U.S. BUREAU OF MINES SPECIAL PUBLICATION 12-95

Mineral Availability System/ Minerals Industry Location System CD-ROM MAS/MILS CD-ROM

DATA DICTIONARY

The information on this CD-ROM was extracted from the Minerals Availability System/Mineral Industry Location System (MAS/MILS) database. MAS/MILS was developed to do systematic assessment of the future supply of strategic and critical minerals and to record mineral sites identified in mineral land assessment campaigns for the United States Government. The MAS/MILS database has two basic components - MAS and MILS.

The MAS part is focused on 34 mineral commodities. It has extensive data on about 5,000 significant mineral deposits, mining operations and processing plants worldwide. This detailed information was developed to classify identified domestic and foreign mineral resources according to their respective extraction technologies, economics, and availability. Much of this information specifies engineering cost elements and estimates the economic viability of individual mineral operations. These proprietary fields are not available to the general public.

The MILS part covers more commodities and has records for over 221,000 mineral occurrences, deposits, mines and processing plants. Ninety percent of these are in the United States. This more general information is used to support government agencies which have land-use planning responsibilities. These agencies look to the Bureau of Mines both for mineral resource assessments and for help identifying and remediating inactive and abandoned mine hazards. The mineral industry has obtained this data to assist in exploration activities.

The information provided on this CD-ROM is targeted at users interested in a geographically referenced list of mineral sites. The data fields included enable searches of selected, non-proprietary information from the MAS/MILS database by such criteria as political boundary, geographical coordinates, or particular commodity associated with an occurrence. Data for a total of 221,151 separate locations are contained on this CD-ROM. Five browse screens - general identification, location, commodity, cross reference, and land status - display related collections of some fields. Limitations in the extraction software has restricted the number of fields that could be handled in an efficient manner. The 78 fields contained on this CD-ROM originated from four ORACLE Tables in the MAS/MILS database. ORACLE, the host software used for the MAS/MILS database, defines a Table as a set of information which is connected to other sets of information in a relational format. These Four Tables are the Mineral Industry Location System (MILS) Table, the Commodity Table, The Alternate Name Table, and the Bibliography Table.

On the CD-ROM, these fields (except the Bibliography File) were

combined into one data record structure which corresponds to each entry on the CD-ROM - MAS/MILS database. A short description of the general structure of the data fields as well as a dictionary of the valid data options for each field follows. The field definitions are the same ones relied on by the numerous evaluators who have developed the MAS/MILS data over the last 19 years.

The information contained in the associated Bibliography has been extracted into a separate file. Bibliographic information for a particular deposit can be accessed through its corresponding 10-digit sequence number.

GENERAL STRUCTURE

The following is the general structure of the MAS/MILS CD-ROM data base.

Table Field NAME/Item Description	Size
STAte name (NATION - FMAS users only)	20 char.
COUnty name (PROVINCE - FMAS users only)	20 char.
SEQuence number	10 char.
FOD Foreign Or Domestic	1 char.
NAMe of deposit or operation	35 char.
TYPe of operation	12 char.
CURrent status	21 char.
LATitude (Latitude Degree Decimal Value)	10 digit
CHARLAT (Latitude Character DDMMSS Value)	7 char.
LONgitude (Longitude Degree Decimal Value)	11 digit
CHARLON (Longitude Character DDDMMSS Value)	8 char.
POR Point Of Reference	8 char.
POP Precision Of Point	5 char.
ELEvation (in meters)	6 char.
ELP ELevation Precision	4 char.
DATum of elevation	1 char.
YFC Year Field Checked YYYY (SITE)	4 char.
ZONe	2 char.
HEMisphere	1 char.
NORthing	7 char.
EASting	6 char.
QUA250 QUAdrangle 1:250,000 scale	18 char.
MAP name	17 char.
SCAle	7 char.
FEDLAND FEDeral LAND status	10 char.
FEDSCA FEDeral SCAle	7 char
DOMain	14 char.
RIVer basin name	24 char.
RBC River Basin Code	4 char.
HUC Hydrologic Unit Code	8 char.
HOL1 1st type of mineral holding	13 char.
HOL2 2nd type of mineral holding	13 char.
HOL3 3rd type of mineral holding	13 char.
MID MSHA Identification Number	8 char.
ISMI ISMI Identification Number	7 char.
GSC Geologic Survey Computer system	7 char.
TOE Type Of Evaluation	1 char.
YOI Year Of Initial file entry YYYY	4 char.

PLT PLant Type	6 char.
PID Plant IDentifier	6 char.
MERidian	14 char.
TWN township	5 char.
RNG range	5 char.
SECtion	2 char.
SUBdivision	6 char.
SURvey status	6 char.
YOD Year Of Discovery YYYY	4 char.
YIP Year of Initial Production YYYY	4 char.
YLP Year of Last Production YYYY	4 char.
MDN Mining District Name	15 char.
COMPANY	40 char.
MINEMET Predominant Mining Method	25 char.
MILLMET Predominant Milling Method	12 char.
PMPMET Predominant Post Mill Processing	35 char.
MLA Mineral Land Assessment study area	1 char.
DLM Date Last Modification	6 char.
COM1 Commodity #1	14 char.
MOC1 Modifier for Commodity #1	22 char.
MAR1 Marketability for Commodity #1	1 char.
COM2 Commodity #2	14 char.
MOC2 Modifier for Commodity #2	22 char.
MAR2 Marketability for Commodity #2	1 char.
COM3 Commodity #3	14 char.
MOC3 Modifier for Commodity #3	22 char.
MAR3 Marketability for Commodity #3	1 char.
COM4 Commodity #4	14 char.
MOC4 Modifier for Commodity #4	22 char.
MAR4 Marketability for Commodity #4	1 char.
COM5 Commodity #5	14 char.
MOC5 Modifier for Commodity #5	22 char.
MAR5 Marketability for Commodity #5	1 char.
SIC Standard Industry Code	4 char.
NAM1 Alternate Property Name #1	35 char.
NAM2 Alternate Property Name #2	35 char.
NAM3 Alternate Property Name #3	35 char.
NAM4 Alternate Property Name #4	35 char.
NAM5 Alternate Property Name #5	35 char.
NAM6 Alternate Property Name #6	35 char.

FIELD DEFINITIONS

STAte/nation name (20 characters) corresponds to positions 1-3 of the SEQuence number (see appendix A).

COUnty/province name (20 characters) corresponds to positions 4-6 of the SEQuence number.

SEQuence number is the unique 10-digit number which references records of information pertaining to a mineral property in the following manner:

- The three-digit State/nation code (or ocean code) from appendix A is assigned to field positions 1-3.
- The three-digit county/province code is assigned to field positions 4-6. For the United States, this is the county code from the Department of Commerce (see, appendix B). For foreign

deposits, this is the province or political subdivision code as defined by the Minerals Availability Field Office. For ocean mining, the code is the marsden square, a unique three digit number from 001 to 999 which represents an area on the earth's surface of 10 degrees latitude by 10 degrees longitude.

- The four digits in field positions 7-10 designate a deposit reference number assigned by the evaluator to insure uniqueness of each deposit within State and county (or within nation and province).

FOD indicates whether this is a Domestic deposit (a State or territory of the United States) or a Foreign deposit by either a D or F respectively.

NAMe of the deposit or operation (35 characters) is the primary or most common name.

TYPe of operation (12 characters) refers to the existing/proposed/past type of operation at this site from the table below. It identifies the existing operation when CURrent status equals 'PRODUCER, PAST PRODUCER, TEMP SHUTDOWN or DEVEL DEPOSIT'. It identifies the proposed operation when CURrent status equals 'EXP PROSPECT or RAW PROSPECT'. All processing plants will be coded 'PROC PLANT' here and further defined with the PLant Type (PLT) and Plant IDentifier (PID) fields.

Entry	Description
UNKNOWN	Unknown or undetermined by evaluator
SURFACE	Surface operation
UNDERGROUND	Underground operation
SURF-UNDERG	Surface-underground operation
OFFSHORE	Any lake/ocean mining operation
WELL	Any well operation
PROC PLANT	Processing plant
LEACH	Leach operation
BRINE OP	Brine recovery operation
GEOTHERMAL	Geothermal operation

CURrent status indicates the operating status of the sites at time of last modification. The description of this 21 character field is defined in the following table:

Entry	Description
UNKNOWN	Unknown or undetermined resource.
PRODUCER	Currently operating mineral property.
PAST PRODUCER	Previously operating mineral property, where the equipment or structures have been removed or abandoned.
DEVEL DEPOSIT	Resource defined, development initiated.
EXP PROSPECT	Resource defined by exploration methods.
RAW PROSPECT	Resource not defined by exploration methods.

INTERMITTENT_PRODUCER	Operates only part of the year. Production interrupted due to seasonal, stockpiling, or other physical restrictions on a regular basis.
TEMP SHUTDOWN	Temporary halt in mineral production, where the property is under care and maintenance status or this status is designated by the current owner and/or operator.
RECLAIMED	Location has been reclaimed.
MINERAL LOCATION	Mineral Location
OTHER	Status other than one of the above.

LATitude is a numeric field 10 characters wide specifying the latitude in standard degree decimal format. A negative symbol preceeding the numeric value indicates the property is in the Southern Hemishere.

CHARLAT is a seven-character latitude field consisting of four subfields:

a. Direction (either N or S) is entered in field position 1.
b. Field positions 2 and 3 are degrees (maximum value is 90).
c. Field positions 4 and 5 are minutes (maximum value is 59).
d. Field positions 6 and 7 are seconds (maximum value is 59).

LONgitude is a numeric field 11 characters wide specifying the longitude in standard degree decimal format. A negative symbol preceeding the numeric valued indicates the property is in the Western Hemisphere.

CHARLON is an eight-character longitude field consisting of four subfields:

a. Direction (either E or W) is entered in field position 1.
b. Field positions 2-4 are degrees (maximum value is 180).
c. Field positions 5 and 6 are minutes (maximum value is 59).
d. Field positions 7 and 8 are seconds (maximum value is 59).

POR (8 characters), Point Of Reference, indicates the physical determination point for the elevation, latitude and longitude data, as selected from the table that follows.

Entry	Description
MAIN ENT	Main Entry to Mine (i.e. Shaft)
TRENCH	Exploration Trench
ORE BODY	Definable Ore Body Structure (out-drop)
CLAIM	Claim
PLANT	Location of Processing Plant
TOWN	Nearest Town
PIT	Discovery Pit

POP Precision Of Point (5 characters right-justified) gives the precision or maximum deviation from exact POR in meters (e.g. 10, 500, 5000). POP is a required if POR is entered. An entry of

99999 indicates that the precision is over 10000 meters.

ELEvation (6 characters including optional sign) of the Point of Reference (POR) in meters. Locations with an elevation below the reference datum must have a minus (-) sign immediately preceding the numeric value (e.g., a location with an elevation 1800 meters below the datum would be entered as " -1800").

ELP ELevation Precision (4 characters - right-justified) gives the precision OF the elevation measurement in meters. (e.g. 10, 100, 500). An entry of 9999 indicates that the precision is over 500 meters.

DATum of elevation provides for elevations to be expressed above or below either sea level or a local datum. The recommended reference is sea level whenever possible. Input the appropriate letter from the list below:

Entry	Description
S	Sea level
L	Local datum
D	Depth of water

YFC Year Field Checked is a four-character year of an on-site evaluation check made by either personnel or contractors of the Minerals Availability Program.

The following four items (ZON, HEM, NOR, and EAS) contain the Universal Transverse Mercator (UTM - an international grid coordinate system) location of this mineral property.

ZONe is a 2-character field for the UTM ZONe number (01 through 60).

HEMisphere is the UTM HEMisphere (either N or S).

NORthing (7 characters) In the Northern Hemisphere, this represents the distance in meters NORth of the equator; the equator is 0 meters with numbers increasing northward. In the Southern Hemisphere, it represents the distance in meters NORth from about 80 degrees south latitude; the equator is 10 million meters, with numbers decreasing southward.

EASting (6 characters) represents the distance in meters from a central meridian in each UTM zone. The central meridian is given an arbitrary value of 500,000 meters. Measurements increase to the east and decrease to the west of the central meridian and are terminated by the respective east and west boundaries of each of the 60 zones.

QUA250 QUAdrangle is an 18-character data field which, for domestic deposits, identifies the U.S. Geological Survey 1:250,000 series map on which the deposit can be located. These codes and their 18-character entries are shown in appendix B-QUA250. This field is valid for domestic deposits and is not used in foreign or ocean deposits.

MAP name (17 characters) of the largest-scale map available for the area of the deposit. If the name is larger than 17 characters it has been shortened to a recognizable name.

SCAle (7 characters) indicates the SCAle of the map identified field above:

Entry	Description
7.5 MIN	7.5 minutes
15 MIN	15 minutes
30 MIN	30 minutes
1:250K	1:250,000
1:500K	1:500,000
1:1 MIL	1:1,000,000

FEDLAND (10 characters) identifies the FEDeral LAND status of this location. The value for this field was generated utilizing GIS technology with the LATitude (LAT) and LONgitude (LON) of this location. Valid entries for this field are:

Entry	Definition
BIA	Indian Reservation lands
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
DOD	Department of Defense lands
FS	Forest Service
FWS	Fish and Wildlife lands
NPS	National Parks lands
TVA	Tennessee Valley Authority

FEDSCA (7 characters) indicates the SCAle of the coverage used to determine the FEDLAND entry. Valid entries are:

Entry	Description
7.5 MIN	7.5 minutes
15 MIN	15 minutes
30 MIN	30 minutes
1:100K	1:100,000
1:250K	1:250,000
1:500K	1:500,000
1:1 MIL	1:1,000,000
1:2 MIL	1:2,000,000

DOMain (14 characters) describes the type of public or private land holding of the deposit area:

Code	Entry	Code	Entry	Code	Entry
00	UNKNOWN	33	STATE OFFSHORE	47	INDIAN RES
05	MIXED	40	FEDERAL	48	NAT OFFSHORE
10	PRIVATE	41	NAT FOREST	49	BLM ADMIN
15	MUNICIPALITY	42	NAT RECREATION	50	MILITARY RES
20	COUNTY	43	NAT WILDERNESS	61	FORGN OFFSHORE

30	STATE	44	NAT PRIMITIVE	71	INTERNAT WATER
31	STATE FOREST	45	NAT PARK	72	UN ADMIN
32	STATE PARK	46	NAT MONUMENT		

RBC River Basin Code (4 characters) is defined in the U.S. Geological Survey Office of Water Data Coordination publication, Catalog of Information on Water Data-Maps Showing Location of Water Quality Stations. These maps show major drainage area boundaries coded from 1 through 97; each of these major drainage areas is further subdivided into minor areas which are assigned letter codes (e.g., 1A, 4B, 23C, 26AA, etc.). The data base entry consists of two numeric digits (leading zeros are required) followed by either one or two alphabetic characters (e.g., "01A", "04B", "23C", "26AA", etc.).

RIVer (24 characters) is optional. If left blank it is a computer-generated data field that will contain the name of the RIVer basin indicated by the River Basin Code.

HUC Hydrologic Unit Code is an 8-character replacement for the RBC, currently being used by the Water Resources Division of the U.S. Geological Survey. This code more precisely pinpoints the water drainage area and it is recommended that it be used as an addition to the data provided by the River Basin Code. The code for a particular deposit can be obtained from a Hydrologic Unit Map (1974+ - date varies) for a given State. These maps have been published by the Water Resources Division of the U.S. Geological Survey and are available from the district office responsible for the State(s) concerned.

HOL# designates a 13-character data item for entry of mineral and access rights (holdings) available for the resources contained on this property. HOL1 is the primary type of mineral holding from the table below. HOL2 and HOL3 are the second and third type, respectively, of mineral holding from the table below.

Entry	Entry
UNKNOWN	PRIVATE LEASE
LOCATED CLAIM	FEE OWNERSHIP
PATENTED	MINERALS ONLY
FEDERAL LEASE	OTHER
STATE LEASE	

MID Mine Safety and Health Administration (MSHA) Identification Number which corresponds to this particular property. Most often an operating or temporarily closed facility.

ISMI The International Strategic Minerals Inventory identification number which corresponds to this particular property. Limited to those commodities which were studied by this international cooperation.

GSC Geological Survey's Computerized seven character deposit number for their Mineral Resource Data System (MRDS) data base entry that relates to this MAS deposit entry.

TOE Type Of Evaluation is a single-character representing the type of deposit information currently on the data base. Valid entries are:

Entry	Definition
A	MILS default from ADIT database.
M	Location information resulting from general sources; data may not be confirmed.
L	Location information with validity confirmed through investigation by an evaluator.
R	Resource data present, in addition to MILS information.
C	Complete deposit description, often indicates thorough MAS evaluation.

YOI Year Of Initial data entry contains the four-digit year of initial entry of this property into the MAS data base. The contents of this field should not be changed when data is entered for update purposes. System will default to current year for new entries.

PLT and PID are available when an evaluator wishes to identify a processing plant (mill, smelter, refiner, etc.) and show its location, owners, feed, etc. The mill would be assigned a unique sequence number and TYPe of operation would be entered as code 06 "PROC PLANT". The following two data fields further identify the plant.

PLT (6 characters) PLant Type identifies the primary type of processing plant, from the following table.

Entry	Description
BENEF	beneficiation (mill)
LEACH	leach
AGGLOM	agglomeration
DRI	Direct Reduced Iron plant
PELLET	pellet plant
SINTER	sinter plant
SMELTR	smelter
SYNRTL	synthetic rutile
PIG	pigment plant
METAL	metal plant
REFINR	refiner
SMLREF	smelter/refiner
ACID	acid plant
MANUF	manufacturing plant

PID (6 characters) Plant IDentifier is a more detailed subdivision of plant type listing the primary processing method used, from the table on the next page.

Entry	Description
DRY	dry

WASH	wash
CRUSH	crush
GRAV	gravity
FLOAT	flotation
MAG	magnetic
ESTAT	electrostatic
E-M	electrostatic-magnetic
TI-CL	TIO2 pigment-chloride
TI-S	TIO2 pigment-sulfide
TI	TI metal
PPT	precipitation
SX-EW	solvent extraction-electrowin
IX-EW	ion exchange-electrowin
SINTER	sinter
PELLET	pellet
NODULE	nodule
COMPCT	compact
BRIQUT	briquette
S-PYRO	smelter-pyrometallurgy
REDUCT	reduction
R-PYRO	refiner-pyrometallurgy
HYDRO	hydromet
ELECT	electrowinning
DISTLL	distillation
CRYSTL	crystallization
CAL-DB	calcination/dead burn
BAYER	Bayer
HARRIS	Harris
PARKES	Parkes
FERRO	ferro alloy plant
FIBRE	fibre plant (e.g. asbestos plant)

MER, TWN, RNG, SEC, SUB and SUR contain the deposit's Public Land Survey location information.

MERidian (14 characters) contains the name of the Principal Meridian from the following table:

Code	Entry	Code	Entry	Code	Entry
01	1ST PRINCIPAL	17	INDIAN	33	WILLAMETTE
02	2ND PRINCIPAL	18	LOUISIANA	34	WIND RIVER
03	3RD PRINCIPAL	19	MICHIGAN	35	OHIO
04	4TH PRINCIPAL	20	MONTANA PRINC	36	GT MIAMI RIVER
05	5TH PRINCIPAL	21	MOUNT DIABLO	37	MUSKINGUM RIV
06	6TH PRINCIPAL	22	NAVAJO	38	OHIO RIVER
07	BLACK HILLS	23	NEW MEXICO	39	1ST SCIOTO RIV
08	BOISE	24	ST HELENA	40	2ND SCIOTO RIV
09	CHICKASAW	25	ST STEPHENS	41	3RD SCIOTO RIV
10	CHOCTAW	26	SALT LAKE	42	ELLICOTTS LINE
11	CIMARRON	27	SAN BERNARDINO	43	12 MILE SQUARE
12	COPPER RIVER	28	SEWARD	44	KATEEL RIVER
13	FAIRBANKS	29	TALLAHASSEE	45	UMIAT
14	GILA & SALT R	30	UINTAH SPECIAL	96	UNKNOWN
15	HUMBOLDT	31	UTE	99	VARIOUS
16	HUNTSVILLE	32	WASHINGTON		

TWN ToWNship (5 characters) includes the township number and direction: the first three characters are the township number with leading zeros, the fourth character is either blank or contains a plus sign (+) to indicate a fractional township, and the fifth character locates the township north (N) or south (S) of the base line (e.g., T 32 N is entered as "032 N", and T 104-1/2 S is "104+S").

RNG RaNGe (5 characters) includes the range number and direction, using the same conventions outlined in TWN. Except that the directions used for ranges are either east (E) or west (W) of the base line.

SECtion (2 characters) is the section number, 01 to 36, including the leading zero.

SUBdivision (6 characters) uses the accepted practice of section subdivision naming (e.g., NWSESW is the northwest quarter of the southeast quarter of the southwest quarter). Numerical codes cannot be used for entry of this left-justified field; the following alphanumeric abbreviations must be used:

Entry	Description	Entry	Description
C	Center	NE	Northeast quarter
N2	North half	NW	Northwest quarter
S2	South half	SE	Southeast quarter
E2	East half	SW	Southwest quarter
W2	West half	(blank)	No section subdivision

SURvey status (6 characters) is to be selected from the following table:

Code	Entry	Description
00	UNK	unknown
01	UNSURV	unsurveyed
02	SURVEY	surveyed
03	GRID	superimposed grid

YOD (4 characters) indicates the Year Of Discovery of the deposit.

YIP (4 characters) records the Year of Initial significant Production from the deposit.

YLP (4 characters) records the Year of Last Production.

MDN (15 characters) contains the Mining District Name, when applicable. The field is free-form, although an effort should be made to geographically standardize entries.

COMPANY (40 characters) contains the principal owner/company name or a summary of the most significant owners identified with the operation. For this file, the first company listed in the Owners Table was sued as the principal owner/company in this field.

MINEMET MINE METhod (25 Characters) identifies the most predominant mining method being used at this site.

Method	Entry
UNDERGROUND	OPEN STOPE
	GOPHERING (COYOTING)
	BREAST STOPING
	ROOM AND PILLAR
	UNDERHAND
	GLORY HOLE
	OVERHAND
	PILLAR AND CHAMBER
	SUBLEVEL
	OTHER OPEN STOPE METHODS
	TIMBERED STOPES
	OVERHAND SQUARE-SET
	UNDERHAND SQUARE-SET
	HORIZONTAL SQUARE-SET
	OTHER TIMBERED STOPES
	FILLED STOPES
	TIMBER WITH SUBSEQUENT FILL
	HORIZ CUT & FILL W/WASTE ROCK
	HORIZ CUT & FILL W/TAILINGS
	RESUING
	ASCENDING CROSSCUTS
	DESCENDING CROSSCUTS
	INCLINED CUT AND FILL
	OTHER FILLED STOPE METHODS
	CAVING METHODS
	TOP SLICING
	INCLINED TOP SLICING
	SUBLEVEL CAVING
	BLOCK CAVING
	LONGWALL CAVING
	OTHER CAVING METHODS
	SHRINKAGE METHODS
	OVERHAND SHRINKAGE
	OTHER SHRINKAGE METHODS
	COMBINED METHODS
	SHRINKAGE W/CAVING
	SHRINKAGE W/TIMBERED METHODS
	SHRINKAGE W/CUT AND FILL
	TIMBERED STOPES W/CAVING METHODS
	CAVING METHODS W/TIMBERED METHODS
	OTHER COMBINED METHODS
	AUGER MINING
	SOLUTION MINING
	LEACHING IN PLACE (IN SITU)
	FRASCH PROCESS
	BORE HOLE SUSPENSION MINING
	BRINE WELL
	COAL MINING METHODS
	CONVENTIONAL ROOM & PILLAR
	CONVENTIONAL W/PILLAR EXTRACTION
	CONTINUOUS
	CONTINUOUS W/PILLAR EXTRACTION

	LONGWALL
	SHORTWALL
	HYDRAULIC
	COMBINED COAL MINING METHODS
SURFACE	OPEN PIT
	STRIP-HILLSIDE
	STRIP-LEVEL
	BENCH (BERM)
	QUARRY
	GLORY HOLE
	STRIP-MOUNTAINTOP
	AUGER MINING
	STRIP-AREA
	STRIP-AUGER
	ALLUVIAL MINING
	HYDRAULICKING
	DREDGING
	GROUND SLUICING
	NONFLOATING PLANT
	IN SITU LEACH

MILLMET MILL METhod (12 Characters) identifies the most predominant milling method being used at this site. Select the most appropriate mill method from the following table:

Entry	Description
UNSPECIFIED	unspecified
HANDSORT	handsort
SIZING	sizing
WASHING	washing
GRAVITY	gravity
JIG	jig
CLASSIFIER	classifier
HEAVY MEDIA	heavy media
FLOTATION	flotation
HYDROMET	hydrometallurgy unspecified
LEACH-PPT	leach-precipitation
LPF	leach-precipitation-float
L-SX-PPT	leach-solvent-extract-precipitation
L-IX	leach-ion exchange
ACIDULATION	acidulation
L-SX-EW	leach-solvent-extract-electrowin
MC	Merrill-Crowe
CIL-EW	carbon-in-leach-electrowin
CIL-MC	carbon-in-leach-Merrill-Crowe
CIP-EW	carbon-in-pulp-electrowin
CIP-MC	carbon-in-pulp-Merrill-Crowe
AUT-CIL-EW	autoclave-carbon-in-leach-electrowin
AUT-CIL-MC	autoclave-carbon-in-leach-Merrill-Crowe
AUT-CIP-EW	autoclave-carbon-in-pulp-electrowin
AUT-CIP-MC	autoclave-carbon-in-pulp-Merrill-Crowe
HL-EW	heap leach-electrowin
HL-MC	heap leach-Merrill-Crowe
HL-CC-EW	heap leach-carbon column-Merrill-Crowe
HL-AGG-MC	heap leach-agglomerate-Merrill-Crowe
HL-AGG-CC-EW	heap leach-agglomerate-carbon column-

	electrowin
HL-AGG-CC-MC	heap leach-agglomerate-carbon column-Merrill-Crowe
CRYSTALIZ	crystallization
MAGNETIC	magnetic
ELECTROSTAT	electrostatic
MAG/ELECTRO	magnetic and electrostatic
PYROMET	pyrometallurgy unspecified
DISTILL	distillation
TEMP DECOMP	thermal decomposition
ELECTRO FAC	electrolytic facilities
SINTER PLT	sinter plants
BRIQUETTING	briquetting

PMPMET Post Mill Processing METhod (35 Characters) identifies the most predominant post mill processing method being used at this site.

Method	Code	Entry
PELLETIZING	210	PELLET - GRATE KILN
	211	PELLET - TRAVELING GRATE
	212	PELLET - SHAFT FURNACE
	213	PELLET - CIRCULAR GRATE
SMELTER	310	REVERBERATORY
	311	REVERB GREEN CHARGE
	312	REVERB CALCINE CHARGE
	313	REVERB OXY-FUEL
	320	ELECTRIC FURNACE
	321	ELECT GREEN CHARGE
	322	ELECT CALCINE CHARGE
	330	FLASH
	331	INCO FLASH
	332	OUTOKUMPU FLASH
	340	CONTINUOUS
	341	MITSUBISHI CONT
	342	NORANDA CONT
	350	BLAST FURNACE
	360	ALUMINOTHERMIC
	370	HALL-HEROULT
	380	IMPERIAL BLAST FURNACE
	390	IMPERIAL
REFINERY	410	ELECTROLYTIC
	420	ELECTROWINNING
	430	FIRE REFINED
	431	ELECTROLYTIC/FIRE REF.
	440	MATTE LEACH-SX-PPT-FIRE REFINE.
	450	UNSPECIFIED BAYER
	451	MODIFIED BAYER
	452	AMERICAN BAYER
	453	EUROPEAN BAYER
	454	COMBINATION BAYER
	460	REFLUXER COLUMNS
OTHER	510	SYNTHETIC RUTILE
	520	CHLORIDE PIGMENT PLANT
	530	SULFIDE PIGMENT PLANT
	540	KROLL PROCESS (TI METAL)

MLA Mineral Land Assessment study area is a 1 character field that contains a 'Y' if an alternate Name (N) with record number greater than '49' exists. These (greater than 49) alternate Name (N) records have been reserved for names used to identify Mineral Land Assessment study areas.

DLM Date Last Modification (6 characters) contains date of entry or the last modification made to the MILS table.

The COM#, MOC#, and MAR# fields identify the numerous products that can be recovered from a mineral deposit. These products, or commodities, cover a wide spectrum (e.g., pure metals, liquids, gases, mineral compounds, stone, etc.) For this CD-ROM the first five commodities (COM#) found at a property are listed with its commodity modifier (MOD#), and marketability code (MAR#). These commodities correspond to COM1, MOD1, MAR1; COM2, MOD2, MAR2; etc.

COM# is a Commodity name (14 characters) corresponds to the valid entries found in Appendix C.

MOC# is a Modifier Of Commodity (22 characters) and an integral part of the COMmodity. See Appendix C.

MAR# is Marketability; a single-character indicator of this commodity's market status, using the following abbreviations:

Code	Description	Definition
P	Primary Product	Major product affecting revenue
C	Co-product	A product of equal or near equal value to another product in terms of producing revenue
B	Byproduct	A product that helps the economic viability of a property, but which would not be produced unless other primary products or co-products are being recovered
R	Recoverable	A product that is not identifiable as a primary product, co-product, or byproduct, but is recoverable or potentially recoverable. The evaluator should identify in the comments if this is a commodity proposed for stockpiling if no market presently exists, or if revenues will exist, but

		the status (P, C, B) of the commodity is unknown.
A	Affecting	Deleterious products or impurities that affect the marketability of the marketability recovered product(s).

SIC Standard Industrial Classification code, as defined by the Office of Management and Budget, is a four-character optional entry (see Appendix D).

NAM# corresponds to multiple alternate or secondary names associated with this mineral property up to a total of six. The NAM1 through NAM6 fields (each 35 character) correspond to the first six fields found in the MAS data base Alternate Name Table.

The BIBLIOGRAPHIC data file on this CD-ROM contains material relating to the same set of mineral properties. The format of each line is free-form.

BIBLIOGRAPHY FILE

NAME/Item Description	Size
SEQuence number	10 char.
TABle reference	2 char.
LINe number	3 char.
BIBliography	65 char.

SEQuence number is the unique 10-digit number which references records of information pertaining to a mineral property as identified by the MILS table in the original relational data base.

TABle is two characters which relate the bibliographic reference to a specific data base table in the original relational data base. Only general references (e.g., a blank TABle indicates general reference material) and references from the Resource Table (e.g., an entry of R under TABle) were extracted from the original relational data base tables for inclusion in this CD-ROM.

LINe number (3 characters) contains a unique value (from 001 to 999) for each line of Bibliography relating to a referenced table in the original relational data base.

BIBliography contains a single 65-character line of reference material source description.