984 (635)

**CANADA-313**

RICHMOND GULF-4 (LAC GUILLAUME-DELISLE (4))  
CU

56 19 00 N 76 25 00 W

GEOGRAPHICAL SUBDIVISION (QUEBEC)  
GEOLOGICAL PROVINCE (CHURCHILL)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (MALACHITE STAINS FRACTURES IN BLEACHED  
ZONE OF QINGAALUK FORMATION)

AGE OF HOST (EARLY PROTEROZOIC (LATE APHEBIAN))  
LITHOLOGY (SANDSTONE)  
FORMATION (QINGAALIK FORMATION/RICHMOND GULF GROUP)

CHANDLER, F.W. 1984 (635)

**CANADA-314**

THUNDERCLOUD CREEK  
CU

62 40 05 N 126 38 00 W  
ENTITY COMMENT (OCC/16 KM NORTH OF CREEK MOUTH)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN ROCKS OF THE REDSTONE RIVER FORMATION)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (PINK SLATY SILTSTONE/MINOR SHALE/GYPSUM)  
FORMATION (REDSTONE RIVER FM)

GABRIELSE, H. 1973 (149)

**CANADA-315**

FLAT RIVER  
CU

61 16 00 N 127 05 00 W  
ENTITY COMMENT (SHOWINGS/GSC MEM 366/PG 114)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (BORNITE IN FINE-GRAINED QUARTZITE)

AGE OF HOST (CAMBRIAN)  
LITHOLOGY  
(PHYLLITE/SLATE/QUARTZITE/SILTSTONE/ARGILLITE)  
FORMATION (PHYLLITE UNIT)

GABRIELSE, H. 1973 (149)

**CANADA-316**

SLOOP COVE (DWELLY)  
CU

44 41 11 N 66 52 24 W  
ENTITY COMMENT (NO 9/MIN OCC MAP/NB DEPT OF NR)

GEOGRAPHICAL SUBDIVISION (NEW BRUNSWICK)  
GEOLOGICAL PROVINCE (APPALACHIAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (PATCHES OR BLEBS DISSEM OR IN FRACTURES IN  
SHALE)  
REMARKS (THICK BASALTIC FLOW CONTAINING MINOR NATIVE  
CU OVERLIES MARINE SHALE)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (GREY GREEN & RED  
SHALES/GYPSUM/ANHYDRITE)  
FORMATION (ANNAPOLIS FORMATION)  
GEOREMARKS (TOP 6M OF SHALE UNIT GRADES UP TO 10%  
LOCALLY/AVG 0.1% OVER LARGE AREA)

MACNEILL, R.H. 1966 (637)  
CARROLL, B.M.W. 1977 (638)

**CANADA-317**

DISRAELI LAKE (COMMERCE)  
CU, PB

49 08 55 N 88 59 30 W  
ENTITY COMMENT (OCC/FIG 52 PHD THESIS/PG 241)

GEOGRAPHICAL SUBDIVISION (ONTARIO)  
GEOLOGICAL PROVINCE (SOUTHERN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (DISS IN POROUS STROMATOLITE HORIZON IN  
DOLO-LMST)  
REMARKS (MINERALIZATION OF LIMITED EXTENT OCCURS 1.1  
KM W OF NORTH END OF LAKE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (DOLOMITE/LIMESTONE)  
FORMATION (SIBLEY GROUP)  
GEOREMARKS (AGE OF HOST ROCK IS NOT NECESSARILY AGE  
OF MINERALIZATION IN THIS CASE)

SHKLANKA, R. 1969 (343)  
COATES, M.E. 1972 (639)  
ANON. 1967 (640)  
FRANKLIN, J.M. 1970 (641)

**CANADA-318**

THUNDERCLOUD RANGE  
CU

62 30 47 N 126 12 44 W  
ENTITY COMMENT (APPROX LOC/ GSC MEM 366 PG 114)

GEOGRAPHICAL SUBDIVISION (NORTHWEST TERRITORIES)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (MALACHITE ALONG CONTACT OF RAPITAN  
GP/WHITTAKER FM)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY  
(MUDSTONE/SILTSTONE/CONGLOM/SS/DOLOMITE/LIMEST)  
FORMATION (RAPITAN GROUP/WHITTAKER FORMATION)  
GEOREMARKS (CU LIKELY ASSOC WITH RAPITAN  
GP/WHITTAKER FM ORDOVICIAN-SILURIAN AGE)

GABRIELSE, H. 1973 (149)

#### **CANADA-319**

NORTHSTAR MAIN OR -A- SHOWING  
CU

56 03 00 N 126 16 00 W

GEOGRAPHICAL SUBDIVISION (BRITISH COLUMBIA)  
GEOLOGICAL PROVINCE (CORDILLERAN OROGEN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN SILTSTONE)  
REMARKS (SEVERAL TYPES OF CU MINERALIZATION OCCUR  
ON THIS PROPERTY)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (SILTSTONE)  
FORMATION (HAZELTON GROUP)

KIKUCHI, T. 1969 (603)  
SUTHERLAND-BROWN, A. 1968 (604)

#### **JAMAICA-1**

UGLY RIVER-PENCAR RIVER  
CU

18 36 00 N 76 45 00 W  
ENTITY COMMENT (LOC 15/ FIG 41 BIBL 1/ PG 149)

GEOLOGICAL PROVINCE (WAGWATER BELT)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (FINELY DISSEMINATED LOW-GRADE CU OCCURS IN  
GRITS)  
REMARKS (MINERALIZATION FREQUENTLY ASSOCIATED WITH  
ORGANIC DEBRIS)

AGE OF HOST (LOWER EOCENE)  
LITHOLOGY (GREEN TO GREY ARKOSE/ARKOSIC  
GRITS/SILTSTONES)  
FORMATION (WAGWATER FORMATION/ PENCAR RIVER  
MEMBER)  
GEOREMARKS (FOSSIL PLANT REMAINS OCCUR IN HORIZONS  
WITHIN PENCAR RIVER MEMBER)

FENTON, A.D. 1979 (133)  
HUGHES, I.G. 1973 (192)

#### **JAMAICA-2**

BARBECUE RIVER  
CU

18 06 00 N 76 37 00 W  
ENTITY COMMENT (NORTH SIDE OF BARBECUE VALLEY)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE STRATIGRAPHICALLY BELOW  
LAVAS)

AGE OF HOST (LOWER EOCENE)  
LITHOLOGY (GRIT/ SANDSTONE/ MUDSTONE/ TUFFACEOUS  
LAYERS)  
FORMATION (WAGWATER FORMATION)  
GEOREMARKS (SHALLOW-WATER SANDSTONE OCCUR ABOVE  
& BELOW MULTIPLE LAVA FLOWS)

FENTON, A.D. 1979 (133)  
HUGHES, I.G. 1973 (192)

#### **JAMAICA-3**

PHILLIPS GULLY  
CU, CO

18 08 00 N 76 38 00 W  
ENTITY COMMENT (NORTH OF BARBECUE RIVER)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (OCCURRENCE OF ACADEMIC INTEREST ONLY DUE  
TO LIMITED EXTENT)

AGE OF HOST (LOWER EOCENE)  
LITHOLOGY (GRIT/ SANDSTONE/ MUDSTONE/ TUFFACEOUS  
LAYERS)  
FORMATION (WAGWATER FORMATION)

FENTON, A.D. 1979 (133)  
HUGHES, I.G. 1973 (192)

#### **MEXICO-1**

BOLEO DISTRICT  
CU, AG, CO, ZN, MN, FE (SEE RESERVE/PRODUCTION  
REPORT)

27 10 00 N 112 30 00 W  
ENTITY COMMENT (4 KM SW OF SANTA ROSALIA TOWN)

GEOGRAPHICAL SUBDIVISION (BAJA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (5 ORE BEDS OF CLAYEY TUFF/ ORGANIC CARBON  
IN ORE)  
REMARKS (CU MINES COVER ZONE 11KM LONG BY 0.5-3KM  
WIDE PARALLEL TO THE COAST)

AGE OF HOST (EARLY PLIOCENE)  
LITHOLOGY (TUFF/CONGLOMERATE/LIMESTONE/GYPSUM)  
FORMATION (BOLEO FORMATION)  
GEOREMARKS (HOST ROCKS ARE CYCLIC MARINE TO  
NONMARINE TUFF AND CONGLOMERATE)

GUSTAFSON, L.B. 1981 (172)  
WILSON, I.F. 1955 (400)  
NISHIHARA, H. 1957 (289)  
WILSON, I.F. 1948 (399)

#### **MEXICO-2**

LAS VIGAS FORMATION

CU, BA (SEE RESERVE/PRODUCTION REPORT)  
29 21 48 N 105 04 10 W  
ENTITY COMMENT (LAS VIGAS/ TOWN-CENTRE OF BELT)  
GEOLOGICAL PROVINCE (CORDILLERA)  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS INDISTINCT POCKETS & LENSES IN  
CALCAREOUS ROCK)  
REMARKS (DEPOSITS FORM BELT 100 BY 250 KM/MARGINALLY  
ECONOMIC/MODEST PRODUCTION)  
AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (SILTSTONE/ SANDSTONE/ LIMESTONE)  
FORMATION (LAS VIGAS FORMATION)  
GEOREMARKS (IN PLACES MINERALIZATION IN ROLL FORM OR  
ASSOCIATED WITH FOSSIL WOOD)  
CLARK, K.F. 1978 (87)

### MEXICO-3

CUPIDO FORMATION  
CU  
26 21 30 N 101 25 00 W  
ENTITY COMMENT (PATULA/ TOWN IN NE MEXICO)  
CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITE AND INTERSTRATIFIED SHALE)  
REMARKS (CU FOUND IN TRANSITION ZONE FROM PATULA  
ARKOSE TO CUPIDO DOLOMITES)  
AGE OF HOST (CRETACEOUS)  
LITHOLOGY (RED OR GREEN SS & ARKOSE/ DOLOMITE/ SHALE)  
FORMATION (CUPIDO FORMATION)  
GEOREMARKS (BOTTOM TO TOP/ PATULA ARKOSE (600M) TO  
CUPIDO DOLOMITES WITH SHALES)  
NICOLINI, P. 1962 (287)

### UNITED STATES-1

NEWGATE PRISON  
CU  
41 55 00 N 72 45 00 W  
GEOGRAPHICAL SUBDIVISION (CONNECTICUT)  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREY SANDSTONE & MUDSTONE IN LEACHED  
ZONES)  
REMARKS (ORE HAS BEEN MINED FROM MAIN OREBODY & 4  
SMALL ADITS NORTH OF NEWGATE)  
AGE OF HOST (TRIASSIC)  
LITHOLOGY (GREY SANDSTONE BTWN GREENISH-GREY  
MUDSTONE)  
FORMATION (NEW HAVEN FM)  
GEOREMARKS (SULPHIDES OCCUR AS DISSEMINATED SPECKS  
& CLUSTERS OF GRAINS)  
ANON. 1977 (446)  
POTISAT, S. 1978 (302)  
RAYMOND, J. 1982 (529)

### UNITED STATES-2

EAST ORANGE (DODS)  
CU  
40 45 00 N 74 12 00 W  
ENTITY COMMENT (NO 2/ NEW JERSEY STATE BULL 57)  
GEOGRAPHICAL SUBDIVISION (NEW JERSEY)  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (THINLY SCATTERED IN VEINS & FRACTURES IN  
SANDSTONE)  
REMARKS (MINED IN THE 1700S)  
AGE OF HOST (TRIASSIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (NEWARK)  
WOODWARD, H.P. 1944 (403)

### UNITED STATES-3

GLEN RIDGE  
CU  
40 48 00 N 74 10 00 W  
ENTITY COMMENT (NO 3/ NEW JERSEY STATE BULL 57)  
GEOGRAPHICAL SUBDIVISION (NEW JERSEY)  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (LARGELY REPLACING BITUMINOUS PLANT REMAINS  
IN SS)  
REMARKS (WORKED IN THE 1700S/ IN 1880S-SEVERAL  
HUNDRED TONS WERE MINED)  
AGE OF HOST (TRIASSIC)  
LITHOLOGY (GREY SANDSTONE)  
WOODWARD, H.P. 1944 (403)  
LEWIS, J.V. 1907 (240)

### UNITED STATES-4

PAHAQUARRY (HIGH FALL FORMATION)  
CU  
41 02 00 N 75 02 00 W  
ENTITY COMMENT (NO 1/ USGS MIN INVEST MAP MR13)  
GEOGRAPHICAL SUBDIVISION (NEW JERSEY)  
CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEM & RARELY AS SEAMS & KNOTS IN GREY  
SANDSTONE)  
REMARKS (MINERALIZED PART OF SECTION IS SANDSTONE  
SEQUENCE 42 FEET THICK)  
AGE OF HOST (SILURIAN)  
LITHOLOGY (GREY SANDSTONE WITHIN RED SHALE)  
FORMATION (HIGH FALL FM)  
TAN, L.P. 1967 (365)  
WOODWARD, H.P. 1944 (403)  
KINKLE, A.R. 1962 (216)

### UNITED STATES-5

SCHUYLER (ARLINGTON LEVILLE/ VICTORIA)

CU

40 47 00 N 74 08 00 W

ENTITY COMMENT (NO 2/ USGS MIN INVEST MAP MR13)

GEOGRAPHICAL SUBDIVISION (NEW JERSEY)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SMALL BRANCHING VEINS AND SEAMS IN SANDSTONE)

REMARKS (TWO SS BEDS-UPPER 12 FT THICK/LOWER 10 FT SEPARATED BY 1 FT RED SHALE)

AGE OF HOST (TRIASSIC)

LITHOLOGY (SANDSTONE)

WOODWARD, H.P. 1944 (403)

LEWIS, J.V. 1907 (240)

KINKLE, A.R. 1962 (216)

#### **UNITED STATES-6**

BEAVER LAKE AREA

CU, U, AG

41 17 30 N 76 36 00 W

ENTITY COMMENT (APPROX CENTRE OF 4 PROSPECTS)

GEOGRAPHICAL SUBDIVISION (PENNSYLVANIA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (LENS-SHAPED/TABULAR ZONES IN GREENISH-GREY SS BEDS)

REMARKS (GRAY TO GREEN CHANNEL DEPOSITS ARE RICH IN CARBONACEOUS MATERIAL)

AGE OF HOST (UPPER DEVONIAN)

LITHOLOGY (GREENISH-GREY SANDSTONE/ SILTSTONE/ SHALE)

FORMATION (CATSKILL FM)

GEOREMARKS (OCCUR IN LOWER PART OF CATSKILL FM OF INTERLAYERED RED & GREY BEDS)

MCCAULEY, J.F. 1961 (262)

LESURE, F.G. 1977 (239)

GLAESER, J.D. 1974 (157)

#### **UNITED STATES-7**

FORKSTON

CU

41 30 00 N 76 07 00 W

ENTITY COMMENT (7 MILES WEST OF MEHOOPANY)

GEOGRAPHICAL SUBDIVISION (PENNSYLVANIA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (SULPHIDES REPLACE PLANT REMAINS IN SANDSTONE/SHALE)

REMARKS (ONE OCCURRENCE-200 YARDS N OF FORKSTON/THE 2ND-300 YARDS S OF FORKSTON)

AGE OF HOST (UPPER DEVONIAN)

LITHOLOGY (GREY SANDSTONE AND SHALE)

FORMATION (CATSKILL FM)

GEOREMARKS (THE GREY SANDSTONE & SHALE ARE INTERCALATED WITH RED STRATA)

BUTLER, R.D. 1938 (67)

GLAESER, J.D. 1974 (157)

#### **UNITED STATES-8**

GRASSMERE PARK AREA

CU, U, AG

41 16 30 N 76 23 00 W

ENTITY COMMENT (APPROX CENTRE OF 8 PROSPECTS)

GEOGRAPHICAL SUBDIVISION (PENNSYLVANIA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (LENS-SHAPED/TABULAR ZONES IN GREENISH-GREY SS BEDS)

AGE OF HOST (UPPER DEVONIAN)

LITHOLOGY (GREENISH-GREY SANDSTONE/ SILTSTONE/ SHALE)

FORMATION (CATSKILL FM)

GEOREMARKS (OCCUR IN LOWER PART OF CATSKILL FM OF INTERLAYERED RED AND GREY BEDS)

MCCAULEY, J.F. 1961 (262)

LESURE, F.G. 1977 (239)

GLAESER, J.D. 1974 (157)

#### **UNITED STATES-9**

NEW ALBANY AREA

CU, U, AG

41 35 00 N 76 27 30 W

ENTITY COMMENT (APPROX CENTRE OF 4 PROSPECTS)

GEOGRAPHICAL SUBDIVISION (PENNSYLVANIA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (LENS-SHAPED/TABULAR ZONES IN GREENISH-GREY SS BEDS)

REMARKS (TWO PROSPECTS WITHIN 1 KM OF NEW ALBANY/ SS BEDS RICH IN PLANT REMAINS)

AGE OF HOST (UPPER DEVONIAN)

LITHOLOGY (GREENISH-GREY SANDSTONE/ SILTSTONE/ SHALE)

FORMATION (CATSKILL FM)

GEOREMARKS (OCCUR IN LOWER PART OF CATSKILL FM OF INTERLAYERED RED AND GREY BEDS)

MCCAULEY, J.F. 1961 (262)

LESURE, F.G. 1977 (239)

GLAESER, J.D. 1974 (157)

#### **UNITED STATES-10**

CHANTILLY

CU, AG

38 52 45 N 77 19 00 W

ENTITY COMMENT (1.2 MILES EAST OF CHANTILLY)

GEOGRAPHICAL SUBDIVISION (VIRGINIA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN GREY SS CONTAINING CARBONIZED PLANT REMAINS)

REMARKS (MALACHITE/AZURITE OCCUR ON LAMINAE & JOINTS)

AS THIN COATINGS OVER 5 FT)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (GREY SANDSTONE IN REDBED SEQUENCE)  
FORMATION (MANASSAS FM)  
GEOREMARKS (ZONE IS 5 FEET THICK IN TRENCH & CONTAINS  
ANOMALOUS QUANTITIES CU & AG)

DAGOSTINO, J.P. 1970 (100)

**UNITED STATES-11**  
ROME SANDSTONE  
CU

35 00 00 N 84 30 00 W

GEOGRAPHICAL SUBDIVISION (TENNESSEE)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN LOCALLY BLEACHED HEMATITIC &/OR  
GLAUCONITIC SS)  
REMARKS (CHALCOPYRITE BORNITE AND CHALCOCITE(?) ARE  
DISSEMINATED LOCALLY IN SS)

AGE OF HOST (LOWER CAMBRIAN)  
LITHOLOGY (QUARTZITIC SANDSTONE)  
FORMATION (ROME FORMATION)  
GEOREMARKS (SAMPLES CONTAIN > 1% CU ALSO  
ANOMALOUS MO AND DETECTABLE AG)

WEDOW JR, H. 1975 (390)

**UNITED STATES-13**  
LAMOTTE SANDSTONE  
CU

37 44 00 N 91 05 00 W  
ENTITY COMMENT (NO 4/ USGS MIN INVEST MAP MR13)

GEOGRAPHICAL SUBDIVISION (MISSOURI)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (LOCAL CU ENRICHMENT IN UPPER PART OF  
LAMOTTE SS)  
REMARKS (CU ALONE OCCURS BELOW PB-ZN-CU DEPOSITS  
OF THE BONNETERRE FORMATION)

AGE OF HOST (UPPER CAMBRIAN)  
FORMATION (LAMOTTE SANDSTONE UNDERLYING  
BONNETERRE FM)  
GEOREMARKS (REPRESENTS SEPARATE CU PHASE  
MINERALIZATION OF PRE-VIBURNUM TREND AGE)

KISVARSANYI, G. 1977 (219)  
KINKLE, A.R. 1962 (216)

**UNITED STATES-14**  
PRESQUE ISLE (AMERICAN METALS)  
CU (SEE RESERVE/PRODUCTION REPORT)

46 41 00 N 89 59 00 W  
ENTITY COMMENT (NO 19/USGS MIN INVEST MAP MR13)

GEOGRAPHICAL SUBDIVISION (MICHIGAN)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN GREY SILTSTONE)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (SILTSTONE & SANDSTONE)  
FORMATION (NONESUCH SHALE)

KINKLE, A.R. 1962 (216)  
LUR'YE, A.M. 1986 (657)

**UNITED STATES-15**  
KONA DOLOMITE (MARQUETTE AREA)  
CU (SEE RESERVE/PRODUCTION REPORT)

46 32 00 N 87 27 00 W  
ENTITY COMMENT (EASTERN END- MARQUETTE TROUGH)

GEOGRAPHICAL SUBDIVISION (MICHIGAN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (LOW GRADE IN ARGILLITE & VERY FINE GRAINED  
QTZITE)  
REMARKS (NEAR BASE OF KONA DOLOMITE)

AGE OF HOST (EARLY PROTEROZOIC (APHEBIAN))  
LITHOLOGY (PINK DOLOMITIC QUARTZITE)  
FORMATION (LOWER QUARTZITE MEMBER/ WEWE FM)  
GEOREMARKS (QUARTZITE IS BOUNDED TOP & BOTTOM BY  
GREEN ARGILLITE)

CLARK, J.L. 1974 (86)  
TAYLOR, G.L. 1972 (367)

**UNITED STATES-16**  
WHITE PINE-SOUTHWEST MINE (WHITE PINE)  
CU

46 40 00 N 89 45 00 W

GEOGRAPHICAL SUBDIVISION (MICHIGAN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (NATIVE CU DISSEM IN CROSS-STRATIFIED  
SANDSTONE)  
REMARKS (UPPER CHLORITIC FACIES 1-20 FT THICK/LOWER  
HEMATITIC FACIES 80-100 FT)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (CHLORITIC SANDSTONE)  
FORMATION (COPPER HARBOR CONGLOMERATE)  
GEOREMARKS (MOST CU WITHIN 7 FT OF UPPER CONTACT  
BUT ALSO SCATTERED 25-85 FT BELOW)

HAMILTON, S.K. 1967 (180)  
WHITE, W.S. 1960 (393)  
ENSIGN, C.O. 1968 (541)  
WHITE, W.S. 1971 (540)

**UNITED STATES-17**  
WATERSMEET  
CU

46 21 00 N 89 19 00 W  
ENTITY COMMENT (13 KM NORTHWEST OF WATERSMEET)

GEOGRAPHICAL SUBDIVISION (MICHIGAN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN WHITE ORTHOQUARTZITE INTERLAYERED WITH  
MARBLE)  
REMARKS (TWO QUARTZITE BEDS 0.25-0.5 METRE  
THICK-MINERALIZED MOSTLY WITH CHALCO)

AGE OF HOST (EARLY PROTEROZOIC)  
LITHOLOGY (VITREOUS WHITE ORTHOQUARTZITE)  
FORMATION (CHOCOLAY GROUP/MARQUETTE RANGE  
SUPERGROUP)  
GEOREMARKS (MASSIVE QUARTZITE BEDS HAVE SHARP  
CONTACT WITH THE TREMOLITIC MARBLE)

CANNON, W.F. 1980 (73)

**UNITED STATES-18**

WHITE PINE  
CU (SEE RESERVE/PRODUCTION REPORT)

46 46 00 N 89 34 00 W  
ENTITY COMMENT (NO 18/USGS MIN INVEST MAP MR13)

GEOGRAPHICAL SUBDIVISION (MICHIGAN)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (ORE IN LOWER NONESUCH SHALE)  
REMARKS (RESERVES UNDERLIE MORE THAN 20 SQUARE  
MILES OF GROUND)

AGE OF HOST (MIDDLE PROTEROZOIC (UPPER KEWEENAWAN))  
LITHOLOGY (SILTSTONE/SHALE/SANDSTONE)  
FORMATION (NONESUCH SHALE OVERLIES COPPER HARBOR  
CGLM)  
GEOREMARKS (FORMED BY REDUCTION OF SEAWATER  
SULFATE/ 3 ZONES IN NONESUCH SHALE)

ENSIGN, C.O. 1968 (541)  
ENSIGN, C.O. 1968 (541)  
BURNIE, S.W. 1972 (66)  
CARPENTER, R.H. 1963 (74)  
CHAUDHURI, S. 1967 (77)  
KINKLE, A.R. 1962 (216)  
WIESE JR, R.G. 1973 (396)  
BARTHOLOME, P. 1969 (34)

**UNITED STATES-19**

HOT BROOK CANYON  
CU, MO, ZN

43 26 00 N 103 30 00 W  
ENTITY COMMENT (NO 1/FIG 267-1 USGS PP 424-C)

GEOGRAPHICAL SUBDIVISION (SOUTH DAKOTA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BLACK SAPROPELIC SHALE LAYERS)  
REMARKS (SAMPLES REPRESENT 0.5/ 0.6/ 1.25/ 3.3 FT  
THICKNESS RANGE 70-1500PPM CU)

AGE OF HOST (PENNSYLVANIAN)  
LITHOLOGY (BLACK SAPROPELIC SHALE)  
FORMATION (MINNELUSA FM)

DAVIDSON, D.F. 1961 (103)

**UNITED STATES-20**

MILAN  
CU

37 15 30 N 97 41 00 W  
ENTITY COMMENT (EXPOSURE/ 2 MILES S OF MILAN)

GEOGRAPHICAL SUBDIVISION (KANSAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (BOTRYOIDAL MALACHITE IN VUGGY  
ARGILLACEOUS DOLOMIT)  
REMARKS (MINERALIZATION OCCURS AT 4 DISTINCT  
STRATIGRAPHIC LEVELS)

AGE OF HOST (UPPER PERMIAN)  
LITHOLOGY (3 THIN DOLOMITE UNITS WITH GREEN/RED  
SHALES)  
FORMATION (MILAN LIMESTONE MEMBER OF THE  
WELLINGTON FM)  
GEOREMARKS (MILAN DOLOMITE CAPS THICK SEQUENCE OF  
WELLINGTON FM EVAPORITES)

LONG, D.T. 1976 (248)  
HILL, W.E. 1967 (187)

**UNITED STATES-21**

RUNNYMEDE  
CU

37 20 00 N 97 56 00 W  
ENTITY COMMENT (1.5 MILES EAST OF RUNNYMEDE)

GEOGRAPHICAL SUBDIVISION (KANSAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (THIN FILMS ON BEDDING PLANES IN DOLOMITE &  
SHALE)  
REMARKS (ASSOCIATED WITH ARGILLACEOUS DOLOMITE  
BEDS & ADJACENT SHALE)

AGE OF HOST (PERMIAN)  
LITHOLOGY (ARGILLACEOUS DOLOMITE/ SHALE/ SILTSTONE)  
FORMATION (NINNESCAH SHALE FM OF THE SUMMER GROUP)  
GEOREMARKS (CU IN UPPER PART OF NINNESCAH SHALE FM  
INCLUDING RUNNYMEDE SS MEMBER)

WAUGH, T.C. 1976 (387)  
HILL, W.E. 1967 (187)

**UNITED STATES-22**

SEDGWICK COUNTY OCCURRENCES  
CU

37 40 00 N 97 40 00 W  
ENTITY COMMENT (APPROX CENTRE OF 3 OCCURRENCES)

GEOGRAPHICAL SUBDIVISION (KANSAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREY SHALE WITH MINOR DOLOMITE &  
LIMESTONE)  
REMARKS (CHALCO & BORNITE OCCUR PRIMARILY AS  
REPLACEMENTS OF DIAGENETIC PYRITE)

AGE OF HOST (LOWER PERMIAN)  
LITHOLOGY (GREY SHALE WITH THIN LIMESTONE/DOLOMITE  
UNITS)



FORMATION (SUMMER GROUP - NINNESCAH  
SHALE/WELLINGTON FMS)

RIPLEY, E.M. 1980 (313)  
HILL, W.E. 1967 (187)

**UNITED STATES-23**

SUMNER COUNTY OCCURRENCES  
CU

37 05 00 N 97 40 00 W  
ENTITY COMMENT (APPROX CENTRE OF 9 OCCURRENCES)

GEOGRAPHICAL SUBDIVISION (KANSAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREY SHALE WITH MINOR DOLOMITE &  
LIMESTONE)  
REMARKS (CHALCOCITE OCCURS PRIMARILY AS  
REPLACEMENTS OF DIAGENETIC PYRITE)

AGE OF HOST (LOWER PERMIAN)  
LITHOLOGY (GREY SHALE WITH THIN LIMESTONE/DOLOMITE  
UNITS)  
FORMATION (SUMMER GROUP-NINNESCAH SHALE/  
WELLINGTON FMS)

RIPLEY, E.M. 1980 (313)  
HILL, W.E. 1967 (187)

**UNITED STATES-24**

BENSON FARM  
CU

34 12 00 N 98 18 00 W  
ENTITY COMMENT (1 MILE SOUTH OF TAYLOR)

GEOGRAPHICAL SUBDIVISION (OKLAHOMA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN BASE OF GARBER SANDSTONE)

AGE OF HOST (PERMIAN)  
FORMATION (GARBER FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-25**

BYARS  
CU, AG

35 00 00 N 97 30 00 W  
ENTITY COMMENT (5 MILES SW OF BYARS)

GEOGRAPHICAL SUBDIVISION (OKLAHOMA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (190 TONS OF COPPER ORE SHIPPED BETWEEN  
1913-1914/ALSO WORKED 1897-98)

LITHOLOGY (RED SANDSTONE & SHALE (LOCALLY BLEACHED  
WHITE)

LAPPOINT, D.J. 1979 (236)  
STROUD, R.B. 1970 (362)

MERRITT, C.A. 1940 (266)

**UNITED STATES-26**

CRETA  
CU (SEE RESERVE/PRODUCTION REPORT)

34 39 00 N 99 21 00 W  
ENTITY COMMENT (5 MILES SOUTHWEST OF OLUSTEE)

GEOGRAPHICAL SUBDIVISION (OKLAHOMA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN GREENISH-GREY SHALES)  
REMARKS (2 PERSISTENT CU-BEARING SHALE BEDS/MINING  
BEGAN IN NOVEMBER 1965)

AGE OF HOST (LOWER PERMIAN (U LEONARDIAN - E  
GUADALUPIAN))  
LITHOLOGY (SHALE-RED SHALE/EVAPORITE/DOLOMITE  
INTERBEDS)  
FORMATION (PREWITT SHALE/FLOWERPOW FM OF EL RENO  
GP)  
GEOREMARKS (CC & MALACHITE/ MID PERMIAN CLASTIC SED  
RKS & EVAPORITES)

HAGNI, R.D. 1976 (178)  
JOHNSON, K.S. 1976 (506)  
HAGNI, R.D. 1976 (178)  
DINGESS, P.R. 1976 (111)  
LAPPOINT, D.J. 1979 (236)  
LUR'YE, A.M. 1986 (657)  
LOCKWOOD, R.P. 1976 (247)  
STROUD, R.B. 1970 (362)

**UNITED STATES-27**

GRANT COUNTY  
CU

36 45 00 N 97 50 00 W

GEOGRAPHICAL SUBDIVISION (OKLAHOMA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (WITHIN THIN BEDS OF UPPER SHALE MEMBER)  
REMARKS (UP TO 4 CU ZONES OCCUR IN 250-320 FT INTERVAL  
IN UPPER MOST PART OF FM)

AGE OF HOST (LOWER PERMIAN)  
LITHOLOGY (SHALE)  
FORMATION (WELLINGTON FM)  
GEOREMARKS (MINERALIZED BEDS OCCUR IN SHALLOW  
SUBSURFACE/ UPPER SHALE MEMBER)

COX, R. 1980 (97)  
LUR'YE, A.M. 1986 (657)

**UNITED STATES-28**

LEE UTO  
CU

36 24 00 N 96 58 30 W  
ENTITY COMMENT (7 MILES NW OF PAWNEE)

GEOGRAPHICAL SUBDIVISION (OKLAHOMA)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SANDSTONE)

AGE OF HOST (PERMIAN)  
FORMATION (CHASE GROUP)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-29**

MANGUM (LOBARIS)  
CU (SEE RESERVE/PRODUCTION REPORT)

34 53 00 N 99 30 00 W  
ENTITY COMMENT (24 KM N OF Creta/ NEAR MANGUM)

GEOGRAPHICAL SUBDIVISION (OKLAHOMA)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN MEADOWS COPPER SHALE OF THE FLOWERPOT  
FORMATION)

AGE OF HOST (LOWER PERMIAN)  
LITHOLOGY (MED-GREY LAMINATED SILTY SHALE &  
MUDSTONE)  
FORMATION (FLOWERPOT FM OF THE EL RENO GROUP)  
GEOREMARKS (ORE BED-MEADOWS COPPER SHALE RANGING  
FROM 4-18 INCHES THICK-AVG 14 IN)

STROUD, R.B. 1970 (362)  
JOHNSON, K.S. 1976 (506)  
LUR'YE, A.M. 1986 (657)

**UNITED STATES-30**

PAOLI (TEEPEE QUEEN)  
CU, AG

34 47 00 N 97 17 00 W

GEOGRAPHICAL SUBDIVISION (OKLAHOMA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN FLUVIAL CHANNELS IN SANDSTONE)  
REMARKS (PRODUCTION FROM TWO SIDE-HILL CUTS  
REPORTED AS 'A FEW TONS' IN 1913)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (GARBER FM OF THE WICHITA GROUP)

LAPOINT, D.J. 1979 (236)  
STROUD, R.B. 1970 (362)  
MERRITT, C.A. 1940 (266)

**UNITED STATES-31**

ALEXANDER RANCH  
CU

33 30 00 N 99 45 00 W  
ENTITY COMMENT (8 MILES WEST OF TRUSCOTT)

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (IN CLASTIC FLUVIAL/DELTAIC DEPOSITS  
ASSOCIATED WITH ORGANIC TRASH)

AGE OF HOST (PERMIAN)  
LITHOLOGY (RED-BED SEQUENCE OF OXIDIZED SS &  
MUDSTONE)  
FORMATION (SAN ANGELO FM OF THE PEASE RIVER GROUP)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-32**

BRAZOS-WICHITA  
CU

33 24 00 N 100 03 00 W

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN DARK-RED & GREY SANDSTONE/ SILTSTONE/  
MUDSTONE)  
REMARKS (IN 1917 40 TONS OF CRUDE ORE WAS PRODUCED)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE/SILTSTONE/MUDSTONE)  
FORMATION (SAN ANGELO FM OF PEASE RIVER GROUP)

STROUD, R.B. 1970 (362)  
SMITH, G.E. 1974 (351)

**UNITED STATES-33**

BUZZARD PEAK  
CU

33 30 00 N 100 02 00 W

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN DOLOMITE/MUDSTONE AND SHALE)  
REMARKS (FROM 1882-1945 2550 TONS OF CRUDE ORE WAS  
PRODUCED)

AGE OF HOST (PERMIAN)  
LITHOLOGY (DOLOMITE/MUDSTONE AND SHALE)  
FORMATION (SAN ANGELO FM/ BLAINE FM OF PEASE RIVER  
GROUP)  
GEOREMARKS (DEPOSIT NEAR CONTACT OF SAN ANGELO  
AND BLAINE FORMATIONS)

STROUD, R.B. 1970 (362)  
SMITH, G.E. 1974 (351)  
JOHNSON, K.S. 1974 (201)

**UNITED STATES-34**

COPPER QUEEN (OLD GLORY)  
CU

33 01 45 N 100 05 00 W  
ENTITY COMMENT (DOUBLE MTN FORK BRAZOS RIVER)

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN DARK-RED & GREY SANDSTONE/ SILTSTONE/  
MUDSTONE)  
REMARKS (MINE WORKED 1880-1892 & 1945/ 175 TONS OF  
CRUDE ORE PRODUCED IN 1890)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE/SILTSTONE/MUDSTONE)  
FORMATION (SAN ANGELO FM OF PEASE RIVER GROUP)

STROUD, R.B. 1970 (362)  
SMITH, G.E. 1974 (351)  
JOHNSON, K.S. 1974 (201)

**UNITED STATES-35**  
FARRIS (AARD COPPER INC)  
CU

33 01 45 N 100 05 00 W  
ENTITY COMMENT (NEAR DAVIDSON PEAK)

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (65 TONS OF CRUDE ORE PRODUCED FROM  
1965-1974)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (SAN ANGELO FM OF PEASE RIVER GROUP)

STROUD, R.B. 1970 (362)  
SMITH, G.E. 1974 (351)

**UNITED STATES-36**  
GIBBS (MEDICINE MOUNDS)  
CU

34 10 00 N 99 31 00 W  
ENTITY COMMENT (NEAR MEDICINE MOUNDS)

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE LENS NEAR TOP OF SAN ANGELO  
FORMATION)  
REMARKS (IN 1918 3 TONS OF HAND-SORTED ORE  
CONTAINING 50% CU WAS PRODUCED)

AGE OF HOST (PERMIAN)  
LITHOLOGY (DARK RED & GREY SANDSTONE/  
SILTSTONE/MUDSTONE)  
FORMATION (SAN ANGELO FM OF PEASE RIVER GROUP)  
GEOREMARKS (CHANNEL-SCOUR TYPE)

STROUD, R.B. 1970 (362)  
SMITH, G.E. 1974 (351)  
JOHNSON, K.S. 1974 (201)

**UNITED STATES-37**  
HUGH-ROGERS (SMELTER CANYON/KIOWA PEAK)  
CU

33 20 00 N 100 03 30 W

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN DARK-RED & GREY SANDSTONE/ SILTSTONE/  
MUDSTONE)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE/SILTSTONE/MUDSTONE)  
FORMATION (SAN ANGELO FM OF PEASE RIVER GROUP)

STROUD, R.B. 1970 (362)  
SMITH, G.E. 1974 (351)

**UNITED STATES-38**  
MCCLELLAN  
CU

34 05 00 N 99 50 00 W  
ENTITY COMMENT (NORTH-EAST OF TEACUP MOUNTAIN)

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOCIATED WITH LENTICULAR SANDSTONE BEDS)  
REMARKS (FROM 1877-1917/ 1943-45/ 1967-70 ABOUT 250 TONS  
OF ORE WAS MINED)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE HORIZONS IN  
DOLOMITE/MUDSTONE/SHALE)  
FORMATION (SAN ANGELO FM OF PEASE RIVER GROUP)  
GEOREMARKS (AN UPPER CU ZONE OCCURS 50 FT ABOVE  
LOWER ZONE IN SHALE & GYPSUM BEDS)

STROUD, R.B. 1970 (362)  
SMITH, G.E. 1974 (351)

**UNITED STATES-39**  
MCFADDIN  
CU

33 29 00 N 99 57 00 W

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN DARK-RED & GREY SANDSTONE/ SILTSTONE/  
MUDSTONE)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE/SILTSTONE/MUDSTONE)  
FORMATION (SAN ANGELO FM OF PEASE RIVER GROUP)

STROUD, R.B. 1970 (362)  
SMITH, G.E. 1974 (351)

**UNITED STATES-40**  
PYRON (CROWELL ?) (CRAIG RANCH)  
CU

33 45 00 N 99 54 00 W

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN DARK-RED & GREY SANDSTONE/ SILTSTONE/  
MUDSTONE)  
REMARKS (PRIOR TO 1911 SEVERAL CAR LOADS WERE  
SHIPPED)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE/SILTSTONE/MUDSTONE)

FORMATION (SAN ANGELO FM OF PEASE RIVER GROUP)

STROUD, R.B. 1970 (362)  
SMITH, G.E. 1974 (351)  
JOHNSON, K.S. 1974 (201)

**UNITED STATES-41**

SMELTER  
CU

33 33 00 N 99 59 00 W

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN DARK-RED SANDSTONE/SILTSTONE/MUDSTONE)  
REMARKS (FROM 1880-1945 1000 TONS OF CRUDE ORE WAS  
PRODUCED)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE/SILTSTONE/MUDSTONE)  
FORMATION (SAN ANGELO FM OF PEASE RIVER GROUP)

STROUD, R.B. 1970 (362)  
SMITH, G.E. 1974 (351)

**UNITED STATES-42**

WILEY RANCH  
CU

33 05 00 N 100 10 00 W  
ENTITY COMMENT (IN VALLEY OF DOUBLE MOUNTAIN)

GEOGRAPHICAL SUBDIVISION (TEXAS)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (IN BASE OF BLAINE FORMATION)  
REMARKS (EXHIBITS FEATURES COMMON TO CHANNEL AND  
SCOUR DEPOSITS)

AGE OF HOST (PERMIAN)  
LITHOLOGY (DOLOMITE/MUDSTONE/SHALE JUST BELOW  
GYPSUM BED)  
FORMATION (BLAINE FM OF THE PEASE RIVER GROUP)  
GEOREMARKS (AT LEAST TWO SEPARATE COPPER-BEARING  
HORIZONS ARE KNOWN)

PHILLIPS, J.S. 1960 (297)  
STROUD, R.B. 1970 (362)

**UNITED STATES-43**

ABIQUIU  
CU

34 26 00 N 106 18 00 W  
ENTITY COMMENT (NO 6/ FIGURE 1 BIBL 1/ PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (REPLACEMENT OF CARBONACEOUS MATERIAL IN  
SANDSTONE)  
REMARKS (TWO GROUPS-ONE 5 MILES NORTH OF  
ABIQUIU/2ND 7 MILES NORTH OF ABIQUIU)

AGE OF HOST (TRIASSIC)

LITHOLOGY (FAIRLY FINE-GRAINED SS/ GRIT/ CONGLOMERATE)  
FORMATION (POLEO SANDSTONE)  
GEOREMARKS (ABO REDBEDS UNDERLY THE POLEO SS/  
PRIMARY CU MINERAL IS CHALCOCITE)

SOULE, J.H. 1956 (354)

**UNITED STATES-44**

BROOME  
CU

34 15 00 N 106 30 00 W  
ENTITY COMMENT (DISTRICT)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (MESETA BLANCA FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-45**

COYOTE CREEK (GUADALUPITA (??))  
CU

36 06 00 N 105 10 00 W  
ENTITY COMMENT (NO 12/ FIGURE 1 BIBL 2/ PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN CARBONACEOUS SHALES AND ARKOSIC  
SANDSTONES)

AGE OF HOST (PERMO-PENNSYLVANIAN)  
LITHOLOGY (ARKOSES/ARKOSIC SS/RED & GREYISH-GREEN  
SHALES)  
FORMATION (SANGRE DE CRISTO FM)

PHILLIPS, J.S. 1960 (297)  
SOULE, J.H. 1956 (354)

**UNITED STATES-46**

NACIMIENTO (EUREKA/NACIMIENTO)  
CU (SEE RESERVE/PRODUCTION REPORT)

36 00 30 N 106 53 00 W  
ENTITY COMMENT (NO 1/USGS MIN INVEST MAP MR-13)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ORE REPL WOODY DEBRIS IN LOWER  
CONGLOMERATIC SS)  
REMARKS (2 MINES-EUREKA/ NACIMIENTO/ FROM 1886-1957  
PRODUCED 3780 TONS OF CU)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (MED-COARSE GR QTZ SS WITH CONGLOM NEAR  
BASE)  
FORMATION (AGUA ZARCA MEMBER OF CHINLE FM)  
GEOREMARKS (RIPPED UP CLAY FRAGMENTS (UP TO 1 FT

LONG) OCCUR THROUGHOUT SANDSTONE)

LAPPOINT, D.J. 1979 (236)  
PHILLIPS, J.S. 1960 (297)  
KINKLE, A.R. 1962 (216)  
WOODWARD, L.A. 1974 (404)

**UNITED STATES-47**

LONE EAGLE (GOLDEN EAGLE/ AMMON)  
CU

32 26 00 N 104 15 00 W  
ENTITY COMMENT (0.25 MI BY ROAD NW OF CARLSBAD)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN SS REPLACING CEMENTING  
MATERIAL)  
REMARKS (SEVERAL SMALL ORE SHIPMENTS MADE/ SOME  
ORE STOCKPILED/CU AS MALACHITE)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (YESO FM)  
GEOREMARKS (SS GENERALLY FLAT LYING BUT SHARPLY  
FOLDED/FAULTED WHERE MINERALIZED)

SOULE, J.H. 1956 (354)

**UNITED STATES-48**

MIRABAL  
CU

35 12 00 N 108 06 00 W  
ENTITY COMMENT (NO 23/ FIGURE 1 BIBL 3/ PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SEAMS IN SHALE REPLACING WOOD/AS CEMENT  
IN SS)  
REMARKS (SIGNIFICANT TONNAGE OF PRINCIPALLY  
ACID-SOLUBLE COPPER)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SHALE/CONGLOMERATE/SANDSTONE)  
FORMATION (ABO FM)

PHILLIPS, J.S. 1960 (297)  
JORALEMON, I.B. 1952 (207)  
SOULE, J.H. 1956 (354)

**UNITED STATES-49**

PAJARITO AZULE  
CU

36 15 00 N 106 50 00 W  
ENTITY COMMENT (NO 7/ FIGURE 1 BIBL 1/ PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN ARKOSIC LIMESTONE)

AGE OF HOST (PENNSYLVANIAN)

LITHOLOGY (ARKOSIC LIMESTONE)  
FORMATION (MADERA FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-50**

PARKER-DOYLE  
CU

34 16 00 N 106 28 00 W  
ENTITY COMMENT (NO 27/ FIGURE 1 BIBL 1/ PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS CEMENTING MATERIAL BETWEEN MED-SIZE  
SAND GRAINS)  
REMARKS (PRINCIPAL COPPER MINERAL IS MALACHITE/ NO  
CHALCOCITE WAS NOTED)

AGE OF HOST (PERMIAN)  
LITHOLOGY (LIGHT-COLOURED SANDSTONE)  
FORMATION (ABO FM)  
GEOREMARKS (MINERALIZED BEDS OCCUR  
STRATIGRAPHICALLY MUCH HIGHER THAN SCHOLLE DIST)

SOULE, J.H. 1956 (354)

**UNITED STATES-51**

PEACOCK CANYON  
CU, AG

36 55 00 N 103 26 00 W  
ENTITY COMMENT (CENTRE OF AREA/FIG 10 BIBL1)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ASSOC WITH STEEP FAULTS IN FLAT-LYING  
SANDSTONE)  
REMARKS (SEVERAL CLAIM GROUPS/CU ALSO OCCURS AS  
DISSEMINATIONS IN ADJOINING SS)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (DOCKUM GROUP)  
GEOREMARKS (SS BLEACHED FROM RED TO NEARLY WHITE  
IN AREAS OF CU MINERALIZATION)

SOULE, J.H. 1956 (354)  
PHILLIPS, J.S. 1960 (297)

**UNITED STATES-52**

PINTADA  
CU

34 56 00 N 104 52 00 W  
ENTITY COMMENT (NO 11/USGS MIN INVEST MAP MR13)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE REPLACING V FINE-GR ORGANIC  
MATERIAL)  
REMARKS (MINERALIZATION OCCURS IN FIVE SEPARATE BEDS  
EACH 5 TO 9 FEET THICK)

AGE OF HOST (PERMIAN)  
LITHOLOGY (MASS GYPSIFEROUS UNIT/MIDDLE & UPPER SS  
UNITS)  
FORMATION (GRAYBURG-QUEEN FORMATION)

LAPOINT, D.J. 1979 (236)  
KINKLE, A.R. 1962 (216)

**UNITED STATES-53**  
SACRAMENTO MOUNTAINS  
CU

32 55 00 N 105 48 00 W  
ENTITY COMMENT (DIST-NO2/FIG 1 BIBL 1/ PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARKOSE & ARKOSIC SHALE)  
REMARKS (2 MINES & OVER 20 SHOWINGS/ FROM 1908-1948  
PRODUCED 80 TONS CU/900T PB)

AGE OF HOST (PERMIAN)  
LITHOLOGY (ARKOSIC SHALE)  
FORMATION (ABO FM)

LAPOINT, D.J. 1979 (236)  
PHILLIPS, J.S. 1960 (297)

**UNITED STATES-54**  
COURTNEY  
CU

32 57 30 N 105 47 00 W  
ENTITY COMMENT (DIST-NO2/FIG 1 BIBL 1/ PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARKOSIC SHALE AS NODULES/& REPL OF  
ORGANIC MAT)  
REMARKS (IN 1929 A FEW CARS OF ORE CONTAINING ABOUT  
3.3% COPPER WERE SHIPPED)

AGE OF HOST (PERMIAN)  
LITHOLOGY (ARKOSIC GRAY SHALE)  
FORMATION (ABO FM)  
GEOREMARKS (CHALCOCITE & ITS ALTERATION & OXIDATION  
PRODUCTS ARE MAIN ORE MINERALS)

LAPOINT, D.J. 1979 (236)  
PHILLIPS, J.S. 1960 (297)

**UNITED STATES-55**  
WARNOCK  
PB, CU

32 55 00 N 105 48 00 W  
ENTITY COMMENT (DIST-NO2/FIG 1 BIBL 1/ PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN ARKOSE)  
REMARKS (VISIBLE ORGANIC DEBRIS IS RARE AND DOES NOT  
CONTROL MINERALIZATION)

AGE OF HOST (PERMIAN)  
LITHOLOGY (CREAM-COLOURED ARKOSES OF THE MIDDLE  
UNIT)  
FORMATION (ABO FM)

LAPOINT, D.J. 1979 (236)  
PHILLIPS, J.S. 1960 (297)

**UNITED STATES-56**  
SAN MIGUEL  
CU

35 59 30 N 106 53 30 W

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (ORE REPL WOODY DEBRIS AND SURROUNDING  
SANDSTONE)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (WHITE MED-COARSE GR FRIABLE QUARTZ  
SANDSTONE)  
FORMATION (AGUA ZARCA MEMBER OF CHINLE FM)  
GEOREMARKS (10 M TONS 0.67% CU/  
CC/BN/CV/MAL/AZUR/CRYSPY/CP IN SAN JUAN BASIN)

LAPOINT, D.J. 1979 (236)  
PHILLIPS, J.S. 1960 (297)  
KINKLE, A.R. 1962 (216)  
KAUFMAN, W.H. 1972 (209)  
WOODWARD, L.A. 1974 (404)  
ANON. 1971 (538)

**UNITED STATES-57**  
SCHOLLE DISTRICT  
CU

34 30 00 N 106 25 00 W  
ENTITY COMMENT (DIST-NO2/ FIG 1 BIBL 1/PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREY ORGANIC SHALE & SILTSTONE WITH SS  
LENSES)  
REMARKS (33 PROSPECTS/TO 1957 500 TONS OF CU  
PRODUCED)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SHALE overlain BY RED SHALE capped BY SS)  
FORMATION (ABO FM)  
GEOREMARKS (COPPER OCCURS AS CHALCOCITE/MALACHITE  
AND AZURITE)

LAPOINT, D.J. 1979 (236)  
PHILLIPS, J.S. 1960 (297)

**UNITED STATES-58**  
SPECKLED BIRD  
CU

32 58 00 N 105 47 00 W  
ENTITY COMMENT (NO 32/FIG 1 BIBL 1/ PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (NODULES FROM 0.5-6 INCHES IN DIAMETER IN  
ARKOSE)  
REMARKS (NODULES OF CHALCOCITE COATED WITH  
MALACHITE AND AZURITE)  
  
AGE OF HOST (PERMIAN)  
LITHOLOGY (ARKOSE)  
FORMATION (ABO FM)  
GEOREMARKS (DEVELOPED BY ADITS-ONE 45 FT DEEP THE  
OTHER 110 FT DEEP)  
  
SOULE, J.H. 1956 (354)

**UNITED STATES-59**  
STAUBER (GUADALUPE)  
CU

34 51 00 N 104 51 00 W  
ENTITY COMMENT (NO 4/USGS MIN INVEST MAP MR-13)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISS IN SANDSTONE & REPLACING WOODY PLANT  
DEBRIS)  
REMARKS (FROM 1925 TO 1957 MINE PRODUCED 6600 TONS  
OF CU AND 42000 OUNCES OF AG)  
  
AGE OF HOST (LATE TRIASSIC)  
LITHOLOGY (3 SANDSTONE UNITS SEPARATED BY CLAY OR  
SHALE)  
FORMATION (SANTA ROSA MEMBER OF CHINLE FM)  
GEOREMARKS (ORE-BEARING SS UP TO 12 FT THICK/EXTENDS  
1500 FT IN LENGTH/320 FT WIDE)

LAPOINT, D.J. 1979 (236)  
PHILLIPS, J.S. 1960 (297)  
KINKLE, A.R. 1962 (216)

**UNITED STATES-60**  
TULAROSA  
CU

33 13 00 N 105 50 00 W  
ENTITY COMMENT (NO 30/FIG 1 BIBL 3/ PG 3)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GYPSUM AS CONCRETIONS & REPLACES  
COALIFIED WOOD)  
REMARKS (GYPSUM BED IS PLEISTOCENE(?) PLAYA DEPOSIT  
ABOUT 5 FT THICK)

AGE OF HOST (QUATERNARY)  
LITHOLOGY (GYPSUM)  
GEOREMARKS (DEPOSIT RESTS UNCONFORMABLY ON  
PERMIAN SED ROCKS/CU CLASS QUESTIONABLE)

PHILLIPS, J.S. 1960 (297)  
KINKLE, A.R. 1962 (216)  
SOULE, J.H. 1956 (354)

**UNITED STATES-62**  
WIGGINS

CU

36 56 00 N 103 05 00 W  
ENTITY COMMENT (GENERAL AREA)

GEOGRAPHICAL SUBDIVISION (NEW MEXICO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (JURASSIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (ENTRADA FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-63**  
BRONZE LAKE  
CU, PB, V

35 59 00 N 114 10 00 W  
ENTITY COMMENT (APPROX LOCATION)

GEOGRAPHICAL SUBDIVISION (ARIZONA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN LIMESTONE ALONG BEDDING NEAR FRACTURES)

AGE OF HOST (MISSISSIPPIAN)  
LITHOLOGY (LIMESTONE)  
FORMATION (REDWALL FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-64**  
HACKS CANYON  
CU, U

35 25 00 N 113 30 00 W  
ENTITY COMMENT (APPROX LOCATION)

GEOGRAPHICAL SUBDIVISION (ARIZONA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SHALE)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SHALE)  
FORMATION (HERMIT FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-65**  
HUNTERS POINT  
CU

35 45 00 N 109 15 00 W  
ENTITY COMMENT (APPROX LOCATION)

GEOGRAPHICAL SUBDIVISION (ARIZONA)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE)

FORMATION (COCONINO FM (?))

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-66**

MOGOLLON RIM

CU

34 15 00 N 111 00 00 W

GEOGRAPHICAL SUBDIVISION (ARIZONA)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (ASSOC WITH ORGANIC MATERIAL IN LOWER SUPAI FM)

AGE OF HOST (PERMIAN-PENNSYLVANIAN)

LITHOLOGY (MICRITE/ QTZ ARENITE/ LIMESTONE PEBBLE CONGL)

FORMATION (SUPAI FORMATION)

ROGERS, R.D. 1978 (315)

**UNITED STATES-67**

NATIONAL

CU

36 20 00 N 112 45 00 W

ENTITY COMMENT (HEAD OF NATIONAL CANYON)

GEOGRAPHICAL SUBDIVISION (ARIZONA)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN LIMESTONE)

AGE OF HOST (PERMIAN)

LITHOLOGY (LIMESTONE)

FORMATION (KAIBAB FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-68**

RIDENOUR

CU, U, V

36 10 00 N 113 10 00 W

ENTITY COMMENT (APPROX LOCATION)

GEOGRAPHICAL SUBDIVISION (ARIZONA)

CU SUBTYPE (UNDIFFERENTIATED)

AGE OF HOST (PERMIAN-PENNSYLVANIAN)

FORMATION (SUPAI FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-69**

SUNLITE AND MOONLITE

CU, U

34 59 00 N 110 43 00 W

ENTITY COMMENT (NEAR OWL ROCK)

GEOGRAPHICAL SUBDIVISION (ARIZONA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN CONGLOMERATIC SANDSTONE)

REMARKS (MINES ARE IN OLJETO SYNCLINE)

AGE OF HOST (LATE TRIASSIC)

LITHOLOGY (SS CONTAIN PEBBLES OF

SS/CHERT/QTZT/LS/SILTST)

FORMATION (SHINARUMP MEMBER OF CHINLE FM)

GEOREMARKS (COALIFIED WOODY MATERIAL IS ABUNDANT IN THE ORE)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-70**

WHITE MESA DISTRICT

CU

36 40 00 N 111 23 00 W

ENTITY COMMENT (NO 1/USGS MIN INVEST MAP MR-13)

GEOGRAPHICAL SUBDIVISION (ARIZONA)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SANDSTONE)

REMARKS (SIGNIFICANT TONNAGE OF PRINCIPALLY ACID-SOLUBLE COPPER)

AGE OF HOST (JURASSIC)

LITHOLOGY (SANDSTONE)

FORMATION (NAVAJO FM)

PHILLIPS, J.S. 1960 (297)

KINKLE, A.R. 1962 (216)

**UNITED STATES-71**

ADAK (URAVAN)

U, V, CU

38 25 50 N 108 49 15 W

ENTITY COMMENT (MINE/GEOGRAPHIC NAMES INFO SYS)

GEOGRAPHICAL SUBDIVISION (COLORADO)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN UPPER SANDSTONE OF THE SALT WASH MEMBER)

REMARKS (DEPOSIT IN BRAIDED ALLUVIAL FAN IN 2ND ORDER BASIN OVER PARADOX SALT)

AGE OF HOST (JURASSIC)

LITHOLOGY (INTERSTRATIFIED UNITS OF SANDSTONE & MUDSTONE)

FORMATION (MORRISON FM)

PHILLIPS, J.S. 1960 (297)

YOUNG, R.G. 1978 (413)

**UNITED STATES-72**

BEAR CREEK

CU

37 37 00 N 108 10 00 W

ENTITY COMMENT (AREA/USGS MIN INVEST MAP MR-13)

GEOGRAPHICAL SUBDIVISION (COLORADO)



CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN DOLORES FM ALONG CONT WITH MONZONITE  
PORP DYKES)  
REMARKS (ALONG BEAR CREEK SEVERAL DEPOSITS OCCUR  
AT BASE OF DOLORES FORMATION)

AGE OF HOST (LATE TRIASSIC)  
FORMATION (DOLORES FM)

PHILLIPS, J.S. 1960 (297)  
KINKLE, A.R. 1962 (216)

**UNITED STATES-73**

CASHIN  
CU

38 18 00 N 108 57 00 W  
ENTITY COMMENT (NO 10/USGS MIN INVEST MAP MR13)

GEOGRAPHICAL SUBDIVISION (COLORADO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (FROM 1897-1957 MINE PRODUCED 1000 TONS OF  
CU AND 306000 OUNCES OF AG)

AGE OF HOST (TRIASSIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (DOLORES FM)

PHILLIPS, J.S. 1960 (297)  
KINKLE, A.R. 1962 (216)

**UNITED STATES-74**

COPPER KING  
CU

38 23 33 N 108 25 54 W  
ENTITY COMMENT (MINE/GEOGRAPHIC NAMES INFO SYS)

GEOGRAPHICAL SUBDIVISION (COLORADO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)

AGE OF HOST (CRETACEOUS)  
FORMATION (BURRO CANYON FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-75**

COTOPAXI CORDOVA  
CU

38 30 00 N 105 30 00 W  
ENTITY COMMENT (6-10 MI NO OF COTOPAXI CORDOVA)

GEOGRAPHICAL SUBDIVISION (COLORADO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)

AGE OF HOST (PENNSYLVANIAN)  
LITHOLOGY (UNDIVIDED)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-76**

COUGAR  
CU, U

38 00 00 N 107 53 00 W

GEOGRAPHICAL SUBDIVISION (COLORADO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (SANDSTONE ROLL-TYPE U-CU DEPOSIT)  
REMARKS (SHARP INTERFACE BTWN ORE & BARREN/CU WITH  
U ALONG MARGINS OF ROLL)

AGE OF HOST (JURASSIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (MORRISON FM)  
GEOREMARKS (CU MINERALS MAINLY VOLBORTHITE/ SOME  
MALACHITE & AZURITE)

PHILLIPS, J.S. 1960 (297)  
SHIELDS, W.R. 1965 (342)  
YOUNG, R.G. 1978 (413)

**UNITED STATES-77**

DUNLAP RANCH (JACKPOT)  
CU

37 27 00 N 102 14 00 W  
ENTITY COMMENT (NO 5/FIGURE 3 BIBL 1/ PG 9)

GEOGRAPHICAL SUBDIVISION (COLORADO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (JURASSIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (ENTRADA FM)

PHILLIPS, J.S. 1960 (297)  
YOUNG, R.G. 1978 (413)  
SOULE, J.H. 1956 (354)

**UNITED STATES-78**

INDEPENDENCE  
CU, AG, AU

37 28 00 N 102 14 00 W  
ENTITY COMMENT (NO 4/ FIGURE 3 BIBL 1/ PG 9)

GEOGRAPHICAL SUBDIVISION (COLORADO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (STRINGERS OF CU MINERALS IN FRACTURES  
WITHIN SS)  
REMARKS (PRODUCTION 1900-02 YIELDED 11419 LBS  
CU/1915-17 YIELDED 10092 LBS CU)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (LIGHT/CROSSBEDDED/POROUS ARKOSIC  
SANDSTONE)  
FORMATION (PURGATOIRE FM)  
GEOREMARKS (CU OCCURS IN BASAL MEMBER OF  
FORMATION)

SOULE, J.H. 1956 (354)

**UNITED STATES-79**

LYONS FM  
CU

38 45 00 N 104 45 00 W

GEOGRAPHICAL SUBDIVISION (COLORADO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (LYONS FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-80**

MCGUIRE  
CU

37 30 00 N 105 01 00 W

GEOGRAPHICAL SUBDIVISION (COLORADO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)

AGE OF HOST (PERMIAN)  
LITHOLOGY (UNDIVIDED)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-81**

STEAMBOAT SPRINGS  
CU

40 32 00 N 106 45 00 W  
ENTITY COMMENT (4-7 MI N OF STEAMBOAT SPRINGS)

GEOGRAPHICAL SUBDIVISION (COLORADO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (CRETACEOUS)  
FORMATION (DAKOTA FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-82**

BIG INDIAN  
CU

38 14 00 N 109 13 00 W  
ENTITY COMMENT (NO 19/USGS MIN INVEST MAP MR13)

GEOGRAPHICAL SUBDIVISION (UTAH)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE ASSOCIATED WITH COALY BEDS  
AND FAULT)  
REMARKS (2000 FT-3000FT FAULT BETWEEN CU DEPOSIT AND  
ADJACENT URANIUM DEPOSITS)

AGE OF HOST (CRETACEOUS)  
LITHOLOGY (SANDSTONE)  
FORMATION (DAKOTA FM)

PHILLIPS, J.S. 1960 (297)  
KINKLE, A.R. 1962 (216)  
SCHMITT, L.J. 1969 (333)

**UNITED STATES-83**

COPPER GLOBE  
CU

38 48 00 N 110 54 00 W

GEOGRAPHICAL SUBDIVISION (UTAH)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (DEPOSIT LOCALIZED BY FAULTS)

AGE OF HOST (JURASSIC)  
LITHOLOGY (SANDSTONE)  
FORMATION (NAVAJO FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-84**

CUTLER  
CU, U

38 21 40 N 109 44 00 W

GEOGRAPHICAL SUBDIVISION (UTAH)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN SEDIMENTARY ROCKS)

AGE OF HOST (PERMIAN)  
FORMATION (CUTLER FM)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-86**

ELK RIDGE  
CU

41 21 15 N 111 32 30 W  
ENTITY COMMENT (RIDGE/GEOGRAPHIC NAMES INFO SY)

GEOGRAPHICAL SUBDIVISION (UTAH)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)

AGE OF HOST (LATE TRIASSIC)  
FORMATION (SHINARUMP MEMBER OF CHINLE FORMATION)

PHILLIPS, J.S. 1960 (297)

**UNITED STATES-87**

HAPPY JACK  
U, CU

37 48 30 N 110 26 00 W  
ENTITY COMMENT (APPROX LOC WITHIN WHITE CANYON)

GEOGRAPHICAL SUBDIVISION (UTAH)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN LENTICULAR CROSSBEDDED CONGLOMERATIC SANDSTONE)

REMARKS (MINE IS ON WEST FLANK OF MONUMENT UPLIFT)

AGE OF HOST (LATE TRIASSIC)

LITHOLOGY (CONGLOM SS/COALIFIED WOODY MATERIAL/MUDSTONE)

FORMATION (SHINARUMP MEMBER OF CHINLE FM)

GEOREMARKS (SHINARUMP UNCONFORMABLY OVERLIES MOENKOPI FM OF EARLY-MIDDLE TRIASSIC)

PHILLIPS, J.S. 1960 (297)

MILLER, L.J. 1955 (271)

STIEFF, L.R. 1953 (360)

#### UNITED STATES-88

HIDEOUT NO 1

U, CU

37 39 15 N 110 00 30 W

GEOGRAPHICAL SUBDIVISION (UTAH)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (REPLACE PLANT REMAINS/DETRITUS/CEMENT OF HOST SS)

REMARKS (DEPOSIT LOCALIZED IN PERMEABLE SS THAT FILLS CHANNELS CUT IN SHALE)

AGE OF HOST (TRIASSIC)

LITHOLOGY (SANDSTONE)

FORMATION (SHINARUMP MEMBER OF CHINLE FORMATION)

GEOREMARKS (ORE MIN PRESERVE CELL STRUCT/REPLACE QZ&FELD/FILL FRACS/IMPREGNATE SS)

FINNELL, T.L. 1963 (134)

#### UNITED STATES-89

LISBON VALLEY

CU (SEE RESERVE/PRODUCTION REPORT)

38 09 00 N 109 06 00 W

ENTITY COMMENT (NO 20/USGS MIN INVEST MAP MR13)

GEOGRAPHICAL SUBDIVISION (UTAH)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN ARKOSIC/CALCAREOUS/MICA-RICH/ORGANIC-RICH SS)

REMARKS (STRONGLY CONTROLLED BY FAULTS/ FRACTURES ALONG CREST OF SALT ANTICLINE)

AGE OF HOST (CRETACEOUS)

FORMATION (DAKOTA SANDSTONE)

GEOREMARKS (SMALL NODULES OF CHALCOCITE ARE SURROUNDED BY ZONED HALO OF CARBONATES)

LAPPOINT, D.J. 1979 (236)

SCHMITT, L.J. 1969 (333)

#### UNITED STATES-90

UINTA (PARK CITY AREA)

CU, U

40 37 00 N 111 31 00 W

ENTITY COMMENT (NO 3/USGS MIN INVEST MAP MR-13)

GEOGRAPHICAL SUBDIVISION (UTAH)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (REPLACEMENT AND VEINS MAINLY IN LIMESTONE)

REMARKS (MANY MINOR OCCURRENCES/ BYPRODUCT COPPER)

AGE OF HOST (CENOZOIC)

FORMATION (UINTA FM)

PHILLIPS, J.S. 1960 (297)

KINKLE, A.R. 1962 (216)

#### UNITED STATES-91

WESTERN STAR

CU

38 09 00 N 109 08 00 W

ENTITY COMMENT (APPROX LOC WITHIN LISBON VALLEY)

GEOGRAPHICAL SUBDIVISION (UTAH)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SANDSTONE)

AGE OF HOST (PENNSYLVANIAN)

FORMATION (HERMOSA FM)

PHILLIPS, J.S. 1960 (297)

#### UNITED STATES-92

W N

CU

37 38 25 N 110 02 55 W

ENTITY COMMENT (ON SOUTHWEST SIDE OF DEER FLAT)

GEOGRAPHICAL SUBDIVISION (UTAH)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SS WHERE IT FILLS SCOURS IN UNDERLYING FM)

REMARKS (OPERATED INTERMITTENTLY SINCE 1953)

AGE OF HOST (LATE TRIASSIC)

LITHOLOGY (SANDSTONE)

FORMATION (SHINARUMP MEMBER OF CHINLE FM)

GEOREMARKS (LOWER PART OF SHINARUMP RESTS WITH MARKED DISCONFORMITY ON MOENKOPI FM)

FINNELL, T.L. 1963 (134)

#### UNITED STATES-96

JASPER

CU

42 44 00 N 105 50 00 W

GEOGRAPHICAL SUBDIVISION (WYOMING)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (FRAC FILLINGS & REPLACEMENT IN TOP OF FLATHEAD SS)

REMARKS (COPPER ORE REPORTED SHIPPED DURING WORLD

WAR 1/NO RECORD OF AMOUNT)  
AGE OF HOST (CAMBRIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (FLATHEAD FM)  
GEOREMARKS (DEPOSIT TYPE (COPPER CLASS)  
QUESTIONABLE)  
LANE, D.W. 1972 (234)

**UNITED STATES-97**  
WATERCRESS CANYON  
CU  
43 00 00 N 110 45 00 W  
ENTITY COMMENT (NORTH OF WATERCRESS CANYON)  
GEOGRAPHICAL SUBDIVISION (WYOMING)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN QUARTZITE)  
REMARKS (SEVERAL OCCURRENCES)

AGE OF HOST (PENNSYLVANIAN (??))  
LITHOLOGY (QUARTZITE)  
FORMATION (WEBER (WELLS) FM)

HAUSEL, W.D. 1981 (184)

**UNITED STATES-98**  
MONTPELIER  
CU

42 20 00 N 111 15 00 W  
ENTITY COMMENT (NEAR PARIS)

GEOGRAPHICAL SUBDIVISION (IDAHO)

CU SUBTYPE (UNDIFFERENTIATED)  
REMARKS (OCCURS IN OVERTURNED ANTICLINE  
LIMB/LOCATION APPROXIMATE)

AGE OF HOST (LATE TRIASSIC)  
LITHOLOGY (HIGHAM GRIT)

PHILLIPS, J.S. 1960 (297)  
KINKLE, A.R. 1962 (216)

**UNITED STATES-99**  
NATIONAL (REX-SNOWSTORM)  
CU (SEE RESERVE/PRODUCTION REPORT)

47 30 30 N 115 45 00 W  
ENTITY COMMENT (NO 8/FIG 6 USGS PP 1116/PG 16)

GEOGRAPHICAL SUBDIVISION (IDAHO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEMINATED IN QUARTZITE)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (QUARTZITE)  
FORMATION (REVETT FORMATION)

GOTT, G.B. 1980 (166)  
CLARK, A.L. 1971 (85)

**UNITED STATES-100**  
POPE-SHENON  
CU

45 04 00 N 113 51 00 W  
ENTITY COMMENT (NO 6/USGS MIN INVEST MAP MR-13)

GEOGRAPHICAL SUBDIVISION (IDAHO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (REPL & FISS FILLS IN SHEAR ZONES IN IMPURE  
QTZITES)  
REMARKS (IN PLACES MIN APPEARS TO BE MORE DIFFUSE/ 2.5  
- 6% CU)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
FORMATION (BELT SUPERGROUP/ NELLIE GROUP)

KINKLE, A.R. 1962 (216)  
ROSS, C.P. 1933 (317)

**UNITED STATES-101**  
SNOWSTORM (COEUR D'ALENE REGION)  
CU, AG, AU (SEE RESERVE/PRODUCTION REPORT)

47 28 00 N 115 44 00 W  
ENTITY COMMENT (NO 2/USGS MIN INVEST MAP MR-13)

GEOGRAPHICAL SUBDIVISION (IDAHO)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (DISSEM IN & REPLACES SILICEOUS CEMENT OF  
QUARTZITE)  
REMARKS (MUCH OF ORE IS OXIDIZED/ 3.5 - 4% CRUDE CU  
ORE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZITE)  
FORMATION (REVETT QUARTZITE)  
GEOREMARKS (BORNITE/CHALCOCITE/CHALCOPYRITE &  
TETRAHEDRITE)

ANON. 1933 (417)  
GOTT, G.B. 1980 (166)  
KINKLE, A.R. 1962 (216)  
CLARK, A.L. 1971 (85)

**UNITED STATES-102**  
MISSION MOUNTAINS  
CU

47 30 00 N 114 05 00 W  
ENTITY COMMENT (APPROX CENTRE OF AREA)

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS HEAVY MIN GRAINS WITH STROMATOLITES IN  
QTZITE)  
REMARKS (WIDESPREAD IRREGULAR DISTRIBUTION OF MINOR  
AMOUNTS OF CU/NON-ECONOMIC)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (SILTITE & QUARTZITE)  
FORMATION (SHEPARD FM OF BELT SUPERGROUP)  
GEOREMARKS (ORIGINAL CU MINERALS OCCUR AS HEAVY

MINERAL GRAINS/INTERSTITIAL FLAKES)

HARRISON, J.E. 1970 (182)

HARRISON, J.E. 1969 (181)

**UNITED STATES-103**

ROCK LAKE (U.S. BORAX) (U.S. BORAX NOXON PROJECT)  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

48 04 30 N 115 39 00 W

ENTITY COMMENT (8 KM NE OF NOXON)

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN LOWER QUARTZITE MEMBER OF THE REVETT  
FORMATION)

REMARKS (MOSTLY AS FINE DISSEM ON BEDDING & SHEAR  
PLANES & AS FRACTURE COATINGS)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))

LITHOLOGY (QUARTZITES/ SILTY QUARTZITE/ SILTITE)

FORMATION (REVETT FM/RAVALLI GROUP/BELT SUPERGROUP)

GEOREMARKS (HOST ROCKS METAMORPHOSED TO LOWER  
GREENSCHIST FACIES)

WELLS, J.D. 1981 (392)

BANISTER, D.P. 1981 (25)

ANON. 1981 (453)

CLARK, A.L. 1971 (85)

TRAMMELL, J. 1970 (374)

**UNITED STATES-104**

SCAPEGUAT WILDERNESS-RED RIDGE

CU, AG

47 14 00 N 112 46 00 W

ENTITY COMMENT (1 MILE NORTH OF RED RIDGE)

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN GREEN GREY QUARTZITE WITH THIN SILTITE  
LAYERS)

REMARKS (WEAK CU MINERALIZATION WIDESPREAD IN  
WILDERNESS AREA MAINLY IN 3 FM)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))

LITHOLOGY (ARGILLITE/ SILTITE/ QUARTZITE)

FORMATION (SPOKANE/EMPIRE/SNOWSLIP FORMATIONS)

GEOREMARKS (ALONG FRACTURES/BEDDING PLANES & IN  
INTERGRANULAR VOIDS OF POROUS RXS)

MUDGE, M.R. 1974 (279)

HARRISON, J.E. 1974 (183)

**UNITED STATES-105**

SPAR LAKE

CU, AG, HG (SEE RESERVE/PRODUCTION REPORT)

48 16 00 N 115 56 00 W

ENTITY COMMENT (17 MILES SOUTH OF TROY)

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN MIDDLE QUARTZITE UNIT ALONG BEDDING  
PLANES)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))

LITHOLOGY (SILTY QUARTZITE WITH CLEAN QTZ/SILTITE/  
ARGIL)

FORMATION (REVETT FM OF THE RAVALLI GROUP)

ANON. 1982 (455)

HARRISON, J.E. 1974 (183)

BANISTER, D.P. 1981 (25)

CLARK, A.L. 1971 (85)

TRAMMELL, J. 1970 (374)

**UNITED STATES-106**

VERMILION RIVER

CU, AG

47 50 00 N 115 22 00 W

ENTITY COMMENT (NEAR SEVEN POINT MOUNTAIN)

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (DISS SULPHIDE BLEBS FILL PORE SPACES IN  
QUARTZITE)

REMARKS (MINERALIZATION CONTROLLED BY PRIMARY  
POROSITY & SEDIMENTARY STRUCTURES)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))

LITHOLOGY (QUARTZITE & INTERBEDS OF ARGILLITE &  
SILTITE)

FORMATION (REVETT FORMATION OF THE RAVALLI GROUP)

GEOREMARKS (MINERALIZATION CONFINED TO UPPER  
PORTIONS OF REVETT FM)

LINDSEY, T.R. 1979 (242)

LANGE, I. 1975 (235)

CLARK, A.L. 1971 (85)

TRAMMELL, J. 1970 (374)

**UNITED STATES-107**

RUBY CREEK (BORNITE)

CU, CO (SEE RESERVE/PRODUCTION REPORT)

67 05 00 N 157 00 00 W

GEOGRAPHICAL SUBDIVISION (ALASKA)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (REPL MATRIX IN DOLOMITE BRECCIA/FRACTURE  
FILLINGS)

REMARKS (DEPOSIT CONTAINED IN NORTHERN LIMB OF  
SYMMETRICAL PLUNGING ANTICLINE)

AGE OF HOST (MIDDLE DEVONIAN)

LITHOLOGY (CARBONATE ROCKS-DOLOMITE)

RUNNELLS, D.D. 1964 (324)

RUNNELLS, D.D. 1969 (326)

RUNNELLS, D.D. 1968 (325)

HITZMAN, M.W. 1986 (551)

**UNITED STATES-108**

CANYON CREEK/ ROGERS PASS

CU, AG

46 55 00 N 112 05 00 W  
ENTITY COMMENT (AREA-SE QUARTER/FIG 1 & 3 BIB1)

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREEN ARGILLITE INTERBEDS WITHIN  
QUARTZITE)  
REMARKS (MINERALIZED BEDS REDUCED (WITH C-ORGANIC  
RESIDUE) IN 30 M-THICK ZONE)

AGE OF HOST (PROTEROZOIC)  
LITHOLOGY (WHITE FELDSPATHIC QZITE/GREEN ARGL &  
SILTITE)  
FORMATION (MIDDLE SPOKANE FORMATION/ BELT  
SUPERGROUP)  
GEOREMARKS (MAROON ROCKS ENCLOSE POTENTIALLY  
ECONOMIC CU-BEARING SANDST INTERVALS)

BRAUN, E.R. 1984 (597)

**UNITED STATES-109**

PRESQUE ISLE (NORTH SIDE)  
CU

46 35 00 N 87 23 00 W

GEOGRAPHICAL SUBDIVISION (MICHIGAN)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN GREY SANDY CONGLOMERATE)  
REMARKS (MALACHITE STAINS FOUND IN 20 CM-THICK CGLM  
BED TRACED 12M ALONG STRIKE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (GREY SANDY CONGLOMERATE/REDDISH BROWN  
SANDST)  
FORMATION (JACOBSVILLE SANDSTONE)  
GEOREMARKS (GREY CGLM BED UNDERLAIN BY IMMATURE  
RED BASAL CGLM ABOVE UNCONFORMITY)

ANON. 0 (627)  
BROWN, A.C. 1986 (628)

**UNITED STATES-110(A)**

ROCK CREEK (ASARCO)  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

48 04 30 N 115 41 00 W  
ENTITY COMMENT (DEPOSIT/8KM NORTHEAST OF NOXON)

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN QUARTZITE)  
REMARKS (4 ORE ZONES-ROCK CREEK/ COPPER GULCH/  
ROCK PEAK/ HORIZON BASIN)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/ SILTY QUARTZITE/ SILTITE)  
FORMATION (REVETT FORMATION/ BELT SUPERGROUP)  
GEOREMARKS (HOST ROCKS METAMORPHOSED TO LOWER  
GREENSCHIST FACIES)

HENRICKSEN, T.A. 1986 (694)

**UNITED STATES-110(B)**  
ROCK PEAK (U.S. BORAX NOXON PROJECT)  
CU, AG

48 04 00 N 115 41 00 W

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN MIDDLE SILTITE MEMBER OF THE REVETT  
FORMATION)  
REMARKS (MOSTLY AS FINE DISSEM ON BEDDING & SHEAR  
PLANES & AS FRACTURE COATINGS)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/ SILTY QUARTZITE/ SILTITE)  
FORMATION (REVETT FORMATION/ BELT SUPERGROUP)  
GEOREMARKS (HOST ROCKS METAMORPHOSED TO LOWER  
GREENSCHIST FACIES)

HENRICKSEN, T.A. 1986 (694)

**UNITED STATES-110(C)**

HORIZON BASIN (U.S. BORAX NOXON PROJECT)  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

48 05 00 N 115 40 00 W

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN QUARTZITE)

AGE OF HOST (MIDDLE PROTEROZOIC)  
LITHOLOGY (QUARTZITE/ SILTY QUARTZITE/ SILTITE)  
FORMATION (REVETT FORMATION/ BELT SUPERGROUP)  
GEOREMARKS (HOST ROCKS METAMORPHOSED TO LOWER  
GREENSCHIST FACIES)

HENRICKSEN, T.A. 1986 (694)

**UNITED STATES-111**

DAISY CREEK  
CU, PB, AG

47 49 00 N 115 20 00 W  
ENTITY COMMENT (PROSPECT/25KM N THOMPSON FALLS)

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (WITHIN CHANNEL-FACIES ORTHOQUARTZITE)  
REMARKS (MINERALIZATION OCCURS ADJACENT TO  
OVERBANK-FACIES SILTITE BEDS)

AGE OF HOST (MIDDLE PROTEROZOIC (HELIKIAN))  
LITHOLOGY (GREY TO WHITE FELDSPATHIC QUARTZITES)  
FORMATION (BONNER FORMATION/ BELT SUPERGROUP)

STANLEY, C.R. 1987 (675)

**UNITED STATES-112**

WOLF CREEK  
CU, AG

46 52 00 N 112 07 00 W

ENTITY COMMENT (OCCURRENCE/FIG 2 BIBL 1/P 1336)

GEOGRAPHICAL SUBDIVISION (MONTANA)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN GREEN SILTST BEDS/PHOSPHATIC UNIT/OOLITIC  
LMSN)

REMARKS (4 MINERALIZED BEDS WITHIN 23 METRE-THICK  
SECTION OF SPOKANE FORMATION)

AGE OF HOST (MIDDLE PROTEROZOIC)

LITHOLOGY (LIMESTONE/ GREEN & RED SILTSTONE/  
SANDSTONE)

FORMATION (SPOKANE FM/ RAVALLI GROUP/ BELT  
SUPERGROUP)

GEOREMARKS (CU CONC UP TO 1% & AG CONC UP TO 29 PPM  
OCCUR IN THE OOLITIC LIMESTONE)

LANGE, I.M. 1987 (674)

## **SOUTH AMERICA**

### **ARGENTINA-1**

JURAMENTO

AG, CU, AS

25 30 00 S 64 05 00 W

ENTITY COMMENT (PASAJE (JURAMENTO) RIVER/ATLAS)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (SECONDARY CU IN DOLOMITIC OOLITIC LIMESTONE  
BEDS)

REMARKS (SAMPLES FROM OLD ADIT AVERAGED LESS THAN  
1% CU WITH 1-2 OZ/TON AG)

AGE OF HOST (CRETACEOUS)

LITHOLOGY (LIMESTONE)

### **ARGENTINA-2**

EUREKA

CU

24 05 00 S 65 10 00 W

ENTITY COMMENT (MINE/NEAR JUJUY-APROX LOCATION)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

AGE OF HOST (CENOZOIC)

LITHOLOGY (SANDSTONE)

FORMATION (CABRERIA FM)

BRODTKORB (DE), M.K. 1984 (556)

### **ARGENTINA-3**

CERRO DEL PLOMO

CU, PB, ZN

25 00 00 S 65 15 00 W

ENTITY COMMENT (DEPOSIT/S OF RIO JURAMENTO)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (PRIMARY MINERALIZATION CEMENTING DOLOMITIC  
LMSN)

REMARKS (SULPHIDES CRYSTALLIZED DURING EARLY  
DIAGENETIC STAGE)

AGE OF HOST (EARLY CRETACEOUS)

LITHOLOGY (DOLOMITIC LIMESTONE/OOLITIC LS/CALCAREOUS  
SS)

FORMATION (YACORAITE FORMATION)

GEOREMARKS (MEAN GRADES ARE 1.5% PB/ 1.03% ZN/ 0.94%  
CU)

BRODTKORB (DE), M.K. 1984 (556)

MALUMIAN, N. 1983 (557)

### **ARGENTINA-4**

CANADA DE ALVAREZ

CU

30 50 00 S 64 40 00 W

ENTITY COMMENT (OCCURRENCE/VERY APROX LOCATION)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (PRIMARY CHALCOCITE IN LIMESTONE)  
REMARKS (RESTRICTED MARINE ENVIRONMENT WITH  
POSSIBLE STROMATOLITE PARTICIPATION)

AGE OF HOST (PROTEROZOIC)  
LITHOLOGY (LIMESTONE)  
GEOREMARKS (CU IN SEVERAL LEVELS (FEW M LONG)  
COMPOSED OF CONCORDANT PARALLEL BEDS)

BRODTKORB (DE), M.K. 1984 (556)

**ARGENTINA-5**

NEUQUEN & MENDOZA PROVINCES  
CU, U, V

35 05 00 S 70 15 00 W  
ENTITY COMMENT (AREA CENTRED IN MENDOZA PROV)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN MOLASSIC SEDIMENTARY ROCKS)  
REMARKS (NUMEROUS OCCURRENCES OCCUR IN DIVERSE  
FORMATIONS WITHIN THE CYCLE)

AGE OF HOST (JURASSIC/ CRETACEOUS)  
FORMATION (RIOGRANDICO CYCLE)  
GEOREMARKS (ORGANIC MATTER REGULATED FIXATION OF  
CU-U-V DURING LATE DIAGENESIS)

BRODTKORB (DE), M.K. 1984 (556)  
MALUMIAN, N. 1983 (557)

**ARGENTINA-6**

AGUA-BOTADA  
CU, U, V

36 15 00 S 69 58 00 W  
ENTITY COMMENT (SECTOR/VERY APPROX LOCATION)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN MOLASSIC SEDIMENTARY ROCKS)  
REMARKS (5 LEVELS/NO 4-600X300X(0.3-1.2)METRES-MEAN  
GRADES 0.15% U308 & 0.1% CU)

AGE OF HOST (JURASSIC/ CRETACEOUS)  
FORMATION (DIAMANTE FORMATION/ RIOGRANDICO CYCLE)  
GEOREMARKS (ORGANIC MATTER REGULATED CU-U-V  
FIXATION DURING LATE DIAGENETIC STAGE)

BRODTKORB (DE), M.K. 1984 (556)  
MALUMIAN, N. 1983 (557)

**ARGENTINA-7**

CUSTODIO/SALAMANCA/SAN MARTIN  
CU, U, V, PB, ZN

38 00 00 S 69 15 00 W  
ENTITY COMMENT (APPROX CENTRE OF AREA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (MINERALIZATION CEMENTS  
SS/ARKOSE/CONGLOMERATES)  
REMARKS (3 OF MOST KNOWN DEPOSITS WHICH OCCUR IN  
RED SEDIMENTS OF PIRGUA SUBGP)

AGE OF HOST (EARLY CRETACEOUS)  
LITHOLOGY (RED SANDSTONE/ ARKOSE/IMMATURE

CONGLOMERATE)  
FORMATION (PIRGUA SUBGROUP)  
GEOREMARKS (METALS ASSOCIATED IWTH ORGANIC MATTER  
IN CONTINENTAL ENVIRONMENT)

BRODTKORB (DE), M.K. 1984 (556)  
MALUMIAN, N. 1983 (557)

**ARGENTINA-8**

YASYAMAYO  
CU

26 30 00 S 66 00 00 W  
ENTITY COMMENT (AREA/VERY APPROXIMATE LOCATION)

GEOGRAPHICAL SUBDIVISION (NORTHWEST)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (LENTICULAR OREBODIES IN FRIABLE GREY SS &  
CGLM)  
REMARKS (FM INTERPRETED AS FLUVIAL SEQUENCE/NO  
ORGANIC REMAINS OR EVAPORITES)

AGE OF HOST (MIOCENE-PLIOCENE)  
LITHOLOGY (RED & GREY SANDSTONE/ MUDSTONE/  
CONGLOMERATE)  
FORMATION (LAS ARCAS FORMATION / SANTA MARIA GROUP)  
GEOREMARKS (CU DEPOSITS OCCUR AT TWO MAJOR  
HORIZONS CONFINED TO LOWER MEMBER OF FM)

GARCIA, V. 1985 (602)

**BOLIVIA-1**

COROCORO  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

17 15 00 S 68 30 00 W  
ENTITY COMMENT (CITY OF COROCORO)

GEOLOGICAL PROVINCE (ANDES)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (REPLACES FOSSIL PLANT REMNANTS OR CEMENT  
OF SS/ CG)  
REMARKS (SEVERAL MINES IN AREA MOSTLY IN VETAS BEDS  
ON SW SIDE OF FAULT)

AGE OF HOST (TERTIARY)  
LITHOLOGY (CONGLOMERATE/ SANDSTONE/ SANDY SHALE)  
FORMATION (COROCORO GP/ TOTORA FM/ VETAS & RAMOS  
MEMBERS)  
GEOREMARKS (ORE OCCURS ON BOTH SIDES OF COROCORO  
FAULT/ IN STRUCTURAL LOWS & HIGHS)

GUSTAFSON, L.B. 1981 (172)  
RUTLAND, R.W. 1966 (327)  
DAVIDSON, C.F. 1965 (102)  
LJUNGGREN, P. 1964 (246)  
PELISSONNIER, H. 1964 (296)  
ENTWISTLE, L.P. 1955 (131)  
SINGEWALD, J.T. 1933 (347)

**BOLIVIA-1(A)**

COROCORO  
CU, AG



17 15 00 S 68 30 00 W

GEOLOGICAL PROVINCE (ANDES)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN VETAS CONGLOMERATE & RAMOS SANDY SHALE & SS)

REMARKS (ORES OVERLIE DIAPIRIC SALT AND GYPSUM BEDS OF CRETACEOUS AGE)

AGE OF HOST (LATE CRETACEOUS & TERTIARY)

LITHOLOGY (CONGLOMERATE/ SANDY SHALE WITH ARKOSIC SS)

FORMATION (COROCORO GP/ TOTORA FM/ VETAS & RAMOS MEMBERS)

GEOREMARKS (FAULT PLANE SEPARATES VETAS CONGLOM ON WEST & RAMOS SHALE & SS ON EAST)

LJUNGGREN, P. 1964 (246)

SINGEWALD, J.T. 1933 (347)

#### **BOLIVIA-2**

PISAKERI

CU, AG

17 10 00 S 68 32 00 W

ENTITY COMMENT (10.5 KM NORTH OF COROCORO)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (NATIVE CU AS NODULES REPLACING CEMENT OF SANDSTONE)

REMARKS (MINE MOSTLY DEVELOPED ON NW FLANK OF FAULTED COROCORO ANTICLINE)

AGE OF HOST (TERTIARY)

LITHOLOGY (SANDSTONE (FRIABLE/BLEACHED))

FORMATION (COROCORO GP/TOTORA FM/VETAS & RAMOS MEMBERS)

GEOREMARKS (NATIVE CU NODULES 5-20 MM IN DIAMETER/ SS BTWN NODULES IS QUITE BARREN)

LJUNGGREN, P. 1964 (246)

#### **BOLIVIA-3**

VETA VERDE

CU, AG

17 27 00 S 68 24 00 W

ENTITY COMMENT (30 KM SSE OF COROCORO)

GEOLOGICAL PROVINCE (ANDES)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE)

AGE OF HOST (TERTIARY)

LITHOLOGY (SANDSTONE)

FORMATION (VETAS MEMBER/ TOTORA FROMATION)

LJUNGGREN, P. 1964 (246)

#### **BOLIVIA-4**

CHACARILLA

CU, AG (SEE RESERVE/PRODUCTION REPORT)

17 48 00 S 68 10 30 W

ENTITY COMMENT (94 KM SSE OF COROCORO)

GEOLOGICAL PROVINCE (ANDES)

CU SUBTYPE (CONTINENTAL REDBED)

GEOLOGY (IN SANDSTONE/ NATIVE CU PARTLY REPLACES SS CEMENT)

REMARKS (SEVERAL OREBODIES/CC CLOSE TO ANTICLINE CENTRE/NATIVE CU IN OUTER ZONE)

AGE OF HOST (TERTIARY)

FORMATION (HUAYLLAMARCA FORMATION)

GEOREMARKS (SULPHIDE OREBODIES HAVE UP TO 10-20% CHALCOCITE/ NATIVE CU ONLY 5-10%)

LJUNGGREN, P. 1964 (246)

#### **BRAZIL-1**

SUCUNDURI RIVER

CU

8 45 00 S 59 00 00 W

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (ASSOC WITH PLATFORMAL STROMATOLITIC DOLOMITES)

AGE OF HOST (MIDDLE PROTEROZOIC)

LITHOLOGY (DOLOMITE)

GEOREMARKS (DOLOMITE OVERLIES CLASTIC ROCKS)

ANON. 1976 (445)

#### **BRAZIL-2**

BAHIA

CU (SEE RESERVE/PRODUCTION REPORT)

5 40 00 S 49 05 00 W

ENTITY COMMENT (AREA/ FIGURE 1 BIBL 1/ PG 428)

CU SUBTYPE (UNDIFFERENTIATED)

GEOLOGY (IN SANDSTONE/ GREYWACKE/ SILTSTONE/ PELITIC ROCKS)

REMARKS (CU MINERALIZATION RELATED WITH LOW GRADE METAMORPHOSED SEDIMENTARY RXS)

AGE OF HOST (EARLY PROTEROZOIC)

LITHOLOGY (SANDSTONE/ GREYWACKE/ SILTSTONE/ PELITIC ROCK)

FORMATION (RIO FRESCO FORMATION)

DAMASCENO, E.C. 1982 (598)

DAYTON, S.H. 1985 (651)

#### **BRAZIL-3**

ARARIPE

PB, CU

7 08 00 S 40 10 00 W

ENTITY COMMENT (ARARIPE/ TOWN IN AREA OF BASIN)

GEOLOGICAL PROVINCE (ARAPIPE BASIN)

CU SUBTYPE (PARALIC MARINE)

GEOLOGY (IN MARINE SEDIMENTARY ROCKS)

AGE OF HOST (EARLY CRETACEOUS)

VAN EDEN, J.G. 1978 (378)

**BRAZIL-4**  
PARACATU  
CU

17 14 00 S 46 52 00 W

ENTITY COMMENT (PARACATU/ TOWN NEAR OCCURRENCE)

CU SUBTYPE (PARALIC MARINE)  
GEOLOGY (FINELY DISSEMINATED IN GREEN CALCAREOUS SILTSTONE)

AGE OF HOST (LATE PROTEROZOIC)  
LITHOLOGY (CALCAREOUS SILTSTONE)  
FORMATION (VAZANTE FORMATION/ BAMBUI GROUP)

ALMEIDA, F.F.M. DE, 1984 (599)

**BRAZIL-5**  
PERAU  
CU, PB

25 30 00 S 49 00 00 W

CU SUBTYPE (UNDIFFERENTIATED)

AGE OF HOST (LATE PROTEROZOIC)

SEKINE, Y. 1984 (621)

**BRAZIL-6**  
CAMAQUA  
CU (SEE RESERVE/PRODUCTION REPORT)

30 47 00 S 52 24 00 W

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED AND AS VEINS IN HOST ROCKS)  
REMARKS (VEIN-TYPE ORE INTERPRETED AS REMOBILIZATION OF DISSEMINATED SULPHIDES)

AGE OF HOST (UPPER PROTEROZOIC)  
LITHOLOGY (CONGLOMERATE/ SANDSTONE)  
FORMATION (BOM JARDIM GROUP/ ARROIO DOS NOBRES FORMATION)

TEIXEIRA, G. 0 (673)

**BRAZIL-7**  
PEDRA VERDE  
CU (SEE RESERVE/PRODUCTION REPORT)

3 31 30 S 41 08 00 W

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN BLACK PHYLLITE OF PEDRA VERDE MEMBER)  
REMARKS (ORE MINERALS FOLLOW WELL DEFINED ZONING FROM HANGING-WALL TO FOOTWALL)

AGE OF HOST (UPPER PROTEROZOIC)  
LITHOLOGY (CARBONACEOUS METAPELITIC RXS/BLACK PHYLLITE)

FORMATION (MARTINOPOLIS GROUP/MAMBIRA FM/PEDRA VERDE MEM)  
GEOREMARKS (PHYLLITE OCCURS JUST BELOW ENRICHED ZONE OF IRON OXIDE (RED ZONE))

BRIZZI, A.S. 1988 (672)

**CHILE-1**  
SAGASCA  
CU

20 12 00 S 69 21 00 W

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (COLLOFORM CHRYSOCOLLA AS CEMENT IN CONGLOMERATE)  
REMARKS (THE POORLY SORTED CONGLOM DEPOSITED BY FLOODS IN SEMI-ARID ENVIRONMENT)

AGE OF HOST (TERTIARY)  
LITHOLOGY (CONGLOMERATE)  
FORMATION (ALTOS DE PICA FORMATION)  
GEOREMARKS (CU DERIVED FROM WEATHERING OXIDATION & LEACHING OF NEARBY PORPHYRY CU)

MUNOZ, J.O. 1975 (280)

**CHILE-3**  
SAN BARTOLO  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

22 44 00 S 68 14 00 W  
ENTITY COMMENT (AREA/ 20 KM N OF SAN PEDRO)

GEOLOGICAL PROVINCE (ANDEAN CORDILLERA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS MATRIX IN ARKOSE REPLACING EARLIER CEMENTS)  
REMARKS (SEVERAL DEPOSITS IN AREA HOSTED BY SHEET AND RIBBON SANDSTONE BODIES)

AGE OF HOST (MIDDLE TERTIARY (OLIGO-MIOCENE))  
LITHOLOGY (RED MUDSTONE/RED & GREY SANDSTONE/ ANHYDRITE)  
FORMATION (PACENCIA GROUP/ARTOLLA MEMBER)  
GEOREMARKS (HOST RX DEPOSITED IN HIGH ENERGY PLAYA-MARGINAL SANDFLAT ENVIRONMENT)

MUNOZ, J.O. 1975 (280)  
FLINT, S. 1985 (553)  
RUIZ, C.F. 1965 (323)  
FLINT, S. 1986 (554)

**CHILE-4**  
JARDIN  
CU, AG (SEE RESERVE/PRODUCTION REPORT)

27 45 30 S 70 11 30 W  
ENTITY COMMENT (NEAR COPIAPO)

GEOLOGICAL PROVINCE (CENTRAL ANDES)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN IGIMBRITES & TUFFACEOUS SEDIMENTARY HORIZONS)

REMARKS (MINE PRODUCED AT 100 T/ DAY RATE FOR MANY YEARS/ NO TOTAL PROD FIGURES)

AGE OF HOST (LOWER TERTIARY (PALEOCENE))  
LITHOLOGY (TUFF/BRECCIA/CARBONACEOUS SHALE/SILTSTONE)  
FORMATION (HORNITOS FORMATION)  
GEOREMARKS (CU/AG DISSEM IN UPPERMOST 1-2M OF FLOW & 2-3M OF OVERLYING SED ROCKS)

LORTIE, R.B. 1974 (251)

**CHILE-5**  
CARMEN  
CU

32 30 00 S 71 00 00 W  
ENTITY COMMENT (110 KM N-NW OF SANTIAGO)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (DISSEMINATED IN BED OF FINELY LAMINATED LIMESTONE)  
REMARKS (MINERALIZATION RESTRICTED TO LOWER 2M OF BLACK MARINE LIMESTONE)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (LIMESTONE)  
GEOREMARKS (LIMESTONE IS GREYISH BLACK DUE TO PRESENCE OF ABUNDANT ORGANIC MATTER)

RUTZ, C. 1970 (328)

**CHILE-6**  
RUSA  
CU

32 31 00 S 71 05 00 W

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN LIMESTONE WITH INTERCALATED ANDESITIC LAVAS)  
REMARKS (LIMESTONES RELATED TO NARROW NORTH TRENDING TITONIAN-NEOCOMIAN BASIN)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (SHALY LIMESTONE)  
GEOREMARKS (LIMESTONE REEF FACIES FORMED IN MOBILE MARINE ENVIRONMENT)

MUNOZ, J.O. 1975 (280)

**CHILE-7**  
CERRO-NEGRO (PIRQUITRA/DIABLO)  
CU

32 34 00 S 70 05 00 W  
ENTITY COMMENT (ON SW FLANK OF CERRO-NEGRO MTN)

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (PRIMARY SULPHIDES IN GREEN BRECCIAS)  
REMARKS (MANTO-TYPE CU DEPOSIT IN CONTINENTAL CLASTIC SEDIMENTARY ROCKS)

AGE OF HOST (UPPER CRETACEOUS)  
LITHOLOGY (BRECCIA)

MUNOZ, J.O. 1975 (280)  
PELISSONNIER, H. 1971 (509)

**CHILE-8**  
VETA-NEGRA  
CU

32 39 00 S 71 06 00 W

CU SUBTYPE (UNDIFFERENTIATED)  
GEOLOGY (IN BLACK SHALE)  
REMARKS (MANTO-TYPE CU DEPOSIT IN CONTINENTAL CLASTIC SEDIMENTARY ROCKS)

AGE OF HOST (LOWER CRETACEOUS)  
LITHOLOGY (SHALE)

MUNOZ, J.O. 1975 (280)

**CHILE-9**  
CALETA COLOSO  
CU

23 44 58 S 70 30 00 W  
ENTITY COMMENT (AREA/10KM SOUTH OF ANTOFAGASTA)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (AS CEMENT TO CLASTS IN BLEACHED CONGLOMERATE & SS)  
REMARKS (SEVERAL DEPOSITS/ NO EVAPORITES OR PLANT REMAINS PRESENT IN COLOSO FM)

AGE OF HOST (LATE JURASSIC/ EARLY CRETACEOUS)  
LITHOLOGY (RED & GREY COARSE CONGLOMERATE/THIN SANDSTONE)  
FORMATION (COLOSO FORMATION/ WAY GROUP)  
GEOREMARKS (PROXIMAL TO MEDIAL ALLUVIAL FAN DEPOSITS-EXTREMELY COARSE GRAIN SIZE)

FLINT, S. 1986 (596)  
ESPINOSA, S.R. 1983 (607)

**PERU-1**  
NEGRA HUANUSHA  
CU, AG, V

11 18 00 S 75 51 00 W  
ENTITY COMMENT (CENTRE OF NEGRA HUANUSHA AREA)

GEOLOGICAL PROVINCE (PERUVIAN ANDES)

CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN RED SANDSTONE CONTAINING ABUNDANT PLANT REMAINS)  
REMARKS (SEVERAL OCCURRENCES IN AREA BETWEEN TOWNS-LA OROYA JUNIN & ACOBAMBA)

AGE OF HOST (PERMIAN)  
LITHOLOGY (RED ARKOSIC SANDSTONE/ ARKOSE/ RED MUDSTONE)  
FORMATION (MITU FORMATION)  
GEOREMARKS (3 TYPES-1)IN BLEACHED RED SS 2)IN RED SS WITH FE 3)IN SS & LMST ABOVE)

KOBE, H.W. 1960 (222)

**PERU-2**  
SACSALLAC  
CU  
  
9 43 00 S 75 50 00 W  
ENTITY COMMENT (OCC/VERY APPROXIMATE LOCATION)  
  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN REDBEDS)  
  
AGE OF HOST (PERMAIN)  
LITHOLOGY (SANDSTONE)  
FORMATION (MITU GROUP)  
  
BOGGIO, M.S. 1985 (619)

**PERU-3**  
DONA BASILIA  
CU  
  
12 13 00 S 75 42 30 W  
ENTITY COMMENT (OCCURR/15 KM NE OF Yauricocha)  
  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONE)  
REMARKS (SMALL AND ECONOMICALLY UNIMPORTANT)  
  
AGE OF HOST (TERTIARY)  
LITHOLOGY (REDBEDS)  
FORMATION (CASAPALCA FORMATION)  
  
PETERSEN, U. 1965 (620)  
BOGGIO, M.S. 1985 (619)

**PERU-4**  
ROSARIO  
CU  
  
12 43 00 S 74 20 00 W  
ENTITY COMMENT (OCCURRENCE/NEAR ROSARIO)  
  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN REDBEDS)  
  
AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (MITU GROUP)  
  
BOGGIO, M.S. 1985 (619)

**PERU-5**  
MARIA MAGDALENA  
CU  
  
13 20 00 S 72 00 00 W  
ENTITY COMMENT (OCCURRENCE/NORTH OF CUZCO CITY)  
  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN REDBEDS)  
REMARKS (VERY APPROXIMATE LOCATION)  
  
AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (MITU GROUP)  
  
BOGGIO, M.S. 1985 (619)

**PERU-6**  
ANDARAPA  
CU  
  
13 30 02 S 73 22 30 W  
ENTITY COMMENT (OCC/10 KM WEST OF KAKIOBAMBA)  
  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN REDBEDS)  
REMARKS (ONE OF FOUR OCCURRENCES IN APURIMAC  
STATE-ABANQUINA/LANDA/LLACTABAMBA)  
  
AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (MITU GROUP)  
  
BOGGIO, M.S. 1985 (619)

**PERU-7**  
DESAGUADERO  
CU  
  
14 05 00 S 70 36 00 W  
ENTITY COMMENT (OCCURRENCE/SW OF MUCUSANI)  
  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN REDBEDS)  
REMARKS (VERY APPROXIMATE LOCATION)  
  
AGE OF HOST (PERMIAN)  
LITHOLOGY (SANDSTONE)  
FORMATION (MITU GROUP)  
  
BOGGIO, M.S. 1985 (619)

**VENEZUELA-1**  
SEBORUCO (SEBOROKO)  
CU  
  
8 00 00 N 72 00 00 W  
ENTITY COMMENT (OCC/VERY APPROXIMATE LOCATION)  
  
CU SUBTYPE (CONTINENTAL REDBED)  
GEOLOGY (IN SANDSTONES AND CONGLOMERATES)  
REMARKS (8 BEDS VARYING FROM 45 CM TO 76 CM THICK  
CARRY CU MINERALS)  
  
AGE OF HOST (MESOZOIC)  
LITHOLOGY (RED SANDSTONE/GREY  
SANDSTONE/CONGLOMERATE)  
GEOREMARKS (CONSIDERABLE LIGNITE IS PRESENT IN THE  
SANDSTONE/ TENOR OF ORE IS LOW)  
  
MILLER, B.L. 1919 (617)  
DIMANCHE, F. 1976 (618)

**SEDIMENT-HOSTED STRATIFORM  
COPPER DEPOSITS AND OCCURRENCES**

**RESERVE/PRODUCTION**

**Listed Alphabetically by Continent,  
Country and Map Number.**

## AFRICA

### ANGOLA-2

CACHOEIRAS DE BINGA

RESERVES

6350293 TONNES

CU: 2%

NOTE: PROVEN ORE/ 1% CU CUTOFF/ NON-OXIDIZED ORE

REFS: 1978 ECONOMIC GEOLOGY/VOL 73 NO 6/P 1156

### BOTSWANA-1

BUSHMAN GROUP

RESERVES 1976

2000000 TONNES

CU: 2%

NOTE: OXIDE ORE/GEOL RESERVES-ECONOMICALLY

DOUBTFUL

REFS: 1976 ECONOMIC GEOLOGY/VOL 71 NO 1/ P 139-156

### BOTSWANA-2

NGWAKO PAN (LAKE NGAMI AREA)

RESERVES

80000000 TONNES

CU: 2%, AG: 40G/T

NOTE: NGWAKO PAN/POSSIBLE RESERVES/PLUS AU MO & ZN

REFS: 1986 K MAIDEN/PERSONNAL COMMUNICATION

### BOTSWANA-3

LOGOLO (MATSITAMA)

RESERVES 1977

1000000 TONNES

CU: 1.8%

NOTE: DD INDICATED/ MAXIMUM POSSIBLE TONNES STATED

REFS: 1977 RESOURCES INVENTORY OF BOTSWANA/REPT NO4

### BOTSWANA-4

MAKALA (MATSITAMA)

RESERVES 1977

5000000 TONNES

CU: 2.1%

NOTE: DRILL INDICATED/ MINIMUM TONNAGE

REFS: 1977 RESOURCES INVENTORY OF BOTSWANA/REPT NO4

### BOTSWANA-5

THAKADU (MATSITAMA)

RESERVES 1977

2000000 TONNES

CU: 2.5%

NOTE: ESTIMATED/OPEN IN DEPTH AT WESTERN EXTREMITY

REFS: 1977 RESOURCES INVENTORY OF BOTAWANA/REPT NO4

### BOTSWANA-7

LAKE NGAMI

RESERVES

20000000 TONNES

CU: 2%, AG: 60G/T

NOTE: DRILL INDICATED

REFS: 1986/PERSONNAL COMMUNICATION

### MOROCCO-3

TAMARIFT (TANSRIFT (?))

RESERVES 1982

1000000 TONNES

CU: 1.3%

NOTE: ANNUAL PRODUCTION - 150000 TONNES OF ORE

REFS: 1982 MINERAL RESOURCES OF THE ARAB COUNTRIES

### MOROCCO-4

TALAT N OUAMANE

RESERVES

3000000 TONNES

CU: 1.5%

NOTE: ESTIMATED 1982/ EXPLOITATION BEGAN RECENTLY

REFS: 1982 MINERAL RESOURCES OF THE ARAB COUNTRIES

### MOROCCO-5

AGOUJGAL

RESERVES 1982

800000 TONNES

CU: 1.7%

REFS: 1982 MINERAL RESOURCES OF THE ARAB COUNTRIES

### NAMIBIA-1

WITVLEI

RESERVES

6000000 TONNES

CU: 2%, AG: 30G/T

NOTE: COMBINED FOR DORDABIS & WITVLEI OREBODIES

REFS: 1986 G BORG/ PERSONNAL COMMUNICATION

### NAMIBIA-2

OAMITES (S)

PRODUCTION (YEARLY) FROM 1979

5652.668 TONNES OF METAL

CU: 100%

NOTE: 575000 TONS OF ORE MILLED

REFS: 1978-79 MINERALS YEARBOOK/US BUREAU OF MINES

PRODUCTION (YEARLY) FROM 1978

6274.09 TONNES OF METAL

CU: 100%

NOTE: 615000 TONS OF ORE MILLED

REFS: 1978-79 MINERALS YEARBOOK/US BUREAU OF MINES

RESERVES 1979/12

1814370 TONNES

CU: 1.09%

NOTE: RESERVES ESTIMATED AT OVER 2 MILLION TONS

REFS: 1978-79 MINERALS YEARBOOK/US BUREAU OF MINES

RESERVES 1970

6100000 TONNES

CU: 1.33%, AG: 12.3G/T

NOTE: PRE-PRODUCTION RESERVES/PRODUCTION BEGAN

1971

**NAMIBIA-3**  
KLEIN AUB

PRODUCTION (SUMMARY) FROM 1967  
8000000 TONNES OF ORE  
CU: 2%, AG: 45G/T  
NOTE: PRODUCED SINCE 1967/GRADES APPROXIMATE  
REFS: 1986 G BORG/ PERSONNAL COMMUNICATION

RESERVES  
10000000 TONNES  
CU: 2%, AG: 45G/T  
NOTE: PRE-PRODUCTION  
REFS: 1986 G BORG/ PERSONNEL COMMUNICATION

**UGANDA-1**  
KILEMBE

PRODUCTION (SUMMARY) FROM 1956 TO 1977  
1113000 TONNES OF CONCENTRATE

NOTE: BY-PRODUCT/STOCKPILED AT KASESE-7KM TO SE  
REFS: 1985 TRANS INSTN MIN METALL/SECT B/VOL 94/MAY

PRODUCTION (SUMMARY) FROM 1956 TO 1977  
15400000 TONNES OF ORE  
CU: 1.9%  
NOTE: NORTHERN DEPOSIT MINED OUT/EASTERN DEPOSIT-NO  
REFS: 1985 TRANS INSTN MIN METALL/SECT B/VOL 94/MAY

RESERVES 1979  
103400 TONNES  
CU: 1.2%  
NOTE: EASTERN/POSSIBLE ORE  
REFS: 1985 TRANS INSTN MIN METALL/SEC B/VOL 94/P102

RESERVES 1979  
222800 TONNES  
CU: 2.3%  
NOTE: NAMHUGA/PROVEN & PROBABLE  
REFS: 1985 TRANS INSTN MIN METALL/SEC B/VOL 94/P102

RESERVES 1979  
1849400 TONNES  
CU: 1.46%  
NOTE: KILEMBE/POSSIBLE RESERVES/PLUS RECOVERABLE CO  
REFS: 1985 TRANS INSTN MIN METALL/SECT B/VOL 94/MAY

RESERVES 1979  
335300 TONNES  
CU: 1.65%  
NOTE: BUHUNGA/POSSIBLE ORE  
REFS: 1985 TRANS INSTN MIN METALL/SEC B/VOL 94/P102

RESERVES 1979  
521000 TONNES  
CU: 1.73%  
NOTE: BUHUNGA/PROVEN & PROBALBE  
REFS: 1985 TRANS INSTN MIN METALL/SEC B/VOL 94/P102

RESERVES 1979  
4120100 TONNES  
CU: 1.77%  
NOTE: KILEMBE/PROVEN & PROBABLE/PLUS RECOVERABLE CO  
REFS: 1985 TRANS INSTN MIN METALL/SECT B/VOL 94/MAY

RESERVES 1979  
1410700 TONNES  
CU: 1.37%  
NOTE: BUKANGAMA/POSSIBLE ORE  
REFS: 1985 TRANS INSTN MIN METALL/SEC B/VOL 94/P102

RESERVES 1979  
2085100 TONNES  
CU: 1.59%  
NOTE: BUKANGAMA/PROVEN & PROBABLE  
REFS: 1985 TRANS INSTN MIN METALL/SEC B/VOL 94/P102

RESERVES 1979  
1124400 TONNES  
CU: 1.97%  
NOTE: EASTERN/PROVEN & PROBABLE  
REFS: 1985 TRANS INSTN MIN METALL/SEC B/VOL 94/P102

RESERVES 1979  
166800 TONNES  
CU: 2.04%  
NOTE: OKAY-ZONE/PROVEN & PROBABLE  
REFS: 1985 TRANS INSTN MIN METALL/SEC B/VOL 94/P102

RESERVES 1956  
14600000 TONNES  
CU: 2.3%  
NOTE: ESTIMATED PRE-PROD/ MINE PRODUCED 1956-1977  
REFS: MINING MAGAZINE/ OCTOBER 1980/ PG 281

**ZAIRE-2**  
DIKULUWE AND MASHUMBA PITS

PRODUCTION (SUMMARY) TO 1986  
30000000 TONNES OF ORE  
CU: 4%, CO: 0.2%  
NOTE: DIKULUWE & MASHAMBA PITS 1986/ PROD TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES 1971  
155100000 TONNES  
CU: 4.1%, CO: 0.3%  
NOTE: COMBINED RESERVES FOR DIKULUNE/MASHUMBA PITS  
REFS: 1974 MINERALS YEARBOOK/ U.S. BUREAU OF MINES

RESERVES  
200000000 TONNES  
CU: 3.8%, CO: 0.2%  
NOTE: DIKULUWE & MASHAMBA PITS 1986/PROVEN RESERVES  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-3**  
KAMOTO

PRODUCTION (SUMMARY) TO 1986  
30000000 TONNES OF ORE  
CU: 4.5%, CO: 0.4%  
NOTE: KAMOTO OLIVEIRA-VIRPULE/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

PRODUCTION (SUMMARY) TO 1986  
80000000 TONNES OF ORE  
CU: 5%, CO: 0.4%  
NOTE: KAMOTO PRINCIPAL/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES

40000000 TONNES  
CU: 2%, CO: 0.5%  
NOTE: KAMOTO ETANG/ PROVEN RESERVES 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
60000000 TONNES  
CU: 4%, CO: 0.1%  
NOTE: KAMOTO NORTH/ PROVEN RESERVES 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
100000000 TONNES  
CU: 5%, CO: 0.4%  
NOTE: KAMOTO PRINCIPAL/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
170000000 TONNES  
CU: 4.5%, CO: 0.4%  
NOTE: KAMOTO OLIVEIRA-VIRPULE/ PROVEN RESERVES 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

#### **ZAIRE-4** MUPINE

RESERVES  
10000000 TONNES  
CU: 2.5%, CO  
NOTE: MUPINE/ PROVEN RESERVES 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

#### **ZAIRE-5** MUSONOI

PRODUCTION (SUMMARY) TO 1986  
95000000 TONNES OF ORE  
CU: 5%, CO  
NOTE: MUSONOI/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
35000000 TONNES  
CU: 4%, CO  
NOTE: MUSONOI/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
20000000 TONNES  
CU: 3%, CO  
NOTE: MUSONOI/ POSSIBLE ADDITIONAL RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

#### **ZAIRE-6** KOLWEZI

PRODUCTION (SUMMARY) TO 1986  
5000000 TONNES OF ORE  
CU: 6%, CO  
NOTE: KOLWEZI/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

PRODUCTION (SUMMARY)  
15000000 TONNES OF ORE  
CU: 6%, CO  
NOTE: KOLWEZI/ PROVEN RESERVES IN 1986

REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

#### **ZAIRE-7** MUTOSHI

PRODUCTION (SUMMARY)  
60000000 TONNES OF ORE  
CU: 2%, CO  
NOTE: MUTOSHI/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
20000000 TONNES  
CU: 3%, CO  
NOTE: MUTOSHI/ POSSIBLE ADDITIONAL RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
20000000 TONNES  
CU: 1.8%, CO  
NOTE: MUTOSHI/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

#### **ZAIRE-8** MENDA-MINDIPI

RESERVES  
30000000 TONNES  
CU: 3%, CO: 0.2%  
NOTE: MENDA-MINDIPI/ POSSIBLE RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

#### **ZAIRE-9** TENKE

RESERVES 1972  
18140000 TONNES  
CU: 6.2%, CO: 0.42%  
NOTE: DRILL INDICATED/COMPLEX ORE/SULFIDE-OXIDE MIX  
REFS: 1973 MINING MAGAZINE/ FEBRUARY/ PG 71

RESERVES 1972  
13430000 TONNES  
CU: 6.2%, CO: 0.42%  
NOTE: INFERED/IN ADDITION TO DRILL INDICATED  
REFS: 1972 MINING JOURNAL/ JUNE 16/ PG 504

RESERVES  
75000000 TONNES  
CU: 3.6%, CO: 0.3%  
NOTE: KWATEBALA/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
15000000 TONNES  
CU: 4.1%, CO: 0.1%  
NOTE: FWALU/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
40000000 TONNES  
CU: 1.7%, CO: 0.7%  
NOTE: KWATEBALA/ POSSIBLE ADDITIONAL RESERVES 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES



45000000 TONNES  
CU: 4.3%, CO: 0.2%  
NOTE: GOMA/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
10000000 TONNES  
CU: 2.5%, CO: 1%  
NOTE: GOMA/ POSSIBLE ADDITIONAL RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
50000000 TONNES  
CU: 2%, CO: 0.5%  
NOTE: KWATEBALA/ POSSIBLE ADDITIONAL RESERVES 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-10**  
FUNGURUME DISTRICT

RESERVES  
1270000000 TONNES  
CU: 2.5%, CO: 0.3%  
NOTE: FUNGURUME/ POSSIBLE ADDITIONAL RESERVES 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
100000000 TONNES  
CU: 5%, CO: 0.3%  
NOTE: FUNGURUME DISTRICT/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-11**  
KAKANDA

PRODUCTION (SUMMARY)  
12000000 TONNES OF ORE  
CU: 4%, CO: 0.2%  
NOTE: KAKANDA/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
18000000 TONNES  
CU: 3.5%, CO: 0.2%  
NOTE: KAKANDA/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-12**  
KAMFUNDWA

PRODUCTION (SUMMARY)  
5000000 TONNES OF ORE  
CU: 3%, CO: 0.3%  
NOTE: KAMFUNDWA/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
5000000 TONNES  
CU: 2.5%, CO: 0.3%  
NOTE: KAMFUNDWA/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-13**  
KABOLELA

PRODUCTION (SUMMARY)  
1000000 TONNES OF ORE  
CU: 4.5%, CO: 2.5%  
NOTE: KABOLELA/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
4000000 TONNES  
CU: 4%, CO: 0.7%  
NOTE: KABOLELA/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-14**  
KAMBOVE AND KAMBOVE WEST

PRODUCTION (SUMMARY)  
25000000 TONNES OF ORE  
CU: 6%, CO: 0.4%  
NOTE: KAMBOVE WEST/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

PRODUCTION (SUMMARY)  
10000000 TONNES OF ORE  
CU: 10%, CO: 0.5%  
NOTE: KAMBOVE PRINCIPAL/PROD TO 1986/MINE SHUT DOWN  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES 1985  
7900000 TONNES  
CU: 4%  
NOTE: TOTAL RESERVES AS OF 1985  
REFS: 1985 US BUREAU OF MINES/ MINERAL PERSPECTIVES

RESERVES 1985  
4900000 TONNES  
CU: 3.13%, CO: 0.3%  
NOTE: RECOVERABLE RESERVES/TO BE EXHAUSTED 1987-92  
REFS: 1985 US BUREAU OF MINES/ MINERAL PERSPECTIVES

RESERVES  
10000000 TONNES  
CU: 3%, CO: 0.4%  
NOTE: KAMBOVE WEST/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-15**  
KAMATANDA

PRODUCTION (SUMMARY)  
10000000 TONNES OF ORE  
CU: 5%  
NOTE: KAMATANDA/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-16**  
SESA (MSESA)

PRODUCTION (SUMMARY)  
6000000 TONNES OF ORE  
CU: 6%, CO: 0.2%  
NOTE: SESA/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
2000000 TONNES  
CU: 5%, CO: 0.2%

NOTE: SESA/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-17**  
LUIISHIA

PRODUCTION (SUMMARY)  
13000000 TONNES OF ORE  
CU: 7%  
NOTE: LUIISHIA/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
30000000 TONNES  
CU: 3%, CO: 0.2%  
NOTE: LUIISHIA/ POSSIBLE ADDITIONAL RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
7000000 TONNES  
CU: 2.7%  
NOTE: LUIISHIA/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-18**  
KIMBWE

RESERVES  
50000000 TONNES  
CU: 4%  
NOTE: KIMBWE/ POSSIBLE RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-19**  
LUKUNI-LUISWISHI-KISWISHI DIST

PRODUCTION (SUMMARY)  
9000000 TONNES OF ORE  
CU: 5%  
NOTE: LUKUNI-LUISWISHI-KISWISHI/ PRODUCTION TO 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
1000000 TONNES  
CU: 3.6%, CO: 0.1%  
NOTE: LUKUNI-LUISWISHI-KISWISHI/PROVEN RESERVE 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-20**  
LUPATO

RESERVES  
5000000 TONNES  
CU: 4%, CO: 0.2%  
NOTE: LUPATO/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-21**  
ETOILE

PRODUCTION (SUMMARY)  
15000000 TONNES OF ORE  
CU: 5%  
NOTE: ETOILE/ PRODUCTION TO 1986

REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

RESERVES  
25000000 TONNES  
CU: 4%, CO: 0.5%  
NOTE: ETOILE/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-22**  
MUSOSHI

PRODUCTION (SUMMARY) FROM 1972/9 TO 1986  
20000000 TONNES OF ORE  
CU: 2.1%  
NOTE: MUSOSHI  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

PRODUCTION (SUMMARY) FROM 1985/1 TO 1985/12  
562454.6 TONNES OF ORE  
CU: 2.3%  
NOTE: MUSOSHI/ 90% COPPER RECOVERY  
REFS: 1985 US BUREAU OF MINES/MIN INDUSTRY OF ZAIRE

RESERVES 1972  
90720000 TONNES  
CU: 3%  
NOTE: ESTIMATED/MINE OFFICIALLY OPENED SEPT 30/72  
REFS: 1973 MINING MAGAZINE/ FEBRUARY/ P 71

RESERVES  
100000000 TONNES  
CU: 2.1%  
NOTE: QUOTED RESERVES - 1972  
REFS: ANNELS - MAY 1986

RESERVES  
90000000 TONNES  
CU: 2%  
NOTE: MUSOSHI/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAIRE-23**  
KINSEDA

PRODUCTION (SUMMARY) FROM 1985/1 TO 1985/12  
344730.2 TONNES OF ORE  
CU: 5.8%  
NOTE: KINSEDA/ 90% COPPER RECOVERY  
REFS: 1985 US BUREAU OF MINES/MIN INDUSTRY OF ZAIRE

PRODUCTION (SUMMARY) FROM 1985/1 TO 1985/12  
344730.2 TONNES OF ORE  
CU: 5.8%  
NOTE: KINSEDA/ 90% COPPER RECOVERY  
REFS: 1985 US BUREAU OF MINES/MIN INDUSTRY OF ZAIRE

RESERVES 1974  
31750000 TONNES  
CU: 5.5%  
NOTE: KINSEDA  
REFS: 1974 MINERALS YEARBOOK/ US BUREAU OF MINES

RESERVES  
25000000 TONNES  
CU: 4.5%  
NOTE: KINSEDA/ PROVEN RESERVES IN 1986  
REFS: T VERBEEK/ PERSONAL COMMUNICATION/ 1987

**ZAMBIA-1**  
KALENGWA

PRODUCTION (YEARLY) FROM 1975/1 TO 1975/12  
188694.4 TONNES OF ORE  
CU: 5.9%  
REFS: 1975 MINERALS YEARBOOK/US BUREAU OF MINES

PRODUCTION (YEARLY) FROM 1976/1 TO 1976/12  
209000 TONNES OF ORE  
CU: 8.72%  
NOTE: OPEN PIT  
REFS: 1976 MINERALS YEARBOOK/US BUREAU OF MINES

PRODUCTION (YEARLY) FROM 1977/1 TO 1977/12  
149000 TONNES OF ORE  
CU: 10.03%  
NOTE: OPEN PIT  
REFS: 1977 MINERALS YEARBOOK/ US BUREAU OF MINES

PRODUCTION (YEARLY) FROM 1979/1 TO 1979/12  
154000 TONNES OF ORE  
CU: 4.74%  
NOTE: NO PRODUCTION IN 1978  
REFS: 1978-79 MINERALS YEARBOOK/US BUREAU OF MINES

PRODUCTION (YEARLY) FROM 1980/1 TO 1980/12  
204000 TONNES OF ORE  
CU: 2.35%  
REFS: 1980 MINERALS YEARBOOK/US BUREAU OF MINES

PRODUCTION (YEARLY) FROM 1981/1 TO 1981/12  
215000 TONNES OF ORE  
CU: 2.47%  
REFS: 1981 MINERALS YEARBOOK/US BUREAU OF MINES

PRODUCTION (SUMMARY) FROM 1969 TO 1982  
2000000 TONNES OF ORE  
CU: 9.44%, AG: 20G/T  
NOTE: NEARLY 2 MT REMOVED FROM PIT/ AG GRADE APPROX  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES 1966  
544310.9 TONNES  
CU: 16%  
NOTE: MAIN OREBODY  
REFS: 1967 ECONOMIC GEOLOGY/ VOL 62 NO 6/ P 782

RESERVES  
2000000 TONNES  
CU: 8%  
NOTE: AS OF 1 APRIL 1985/ ORIGINAL RESERVE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-2**  
KONKOLA (BANCROFT) (KONKOLA DIVISION)

PRODUCTION (SUMMARY) FROM 1957 TO 1981/12  
33000000 TONNES OF ORE  
CU: 3.34%  
NOTE: PRODUCTION FROM KIRILA BOMWE S&N PLUS KINKOLA  
REFS: 1983 ANNALES-MUSEE ROYAL-BELIGQUES/GEOL/NO 89

PRODUCTION (SUMMARY)  
53500000 TONNES OF ORE  
CU: 4.06%  
NOTE: AS OF 1 APRIL 1985

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES 1982  
121000000 TONNES  
CU: 3.52%  
NOTE: RESERVES FOR KONKOLA & KIRILA BOMWE S & n  
REFS: 1983 ANNALES-MUSEE ROUAL-BELGIQUE/GEOL/NO 89

RESERVES 1985/3  
45100000 TONNES  
CU: 3.84%  
NOTE: UNDEVELOPED RESERVES AS OF MARCH 31/85  
REFS: MINING JOURNAL/LONDON FEB 7/86-VOL 306/NO7851

RESERVES 1986  
52000000 TONNES  
CU: 3.8%, CO: 0.07%  
NOTE: FULLY OR PARTIALLY DEVELOPED ORE  
REFS: COMPANY DATA 1986 (IN SWEENEY & BINDA,IN PREP

RESERVES 1986  
300000000 TONNES  
CU: 2.8%, CO: 0.07%  
NOTE: MINIMUM INFERRED RESERVES  
REFS: COMPANY DATA 1986 (IN SWEENEY & BINDA,IN PREP

RESERVES  
66000000 TONNES  
CO: 0.07%  
NOTE: KONKOLA NO 3/ QUOTED RESERVES - 1977  
REFS: ANNELS-MAY 1986

RESERVES  
421000000 TONNES  
CU: 3.06%  
NOTE: AS OF 1 APRIL 1985/ RESOURCES (ESTIMATED)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES  
51800000 TONNES  
CU: 3.82%  
NOTE: AS OF 1 APRIL 1985/ RESERVE (PROVEN)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES  
131400000 TONNES  
CU: 3.55%  
NOTE: KONKOLA-AS A WHOLE/QUOTED RESERVES-1977  
REFS: ANNELS-MAY 1986

**ZAMBIA-4**  
FITWAOLA (KONKOLA DIVISION)

RESERVES  
3300000 TONNES  
CO: 0.09%  
NOTE: KONKOLA-FITUAOLA/QUOTED RESERVES 1977  
REFS: ANNELS-MAY 1986

**ZAMBIA-5**  
NCHANGA AREA

PRODUCTION (SUMMARY) FROM 1939 TO 1981/12  
174000000 TONNES OF ORE  
CU: 4.23%  
NOTE: COMBINED PRODUCTION FOR NCHANGA-CHINGOLA  
AREA

REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

PRODUCTION (SUMMARY)  
203000000 TONNES OF ORE

CU: 5.03%

NOTE: AS OF 1 APRIL 1985

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES 1982/1  
278000000 TONNES

CU: 3.23%

NOTE: COMBINED RESERVES FOR NCHANGA-CHINGOLA AREA

REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

RESERVES  
105000000 TONNES

CU: 4.4%

NOTE: FW NCHANGA/ QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

RESERVES  
10500000 TONNES

CU: 2.8%

NOTE: IOB NCHANGA/ QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

RESERVES  
3000000 TONNES

CU: 3.6%

NOTE: CHINGOLA C/ QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

RESERVES  
19000000 TONNES  
CU: 2.87%, CO: 0.49%

NOTE: COBALTIFEROUS RESERVES (PROVEN)

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES  
27900000 TONNES  
CU: 1.18%, CO: 0.3%

NOTE: COBALTIFEROUS RESOURCES (ESTIMATED)

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES  
131500000 TONNES  
CU: 2.58%

NOTE: UOB NCHANGA/ QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

RESERVES  
105000000 TONNES  
CU: 4.4%

NOTE: FW NCHANGA/ QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

RESERVES  
40200000 TONNES  
CU: 1.47%, CO: 0.35%

NOTE: UOB NCHANGA/ QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

RESERVES  
112200000 TONNES  
CU: 3.96%

NOTE: AS OF APR 1/85/PROVEN/ INCLUDES 19 MT 0.49%CO

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES

2100000 TONNES  
CU: 3.7%, CO: 0.48%

NOTE: LOB + FW NCHANGA/ QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

RESERVES  
3000000 TONNES  
CO: 0.38%

NOTE: IAB NCHANGA/ QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

RESERVES  
143000000 TONNES  
CU: 4%

NOTE: LOB + FW NCHANGA/ QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

RESERVES  
197000000 TONNES  
CU: 2.22%

NOTE: AS OF 1 APRIL 1985/ EST/ INCLUDES 27MT 0.3%CO

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

#### **ZAMBIA-5(A)** CHINGOLA (NCHANGA DIVISION)

PRODUCTION (SUMMARY) FROM 1957 TO 1970  
8000000 TONNES OF ORE  
CU: 5%

NOTE: CHINGOLA A OREBODY (OPEN PIT)

REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

PRODUCTION (SUMMARY) FROM 1970 TO 1978  
3000000 TONNES OF ORE  
CU: 3.6%  
NOTE: CHINGOLA C OREBODY (OPEN PIT)  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

RESERVES 1982  
135000000 TONNES  
CU: 0.7%  
NOTE: ESTIMATED RESERVES OF 4 MINE TAILINGS DUMPS  
REFS: 1982 MINING MAGAZINE/ AUGUST/ P 78-79

RESERVES 1977  
1200000 TONNES

NOTE: CHINGOLA B UPPER OREBODY/ NOT ECONOMIC (1977)  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

RESERVES 1974/12  
1500000 TONNES  
CU: 3.9%  
NOTE: CHINGOLA B LOWER OREBODY/ PROD BEGAN END-1974  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

RESERVES 1975  
4500000 TONNES  
CU: 5.5%  
NOTE: BLOCK A LIES MIDWAY-CHINGOLA B& NCHANGA LOWER  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

RESERVES 1975  
3400000 TONNES  
CU: 3.5%  
NOTE: CHINGOLA E OREBODY-OPEN PIT/PROD BEGAN 1977-8  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

RESERVES 1970  
3400000 TONNES  
CU: 3.9%  
NOTE: CHINGCOLA F OREBODY/ORE PROVED DOWN TO 300 M  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

RESERVES 1974  
8500000 TONNES  
CU: 2%  
NOTE: CHINGOLA D OREBODY  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

**ZAMBIA-6**  
LUANO (NCHANGA DIVISION)

RESERVES 1975  
3700000 TONNES  
CU: 3.5%  
NOTE: ESTIMATED/UNEXPLOITED AS OF 1977  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

**ZAMBIA-7**  
RIVER LODGE (NCHANGA DIVISION)

PRODUCTION (SUMMARY) FROM 1968/4 TO 1972/10  
2178000 TONNES OF ORE  
CU: 2.5%  
NOTE: 60000 TONNES ORE LEFT UNMINED -TOO DANGEROUS  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

RESERVES  
2200000 TONNES  
CU: 2.5%  
NOTE: QUOTED RESERVES - 1977  
REFS: ANNELS - MAY 1986

**ZAMBIA-8**  
NCHANGA (NCHANGA DIVISION)

PRODUCTION (SUMMARY) FROM 1955 TO 1975  
75000000 TONNES OF ORE  
CU: 1.4%  
NOTE: CUPRIFEROUS MICA-MINED & STOCKPILED/UPPER OB  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

RESERVES 1975  
200000000 TONNES  
CU: 1%  
NOTE: CUPRIFEROUS MICA ORE/ UPPER OREBODY  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

RESERVES 1976/4  
8000000 TONNES  
CU: 2.9%  
NOTE: PROD BEGAN IN APRIL 1976/INTERMEDIATE OREBODY  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

RESERVES  
290000000 TONNES  
CU: 1.2%  
NOTE: AS OF 1 APRIL 1985/ MICACEOUS RESOURCE (EST)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES  
70000000 TONNES  
CU: 1.4%

NOTE: CUPRIFEROUS MICA STOCKPILED/QUOTED RESERVE-77  
REFS: ANNELS - MAY 1986

**ZAMBIA-9**  
MIMBULA (NCHANGA DIVISION)

RESERVES 1958  
9000000 TONNES  
CU: 2.7%  
NOTE: PROD BEGAN FEB/68-ENDED MAR/78-PIT DEPTH 140M  
REFS: 1977 ZCCM LTD-NCHANGA DIVISION/GEOL DEPT REPT

**ZAMBIA-10**  
FITULA (NCHANGA DIVISION)

RESERVES 1965  
4091403 TONNES  
CU: 5.28%  
NOTE: ESTIMATED/PRE-PRODUCTION/ORE MINED 1968-1981  
REFS: 1969 PROCEEDINGS 9TH COMM MIN & MET CONGRESS

RESERVES  
4500000 TONNES  
CU: 5%  
NOTE: QUOTED RESERVES - 1977  
REFS: ANNELS - MAY 1986

**ZAMBIA-11**  
CHAMBISHI

PRODUCTION (SUMMARY) FROM 1965 TO 1981/12  
23000000 TONNES OF ORE  
CU: 2.46%  
NOTE: MINED BY OPEN PIT UNTIL DECEMBER 1978  
REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

PRODUCTION (SUMMARY)  
339000000 TONNES OF ORE  
CU: 2.88%  
NOTE: AS OF 1 APRIL 1985  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES 1982  
39000000 TONNES  
CU: 2.88%  
REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

RESERVES 1985/3  
20900000 TONNES  
CU: 2.78%  
NOTE: UNDEVELOPED RESERVES AS OF MARCH 31/1985  
REFS: MINING JOURNAL/LONDON FEB 7/86-VOL 306/NO7851

RESERVES  
30600000 TONNES  
CU: 3.07%  
NOTE: QUOTED RESERVES - 1977  
REFS: ANNELS - MAY 1986

RESERVES  
23500000 TONNES  
CU: 2.79%  
NOTE: AS OF 1 APRIL 1985/ RESERVE (PROVEN)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-12****NKANA (ROKANA) DIVISION****PRODUCTION (SUMMARY) FROM 1932 TO 1981/12**

183000000 TONNES OF ORE

CU: 2.58%

NOTE: UNDERGROUND PROD BEGAN 1929/OPEN PIT IN 1965

REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE-GEOL-NO 89

**PRODUCTION (SUMMARY)**

178200000 TONNES OF ORE

CU: 3.37%, CO: 0.17%

NOTE: AS OF 1 APRIL 1985

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**RESERVES 1982/1**

127000000 TONNES

CU: 2.36%

REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

**RESERVES**

303800000 TONNES

CU: 2.22%, CO: 0.05%

NOTE: AS OF 1 APRIL 1985/ RESOURCES (ESTIMATED)

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**RESERVES**

127200000 TONNES

CU: 2.52%

NOTE: QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

**RESERVES**

81700000 TONNES

CU: 2.38%, CO: 0.14%

NOTE: AS OF 1 APRIL 1985/ RESERVE (PROVEN)

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-13****CHIBULUMA AND CHIBULUMA WEST****PRODUCTION (SUMMARY) FROM 1955 TO 1981/12**

130000000 TONNES OF ORE

CU: 4%

REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

**PRODUCTION (SUMMARY)**

180000000 TONNES OF ORE

CU: 4.66%, CO: 0.21%

NOTE: AS OF 1 APRIL 1985

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**RESERVES 1982/1**

78000000 TONNES

CU: 4.68%

REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

**RESERVES**

8000000 TONNES

CU: 4.6%, CO: 0.17%

NOTE: CHIBULUMA WEST/ORIGINAL RESERVES-QUOTED 1977/

REFS: ANNELS - MAY 1986

**RESERVES**

7000000 TONNES

CU: 5.23%, CO: 0.25%

NOTE: CHIBULUMA/ORIGINAL RESERVES-QUOTED 1977

REFS: ANNELS - MAY 1986

**RESERVES**

42400000 TONNES

CU: 2.31%

NOTE: AS OF 1 APRIL 1985/ RESOURCES (ESTIMATED)

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**RESERVES**

4900000 TONNES

CU: 1.36%

NOTE: AS OF 1 APRIL 1985/ RESOURCES (ESTIMATED)

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**RESERVES**

8700000 TONNES

CU: 3.35%, CO: 0.21%

NOTE: AS OF 1 APRIL 1985/ RESERVE (PROVEN)

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-14****BULUBA-UPPER OREBODY (LUANSHYA AREA)****PRODUCTION (SUMMARY)**

20900000 TONNES OF ORE

CU: 2.41%, CO: 0.15%

NOTE: AS OF 1 APRIL 1985

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ZCCM

**RESERVES 1969/6**

59690000 TONNES

CU: 2.71%, CO: 0.17%

NOTE: PRE-PRODUCTION

REFS: 1971 MINING MAGAZINE/APRIL/VOL 124 NO 4/P 267

**RESERVES 1980/3**

62000000 TONNES

CU: 2.58%, CO: 0.15%

NOTE: PRODUCTION BEGAN IN 1973

REFS: 1981 MINING JOURNAL/ JANUARY 2/PG 5

**RESERVES**

20400000 TONNES

CU: 2.35%

NOTE: AS OF 1 APRIL 1985/ RESOURCES (ESTIMATED)

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**RESERVES**

67500000 TONNES

CU: 2.53%, CO: 0.17%

NOTE: QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

**RESERVES**

50300000 TONNES

CU: 2.56%, CO: 0.16%

NOTE: AS OF 1 APRIL 1985// RESERVE (PROVEN)

REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**RESERVES**

67500000 TONNES

CU: 2.53%, CO: 0.17%

NOTE: QUOTED RESERVES - 1977

REFS: ANNELS - MAY 1986

**ZAMBIA-16****LUANSHYA (ROAN ANTELOPE)****PRODUCTION (SUMMARY) FROM 1931 TO 1981/12**

206000000 TONNES OF ORE  
CU: 2.05%  
REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

PRODUCTION (SUMMARY)  
213600000 TONNES OF ORE  
CU: 2.91%  
NOTE: AS OF 1 APRIL 1985  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES 1982/1  
134000000 TONNES  
CU: 2.52%  
REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

RESERVES  
41900000 TONNES  
CU: 2.41%  
NOTE: AS OF 1 APRIL 1985/ RESERVE (PROVEN)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES  
19900000 TONNES  
CU: 2.61%  
NOTE: AS OF 1 APRIL 1985/ RESOURCES (ESTIMATED)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES  
72000000 TONNES  
CU: 2.71%  
NOTE: QUOTED RESERVES - 1977  
REFS: ANNELS - MAY 1986

#### **ZAMBIA-17** BWANA MKUBWA

PRODUCTION (SUMMARY) FROM 1913 TO 1971  
8000000 TONNES OF ORE  
CU: 3.14%  
NOTE: MINE PRODUCED INTERMITTENTLY-1913/1926/1971  
REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

RESERVES 1981  
2500000 TONNES  
CU: 3.53%  
REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

RESERVES  
5600000 TONNES  
CU: 3.31%  
NOTE: QUOTED RESERVES - 1977  
REFS: ANNELS - MAY 1986

RESERVES  
8600000 TONNES  
CU: 3.34%  
NOTE: AS OF 1 APRIL 1985/ ORIGINAL RESERVE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

#### **ZAMBIA-18** MUFULIRA

PRODUCTION (SUMMARY) FROM 1933 TO 1981/12  
179000000 TONNES OF ORE  
CU: 2.82%  
REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

PRODUCTION (SUMMARY)  
208100000 TONNES OF ORE  
CU: 3.51%  
NOTE: AS OF 1 APRIL 1985  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES 1982/1  
139000000 TONNES  
CU: 3.08%  
REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

RESERVES  
86800000 TONNES  
CU: 3.01%  
NOTE: AS OF 1 APRIL 1985/ RESERVE (PROVEN)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES  
136400000 TONNES  
CU: 3.27%  
NOTE: QUOTED RESERVES - 1977  
REFS: ANNELS - MAY 1986

RESERVES  
40000000 TONNES  
CU: 2.94%  
NOTE: AS OF 1 APRIL 1985/ RESOURCES (ESTIMATED)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

#### **ZAMBIA-19** MOKAMBO

RESERVES  
6200000 TONNES  
CU: 1.21%  
NOTE: AS OF 1 APRIL 1985/ NORTH OREBODY/ ESTIMATED  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES  
6000000 TONNES  
CU: 2.38%  
NOTE: AS OF 1 APRIL 1985/ SOUTH OREBODY/ ESTIMATED  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

#### **ZAMBIA-20** KANSANSHI

PRODUCTION (YEARLY) FROM 1980  
237000 TONNES OF ORE  
CU: 2.97%  
NOTE: PRODUCTION BEGAN IN 1980  
REFS: 1980 MINERALS YEARBOOK/ US BUREAU OF MINES

PRODUCTION (YEARLY) FROM 1981  
307000 TONNES OF ORE  
CU: 3.21%  
NOTE: ORE MINED AND TREATED  
REFS: 1981 MINERALS YEARBOOK/ US BUREAU OF MINES

RESERVES 1985/3  
3400000 TONNES  
CU: 2.75%  
NOTE: UNDEVELOPED RESERVES AS OF MARCH 31/85  
REFS: MINING JOURNAL/LONDON FEB 7/86-VOL 306/NO7851

#### **ZAMBIA-21**

CHIBULUMA SOUTH (KALULUSHI EAST)

RESERVES 1975  
5352390 TONNES  
CU: 4.09%  
NOTE: EAST OREBODY  
REFS: 1975 MINERALS YEARBOOK/ US BUREAU OF MINES

RESERVES  
11100000 TONNES  
CU: 4.33%  
NOTE: AS OF 1 APRIL 1985/RESOURCES (EST)/+ MINOR CO  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

RESERVES  
5000000 TONNES  
CU: 4%, CO: 0.2%  
NOTE: QUOTED RESERVES - 1977/ CO 0.1-0.3%  
REFS: ANNELS - MAY 1986

**ZAMBIA-22(A)**  
MALUNDWE (LUMWANA)

RESERVES  
125000000 TONNES  
CU: 1.03%  
NOTE: AS OF 1 APRIL 1985/ RESOURCE (ESTIMATED)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-23**  
CHIMIWUNGO (LUMWANA)

RESERVES  
953000000 TONNES  
CU: 0.64%  
NOTE: AS OF 1 APRIL 1985/ RESOURCE (ESTIMATED)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-24**  
LUBWE

RESERVES  
70000000 TONNES  
CU: 0.8%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-25**  
MWAMBASHI B

RESERVES  
5000000 TONNES  
CU: 3%  
NOTE: QUOTED RESERVES 1977  
REFS: ANNELS - MAY 1986

RESERVES  
7900000 TONNES  
CU: 2.72%, CO: 0.08%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-26**  
PITANDA SOUTH (MWAMBASHI A)

RESERVES  
400000 TONNES  
CU: 1.68%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-27**  
PITANDA

RESERVES  
15000000 TONNES  
CU: 1.7%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-28**  
NKANA NORTH LIMB (CHAMBISHI SE)

RESERVES  
51700000 TONNES  
CU: 2.44%  
NOTE: RESOURCES APRIL 1, 1985  
REFS: P.V. FREEMAN, PERSONAL COMMUNICATION, 1986

RESERVES  
72400000 TONNES  
CU: 1.9%, CO: 0.1%  
NOTE: QUOTED RESERVES - 1977  
REFS: ANNELS - MAY 1986

RESERVES  
51700000 TONNES  
CU: 2.44%  
NOTE: AS OF 1 APRIL 1985/ RESOURCES (ESTIMATED)  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ZCCM

**ZAMBIA-30**  
CHIFUPU

RESERVES  
200000 TONNES  
CU: 2.79%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-33**  
SAMBA

RESERVES  
14000000 TONNES  
CU: 1.1%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCES  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLGOSIT/ ZCCM

**ZAMBIA-35**  
KASARIA

RESERVES  
5000000 TONNES  
CU: 2.51%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED REOSURCES  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLGOIST/ ZCCM



**ZAMBIA-36**  
LUANSOBE (NSATO)

RESERVES  
8400000 TONNES  
CU: 1.6%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-37**  
MWEKERA

RESERVES  
7100000 TONNES  
CU: 1.53%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-38**  
ITAWA

RESERVES  
40000000 TONNES  
CU: 0.76%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-39**  
KALUMBILA

RESERVES  
30000000 TONNES  
CU: 1%  
NOTE: AS OF 1 APRIL 1985/ POSSIBLE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-40**  
MUFUMBWE

RESERVES  
5200000 TONNES  
CU: 2.3%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-41**  
MUFUKUSHI

RESERVES  
6000000 TONNES  
CU: 1.23%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZAMBIA-42**  
SEBEMBERE

RESERVES  
6000000 TONNES  
CU: 1.9%  
NOTE: AS OF 1 APRIL 1985/ ESTIMATED RESOURCE  
REFS: 1986 P V FREEMAN/ CONSULTING GEOLOGIST/ ZCCM

**ZIMBABWE-2**  
MANGULA

PRODUCTION (SUMMARY) TO 1971  
1174804 TONNES OF ORE  
CU: 1.11%  
NOTE: PRODUCTION TO 1971  
REFS: 1971 MINING MAGAZINE/APRIL/VOL 124 NO 4/P 263

RESERVES 1984  
60000000 TONNES  
CU: 1.2%  
NOTE: ESTIMATE OF TOTAL SIZE OF DEPOSIT  
REFS: 1984 PRECAMBRIAN RESEARCH/VOLUME 25/P 104

RESERVES 1971  
14480000 TONNES  
CU: 1.36%  
NOTE: PROVEN SULPHIDE ORE  
REFS: 1971 MINING MAGAZINE/APRIL/VOL 124 NO 4/P 263

**ZIMBABWE-3**  
NORAH

RESERVES 1973  
1723651 TONNES  
CU: 1.32%  
NOTE: SULPHIDE ORE  
REFS: 1973 MINING MAGAZINE/FEBRUARY/PG 73

RESERVES 1975  
4759091 TONNES  
CU: 1.26%  
NOTE: PROVED & PROBABLE  
REFS: 1975 MINERALS YEARBOOK/VOLUME 3/P 871

RESERVES 1980/10  
2721554 TONNES  
CU: 1.35%  
NOTE: PROVED & PROBABLE  
REFS: 1980 MINERALS YEARBOOK/VOL 3/P 1151

RESERVES 1984  
10000000 TONNES  
CU: 1.2%  
NOTE: ESTIMATE OF TOTAL SIZE OF DEPOSIT  
REFS: 1984 PRECAMBRIAN RESEARCH/VOLUME 25/P 104

**ZIMBABWE-5**  
SILVERSIDE

RESERVES  
907184.8 TONNES  
CU: 1.8%  
NOTE: ESTIMATED (1973)/APPRECIABLE PRECIOUS METALS  
REFS: 1973 MINING MAG/FEB/P73 & 1975 MINERALS YEARB

**ZIMBABWE-6**  
SHACKLETON

RESERVES 1980  
759313.6 TONNES  
CU: 1.26%  
REFS: 1980 MINERALS YEARBOOK/VOL 3/PG 1151

**ZIMBABWE-7**  
AVONDALE

RESERVES 1971  
2721554 TONNES  
CU: 1%  
NOTE: ESTIMATED  
REFS: 1971 SA MINING & ENGINEERING JOURNAL-SEPT/P37

RESERVES 1980  
290299.1 TONNES  
CU: 1.14%  
REFS: 1980 MINERALS YEARBOOK/VOL 3/PG 1151

**ZIMBABWE-8**  
ALASKA

PRODUCTION (SUMMARY) FROM 1964 TO 1970/9  
252197.4 TONNES OF ORE  
CU: 0.95%  
REFS: 1971 MINING MAGAZINE/APRIL/VOL 124 NO 4/P 263

RESERVES 1970/9  
326586.5 TONNES  
CU: 2.08%  
REFS: 1971 MINING MAGAZINE/APRIL/VOL 124/NO 4/P 263

RESERVES 1980  
525259.9 TONNES  
CU: 1.11%  
NOTE: PROVED/MINE ON CARE & MAINTENANCE IN 1980  
REFS: 1980 MINERALS YEARBOOK/VOL 3/P 1151

RESERVES 1984  
6000000 TONNES  
CU: 1.2%  
NOTE: SHACKLETON/AVONDALE/ANGWA-ESTIMATE TOTAL SIZE  
REFS: 1984 PRECAMBRIAN RESEARCH/VOLUME 25/P 104

**ZIMBABWE-11**  
COPPER QUEEN (SANYATI)

RESERVES 1980  
13610000 TONNES  
CU: 1.4%, PB: 1.35%, ZN: 1.85%  
NOTE: PROVED & PROBABLE/START UP POSTPONED IN 1983  
REFS: 1980 MINERALS YEARBOOK/VOL 3/P1151 (ALSO 1977

**ASIA**

**AFGHANISTAN-1**  
AYNAK

RESERVES 1980  
200000000 TONNES  
CU: 2%  
NOTE: POSSIBLE/EXPLORATION STAGE-3 MINERALIZED AREA  
REFS: 1980 PROCEEDINGS OF 5TH IAGOD SYMPOSIUM/P 168

RESERVES  
350000000 TONNES  
CU: 1.5%  
NOTE: CUTOFF GRADE 0.7% CU/ 2 DEPOSITS 2 KM APART  
REFS: PERSONAL COMMUNICATION (1990)

**AFGHANISTAN-3**  
DARBAND

RESERVES  
1000000 TONNES  
CU: 1%  
NOTE: SPECULATIVE-FOR 3 AREAS/CU GRADE 0.55-2.06 %  
REFS: 1977 MINERAL RESOURCES OF AFGHANISTAN/ P 104

**CHINA-8**  
DONGCHUAN

RESERVES 1984  
9071847 TONNES  
CU: 3.5%  
NOTE: ESTIMATED RESERVES  
REFS: POW-FOONG FAN 1984 ECON GEOL V79 P1785-95

RESERVES  
300000000 TONNES  
CU: 1%  
NOTE: QUESTIONABLE DATA

**INDIA-1**  
BANDALAMOTTU (AGNIGUNDALA BELT)

RESERVES  
1036000 TONNES  
CU: 1.42%  
NOTE: BANDALAMOTTU-CU ORE(AVG-GRADES  
A&B)/ESTIMATED  
REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 18

RESERVES  
261000 TONNES  
CU: 0.56%  
NOTE: BANDALAMOTTU-COPPER ZONE (GRADE B)/ESTIMATED  
REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 18

RESERVES  
10060000 TONNES  
PB: 6.59%  
NOTE: BANDALAMOTTU-PB ORE (GRADE A)/ ESTIMATED  
REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 12

RESERVES  
1400000 TONNES  
PB: 3.1%  
NOTE: BANDALAMOTTU-PB ORE (GRADE B)/ ESTIMATED

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 12

**RESERVES**

775000 TONNES

CU: 1.71%

NOTE: BANDALAMOTTU-COPPER ZONE (GRADE A)/ESTIMATED

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 18

**INDIA-1(A)**

AGNIGUNDALA BELT (BANDALAMOTTU/DHUKONDA/NALLAKON)

**RESERVES**

16570000 TONNES

CU: 1.5%, PB: 6.5%

NOTE: ESTIMATED COMBINED RESERVES OF 3 MAJOR ZONES

REFS: 1969 MINING JOURNAL/DECEMBER 5

**RESERVES**

8000000 TONNES

CU: 1.52%, PB: 3.1%

NOTE: COMBINED RESERVES/ CU 1.52-1.82% PB 3.1-8.98%

REFS: THE DEV POTENTIAL OF PREC MIN DEPOSIT/UN-1982

**INDIA-2**

DHUKONDA (AGINGUNDALA BELT)

**RESERVES**

2134000 TONNES

CU: 1.53%

NOTE: NORTHEAST/SOUTHWESTERN/CENTRAL & WEST AREAS

REFS: 1980 GEOL SURVEY OF INDIA/ECON GEOL BULL 44

**RESERVES**

2154000 TONNES

CU: 1.51%

NOTE: DHUKONDA-ESTIMATED-FOR 4 MINERALIZED AREAS

REFS: 1981 GEOL SURVEY OF INDIA/BULL NO 47/P 10-11

**RESERVES**

1591000 TONNES

CU: 1.39%

NOTE: NORTHEAST DHUKONDA-CU ORE/ ESTIMATED

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 27

**RESERVES**

395000 TONNES

CU: 1.91%

NOTE: CENTRAL & WESTERN DHUKONDA-CU ORE/ ESTIMATED

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 27

**RESERVES**

126000 TONNES

CU: 1.48%

NOTE: SOUTHWESTERN DHUKONDA-CU ORE/ ESTIMATED

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 27

**RESERVES**

460000 TONNES

PB: 8.98%

NOTE: DHUKONDA-PB ORE/ ESTIMATED

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 12

**RESERVES**

42000 TONNES

CU: 2.6%

NOTE: SOUTHWESTERN DHUKONDA-CU ORE (ASSOC WITH PB)

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 27

**RESERVES**

216000 TONNES

PB: 9.94%

NOTE: NORTHEAST DHUKONDA-PB ORE/ ESTIMATED

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 27

**RESERVES**

74000 TONNES

PB: 7.06%

NOTE: CENTRAL & WESTERN DHUKONDA-PB ORE/ ESTIMATED

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 27

**RESERVES**

169000 TONNES

PB: 8.6%

NOTE: SOUTHWESTERN DHUKONDA-PB ORE/ ESTIMATED

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 27

**INDIA-3**

NALLAKONDA (AGNIGUNDALA BELT)

**RESERVES**

CU: 1.82%

NOTE: NALLAKONDA BLOCK/ ESTIMATED

REFS: 1985 GEOL SURV OF INDIA/MEMOIRS VOL 118/P 23

**KAZAKHSTAN-21**

DZHEZKAZGAN (JESKESGAN)

**PRODUCTION AND RESERVES**

439000000 TONNES

CU: 1.54%

NOTE: QUESTIONABLE DATA; BLISTER CU PROD 1971-82

REFS: STRISHKOV (1984)

**PHILIPPINES-1**

BAGACAY (BAGAYCAY)

**PRODUCTION (YEARLY) FROM 1956 TO 1956**

4000 TONNES OF ORE

CU: 20%

NOTE: TWO ORE SHIPMENTS MADE IN LATE 1956

REFS: 1956 COPPER DEPOSITS OF THE PHILIPPINES/ P267

**PRODUCTION (YEARLY) FROM 1956 TO 1956**

4000 TONNES OF ORE

CU: 20%

NOTE: TWO ORE SHIPMENTS MADE IN LATE 1956

REFS: 1956 COPPER DEPOSITS OF THE PHILIPPINES/ P267

**PRODUCTION (YEARLY) FROM 1956 TO 1956**

4000 TONNES OF ORE

CU: 20%

NOTE: TWO ORE SHIPMENTS MADE IN LATE 1956

REFS: 1956 COPPER DEPOSITS OF THE PHILIPPINES/ P267

**PRODUCTION (YEARLY) FROM 1960/1 TO 1960/12**

23133 TONNES OF CONCENTRATE

CU: 14.13%, ZN: 7.8%, AU: 0.789G/T, AG: 125.49G/T

NOTE: APPROX TONNAGE OF CONCENTRATE SHIPPED IN 1960

REFS: 1965 US BUREAU OF MINES/ INFO CIRCULAR 8225

**PRODUCTION (YEARLY) FROM 1960/3 TO 1960/12**

136 TONNES OF ORE

CU: 3.19%, ZN: 2.19%

NOTE: MILLING GRADE ORE

REFS: 1965 US BUREAU OF MINES/ INFO CIRCULAR 8225

PRODUCTION (YEARLY) FROM 1960/3 TO 1960/12  
3878 TONNES OF ORE

CU: 12.33%

NOTE: SHIPPING GRADE ORE

REFS: 1965 US BUREAU OF MINES/ INFO CIRCULAR 8225

RESERVES

29030 TONNES

CU: 17.14%

NOTE: PROVEN RESERVES (1959)/ DIRECT SHIPPING ORE

REFS: 1965 US BUREAU OF MINES/ INFO CIRCULAR 8225

RESERVES

2903000 TONNES

CU: 3.55%

NOTE: PROVEN RESERVES (1959)/ MILLING GRADE ORE

REFS: 1965 US BUREAU OF MINES/ INFO CIRCULAR 8225

#### **RUSSIA-43**

UDOKAN

RESERVES 1985

1200000000 TONNES

CU: 2%

NOTE: ESTIMATED RESERVES CONTAINED IN 4 DEPOSITS

REFS: 1985 ENGINEERING & MINING JOURNAL/JULY/P 20

RESERVES

1200000000 TONNES

CU: 1.5%

NOTE: GROSS RESERVES/20 % OXIDES & 80% SULPHIDES

REFS: 1977 US BUREAU OF MINES/MINERAL PERSPECTIVES2

## **AUSTRALIA**

### **AUSTRALIA-1**

MOUNT OXIDE

PRODUCTION (SUMMARY) TO 1958

43770.76 TONNES OF ORE

CU: 21%

NOTE: ADDITIONAL 2201 TONS MINED/ 28723 OZ AG RECOV

REFS: 1961 AUSTRALIA DEPT OF NATIONAL DEV/BULL 51

RESERVES 1958

181437 TONNES

CU: 4%

NOTE: MAXIMUM RESERVES/GIVEN AS 150000-200000/2-4%

REFS: 1961 AUSTRALIA DEPT OF NATIONAL DEV/BULL 51

### **AUSTRALIA-11**

MOUNT GUNSON

PRODUCTION (SUMMARY) FROM 1941 TO 1943

33000 TONNES OF ORE

CU: 5.5%

REFS: 1980 CU IN SOTH AUSTRALIA/REPT BK NO 80/29

PRODUCTION (SUMMARY) FROM 1974/8 TO 1980/1

58491 TONNES OF METAL

CU: 99.999%

REFS: 1980 CU IN SOUTH AUSTRALIA/ REPT BK NO 80/29

PRODUCTION (SUMMARY) FROM 1898 TO 1937

3330 TONNES OF ORE

CU: 8%

NOTE: HANDPICKED ORE GRADING 8 TO 16% CU

REFS: 1980 CU IN SOUTH AUSTRALIA/REPT BK NO 80/29

PRODUCTION (YEARLY) FROM 1983/1 TO 1983/12

903738 TONNES OF ORE

CU: 1.53%

REFS: 1986AUSTRALIAN MIN IND/ANNUAL REVIEW FOR 1983

RESERVES 1970

3300000 TONNES

CU: 1%

NOTE: ESTIMATED-MAIN ZONE

REFS: 1980 CU IN SOUTH AUSTRALIA/REPT BK NO 80/29

RESERVES 1972

5000000 TONNES

CU: 2.2%

NOTE: CATTLE GRID-DRILL INDICATED- 3 KM W OF MAIN

REFS: 1980 CU IN SOUTH AUSTRALIA/ REPT BK NO 80/29

RESERVES 1983

400000 TONNES

CU: 2.2%

NOTE: NEW DISCOVERY-NW OF CATTLE GRID DEPOSIT

REFS: 1983 MINING JOURNAL/DECEMBER/ P 401

RESERVES 1983

140000 TONNES

CU: 1.6%

NOTE: ADDITIONAL NEW DISCOVERY-NEAR OLD MAIN ZONE

REFS: 1983 MINING JOURNAL/DECEMBER/ P 401

RESERVES

1130000 TONNES

CU: 1.7%

NOTE: PROVED/AS OF 31 MARCH 1983/EXHAUSTED MID 1984  
REFS: 1986 AUSTRALIAN MIN IND/ANNUAL REVIEW FOR1983

**AUSTRALIA-14**  
PRINCE ALFRED

PRODUCTION (SUMMARY) TO 1980  
2000 TONNES OF ORE  
CU: 99.999%  
NOTE: APPROX TONNES OF METAL PRODUCED UP TO 1980  
REFS: 1980 CU IN SOUTH AUSTRALIA/REPT BK NO 80/29

**EUROPE**

**BELGIUM-2**  
ROUVEROY

PRODUCTION (SUMMARY)  
5000 TONNES OF METAL  
CU: 100%  
NOTE: ESTIMATED PROD DATING BACK TO 19TH CENTURY  
REFS: 1986 MINERAL DEPOSITS OF EUROPE/ VOL 3/ P 109

**GERMANY-2**  
RICHELSDORF

PRODUCTION (SUMMARY) FROM 1939 TO 1954  
2000000 TONNES OF ORE  
CU: 0.765%, AG: 3.5G/T  
NOTE: RECOVERED GRADES CALCULATED HERE  
REFS: WALTHER (1986)

RESERVES  
40000000 TONNES  
CU: 1%  
NOTE: TOTAL POSSIBLE IN SITU RESERVES IN 1902  
REFS: WALTHER (1986)

**GERMANY-17**  
MARSBERG

PRODUCTION (SUMMARY) FROM 1840 TO 1945  
3230000 TONNES OF ORE  
CU: 1.55%  
NOTE: MINED AS EARLY AS 1150 & POSSIBLY EARLIER  
REFS: 1986 MINERAL DEPOSITS OF EUROPE/VOL3/IMM/P241

RESERVES  
1000000 TONNES  
CU: 1.3%  
NOTE: REMAINING RESERVES AS OF 1945  
REFS: 1986 MINERAL DEPOSITS OF EUROPE/VOL3/IMM/P241

**GERMANY-22**  
MANSFELD-SANGERHAUSEN

PRODUCTION AND RESERVES  
75000000 TONNES  
CU: 2%  
NOTE: CALCULATED FROM ESTIMATED CU METAL  
PRODUCTION  
REFS: JUNG AND KNITZSCHKE (1976)

PRODUCTION (SUMMARY)  
1500000 TONNES OF ORE  
ZN: 1.8%  
NOTE: ESTIMATED CU METAL PRODUCTION OVER 770 YEARS  
REFS: GUSTAFSON AND WILLIAMS (1981)

**KALAALLIT NUNAAT-9**  
LADDERBJERG (GIESECKE BJERGE)

RESERVES  
2500000 TONNES  
CU: 0.15%  
NOTE: EST MINIMUM FOR AREA 1000 X 400 M/ AG 8 PPM  
REFS: MEDDELELSER OM GRONLAND-86/GEOSCIENCE 17/P 88

**KALAALLIT NUNAAT-10**  
RUBJERG KNUDE (TRAILL O)

RESERVES  
5000000 TONNES  
CU: 0.3%  
NOTE: ESTIMATE FOR AREA 1300 X 2500 M/ AG 5 PPM  
REFS: MEDDELELSER OM GRONLAND-86/GEOSCIENCE 17/P 88

**NORWAY-1**  
REPPARFJORD

PRODUCTION (SUMMARY) FROM 1972 TO 1979  
3061238 TONNES OF ORE  
CU: 0.663%  
NOTE: MINED OUT/PREVIOUS ORE RESERVE TOO OPTIMISTIC  
REFS: 1985 MONOGRAPH SERIES ON MINERAL DEPOSITS/#24

PRODUCTION (SUMMARY) FROM 1972 TO 1979  
50903 TONNES OF CONCENTRATE  
CU: 35.5%  
NOTE: MINE CLOSED DUE TO UNECONOMIC CONTITIONS  
REFS: 1985 MONOGRAPH SERIES ON MINERAL DEPOSITS/#24

PRODUCTION (SUMMARY) FROM 1972 TO 1979  
51000 TONNES OF CONCENTRATE  
CU: 35.5%  
NOTE: CONCENTRATE PRODUCED  
REFS: 1986 7TH IAGOD SYMPOSIUM/EXCURSION GUIDE NO.6

PRODUCTION (SUMMARY) FROM 1972 TO 1979  
3100000 TONNES OF ORE  
CU: 0.66%  
REFS: 1986 7TH IAGOD SYMPOSIUM/EXCURSION GUIDE NO.6

PRODUCTION (SUMMARY) FROM 1972 TO 1978  
3000000 TONNES OF ORE  
CU: 0.65%, AG: 1G/T  
NOTE: CONC CONTAINED 35-40% CU & 50-70 G/TONNE AG  
REFS: 1985 NORGES GEOLOGISKE UNDERS/BULL 403/P 190

RESERVES  
10000000 TONNES  
CU: 0.65%, AG: 70G/T  
NOTE: REPPARFJORD/ PRE-PRODUCTION RESERVES  
REFS: 1985 NORGES GEOLOGISKE UNDERS/BULL 403/ P 190

**POLAND-3**  
KONRAD

PRODUCTION (YEARLY) FROM 1957/1 TO 1957/12  
1139424 TONNES OF ORE  
CU: 0.61%  
NOTE: PRODUCTION FROM 3 MINES-KONRAD/LUBICHOW/LENA  
REFS: 1965 US BUREAU OF MINES/ INFO CIRCULAR 8225

RESERVES  
181400000 TONNES  
CU: 0.7%  
NOTE: ESTIMATED  
REFS: 1965 US BUREAU OF MINES/ INFO CIRCULAR 8225

**POLAND-5**  
LUBIN AREA

RESERVES 1981  
1361000000 TONNES  
CU: 1%  
NOTE: LUBIN AREA/RESERVES GRADING MORE THAN 1%  
REFS: 1981 US BUREAU OF MINES MINEALS YB/POLAND

RESERVES 1977  
1361000000 TONNES  
CU: 2%, AG: 90G/T  
NOTE: LUBIN AREA/ESTIMATED-GRADING 1.7 TO 2.3% CU  
REFS: 1977 ENGINEERING /MINING JOURNAL (FEBRUARY) P

RESERVES 1985  
2600000000 TONNES  
CU: 2%  
NOTE: PROVEN RECOVERABLE RESERVES (1985)/TO 1500M  
REFS: 1985 MINING MAGAZINE/AUGUST/P92-93

RESERVES  
1000000000 TONNES  
CU: 1.5%, AG: 30G/T  
NOTE: MINEABLE RES/CU 1.5-2.0 %/RECOVERABLE PB & ZN  
REFS: 1987 CAN JOURN EARTH SCIENCES/ VOL 24/ P 2017

**SWEDEN-1**  
AITIK

PRODUCTION AND RESERVES  
566000000 TONNES  
CU: 0.4%, AU: 0.3G/T, AG: 4.1G/T  
NOTE: TOTAL PRODUCTION AND RESERVES  
REFS: GRIP (1978)

PRODUCTION (SUMMARY)  
66000000 TONNES OF ORE  
CU: 0.4%, AU: 0.3G/T, AG: 5G/T, S: 1.5%  
NOTE: PRODUCTION FROM ORIGINAL PIT TO 67 M  
REFS: GRIP (1978)

RESERVES 1980  
500000000 TONNES  
CU: 0.4%, AU: 0.3G/T, AG: 4G/T  
NOTE: OPEN PIT/ESTIMATED RESERVES (CU OFF 0.17%)  
REFS: 1980 MINING MAGAZINE/NOVEMBER/P 405

RESERVES  
4000000 TONNES  
CU: 0.63%, AU: 0.1G/T, AG: 6G/T  
NOTE: RESERVES / LIIKAVAARA EAST 4KM EAST OF AITIK  
REFS: GRIP (1978)

**UNITED KINGDOM-1**  
ALDERLY EDGE

PRODUCTION (SUMMARY) FROM 1857 TO 1877  
152651.1 TONNES OF ORE  
CU: 2.1%  
NOTE: TOTAL OUTPUT FROM WEST/WOOD/ENGINE MINES  
REFS: 1925 DEWEY & EASTWOOD/ SPECIAL REPTS/ VOL XXX

**UNITED KINGDOM-9**  
MALLOW

RESERVES  
3600000 TONNES  
CU: 0.7%, AG: 27.4G/T

NOTE: ESTIMATED TONNAGE  
REFS: 1981 GEOLOGY OF IRELAND/ CHAPTER 18/ PG 281

**UNITED KINGDOM-10**  
BALLYVERGIN

RESERVES 1981  
136000 TONNES  
CU: 1%, AG: 17.1G/T  
NOTE: ESTIMATED TONNAGE  
REFS: 1981 GEOLOGY OF IRELAND/CHAPTER 18/ PG 281

**MIDDLE EAST**

**ISRAEL-2**  
TIMNA

RESERVES 1974  
18140000 TONNES  
CU: 1.6%  
NOTE: RESERVES AS OF 1974/MINING BEGAN IN 1958  
REFS: 1980 PROCEEDINGS OF 5TH IAGOD SYMPOSIUM/ P168

**JORDAN-2**  
FENAN

RESERVES 1984  
65000000 TONNES  
CU: 1.2%  
NOTE: APPROX RESERVES 1984 FOR FENAN & ABU KASHABIA  
REFS: 1984 US BUREAU OF MINES/ MINERALS YEARBOOK

**SAUDI ARABIA-6**  
ASH SHA IB

RESERVES  
1700000 TONNES  
CU: 0.3%, ZN: 6%, AG: 100G/T  
REFS: 1984 PRECAMBRIAN RESEARCH/VOL 25 NO 1-3/P 341

**SAUDI ARABIA-7**  
JABAL MUWAYGIRAH

RESERVES  
140000 TONNES  
ZN: 2.5%  
NOTE: GRADE OF ZN REPORTED AS 2-3% ZN/PLUS CU & PB  
REFS: 1984 PRECAMBRIAN RESEARCH/VOL 25 NO 1-3/P 341

## **NORTH AMERICA**

### **CANADA-4**

LOCHABER LAKE

#### **RESERVES**

2077453 TONNES

CU: 0.33%

NOTE: DRILL INDICATED ORE AS OF 1972

REFS: HOOPER 1972/GREAT HORN MINING SYNDICATE REPT

#### **PRODUCTION (SUMMARY)**

3120716 TONNES

CU: 0.33%

NOTE: ADDITIONAL INFERRED RESERVES AS OF 1972

REFS: HOOPER 1972/GREAT HORN MINING SYNDICATE REPT

### **CANADA-78**

CANFIELD DOME

#### **RESERVES**

300000 TONNES

CU: 1.2%

NOTE: PREL ESTIMATE BASED ON LIMITED DD/LOW AG ALSO

REFS: 1982 PERSONAL COMMUNICATION/ COMPANY OFFICIAL

### **CANADA-196**

DORCHESTER (COLONIAL COPPER MINE)

#### **PRODUCTION (SUMMARY) FROM 1915**

54 TONNES OF CONCENTRATE

CU: 25%, AG: 1302.85G/T

NOTE: 2234 TON MINED/400 TONS MILLED

REFS: 1950 REPT FROM NB MINES BRANCH

#### **PRODUCTION (SUMMARY) FROM 1916**

16556 TONNES OF ORE

CU: 3%

NOTE: 50 TONS MILLED PER DAY IN 1916

REFS: 1950 REPT FROM NB MINES BRANCH

#### **PRODUCTION (SUMMARY) FROM 1917**

54 TONNES OF CONCENTRATE

CU: 23.6%, AG: 188.57G/T

NOTE: AND 1.5 TONS OF 99% CU SHIPPED

REFS: 1950 REPT FROM NB MINES BRANCH

#### **RESERVES**

2267961 TONNES

CU: 2%

NOTE: CA-20 AREA/ 2-3 MT POSSIBLE

REFS: 1974 CANERPA-AMAX PROJECT REPT 536

### **CANADA-197**

GOSHEN (UPPER GOSHEN)

#### **RESERVES 1956**

22679 TONNES

CU: 2.25%

NOTE: DRILL INDICATED

REFS: 1956 OAKWOOD ML ANN REPT

#### **RESERVES 1982/1**

22679.62 TONNES

CU: 2.35%

NOTE: ESTIMATED

REFS: NEW BRUNSWICKS MINERAL INDUSTRY 1982/IC 83-2

### **CANADA-263**

COATES LAKE (REDSTONE/LITTLE DAL/PLATEAU LK)

#### **RESERVES**

33570000 TONNES

CU: 3.9%, AG: 11.31G/T

NOTE: B-1 SECTION/ DRILL INDICATED

REFS: MINING JOURNAL/JUNE 30 1978/P 495

#### **RESERVES**

33570000 TONNES

CU: 3.9%, AG: 11.31G/T

NOTE: DRILL INDICATED

REFS: 1979 NM JULY 26/ P 1 & 11

#### **RESERVES**

226800000 TONNES

CU: 3.9%, AG: 11.31G/T

NOTE: POTENTIAL RESOURCES ON LOWER BED

REFS: 1979 NORTHERN MINER AUGUST 16/ P A16

### **CANADA-271**

JAY (KEELE RIVER) (KEELE RIVER-BACKBONE PROJECTS)

#### **RESERVES**

1200000 TONNES

CU: 2.7%

NOTE: DRILL-INDICATED

REFS: 1982 ROBINSON VOL/GAC SPECIAL PAPER 25/P 730

### **CANADA-272**

JUNE CREEK (KEELE RIVER) (KEELE RIVER-BACKBONE PROJECTS)

#### **RESERVES**

250000 TONNES

CU: 3.4%

NOTE: DRILL-INDICATED

REFS: 1982 ROBINSON VOL/GAC SPECIAL PAPER 25/P 730

### **MEXICO-1**

BOLEO DISTRICT

#### **PRODUCTION (SUMMARY) FROM 1886 TO 1954**

453592.4 TONNES OF METAL

CU: 99.999%

NOTE: IN REF AS MORE THAN HALF A MILLION TONS OF CU

REFS: 1955 USGS PROFESSIONAL PAPER 273/P 122

#### **PRODUCTION (SUMMARY) FROM 1886 TO 1947/6**

13600000 TONNES OF METAL

CU: 4.81%, AU: 0.19G/T, AG: 9G/T, MN: 6.5%, ZN: 0.8%, PB: 0.06%

NOTE: MINOR METAL CONTENTS BASED ON LIMITED ANALYSE

REFS: 1955 USGS PROFESSIONAL PAPER 273, 134 PAGES

#### **RESERVES 1955**

4535924 TONNES

CU: 2%

NOTE: INFERRED ORE-WITH MIN THICKNESS 50 CM/MIN 2%

REFS: 1955 USGS PROFESSIONAL PAPER 273/P 122

### **MEXICO-2**



**LAS VIGAS FORMATION**

**RESERVES**

200000 TONNES

CU: 3%, PB: 0.005%, ZN: 0.03%, AU: 0.02G/T, AG: 9G/T

NOTE: POSSIBLE AND INFERRED RESERVES

**UNITED STATES-14**

PRESQUE ISLE (AMERICAN METALS)

**RESERVES**

90700000 TONNES

CU: 1.3%, AG: 5G/T

NOTE: DRILL-INDICATED RESOURCES

REFS: PERSONAL COMMUNICATION, 1986

**UNITED STATES-15**

KONA DOLOMITE (MARQUETTE AREA)

**RESERVES 1978**

907200000 TONNES

CU: 0.3%

NOTE: DRILL INDICATED/PRESENTLY UNECONOMIC

REFS: 1978 COPPER RESOURCES OF NORTHERN MICHIGAN

**RESERVES 1986**

100000000 TONNES

CU: 0.5%

NOTE: REASONABLY ASSURED RESOURCES/MINIMUM ESTIMATE

REFS: PERSONAL COMMUNICATION MARCH 1986

**UNITED STATES-18**

WHITE PINE

**PRODUCTION (SUMMARY) FROM 1953 TO 1982**

138000000 TONNES OF ORE

CU: 1.14%

NOTE: PROD OF MODERN OPERATION UNTIL CLOSURE 1982

REFS: RW SEASOR PERSONAL COMMUNICATION APRIL 1986

**RESERVES 1981**

550000000 TONNES

CU: 1.2%, AG: 40G/T

REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

**RESERVES 1952**

184200000 TONNES

CU: 1.1%, AG: 6.77G/T

NOTE: PRE-PRODUCTION (PRE-1953) RESERVES

REFS: RW SEASOR PERSONAL COMMUNICATION APRIL 1986

**UNITED STATES-26**

CRETA

**PRODUCTION (SUMMARY)**

1800000 TONNES OF ORE

CU: 2.3%, AG: 5.5G/T

NOTE: ESTIMATED TOTAL PRODUCTION 1965-1975

REFS: K.S. JOHNSON, PERSONAL COMMUNICATION, 1987

**UNITED STATES-29**

MANGUM (LOBARIS)

**RESERVES**

3600000 TONNES

CU: 1%

NOTE: ESTIMATED SUBECONOMIC RESOURCES

REFS: K.S. JOHNSON, PERSONAL COMMUNICATION, 1987

**UNITED STATES-46**

NACIMIENTO (EUREKA/NACIMIENTO)

**PRODUCTION (SUMMARY) FROM 1971 TO 1974**

2300000 TONNES OF ORE

CU: 0.66%

NOTE: NACIMIENTO/ TOTAL PROD-CUTOFF GRADE 0.3% CU

REFS: 1983 US BUREAU OF MINES/ INFO CIRCULAR 8961

**RESERVES**

8700000 TONNES

CU: 0.66%

NOTE: NACIMIENTO/ORIGINAL ESTIMATED RESERVES (1971)

REFS: 1983 US BUREAU OF MINES/ INFO CIRCULAR 8961

**UNITED STATES-89**

LISBON VALLEY

**PRODUCTION (SUMMARY)**

1000000 TONNES OF ORE

CU: 1%

NOTE: ESTIMATED PRODUCTION 1944-1974; AG RECOVERED

REFS: G.N. BREIT, PERSONAL COMMUNICATION, 1987

**RESERVES**

9070000 TONNES

CU: 0.73%

NOTE: ESTIMATED PRELIMINARY RESERVES

REFS: NORTHERN MINER, AUGUST 19, 1991, P.18

**UNITED STATES-99**

NATIONAL (REX-SNOWSTORM)

**PRODUCTION (SUMMARY)**

154221.4 TONNES OF ORE

CU: 0.77%

NOTE: PAST PRODUCTION

REFS: 1985 JOHN C BALLA/MANAGER ASARCO(NW EXPL DIV)

**UNITED STATES-101**

SNOWSTORM (COEUR D'ALENE REGION)

**PRODUCTION (SUMMARY)**

589670.1 TONNES OF ORE

CU: 4.2%

NOTE: PAST PRODUCTION

REFS: 1985 JOHN C BALLA/MANAGER/ASARCO (NW EXPL DIV)

**UNITED STATES-103**

ROCK LAKE (U.S. BORAX) (U.S. BORAX NOXON PROJECT)

**RESERVES 1984**

130400000 TONNES

CU: 0.68%

NOTE: GEOLOGICAL ORE RESERVES/12000FTX6000FTX27FT

REFS: 1984 SANDERS COUNTY LEDGER/ JUNE 21/ PG 6-7

**RESERVES 1984**

93290000 TONNES  
CU: 0.68%  
NOTE: MINEABLE RESERVE WITHIN GEOLOGICAL RESERVES  
REFS: 1984 SANDERS COUNTY LEDGER/ JUNE 21/ PG 6-7

RESERVES 1984  
130400000 TONNES  
CU: 0.68%  
NOTE: 12000FT LONG/6000FT WIDE/27FT THICK  
REFS: J BALLA PERSONAL COMMUNICATION SEPT 20/84

RESERVES  
26580000 TONNES  
CU: 0.49%  
NOTE: ROCK LAKE-UPPER ZONE/ DRILL INDICATED  
REFS: T HENDRICKSEN/ PERSONAL COMMUNICATION/ 1987

RESERVES  
37830000 TONNES  
CU: 0.93%  
NOTE: ROCK LAKE-LOWER ZONE/ DRILL INDICATED  
REFS: T HENDRICKSEN/ PERSONAL COMMUNICATION/ 1987

**UNITED STATES-105**  
SPAR LAKE

RESERVES 1981  
58000000 TONNES  
CU: 0.8%, AG: 58G/T  
NOTE: FOUND IN PROTEROZOIC INTRACRATONIC BASIN  
REFS: 1983 ANNALES-MUSEE ROYAL-BELGIQUE/GEOL/NO 89

**UNITED STATES-107**  
RUBY CREEK (BORNITE)

RESERVES 1985  
90720000 TONNES  
CU: 1.2%  
NOTE: MINIMUM ESTIMATED RESERVES  
REFS: 1985 CONFERENCE ABSTRACT VOL/STANFORD UNIV

RESERVES  
36290000 TONNES  
CU: 2%  
NOTE: ESTIMATED ALSO SOME ZN & POSSIBLY ECONOMIC CO  
REFS: 1984 US BUREAU OF MINES/MINERAL IND OF ALASKA

**UNITED STATES-110(A)**  
ROCK CREEK (ASARCO)

RESERVES  
9888314 TONNES  
CU: 0.85%  
NOTE: ROCK PEAK/DRILL INDICATED OVER WIDTH OF 29 FT  
REFS: T. HENDRICKSEN/ PERSONAL COMMUNICATION/ 1987

**UNITED STATES-110(C)**  
HORIZON BASIN (U.S. BORAX NOXON PROJECT)

RESERVES  
3810176 TONNES  
CU: 0.6%  
NOTE: HORIZON BASIN/DRILL INDICATED OVER 31FT WIDTH  
REFS: T. HENRICKSEN/ PERSONAL COMMUNICATION/ 1987

**SOUTH AMERICA**

**BOLIVIA-1**  
COROCORO

PRODUCTION (SUMMARY) FROM 1600 TO 1964  
317514.7 TONNES OF METAL  
CU: 99.99%  
NOTE: PRODUCTION TO END OF 1964  
REFS: 1965 US BUREAU OF MINES/ INFO CIRCULAR 8225

RESERVES 1974  
840000 TONNES  
CU: 3.75%  
NOTE: APPROX (1974)  
REFS: 1974 METALS SOURCEBOOK/ JANUARY 14/ P 3

RESERVES 1957  
680388.6 TONNES  
CU: 2.6%  
NOTE: ESTIMATED IN 1957  
REFS: 1965 US BUREAU OF MINES/ INFO CIRCULAR 8225

**BOLIVIA-4**  
CHACARILLA

RESERVES  
816466.3 TONNES  
CU: 4%  
NOTE: ESTIMATED (1965)  
REFS: 1965 US BUREAU OF MINES/ INFO CIRCULAR 8225

**BRAZIL-2**  
BAHIA

RESERVES  
105000000 TONNES  
CU: 0.75%  
NOTE: ESTIMATED/ASSESSMENT INCOMPLETE AS OF 1985  
REFS: 1985 ENGINEERING & MINING JOURNAL/NOV/P 44

**BRAZIL-6**  
CAMAQUA

RESERVES  
31000000 TONNES  
CU: 1.06%  
NOTE: ESTIMATED (1987)  
REFS: OS PRINCIPAIS DEPOSITOS MINERAIS DO BRASIL/V3

**BRAZIL-7**  
PEDRA VERDE

RESERVES  
11500000 TONNES  
CU: 1%, AG: 10G/T  
NOTE: ESTIMATED (1987)  
REFS: OS PRINCIPAIS DEPOSITOS MINERAIS DO BRASIL/V3

**CHILE-3**  
SAN BARTOLO

PRODUCTION AND RESERVES  
1500000 TONNES

CU: 2%  
NOTE: COMBINED FIGURE  
REFS: CAMUS (1986)

**CHILE-4**  
JARDIN

RESERVES  
2000000 TONNES  
CU: 1.75%, AG: 140G/T  
NOTE: MAXIMUM ESTIMATE OF ORIGINAL RESERVES  
REFS: 1974 4TH IAGOD SYMPOSIUM/VARNA/VOL 1/ P 258

RESERVES 1974  
1500000 TONNES  
CU: 2%, AG: 100G/T, AS: 1%  
NOTE: ESTIMATE  
REFS: ABST/CONF ON EXP MIN PET & ECON GEOL/FEB 1974



**SEDIMENT-HOSTED STRATIFORM  
COPPER DEPOSITS AND OCCURRENCES**

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# **SEDIMENT-HOSTED STRATIFORM COPPER DEPOSITS AND OCCURRENCES**

## **APPENDICES**

**Index of Deposits and Occurrences Listed Alphabetically by Name**

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# Index of Deposits and Occurrences Listed Alphabetically by Name

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AARD COPPER INC	NORTH AMERICA	UNITED STATES-35
ABIQUIU	NORTH AMERICA	UNITED STATES-43
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ADAK	NORTH AMERICA	UNITED STATES-71
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ADELINE LAKE EAST-SHOWING NO 7	NORTH AMERICA	CANADA-35
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AGADEZ	AFRICA	NIGERIA-1
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AGOUJGAL	AFRICA	MOROCCO-5
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AITIK	EUROPE	SWEDEN-1
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BANCAIROUN	EUROPE	FRANCE-8
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BANDALAMOTTU/DHUKONDA/NALLAKON	ASIA	INDIA-1(A)
BARAUD	ASIA	INDIA-5
BARBECUE RIVER	NORTH AMERICA	JAMAICA-2
BARNABY RIDGE	NORTH AMERICA	CANADA-235
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BRIAN PROSPECT (B)	NORTH AMERICA	CANADA-42
BRIAN PROSPECT (C)	NORTH AMERICA	CANADA-43
BRIAN PROSPECT (D)	NORTH AMERICA	CANADA-44
BRIAN PROSPECT (E)	NORTH AMERICA	CANADA-45
BRIERLY BROOK-2	NORTH AMERICA	CANADA-75
BRODEUR PENINSULA	NORTH AMERICA	CANADA-308
BRONZE LAKE	NORTH AMERICA	UNITED STATES-63
BROOKFIELD COPPER SHOWING	NORTH AMERICA	CANADA-76
BROOME	NORTH AMERICA	UNITED STATES-44
BRUCKENAU	EUROPE	GERMANY-5
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BULUBA-UPPER OREBODY	AFRICA	ZAMBIA-14
BURGSINN	EUROPE	GERMANY-4
BURPALA	ASIA	RUSSIA-38
BUSHMAN GROUP	AFRICA	BOTSWANA-1
BUTUN SUITE	ASIA	RUSSIA-36
BUZZARD PEAK	NORTH AMERICA	UNITED STATES-33
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BYARS	NORTH AMERICA	UNITED STATES-25
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COPPER KING	NORTH AMERICA	UNITED STATES-74
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COPPER QUEEN	NORTH AMERICA	UNITED STATES-34
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COROCORO	SOUTH AMERICA	BOLIVIA-1(A)
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DISUEI-2	ASIA	CHINA-31
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DONA BASILIA	SOUTH AMERICA	PERU-3
DONBASS	EUROPE	UKRAINE-3
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DUNMORE BROOK	NORTH AMERICA	CANADA-156
DUNMORE BROOK	NORTH AMERICA	CANADA-157
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ELIZABETH LAKE	NORTH AMERICA	CANADA-226
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ELLIS PROSPECT	NORTH AMERICA	CANADA-1
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FINLAY BEACH	NORTH AMERICA	CANADA-101
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FISCHELLS BROOK	NORTH AMERICA	CANADA-48
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GE YIZHA	ASIA	CHINA-3
GEELKOP DOME	AFRICA	NAMIBIA-5
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GEYIZHA	ASIA	CHINA-3
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GIPPSLAND	AUSTRALIA	AUSTRALIA-21
GISSAR RANGE	ASIA	TAJIKISTAN-1
GLEN MORRISON (GM-1)	NORTH AMERICA	CANADA-109
GLEN RIDGE	NORTH AMERICA	UNITED STATES-3
GLEN ROAD	NORTH AMERICA	CANADA-33
GOLDEN EAGLE/ AMMON	NORTH AMERICA	UNITED STATES-47
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HOLMES BROOK	NORTH AMERICA	CANADA-175
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HOUEI PHAI	ASIA	LAOS-1
HUBAC DE JOURDAN EST	EUROPE	FRANCE-9
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HUILI	ASIA	CHINA-18
HUNTERS POINT	NORTH AMERICA	UNITED STATES-65
HUTCH EAST	NORTH AMERICA	CANADA-269
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ITAUZ	ASIA	KAZAKHSTAN-24
ITAWA	AFRICA	ZAMBIA-38
IZLUCHINSK	ASIA	RUSSIA-48
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JABAL MUWAYGIRAH	MIDDLE EAST	SAUDI ARABIA-7
JABAL SHARBON	MIDDLE EAST	SAUDI ARABIA-10
JACKPOT	NORTH AMERICA	UNITED STATES-77
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JANICE LAKE	NORTH AMERICA	CANADA-227
JARDIN	SOUTH AMERICA	CHILE-4
JASPER	NORTH AMERICA	UNITED STATES-96
JASPER VALLEY	NORTH AMERICA	CANADA-270
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JESKESGAN	ASIA	KAZAKHSTAN-21
JHAKKAR KOT	ASIA	PAKISTAN-1
JIUQUWAN	ASIA	CHINA-14
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KAKANDA	AFRICA	ZAIRE-11
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KALENGWA	AFRICA	ZAMBIA-1
KALONGWE	AFRICA	ZAIRE-1
KALULUSHI EAST	AFRICA	ZAMBIA-21
KALUMBILA	AFRICA	ZAMBIA-39
KAMATANDA	AFRICA	ZAIRE-15
KAMBOVE AND KAMBOVE WEST	AFRICA	ZAIRE-14
KAMFUNDWA	AFRICA	ZAIRE-12
KAMO RIVER	ASIA	RUSSIA-29
KAMOTO	AFRICA	ZAIRE-3
KAN-TASEYEVA BASIN	ASIA	RUSSIA-24
KANDRYKUL	ASIA	RUSSIA-11
KANSANSHI	AFRICA	ZAMBIA-20
KANYAKA	AUSTRALIA	AUSTRALIA-15
KAP BIOT-CARLSBERG FJORD	EUROPE	KALAALLIT NUNAAT-2
KARA BALTY	ASIA	KYRGYZSTAN-3
KARASHOSHAK	ASIA	KAZAKHSTAN-27
KARGALA	ASIA	RUSSIA-3
KASARIA	AFRICA	ZAMBIA-35
KASSEN	EUROPE	KALAALLIT NUNAAT-13
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KEELE RIVER-BACKBONE PROJECTS	NORTH AMERICA	CANADA-269
KEELE RIVER-BACKBONE PROJECTS	NORTH AMERICA	CANADA-271
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KENGIR	ASIA	KAZAKHSTAN-29
KENT PENINSULA-1	NORTH AMERICA	CANADA-273
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KHOZRETISHI RANGE	ASIA	TAJIKISTAN-2
KHUNDARA	ASIA	AFGHANISTAN-2
KHURDKABUL	ASIA	AFGHANISTAN-6
KILEMBE	AFRICA	UGANDA-1
KIMBWE	AFRICA	ZAIRE-18
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KIPSHAKPAY	ASIA	KAZAKHSTAN-26
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KIRKWOOD	NORTH AMERICA	CANADA-122
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KONA DOLOMITE	NORTH AMERICA	UNITED STATES-15
KONKOLA (BANCROFT)	AFRICA	ZAMBIA-2
KONKOLA DIVISION	AFRICA	ZAMBIA-2
KONKOLA DIVISION	AFRICA	ZAMBIA-3
KONKOLA DIVISION	AFRICA	ZAMBIA-4
KONRAD	EUROPE	POLAND-3
KOPKAZGEN	ASIA	KAZAKHSTAN-13
KORBACH	EUROPE	GERMANY-13
KOSTALOV	EUROPE	CZECH REPUBLIC-3
KRASNOYE	ASIA	RUSSIA-41
KUANG-TUNG	ASIA	CHINA-2
KUCHA (KUQA)	ASIA	CHINA-32
KUNGITANG	ASIA	CHINA-27
KURPANDZHA	ASIA	RUSSIA-53
KYZYL-BEL	ASIA	KYRGYZSTAN-1
KYZYLOBA	ASIA	KAZAKHSTAN-10
LA LOCHE	NORTH AMERICA	CANADA-286
LA RIOLLE	EUROPE	FRANCE-5
LAC GUILLAUME-DELISLE (1)	NORTH AMERICA	CANADA-310
LAC GUILLAUME-DELISLE (2)	NORTH AMERICA	CANADA-311
LAC GUILLAUME-DELISLE (3)	NORTH AMERICA	CANADA-312
LAC GUILLAUME-DELISLE (4)	NORTH AMERICA	CANADA-313
LADDERBJERG (GIESECKE BJERGE)	EUROPE	KALAALLIT NUNAAT-9
LAKE AYAKKUM	ASIA	CHINA-34
LAKE NGAMI	AFRICA	BOTSWANA-7
LAKE NGAMI AREA	AFRICA	BOTSWANA-2
LAKEVALE	NORTH AMERICA	CANADA-124
LAMOTTE SANDSTONE	NORTH AMERICA	UNITED STATES-13
LAMPANG	ASIA	THAILAND-3
LAOQINGSHAN	ASIA	CHINA-6
LAOQLIN SHAN	ASIA	CHINA-6
LARKFIELD (GOUROCK)	EUROPE	UNITED KINGDOM-17
LAS VIGAS FORMATION	NORTH AMERICA	MEXICO-2
LAWN HILL AREA	AUSTRALIA	AUSTRALIA-29
LE BIOT	EUROPE	FRANCE-3
LE LUC	EUROPE	FRANCE-13
LEE UTO	NORTH AMERICA	UNITED STATES-28
LEHRBERG	EUROPE	GERMANY-24
LEITMAR	EUROPE	GERMANY-16
LENA	EUROPE	POLAND-11
LENA ZONE	ASIA	RUSSIA-35
LEWIS LAKE	NORTH AMERICA	CANADA-220
LEYSIN	EUROPE	SWITZERLAND-1
LIMEROCK	NORTH AMERICA	CANADA-125
LIOUC	EUROPE	FRANCE-11
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LISBON VALLEY	NORTH AMERICA	UNITED STATES-89
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LOAF MOUNTAIN	NORTH AMERICA	CANADA-240
LOBARIS	NORTH AMERICA	UNITED STATES-29
LOCHABER LAKE	NORTH AMERICA	CANADA-4
LODEVE	EUROPE	FRANCE-1
LOGAN POINT	NORTH AMERICA	CANADA-81
LOGOLO (MATSITAMA)	AFRICA	BOTSWANA-3
LONE EAGLE	NORTH AMERICA	UNITED STATES-47
LOWER NORTH GRANT	NORTH AMERICA	CANADA-127
LOWER WAUGH RIVER	NORTH AMERICA	CANADA-135
LOWER WENTWORTH	NORTH AMERICA	CANADA-102
LUANO	AFRICA	ZAMBIA-6
LUANSHYA (ROAN ANTELOPE)	AFRICA	ZAMBIA-16
LUANSHYA AREA	AFRICA	ZAMBIA-14
LUANSOBE	AFRICA	ZAMBIA-36
LUBEMBE	AFRICA	ZAMBIA-34
LUBICHOW	EUROPE	POLAND-1
LUBIN	EUROPE	POLAND-5(A)
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LUMWANA	AFRICA	ZAMBIA-22(A)
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MIDWAY COPPER BELT-PIT 2	NORTH AMERICA	CANADA-202
MIDWAY COPPER BELT-PIT 3	NORTH AMERICA	CANADA-203
MIDWAY COPPER BELT-PIT 5	NORTH AMERICA	CANADA-204
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NATIONAL	NORTH AMERICA	UNITED STATES-99
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NORTH KOOTENAY PASS AREA-4	NORTH AMERICA	CANADA-246
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NOWY KOSCIOL	EUROPE	POLAND-10
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PALMER MINE	NORTH AMERICA	CANADA-155
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PARACATU	SOUTH AMERICA	BRAZIL-4
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PEDRA VERDE	SOUTH AMERICA	BRAZIL-7
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PERM-VYATKA	ASIA	RUSSIA-12
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PINTADA	NORTH AMERICA	UNITED STATES-52
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POPE-SHENON	NORTH AMERICA	UNITED STATES-100
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PRATU TEEMA	ASIA	THAILAND-1
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RUNNYMEDE	NORTH AMERICA	UNITED STATES-21
RUSA	SOUTH AMERICA	CHILE-6
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S	AFRICA	NAMIBIA-2
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SCHUYLER	NORTH AMERICA	UNITED STATES-5
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SH GROUP-4	NORTH AMERICA	CANADA-280
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SUESS LAND-1	EUROPE	KALAALLIT NUNAAT-17
SUESS LAND-2	EUROPE	KALAALLIT NUNAAT-18
SUKHARIKHA	ASIA	RUSSIA-49
SUMNER COUNTY OCCURRENCES	NORTH AMERICA	UNITED STATES-23
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TAMARIFT	AFRICA	MOROCCO-3
TANGTANG	ASIA	CHINA-25
TANSRIFT (?)	AFRICA	MOROCCO-3
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TATAMAGOUCHE	NORTH AMERICA	CANADA-104
TATAMAGOUCHE	NORTH AMERICA	CANADA-105
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TILOULA	AFRICA	ALGERIA-2
TIMNA	MIDDLE EAST	ISRAEL-2
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