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PRELIMINARY DEPOSIT-TYPE MAP OF NORTHWESTERN MEXICO

By
Kenneth R. Leonard

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Plate 1 Distribution of Mineral Deposits in Northwestern Mexico

Insets:

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- Figure 4. Cananea District

Preliminary Deposit-Type Map of Northwestern Mexico

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Introduction

The following map and descriptions contain site-specific geologic and economic data on mineral deposits and occurrences in Sonora, North Baja California, South Baja California and the northern part of Chihuahua, Mexico. The area is important for the evaluation of mineral deposits in the United States because many major mineral deposit trends extend across the U.S.-Mexican border.

The data was compiled from both Spanish- and English-language sources, and was entered into a microcomputer database known as MEX-MRDS.¹ The database consists of 753 records of mines, prospects, and mineral occurrences in northwest Mexico. A record may refer to one deposit or to a group of several closely-spaced deposits of similar character. Each record may contain up to 104 individual data fields which include available information on location, commodities, geology and economic potential of the deposit(s). Thirty-nine of these data fields were used in compiling the site descriptions listed in this report.

The symbols shown on the map correspond to 52 deposit type classifications, including one "not classified" group. Deposit types closely follow those listed in U.S. Geological Survey Bulletin 1693, Mineral Deposit Models (Cox and Singer, 1986). In addition to these, twenty one deposit-type designations were created in order to allow classification of deposits which did not fit any of the models listed in Cox and Singer (1986). The deposit type classifications used in this report should be considered only as broad categories of deposits which occur in similar geologic settings. Deposits grouped under one type may show considerable variation in detail.

Explanation of Data Fields

MRDS RECORD NUMBER

Unique number assigned to each record in the database. A record may refer to one deposit or to a group of closely-spaced deposits. Two district records have been included (MX00018 and MX02161) in order to include data that cannot be subdivided on a site-by-site basis.

MAP NUMBER

Number used to identify symbol on map that corresponds to the site description. Same as the last 4 digits of the MRDS number.

¹MEX-MRDS was created by Don Huber (USGS) as a modification of a program developed by Paul Schruben (USGS) which utilizes the database applications environment Revelation. For information regarding public access to the database, contact Don Huber, Branch of Resource Analysis, U.S. Geological Survey, MS 984, 345 Middlefield Rd., Menlo Park, CA 94025. (415) 329-5358.

SITE NAME

Most commonly used name used in the literature to identify the site. In some cases, this may be the name of a nearby town or geographic feature.

SYNONYM NAME

Less commonly used names for the site, names of several closely-spaced mines that have been included in one record, or names of individual orebodies.

DISTRICT/AREA

Informal district name used in the literature. Names appearing after a slash (/) refer to municipalities.

STATE

Mexican state in which the site is located: Sonora, North Baja California (NBAJA), South Baja California (SBAJA), or Chihuahua.

LATITUDE/LONGITUDE

Geodetic coordinates for the site. Locations listed with no seconds entered (e.g. 28-28- N, not 28-28-00N) are estimated to the nearest minute.

COMMODITIES

Metallic commodities are listed by their chemical symbol (AU = gold, Pb = lead, etc.). Non-metallic commodities are listed as follows:

ASB	asbestos	LST	limestone
B	borates	MG	magnesite
BA	barite	NA	sodium compounds
BRI	brine	P	phosphates
C	coal	QTZ	quartz
F	fluorite	TLC	talc
GRF	graphite	VRM	vermiculite
GYP	gypsum	ZEO	zeolites

MAJOR/MINOR/POTEN

Subdivision of commodities field for sites that have recorded production.

MAJOR: Commodity of primary economic interest.

MINOR: Coproducts or byproducts of mining.

POTEN: Commodities that have not been exploited, but which are present in sufficient amounts to be of possible economic interest.

MAIN/MINOR

Subdivision of commodities field for sites that do not have recorded production, or for which production is uncertain.

OCCUR

Commodities present in small amounts and which have no known economic importance or potential.

ORE MATERIALS

Mineralogical composition of the ore. Generally includes metallic minerals which may not contain any commodities of primary interest, but which are

intimately associated with ore grade mineralization. Minerals that appear in parentheses are present in very small amounts.

GENERAL ANALYTICAL DATA

Assays, geochemical findings, grade information or other pertinent analytical data.

PRODUCTION

Amount of commodity produced in terms of size classification scheme devised by Guild (1981). See Table 1. Codes used are as follows:

L = Large	Y = Yes (amount unknown)
M = Medium	N = No
S = Small	U = Uncertain

EXPLORATION/DEVELOPMENT COMMENTS

Description of past or recent activity at the site

DEPOSIT MODEL

General classification of deposit based on mineralogic characteristics, geologic occurrence and morphology.

The 52 Deposit Classes recognized in the map area are:

I. Models listed in USGS Bulletin 1693 (Cox and Singer, 1986)

Cu Skarn	Kuroko Massive Sulfide
Pb-Zn Skarn	Simple Sb
Fe Skarn	Polymetallic Replacement
Volcanic-Hosted Magnetite	Polymetallic Vein
Au-Ag-Te Vein	Podiform Chromite
Comstock Epithermal Vein	Serpentine-Hosted Asbestos
Creede Epithermal Vein	Carbonate-Hosted Au
Sado Epithermal Vein	Flat-Fault Au
Hot-Spring Au	Porphyry Cu
Low-Sulfide Au	Porphyry Cu, Skarn-Related
Epithermal Mn	Porphyry Cu-Mo
Replacement Mn	Porphyry Mo, Low F
Sedimentary Mn	Placer Au
Volcanogenic Mn	Bedded Barite
W Skarn	Upwelling -type P
Basaltic Cu	

II. Deposit classifications added by author.

Not Classified	Amorphous Graphite
Au Skarn	Disseminated Graphite
Epithermal Au-Ag Vein	Bedded Gypsum
W Pegmatite Vein	Coal
Serpentine-Hosted Magnesite	Evaporite Na
Serpentine-Hosted Talc	Trona
Carbonate-Hosted U	Salt
Volcanic-Hosted U	Fluorite Vein
Lithium Pegmatite	Limestone
Vermiculite	Quartz
Stratiform Borates	

USGS MODEL NUMBER

The number corresponding to the appropriate model for those deposits which fit one of the models listed in USGS Bulletin 1693. Deposits classified as Epithermal Au-Ag Veins have been given the number 25?, indicating the author's belief that, given more information, these deposits could probably be assigned to one of the models listed in Bulletin 1693 as 25a, b, c, or d.

DEPOSIT SIZE

Estimated total tonnage of past production plus estimated reserves. Classified in terms of size classification scheme devised by Guild (1981). See Table 1.

Codes used are as follows:

L = Large
M = Medium
S = Small

DEPOSIT DESCRIPTION

Summary of data pertaining to deposit morphology, mineralogy, dimensions, and geologic environment, given in narrative form.

HOST ROCK AGE

Codes used are as follows:

QUAT	Quaternary	CARB	Carboniferous
HOLO	Holocene	PENN	Pennsylvanian
PLEIS	Pleistocene	MISS	Mississippian
TERT	Tertiary	DEV	Devonian
PLIO	Pliocene	SIL	Silurian
MIO	Miocene	ORD	Ordovician
OLIGO	Oligocene	CAMB	Cambrian
EO	Eocene	PREC	Precambrian
PALEO	Paleocene	CEN	Cenozoic
CRET	Cretaceous	MES	Mesozoic
JUR	Jurassic	PAL	Paleozoic
TRI	Triassic	E	Early
PERM	Permian	L	Late

HOST ROCK TYPE

Lithologic name of rock unit(s) containing mineralization.

IGNEOUS UNIT AGE

See Host Rock Age.

IGNEOUS UNIT TYPE

Lithologic name of igneous rock unit(s) associated with mineralization.

GANGUE MINERALS

Mineralogy of non-economic component of ore.

SIGNIFICANT ALTERATION

Description of alteration patterns, or list of types of alteration associated with mineralization.

REFERENCES

List of sources arranged alphabetically by author and year of publication.

PRODUCTION TABLES

Amount of commodities or ore produced in a given year or range of years. Production figures are listed in the same units as given in the source publication.

ITEM: Ore, concentrates, or commodity.

TONNAGE($\times 10^3$): Amount of production given in thousand units (e.g. 100 MT = 100,000 metric tonnes). Abbreviations for units are:

MT = metric tonnes

LT = long tons

ST = short tons

TONS = unable to determine whether MT, ST, or LT.

LB = pounds

KG = kilograms

TPD = tons/day

TPY = tons/year

YEAR(S): Year or range of years during which production took place. A year followed by a hyphen (e.g. 1943-) indicates production after that year. Likewise, a year preceded by a hyphen (-1953) indicates production before that year. In some cases, this will be the date of the source publication for the production data. Dates given are inclusive.

GRADE: Grade of the ore or concentrate. In some places where contained metal is listed, this column contains the amount of ore from which the metal was recovered and from which a grade can be calculated.

PRODUCTION COMMENTS

Additional descriptive information about the data. Comments may be keyed to particular lines in a table, designated as Items 1 through n , with Item 1 being the top line and Item n the n th line from the top.

SOURCE OF PRODUCTION INFORMATION

References containing the production data. These are often keyed to particular lines in a table, in a manner identical to the comments field.

RESERVES/POTENTIAL RESOURCES TABLES

The amount of unmined material remaining in the deposit. Reserves are identified deposits whose quality and quantity have been estimated by: 1) geochemical analyses and physical measurements through drill holes, underground workings or other means ("measured ore"), 2) sampling data with projections based on geologic evidence ("indicated ore"), or 3) use of reasonable geologic inferences only ("inferred ore"). The mining industry terms "proven", "probable", and "possible", and other less specific terms have been reported as they appear in the literature. Data listed under Potential Resources reflect a lesser degree of certainty. These estimates are generally based on designations of permissive terrane and on little or no hard data.

ITEM: Ore or commodity.

TONNAGE($\times 10^3$): Amount of reserves or potential resources given in thousand units (e.g. 100 MT = 100,000 metric tonnes). Abbreviations for units are listed above.

YEAR: Date of the estimate.

GRADE: Grade of the ore.

RESERVES/POTENTIAL RESOURCES COMMENTS

Additional descriptive information about the data. Comments may be keyed to particular lines in a table, designated as Items 1 through n , with Item 1 being the top line and Item n the n th line from the top.

SOURCE OF RESERVES/POTENTIAL RESOURCES INFORMATION

References containing the reserves or potential resources data. These are often keyed to particular lines in a table, in a manner identical to the comments field.

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TABLE 1. Size categories, in metric tonnes of metal or commodity unless otherwise specified.
Numbers represent total past production + reserves.

	Large	>	Medium	>	Small
Antimony		50,000		5,000	
Asbestos		10,000,000		100,000	
Barite (BaSO ₄)		5,000,000		50,000	
Beryllium (BeO)		1,000		10	
Boron (B ₂ O ₃)		10,000,000		100,000	
Chromium (Cr ₂ O ₃)		1,000,000		10,000	
Cobalt		20,000		1,000	
Copper		1,000,000		50,000	
Fluorite (CaF ₂)		5,000,000		50,000	
Gold		500		25	
Graphite		1,000,000		10,000	
Gypsum		100,000,000		5,000,000	
Iron (ore)		100,000,000		5,000,000	
Lead		1,000,000		50,000	
Lithium (Li ₂ O)		100,000		10,000	
Magnesium (MgCO ₃)		10,000,000		100,000	
Manganese (tons of 40% Mn)		10,000,000		100,000	
Mercury (flasks)		500,000		10,000	
Molybdenum		500,000		5,000	
Nickel		500,000		25,000	
Phosphate (P ₂ O ₅)		200,000,000		200,000	
Platinum Group		500		25	
Rare Earths (RE ₂ O ₃)		1,000,000		1,000	
Silver		10,000		500	
Sodium (salts)		10,000,000		1,000,000	
Sulfur		10,000,000		100,000	
Talc		10,000,000		1,000,000	
Thorium		10,000		1,000	
Tin		100,000		5,000	
Tungsten		10,000		500	
Uranium		10,000		100	
Vanadium		10,000		500	
Zinc		1,000,000		50,000	

(Excerpted from Guild, 1981, Table 2)

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Site Descriptions

MRDS RECORD NUMBER...MX00001

MAP NUMBER.....1
SITE NAME.....El Tordillo
DISTRICT/AREA...../El Realito
STATE.....SONORA
LATITUDE.....28-23- N LONGITUDE.....109-39- W
COMMODITIES.....W MO
MAIN....W MO
ORE MATERIALS.....scheelite, molybdenite
DEPOSIT MODEL.....W Pegmatite(?)
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Euhedral scheelite and flakes of
molybdenite in weakly sericitized quartz-monzonitic granite, on
the border of a body of leucocratic granite (Radelli, 1985).
HOST ROCK AGE.....LCRET-ETERT
HOST ROCK TYPE.....quartz-monzonitic granite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusive complex
SIGNIFICANT ALTERATION.....sericitic
REFERENCE....Radelli, 1985.

MRDS RECORD NUMBER...MX00002

MAP NUMBER.....2
SITE NAME.....Cananea
SYNONYM NAME.....Sonora Hill
DISTRICT/AREA.....Cananea
STATE.....SONORA
LATITUDE.....30-57-15N LONGITUDE.....110-19-00W
COMMODITIES.....CU MO AG
MAJOR....CU MINOR....MO AG
ORE MATERIALS.....chalcocite, pyrite, chalcopyrite,
covellite, molybdenite
PRODUCTION.....L
EXPLORATION AND DEVELOPMENT COMMENTS.....At the end of 1985: plans
announced to increase mining capacity to 300,000 TPD (ore + waste)
with concentrator throughput of 80,000 TPD. Low-grade ore being
stockpiled for treatment in 22,000 TPY solvent
extraction/electrowin plant; Mining Journal, v. 305, p. 484.
DEPOSIT MODEL.....Porphyry Cu
USGS MODEL NUMBER.....17
DEPOSIT SIZE.....LARGE
DEPOSIT DESCRIPTION.....Disseminated primary and supergene Cu ore
associated with a NW-trending series of quartz porphyry plugs in
Mesa volcanics. Breccia pipes and porphyry-volcanic contact zones
both favorable sites for mineralization. Primary ore consists of
pyrite-chalcopyrite and minor molybdenite in quartz-alunite
gangue. Supergene chalcocite (+ minor covellite) zone overlies
extensive chalcopyrite zone.
HOST ROCK AGE.....LCRET
HOST ROCK TYPE.....dominantly andesitic volcanics
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granodioritic to quartz monzonitic
porphyries
GANGUE MINERALS.....quartz, alunite, tourmaline

SIGNIFICANT ALTERATION.....Intense quartz-sericite-pyrite alteration grades outwardly into propylitic alteration at distances of about 250 M from quartz porphyry contacts. Evidence of "enveloping" of the pyritic-phyllitic zone indicates overlaying of mineralizing centers caused by progressive multiple intrusive effects.

REFERENCES

Ayala, 1981.
Cox and Singer, 1986.
Einaudi, 1982.
Emmons, 1910.
Maravilla, 1978.
Meinert, 1982.
Perez Segura, 1985.
Perry, 1961.
Ruben Velasco, 1956.
Salas, 1973.
Salas, 1975.
Sutulov, 1983.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR
ORE CU	25.000 TPD	1978
ORE CU	262.150 ST	1968
CU	11.850 ST	1968

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	
CU	650000 LB	-1979	WEST AND EAST AREAS
CU	500000 LB	-1979	SONORA HILL PIT
CU	120000 LB	-1979	EAST PIT
CU	1000000 LB	-1979	CANANEA PIT
CU	165000 LB	-1979	KINO PIT
MO	4.938 MT	1933-1947	

PRODUCTION COMMENTS.....1978 production rate: 25,000 to 30,000 tons/day, (Maravilla, 1978.) In 1968, 650 tons of copper ore were produced daily, from which 22.5 tons of copper concentrates were produced.

SOURCE OF PRODUCTION INFORMATION.....Annual Prod: Maravilla (1978), Salas (1973). Cumulative Prod: Meinert (1982), Intermet Molybdenum Yearbook (1983).

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE CU MO	1500000 MT	1983	0.73% CU, 0.006% MO

SOURCE OF RESOURCES INFORMATION.....Intermet Molybdenum Yearbook, 1983.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE CU	1600000 MT	1985	0.7% CU
ORE CU	1500000 MT	1985	0.5% CU, ACID-LEACHABLE

RESERVES COMMENTS.....Mill capacity: 38,000 TPD

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00003

MAP NUMBER.....3

SITE NAME.....Arizpe

DISTRICT/AREA.....Arizpe

STATE.....SONORA
LATITUDE.....30-20- N LONGITUDE.....110-07- W
COMMODITIES.....SB
MAJOR.....SB
PRODUCTION.....S
DEPOSIT MODEL.....Simple Sb
USGS MODEL NUMBER.....27d
DEPOSIT SIZE.....SMALL
REFERENCES
Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER....MX00004

MAP NUMBER.....4
SITE NAME.....Atil
DISTRICT/AREA.....Magdallena/Atil
STATE.....SONORA
LATITUDE.....30-58- N LONGITUDE.....111-31- W
COMMODITIES.....MN
MAJOR.....MN
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Mn
USGS MODEL NUMBER.....25g
DEPOSIT SIZE.....SMALL
REFERENCES
Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER....MX00005

MAP NUMBER.....5
SITE NAME.....Bahia de Adair
DISTRICT/AREA.....San Luis
STATE.....SONORA
LATITUDE.....31-35- N LONGITUDE.....113-45- W
COMMODITIES.....NA
MAJOR.....NA
ORE MATERIALS.....trona
PRODUCTION.....L
DEPOSIT MODEL.....Trona
DEPOSIT SIZE.....LARGE
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00006

MAP NUMBER.....6
SITE NAME.....Baroyeca
SYNONYM NAME.....Barollega
DISTRICT/AREA.....Navojoa/Quiriego
STATE.....SONORA
LATITUDE.....27-34-35N LONGITUDE.....109-29-25W
COMMODITIES.....AG AU
MAJOR.....AG AU
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesites
REFERENCES

Guild, 1981.
Perez Segura, 1985.
Salas, 1975.

MRDS RECORD NUMBER....MX00007

MAP NUMBER.....7
SITE NAME.....Blanca
SYNONYM NAME.....Urrea, Las Lomas
DISTRICT/AREA.....Navojoa
STATE.....SONORA
LATITUDE.....27-04- N LONGITUDE.....109-10- W
COMMODITIES.....AU
MAJOR.....AU
PRODUCTION.....S
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
IGNEOUS ROCK TYPE.....granite-quartz diorite
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00008

MAP NUMBER.....8
SITE NAME.....La Confianza
DISTRICT/AREA.....La Colorada
STATE.....SONORA
LATITUDE.....28-49- N LONGITUDE.....110-26- W
COMMODITIES.....W ZN PB AG
MAIN...W ZN MINOR...PB AG
ORE MATERIALS.....scheelite, sphalerite; galena,
 argentiferous arsenopyrite, pyrite
GENERAL ANALYTICAL DATA.....Zn up to 20%; no data on W, Ag, or Pb
 content.
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Two vertical anasthomizing shear zones
 cutting across Permo-Triassic formation which includes limestone.
 Cumulative strike length: 300 M. Width: a few decimeters to 2 M.
HOST ROCK AGE.....PERM-TRI
HOST ROCK TYPE.....limestone
GANGUE MINERALS.....quartz, calcite
REFERENCE....Radelli, 1985.

MRDS RECORD NUMBER....MX00009

MAP NUMBER.....9
SITE NAME.....Caborca
DISTRICT/AREA.....Caborca
STATE.....SONORA
LATITUDE.....30-43- N LONGITUDE.....112-10- W
COMMODITIES.....AU CU SB BA
MAJOR.....AU CU MINOR.....SB POTEN.....BA

REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	3.300 MT	-1943	41% MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00012

MAP NUMBER.....12

SITE NAME.....Cieneguita

DISTRICT/AREA.....Sahuaripa

STATE.....SONORA

LATITUDE.....29-08- N LONGITUDE.....109-12- W

COMMODITIES.....CU AG

MAJOR.....CU AG

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Vein(?)

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00013

MAP NUMBER.....13

SITE NAME.....La Estrella

DISTRICT/AREA.....Hermosillo

STATE.....SONORA

LATITUDE.....29-05- N LONGITUDE.....110-33- W

COMMODITIES.....W

MAJOR.....W

ORE MATERIALS.....scheelite

DEPOSIT MODEL.....W Skarn(?)

USGS MODEL NUMBER.....14a?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Vertical, tabular body of scheelite, 7 M thick, occupies joint in argillically altered limestone breccia. W grade increases with depth. One ore shoot dips away from main body at about 45 degrees.

HOST ROCK AGE.....PAL

HOST ROCK TYPE.....limestone

SIGNIFICANT ALTERATION.....argillic

REFERENCE....Radelli, 1985.

MRDS RECORD NUMBER....MX00014

MAP NUMBER.....14

SITE NAME.....Dolores

DISTRICT/AREA.....Sahuaripa

STATE.....SONORA

LATITUDE.....29-00- N LONGITUDE.....109-44- W

COMMODITIES.....CU PB AG

MAJOR.....CU PB MINOR.....AG

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL
 IGNEOUS ROCK AGE.....TERT?
 IGNEOUS ROCK TYPE.....granite-quartz diorite
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00015

MAP NUMBER.....15
 SITE NAME.....Dos Cabezas
 DISTRICT/AREA.....Col. Juarez
 STATE.....SONORA
 LATITUDE.....30-21- N LONGITUDE.....108-38- W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Mn-bearing stringers in volcanic rocks.
 REFERENCES
 Guild, 1981.
 Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00016

MAP NUMBER.....16
 SITE NAME.....Dos Naciones
 STATE.....SONORA
 LATITUDE.....30-10- N LONGITUDE.....110-35- W
 COMMODITIES.....AU AG PB
 MAJOR.....AU AG PB
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00017

MAP NUMBER.....17
 SITE NAME.....Algorroba-Pichucate
 STATE.....SONORA
 LATITUDE.....26-56- N LONGITUDE.....108-31- W
 COMMODITIES.....AU
 MAJOR.....AU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00018

MAP NUMBER.....NONE (See Fig. 2.)
 SITE NAME.....El Antimonio district
 SYNONYM NAME.....Mines: Cerro de San Francisco, El Brasil, El
 Divisadero, El Palo Verde, El Pensamiento, El Promontorio, El
 Rincon, El Salero, La Argentina, La Bofa, La Bolivia, La Carta

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
SB	25.000 MT	-1941

PRODUCTION COMMENTS.....First 5 months of 1943: average monthly production was 98 tonnes of ore grading 45% Sb, (62 of 98 tonnes was from La Piedra Azul, La Limena, and El Palo Verde.)
 Mill Capacity: < 50 tonnes/day. From ore containing 13-15% Sb, 50% of the Sb was recovered in a 50% concentrate.

SOURCE OF PRODUCTION INFORMATION.....Guiza and White, 1949.

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
SB	47.700 MT	1943	276,000 TONNES ORE
SB	17.150 MT	1943	122,000 TONNES ORE

RESOURCES COMMENTS.....Item 1: Maximum estimate; Item 2: Minimum estimate.

SOURCE OF RESOURCES INFORMATION.....White and Guiza, 1949.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE SB	3.000 MT	1943	45% SB
ORE SB	60.000 MT	1943	5-10% SB
ORE SB	10.000 MT	1943	10-15% SB

RESERVES COMMENTS.....Indicated ore reserves; numbers given represent maximum estimates. Item 1: High-grade ore in veins and placers; Item 2: Mill (lower-grade) ore in veins; Item 3: Dump ore.

SOURCE OF RESERVES INFORMATION.....White and Guiza, 1949.

RESERVES (continued)

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE SB	50.000 MT	1943	45% SB
ORE SB	3.000 MT	1943	45% SB
ORE SB	150.000 MT	1943	5-10% SB

RESERVES COMMENTS.....Inferred ore reserves; numbers given represent maximum estimates. Item 1: High-grade ore in veins; Item 2: High-grade ore in placers; Item 3: Mill ore in veins.

SOURCE OF RESERVES INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00019

MAP NUMBER.....19

SITE NAME.....San Pascual

DISTRICT/AREA...../Alamos

STATE.....SONORA

LATITUDE.....27-10-45N LONGITUDE.....109-01-00W

COMMODITIES.....FE

MAJOR.....Fe MINOR.....MgO POTEN.....S P

ORE MATERIALS.....magnetite, hematite

GENERAL ANALYTICAL DATA.....52.80% total Fe, 7.85% silica, 0.006% total S, 1.15% CaO, 0.086% P, 0.053% Mn; Cabrera, et.al., 1983, table IV.

PRODUCTION.....S

DEPOSIT MODEL.....Volcanic-Hosted Magnetite

USGS MODEL NUMBER.....25i

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Fe deposit in volcaniclastic rocks.

HOST ROCK AGE.....CRET

HOST ROCK TYPE.....andesite, limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....trachytic andesite
 GANGUE MINERALS.....calcite, quartz, plagioclase, K-feldspar
 REFERENCES

Cabrera F., Vega G. and Perez S., 1983.
 Gomez, 1961.
 Perez Segura 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	25.00 MT	1961	62.5% FE
ORE FE	9.000 MT	1983	52% FE

RESERVES COMMENTS.....Item 1: Proven Reserves; Item 2:
 Inferred reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961; Cabrera, et.al., 1983.

MRDS RECORD NUMBER....MX00020

MAP NUMBER.....20
 SITE NAME.....Aurora
 DISTRICT/AREA.....Huerta
 STATE.....SONORA
 LATITUDE.....28-31-35N LONGITUDE.....109-37-15W
 COMMODITIES.....CU MO AU
 MAJOR.....CU MO AU
 ORE MATERIALS.....pyrite, chalcopryrite, molybdenite,
 tetrahedrite, gold
 PRODUCTION.....S
 DEPOSIT MODEL.....Porphyry Cu-Mo
 USGS MODEL NUMBER.....21a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Concentration of copper along E-W trending
 breccia zone. Sulfides such as tetrahedrite are present in vein
 systems. Gold was discovered both as placer and vein deposits in
 1889. 5 months after the first discovery there were over 5
 thousand people living and working the area near Santa Clara.

HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....andesite(?)
 IGNEOUS ROCK AGE.....LCRET-ETERT
 (54.5 +/- 1.8 M.Y., 52.4 +/- 1.6 M.Y.)
 IGNEOUS ROCK TYPE.....quartz monzonite, volcanics
 SIGNIFICANT ALTERATION.....hydrothermal alteration (quartz-sericite-
 tourmaline), and propylitic alteration

REFERENCES

Panczner, 1987.
 Perez Segura, 1985.

MRDS RECORD NUMBER....MX00021

MAP NUMBER.....21
 SITE NAME.....Florida-Barrigon
 SYNONYM NAME.....La Florida de Nacozari
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....30-22-50N LONGITUDE.....109-43-20W
 COMMODITIES.....CU MO ZN AG

MAJOR.....CU MINOR.....MO POTEN.....ZN OCCUR.....AG
 ORE MATERIALS.....chalcopryite, chrysocolla, malachite;
 molybdenite, sphalerite
 GENERAL ANALYTICAL DATA.....Oxide zone: 530-3500 ppm Cu; Hypogene: up
 to 2.0% Cu, 20-150 ppm Mo, 63-230 ppm Zn, 5-13 ppm Ag; 50-1900 ppm
 Cu in altered dacite porphyry.
 PRODUCTION.....S
 DEPOSIT MODEL.....Porphyry Cu
 USGS MODEL NUMBER.....17
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Two generations of porphyry copper
 mineralization in andesite. 1> early stage chalcopryite associated
 with pervasive f. gr. secondary biotite; 2> later stage quartz-
 calcite-chlorite stockwork carrying chalcopryite with subordinate
 molybdenite, sphalerite, and locally containing laumontite.
 Supergene malachite and chrysocolla present in surface exposures.
 HOST ROCK AGE.....EO (43.2 +/- 1.1 M.Y.)
 HOST ROCK TYPE.....andesite flow(?)
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....dacite porphyry
 GANGUE MINERALS.....quartz, calcite, chlorite, biotite,
 actinolite, apatite, rutile, sphene, epidote; pyrite, magnetite
 SIGNIFICANT ALTERATION.....Potassic alteration followed by quartz-
 white mica-pyrite alteration contemporaneous with introduction of
 stockwork.
 REFERENCES
 Cox and Singer, 1986.
 Perez Segura, 1985.
 Theodore and Priego de Wit, 1978.
 RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE CU	45000.00 MT	1985	0.35% CU
ORE CU	90000.00 MT	1985	0.30% CU

 RESERVES COMMENTS.....1> Developed ore.
 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00022

MAP NUMBER.....22
 SITE NAME.....Bella Esperanza
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....30-16-10N LONGITUDE.....109-41-55W
 COMMODITIES.....CU
 MAJOR.....CU
 ORE MATERIALS.....pyrite, chalcopryite
 DEPOSIT MODEL.....Porphyry Cu
 USGS MODEL NUMBER.....17
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....quartz monzonite, andesite
 IGNEOUS ROCK AGE.....PALEO
 (55.5 +/- 1.2 M.Y., quartz monzonite)
 IGNEOUS ROCK TYPE.....quartz monzonite, andesite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00023

MAP NUMBER.....23
SITE NAME.....La Mariquita
SYNONYM NAME.....Mariquita
DISTRICT/AREA.....Nogales/Cananea
STATE.....SONORA
LATITUDE.....31-03-20N LONGITUDE.....110-25-15W
COMMODITIES.....CU MO
MAJOR.....CU MINOR.....MO
ORE MATERIALS.....pyrite, chalcopryrite, specularite,
 chalcocite
GENERAL ANALYTICAL DATA.....0.45-0.70% Cu.
PRODUCTION.....S
EXPLORATION AND DEVELOPMENT COMMENTS.....Not presently economically
 feasible, 1985.
DEPOSIT MODEL.....Porphyry Cu
USGS MODEL NUMBER.....17
DEPOSIT SIZE.....MEDIUM
HOST ROCK AGE.....TERT
HOST ROCK TYPE.....conglomerate, sandstones, minor tuffs,
 ignimbrites, and basalts
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granodiorite, andesites, (quartz
 monzonite)
GANGUE MINERALS.....quartz, plagioclase
SIGNIFICANT ALTERATION.....potassic
REFERENCES
 Maravilla S., 1978.
 Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE CU	20000.00 MT	1985	0.7% CU
ORE CU	100000.0 MT	1978	0.45% CU

RESERVES COMMENTS.....Tonnages above are calculated at
 different cut-off grades for same deposit. Not considered
 economically feasible to mine although a very large deposit. It
 is located close to Cananea porphyry copper.
SOURCE OF RESERVES INFORMATION.....Maravilla, 1978; Perez Segura, 1985.

MRDS RECORD NUMBER....MX00024

MAP NUMBER.....24
SITE NAME.....El Alacran
DISTRICT/AREA.....Cananea
STATE.....SONORA
LATITUDE.....30-51-10N LONGITUDE.....110-10-35W
COMMODITIES.....CU MO
MAJOR.....CU MO
ORE MATERIALS.....pyrite, chalcopryrite, chalcocite
GENERAL ANALYTICAL DATA.....Oxide zone: 0.3% Cu.
PRODUCTION.....S
DEPOSIT MODEL.....Porphyry Cu
USGS MODEL NUMBER.....17
DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....High-level Laramide age porphyry copper deposit occupying elongate area of 2.7 x 6.0 KM. Supergene processes have formed a copper enriched "blanket" underlying a leached cap. The "blanket" is characterized by chalcocite zone which grades downward into bornite-digenite-covellite zone and then into lower grade material.

HOST ROCK AGE.....LCRET-ETERT

HOST ROCK TYPE.....andesitic (locally quartz latitic) volcaniclastics

IGNEOUS ROCK AGE.....PALEO

(55.4 +/- 1.2 M.Y., andesite)

(56.7 +/- 1.2 M.Y., biotite)

IGNEOUS ROCK TYPE.....quartz latite porphyry

SIGNIFICANT ALTERATION.....Potassic, phyllic, and propylitic alteration, tourmalinization, silicification. Silicification generally occurs near surface with kaolinization and primary sulfides 5-200+ M below (Alacon, 1970). Potassic alteration dated at 55.4 +/- 1.2 M.y.

REFERENCES

Alarcon and Aguilera, 1970.

Dean and Guilbert, 1981.

Perez Segura, 1985.

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR
CU	3.1 MT	1985

SOURCE OF RESOURCES INFORMATION.....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE CU	700.000 MT	1985	0.5% CU
ORE CU	2400.000 MT	1985	0.35% CU

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00025

MAP NUMBER.....25

SITE NAME.....El Batamote

SYNONYM NAME.....Batamote

DISTRICT/AREA.....Nacozari

STATE.....SONORA

LATITUDE.....30-28-55N LONGITUDE.....109-45-10W

COMMODITIES.....CU

MAIN....CUPDEPOSIT MODEL.....Porphyry Cu

USGS MODEL NUMBER.....17

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Surficial expression of porphyry copper occurrence over 3000 x 8000 meter area, elongated to the NW. Supergene processes formed enriched copper "blanket". Molybdenum totally absent at present level of exposure.

HOST ROCK TYPE.....tuffs, andesite, granodiorite

IGNEOUS ROCK AGE.....PALEO

(56.8 +/- 1.2 M.Y., quartz monzonite)

IGNEOUS ROCK TYPE.....granodiorite, quartz monzonite

SIGNIFICANT ALTERATION.....Intrusive surrounded by potassic, phyllic, propylitic, and advanced argillic alteration zones with associated

tourmaline breccia zone. Phyllic and argillic alt. most evident in volcaniclastics. Potassic zone best developed in stock.

REFERENCES

Perez Segura, 1985.

Wendt, 1981.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE CU	4400.00 MT	1985	0.36% CU

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00026

MAP NUMBER.....26

SITE NAME.....Magdalena del Kino

DISTRICT/AREA.....Cananea

STATE.....SONORA

LATITUDE.....30-40- N LONGITUDE.....110-52- W

COMMODITIES.....BA

MAJOR.....BA

ORE MATERIALS.....barite

DEPOSIT MODEL.....Bedded Barite

USGS MODEL NUMBER.....31b

DEPOSIT SIZE.....SMALL

HOST ROCK AGE.....MIO (approx. 22 M.Y.)

HOST ROCK TYPE.....lake sediments, shale, sandstones,
conglomerate

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....rhyolite, dacite, andesite

REFERENCE....Arriaga, Manuel, 1987, pers. com. to Staude..

MRDS RECORD NUMBER....MX00027

MAP NUMBER.....27

SITE NAME.....Pilares

SYNONYM NAME.....Mina Pilares

DISTRICT/AREA.....Nacozari

STATE.....SONORA

LATITUDE.....30-20-10N LONGITUDE.....109-38-00W

COMMODITIES.....CU AG AU W ZN PB

MAJOR.....CU MINOR.....AG AU POTEN.....W ZN PB

ORE MATERIALS.....pyrite, chalcopryrite, chalcocite,
specularite; scheelite, sphalerite, galena, tetrahedrite

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Property of Phelps Dodge,
1895-1949. Underground mining ceased, 1949. Leaching program,
1946-1960. Feasibility study underway, 1985.

DEPOSIT MODEL.....Porphyry Cu

USGS MODEL NUMBER.....17

DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....Breccia pipe orebody, 600 M by 300 M.

Major axis trends N 35 W. Known vertical extent: 725 M. Ore
consists of a network of pyrite-chalcopryrite veinlets cementing
angular fragments of sericitized, silicified latite and andesite.
Sulfides partially replaced by chalcocite to depths of 100-200 FT.

HOST ROCK AGE.....LCRET-ETERT

HOST ROCK TYPE.....andesites, latites

GANGUE MINERALS.....quartz, sericite, chlorite
 SIGNIFICANT ALTERATION.....silicification, sericitization,
 chloritization, pyritization

REFERENCES

Cox, and Singer, 1986.
 Livingston, 1912.
 Maravilla S., 1978.
 Mining Magazine, v. 156, no. 5, p. 370.
 Perez Segura, 1985.
 Tenney, 1935.
 Thoms, 1978.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR
CU	37.000 MT	1975

SOURCE OF ANNUAL PRODUCTION INFORMATION....Mining Annual Rept., 1976.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE CU	19000.00 MT	-1985	2.6% CU
ORE CU	16600.00 MT	-1949	2.5% CU, 25.7 G/MT AG
CU	19.85 MT	1946-1960	(LEACHING PROGRAM)
CU	575000.00 LB	1902-1925	
AG	4000.00 OZ	1902-1925	
AU	11.30 OZ	1902-1925	

PRODUCTION COMMENTS.....19 million tons of 2.6% Cu ore has
 already been extracted from Pilares Mine. Similar production at
 Santa Rosa which is owned by the same company.

SOURCE OF PRODUCTION INFORMATION.....Perez Segura, 1985; Mining
 Magazine, 1987; Tenney, 1935.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE CU	40000.00 MT	1985	0.7% CU
ORE CU	44000.00 MT	1985	0.8% CU
ORE CU	80000.00 MT	1978	0.7% CU

RESERVES COMMENTS.....Separate estimates.

SOURCE OF RESERVES INFORMATION.....Maravilla, 1978; Perez Segura, 1985.

MRDS RECORD NUMBER....MX00028

MAP NUMBER.....28

SITE NAME.....Washington

DISTRICT/AREA.....Hermosillo/Huepac

STATE.....SONORA

LATITUDE.....29-53-55N LONGITUDE.....110-03-45W

COMMODITIES.....CU MO W AG AU ZN PB

MAJOR.....CU MO W MINOR.....AG AU OCCUR.....ZN PB

ORE MATERIALS.....chalcopyrite, molybdenite, scheelite,
 pyrite; trace tetrahedrite, sphalerite, galena

PRODUCTION.....S

DEPOSIT MODEL.....Porphyry Cu

USGS MODEL NUMBER.....17

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Oval-shaped, vertically plunging collapse
 breccia, about 60 M in diameter. NNW trending faults form contacts
 at the surface and crosscut the breccia at depth. Plunge of the
 orebody changes to about 60 SW at 200 M depth. Ubiquitous

chalcopyrite. Pyrite content decreases below 200-FT level.
 Molybdenite found only below 400-FT level.
 HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....trachyte, andesite, latite, shale,
 limestone
 IGNEOUS ROCK AGE.....PALEO
 (56.4 +/- 1.2 M.Y., K-AR, BIO)
 IGNEOUS ROCK TYPE.....granodiorite
 GANGUE MINERALS.....quartz, tourmaline, calcite
 SIGNIFICANT ALTERATION.....phyllic, potassic, local silicification
 and tourmalinization

REFERENCES

Cox and Singer, 1986.
 Daco, 1978.
 Dominquez, 1979.
 Perez Segura, 1985.
 Simmons and Sawkins, 1983.

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE CU MO W	1200.00 MT	1985	1.8% CU, 0.14% WO ₃ , 0.106% MO, 17 GR/TON AU, 15.8 GR/ TON AG
ORE CU MO W	9.000 MT	1985	1.6% CU, MINOR WO ₃ AND MO.
ORE CU MO W	1200.00 MT	1983	1.71% CU, 0.058% MO, 0.14% WO ₃ ,
			15.85 G/MT AG, 0.172 G/MT AU

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985; Simmons and
 Sawkins, 1983.

MRDS RECORD NUMBER....MX00029

MAP NUMBER.....29
 SITE NAME.....La Verde
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....29-24-20N LONGITUDE.....111-17-20W
 COMMODITIES.....CU
 MAJOR.....CU
 ORE MATERIALS.....chalcopyrite(?)
 DEPOSIT MODEL.....Cu Skarn
 USGS MODEL NUMBER.....18b
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....undivided limestone, quartzite, shale, and
 chert
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives

REFERENCES

Perez Segura, 1985.
 Salas, 1973.
 Salas, 1975.

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE CU	1500.000 MT	1985	1.2% CU

RESERVES COMMENTS.....Oxidized ore difficult to
 beneficiate.

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00030

MAP NUMBER.....30

SITE NAME.....El Creston

DISTRICT/AREA.....Hermosillo/Opodepe

STATE.....SONORA

LATITUDE.....29-55-50N LONGITUDE.....110-39-25W

COMMODITIES.....MO CU PB ZN

MAJOR.....MO MINOR.....CU OCCUR.....PB ZN

ORE MATERIALS.....molybdenite; chalcocite, minor galena,
sphalerite, chalcopyrite

GENERAL ANALYTICAL DATA.....Mo content not reported; 0.001% to >0.15%
Cu; Very low W, Ag, Au.

DEPOSIT MODEL.....Porphyry Mo, Low-F

USGS MODEL NUMBER.....21b

DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....Molybdenite mineralization consists of 1>
quartz veins 0.5 to 5.0 CM wide (max 30 CM) containing
molybdenite-pyrite-rare chalcopyrite assemblage in Creston
"granite" (70%); 2> finely disseminated molybdenite in quartz
matrix of collapse-type breccia (20%); and 3> coarsely
disseminated molybdenite in short, erratic zones of massive
sericite less than 30 CM wide in Creston "granite" (5-10%).
Economic Cu mineralization consists of thin films of chalcocite
coating finely disseminated pyrite and pyrite in quartz veins
occupying zones in Meztli diorite up to 50 M thick with short
intercepts grading > 0.15% Cu. Hypogene Cu mineralization: very
low grade (0.001-0.1% Cu), chalcopyrite in quartz veinlets with
pyrite, rare sphalerite and molybdenite. Oxide zone minerals:
ilsemanite, ferrimolybdenite, chalcantite, brochantite,
turquoise. Depth to bottom of oxidized zone: 73 M (ave 60 M).

HOST ROCK AGE.....PREC-PAL

HOST ROCK TYPE.....gneissic granite, diorite porphyry

IGNEOUS ROCK AGE.....PALEO (55.0 M.Y., K/AR)

IGNEOUS ROCK TYPE.....granodiorite, quartz monzonite porphyry

GANGUE MINERALS.....quartz, pyrite, chlorite, epidote,
sericite, tourmaline, secondary biotite, kaolin

SIGNIFICANT ALTERATION.....Potassic, propylitic, argillic, phyllic.
Silicification and moly mineralization most common in phyllic
zone. Potassic alt. considered to be pre-mineral.

REFERENCES

Cox and Singer, 1986.
Leon and Miller, 1981.
Perez Segura, 1985.
Sutulov, 1983.
Theodore and Menzie, 1983.

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MO	100000.0 MT	1985	0.16% MO
ORE MO	100000.0 MT	1983	0.06-0.08% MO

SOURCE OF RESOURCES INFORMATION.....1> Perez Segura, 1985. 2> Internet
Molybdenum Yearbook, 1983.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MO	2000.000 MT	1983	0.1% MO

SOURCE OF RESERVES INFORMATION.....Intermet Molybdenum Yearbook
(Sutulov), 1983, p. 162.

RESERVES COMMENTS.....Proven ore.

MRDS RECORD NUMBER....MX00031

MAP NUMBER.....31

SITE NAME.....San Antonio del Cobre

SYNONYM NAME.....San Antonio de la Huerta, El Cobre Mine

DISTRICT/AREA.....Soyopa/San Antonio de la Huerta

STATE.....SONORA

LATITUDE.....28-37-40N LONGITUDE.....109-37-10W

COMMODITIES.....CU MO U

MAJOR.....CU POTEN.....MO OCCUR.....U

ORE MATERIALS.....chalcocite, covellite, chalcopyrite,
cuprite, tenorite, chrysocolla, malachite, azurite; minor
molybdenite; (metatorbernite)

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....In-situ lixiviation study
underway in 1985.

DEPOSIT MODEL.....Porphyry Cu

USGS MODEL NUMBER.....17

DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....Mineralized breccia pipe, probably part of
a deeply buried porphyry system. Cu minerals occur as cavity
fillings in collapse breccia. Cu mineralization consists of 65%
chalcocite-covellite, 15% chalcopyrite, 10% cuprite-tenorite, and
10% chrysocolla-malachite-azurite. Minor molybdenite.
Metatorbernite occurrence. Oxidation minerals: goethite,
malachite, chrysocolla, hematite, limonite, pitch, and neotectite.
Hypogene minerals: specularite, pyrite, quartz, siderite,
magnetite, chalcopyrite, sericite, barite, orthoclase. Pervasive
hydrothermal alteration. Published sources indicate host rock as
Triassic-Jurassic quartzite Recent work suggests host rock may be
pre-Triassic, and possibly as old as Ordovician. (J. Stewart,
writ. comm., 10-13-88).

HOST ROCK AGE.....ORD?

HOST ROCK TYPE.....quartzite

IGNEOUS ROCK AGE.....PALEO (57.4 +/- 1.4 M.Y., MICRODIORITE)

IGNEOUS ROCK TYPE.....andesite (microdiorite), dacite porphyry

GANGUE MINERALS.....specularite, pyrite, quartz, siderite,
magnetite, sericite, barite, orthoclase

SIGNIFICANT ALTERATION.....Considerable argillic and silicic
alteration within breccia pipe. Peripheral chlorite-epidote-
calcite-pyrite-specularite assemblage.

REFERENCES

Damon, Clark, Shafiqullah, Roldan Q., and Islas L., 1981.
Guild, 1981.
Perez Segura, 1985.
Salas, 1973.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
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U .2074 MT 1985 U308
 ORE CU 3700.000 MT 1985 1.7% CU
 ORE CU 4200.000 MT 1985 1.38% CU
 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00032

MAP NUMBER.....32
 SITE NAME.....Cuatro Hermanos
 DISTRICT/AREA.....Tecoripa/Rosario
 STATE.....SONORA
 LATITUDE.....28-23-10N LONGITUDE.....109-39-25W
 COMMODITIES.....CU MO
 MAJOR.....CU MO
 ORE MATERIALS.....pyrite, chalcopryrite, molybdenite,
 chalcocite(?)
 DEPOSIT MODEL.....Porphyry Cu-Mo
 USGS MODEL NUMBER.....21a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Hydrothermal breccia. Small zones of
 secondary enrichment of Cu-Mo (0.50% Cu grade) are common
 (Echavarri and Gomez Tagle, 1971).
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....(granodiorite), andesites, tuffs and
 rhyolites
 SIGNIFICANT ALTERATION.....silicification, potassic(?)
 REFERENCES
 Echavarri and Gomez Tagle, 1971.
 Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MO	UNKNOWN MT	1985	0.25% MO

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00033

MAP NUMBER.....33
 SITE NAME.....Lucia
 SYNONYM NAME.....Beatriz
 DISTRICT/AREA.....Tecoripa
 STATE.....SONORA
 LATITUDE.....28-24-10N LONGITUDE.....109-52-20W
 COMMODITIES.....CU MO
 MAJOR.....CU MO
 ORE MATERIALS.....pyrite, chalcopryrite, molybdenite
 PRODUCTION.....M
 DEPOSIT MODEL.....Porphyry Cu-Mo
 USGS MODEL NUMBER.....21a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Mineralization follows brecciated
 structure. Sulfide content: 0.5-2.0%. The chalcopryrite to pyrite
 ratio is 2:1 (Solano and Dominguez).
 HOST ROCK TYPE.....tonalite, andesite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....tonalite, andesite
 SIGNIFICANT ALTERATION.....Sericitic, potassic (locally)

REFERENCES

Perez Segura, 1985.
Solano and Dominguez, 1972.

MRDS RECORD NUMBER....MX00034

MAP NUMBER.....34
SITE NAME.....Los Verdes
DISTRICT/AREA.....Tecoripa/Yecora
STATE.....SONORA
LATITUDE.....28-22-20N LONGITUDE.....109-09-05W
COMMODITIES.....CU MO W
MAJOR.....CU MO W
ORE MATERIALS.....pyrite, chalcopryrite, molybdenite,
scheelite, wolframite
DEPOSIT MODEL.....Porphyry Cu-Mo
USGS MODEL NUMBER.....21a
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Deposit follows faulted, brecciated zone.
HOST ROCK TYPE.....granodiorite, andesite
IGNEOUS ROCK AGE.....PALEO
(58.5 +/- 1.3 M.Y., hornblende in granodiorite
(49.3 +/-1.2 M.Y., biotite in granodiorite)
IGNEOUS ROCK TYPE.....granodiorite, andesite
SIGNIFICANT ALTERATION.....potassic
Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE CU MO W	10000.0 MT	1985	0.25% MO, 0.2% CU, 0.2% WO ₃

RESERVES COMMENTS.....Minimum estimate.
SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00035

MAP NUMBER.....35
SITE NAME.....La Estrella
DISTRICT/AREA.....Tecoripa/Tacupeto
STATE.....SONORA
LATITUDE.....28-47-25N LONGITUDE.....109-04-40W
COMMODITIES.....AG PB
MAJOR.....AG MINOR.....PB
ORE MATERIALS.....cerargyrite, galena, arsenopyrite
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....LCRET
HOST ROCK TYPE.....conglomerate
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesites
GANGUE MINERALS.....

REFERENCES

Cox and Singer, 1986.
Guild, 1981.
Perez Segura, 1985.

MRDS RECORD NUMBER....MX00036

MAP NUMBER.....36
 SITE NAME.....La Gloria-Santa Rosa
 STATE.....SONORA
 LATITUDE.....28-20- N LONGITUDE.....109-01- W
 COMMODITIES.....MO
 MAJOR.....MO
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00037

MAP NUMBER.....37
 SITE NAME.....La Guadalupana
 DISTRICT/AREA.....Magdalena/Estacion Llanos
 STATE.....SONORA
 LATITUDE.....30-25-55N LONGITUDE.....110-53-05W
 COMMODITIES.....MN
 MAJOR.....MN
 GENERAL ANALYTICAL DATA.....Ave. Mn content: 35%. Sorted ore: 47% Mn,
 8% silica, 4% Fe.
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Several Mn veins. Ave. width: 0.40-0.80 M.
 Length: 117-210 M. Estimated total depth: 30-45 M. Ore mainly
 "black calcite" and Mn oxides.
 HOST ROCK TYPE.....rhyolite
 REFERENCES
 Ayub M., 1960.
 Guild, 1981.
 Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEARS</u>	<u>GRADE</u>
ORE MN	8.276 TONS	-1960	42% MN

PRODUCTION COMMENTS.....Total pre-1960 production.
 Production rate in 1960 for mines in Est. Llanos area: 10 TPD of
 material grading 42% Mn.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE MN	7.120 TONS	1960	28% MN
ORE MN	15.807 TONS	1960	26% MN
ORE MN	22.197 TONS	1960	23% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:
 Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00038

MAP NUMBER.....38
 SITE NAME.....La Guadalupe
 STATE.....SONORA
 LATITUDE.....27-18- N LONGITUDE.....108-50- W

COMMODITIES.....CU AG AU
 MAJOR.....CU MINOR.....AG AU
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00039

MAP NUMBER.....39
 SITE NAME.....La Independencia
 STATE.....SONORA
 LATITUDE.....31-15- N LONGITUDE.....110-52- W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn(?)
 USGS MODEL NUMBER.....25g?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Mn deposit in fissure zone in granite
 traceable for several hundred meters. Longest continuous exposure:
 60 M, with average width of 40 CM.
 HOST ROCK TYPE.....granite
 REFERENCES
 Guild, 1981.
 Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00040

MAP NUMBER.....40
 SITE NAME.....La Plumosita
 STATE.....SONORA
 LATITUDE.....29-09- N LONGITUDE.....109-22- W
 COMMODITIES.....CU FE
 MAJOR.....CU MINOR.....FE
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00041

MAP NUMBER.....41
 SITE NAME.....Caracahui
 SYNONYM NAME.....Cornelio
 DISTRICT/AREA.....Santa Ana
 STATE.....SONORA
 LATITUDE.....30-15-15N LONGITUDE.....111-02-00W
 COMMODITIES.....FE
 MAJOR.....FE
 ORE MATERIALS.....hematite, magnetite
 GENERAL ANALYTICAL DATA.....60.80% total Fe, 0.60% silica, 1.385%
 total S, tr. CaO, 0.152% P, 0.20% Mn; Cabrera, et.al., 1983, table
 IV.
 PRODUCTION.....S
 DEPOSIT MODEL.....Fe Skarn

USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Actinolite skarn and pyroxene hornfels
 developed at contact between alkaline granitic phase of a
 granodiorite pluton and limestone. Ore: 60-80% specular hematite,
 20-40% magnetite. Orebody 5Mthick and 150Mlong. Also: hematite in
 quartz-barite veinlets.
 HOST ROCK AGE.....ECRET
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granodiorite
 GANGUE MINERALS.....actinolite, diopside, garnet
 (grossularite-andradite), epidote, quartz, calcite, wollastonite,
 vesuvianite, chlorite

REFERENCES

Cabrera, 1983.
 Cabrera F., Vega G. and Perez Segura, 1983.
 Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	172.500 MT	1983	61% FE

RESERVES COMMENTS.....Inferred reserves assuming depth of
 50 M.

SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00042

MAP NUMBER.....42
 SITE NAME.....Cuesta de Fierro
 DISTRICT/AREA.....Bacanora
 STATE.....SONORA
 LATITUDE.....28-55-45N LONGITUDE.....109-27-45W
 COMMODITIES.....FE
 MAJOR.....FE

ORE MATERIALS.....magnetite, hematite, pyrite
 GENERAL ANALYTICAL DATA.....38.49% Mag, 56.00% total Fe, 56.00% Fe
 sol, 1.50% Fe⁺⁺, 1.30% SiO₂, .054 total S, trace CaO, .092% P,
 1.593% MgO, .416% TiO₂, 7.696% Mn, .104% Cu; Cabrera, et.al.,
 1983, table IV.

DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Iron skarn in roof pendant.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granodiorite
 GANGUE MINERALS.....epidote, garnet, calcite, biotite,
 plagioclase, quartz, K-feldspar

REFERENCES

Cabrera F., Vega G. and Perez Segura, 1983.
 Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	860.000 MT	1983	56% FE

RESERVES COMMENTS.....Inferred reserves.
 SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00043

MAP NUMBER.....43
 SITE NAME.....San Marcos
 DISTRICT/AREA.....Tecoripa
 STATE.....SONORA
 LATITUDE.....28-46-45N LONGITUDE.....109-24-00W
 COMMODITIES.....FE
 MAJOR.....Fe
 ORE MATERIALS.....magnetite, hematite
 GENERAL ANALYTICAL DATA.....61.60% total Fe, 2.00% silica, 0.040%
 total S, tr. CaO, 0.010% P, 1.332% Mn; Cabrera, et.al., 1983,
 table IV.
 DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Fe skarn in roof pendant.
 HOST ROCK AGE.....PERM?
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....monzonite
 GANGUE MINERALS.....garnet, epidote, calcite, plagioclase,
 clinopyroxene
 REFERENCES
 Cabrera F., Vega G. and Perez Segura, 1983.
 Guild, 1981.
 Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	5000.000 MT	1983	62% FE

RESERVES COMMENTS.....Inferred reserves.
 SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00044

MAP NUMBER.....44
 SITE NAME.....San Miguelito
 DISTRICT/AREA.....Arivechi
 STATE.....SONORA
 LATITUDE.....28-51-30N LONGITUDE.....109-04-15W
 COMMODITIES.....FE
 MAJOR.....Fe
 ORE MATERIALS.....magnetite
 GENERAL ANALYTICAL DATA.....70.00% total Fe, 1.40% silica, 0.026%
 total S, tr. CaO, 0.130% P, 0.260% Mn; Cabrera, et.al., 1983,
 table IV.
 DEPOSIT MODEL.....Volcanic-Hosted Magnetite
 USGS MODEL NUMBER.....25i
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Fe-veins in granitic host rock.
 Mineralization is predominately magnetite; locally replaced by
 hematite.
 HOST ROCK TYPE.....andesite

IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....monzonite
 GANGUE MINERALS.....plagioclase, K-feldspar, apatite,
 actinolite, quartz, opaques
 REFERENCES
 Cabrera, 1983.
 Cabrera F., Vega G. and Perez Segura, 1983.
 Perez Segura, 1985.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	10000.00 MT	1985	70% FE-OXIDE
ORE FE	3000.00 MT	1983	80% FE IN MAGNETITE
ORE FE	10000.00 MT	1983	70% FE (inferred)

 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985; Cabrera, et.al.,
 1983, table VI.

 MRDS RECORD NUMBER....MX00045
 MAP NUMBER.....45
 SITE NAME.....El Volcan
 SYNONYM NAME.....Piedra Iman
 DISTRICT/AREA...../Rosario
 STATE.....SONORA
 LATITUDE.....27-45-00N LONGITUDE.....109-18-30W
 COMMODITIES.....FE
 MAJOR.....FE
 ORE MATERIALS.....hematite, magnetite, pyrite
 GENERAL ANALYTICAL DATA.....65.70% total Fe, 2.60% silica, 0.006%
 total S, 0.50% CaO, 0.904% P, 0.006% Mn; Cabrera, et.al., 1983,
 table IV.
 PRODUCTION.....M
 EXPLORATION AND DEVELOPMENT COMMENTS.....Over 10 million tons were
 expected by Cuban miners during the early 1900's. Currently (1985)
 inactive.
 DEPOSIT MODEL.....Volcanic-Hosted Magnetite
 USGS MODEL NUMBER.....25i
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Fe is concentrated in subaerial volcanic
 rocks. Fe-epithermal veins. The deposit structural direction is
 200m long and 20m wide (widest spot). 80% of the mineralization is
 magnetite that has been highly altered to hematite. Other minerals
 include apatite (very high phosphorous), pyrite, chalcopyrite,
 potassium feldspar and biotite.
 HOST ROCK TYPE.....rhyolite dome
 IGNEOUS ROCK AGE.....LTERT
 IGNEOUS ROCK TYPE.....rhyolites, ignimbrites, andesites
 GANGUE MINERALS.....apatite, quartz, K-feldspar, biotite,
 lenses of pyrite and chalcopyrite
 SIGNIFICANT ALTERATION.....magnetite altered to hematite
 REFERENCES
 Cabrera F., Vega G. and Perez Segura, 1983.
 Dutton, 1955.
 Gomez, 1961.
 Long, 1956.

Perez Segura, 1985.
 Salas, 1975.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
ORE FE	10000 MT	1900's

PRODUCTION COMMENTS.....Total amount extracted by Cuban miners during twenty year period in early 1900's

SOURCE OF PRODUCTION INFORMATION.....Long, 1956

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	7012.00 MT	1961	62.2% FE
ORE FE	533.00 MT	1961	SEE ABOVE
ORE FE	373.00 MT	1961	SEE ABOVE
ORE FE	10650.437 MT	1983	65% FE
ORE FE	7000.000 MT	1985	60.0% FE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2: Probable Reserves. Item 3: Possible Reserves. Items 4-5: Measured reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961; Cabrera, et.al., 1983; Perez Segura, 1985.

MRDS RECORD NUMBER....MX00046

MAP NUMBER.....46

SITE NAME.....Cerro de Oro

DISTRICT/AREA.....Hermosillo\Rayon

STATE.....SONORA

LATITUDE.....29-37-10N LONGITUDE.....110-37-50W

COMMODITIES.....AU CU FE

MAJOR.....AU POTEN.....CU FE

ORE MATERIALS.....gold, Fe oxides

PRODUCTION.....U

DEPOSIT MODEL.....Polymetallic Vein(?)

USGS MODEL NUMBER.....22c?

DEPOSIT SIZE.....SMALL

HOST ROCK AGE.....TRI-JUR

HOST ROCK TYPE.....quartzites, carbonaceous shales

IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)

IGNEOUS ROCK TYPE.....rhyodacite porphyry dome

GANGUE MINERALS.....quartz, Fe-oxides

REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00047

MAP NUMBER.....47

SITE NAME.....Cerro Blanco

DISTRICT/AREA.....Hermosillo

STATE.....SONORA

LATITUDE.....29-32-15N LONGITUDE.....110-11-30W

COMMODITIES.....FE

MAJOR.....FE

ORE MATERIALS.....magnetite, hematite, goethite

GENERAL ANALYTICAL DATA.....61.00% total Fe, 7.20% silica, 0.114% total S, 0.10% CaO, 0.048% P, 0.0195% Mn; Cabrera, et.al., 1983, table IV.

PRODUCTION.....S

DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Pyroxene hornfels at base of limestone
 roof pendant overlying granite. Ore: 70-80% magnetite, 10-20%
 hematite, 10% goethite. Tabular orebody 10Mwide by 150Mlong.
 HOST ROCK AGE.....PERM
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....PALEO (57 M.Y.)
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....quartz, garnet, epidote, serpentine,
 chlorite, pyrite, sphene

REFERENCES

Bracho, 1960.
 Cabrera F., Vega G. and Perez Segura, 1983.
 Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
ORE FE	322.500 MT	1983	61% FE

RESERVES COMMENTS.....Inferred reserves assuming depth of
 50 M..

SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00048

MAP NUMBER.....48
 SITE NAME.....Arroyo Coronado
 DISTRICT/AREA.....Madera
 STATE.....SONORA
 LATITUDE.....29-38-00N LONGITUDE.....109-20-15W
 COMMODITIES.....FE
 MAJOR.....FE OCCUR.....Cu Mn
 ORE MATERIALS.....magnetite, hematite, pyrite
 GENERAL ANALYTICAL DATA.....62.80% total Fe, 3.50% silica, 0.060%
 total S, tr. CaO, 0.052% P, 0.020% Mn; Cabrera, et.al., 1983,
 table IV.

PRODUCTION.....S

DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Fe skarn in roof pendent.
 HOST ROCK AGE.....CRET?
 HOST ROCK TYPE.....arenite, limestone
 IGNEOUS ROCK AGE.....LCRET
 IGNEOUS ROCK TYPE.....diorite
 GANGUE MINERALS.....quartz, chlorite, calcite, K-feldspar,
 epidote

REFERENCES

Cabrera, 1984.
 Cabrera F., Vega G. and Perez Segura, 1983.
 Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
ORE FE	500.000 MT	1983	62% FE

RESERVES COMMENTS.....Inferred reserves.

SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00049

MAP NUMBER.....49
SITE NAME.....Magallanes
DISTRICT/AREA.....Cananea
STATE.....SONORA
LATITUDE.....31-03- N LONGITUDE.....109-50- W
COMMODITIES.....AU AG U
MAJOR.....AU AG OCCUR.....U
ORE MATERIALS.....disseminated gold
GENERAL ANALYTICAL DATA.....Samples from zones of intersection of
 fault systems ran as high as 50 g/MT Au, Au:Ag < 1, over 3-5 m
 widths (Silberman, et.al., 1987).
PRODUCTION.....S
EXPLORATION AND DEVELOPMENT COMMENTS.....Government sponsored
 projects to study mineral deposits in 1981, 1982, and 1984. Some
 small-scale mining.
DEPOSIT MODEL.....Hot-Spring Au-Ag
USGS MODEL NUMBER.....25a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Gold-silver mineralization associated with
 fluorite in fractured, partially silicified rhyolite containing
 thin quartz veins. Several types of fault-controlled hydrothermal
 breccias occur; 1> "crackle breccia"-in situ hydrofracturing of
 silicified or argillized wall rock with no significant translation
 of fragments, 2> quartz-hematite-adularia breccia veins
 crosscutting fractured wall rock and containing silicified or
 argillized clasts, 3> clast supported breccia with considerable
 open space, limonite and/or hematite, and quartz, and 4> quartz-
 matrix breccia containing disseminated sulfides which oxidize to
 concentrations of limonite and/or hematite. The mineralization has
 occurred along fractures controlled by three 2-3 km long
 subparallel normal faults 600 m apart. Assay data show that the
 highest concentrations of gold, fluorite, and silver occur in
 brecciated fault zones, particularly at the intersection of two
 prominent fault systems trending NW and NE respectively.
HOST ROCK TYPE.....rhyolite
IGNEOUS ROCK AGE.....ECRET
IGNEOUS ROCK TYPE.....rhyolite
GANGUE MINERALS.....quartz, fluorite, chlorite,
 montmorillonite, kaolinite, adularia, hematite/limonite, garnet
SIGNIFICANT ALTERATION.....Widespread potassic and silicic
 alteration, most intense along fractures. Central argillic,
 peripheral propylitic, and near-surface kaolinitic alteration.
 Coarse euhedral andradite at the SE end of the dome suggests early
 thermal metamorphism. Chlorite, montmorillonite, and kaolinite
 present as alteration products. Fluorite abundant in the mine
 openings and faulted areas.
REFERENCES
 Arriaga Melendez, 1984.
 Silberman, Staude and Cox, 1987.

MRDS RECORD NUMBER....MX00050

MAP NUMBER.....50
 SITE NAME.....Maria Bonita
 DISTRICT/AREA.....Alamos
 STATE.....SONORA
 LATITUDE.....26-47- N LONGITUDE.....108-36- W
 COMMODITIES.....AU AG CU MO
 MAIN....AU AG MINOR....CU MO
 ORE MATERIALS.....pyrite, chalcopryrite, molybdenite
 PRODUCTION.....U
 EXPLORATION AND DEVELOPMENT COMMENTS.....First output expected,
 1990.
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Gold and silver bearing vein containing
 pyrite, chalcopryrite and molybdenite runs N 50 E in Laramide-age
 andesite.
 HOST ROCK TYPE.....andesite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesite
 REFERENCES
 Mining Journal, 1987, v. 309, no. 7939, p. 310.
 Perez Segura, 1985.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE CU MO AG	771.000 MT	1987	10% CU, 0.26% MO, 55 G/MT AG

 RESERVES COMMENTS.....Reserves listed for Maria Cu mine
 (Cominco); may or may not be the same as Maria Bonita.
 SOURCE OF RESERVES INFORMATION.....MJ, v. 309, p. 310.

MRDS RECORD NUMBER....MX00051

 MAP NUMBER.....51
 SITE NAME.....Campodonico
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....29-28-15N LONGITUDE.....110-35-15W
 COMMODITIES.....FE
 MAJOR.....Fe
 ORE MATERIALS.....magnetite, hematite
 GENERAL ANALYTICAL DATA.....66.80% total Fe, 1.10% silica, 0.066%
 total S, 0.112% P, 0.290% Mn; Cabrera, et.al., 1983, table IV.
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Slight development
 DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....garnet, quartz, K-feldspar, dolomite,
 olivine, biotite
 REFERENCES
 Cabrera F., Vega G. and Perez Segura, 1983.

Guild, 1981.
Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	5.000 MT	1983	67% FE

RESERVES COMMENTS.....Inferred reserves.
SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00052

MAP NUMBER.....52
SITE NAME.....Antonio Rosales
DISTRICT/AREA.....El Limon
STATE.....SONORA
LATITUDE.....26-56- N LONGITUDE.....108-56- W
COMMODITIES.....CU PB ZN AU AG
MAJOR.....CU PB ZN MINOR.....AU AG
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00053

MAP NUMBER.....53
SITE NAME.....La Victoria
SYNONYM NAME.....Alamos a la Victoria
STATE.....SONORA
LATITUDE.....27-03- N LONGITUDE.....108-58- W
COMMODITIES.....W
MAJOR.....W
PRODUCTION.....U
DEPOSIT MODEL.....W Pegmatite
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00054

MAP NUMBER.....54
SITE NAME.....Lampazos
DISTRICT/AREA.....Madera\Tepache
STATE.....SONORA
LATITUDE.....29-24-35N LONGITUDE.....109-24-40W
COMMODITIES.....AG PB ZN CU
MAJOR.....AG MINOR.....PB ZN CU
ORE MATERIALS.....argentite, polybasite, pyrargyrite,
proustite; chalcopryrite, galena, pyrite
PRODUCTION.....L
EXPLORATION AND DEVELOPMENT COMMENTS.....Owned and operated by Cia
Minera Lampazos S.A.. In 1975 milling reached 400 tonnes/day of
mostly silver ores to produce 2.0 million oz of silver.
Reevaluation of an old mine showed it would be profitable.
DEPOSIT MODEL.....Polymetallic Replacement
USGS MODEL NUMBER.....19a
DEPOSIT SIZE.....MEDIUM
HOST ROCK AGE.....LCRET

HOST ROCK TYPE.....andesite, latite, tuffs, limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....rhyolitic-andesitic assorted volcanic
 rocks

REFERENCES

Cox and Singer, 1986.
 Guild, 1981.
 Perez Segura, 1985.
 Roldan-Quintana, 1979.
 Salas, 1975.
 World Mining, July, 1980.

ANNUAL PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>
ORE AG	.400 TPD	1985
AG	2000.0 TOZ/YR	1985

SOURCE OF PRODUCTION INFORMATION.....Perez Segura, 1985

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
ORE AG	1000.000 MT	1985	430 G/MT AG
ORE AG	1054.000 ST	1980	14.9 OZ/ST AG

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985; World Mining,
 1980.

MRDS RECORD NUMBER...MX00055

MAP NUMBER.....55

SITE NAME.....Las Antillas

SYNONYM NAME.....Punto Rico, La Cubana

DISTRICT/AREA.....Cananea/Magdalena

STATE.....SONORA

LATITUDE.....30-40-00N LONGITUDE.....111-01-45W

COMMODITIES.....MN

MAJOR.....MN

ORE MATERIALS.....pyrolusite, psilomelane

GENERAL ANALYTICAL DATA.....20-25% Mn, max. 35%

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Mn(?)

USGS MODEL NUMBER.....25g?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Deposit in shear zone between gneiss and
 granite.

HOST ROCK AGE.....MES

HOST ROCK TYPE.....granitic gneiss

REFERENCES

Ayub M., 1960.
 Guild, 1981.
 Perez Segura, 1985.
 Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEARS</u>	<u>GRADE</u>
ORE MN	45.000 TONS	-1960	23% MN
ORE MN	3.200 MT	-1943	40% MN

PRODUCTION COMMENTS.....Production rate in 1960 was 7 TPD
 of material grading 42% Mn.

SOURCE OF PRODUCTION INFORMATION.....Item 1> Ayub, 1960. Item 2> Trask
and Rodriguez, 1948.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE MN	33.360 TONS	1960	18% MN
ORE MN	30.319 TONS	1960	15% MN
ORE MN	38.941 TONS	1960	13% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:
Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00056

MAP NUMBER.....56

SITE NAME.....Los Dardanelos

DISTRICT/AREA.....Cananea/Estacion Llanos

STATE.....SONORA

LATITUDE.....30-26-30N LONGITUDE.....110-54-40W

COMMODITIES.....MN

MAJOR.....MN

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL

HOST ROCK TYPE.....tuff

REFERENCES

Ayub M., 1960.

Guild, 1981.

CUMULATIVE PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEARS</u>	<u>GRADE</u>
ORE MN	1.500 TONS	-1960	42% MN

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE MN	1.810 TONS	1960	19% MN
ORE MN	2.877 TONS	1960	17% MN
ORE MN	3.633 TONS	1960	15% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:
Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00057

MAP NUMBER.....57

SITE NAME.....Las Tablas

DISTRICT/AREA.....Alamos

STATE.....SONORA

LATITUDE.....26-48-30N LONGITUDE.....108-40-45W

COMMODITIES.....CU

MAJOR.....CU

PRODUCTION.....S

DEPOSIT MODEL.....Cu Skarn

USGS MODEL NUMBER.....18b

DEPOSIT SIZE.....SMALL

HOST ROCK AGE.....JUR-CRET

HOST ROCK TYPE.....limestone?

IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives

REFERENCES

Guild, 1981.
Perez Segura, 1985.

MRDS RECORD NUMBER....MX00058

MAP NUMBER.....58
SITE NAME.....Los Alisos
DISTRICT/AREA.....Nacozari
STATE.....SONORA
LATITUDE.....30-24-25N LONGITUDE.....109-27-30W
COMMODITIES.....CU MO AG PB ZN F
MAJOR.....CU MINOR.....MO AG POTEN.....PB ZN
OCCUR.....F
ORE MATERIALS.....chalcopryite, pyrite, molybdenite, galena,
 sphalerite(?), fluorite
PRODUCTION.....S
DEPOSIT MODEL.....Porphyry Cu
USGS MODEL NUMBER.....17
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Brecciated Cu-rich zones trending N45E and
 N30W. More than 5% pyrite. Mineralization occurs primarily in
 zones of oxidation associated with abundant hematite, goethite and
 jarosite. Oxidation extends to 70m below the surface (Ramirez,
 1970).
HOST ROCK TYPE.....andesites, tuffs, (monzonite) diorite
SIGNIFICANT ALTERATION.....silicification, sericitization,
 tourmalinization
REFERENCES
Guild, 1981.
Perez Segura, 1985.
Ramirez and Lopez, 1970.

MRDS RECORD NUMBER....MX00059

MAP NUMBER.....59
SITE NAME.....Los Bronces
DISTRICT/AREA.....Tecoripa
STATE.....SONORA
LATITUDE.....28-37- N LONGITUDE.....109-29- W
COMMODITIES.....PB AG AU CU
MAJOR.....PB AG AU CU
PRODUCTION.....S
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00060

MAP NUMBER.....60
SITE NAME.....Los Crestones
DISTRICT/AREA.....Madera
STATE.....SONORA
LATITUDE.....29-11- N LONGITUDE.....109-39- W
COMMODITIES.....AG PB ZN

MAJOR.....AG PB ZN

PRODUCTION.....S

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00061

MAP NUMBER.....61

SITE NAME.....Los Tanques

DISTRICT/AREA.....Caborca/Punta Penasco

STATE.....SONORA

LATITUDE.....31-40- N LONGITUDE.....112-57- W

COMMODITIES.....AU

MAJOR.....AU

ORE MATERIALS.....native gold

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Vein(?)

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00062

MAP NUMBER.....62

SITE NAME.....Lupita

DISTRICT/AREA.....Huatabampo

STATE.....SONORA

LATITUDE.....26-54- N LONGITUDE.....108-45- W

COMMODITIES.....CU

MAJOR.....CU

PRODUCTION.....S

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00063

MAP NUMBER.....63

SITE NAME.....Maria

SYNONYM NAME.....Cerro Blanco

DISTRICT/AREA.....Alamos

STATE.....SONORA

LATITUDE.....26-58- N LONGITUDE.....108-35- W

COMMODITIES.....CU AU FE

MAJOR.....CU AU MINOR.....FE

DEPOSIT MODEL.....Epithermal Vein(?)

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Quartz and Cu-oxide vein trending N 10 E
in rhyolite.

HOST ROCK TYPE.....rhyolite

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....rhyolite

GANGUE MINERALS.....quartz

REFERENCES

Guild, 1981.
Perez Segura, 1985.

MRDS RECORD NUMBER....MX00064

MAP NUMBER.....64
SITE NAME.....Matape
DISTRICT/AREA.....Madera/Villa Pesqueira
STATE.....SONORA
LATITUDE.....29-10- N LONGITUDE.....109-56- W
COMMODITIES.....TLC VRM
MAJOR.....TLC VRM
PRODUCTION.....S
DEPOSIT MODEL.....Serpentine-Hosted Talc(?)
DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER....MX00065

MAP NUMBER.....65
SITE NAME.....Mulatos
SYNONYM NAME.....El Voladero, La Coqueta, El Hondido, La Guila, La Gloria
DISTRICT/AREA.....Mulatos/Sahuaripa
STATE.....SONORA
LATITUDE.....28-39-00N LONGITUDE.....108-44-30W
COMMODITIES.....AU CU
MAJOR.....AU CU
ORE MATERIALS.....gold in veins, pyrite predominant
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Hydrothermal disseminated gold. NNW trending Au rich quartz, pyrite veins, epithermal gold deposit. Pyrite and gold disseminated in stockworks and shear zones.
HOST ROCK TYPE.....rhyolite dome, andesite
IGNEOUS ROCK AGE.....TERT
IGNEOUS ROCK TYPE.....rhyolite, ignimbrite, andesite, associated with felsic volcanic rocks

REFERENCES

Cox and Singer, 1986.
Guild, 1981.
Perez Segura, 1985.
Salas, 1975.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE AU	200.000 MT	1985	10 G/TON AU

RESERVES COMMENTS.....Includes: El Voladero, La Coqueta, El Hondido, La Guila and La Gloria.

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00066

MAP NUMBER.....66

SITE NAME.....Nacori Chico
 DISTRICT/AREA.....Madera/Nacori Chico
 STATE.....SONORA
 LATITUDE.....29-28- N LONGITUDE.....108-43- W
 COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00067

MAP NUMBER.....67
 SITE NAME.....Nacozari
 SYNONYM NAME.....Nacozari de Garcia
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....30-26- N LONGITUDE.....109-42- W
 COMMODITIES.....CU MO
 MAJOR.....CU MINOR.....MO
 ORE MATERIALS.....chalcocite, unknown Mo
 PRODUCTION.....S
 DEPOSIT MODEL.....Porphyry Cu(?)
 USGS MODEL NUMBER.....17?
 DEPOSIT SIZE.....MEDIUM
 REFERENCES
 Guild, 1981.
 Panczner, 1987.
 Salas, 1975.

MRDS RECORD NUMBER....MX00068

MAP NUMBER.....68
 SITE NAME.....Noche Buena
 DISTRICT/AREA.....Hermosillo/Carbo
 STATE.....SONORA
 LATITUDE.....29-54-50N LONGITUDE.....111-07-35W
 COMMODITIES.....U PB ZN AG
 MAJOR.....U MINOR.....PB ZN AG
 ORE MATERIALS.....pitchblende, kasolite, uranophane,
 torbernite, metatorbernite; galena, sphalerite, pyrite
 PRODUCTION.....S
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....granite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granite
 REFERENCES
 Cabrera F., Vega G. and Perez Segura, 1983.
 Guild 1981
 Perez Segura, 1985.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE AU AG	55.000 MT	1985	AU 8.5 G/TON, AG 400 G/TON

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00069

MAP NUMBER.....69
 SITE NAME.....Oro Blanco
 SYNONYM NAME.....Bacadehuachi
 DISTRICT/AREA.....Madera\Bacadehuachi
 STATE.....SONORA
 LATITUDE.....29-50-15N LONGITUDE.....109-05-50W
 COMMODITIES.....NA
 MAJOR.....NA OCCUR.....AU
 ORE MATERIALS.....Na-sulfate
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Only exploration.
 DEPOSIT MODEL.....Evaporite Na
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Sodium sulfate in stratiform evaporite
 beds in Upper Tertiary Baucarit Group rocks.
 HOST ROCK AGE.....TERT
 REFERENCES
 Guild, 1981.
 Panczner, 1987.
 Perez Segura, 1985.
 Salas, 1973.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
NA SULFATE	100.000 MT	1985	90% NA SULFATE

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00070

MAP NUMBER.....70
 SITE NAME.....El Choro
 SYNONYM NAME.....El Chorro
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....29-21-45N LONGITUDE.....111-09-00W
 COMMODITIES.....FE
 MAJOR.....FE
 ORE MATERIALS.....goethite, hematite
 GENERAL ANALYTICAL DATA.....44.00% total Fe, 21.40% silica, 0.022%
 total S, 1.75% CaO, 1.144% P, 1.983% Mn; Cabrera, et.al., 1983,
 table IV.
 PRODUCTION.....S
 DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesites

GANGUE MINERALS.....garnet, dolomite, quartz, calcite,
chlorite, epidote, K-feldspar, plagioclase, amphiboles

REFERENCES

Cabrera F., Vega G. and Perez Segura, 1983.
Guild, 1981.
Perez Segura, 1985.
Salas, 1975.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	100.000 MT	1983	44% FE

RESERVES COMMENTS.....Inferred reserves.

SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00071

MAP NUMBER.....71

SITE NAME.....Piedras Negras

SYNONYM NAME.....La Caridad

DISTRICT/AREA.....Hermosillo

STATE.....SONORA

LATITUDE.....29-12-45N LONGITUDE.....111-04-15W

COMMODITIES.....FE

MAJOR.....FE

PRODUCTION.....S

DEPOSIT MODEL.....Fe Skarn

USGS MODEL NUMBER.....18d

DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.
Perez Segura, 1985.
Salas, 1975.

MRDS RECORD NUMBER....MX00072

MAP NUMBER.....72

SITE NAME.....Puebla

DISTRICT/AREA.....Tecoripa

STATE.....SONORA

LATITUDE.....28-59- N LONGITUDE.....109-30- W

COMMODITIES.....CU

MAJOR.....CU

PRODUCTION.....S

DEPOSIT MODEL.....Cu Skarn

USGS MODEL NUMBER.....18b

DEPOSIT SIZE.....SMALL

REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00073

MAP NUMBER.....73

SITE NAME.....Golfo de Oro

DISTRICT/AREA.....Tecoripa

STATE.....SONORA

LATITUDE.....28-37- N LONGITUDE.....109-37- W

COMMODITIES.....AU AG PB ZN

MAJOR.....AU AG POTEN.....PB ZN

ORE MATERIALS.....pyrite, pyrrhotite; galena, sphalerite,
 tetrahedrite
 GENERAL ANALYTICAL DATA.....4.5 g/t Au, 10 g/t Ag.
 PRODUCTION.....S
 DEPOSIT MODEL.....Au Skarn
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Skarn containing up to 50% disseminated
 sulfides occurs in distal zone of hydrothermal alteration
 peripheral to San Antonio del Cobre breccia pipe. Silicification
 and brecciation occurs over 2.5 sq. km area. Ore mainly pyrite and
 pyrrhotite, with minor tetrahedrite, galena and sphalerite.
 Developed ore is in oxidized zone.
 HOST ROCK AGE.....MES
 HOST ROCK TYPE.....carbonaceous, calcareous shale and
 siltstone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....dacite porphyry dikes
 SIGNIFICANT ALTERATION.....silicification
 REFERENCE....Bonham, 1985.

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE AU AG	5000.000 MT	1985	4.5 G/MT AU, 10 G/MT AG

SOURCE OF RESERVES INFORMATION.....Bonham, 1985.

MRDS RECORD NUMBER....MX00074

MAP NUMBER.....74
 SITE NAME.....San Eduardo
 DISTRICT/AREA.....Hermosillo/Pitiquio
 STATE.....SONORA
 LATITUDE.....29-30- N LONGITUDE.....111-45- W
 COMMODITIES.....PB ZN AG
 MAJOR.....PB ZN AG
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00075

MAP NUMBER.....75
 SITE NAME.....San Francisco
 DISTRICT/AREA.....Cucurpe/Punta Penasco
 STATE.....SONORA
 LATITUDE.....31-30- N LONGITUDE.....113-02- W
 COMMODITIES.....AU AG PB MO
 MAJOR.....AU AG POTEN.....PB MO
 ORE MATERIALS.....native gold, pyrite, goethite, mimetite,
 wulfenite
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Moderately distributed gold is found throughout area and is exceptionally rich at San Francisco Mine. Gold associated with pyrite, geothite, quartz, mimetite and wulfenite.

REFERENCES

Guild, 1981.
Panczner, 1987.
Salas, 1975.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
ORE AU AG	125.000 MT	1985	AU 3GR., AG 200GR.

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00076

MAP NUMBER.....76

SITE NAME.....Guerro Negro

SYNONYM NAME.....Ojo de Liebre

DISTRICT/AREA.....Bahia Sebastian Vizcaino

STATE.....NBAJA

LATITUDE.....27-55- N LONGITUDE.....114-15- W

COMMODITIES.....BRI

MAJOR.....BRI

ORE MATERIALS.....salt

PRODUCTION.....M

EXPLORATION AND DEVELOPMENT COMMENTS.....Diversification program underway in 1986 to study feasibility of producing KCl, KSO₄, MgBr and Li-salts as by-products.

DEPOSIT MODEL.....Salt Mine

DEPOSIT SIZE.....MEDIUM

REFERENCE.....Terrones L., 1986.

ANNUAL PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>
BRI	5500.00 TPY	1986

SOURCE OF PRODUCTION INFORMATION.....Mining Magazine, 1986.

MRDS RECORD NUMBER....MX00077

MAP NUMBER.....77

SITE NAME.....San Marcial

DISTRICT/AREA.....Sierra Libre/Guaymas

STATE.....SONORA

LATITUDE.....28-30- N LONGITUDE.....110-20- W

COMMODITIES.....GRF

MAJOR.....GRF

ORE MATERIALS.....graphite

PRODUCTION.....M

DEPOSIT MODEL.....Amorphous GRF

DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....Stratabound graphite deposit in metamorphic rocks of the Barranca Group.

HOST ROCK AGE.....TRI-JUR

HOST ROCK TYPE.....quartzites, carbonaceous shales

REFERENCES

Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER...MX00078

MAP NUMBER.....78
SITE NAME.....San Vicente
DISTRICT/AREA.....Ciudad Obregon
STATE.....SONORA
LATITUDE.....27-34- N LONGITUDE.....109-44- W
COMMODITIES.....MN
MAJOR.....MN
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Mn
USGS MODEL NUMBER.....25g
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposit.
REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.050 MT	-1943	30% MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER...MX00079

MAP NUMBER.....79
SITE NAME.....San Cleotilde
DISTRICT/AREA.....Hermosillo
STATE.....SONORA
LATITUDE.....29-20- N LONGITUDE.....111-50- W
COMMODITIES.....CU AU
MAJOR.....CU AU
PRODUCTION.....S
DEPOSIT MODEL.....Cu Skarn
USGS MODEL NUMBER.....18b
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER...MX00080

MAP NUMBER.....80
SITE NAME.....Santa Rosa
DISTRICT/AREA.....San Javier
STATE.....SONORA
LATITUDE.....28-36-00N LONGITUDE.....109-45-15W
COMMODITIES.....AG PB ZN AU MO? BA GRF
MAJOR....AG PB ZN MINOR....AU POTEN...MO? BA GRF
ORE MATERIALS.....Ag sulfosalts, galena, sphalerite,
molybdenite(?), barite, graphite
PRODUCTION.....M
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Three parallel epithermal veins similar to
San Javier deposit. Report of molybdenite veins in granitic rocks
(may refer to a different site.)
HOST ROCK AGE.....TRI-JUR

HOST ROCK TYPE.....quartzites
GANGUE MINERALS.....quartz, iron sulfides
REFERENCES

Cox and Singer, 1986.
Guild, 1981.
Nelson, 1910.
Perez Segura, 1985.

ANNUAL PRODUCTION

ITEM	TONNAGE($\times 10^3$)	YEAR
CU	20.000 MT/YR	1985

SOURCE OF PRODUCTION INFORMATION.....Mining Annual Report, 1975

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE AG PB ZN	160.000 MT	1985	AU:1.25 G/MT, AG:262.2 G/MT, 1.5% PB, 5.0% ZN

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00081

MAP NUMBER.....81
SITE NAME.....Saric
DISTRICT/AREA.....Nogales/Saric
STATE.....SONORA
LATITUDE.....31-10- N LONGITUDE.....111-22- W
COMMODITIES.....MN
MAJOR.....MN
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Mn
USGS MODEL NUMBER.....25g
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER....MX00082

MAP NUMBER.....82
SITE NAME.....Sierra Cabullona
DISTRICT/AREA.....Agua Prieta
STATE.....SONORA
LATITUDE.....31-05- N LONGITUDE.....109-31- W
COMMODITIES.....CU ZN AG
MAJOR.....CU ZN AG
PRODUCTION.....S
DEPOSIT MODEL.....Polymetallic Vein(?)
USGS MODEL NUMBER.....22c?
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00083

MAP NUMBER.....83
SITE NAME.....La Choya
DISTRICT/AREA.....Desierto de Altar
STATE.....SONORA
LATITUDE.....31-32-30N LONGITUDE.....112-51-30W
COMMODITIES.....AU

MAJOR.....AU
 ORE MATERIALS.....gold
 GENERAL ANALYTICAL DATA.....2-6 g/MT Au found along detachment
 surface, 3-4 g/MT Au in quartz-hematite veins. Widespread lower
 grade Au.
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Area was the site of a
 small gold operation, and is surrounded by placer workings in
 adjacent alluvium. Anaconda drilled several cores in 1985.
 DEPOSIT MODEL.....Flat-Fault Au
 USGS MODEL NUMBER.....37b
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Gold mineralization along complex
 detachment surface separating lower plate porphyritic granite,
 which is sericitically altered, brecciated and silicified, from
 unmineralized upper plate of coarse-grained biotite granite. Low
 angle fault marked by intensely sheared, oxidized zone, 1-3 m
 thick, containing abundant hematite, minor silicification and
 discontinuous quartz veins. Fault zone splays into hanging wall
 locally. Gold also found in quartz-hematite breccia veins cutting
 both upper and lower plate rocks. Bulldozer trnches made by
 Anaconda in 1984 exposed stockwork of irregular Au-bearing quartz
 veinlets over 75 by 200 m area in sericitized granite.
 HOST ROCK AGE.....ETERT?
 HOST ROCK TYPE.....porphyritic granite-aplite
 IGNEOUS ROCK AGE.....LCRET?
 IGNEOUS ROCK TYPE.....biotite granite, aplite
 GANGUE MINERALS.....quartz; iron and lead oxides
 SIGNIFICANT ALTERATION.....Sericitization common, though grade best
 indicated by presence of chlorite and hematite.
 REFERENCES
 Giles, Silberman, and Wenrich, 1986.
 Silberman, 1986.
 Silberman, Staude, and Cox, 1987.

MRDS RECORD NUMBER....MX00084

MAP NUMBER.....84
 SITE NAME.....Sierra Hachita Hueca
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....30-35- N LONGITUDE.....108-52- W
 COMMODITIES.....AG PB
 MAJOR.....AG PB
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00085

MAP NUMBER.....85
 SITE NAME.....Sierra Pinta
 DISTRICT/AREA.....Los Vidrios/Punta Penasco
 STATE.....SONORA
 LATITUDE.....31-41- N LONGITUDE.....113-10- W

COMMODITIES.....LI RU
 MAJOR.....LI MINOR.....RU
 PRODUCTION.....S
 DEPOSIT MODEL.....Lithium Pegmatite
 DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00086

MAP NUMBER.....86
 SITE NAME.....Sierra Prieta
 DISTRICT/AREA.....Los Vidrios/Punta Penasco
 STATE.....SONORA
 LATITUDE.....31-18- N LONGITUDE.....113-02- W
 COMMODITIES.....AU

MAJOR.....AU

ORE MATERIALS.....native gold

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Vein(?)

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00087

MAP NUMBER.....87
 SITE NAME.....Tecoripa
 DISTRICT/AREA.....Tecoripa/La Colorada
 STATE.....SONORA
 LATITUDE.....28-38- N LONGITUDE.....109-57- W
 COMMODITIES.....W

MAJOR.....W

PRODUCTION.....S

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00088

MAP NUMBER.....88
 SITE NAME.....Tesia Y Navojoa
 DISTRICT/AREA.....Ciudad Obregon
 STATE.....SONORA
 LATITUDE.....27-20- N LONGITUDE.....109-23- W
 COMMODITIES.....MN

MAJOR.....MN

GENERAL ANALYTICAL DATA.....Ave: 20% Mn

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00089

MAP NUMBER.....89
 SITE NAME.....Ures
 DISTRICT/AREA.....Baviacora/Ures
 STATE.....SONORA
 LATITUDE.....29-27- N LONGITUDE.....110-29- W
 COMMODITIES.....W
 MAJOR.....W
 PRODUCTION.....S
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....granite

REFERENCES

Guild 1981

Perez Segura, 1985.

Salas, 1973.

Salas, 1975.

MRDS RECORD NUMBER....MX00090

MAP NUMBER.....90
 SITE NAME.....Valedora
 DISTRICT/AREA.....Cananea
 STATE.....SONORA
 LATITUDE.....30-22- N LONGITUDE.....111-30- W
 COMMODITIES.....SB
 MAJOR.....SB
 PRODUCTION.....S
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00091

MAP NUMBER.....91
 SITE NAME.....La Herradura
 STATE.....SONORA
 LATITUDE.....31-12-00N LONGITUDE.....112-56-45W
 COMMODITIES.....AU
 MAJOR.....AU
 ORE MATERIALS.....gold
 GENERAL ANALYTICAL DATA.....3-13 g/MT Au.
 PRODUCTION.....S
 DEPOSIT MODEL.....Flat-Fault Au(?)
 USGS MODEL NUMBER.....37b?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Discontinuous, brecciated quartz veins
 containing zones of quartz-hematite breccia occur along low-angle
 shears and steep fractures.

HOST ROCK AGE.....PREC
 HOST ROCK TYPE.....gneiss, schist
 GANGUE MINERALS.....quartz, hematite
 SIGNIFICANT ALTERATION.....Sheared wall rocks are strongly
 sericitized.
 REFERENCE....Silberman, Staude and Cox, 1987.

MRDS RECORD NUMBER....MX00092

MAP NUMBER.....92
 SITE NAME.....Zona Viznaga
 DISTRICT/AREA.....Sierra Libre
 STATE.....SONORA
 LATITUDE.....28-55- N LONGITUDE.....111-06- W
 COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00093

MAP NUMBER.....93
 SITE NAME.....Aguaquito
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....30-03- N LONGITUDE.....115-28- W
 COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00094

MAP NUMBER.....94
 SITE NAME.....Alejandra
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....30-10- N LONGITUDE.....115-22- W
 COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00095

MAP NUMBER.....95
 SITE NAME.....Bonet
 SYNONYM NAME.....Trinidad

DISTRICT/AREA...../San Fernando
 STATE.....NBAJA
 LATITUDE.....28-20- N LONGITUDE.....113-54- W
 COMMODITIES.....CU FE AU AG
 MAJOR.....CU FE MINOR.....AU AG
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES

Gomez, 1961.
 Guild, 1981.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	1536.000 MT	1961	37.3% FE, 0.64% S, 0.09% P

RESERVES COMMENTS.....Proven Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00096

MAP NUMBER.....96
 SITE NAME.....Cerro Colorado
 STATE.....NBAJA
 LATITUDE.....32-28- N LONGITUDE.....116-55- W
 COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00097

MAP NUMBER.....97
 SITE NAME.....Chapala
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....29-40- N LONGITUDE.....114-25- W
 COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Cu Skarn
 USGS MODEL NUMBER.....18b
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00098

MAP NUMBER.....98
 SITE NAME.....La Princesa
 DISTRICT/AREA.....Alamo/Ensenada
 STATE.....NBAJA
 LATITUDE.....31-40- N LONGITUDE.....116-05- W
 COMMODITIES.....AU ZN CU PB
 MAJOR.....AU POTEN.....ZN CU PB

ORE MATERIALS.....native gold, sphalerite, chalcopryrite,
 galena, pyrite, marcasite
 PRODUCTION.....S
 DEPOSIT MODEL.....Polymetallic Vein(?)
 USGS MODEL NUMBER.....22c?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Sheeted auriferous quartz veins averaging
 less than 1 ft wide, trend WNW, intersect NW-trending system of
 dikes in quartz diorite. Plunge of intersection: 25 SE. Ore:
 native gold and base metal sulfides in gangue of quartz + sparse
 magnetite, specularite and pyrrhotite.
 HOST ROCK TYPE.....quartz diorite; crosscut by basic-dacitic
 dikes
 GANGUE MINERALS.....quartz, epidote, hornblende; magnetite,
 specularite, pyrrhotite
 REFERENCES
 Guild, 1981.
 Salas, 1975.
 Wisser, 1954.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE(x10 ³)	YEARS
AU	100-200 OZ	-1907

 SOURCE OF PRODUCTION INFORMATION.....Wisser, 1954.

MRDS RECORD NUMBER....MX00099

MAP NUMBER.....99
 SITE NAME.....El Arco
 SYNONYM NAME.....Calmalli, Don Carlos
 DISTRICT/AREA.....Calmalli
 STATE.....NBAJA
 LATITUDE.....28-03-20N LONGITUDE.....113-23-05W
 COMMODITIES.....CU AU MO
 MAJOR.....CU MINOR.....AU POTEN.....MO
 ORE MATERIALS.....chalcopryrite, pyrite, bornite,
 molybdenite, gold; chalcocite, covellite, digenite, cuprite,
 native Cu
 GENERAL ANALYTICAL DATA.....0.6% Cu
 PRODUCTION.....L
 DEPOSIT MODEL.....Porphyry Cu
 USGS MODEL NUMBER.....17
 DEPOSIT SIZE.....LARGE
 DEPOSIT DESCRIPTION.....Metamorphosed porphyry copper deposit.
 Primary mineralization consists of pyrite, chalcopryrite, bornite,
 molybdenite, minor magnetite and gold disseminated in fractures
 and in quartz-Kspar-calcite-chlorite-epidote veinlets (@3 mm
 wide). Pyrite:chalcopryrite ratio 1.3 to 1 in central core, with
 internal subzones of 0.5 to 1. Grades outward to 14:1 in pyritic
 halo surrounding QMP intrusive. Capped by goethite layer averaging
 40 M thick (max. 60 M). Oxidation minerals: chrysocolla, goethite,
 hematite, clay minerals, neotocite, diopside and malachite. High-
 grade transition zone 9 M thick below oxide zone contains bornite,
 chalcocite, covellite, digenite, cuprite and native Cu. Limited
 distribution of gold.
 HOST ROCK AGE.....LJUR-ECRET

HOST ROCK TYPE.....andesite porphyry and breccia
 IGNEOUS ROCK AGE.....ECRET (107 M.Y., QMP)
 IGNEOUS ROCK TYPE.....quartz monzodiorite porphyry, post-min.
 diabase dikes
 GANGUE MINERALS.....chlorite, epidote, calcite, quartz,
 albite, feldspar, sericite, rare biotite, trace axinite
 SIGNIFICANT ALTERATION.....Zoned outwardly: silicic core ringed by
 potassic and propylitic alteration zones and pyrite halo. No
 sericitic (phyllic) alteration present.

REFERENCES

Cox and Singer, 1986.
 Echavarri P. and Rangin,, 1978.
 Guild, 1981.
 Panczner, 1987.
 Salas, 1975.

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE CU	600000.0 MT	1978	0.6% CU
ORE CU	65000.00 MT	1978	OXIDE ZONE

RESERVES COMMENTS.....Calculated at cut-off grade of 0.4%
 Cu. Does not include small tonnage of high-grade ore from
 transition zone beneath oxide layer.

SOURCE OF RESERVES INFORMATION.....Echavarri y Rangin, 1978.

MRDS RECORD NUMBER....MX00100

MAP NUMBER.....100

SITE NAME.....Cucurpe district

SYNONYM NAME.....Ana Maria, Cabeza Blanca, Corona de Oro, Mercedes,
 Pragedia, Praxedis, Puerto de Oro, Tragedia.

DISTRICT/AREA.....Cucurpe

STATE.....SONORA

LATITUDE.....30-25- N LONGITUDE.....110-39- W

COMMODITIES.....AU AG PB CU

MAJOR.....AU AG MINOR.....PB CU

GENERAL ANALYTICAL DATA.....Ave: 5-6 g/MT Au, 100-150 g/MT Ag.

DEPOSIT MODEL.....Epithermal Vein

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

HOST ROCK AGE.....LCRET-ETERT

HOST ROCK TYPE.....andesite, acid tuff

REFERENCE....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE AU AG	1738.500 MT	1985	5.1 G/MT AU, 131 G/MT AG

RESERVES COMMENTS.....Data combined from numerous mines
 listed in table as being in Cucurpe municipality. Grade listed
 above represents a weighted average.

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00101

MAP NUMBER.....101

SITE NAME.....El Gato

DISTRICT/AREA...../Ensenada

STATE.....NBAJA

LATITUDE.....29-53- N LONGITUDE.....115-17- W
 COMMODITIES.....CU FE
 MAJOR.....CU MINOR.....FE
 PRODUCTION.....S
 DEPOSIT MODEL.....Cu Skarn
 USGS MODEL NUMBER.....18b
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00102

MAP NUMBER.....102
 SITE NAME.....El Manzano
 DISTRICT/AREA...../Rosario
 STATE.....NBAJA
 LATITUDE.....30-17- N LONGITUDE.....115-37- W
 COMMODITIES.....FE
 MAJOR.....FE

GENERAL ANALYTICAL DATA.....62-63% Fe, 0.07-0.09% P, 0.11-0.15% S,
 (Dutton, 1955).

PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES

Dutton, C.E., 1955.

Gomez, 1961.

Guild, 1981.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	4902.00 MT	1961	63.0% FE, 0.16% S, 0.09% P
ORE FE	425.00 MT	1961	SEE ABOVE
ORE FE	641.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
 Probable Reserves. Item 3: Possible Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00103

MAP NUMBER.....103
 SITE NAME.....El Socorro
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....31-02- N LONGITUDE.....115-45- W
 COMMODITIES.....AU
 MAJOR.....AU

PRODUCTION.....S
 DEPOSIT MODEL.....Au Skarn
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00104

MAP NUMBER.....104

SITE NAME.....Esmeralda
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....29-45- N LONGITUDE.....115-10- W
 COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00105

MAP NUMBER.....105
 SITE NAME.....Hercules Coloso, et.al.
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....31-17- N LONGITUDE.....116-15- W
 COMMODITIES.....FE
 MAJOR.....FE
 PRODUCTION.....S
 DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00106

MAP NUMBER.....106
 SITE NAME.....La Escondida
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....29-05- N LONGITUDE.....113-40- W
 COMMODITIES.....AU
 MAJOR.....AU
 ORE MATERIALS.....native gold
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00107

MAP NUMBER.....107
 SITE NAME.....La Milla
 DISTRICT/AREA...../Tecate
 STATE.....NBAJA
 LATITUDE.....32-15- N LONGITUDE.....116-00- W
 COMMODITIES.....AU
 MAJOR.....AU
 ORE MATERIALS.....native gold

PRODUCTION.....S
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00108

MAP NUMBER.....108
SITE NAME.....La Oliva
DISTRICT/AREA...../Mexicali
STATE.....NBAJA
LATITUDE.....32-05- N LONGITUDE.....115-45- W
COMMODITIES.....W
MAJOR.....W
PRODUCTION.....S
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00109

MAP NUMBER.....109
SITE NAME.....Las Chollas
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....28-50- N LONGITUDE.....113-30- W
COMMODITIES.....AU
MAJOR.....AU
ORE MATERIALS.....native gold
PRODUCTION.....S
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00110

MAP NUMBER.....110
SITE NAME.....Leon Grande
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....29-15- N LONGITUDE.....114-25- W
COMMODITIES.....AU
MAJOR.....AU
ORE MATERIALS.....native gold
PRODUCTION.....S
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00111

MAP NUMBER.....111
SITE NAME.....Los Gavilanes
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....32-10- N LONGITUDE.....116-10- W
COMMODITIES.....W
MAJOR.....W
PRODUCTION.....S
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
REFERENCES
Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER....MX00112

MAP NUMBER.....112
SITE NAME.....Luciano
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....29-40- N LONGITUDE.....115-05- W
COMMODITIES.....CU
MAJOR.....CU
PRODUCTION.....S
DEPOSIT MODEL.....Polymetallic Replacement (?)
USGS MODEL NUMBER.....19a?
DEPOSIT SIZE.....SMALL
REFERENCES
Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER....MX00113

MAP NUMBER.....113
SITE NAME.....Mexicali
DISTRICT/AREA...../Mexicali
STATE.....NBAJA
LATITUDE.....32-35- N LONGITUDE.....115-30- W
COMMODITIES.....TLC
MAJOR.....TLC
PRODUCTION.....S
DEPOSIT MODEL.....Serpentine-Hosted Talc
DEPOSIT SIZE.....SMALL
REFERENCES
Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER....MX00114

MAP NUMBER.....114
SITE NAME.....Mina de Barita
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....30-00- N LONGITUDE.....114-40- W

COMMODITIES.....BA

MAJOR.....BA

PRODUCTION.....S

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00115

MAP NUMBER.....115

SITE NAME.....Real del Castillo

DISTRICT/AREA.....Real del Castillo/Ensenada

STATE.....NBAJA

LATITUDE.....31-55- N LONGITUDE.....116-15- W

COMMODITIES.....AU

MAJOR.....AU

ORE MATERIALS.....native gold

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Extensively worked and
explored during late 19 century.

DEPOSIT MODEL.....Low-Sulfide Au

USGS MODEL NUMBER.....36a

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Auriferous quartz veins along W edge of
roof pendant consisting of chloritic schists and slates intruded
by numerous granitic dikes and porphyries. Veins crosscut
schistosity (NNW, steep E).

HOST ROCK TYPE.....chloritic schist, slate

IGNEOUS ROCK AGE.....CRET

IGNEOUS ROCK TYPE.....granite

GANGUE MINERALS.....quartz

REFERENCES

Guild, 1981.

Panczner, 1987.

Salas, 1975.

Wisser, 1954.

MRDS RECORD NUMBER....MX00116

MAP NUMBER.....116

SITE NAME.....San Antonio del Mar

DISTRICT/AREA...../Ensenada

STATE.....NBAJA

LATITUDE.....31-05- N LONGITUDE.....116-15- W

COMMODITIES.....AU CU FE

MAJOR.....AU CU MINOR.....FE

PRODUCTION.....S

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00117

MAP NUMBER.....117
 SITE NAME.....San Felipe
 SYNONYM NAME.....El Apache
 DISTRICT/AREA...../Mexicali
 STATE.....NBAJA
 LATITUDE.....31-00- N LONGITUDE.....114-50- W
 COMMODITIES.....S
 ORE MATERIALS.....native sulfur
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00118

MAP NUMBER.....118
 SITE NAME.....San Jose
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....31-05- N LONGITUDE.....115-35- W
 COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00119

MAP NUMBER.....119
 SITE NAME.....San Juan
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....28-40- N LONGITUDE.....113-30- W
 COMMODITIES.....AU
 MAJOR.....AU
 ORE MATERIALS.....native gold
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00120

MAP NUMBER.....120
 SITE NAME.....Santa Ursula
 DISTRICT/AREA...../San Fernando
 STATE.....NBAJA
 LATITUDE.....29-55- N LONGITUDE.....115-25- W
 COMMODITIES.....FE
 MAJOR.....FE

GENERAL ANALYTICAL DATA.....56-68% Fe, 0.03-0.16% P, 0.03-0.28% S,
(Dutton, 1955).

PRODUCTION.....M

EXPLORATION AND DEVELOPMENT COMMENTS.....Explored by at least 22
dd-holes.

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....MEDIUM

REFERENCES

Dutton, 1955.

Gomez, 1961..

Guild, 1981.

Salas, 1975.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	27000.00 MT	1961	63.9% FE, 0.44% S, 0.07% P
ORE FE	3000.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
Probable Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00121

MAP NUMBER.....121

SITE NAME.....Santa Teresa

STATE.....NBAJA

LATITUDE.....31-05- N LONGITUDE.....116-01- W

COMMODITIES.....AU CU FE

MAJOR.....AU CU MINOR.....FE

PRODUCTION.....S

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00122

MAP NUMBER.....122

SITE NAME.....Valladares

DISTRICT/AREA...../Mexicali

STATE.....NBAJA

LATITUDE.....31-01- N LONGITUDE.....115-25- W

COMMODITIES.....AU

MAJOR.....AU

PRODUCTION.....S

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00123

MAP NUMBER.....123

SITE NAME.....Vibora

DISTRICT/AREA...../Ensenada

STATE.....NBAJA

LATITUDE.....30-10- N LONGITUDE.....115-46- W

COMMODITIES.....CU

MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00124

MAP NUMBER.....124
 SITE NAME.....Comondu
 DISTRICT/AREA...../Comondu
 STATE.....SBAJA
 LATITUDE.....26-05- N LONGITUDE.....111-50- W
 COMMODITIES.....TLC
 MAJOR.....TLC
 PRODUCTION.....S
 DEPOSIT MODEL.....Serpentine-Hosted Talc
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00125

MAP NUMBER.....125
 SITE NAME.....El Boleo
 DISTRICT/AREA.....Santa Rosalia/Mulege
 STATE.....SBAJA
 LATITUDE.....27-17- N LONGITUDE.....112-18- W
 COMMODITIES.....CU ZN AG MN PB CO
 MAJOR.....CU ZN MINOR.....AG POTEN.....MN OCCUR.....PB CO
 ORE MATERIALS.....chalcocite, chalcopyrite, bornite,
 covellite, native Cu, chrysocolla, azurite, malachite, atacamite,
 melaconite, cuprite; cryptomelane, pyrolusite; minor pyrite,
 galena
 GENERAL ANALYTICAL DATA.....Average grade of ore mined 1886-1947: 4.8%
 Cu; ranged from > 8% to 3-3.5%. Other anomalous elements: 0.05-
 6.0% Zn (ave. 0.8%), 0.02-0.86% Co (ave. 0.12%), minor Ag.
 PRODUCTION.....L
 DEPOSIT MODEL.....Basaltic Cu
 USGS MODEL NUMBER.....23
 DEPOSIT SIZE.....LARGE
 DEPOSIT DESCRIPTION.....Thin, subhorizontal tabular ore bodies and
 mantos in argillaceous tuff. Five main horizons, each underlain by
 tuff conglomerate or equivalent arenaceous tuff bed. Ore horizons
 numbered 0, 1, 2, 3 and 4 from top to bottom. Sulfide zone ore:
 finely disseminated black chalcocite associated with chalcopyrite,
 bornite, covellite, native Cu and minor pyrite and galena.
 Widespread but ill-defined oxide zone contains nodules (boleos) of
 chrysocolla, azurite, malachite, atacamite, melaconite, cuprite,
 cryptomelane and pyrolusite. Gangue consists of montmorillonite
 and altered volcanic rocks crosscut by veinlets of gypsum,
 calcite, chalcedony and jasper. Ore zones separated from footwall
 conglomerate (or tuff) by thin layer (10-50 CM) of finely

laminated arenaceous tuff. Average thickness of ore bodies: 60-80 CM.

HOST ROCK AGE.....EPLIO

HOST ROCK TYPE.....argillaceous tuffs, tuffaceous conglomerates

GANGUE MINERALS.....montmorillonite, gypsum, calcite, chalcedony, jasper

SIGNIFICANT ALTERATION.....argillic

REFERENCES

Cox and Singer, 1986.

Guild, 1981.

Salas, 1975.

Wilson, 1955.

Wilson, 1956.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
CU	574.000 MT	1886-1955	
ORE CU	14650.000 MT	1886-1955	
CU	540.342 MT	1886-1947	
ORE CU	13622.327 MT	1886-1947	4.81% CU

PRODUCTION COMMENTS.....Ave. Annual Prod: 221,504 MT; Max. Annual Prod: (1913) 371,300 MT.

SOURCE OF PRODUCTION INFORMATION.....Wilson, 1955; Wilson, 1956.

RESOURCES COMMENTS.....2-5 million tons of marginal Cu reserves (@2% Cu).

SOURCE OF RESOURCES INFORMATION.....Wilson, 1955.

MRDS RECORD NUMBER....MX00126

MAP NUMBER.....126

SITE NAME.....El Gavilan

SYNONYM NAME.....Cata Panchita, Cata Panzon, Cata Luisita

DISTRICT/AREA.....Punta Concepcion/Mulege

STATE.....SBAJA

LATITUDE.....26-52-32N LONGITUDE.....111-50-25W

COMMODITIES.....MN V

MAJOR.....MN OCCUR.....V

ORE MATERIALS.....pyrolusite, psilomelane, hollandite, ramsdellite, manganite, wad, (bustamite), (rhodonite); (vanadinite)

GENERAL ANALYTICAL DATA.....43.38-55.81% Mn (Gonzalez, 1956.)

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Ore shipped during WW1 and WW2. In 1942, property taken over by Cia. Mexicana de Manganese, S.A. In 1944, a 1200-ton mill was installed and attempt was made at large scale mining of low grade Mn ores. Project abandoned in 1948 due to unsatisfactory results.

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Veins and veinlets of Mn oxides cutting hornblende andesites (Gonzalez, 1956) and/or basalt members of the Comondu volcanics (Wilson, 1956.) Principal veins range from 10-50 CM in width. Most are veinlets only 1-10 CM wide. Ave strike: N 20-25 W with dip of 50-70 SW. A less prominent system of veinlets

strikes N 50 W to due W and dips 50-70 NE to N. Veinlets tend to reticulate along both strike and dip. Spacing between veinlets ranges from a fraction of a meter up to 2-3 meters. Irregular secondary enrichment zone at surface of outcrops contains numerous veinlets of Mn minerals. Economically exploitable ores consist of oxides, mainly psilomelane and pyrolusite, with lesser amounts of manganite and wad. Mn-silicates known to occur include bustamite, found in two open cuts and pockets of rhodonite, manganite and pyrolusite at Cata Luisita. Hollandite and ramsdellite also reported. Gangue minerals include: gypsum, quartz, rare calcite and dolomite, aragonite, hematite and limonite. Epidote occurs in altered exfoliation layers capping andesites. Crystals of vanadinite occur in one locality.

HOST ROCK TYPE.....hornblende andesite and/or olivine basalt
 IGNEOUS ROCK AGE.....MIO
 IGNEOUS ROCK TYPE.....hornblende andesite, olivine basalt
 GANGUE MINERALS.....gypsum, quartz, rare calcite and dolomite,
 aragonite, hematite, limonite, epidote

REFERENCES

Gonzalez R., 1956.
 Guild, 1981.
 Trask and Rodriguez, 1948.
 Wilson, 1956b.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	10.000 MT	-1943	50% MN

PRODUCTION COMMENTS.....Possible production estimated at
 10,000 or more tons of high-grade, hand-sorted Mn oxide ore.
 (Wilson, 1956)

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	200.000 TONS	1956	43.38-55.81% MN

RESERVES COMMENTS.....High-grade oxide ore.

SOURCE OF RESERVES INFORMATION.....Gonzalez, 1956a.

MRDS RECORD NUMBER....MX00127

MAP NUMBER.....127
 SITE NAME.....El Tigre
 DISTRICT/AREA...../Mulege
 STATE.....SBAJA
 LATITUDE.....27-33- N LONGITUDE.....114-42- W
 COMMODITIES.....CR
 MAJOR.....CR
 PRODUCTION.....S
 DEPOSIT MODEL.....Podiform Cr
 USGS MODEL NUMBER.....8a
 DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00128

MAP NUMBER.....128

SITE NAME.....El Triunfo-San Antonio Zone
 DISTRICT/AREA.....San Antonio/Sierra de Victoria
 STATE.....SBAJA
 LATITUDE.....23-48-14N LONGITUDE.....110-02-05W
 COMMODITIES.....AG AU PB ZN SB CO
 MAJOR.....AU AG MINOR.....PB POTEN.....ZN SB OCCUR.....CO
 ORE MATERIALS.....pyrite, arsenopyrite, sphalerite, galena,
 tetrahedrite, boulangerite, stibnite, (smaltite)
 GENERAL ANALYTICAL DATA.....8 g/MT Au, 850 g/MT Ag, 4% Pb, (Wisser,
 1954).
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Main activity: 1878-1889.
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Widely distributed gold and silver in
 lenses of closely spaced stringers consisting of drusy,
 chalcedonic quartz and sulfides, in schist near contact with
 aplite or gneissic granite. Individual orebodies averaged 2-3 ft
 in thickness. Locally up to 40% sulfides.
 HOST ROCK TYPE.....schist
 IGNEOUS ROCK TYPE.....aplite, gneissic granite
 GANGUE MINERALS.....quartz, chalcedony
 REFERENCES
 Guild, 1981.
 Panczner, 1987.
 Salas, 1975.
 Wisser, 1954.
 PRODUCTION COMMENTS.....Produced Au and Ag equal to a
 value of \$2,200,000.00, 1874-1918. Mine closed in 1918 and was
 never able to fully re-open.
 SOURCE OF PRODUCTION INFORMATION.....Panczner, 1987

MRDS RECORD NUMBER....MX00129

MAP NUMBER.....129
 SITE NAME.....Isla del Carmen
 DISTRICT/AREA...../Comondu
 STATE.....SBAJA
 LATITUDE.....24-54- N LONGITUDE.....111-11- W
 COMMODITIES.....NA
 MAJOR.....NA
 PRODUCTION.....S
 DEPOSIT MODEL.....Evaporite Na
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00130

MAP NUMBER.....130
 SITE NAME.....Isla Magdalena
 DISTRICT/AREA...../Comondu
 STATE.....SBAJA
 LATITUDE.....24-54- N LONGITUDE.....112-13- W

COMMODITIES.....MG
 MAJOR.....MG
 ORE MATERIALS.....magnesite
 PRODUCTION.....S
 DEPOSIT MODEL.....Serpentine-Hosted Magnesite
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00131

MAP NUMBER.....131
 SITE NAME.....Isla Santa Margarita
 SYNONYM NAME.....Isla Margarita
 DISTRICT/AREA...../La Paz
 STATE.....SBAJA
 LATITUDE.....24-30- N LONGITUDE.....111-55- W
 COMMODITIES.....MG
 MAJOR.....MG
 ORE MATERIALS.....magnesite
 PRODUCTION.....S
 DEPOSIT MODEL.....Serpentine-Hosted Magnesite
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00132

MAP NUMBER.....132
 SITE NAME.....La Minita
 STATE.....SBAJA
 LATITUDE.....27-29- N LONGITUDE.....114-11- W
 COMMODITIES.....AU
 MAJOR.....AU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00133

MAP NUMBER.....133
 SITE NAME.....Lucifer
 DISTRICT/AREA.....Boleo/Santa Rosalia
 STATE.....SBAJA
 LATITUDE.....27-21-34N LONGITUDE.....112-23-12W
 COMMODITIES.....MN
 MAJOR.....MN
 ORE MATERIALS.....cryptomelane, pyrolusite, hollandite,
 coronadite
 GENERAL ANALYTICAL DATA.....Ave. grade: 44-45% Mn
 PRODUCTION.....M
 EXPLORATION AND DEVELOPMENT COMMENTS.....Two diamond drilling
 programs: 1947-1948 and 1951-1953. See General Comments.
 DEPOSIT MODEL.....Volcanogenic Mn

USGS MODEL NUMBER.....24c
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Gently dipping tabular ore body of high-grade Mn oxide. Locally discordant. Main ore body: 600 M long, 50-130 M wide, 1-6 M thick (ave. 2.4 m). Ore fine-grained and friable. Cryptomelane with an average Ba content of more than 3%, average Pb content less than 2% and combined Na+Ca content less than 1% appears to be characteristic of the Lucifer ore.
 (Freiberg, 1982)

HOST ROCK TYPE.....arenaceous tuff
 IGNEOUS ROCK AGE.....EPLIO
 IGNEOUS ROCK TYPE.....interbedded latitic-andesitic tuff and conglomerate
 GANGUE MINERALS.....jasper, hematite, limonite
 REFERENCES

Cox and Singer, 1986.
 Freiberg, 1982.
 Guild, 1981.
 Salas, 1975.
 Trask and Rodriguez, 1948.
 Wilson, 1956c.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR
ORE MN	10.412 LT	1942
ORE MN	22.806 LT	1943
ORE MN	33.447 LT	1944
ORE MN	20.366 LT	1945
ORE MN	14.289 LT	1946
ORE MN	37.185 LT	1947
ORE MN	40.929 LT	1948
ORE MN	36.547 LT	1949
ORE MN	21.425 LT	1950
ORE MN	20.926 LT	1951
ORE MN	23.347 LT	1952
ORE MN	15.400 LT	1953
ORE MN	9.650 LT	1954
ORE MN	9.615 LT	1955

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	316.344 LT	1942-1955	AVE. 44-45% MN.

PRODUCTION COMMENTS.....Grade of main ore body mined in early years came close to 47-48% Mn. Overall average grade: 44-45% Mn. Deposit mined out.

SOURCE OF PRODUCTION INFORMATION.....Wilson, 1956c.

MRDS RECORD NUMBER....MX00134

MAP NUMBER.....134
 SITE NAME.....Punta Eugenia
 DISTRICT/AREA...../Mulege
 STATE.....SBAJA
 LATITUDE.....27-27- N LONGITUDE.....114-15- W
 COMMODITIES.....ASB
 MAJOR.....ASB
 PRODUCTION.....S

DEPOSIT MODEL.....Serpentine-Hosted Asbestos(?)
USGS MODEL NUMBER.....8d?
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00135

MAP NUMBER.....135
SITE NAME.....San Bartolome District
STATE.....SBAJA
LATITUDE.....27-28- N LONGITUDE.....114-25- W
COMMODITIES.....MG
MAJOR.....MG
PRODUCTION.....S
DEPOSIT MODEL.....Serpentine-Hosted Magnesite(?)
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00136

MAP NUMBER.....136
SITE NAME.....San Hilario Norte
DISTRICT/AREA...../La Paz
STATE.....SBAJA
LATITUDE.....24-28- N LONGITUDE.....111-09- W
COMMODITIES.....P
MAJOR.....P
PRODUCTION.....M
DEPOSIT MODEL.....Upwelling-Type P
USGS MODEL NUMBER.....34c
DEPOSIT SIZE.....MEDIUM
REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00137

MAP NUMBER.....137
SITE NAME.....San Hilario Sur
DISTRICT/AREA...../La Paz
STATE.....SBAJA
LATITUDE.....24-17- N LONGITUDE.....111-00- W
COMMODITIES.....P
MAJOR.....P
PRODUCTION.....M
DEPOSIT MODEL.....Upwelling-Type P
USGS MODEL NUMBER.....34c
DEPOSIT SIZE.....MEDIUM
REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00138

MAP NUMBER.....138
SITE NAME.....San Jose del Cabo

DISTRICT/AREA...../San Jose del Cabo
STATE.....SBAJA
LATITUDE.....23-04- N LONGITUDE.....109-40- W
COMMODITIES.....AU AG W
MAJOR.....AU AG MINOR.....W
PRODUCTION.....S
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00139

MAP NUMBER.....139
SITE NAME.....San Marcos
DISTRICT/AREA...../Mulege
STATE.....SBAJA
LATITUDE.....27-13- N LONGITUDE.....112-05- W
COMMODITIES.....GYP
MAJOR.....GYP
ORE MATERIALS.....gypsum
PRODUCTION.....L
DEPOSIT MODEL.....Bedded Gypsum
DEPOSIT SIZE.....LARGE

REFERENCES

Guild, 1981.

Salas, 1975.

Terrones L., 1986.

MRDS RECORD NUMBER....MX00140

MAP NUMBER.....140
SITE NAME.....San Roque
STATE.....SBAJA
LATITUDE.....27-15- N LONGITUDE.....114-24- W
COMMODITIES.....CU
MAJOR.....CU
PRODUCTION.....S
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL

REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00141

MAP NUMBER.....141
SITE NAME.....Santa Isabel (San Nicolas)
STATE.....SBAJA
LATITUDE.....26-29- N LONGITUDE.....111-33- W
COMMODITIES.....MN
MAJOR.....MN
ORE MATERIALS.....psilomelane
GENERAL ANALYTICAL DATA.....Max: 45% Mn
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Mn
USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Vein in fissure zone exposed
 discontinuously for 200 M. Northern part of zone strikes N 10-20 E
 and dips from 50 W to vertical. At southern end attitude changes
 to N 15-20 W with 80-90 E dip. Thickness of vein ranges from 1 to
 30 CM, averages 1-15 CM. Ore consists of botryoidal psilomelane-
 type Mn oxides associated with veinlets of calcite and orange
 opal.
 HOST ROCK TYPE.....reddish volcanic conglomerate
 GANGUE MINERALS.....calcite, opal
 REFERENCES

Guild, 1981.
 Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.300 MT	-1943	45%(?) MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00142

MAP NUMBER.....142
 SITE NAME.....Santiago
 DISTRICT/AREA.....San Antonio
 STATE.....SBAJA
 LATITUDE.....23-30- N LONGITUDE.....109-45- W
 COMMODITIES.....AU AG W
 MAJOR.....AU AG MINOR.....W
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES

Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX00143

MAP NUMBER.....143
 SITE NAME.....Todos Santos
 STATE.....SBAJA
 LATITUDE.....23-30- N LONGITUDE.....110-12- W
 COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00144

MAP NUMBER.....144
 SITE NAME.....Todos Santos
 DISTRICT/AREA...../Todos Santos
 STATE.....SBAJA
 LATITUDE.....23-26- N LONGITUDE.....110-11- W
 COMMODITIES.....AU AG W
 MAJOR.....AU AG MINOR.....W
 PRODUCTION.....S

DEPOSIT MODEL.....Placer Au-W
USGS MODEL NUMBER.....39
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX00145

MAP NUMBER.....145
SITE NAME.....Piedras Verdes
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-10-05N LONGITUDE.....109-01-10W
COMMODITIES.....CU MO
MAJOR.....CU MINOR.....MO
ORE MATERIALS.....pyrite, chalcopryrite, molybdenite,
 chalcocite
GENERAL ANALYTICAL DATA.....3-4% Cu, (Pearce, 1910).
PRODUCTION.....S
DEPOSIT MODEL.....Porphyry Cu
USGS MODEL NUMBER.....17
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....MES
HOST ROCK TYPE.....quartzite, schist
IGNEOUS ROCK AGE.....LCRET (67.3 +/- 1.4 M.Y.; BIOTITE)
IGNEOUS ROCK TYPE.....granodiorite
SIGNIFICANT ALTERATION.....sericite
REFERENCES

Pearce, 1910.

Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE CU	5000.000 MT	1985	0.5% CU
ORE CU	29.08125 MT	1985	2.73% CU

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00146

MAP NUMBER.....146
SITE NAME.....San Francisco
DISTRICT/AREA.....El Antimonio/San Francisco
STATE.....SONORA
LATITUDE.....30-46-37N LONGITUDE.....112-35-20W
COMMODITIES.....SB
MAJOR.....SB
ORE MATERIALS.....antimony oxide, stibnite
EXPLORATION AND DEVELOPMENT COMMENTS.....One of the most productive
 mines in the district from about 1925-1935. Inactive in 1943.
DEPOSIT MODEL.....Simple Sb
USGS MODEL NUMBER.....27d
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Sb vein deposit, either two separate veins
 or single vein with 12 M offset near central part. Known strike
 length: 200 M. Vein strikes N 45-70 E. On the west side of arroyo,
 vein dips 85 N and consists of 30 CM of brecciated and altered

wall rock with about 10 CM of low-grade Sb ore along hanging wall. Vein dips 75-85 S on east side of arroyo. In the middle and lower parts of the deposit, the dip of the vein flattens to the N and ore said to be 3 M wide along large part of the vein. Ore mostly oxidized to deepest levels of the mine, but about 4 tons of unoxidized stibnite ore was mined from below the second level. Vein was mined to a depth of 35-40 M.

HOST ROCK AGE.....TRI?
 HOST ROCK TYPE.....red-gray sandstone
 REFERENCE....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00147

MAP NUMBER.....147
 SITE NAME.....San Federico
 DISTRICT/AREA.....El Antimonio/La Montana
 STATE.....SONORA
 LATITUDE.....30-43-56N LONGITUDE.....112-35-20W
 COMMODITIES.....SB
 MAJOR.....SB
 ORE MATERIALS.....antimony oxide
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Mined intermittently since early days of the district. Inactive in 1943.
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Vein generally 10-20 CM wide with known strike length of 70 M. Consists of coarse-grained quartz enclosing minor amounts of antimony oxide. Mined out portions of vein may have been wider and of higher grade.
 HOST ROCK AGE.....TRI
 HOST ROCK TYPE.....sandstone, fine-grained diorite
 IGNEOUS ROCK AGE.....TERT?
 IGNEOUS ROCK TYPE.....fine-grained diorite
 GANGUE MINERALS.....coarse-grained quartz
 REFERENCE....White and Guiza, 1949.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE SB	.200 MT	-1943	40% SB

 PRODUCTION COMMENTS.....Should be considered a maximum estimate.
 SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00148

MAP NUMBER.....148
 SITE NAME.....San Francisco
 DISTRICT/AREA.....Madera
 STATE.....SONORA
 LATITUDE.....29-14-40N LONGITUDE.....109-50-45W
 COMMODITIES.....PB ZN CU
 MAIN....PB ZN CU
 PRODUCTION.....U
 DEPOSIT MODEL.....Zn-Pb Skarn
 USGS MODEL NUMBER.....18c

DEPOSIT SIZE.....SMALL
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00149

MAP NUMBER.....149
 SITE NAME.....La Colorada
 SYNONYM NAME.....La Colorada Norte, La Colorada Sur
 DISTRICT/AREA.....La Colorada
 STATE.....SONORA
 LATITUDE.....28-47-52N LONGITUDE.....110-34-15W
 COMMODITIES.....AU AG PB ZN CU
 MAJOR.....AU AG MINOR.....PB ZN CU
 ORE MATERIALS.....gold, galena, pyrite, sphalerite,
 chalcopryrite
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....ENE trending Au-Ag veins. Veins occur in
 andesites-diorites of Laramide age which are associated with
 Barranca formation sediments. Veins are 10 M wide and over 200 M
 long. La Colorada Norte: Vein 234 M long and 1.8-9.0 M wide
 contains gold, galena, pyrite and chalcopryrite. Attitude- N 60 E,
 45 NW. La Colorada Sur: Vein containing gold, galena, pyrite,
 sphalerite and chalcopryrite. Attitude- N 85 E, 48 NW. Host rock
 for both veins listed as Late Cretaceous to Mid-Tertiary quartz
 porphyry and diorite.
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....quartz porphyry, diorite
 IGNEOUS ROCK AGE.....LCRET-TERT
 IGNEOUS ROCK TYPE.....quartz porphyry, diorite
 REFERENCE....Perez Segura, 1985.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU AG	1200.000 MT	1985	AU: 0.7 G/MT, AG: 90 G/MT

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00150

MAP NUMBER.....150
 SITE NAME.....Capote
 DISTRICT/AREA.....Cananea/Capote Basin
 STATE.....SONORA
 LATITUDE.....30-58-45N LONGITUDE.....110-20-30W
 COMMODITIES.....CU
 MAJOR.....CU
 ORE MATERIALS.....pyrite, chalcopryrite, bornite, chalcocite
 GENERAL ANALYTICAL DATA.....Locally contains 20% Cu.
 PRODUCTION.....M
 DEPOSIT MODEL.....Porphyry Cu, Skarn-Related
 USGS MODEL NUMBER.....18a
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Vertical breccia pipe cutting Precambrian
 granite and Cambrian quartzite at depth and grading into massive
 sulfide replacement deposits in Paleozoic(?) limestone above 125 M

level. Known vertical extent: 350 M. Breccia consists of angular fragments of porphyry and wall rock cemented by quartz-carbonate-pyrite-chalcopyrite-bornite-chalcocite assemblage. Replacement ore described as stratiform, E-dipping, supergene enriched pyritic body, 100 M x 50 M, containing 20% Cu. Capped by well-developed gossan.

HOST ROCK AGE.....PREC-PAL
 HOST ROCK TYPE.....granite; quartzite, limestone
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....quartz porphyry
 GANGUE MINERALS.....quartz, carbonates
 SIGNIFICANT ALTERATION.....Intense sericitic, pyritic and silicic alteration.

REFERENCES

Cox and Singer, 1986.
 Einaudi, 1982.
 Emmons, 1910.
 Meinert, 1982.
 Perry, 1961.
 Perez Segura, 1985.
 Ruben Velasco, 1956.

CUMULATIVE PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEARS</u>
CU	130000 LB	-1979

SOURCE OF PRODUCTION INFORMATION.....Meinert, 1982.

MRDS RECORD NUMBER....MX00151

MAP NUMBER.....151
 SITE NAME.....San Juan de la Costa
 DISTRICT/AREA...../La Paz
 STATE.....SBAJA
 LATITUDE.....24-22-57N LONGITUDE.....110-42-08W
 COMMODITIES.....P
 MAJOR.....P
 GENERAL ANALYTICAL DATA.....32% P₂O₅
 PRODUCTION.....M
 DEPOSIT MODEL.....Upwelling-Type P
 USGS MODEL NUMBER.....34c
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Two phosphatic horizons.

REFERENCES

Cox and Singer, 1986.
 Mining Journal, 1986, v. 307, no. 7888, p. 299.
 Terrones L., 1986.

ANNUAL PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
CONC P	650.000 MT	1985	32% P ₂ O ₅
CONC P	487.500 MT	1984	

PRODUCTION COMMENTS....."Production last year was 0.65 Mt, a 25% rise over 1984."

SOURCE OF PRODUCTION INFORMATION.....Mining Journal, 1986, v. 307, no. 7888, p. 299.

MRDS RECORD NUMBER....MX00152

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MAP NUMBER.....152
SITE NAME.....La Ventana
DISTRICT/AREA.....Tecoripa/Cumuripa
STATE.....SONORA
LATITUDE.....28-14-00N      LONGITUDE.....109-46-00W
COMMODITIES.....AU      AG
MAJOR.....AU      AG
ORE MATERIALS.....gold, silver salts (cerargyrite?),
hematite
DEPOSIT MODEL.....Polymetallic Vein(?)
USGS MODEL NUMBER.....22c?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Gold, silver-salts and hematite in veins
cutting quartzites.
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzite
REFERENCE....Perez Segura, 1985.
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MAP NUMBER.....153
SITE NAME.....El Cobre
SYNONYM NAME.....San Bartola
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....26-58-  N      LONGITUDE.....108-43-  W
COMMODITIES.....CU
MAJOR.....CU
ORE MATERIALS.....pyrite, chalcopyrite, chalcocite
PRODUCTION.....S
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
HOST ROCK TYPE.....andesite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesite
REFERENCES
    Guild, 1981.
    Perez Segura, 1985.
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REFERENCES

Mead and Kesler, 1984.

Perez Segura, 1985.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.040 TPD	1985	0.5% WO ₃

SOURCE OF PRODUCTION INFORMATION.....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	1000.000 MT	1984	0.5% WO ₃

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00155

MAP NUMBER.....155

SITE NAME.....Las Cabecitas

DISTRICT/AREA.....Hermosillo/Huepac

STATE.....SONORA

LATITUDE.....29-48-00N LONGITUDE.....110-02-50W

COMMODITIES.....AG PB BA

MAJOR.....AG PB OCCUR.....BA

ORE MATERIALS.....galena, barite

DEPOSIT MODEL.....Polymetallic Vein(?)

USGS MODEL NUMBER.....22c?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....The two major veins trend N30E with vertical dip and N25W with 66 dip to east.

IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)

IGNEOUS ROCK TYPE.....granite

REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00156

MAP NUMBER.....156

SITE NAME.....Mascara de Hierro Mine

DISTRICT/AREA.....Isla de Cedros/Bahia Sebastian Vizcaino

STATE.....NBAJA

LATITUDE.....28-10- N LONGITUDE.....115-10- W

COMMODITIES.....AU CU

MAJOR.....AU MINOR.....CU

ORE MATERIALS.....gold associated with quartz, chalcocite and hematite.

PRODUCTION.....S

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Limited distribution of gold.

HOST ROCK AGE.....CRET

HOST ROCK TYPE.....sandstone and assorted marine rocks

IGNEOUS ROCK AGE.....CRET

REFERENCE....Panczner, 1987.

MRDS RECORD NUMBER....MX00157

MAP NUMBER.....157

SITE NAME.....El Manto

STATE.....SONORA

LATITUDE.....27-25- N LONGITUDE.....108-45- W

COMMODITIES.....AG ZN AU
 MAJOR.....AG ZN AU
 PRODUCTION.....S
 DEPOSIT MODEL.....Zn-Pb Skarn
 USGS MODEL NUMBER.....18c
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

 MRDS RECORD NUMBER....MX00158
 MAP NUMBER.....158
 SITE NAME.....Las Chispas
 SYNONYM NAME.....William Tell
 DISTRICT/AREA.....Arizpe
 STATE.....SONORA
 LATITUDE.....30-13-00N LONGITUDE.....110-10-15W
 COMMODITIES.....AG AU ZN PB CU
 MAJOR.....AG MINOR.....AU ZN PB CU
 ORE MATERIALS.....argentite, polybasite, pyrargyrite,
 proustite, stephanite, native Ag, native Au, cerargyrite; pyrite,
 minor sphalerite, galena, chalcopyrite
 GENERAL ANALYTICAL DATA.....Shipping conc.: 350 oz/ton Ag, 2.75 oz/ton
 Au, 1.4% Zn, 0.7% Pb, 0.2% Cu, 4.5% Fe, 1% CaO, (Montijo, 1920);
 Ave: 6-7 oz Ag/ton, bonanzas up to 1500-2000 oz/ton, (Dufourq,
 1910).
 PRODUCTION.....M
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Native Ag, AgCl and AgS in upper
 brecciated tuff, (above 200 ft). Ag sulfosalts in lower felsites.
 Lode and placer gold.
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....rhyolite, brecciated tuff, felsite
 porphyry
 IGNEOUS ROCK AGE.....OLIGO-MIO
 IGNEOUS ROCK TYPE.....felsic volcanic (rhyolite and dacite),
 andesite
 GANGUE MINERALS.....quartz, pyrite, clay minerals, calcite,
 hematite
 SIGNIFICANT ALTERATION.....potassic, silicic
 REFERENCES
 Dufourq, 1910.
 Montijo, 1920.
 Panczner, 1987.
 Perez Segura, 1985.
 Roldan-Quintana, 1979.
 ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR
ORE AG AU	3.286 ST	1908
AG	656.882 OZ	1908
AU	4.876 OZ	1908
ORE AG AU	3.064 ST	1909
AG	573.448 OZ	1909
AU	4.189 OZ	1909

ORE AG AU	3.540	ST	1910
AG	484.746	OZ	1910
AU	3.645	OZ	1910

PRODUCTION COMMENTS.....Milled ore.
SOURCE OF PRODUCTION INFORMATION.....Dufourq, 1910.

RESERVES

<u>ITEM</u>	<u>TONNAGE (x10³)</u>	<u>YEAR</u>	<u>GRADE</u>
ORE AG	180.000 MT	1985	180 G/MT AG

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00159

MAP NUMBER.....159
SITE NAME.....Las Laminas
STATE.....SONORA
LATITUDE.....30-27-45N LONGITUDE.....110-34-45W
COMMODITIES.....AU AG
MAIN...AU AG
ORE MATERIALS.....gold; malachite, azurite, minor oxidized
pyrite
GENERAL ANALYTICAL DATA.....0.8 g/MT Au, 15 g/MT Ag.
DEPOSIT MODEL.....Flat-Fault Au(?)
USGS MODEL NUMBER.....37b?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Gold-silver mineralization in diorite
along low-angle fault zone containing abundant limonite and
hematite. Zone has exposed thickness of 5 m. Irregular cm-scale
quartz and carbonate veins and pods of brecciated quartz up to 0.5
m in width occur along fault zone. Several large hematite stained
and brecciated quartz veins occur along low-angle shears in
hanging wall.
HOST ROCK AGE.....JUR
HOST ROCK TYPE.....diorite
IGNEOUS ROCK AGE.....JUR
IGNEOUS ROCK TYPE.....diorite
GANGUE MINERALS.....quartz, carbonate, hematite, limonite
SIGNIFICANT ALTERATION.....Chloritic alteration in diorite, sericitic
alteration and silicification along contact zone.
REFERENCE....Silberman, Staude and Cox, 1987.

MRDS RECORD NUMBER....MX00169

MAP NUMBER.....169
SITE NAME.....La Venada
DISTRICT/AREA...../Villa Pesqueria
STATE.....SONORA
LATITUDE.....29-07-50N LONGITUDE.....109-51-20W
COMMODITIES.....W CU MO
MAJOR.....W MINOR.....CU MO
ORE MATERIALS.....scheelite; pyrite, chalcopryrite,
powellite, tr. molybdenite
PRODUCTION.....S
EXPLORATION AND DEVELOPMENT COMMENTS.....Mined out.
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Three high-grade scheelite lenses in skarn deposit.

HOST ROCK TYPE.....marble

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....granitic intrusive

REFERENCE....Radelli, 1985.

MRDS RECORD NUMBER....MX00170

MAP NUMBER.....170

SITE NAME.....Mina del Agua

DISTRICT/AREA.....Hermosillo/Mazocahui

STATE.....SONORA

LATITUDE.....29-34-30N LONGITUDE.....110-02-30W

COMMODITIES.....AG PB

MAJOR.....AG MINOR.....PB

ORE MATERIALS.....galena

PRODUCTION.....U

DEPOSIT MODEL.....Polymetallic Vein(?)

USGS MODEL NUMBER.....22c?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Hydrothermal quartz sulfide vein projecting from LCRET age biotite granite.

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....biotite granite

GANGUE MINERALS.....quartz, pyrite

REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00173

MAP NUMBER.....173

SITE NAME.....Tajitos

SYNONYM NAME.....Sierra de Tajitos

DISTRICT/AREA.....Caborca

STATE.....SONORA

LATITUDE.....30-58-15N LONGITUDE.....112-22-20W

COMMODITIES.....AU AG PB ZN CU MO SB

MAJOR.....AU MINOR.....AG POTEN.....PB ZN CU

OCCUR.....MO SB

ORE MATERIALS.....gold, auriferous(?) pyrite; galena, chalcopryite, tr. malachite

GENERAL ANALYTICAL DATA.....Au: 14 g/ton, Ag: 80 g/ton; High Pb content; Pb>Zn>Cu; Up to 10 ppm Mo.

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Production underway: 1985-86 (listed as disseminated gold deposit).

DEPOSIT MODEL.....Sado Epithermal Vein(?)

USGS MODEL NUMBER.....25d?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Epithermal quartz veins in N60W trending vein system hosted in metasandstone and rhyolite. Veins range in thickness from 1 m to 3 m and in length from 20 to 200 m along strike. Finely disseminated pyrite and trace malachite associated with the mineralization. Quartz-hematite matrix breccia along vein margins. Sericite along fractures.

HOST ROCK AGE.....JUR

HOST ROCK TYPE.....meta-sandstone, rhyolite (quartz porphyry)
IGNEOUS ROCK AGE.....JUR-CRET
IGNEOUS ROCK TYPE.....quartz rhyolite porphyry, meta-andesite
GANGUE MINERALS.....quartz, pyrite, limonite
SIGNIFICANT ALTERATION.....sericitic
REFERENCES

Cox and Singer, 1986.
Guild, 1981.
Perez Segura, 1985.
Roldan-Quintana, 1979.
Salas, 1975.
Silberman, Giles and Graubard-Smith, 1987.

MRDS RECORD NUMBER....MX00174

MAP NUMBER.....174
SITE NAME.....El Rincon
DISTRICT/AREA.....El Antimonio/La Fortuna
STATE.....SONORA
LATITUDE.....30-43-53N LONGITUDE.....112-36-20W
COMMODITIES.....SB
MAIN....SB
ORE MATERIALS.....antimony oxide
PRODUCTION.....U
EXPLORATION AND DEVELOPMENT COMMENTS.....Negligible production.
DEPOSIT MODEL.....Simple Sb
USGS MODEL NUMBER.....27d
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Large number of widely scattered veins.
Average length: 20 M, width: 5-15 CM. Disseminated or irregularly
distributed grains of antimony oxide in coarse-grained quartz.
None of the veins worked to depth of more than 5 M down dip (as of
1943.) Easternmost veins hosted in TRI-JUR sediments, parallel to
and immediately below contact with f.gr.diorite intrusive. Strike:
N to N 20 E, dip: 25-30 W. System of veins in diorite strikes N 60
E and dips steeply N.
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....red conglomerate, siltstone, sandstone;
diorite
IGNEOUS ROCK AGE.....TERT?
IGNEOUS ROCK TYPE.....fine-grained diorite
GANGUE MINERALS.....quartz
SIGNIFICANT ALTERATION.....Diorite bleached for a distance of several
CM from veins.
REFERENCE....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00175

MAP NUMBER.....175
SITE NAME.....La Republicana
DISTRICT/AREA.....Caborca
STATE.....SONORA
LATITUDE.....30-56-05N LONGITUDE.....112-12-05W
COMMODITIES.....AU AG PB CU
MAJOR.....AU AG MINOR.....PB CU

ORE MATERIALS.....galena, pyrite, chalcopryite, limonite,
 malachite
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Same as San Felix, polymetallic veins.
 Deposit occurs in andesites and probably a volcanic sedimentary
 series of mid Jurassic to lower Cretaceous rocks. Quartz-galena-
 pyrite-chalcopryite-limonite-malachite vein in Jurassic(?)
 porphyritic quartz-feldspar volcaniclastic unit.
 HOST ROCK AGE.....JUR-
 HOST ROCK TYPE.....andesites and older volcanosedimentary
 rocks
 GANGUE MINERALS.....quartz, pyrite, limonite
 REFERENCES
 Cox and Singer, 1986.
 Perez Segura, 1985.

MRDS RECORD NUMBER....MX00176

MAP NUMBER.....176
 SITE NAME.....La Ramona
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....29-19-35N LONGITUDE.....110-34-05W
 COMMODITIES.....AG PB ZN CU
 MAJOR.....AG MINOR.....PB ZN CU
 ORE MATERIALS.....tetrahedrite
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Hydrothermal shear zone.
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....tuffs and aplites
 IGNEOUS ROCK AGE.....LCRET-ETERT
 GANGUE MINERALS.....quartz, calcite, minor barite.
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00177

MAP NUMBER.....177
 SITE NAME.....Santo Nino
 DISTRICT/AREA.....Hermosillo/Ures
 STATE.....SONORA
 LATITUDE.....29-23-00N LONGITUDE.....110-33-15W
 COMMODITIES.....AG PB ZN CU
 MAJOR.....AG MINOR.....PB ZN CU
 ORE MATERIALS.....argentiferous galena
 PRODUCTION.....S
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Vein deposit with structural trend N_S
 which is cut by a low angle thrust fault which occurred after
 mineralization.
 HOST ROCK TYPE.....granite

IGNEOUS ROCK AGE.....LCRET-TERT (LARAMIDE)
IGNEOUS ROCK TYPE.....granite
SIGNIFICANT ALTERATION.....potassic
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00178

MAP NUMBER.....178
SITE NAME.....San Juan
DISTRICT/AREA.....Hermosillo/Ures
STATE.....SONORA
LATITUDE.....29-13-50N LONGITUDE.....110-33-55W
COMMODITIES.....AG PB ZN CU
MAJOR.....AG PB ZN CU
ORE MATERIALS.....beudantite
PRODUCTION.....S
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Unbrecciated hydrothermal vein system very
 similar to La Ramona and Santo Nino.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesite, granite
SIGNIFICANT ALTERATION.....potassic
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00179

MAP NUMBER.....179
SITE NAME.....La Ultima
DISTRICT/AREA.....Hermosillo/Opodepe
STATE.....SONORA
LATITUDE.....29-58-25N LONGITUDE.....110-43-20W
COMMODITIES.....AU CU AG? PB?
MAJOR.....AU CU POTEN.....AG? PB?
ORE MATERIALS.....pyrite, chalcopyrite, gold; argentiferous
 galena(?)
PRODUCTION.....S
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Hydrothermal gold-copper vein and
 associated placer deposits.
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granite
SIGNIFICANT ALTERATION.....potassic
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00180

MAP NUMBER.....180
SITE NAME.....San Felix
DISTRICT/AREA.....Caborca
STATE.....SONORA
LATITUDE.....30-36-25N LONGITUDE.....112-38-45W
COMMODITIES.....AU AG PB ZN CU

MAJOR.....AU AG MINOR.....PB ZN CU
 ORE MATERIALS.....pyrite, galena, pyrargyrite, sphalerite,
 tetrahedrite, cerussite, anglesite
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....JUR?
 HOST ROCK TYPE.....schist (volcaniclastic protolith)
 IGNEOUS ROCK AGE.....JUR?
 IGNEOUS ROCK TYPE.....volcanic sedimentary
 GANGUE MINERALS.....quartz, pyrite
 REFERENCES

Cox and Singer, 1986.

Perez Segura, 1985.

MRDS RECORD NUMBER....MX00181

MAP NUMBER.....181
 SITE NAME.....El Victor
 DISTRICT/AREA.....Mulatos
 STATE.....SONORA
 LATITUDE.....28-39-50N LONGITUDE.....108-42-45W
 COMMODITIES.....AU
 MAJOR.....AU
 ORE MATERIALS.....pyrite, gold
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Hydrothermal disseminated gold. Pyrite and
 gold disseminated in stockworks and shear zones.
 HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....rhyolite tuff, rhyolite dome
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....rhyolite, ignimbrite, andesite
 REFERENCES

Cox and Singer, 1986.

Perez Segura, 1985.

MRDS RECORD NUMBER....MX00182

MAP NUMBER.....182
 SITE NAME.....La Chipriona
 DISTRICT/AREA.....Tarachi/Arivechi
 STATE.....SONORA
 LATITUDE.....28-43-30N LONGITUDE.....108-52-45W
 COMMODITIES.....AG PB CU ZN
 MAJOR.....AG PB CU POTEN.....ZN
 ORE MATERIALS.....Ag-bearing sulfosalts, pyrite, sphalerite
 GENERAL ANALYTICAL DATA.....Ag: 500 G/MT, Cu: 1.0%, Pb: 1.0%
 DEPOSIT MODEL.....Creede Epithermal Vein
 USGS MODEL NUMBER.....25b
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Hydrothermal polymetallic (Ag-Pb-Zn-Cu)
 vein deposit that trends N 80 W with 80 NE dip over strike length
 of more than 1 KM.
 HOST ROCK TYPE.....andesite

IGNEOUS ROCK AGE.....LTERT
IGNEOUS ROCK TYPE.....rhyolite, andesite, ignimbrite
REFERENCE....Perez Segura, 1985.

ANNUAL PRODUCTION

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
AG PB CU	.030 TPD	1985	AG: 500G, CU 1%, PB 1%

SOURCE OF PRODUCTION INFORMATION.....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE AG PB CU	80.000 MT	1985	500G/MT AG, 1% CU, 1% PB

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00183

MAP NUMBER.....183
SITE NAME.....Los Pinos
DISTRICT/AREA.....Sahuaripa/Tarachi
STATE.....SONORA
LATITUDE.....28-42-35N LONGITUDE.....108-55-50W
COMMODITIES.....AG PB ZN
MAJOR.....AG PB ZN
ORE MATERIALS.....sphalerite, galena
PRODUCTION.....S
DEPOSIT MODEL.....Creede Epithermal Vein
USGS MODEL NUMBER.....25b
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Quartz vein carrying base-metal sulfides.
HOST ROCK TYPE.....ignimbrite
IGNEOUS ROCK AGE.....LTERT
IGNEOUS ROCK TYPE.....rhyolite, andesite, ignimbrite
GANGUE MINERALS.....quartz
REFERENCE....Perez Segura, 1985.

ANNUAL PRODUCTION

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE AG PB ZN	.030 TPD	1985	SEE RESV

SOURCE OF PRODUCTION INFORMATION.....Perez, 1985.

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE AG PB ZN	30.000 MT	1985	250 G/MT AG, 10% PB, 8% ZN

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00184

MAP NUMBER.....184
SITE NAME.....San Javier
SYNONYM NAME.....San Juan, Animas, Buena Vista
DISTRICT/AREA.....San Javier
STATE.....SONORA
LATITUDE.....28-36-35N LONGITUDE.....109-47-10W
COMMODITIES.....AG PB AU ZN BA GRF
MAJOR.....AG PB AU MINOR.....ZN POTEN.....BA GRF
ORE MATERIALS.....Ag sulfosalts, argentiferous tetrahedrite,
galena, sphalerite, barite, graphite
PRODUCTION.....M
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c

DEPOSIT SIZE.....MEDIUM
 HOST ROCK AGE.....TRI-JUR
 HOST ROCK TYPE.....quartzites
 GANGUE MINERALS.....quartz, hematite
 REFERENCES

Cox and Singer, 1986.
 Nelson, 1910.
 Perez Segura, 1985.
 Salas, 1975.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG PB AU	1300.000 MT	1985	AU 3 GR., AG 500 GR., PB 1.5%

RESERVES COMMENTS.....Data table that combines San Javier
 and San Juan mines.
 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00185

MAP NUMBER.....185
 SITE NAME.....La Cocinera Blanca
 SYNONYM NAME.....Cocinera Blanca
 DISTRICT/AREA.....Mesa de Galindo/Onavas
 STATE.....SONORA
 LATITUDE.....28-22-50N LONGITUDE.....109-25-10W
 COMMODITIES.....AU AG CU BA
 MAJOR.....AU AG POTEN.....CU BA
 ORE MATERIALS.....pyrite, tetrahedrite, barite
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Listed as a gold-silver vein in table. Ore
 mineralogy: pyrite, tetrahedrite, barite and tourmaline.
 Hydrothermal shear zone in porphyritic andesite and dacite.
 HOST ROCK TYPE.....porphyritic andesite, dacite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....porphyritic andesite, dacite
 GANGUE MINERALS.....barite, tourmaline
 REFERENCE....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG	5000.000 MT	1985	70 G/MT

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00186

MAP NUMBER.....186
 SITE NAME.....El Oro
 SYNONYM NAME.....Los Tajos
 DISTRICT/AREA.....Mesa de Galindo
 STATE.....SONORA
 LATITUDE.....28-24-50N LONGITUDE.....109-25-00W
 COMMODITIES.....AU AG PB CU
 MAJOR.....AU AG MINOR.....PB CU
 ORE MATERIALS.....pyrite, galena, chalcopryite, Cu-oxides,
 Fe-oxides
 DEPOSIT MODEL.....Epithermal Vein

USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....El Oro: quartz, pyrite, galena and
 limonite in gold-silver veins cutting andesites. Attitudes: N 15
 E, 80 NW and E-W, 72 N. Los Tajos: galena, pyrite, chalcopyrite
 and Cu-oxides in gold-silver vein trending N 45 E in diorite.
 HOST ROCK TYPE.....andesites, diorite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesites, diorite
 GANGUE MINERALS.....quartz, pyrite, limonite
 REFERENCES
 Cox and Singer, 1986.
 Perez Segura, 1985.

 MRDS RECORD NUMBER....MX00187
 MAP NUMBER.....187
 SITE NAME.....Santa Eduwiges
 DISTRICT/AREA.....Tecoripa/Tepoca
 STATE.....SONORA
 LATITUDE.....28-28-40N LONGITUDE.....109-20-20W
 COMMODITIES.....PB ZN
 MAJOR.....PB ZN
 ORE MATERIALS.....galena, sphalerite
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....andesite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesites
 GANGUE MINERALS.....quartz
 REFERENCES
 Cox and Singer, 1986.
 Perez Segura, 1985.

 MRDS RECORD NUMBER....MX00188
 MAP NUMBER.....188
 SITE NAME.....Mina Mexico
 DISTRICT/AREA.....Bacanora/Sahuaripa
 STATE.....SONORA
 LATITUDE.....28-51-55N LONGITUDE.....109-25-05W
 COMMODITIES.....AG AU PB ZN CU
 MAJOR.....AG AU MINOR.....PB ZN CU
 ORE MATERIALS.....argentiferous tetrahedrite, galena,
 sphalerite; pyrite, arsenopyrite
 GENERAL ANALYTICAL DATA.....From a few oz/ton up to 200 oz/ton Ag,
 (Hynes, 1912).
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Veins from a few inches to 2 ft in width
 (ave: <1 ft) contain banded ore composed of quartz, pyrite,
 sphalerite, galena, calcite, and tetrahedrite. Oxidized above 50
 ft depth. Disseminated pyrite in sedimentary wall rocks.
 HOST ROCK AGE.....PERM (J. Stewart, writ. comm., 10-13-88)
 HOST ROCK TYPE.....quartzite, shale, limestone(?)

IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
GANGUE MINERALS.....quartz, calcite, chlorite, kaolin
REFERENCES

Hynes, 1912.

Perez Segura, 1985.

MRDS RECORD NUMBER....MX00189

MAP NUMBER.....189
SITE NAME.....San Guillermo
DISTRICT/AREA.....Tecoripa
STATE.....SONORA
LATITUDE.....28-32-10N LONGITUDE.....109-59-15W
COMMODITIES.....AG PB BA
MAJOR.....AG PB OCCUR.....BA
ORE MATERIALS.....galena, barite
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....LCRET-ETERT
HOST ROCK TYPE.....andesite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesitic and rhyolitic volcanics
Perez Segura, 1985.

MRDS RECORD NUMBER....MX00190

MAP NUMBER.....190
SITE NAME.....Guadalupe
DISTRICT/AREA.....Tecoripa
STATE.....SONORA
LATITUDE.....28-43-50N LONGITUDE.....109-54-20W
COMMODITIES.....BA PB
MAIN....BA MINOR....PB
ORE MATERIALS.....barite, galena
PRODUCTION.....U
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Barite-galena-calcite vein in andesite.
HOST ROCK TYPE.....andesite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesite
GANGUE MINERALS.....calcite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00191

MAP NUMBER.....191
SITE NAME.....Los Duarte
DISTRICT/AREA.....Tecoripa
STATE.....SONORA
LATITUDE.....28-44-50N LONGITUDE.....109-50-55W
COMMODITIES.....BA
MAIN....BA
ORE MATERIALS.....barite

MAJOR.....AU AG MINOR.....PB CU POTEN.....U
 ORE MATERIALS.....uncertain Au-Ag, galena, sphalerite,
 chalcopryrite, kasolite, metatorbernite
 PRODUCTION.....M
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Uranium minerals in fracture zones and in
 local, discontinuous chalcedony veinlets. Associated with galena,
 chalcopryrite and sphalerite. Orebody forms elliptical chimney in
 altered latite porphyry, crosscut by discontinuous lamprophyre
 dikes. Area formerly mined for precious metal content. Perez S.
 reports an EW striking, 72 S dipping epithermal precious metal +
 base metal vein for this site.
 HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....latite porphyry
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....lamprophyre
 GANGUE MINERALS.....quartz, pyrite, sericite, chlorite,
 hematite, tourmaline
 SIGNIFICANT ALTERATION.....phyllic
 REFERENCES

Marquina Martinez, 1983.

Perez Segura, 1985.

MRDS RECORD NUMBER....MX00195

MAP NUMBER.....195
 SITE NAME.....El Toro
 SYNONYM NAME.....Noche Buena-Veta Grande
 DISTRICT/AREA.....Alamos
 STATE.....SONORA
 LATITUDE.....27-12- N LONGITUDE.....108-50- W
 COMMODITIES.....AU ZN PB CU
 MAJOR.....AU MINOR.....ZN PB POTEN.....CU
 ORE MATERIALS.....gold, sphalerite, galena, chalcopryrite,
 pyrite, limonite
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Epithermal gold veins similar to Tajitos.
 Gold-bearing sphalerite-galena-quartz vein (+/- chalcopryrite)
 trends N 20 W in andesite.
 HOST ROCK TYPE.....andesite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesite
 GANGUE MINERALS.....quartz, pyrite, limonite
 REFERENCES

Guild, 1981.

Perez Segura, 1985.

MRDS RECORD NUMBER....MX00196

MAP NUMBER.....196
 SITE NAME.....Klondike

USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Epithermal polymetallic vein like Myriam
 and El Padre.
 HOST ROCK TYPE.....rhyolite porphyry
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesite, rhyolite porphyry
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00199

MAP NUMBER.....199
 SITE NAME.....Myriam, El Toro, El Padre
 DISTRICT/AREA.....Cananea
 STATE.....SONORA
 LATITUDE.....30-49-00N LONGITUDE.....110-58-30W
 COMMODITIES.....CU PB ZN
 MAJOR.....CU MINOR.....PB ZN
 PRODUCTION.....S
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Pb-Zn-Cu epithermal veins in volcanic host
 rocks like Cerro de Plata.
 HOST ROCK AGE.....JUR-CRET
 HOST ROCK TYPE.....schist, limestone, volcanic sedimentary
 and shale
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00200

MAP NUMBER.....200
 SITE NAME.....La Carolina
 DISTRICT/AREA.....Cananea
 STATE.....SONORA
 LATITUDE.....30-10-30N LONGITUDE.....111-43-30W
 COMMODITIES.....AU CU
 MAJOR.....AU CU
 PRODUCTION.....M
 DEPOSIT MODEL.....Not Classssified
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Similar to El Tiro.
 HOST ROCK AGE.....PREC
 HOST ROCK TYPE.....gneiss, amphibolite
 IGNEOUS ROCK AGE.....PREC
 IGNEOUS ROCK TYPE.....migmatite, granite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00201

MAP NUMBER.....201
 SITE NAME.....El Claro
 DISTRICT/AREA.....Nacozari/Cumpas
 STATE.....SONORA
 LATITUDE.....30-09-35N LONGITUDE.....109-34-55W
 COMMODITIES.....AG PB ZN CU
 MAJOR.....AG MINOR.....PB ZN CU

ORE MATERIALS.....argentiferous galena, pyrite
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Epithermal polymetallic Ag-Pb-Zn-Cu vein
 in felsic volcanic host rocks.
 HOST ROCK TYPE.....felsic volcanic
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....granitic intrusives, rhyolitic to
 andesitic volcanics
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00202

MAP NUMBER.....202
 SITE NAME.....La Batalla
 SYNONYM NAME.....San Felipe
 DISTRICT/AREA.....Madera\Sahuaripa
 STATE.....SONORA
 LATITUDE.....29-02-10N LONGITUDE.....109-06-15W
 COMMODITIES.....AG PB ZN CU BA
 MAJOR....AG MINOR....PB ZN POTEN....CU OCCUR....BA
 ORE MATERIALS.....argentiferous galena, Ag-sulfides,
 sphalerite, pyrite, chalcopyrite, tetrahedrite, barite, malachite,
 azurite
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Data combined for San Felipe and La
 Batalla veins.
 HOST ROCK AGE.....ECRET
 HOST ROCK TYPE.....sandstone, shale
 GANGUE MINERALS.....quartz, calcite, barite, graphite, pyrite
 REFERENCE....Perez Segura, 1985.
 RESERVES

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
ORE AG PB ZN	70.000 MT	1985	AG:200 G/MT, 2.7% PB, 2.6% ZN

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00203

MAP NUMBER.....203
 SITE NAME.....La Curra
 SYNONYM NAME.....La Cura
 DISTRICT/AREA.....San Pedro de la Cueva
 STATE.....SONORA
 LATITUDE.....29-16-50N LONGITUDE.....109-43-10W
 COMMODITIES.....AU AG PB CU
 MAIN....AU AG MINOR....PB CU
 ORE MATERIALS.....galena, pyrite
 PRODUCTION.....U
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL

HOST ROCK TYPE.....arenaceous limestone
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00204

MAP NUMBER.....204
 SITE NAME.....El Chilicote
 SYNONYM NAME.....Chicote
 DISTRICT/AREA.....San Pedro de la Cueva
 STATE.....SONORA
 LATITUDE.....29-08-55N LONGITUDE.....109-46-35W
 COMMODITIES.....AG AU PB ZN CU BA
 MAJOR.....AG AU PB POTEN.....ZN CU OCCUR.....BA
 ORE MATERIALS.....argentiferous galena, gold, sphalerite,
 chalcopryrite, barite
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Deposit is cut by three large faults.
 Mineralization within the vein is concentrated along these
 fractures.
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....dacitic tuff, andesite, quartz diorite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....dacitic tuff, andesite, quartz diorite
 GANGUE MINERALS.....quartz, pyrite, barite, calcite
 REFERENCE....Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
ORE AG AU PB	20.000 MT	1985	4.0 G/MT AU, 300 G/MT AG, 10% PB

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00205

MAP NUMBER.....205
 SITE NAME.....16 de Septiembre
 DISTRICT/AREA.....San Pedro de la Cueva
 STATE.....SONORA
 LATITUDE.....29-12-25N LONGITUDE.....109-44-10W
 COMMODITIES.....AG PB ZN CU
 MAJOR.....AG PB ZN CU
 ORE MATERIALS.....galena, sphalerite, chalcopryrite
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Vertical sulfide-bearing quartz pegmatite
 vein has vertical shafts drilled into it. Host rock is andesite.
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....LCRET-TERT
 IGNEOUS ROCK TYPE.....andesite
 GANGUE MINERALS.....quartz
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00206

MAP NUMBER.....206
SITE NAME.....El Albur
DISTRICT/AREA.....San Pedro de la Cueva
STATE.....SONORA
LATITUDE.....29-10-00N LONGITUDE.....109-50-20W
COMMODITIES.....PB AG CU
MAJOR.....PB MINOR.....AG CU
ORE MATERIALS.....galena, chalcopryite, pyrite, Cu- and Fe-
 oxides
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Vein(?)
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Vein cut by normal faults. Deposit along
 contact of rhyolite and granite of similar Laramide age.
HOST ROCK TYPE.....andesite, granite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesite, granite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00207

MAP NUMBER.....207
SITE NAME.....Edna Lucia
DISTRICT/AREA.....San Pedro de la Cueva
STATE.....SONORA
LATITUDE.....29-10-35N LONGITUDE.....109-48-15W
COMMODITIES.....AG PB ZN CU
MAJOR.....PB ZN MINOR.....AG CU
ORE MATERIALS.....chalcopryite, galena, sphalerite
PRODUCTION.....S
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Veins cut by normal faults. Deposit occurs
 in volcanic rocks near rhyolite/granite contact.
HOST ROCK AGE.....CRET
HOST ROCK TYPE.....sedimentary rocks and andesites
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....rhyolite, andesite, ignimbrite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00208

MAP NUMBER.....208
SITE NAME.....La Bamboya
SYNONYM NAME.....Moctezuma Mine
DISTRICT/AREA...../Moctezuma
STATE.....SONORA
LATITUDE.....29-41-05N LONGITUDE.....109-41-35W
COMMODITIES.....AU TE U PB HG
MAJOR.....AU TE MINOR.....U OCCUR.....PB HG
ORE MATERIALS.....native Te, various Au-Te minerals, native
 Au, moctezumite, cinnabar

PRODUCTION.....S
 DEPOSIT MODEL.....Au-Ag-Te Vein
 USGS MODEL NUMBER.....22b
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Widespread Te-Au mineralization over 100
 Sq. km area. Quartz veins in highly altered ash-flow units of
 LCret-ETert age. Veins range from a few CM to >3.0 M (ave: 0.7 M).
 Richest ore at vein intersections. Mineralization extends from
 surface to depth of 125 M. Prime locality worldwide for oxidized
 Te minerals.
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....bedded tuff
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....tuff overlain by younger andesite flows
 GANGUE MINERALS.....quartz, pyrite, barite, illite, kaolin,
 fluorite, calcite
 REFERENCES
 Gaines, 1970.
 Marrrs and Guilbert, 1981.
 McAnulty, 1981.
 Perez Segura, 1985.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE(x10 ³)	YEARS	GRADE
ORE AU	2.900 TONS	1936-1945	UNKNOWN

 SOURCE OF PRODUCTION INFORMATION.....Gaines, 1970.

MRDS RECORD NUMBER....MX00209

MAP NUMBER.....209
 SITE NAME.....San Nicolas
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....30-26-30N LONGITUDE.....109-37-10W
 COMMODITIES.....AG PB AU
 MAJOR.....AG MINOR.....PB ZN AU
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....andesites
 REFERENCE....Perez Segura, 1985.
 RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE AG PB	49.815 MT	1985	92 G/MT AG, 0.6% PB, 0.12% ZN,

TRACE AU

 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00210

MAP NUMBER.....210
 SITE NAME.....El Picacho
 DISTRICT/AREA...../Arizpe

STATE.....SONORA
 LATITUDE.....30-35-30N LONGITUDE.....110-04-50W
 COMMODITIES.....U AU AG MO
 MAIN.....U MINOR....AU AG
 ORE MATERIALS.....torbernite, autunite, iriginite, unknown
 Au-Ag, (molybdenite)
 PRODUCTION.....U
 DEPOSIT MODEL.....Volcanic-Hosted U
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....U minerals in altered ignimbrite,
 associated with Au, Ag and trace molybdenite. Small pockets of
 hydrothermal breccia in fracture zones.
 HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....ignimbrite
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....trachytic andesite, ignimbrite
 GANGUE MINERALS.....quartz, pyrite, sericite
 SIGNIFICANT ALTERATION.....phyllic
 REFERENCES

 Marquina Martinez, 1983.

 Perez Segura, 1985.

MRDS RECORD NUMBER....MX00211

MAP NUMBER.....211
 SITE NAME.....Picacho
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....29-10- N LONGITUDE.....110-45- W
 COMMODITIES.....FE
 MAJOR.....FE
 PRODUCTION.....S
 DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Disseminated Fe skarn associated with
 LCRET-ETERT granitic intrusives.
 HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....conglomerate, sandstone, interbedded
 basalt and andesite
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00212

MAP NUMBER.....212
 SITE NAME.....Palo Verde
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....29-03-20N LONGITUDE.....110-59-10W
 COMMODITIES.....W CU
 MAJOR.....W POTEN.....CU
 ORE MATERIALS.....scheelite, chalcoppyrite, pyrite
 PRODUCTION.....M
 DEPOSIT MODEL.....W Skarn

USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PERM
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....garnet, pyroxene, epidote, vesuvianite,
 wollastinite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00213

MAP NUMBER.....213
 SITE NAME.....Villa de Seris
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....29-04-20N LONGITUDE.....110-57-00W
 COMMODITIES.....W
 MAJOR.....W FE?
 PRODUCTION.....M
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone, quartzites, shale and chert
 unit
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....granite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00214

MAP NUMBER.....214
 SITE NAME.....Suaqui Verde
 DISTRICT/AREA.....Tecoripa
 STATE.....SONORA
 LATITUDE.....28-24-15N LONGITUDE.....109-48-30W
 COMMODITIES.....CU MO
 MAJOR.....CU MO
 ORE MATERIALS.....pyrite, chalcopryrite, molybdenite
 DEPOSIT MODEL.....Porphyry Cu
 USGS MODEL NUMBER.....17
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....quartz diorite, andesite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....quartz diorite, andesite
 SIGNIFICANT ALTERATION.....sericitic
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00215

MAP NUMBER.....215
 SITE NAME.....El Refugio
 STATE.....SONORA
 LATITUDE.....28-57-30N LONGITUDE.....110-04-45W
 COMMODITIES.....BA
 MAIN....BA

ORE MATERIALS.....barite
 PRODUCTION.....U
 DEPOSIT MODEL.....Bedded Barite
 USGS MODEL NUMBER.....31b
 DEPOSIT SIZE.....MEDIUM
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00216

MAP NUMBER.....216
 SITE NAME.....Cobachi
 SYNONYM NAME.....Cerro Cobachi
 DISTRICT/AREA...../Picacho Colorado
 STATE.....SONORA
 LATITUDE.....28-49-45N LONGITUDE.....110-11-45W
 COMMODITIES.....BA
 MAIN....BA
 ORE MATERIALS.....barite
 GENERAL ANALYTICAL DATA.....Ave. grade: 3.8 g/cc; Upgraded to 4.3 g/cc
 by removal of silica.
 PRODUCTION.....U
 DEPOSIT MODEL.....Bedded Barite
 USGS MODEL NUMBER.....31b
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Bedded barite exhibiting primary
 sedimentary textures. Barite averages 40 M thick and occurs as
 beds and lenses within sandy chert and mudstone. Deposit covers
 4000 ha area (7.0 x 2.5 km). Deposit contains Devonian (Famennian)
 brachiopods replaced by barite.
 HOST ROCK AGE.....DEV
 HOST ROCK TYPE.....chert, limestone, sandstone, barite
 GANGUE MINERALS.....quartz
 REFERENCES
 Damon, Clark, Shafiqullah, Roldan Q. and Islas L., 1981.
 Noll, 1981.
 Perez Segura, 1985.
 Pregger, 1981.

RESERVES

<u>ITEM</u>	<u>TONNAGE (x10³)</u>	<u>YEAR</u>	<u>GRADE</u>
ORE BA	5000.000 MT	1981	AVE: 3.8 G/CC

SOURCE OF RESERVES INFORMATION.....Damon, Clark, et.al., 1981.

MRDS RECORD NUMBER....MX00217

MAP NUMBER.....217
 SITE NAME.....El Zubiarte
 DISTRICT/AREA.....La Colorada
 STATE.....SONORA
 LATITUDE.....28-55-55N LONGITUDE.....110-35-15W
 COMMODITIES.....AG AU CU ZN SB
 MAJOR....AG AU MINOR....CU ZN POTEN....SB
 ORE MATERIALS.....pyrite, chalcopryite, sphalerite,
 famatinite, polybasite, covellite
 EXPLORATION AND DEVELOPMENT COMMENTS.....100,000 tons of high-grade
 Ag dump material being treated in 1981.
 DEPOSIT MODEL.....Polymetallic Vein

USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone, intruded by quartz diorite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....quartz diorite
 GANGUE MINERALS.....quartz, calcite

REFERENCES

Mining Journal, v. 296, no. 7804, p. 370.

Perez Segura, 1985.

ANNUAL PRODUCTION

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE AG AU	100.000 MT	1981	HIGH-GRADE AG

SOURCE OF PRODUCTION INFORMATION.....Mining Journal, 1981.

MRDS RECORD NUMBER....MX00218

MAP NUMBER.....218
 SITE NAME.....Tungsteno de Baviacora
 DISTRICT/AREA.....Baviacora
 STATE.....SONORA
 LATITUDE.....29-41- N LONGITUDE.....110-20- W
 COMMODITIES.....W

MAJOR.....W

PRODUCTION.....L

DEPOSIT MODEL.....W Skarn

USGS MODEL NUMBER.....14a

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Similar to Baviacora.

IGNEOUS ROCK AGE.....LCRET-TERT (LARAMIDE)

IGNEOUS ROCK TYPE.....granitic intrusive

REFERENCES

Guild 1981

Maravilla S., 1978.

Perez Segura, 1985.

ANNUAL PRODUCTION

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	.080 TPD	1978	0.8% WO ₃

SOURCE OF PRODUCTION INFORMATION.....Maravilla, 1978.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	3000.000 MT	1985	0.25% WO ₃

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00219

MAP NUMBER.....219
 SITE NAME.....La Mazonena
 DISTRICT/AREA.....La Colorada
 STATE.....SONORA
 LATITUDE.....28-54-45N LONGITUDE.....110-34-30W
 COMMODITIES.....AG PB ZN CU SB
 MAJOR.....AG MINOR.....PB ZN CU OCCUR.....SB
 ORE MATERIALS.....galena, pyrite, pyrargyrite, tetrahedrite,
 famatinite, covellite
 DEPOSIT MODEL.....Polymetallic Vein

USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Deposit occurs in quartz monzonite
 intrusive of Laramide age. Vein is 250 M long and 1 M wide.
 HOST ROCK TYPE.....quartz monzonite
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....quartz monzonite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00220

MAP NUMBER.....220
 SITE NAME.....La Bronzuda
 DISTRICT/AREA.....La Colorada
 STATE.....SONORA
 LATITUDE.....28-53-30N LONGITUDE.....110-33-20W
 COMMODITIES.....AG PB CU
 MAJOR.....AG MINOR.....PB CU
 ORE MATERIALS.....argentiferous galena, argentite, pyrite,
 chalcocopyrite
 DEPOSIT MODEL.....Creede Epithermal Vein
 USGS MODEL NUMBER.....25b
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Vein 200 M long and 0.1 to 6.0 M wide.
 HOST ROCK TYPE.....andesite porphyry
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesite porphyry
 GANGUE MINERALS.....quartz, calcite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00221

MAP NUMBER.....221
 SITE NAME.....Myriam and Ano Nuevo
 SYNONYM NAME.....Miriam
 DISTRICT/AREA.....La Colorada
 STATE.....SONORA
 LATITUDE.....28-55-10N LONGITUDE.....110-43-55W
 COMMODITIES.....AU AG PB CU
 MAJOR.....AU AG MINOR.....PB CU
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Gold-silver-bearing limonite-pyrite-quartz
 vein(s) in andesite.
 HOST ROCK TYPE.....andesite
 IGNEOUS ROCK AGE.....LCRET-TERTT
 IGNEOUS ROCK TYPE.....rhyolites, andesites, ignimbrites
 GANGUE MINERALS.....quartz, pyrite, limonite
 REFERENCE....Perez Segura, 1985.
 RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE AU AG	55.000 MT	1985	AU: 5 G/MT, AG: 80 G/MT

RESERVES COMMENTS.....Reserves listed for "Miriam"
 deposit- La Colorada district.
 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00222

MAP NUMBER.....222
SITE NAME.....Ubarbo
DISTRICT/AREA.....Estacion Torres
STATE.....SONORA
LATITUDE.....28-46-40N LONGITUDE.....110-55-25W
COMMODITIES.....AU AG PB CU
MAJOR.....AU AG MINOR.....PB CU
PRODUCTION.....S
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
HOST ROCK TYPE.....granite
IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
IGNEOUS ROCK TYPE.....granite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00223

MAP NUMBER.....223
SITE NAME.....El Vidolin
SYNONYM NAME.....Vidolin
DISTRICT/AREA.....Estacion Torres
STATE.....SONORA
LATITUDE.....28-30-45N LONGITUDE.....110-45-00W
COMMODITIES.....AG CU PB? ZN?
MAJOR.....AG MINOR.....CU POTEN.....PB? ZN?
ORE MATERIALS.....chalcocite
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Ag-bearing vein containing chalcocite and
possibly other base-metal sulfides.
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzite
IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
IGNEOUS ROCK TYPE.....andesite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00224

MAP NUMBER.....224
SITE NAME.....La Quintera
SYNONYM NAME.....Quinteras, Nuevas Quinteras
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-01-30N LONGITUDE.....109-01-05W
COMMODITIES.....AG PB CU ZN AU
MAJOR.....AG MINOR.....PB CU ZN OCCUR.....AU
ORE MATERIALS.....Ag sulfosalts, tetrahedrite
GENERAL ANALYTICAL DATA.....Ag: 250 g/MT
DEPOSIT MODEL.....Creede Epithermal Vein(?)
USGS MODEL NUMBER.....25b?
DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Quartz-barite-tetrahedrite vein is 700 M long, 8-10 M wide and 450 M deep. Total volume estimated to be 3,150,000 cubic meters.

HOST ROCK TYPE.....andesite

IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)

IGNEOUS ROCK TYPE.....andesite

GANGUE MINERALS.....quartz, barite

REFERENCE....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG	530.0577 MT	1985	AG: 250 G/MT, AU: TRACE
ORE AG	57.6545 MT	1985	AG: 250 G/MT, AU: TRACE
ORE AG PB ZN	111.000 MT	1985	AG: 300 G/MT, PB: 1.3%, ZN: 1.5%,
			CU: 0.3%, AU: 1.0 G/MT

RESERVES COMMENTS.....1>La Quintera, 2> Quinteras (Prop. Cia. Apollo), 3>Nuevas Quinteras; May or may not all refer to same deposit.

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00225

MAP NUMBER.....225

SITE NAME.....Promontorio

DISTRICT/AREA.....Alamos

STATE.....SONORA

LATITUDE.....27-00-10N LONGITUDE.....109-00-00W

COMMODITIES.....AG PB CU ZN AU

MAJOR.....AG MINOR.....PB CU ZN OCCUR.....AU

ORE MATERIALS.....Ag sulfosalts, copper oxides

DEPOSIT MODEL.....Epithermal Vein

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Vein is 5 M wide and 150 M deep. Quartz and copper oxides are only minerals reported specifically.

HOST ROCK TYPE.....andesite

IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)

IGNEOUS ROCK TYPE.....andesite

GANGUE MINERALS.....quartz

REFERENCE....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG	216.673 MT	1985	AG: 180 G/MT, AU: TRACE

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00227

MAP NUMBER.....227

SITE NAME.....San Manuel

DISTRICT/AREA.....Alamos

STATE.....SONORA

LATITUDE.....27-00-10N LONGITUDE.....109-01-55W

COMMODITIES.....AG PB ZN CU AU

MAJOR.....AG PB ZN CU OCCUR.....AU

ORE MATERIALS.....pyrite, galena, sphalerite

GENERAL ANALYTICAL DATA.....AU 1 g/MT, AG 250 g/MT, PB 1.8%, CU 1.0%

DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Galena-sphalerite-quartz vein in granite.
 HOST ROCK TYPE.....granite
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....quartz
 REFERENCE....Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE AG PB	52.000 MT	1985	AU:1 G/MT, AG:250 G/MT, PB:1.8%, CU:1.0%

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00228

MAP NUMBER.....228
 SITE NAME.....Santo Domingo
 DISTRICT/AREA.....Alamos
 STATE.....SONORA
 LATITUDE.....27-10- N LONGITUDE.....108-58- W
 COMMODITIES.....AG PB ZN
 MAJOR.....AG PB ZN
 GENERAL ANALYTICAL DATA.....AG 500 g/MT, PB 2.6%, ZN 1.5%
 DEPOSIT MODEL.....Creede Epithermal Vein
 USGS MODEL NUMBER.....25b
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....andesite
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....andesite
 REFERENCE....Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE AG PB ZN	218.000 MT	1985	AG:500 G/MT, PB 2.6%, ZN 1.5%

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00229

MAP NUMBER.....229
 SITE NAME.....El Fenomeno
 SYNONYM NAME.....Rosa de Castilla
 DISTRICT/AREA.....Los Gavilanes/Ensenada
 STATE.....NBAJA
 LATITUDE.....32-08- N LONGITUDE.....116-08- W
 COMMODITIES.....W CU AU
 MAJOR.....W OCCUR.....CU AU
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....0.2-0.7% WO₃
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Disc. and mined during WW1
 (produced 4,000 units tungstate). Reopened for seven years
 starting in 1937 (60,000 units produced).
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Scheelite in tactite; mainly garnet, but locally idocrase, axinite, diopside, quartz, or calcite predominates. Small % of ore is in quartz diorite containing minor calc-silicates. Minor Fe-oxides and secondary Cu minerals in weathered portions. Sulfides (pyrite, pyrrhotite, chalcopyrite and arsenopyrite occur in fresh rock. A few pegmatite dikes contain minor diss scheelite along contacts with ore bodies. Main ore body is fan-shaped tactite zone at contact between marble and main diorite body. Length of scheelite-bearing zone at surface: 185 M. Length of commercial ore body (greater than 0.4% WO₃ material): 120 M. Sides of ore body appear to converge toward a point immediately below the bottom of the 93-M shaft, where ore body is only 4-5 M long and 3 M wide. Width in upper workings varies from 0.2 to 17.0 M (ave. 4.0 M). Best ore was in pockets or lenses. Some ore mined from irregular vein-like masses extending into marble. Possibly another fan-like ore body at N end of mine, where ore has been stoped from 200-FT level; ore zone less than 1.0 M wide.

HOST ROCK AGE.....LPAL

HOST ROCK TYPE.....marble

IGNEOUS ROCK AGE.....CRET-TERT

IGNEOUS ROCK TYPE.....quartz diorite

GANGUE MINERALS.....garnet, idocrase, axinite, diopside, quartz, calcite, pyrite, pyrrhotite, chalcopyrite, arsenopyrite

REFERENCES

Fries and Schmitter, 1945.

Guild, 1981.

Salas, 1975.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE W	100.000 ST	1937-43	AVE:0.7% WO ₃ ; 56,700 UNITS
WO ₃			
ORE W	5.000 ST	1917-19	AVE:0.9% WO ₃ ; 4,000 UNITS
WO ₃			

PRODUCTION COMMENTS.....Capacity of two large plants: 200 TPD. Commercial ore was material containing at least 0.4% WO₃

SOURCE OF PRODUCTION INFORMATION.....Fries and Schmitter, 1945, p. 83.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.650 ST	1945	0.4-0.5% WO ₃

SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945, p. 83.

MRDS RECORD NUMBER....MX00230

MAP NUMBER.....230

SITE NAME.....La Raza

DISTRICT/AREA.....Los Gavilanes District

STATE.....NBAJA

LATITUDE.....32-15- N LONGITUDE.....116-00- W

COMMODITIES.....W

MAJOR.....W

ORE MATERIALS.....scheelite

PRODUCTION.....S

DEPOSIT MODEL.....W Skarn

USGS MODEL NUMBER.....14a

DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite- bearing tactite in two parallel
 zones that join at the N end of open-cut against intrusive contact
 with biotite diorite body. Westernmost zone was mined.
 HOST ROCK TYPE.....tactite, hornfels, schist
 IGNEOUS ROCK TYPE.....quartz diorite, biotite diorite
 GANGUE MINERALS.....garnet, diopside
 REFERENCE....Fries and Schmitter, 1945.
 ANNUAL PRODUCTION

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE W	1.480 ST	1943	AVE. 1.3% WO ₃ ; 1,650 UNITS WO ₃

PRODUCTION COMMENTS.....Most of ore was mined from small
 glory hole in SW corner of open-pit.
 SOURCE OF PRODUCTION INFORMATION.....Fries and Schmitter, 1945, p. 83.
 RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE W	.200 ST	1945	1.2-1.3% WO ₃

RESERVES COMMENTS.....Estimated 150 to 200 tons of ore
 from area around the N end of the vertical shaft. Removal would
 result in the destruction of the shaft.
 SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945, p. 85.

MRDS RECORD NUMBER....MX00231

MAP NUMBER.....231
 SITE NAME.....El Topo
 DISTRICT/AREA.....Los Gavilanes
 STATE.....NBAJA
 LATITUDE.....32-12-40N LONGITUDE.....115-59-58W
 COMMODITIES.....W
 MAJOR.....W

ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....Assay of ore: 34.66% WO₃, 0.76% S, 0.16%
 As, 0.14% P, 0.02% Cu, trace Sn; major metallic elements: W, Ca,
 Si, Al; intermediate metallic elements: Mg, Fe; minor metallic
 elements: Ti, Mn, Bi, As, Mo, Cu, Ag, Ni, Cr.

PRODUCTION.....S
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Scheelite in tactite near quartz diorite
 contact. Scheelite-bearing zone, 70 M long, 0.5-2.0 M wide (ave.
 1.0 M), explored for 27 M down dip, extends a short distance into
 adjacent marble, hornfels, schist, or quartz diorite. Commercial
 ore is restricted to tactite. Mineralization pockety and
 lenticular within a generally fan-shaped ore body. Sides converge
 toward a point 30 M below outcrop.

HOST ROCK TYPE.....marble, hornfels, schist, quartz diorite
 IGNEOUS ROCK TYPE.....quartz diorite
 GANGUE MINERALS.....garnet, diopside, hedenbergite, quartz,
 pyrrhotite

REFERENCE....Fries and Schmitter, 1945.
 ANNUAL PRODUCTION

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
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ORE W .250 ST 1943 AVE. 1.75% WO₃; 350 UNITS
 WO₃
 SOURCE OF PRODUCTION INFORMATION.....Fries and Schmitter, 1945, p. 83.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	6.000 ST	1945	0.2-0.3% WO ₃

 RESERVES COMMENTS.....Ave. mining width: 1.2 M
 SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945, p. 85.

MRDS RECORD NUMBER....MX00232

MAP NUMBER.....232
 SITE NAME.....Tio Pepe
 DISTRICT/AREA.....Los Gavilanes District
 STATE.....NBAJA
 LATITUDE.....32-11- N LONGITUDE.....115-54- W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....N
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Limestone bed replaced by scheelite-bearing tactite, mainly on NE side of limestone. Scheelite-bearing zone 0.3-1.0 M wide, ave. 0.5 M and only 30 M long although marble-tactite bed is 45 M long at the surface.
 HOST ROCK TYPE.....marble
 IGNEOUS ROCK TYPE.....quartz diorite, minor biotite-hornblende diorite
 GANGUE MINERALS.....garnet, diopside
 REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00233

MAP NUMBER.....233
 SITE NAME.....Olivia
 DISTRICT/AREA.....Los Gavilanes District
 STATE.....NBAJA
 LATITUDE.....32-10- N LONGITUDE.....115-57- W
 COMMODITIES.....W
 MAJOR....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....S
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Three beds of tactite in SW part of pendant in quartz diorite. Each is about 20 M long and either pinches out or is cut off by diorite. Probable replacement of thin marble beds. N scheelite-bearing zone 2 M wide.S scheelite-bearing zone 0.5-1.0 M wide.
 HOST ROCK TYPE.....marble
 IGNEOUS ROCK TYPE.....quartz diorite, pegmatite dikes
 GANGUE MINERALS.....garnet, diopside
 REFERENCE....Fries and Schmitter, 1945.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.036 ST	1943	AVE. 1.33% WO ₃ ; 43 UNITS
WO ₃			

SOURCE OF PRODUCTION INFORMATION.....Fries and Schmitter, 1945, p. 83.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	3.000 ST	1945	0.3-0.4% WO ₃

RESERVES COMMENTS.....Ave. mining width: 1.2 M

SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945, p. 85.

MRDS RECORD NUMBER....MX00234

MAP NUMBER.....234

SITE NAME.....Los Aliados de America

DISTRICT/AREA.....Los Gavilanes District

STATE.....NBAJA

LATITUDE.....32-12-39N LONGITUDE.....116-00-15W

COMMODITIES.....W

MAJOR.....W

ORE MATERIALS.....scheelite

PRODUCTION.....S

DEPOSIT MODEL.....W Skarn

USGS MODEL NUMBER.....14a

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Scheelite in tactite beds and, rarely, in hornfels.

HOST ROCK TYPE.....marble, hornfels

IGNEOUS ROCK TYPE.....biotite diorite

GANGUE MINERALS.....garnet, pyroxene, epidote, calcite, quartz, idocrase, axinite

REFERENCE....Fries and Schmitter, 1945.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.703 ST	1943	AVE. 1.48% WO ₃ ; 835 UNITS
WO ₃			

SOURCE OF PRODUCTION INFORMATION.....Fries and Schmitter, 1945, p. 83.

RESERVES COMMENTS.....Probably no more than 50 tons of ore containing up to 1.0% WO₃ remains in the mine. Overall tenor of ore + waste rock would be much less than 1.0%. Deposit may be regarded as mined out (1943).

SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945, p. 85.

MRDS RECORD NUMBER....MX00235

MAP NUMBER.....235

SITE NAME.....El Audaz

DISTRICT/AREA.....Los Gavilanes District

STATE.....NBAJA

LATITUDE.....32-12-55N LONGITUDE.....115-59-45W

COMMODITIES.....W

MAJOR.....W

ORE MATERIALS.....scheelite

PRODUCTION.....S

DEPOSIT MODEL.....W Skarn

USGS MODEL NUMBER.....14a

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Four subparallel scheelite-bearing zones, each on the SE side of a marble bed. Only possibly commercial zone was exposed in drift and winze: 35 M max. length at surface, width ave. 1.0 M, followed for 28 M down-dip, 0.7 M wide in lowest workings, cut by two barren pegmatite dikes.

HOST ROCK TYPE.....marble

IGNEOUS ROCK TYPE.....biotite diorite

GANGUE MINERALS.....pyroxene, garnet, quartz, calcite, idocrase

REFERENCE....Fries and Schmitter, 1945.

ANNUAL PRODUCTION

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	.300 ST	1943	AVE. 0.9% WO ₃ ; 220 UNITS
WO ₃			

SOURCE OF PRODUCTION INFORMATION.....Fries and Schmitter, 1945, p. 83.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	2.000 ST	1945	0.3-0.4% WO ₃

RESERVES COMMENTS.....Ave. mining width: 1.3 M

SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945, p. 85.

MRDS RECORD NUMBER....MX00236

MAP NUMBER.....236

SITE NAME.....El Dieciseis de Septiembre

DISTRICT/AREA.....Los Gavilanes

STATE.....NBAJA

LATITUDE.....32-12-45N LONGITUDE.....116-00-00W

COMMODITIES.....W

MAJOR.....W

ORE MATERIALS.....scheelite

PRODUCTION.....S

DEPOSIT MODEL.....W Skarn

USGS MODEL NUMBER.....14a

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Scheelite in narrow zones in tactite within and adjacent to marble and replacing borders of pegmatite dikes that crosscut ore body. Best ore in most coarsely crystalline garnet-tactite. Three principal scheelite-bearing zones exposed at surface. Northernmost zone: 40 M. Second and third zones : 25 and 35 M respectively. Widths vary from 0.1 to 2.0 M, ave. 0.5 M. Ore lenticular and pockety. Max. depth probably less than 35 M. Five scheelite-bearing zones exposed in adit.

HOST ROCK TYPE.....marble

IGNEOUS ROCK TYPE.....biotite diorite

GANGUE MINERALS.....garnet

REFERENCE....Fries and Schmitter, 1945.

ANNUAL PRODUCTION

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	.121 ST	1943	AVE. 0.91% WO ₃ ; 96 UNITS
WO ₃			

PRODUCTION COMMENTS.....30-35 tons of 0.91% WO₃ ore sorted into piles on the dumps (1945). Out of some 250-300 tons of rock

extracted from the 22.6 M shaft, only 8-10 tons of ore averaging 0.9 or 1.0% WO₃ were obtained.
 SOURCE OF PRODUCTION INFORMATION.....Fries and Schmitter, 1945, p. 83.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	4.000 ST	1945	0.1-0.2% WO ₃

RESERVES COMMENTS.....Ave. mining width: 1.2 M ; At best, the deposit may contain roughly 2,500 tons of ore avging 0.3 or 0.4% WO₃, from which 1,000 tons of ore containing 0.8 or 0.9% WO₃ could be sorted. But, so much barren rock would have to be mined that the total amount removed would be about 4,000 tons with ave. WO₃ content of less than 0.2%.

SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945, p. 85.

MRDS RECORD NUMBER....MX00237

MAP NUMBER.....237
 SITE NAME.....La Esperanza
 DISTRICT/AREA.....Los Gavilanes
 STATE.....NBAJA
 LATITUDE.....32-09- N LONGITUDE.....115-59- W
 COMMODITIES.....W
 MAJOR.....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....S
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite occurs in a zone 0.5-1.0 M wide in garnet-diopside tactite. Some pockets of moderately rich ore mined from upper parts of shafts. Ore zone less than 0.5 M wide and low grade at bottom of shafts. Probably cut off by diorite a few M below.
 HOST ROCK TYPE.....tactite
 IGNEOUS ROCK TYPE.....diorite
 GANGUE MINERALS.....garnet, diopside
 REFERENCE....Fries and Schmitter, 1945.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.086 ST	1943	AVE. 0.8% WO ₃ ; 58 UNITS WO ₃

PRODUCTION COMMENTS.....Ore was carefully picked under UV light, more than half of the rock was discarded. Overall tenor of the deposit averaged less than 0.4% WO₃. Operation was not profitable.

SOURCE OF PRODUCTION INFORMATION.....Fries and Schmitter, 1945, p. 83.
 RESERVES COMMENTS.....No ore approaching commercial grade exposed in the workings. Not likely that any more will be found.
 SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945, p. 85.

MRDS RECORD NUMBER....MX00238

MAP NUMBER.....238
 SITE NAME.....Cienpies
 DISTRICT/AREA.....Los Gavilanes
 STATE.....NBAJA
 LATITUDE.....32-08- N LONGITUDE.....116-04- W

COMMODITIES.....W
 MAJOR.....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....ave. WO₃ content: 0.4%
 PRODUCTION.....S
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Disseminated scheelite in garnet-amphibole
 tactite.
 HOST ROCK TYPE.....tactite
 IGNEOUS ROCK TYPE.....quartz diorite
 GANGUE MINERALS.....garnet, amphibole
 REFERENCE....Fries and Schmitter, 1945.
 ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.058 ST	1943	AVE. 0.55% WO ₃ ; 29 UNITS
WO ₃			

 PRODUCTION COMMENTS.....15-20 tons of same grade ore piled
 on dumps in 1943. Sorted ore comprised about 2/3 of mined rock.
 SOURCE OF PRODUCTION INFORMATION.....Fries and Schmitter, 1945, p. 83.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	2.000 ST	1945	0.3-0.4% WO ₃

 RESERVES COMMENTS.....Ave. mining width: 4.0 M
 SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945, p. 85.

 MRDS RECORD NUMBER....MX00239
 MAP NUMBER.....239
 SITE NAME.....El Pinalito
 DISTRICT/AREA.....Los Gavilanes
 STATE.....NBAJA
 LATITUDE.....32-11- N LONGITUDE.....116-03- W
 COMMODITIES.....W
 MAJOR.....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....mined section averaged only 0.2% WO₃
 PRODUCTION.....S
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite in tactite, especially in
 coarsely crystalline variety. Maximum width of ore: 1.0 M.
 HOST ROCK TYPE.....tactite
 IGNEOUS ROCK TYPE.....quartz diorite
 REFERENCE....Fries and Schmitter, 1945.
 ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.026 ST	1943	AVE. 0.83% WO ₃ ; 19 UNITS
WO ₃			

 PRODUCTION COMMENTS.....Sorted ore was 1/4 of rock mined,
 all from westernmost pit. 15-20 tons of ore averaging 0.7-0.8% WO₃
 on dumps in 1943.
 SOURCE OF PRODUCTION INFORMATION.....Fries and Schmitter, 1945, p. 83.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.500 ST	1945	0.2-0.3% WO ₃

RESERVES COMMENTS.....Ave. mining width: 1.2 M
 SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945, p. 85.

MRDS RECORD NUMBER....MX00240

MAP NUMBER.....240
 SITE NAME.....Corte de Madera
 DISTRICT/AREA.....Los Gavilanes
 STATE.....NBAJA
 LATITUDE.....32-07-58N LONGITUDE.....116-04- W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....overall tenor probably less than 0.2% WO₃
 PRODUCTION.....N
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite occurs in tactite on the SW side
 of 2 M thick bed of marble and in two zones of tactite within 5 M
 thick marble bed. Tactite gangue consists mainly of garnet,
 tremolite, diopside, calcite and quartz, Scheelite-bearing zones
 are only a few tenths of a meter wide.
 HOST ROCK TYPE.....marble
 IGNEOUS ROCK TYPE.....quartz diorite
 GANGUE MINERALS.....garnet, tremolite, diopside, calcite,
 quartz
 REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00241

MAP NUMBER.....241
 SITE NAME.....El Fenomeno del Topo
 DISTRICT/AREA.....Los Gavilanes
 STATE.....NBAJA
 LATITUDE.....32-12-50N LONGITUDE.....116-00-00W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....N
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite-bearing zone about 0.5 M wide in
 garnet-diopside tactite. Ore is pockety and generally low grade.
 Zone appears to be no more than 10 M long.
 HOST ROCK TYPE.....marble
 IGNEOUS ROCK TYPE.....biotite diorite
 GANGUE MINERALS.....garnet, diopside
 REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00242

MAP NUMBER.....242

SITE NAME.....La Cruz
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....29-06-23N LONGITUDE.....110-54-53W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....1.0% WO₃
 PRODUCTION.....N
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Layer of massive scheelite-bearing tactite
 0.5 M wide and 10 M long may contain 1.0% WO₃. Size and shape of
 limestone pendant suggest that deposit extends to a max. depth of
 10 M.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....garnet, epidote
 REFERENCE....Wiese and Cardenas, 1945.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.150 ST	1945	1.0 % WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00243

MAP NUMBER.....243
 SITE NAME.....El Trueno-Nacimiento
 DISTRICT/AREA.....Nacimiento
 STATE.....SONORA
 LATITUDE.....28-11- N LONGITUDE.....109-45- W
 COMMODITIES.....W
 MAJOR.....W
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Mined: 1916-1917, worked
 intermittently by gambusinos after 1917, property idle in 1943.
 DEPOSIT MODEL.....W Pegmatite(?)
 DEPOSIT SIZE.....SMALL
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 REFERENCES

Guild, 1981.
 Salas, 1975.
 Wiese and Cardenas, 1945.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
CONC W	.040 ST	1916-1917

PRODUCTION COMMENTS.....Subsequent production by
 gambusinos, amounting to a few tons of conc., derived from dumps
 and nearby placers.

SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.

MAP NUMBER.....244
 SITE NAME.....San Julian
 SYNONYM NAME.....San Carlos, Puerto de Buenavista
 DISTRICT/AREA.....San Nicolas
 STATE.....SONORA
 LATITUDE.....28-16- N LONGITUDE.....109-15- W
 COMMODITIES.....W
 MAJOR.....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....In March 1943, six men
 were mining out the high grade pockets in the workings and thirty
 others reworking the dump material and placer gravel in the arroyo
 below the mine with dry washers to produce about 40 KG of 50% WO₃
 conc. per day.
 DEPOSIT MODEL.....W Pegmatite
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite occurs in a zone of stringers
 and pods of pegmatite in granite. Mineralized zone 30 M by 5 M,
 about 50 M downslope of granite/quartzite contact. Stringers Ave.
 10-20 CM across and less than 1 M in length. Entire mineralized
 zone decomposed by weathering. Scheelite partially separated from
 the rock by screening.
 HOST ROCK TYPE.....pegmatite
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 REFERENCE....Wiese and Cardenas, 1945.
 CUMULATIVE PRODUCTION
 ITEM TONNAGE (x10³) YEARS
 CONC W .072 ST 1929-1930
 SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.
 RESOURCES COMMENTS.....Reserve estimate difficult due to
 numerous caved workings and surface cover. Pillars in block being
 mined in March 1943 contained about 500 tons of mineralized rock.
 A small amount of development work might prove presence of a few
 thousand tons of mineralized rock containing an Ave. of about 0.5
 % WO₃ within 10 M of the workings. Dump material and placer
 gravels assayed less than 0.3 % WO₃.
 SOURCE OF RESOURCES INFORMATION.....Wiese and Cardenas, 1945.

MAP NUMBER.....245
 SITE NAME.....Maria Luisa
 DISTRICT/AREA.....Hermosillo/Cerro Tecoripa
 STATE.....SONORA
 LATITUDE.....29-04-38N LONGITUDE.....110-56-03W
 COMMODITIES.....W
 MAJOR.....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....3.0-6.0% WO₃
 PRODUCTION.....S
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a

DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....At least 15 scheelite-bearing tactite lenses along igneous/carbonate contact. Only lens at S end of claim was worked. Three largest ore bodies arranged en echelon along favorable beds in limestone. N ore body cut by diabase dike 1-2 M thick intruded along a fault of 2 M horizontal displacement. Originally the scheelite was in a gangue of quartz, calcite, garnet, epidote and pyrite. Pyrite oxidized and calcite, garnet and epidote weathered out leaving porous, partly brecciated ore composed of quartz, scheelite, iron oxide and f. gr. brown calcite. Probable volume decrease of 50% in the upper part of the ore body. Tungsten content (WO₃) about 6.0% at the surface, decreasing to about 3.0% at a depth of 20 M. No unoxidized sulfides or supergene scheelite found.

HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....quartz, calcite, (garnet), (epidote), (pyrite), iron oxide
 SIGNIFICANT ALTERATION.....oxidation
 REFERENCE....Wiese and Cardenas, 1945.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	3.000 ST	1945	3.0% WO ₃
ORE W	1.500 ST	1945	1.5-2.5% WO ₃

RESERVES COMMENTS.....Line 1: indicated ore above 30-meter level in tactite bodies at S end of claim. Line 2: inferred ore at N end of claim having a depth of from 5-10 M.

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER...MX00246

MAP NUMBER.....246
 SITE NAME.....El Tungsteno
 DISTRICT/AREA.....Hermosillo/Cerro Lujan
 STATE.....SONORA
 LATITUDE.....29-04-35N LONGITUDE.....110-56-01W
 COMMODITIES.....W
 MAJOR.....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....S
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Fifteen separate small lenses of scheelite-bearing tactite. Four lenses pinched out at a depth of 9 M and the others were even shallower. Tactite bodies formed in cs grained recrystallized limestone. Igneous contact truncates bedding at an obtuse angle, causing ore bodies to be of small lateral extent. In the southwest part of the area a few small stringers of pegmatite containing scheelite adjoin the ore bodies.

HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET

IGNEOUS ROCK TYPE.....granite
REFERENCE....Wiese and Cardenas, 1945.

CUMULATIVE PRODUCTION

ITEM	TONNAGE(x10 ³)	YEARS	GRADE
ORE W	.250 ST	-1943	AVE. 2.3 % WO ₃

SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	1.200 ST	1945	1.5-2.0 % WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00247

MAP NUMBER.....247

SITE NAME.....Noche

DISTRICT/AREA.....Hermosillo/Cerro Tecoripa

STATE.....SONORA

LATITUDE.....29-04-36N LONGITUDE.....110-56-04W

COMMODITIES.....W

MAJOR.....W

ORE MATERIALS.....scheelite

PRODUCTION.....S

DEPOSIT MODEL.....W Skarn

USGS MODEL NUMBER.....14a

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Scheelite-bearing tactite along eastern edge of small block of limestone separated from main limestone mass by tongue of f.gr. granite 5 M wide. Two parallel diabase dikes that intrude ore body exposed on 7-meter level. Main tactite body dips W and probably does not continue beyond 10 M below 7-meter level. Crosscut exposed small body of granite pegmatite about 2 M in diam. connected with main body of granite by a stringer 25 CM wide. Pegmatite composed of cs gr. quartz, feldspar, muscovite and 5-10 % scheelite in cs subhedral crystals up to 8 CM across.

HOST ROCK AGE.....PAL

HOST ROCK TYPE.....limestone

IGNEOUS ROCK AGE.....CRET

IGNEOUS ROCK TYPE.....granite, pegmatite

GANGUE MINERALS.....quartz, feldspar, muscovite

REFERENCE....Wiese and Cardenas, 1945.

ANNUAL PRODUCTION

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	.050 ST	1943	1.9% WO ₃

SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945, p. 116.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	.180 ST	1945	1.7% WO ₃

RESERVES COMMENTS.....Assumed mining depth: 17 M

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945, p. 116.

MRDS RECORD NUMBER....MX00248

MAP NUMBER.....248

SITE NAME.....Los Cuates

SYNONYM NAME.....Cuate

DISTRICT/AREA.....Hermosillo/Cerro Tecoripa
 STATE.....SONORA
 LATITUDE.....29-04-37N LONGITUDE.....110-56-01W
 COMMODITIES.....W MO
 MAJOR.....W POTEN.....MO
 ORE MATERIALS.....scheelite, powellite
 GENERAL ANALYTICAL DATA.....2.0-3.5 % WO₃
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....At the end of 1943 only
 the Maria Luisa, Noche, Cuate and Tungsteno mines were producing.
 Three other properties in the district were doing development work
 and the rest were idle.
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Several lenses of scheelite-bearing
 tactite along intrusive contact. At the surface the main ore body
 is 20 M long and 3 M wide from wall to wall, but width includes
 that of intruded diabase dike. Scheelite mineralization spotty.
 Segment of ore body E of the dike pinches out at a depth of 5 M.
 Several small lenses near the S end of the claim contain some
 powellite, but little scheelite.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....garnet
 REFERENCES

 Radelli, 1985.
 Wiese and Cardenas, 1945.

ANNUAL PRODUCTION

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	.050 ST	1943	3.5% WO ₃

SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	1.200 ST	1945	2.0 -2.5 % WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00249

MAP NUMBER.....249
 SITE NAME.....Santa Eduvigis
 DISTRICT/AREA.....Hermosillo/Cerro Tecoripa
 STATE.....SONORA
 LATITUDE.....29-04-43N LONGITUDE.....110-56-00W
 COMMODITIES.....W
 MAJOR.....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....S
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite occurs in seven lenses of
 tactite and in an irregular quartz-muscovite vein. Largest ore

body intersected at depth of 9 M by adit. Three other tactite lenses opened to depths of 3 M by means of pits and shallow shafts. W vein crops out in granite about 10 M S of the adit portal.

HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 REFERENCE....Wiese and Cardenas, 1945.
 PRODUCTION COMMENTS.....Work stopped in Sept. 1943, after 50 tons of hand-sorted ore containing 2.5% WO₃ had been accumulated from all the workings.
 SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.
 RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE W	.500 ST	1945	1.5-2.0 % WO ₃

RESERVES COMMENTS.....Assumes that main ore body extends to 12 M depth and that other ore bodies extend to 5 M.
 SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00250

MAP NUMBER.....250
 SITE NAME.....Beatriz
 SYNONYM NAME.....Hercules, Argentina
 DISTRICT/AREA.....Hermosillo/Villa Seris
 STATE.....SONORA
 LATITUDE.....29-04-50N LONGITUDE.....110-55-08W
 COMMODITIES.....W
 MAJOR.....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....S
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Bed of gray recrystallized limestone 1 M thick partly replaced for strike length of 2 M and min. depth of 15 M by garnet, f.gr. quartz, cs.gr. brown calcite, a little pyrite and epidote. Irregular crystals of scheelite up to 5 CM across in small clusters and stringers in replaced zone.

HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....garnet, quartz, calcite, pyrite, epidote
 REFERENCE....Wiese and Cardenas, 1945.
 PRODUCTION COMMENTS.....3 tons of hand sorted ore taken from dump in 1943 contained about 35 units WO₃. No ore remains in place or on dumps.
 SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00251

MAP NUMBER.....251
 SITE NAME.....Carnaval
 DISTRICT/AREA.....Hermosillo/Villa Seris

STATE.....SONORA
 LATITUDE.....29-04-43N LONGITUDE.....110-55-12W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....U
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite-bearing tactite formed where
 igneous contact cuts across bedding in limestone. Individual
 tactite bodies small and contain f. gr. scheelite in stringers 20-
 30 CM wide parallel to bedding. Seven exposed lenses, inferred
 depth: 7 M.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 REFERENCE....Wiese and Cardenas, 1945.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.250 ST	1945	1.0-2.0 % WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00252

MAP NUMBER.....252
 SITE NAME.....San Juan de Dias
 DISTRICT/AREA.....Hermosillo/Villa Seris
 STATE.....SONORA
 LATITUDE.....29-04-42N LONGITUDE.....110-55-16W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....Assay of composite sample of dumps: 1.5%
 WO₃
 PRODUCTION.....U
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Seven small lenses of scheelite-bearing
 tactite along igneous contact over strike length of 150 M. Tactite
 composed of about 50% epidote, 50% quartz-garnet-scheelite.
 Scheelite occurs in subhedral crystals up to 5 CM across, in
 stringers and disseminated in tactite.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....epidote, quartz, garnet
 REFERENCE....Wiese and Cardenas, 1945.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	1.000 ST	1945	1.5% WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00253

MAP NUMBER.....253
SITE NAME.....Santa Ana
SYNONYM NAME.....La Providencia
DISTRICT/AREA.....Hermosillo
STATE.....SONORA
LATITUDE.....29-06-30N LONGITUDE.....110-55- W
COMMODITIES.....W
MAIN....W
ORE MATERIALS.....scheelite
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Scheelite-bearing rock is hard, massive
quartz-epidote tactite which extends to only a shallow depth.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....CRET
IGNEOUS ROCK TYPE.....granite
GANGUE MINERALS.....quartz, epidote
REFERENCE....Wiese and Cardenas, 1945.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE W	.120 ST	1945	1.0% WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00254

MAP NUMBER.....254
SITE NAME.....El Espejo
DISTRICT/AREA.....Hermosillo
STATE.....SONORA
LATITUDE.....29-06-17N LONGITUDE.....110-54-47W
COMMODITIES.....W
MAIN....W
ORE MATERIALS.....scheelite
PRODUCTION.....N
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Scheelite-bearing tactite layer 0.5 M wide
and 15 M long with probable 8 M depth.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....CRET
IGNEOUS ROCK TYPE.....granite
REFERENCE....Wiese and Cardenas, 1945.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE W	.160 ST	1945	1.0% WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00255

MAP NUMBER.....255
 SITE NAME.....Maravilla
 DISTRICT/AREA.....Hermosillo/Cerro Tecoripa
 STATE.....SONORA
 LATITUDE.....29-04-41N LONGITUDE.....110-56-01W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite-bearing tactite lenses along
 irregular intrusive contact extend to 6 M depth. Small body of
 muscovite-rich scheelite-bearing pegmatite contained about 2% WO₃,
 but only extended to a depth of 3 M.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite, pegmatite
 REFERENCE....Wiese and Cardenas, 1945.
 RESERVES
 ITEM TONNAGE(x10³) YEAR GRADE
 ORE W .500 ST 1945 1.5-2.0% WO₃
 SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00256

MAP NUMBER.....256
 SITE NAME.....Cinco de Mayo
 DISTRICT/AREA.....Hermosillo/Cerro Tecoripa
 STATE.....SONORA
 LATITUDE.....29-04-33N LONGITUDE.....110-56-01W
 COMMODITIES.....W MO
 MAIN....W MINOR....MO
 ORE MATERIALS.....scheelite, powellite
 PRODUCTION.....U
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Six short lenses of tactite on projections
 of limestone that jut out into granite. Average depth of exposed
 ore bodies was about 7 M, in all cases at least equal to strike
 length. Tactite composed principally of garnet with lesser amounts
 of scheelite, calcite, epidote and quartz. Some secondary iron
 oxides and powellite associated with scheelite. Several small
 kidney-shaped masses of nearly pure scheelite found at about the
 8-meter level in shaft at N end of claim, lying exactly on the
 granite/limestone contact. Largest kidney weighed about 6 KG and
 was coated with muscovite.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....garnet, calcite, epidote, quartz, iron
 oxides, muscovite

REFERENCE....Wiese and Cardenas, 1945.
 PRODUCTION COMMENTS.....Nearly 300 tons of ore containing
 2.75% WO₃ extracted by the end of 1943 and stored on dumps.
 SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	1.200 ST	1945	2.0-2.5% WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00257

MAP NUMBER.....257
 SITE NAME.....La Luz Azul, La Leonora
 DISTRICT/AREA.....Hermosillo/Rancho de las Viboras
 STATE.....SONORA
 LATITUDE.....29-02-50N LONGITUDE.....110-55-50W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....N
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite occurs in lenses of massive
 garnet-epidote tactite along granite contact.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....garnet, epidote
 REFERENCE....Wiese and Cardenas, 1945.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.400 ST	1945	1.0% WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00258

MAP NUMBER.....258
 SITE NAME.....El Camino
 DISTRICT/AREA.....Hermosillo/Rancho de las Viboras
 STATE.....SONORA
 LATITUDE.....28-59-40N LONGITUDE.....110-57-45W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....1.5% WO₃
 PRODUCTION.....N
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Several tactite bodies. Most composed of
 barren garnet, except for two, one 20 M long and the other 25 M
 long, that contain scheelite. The width of the ore bodies ranges
 from a few decimeters to 2 M.
 HOST ROCK AGE.....PAL

HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....CRET
IGNEOUS ROCK TYPE.....granite
GANGUE MINERALS.....garnet

REFERENCES

Perez Segura, 1985.
Wiese and Cardenas, 1945.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	1.200 ST	1945	1.5% WO ₃

RESERVES COMMENTS.....Based on indicated ore to a depth of
10 M

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00259

MAP NUMBER.....259

SITE NAME.....Josefina, Los Andes, Carmelita
DISTRICT/AREA.....Hermosillo/Rancho de las Viboras
STATE.....SONORA
LATITUDE.....29-02-50N LONGITUDE.....110-55-10W
COMMODITIES.....W

MAIN...W

ORE MATERIALS.....scheelite

PRODUCTION.....N

DEPOSIT MODEL.....W Skarn

USGS MODEL NUMBER.....14a

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....A few small lenses of scheelite-bearing
tactite.

HOST ROCK AGE.....PAL

HOST ROCK TYPE.....limestone

IGNEOUS ROCK AGE.....CRET

IGNEOUS ROCK TYPE.....granite

REFERENCE....Wiese and Cardenas, 1945.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.100 ST	1945	1.0% WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00260

MAP NUMBER.....260

SITE NAME.....Virgen de Guadalupe
DISTRICT/AREA.....Guaymas
STATE.....SONORA

LATITUDE.....28-12- N LONGITUDE.....110-58- W

COMMODITIES.....W CU FE

MAJOR....W OCCUR....CU FE

ORE MATERIALS.....scheelite, Cu and Fe oxides

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Cu-stained tactite

outcrops originally prospected for copper and silver, but probably
no ore was shipped. Old workings re-denounced by Fernando Navarro
and Pablo Ramirez in June 1943 when scheelite was found on old ore

dump. Development work continued until end of 1943, but attempts to mine the hard, dense tactite by hand methods were unsuccessful.

DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Seven small lenses of scheelite-bearing tactite. Garnet-epidote-calcite-quartz tactite contains secondary oxides of Cu and Fe as well as disseminated scheelite.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....garnet, epidote, calcite, quartz
 REFERENCE....Wiese and Cardenas, 1945.
 ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	.012 ST	1943	10% WO ₃
ORE W	.085 ST	1943	1.5% WO ₃

SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	1.000 ST	1945	1.0-1.5% WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00261

MAP NUMBER.....261
 SITE NAME.....Tecolote
 DISTRICT/AREA...../Tonichi
 STATE.....SONORA
 LATITUDE.....28-40- N LONGITUDE.....109-25- W
 COMMODITIES.....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....N
 EXPLORATION AND DEVELOPMENT COMMENTS.....Property was abandoned in the fall of 1943.

DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Minor amounts of scheelite in contact metamorphosed limestone. No minable ore bodies.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 REFERENCE....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00262

MAP NUMBER.....262
 SITE NAME.....Cadena del Cobre
 DISTRICT/AREA...../Tonichi
 STATE.....SONORA
 LATITUDE.....29-12- N LONGITUDE.....109-22- W
 COMMODITIES.....W CU
 MAIN....W CU
 ORE MATERIALS.....scheelite

GENERAL ANALYTICAL DATA.....Selected samples of best ore contained up
to 3.75% WO₃, but min. zone probably averages considerably less.
PRODUCTION.....N
EXPLORATION AND DEVELOPMENT COMMENTS.....Originally staked for
copper.
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fine-grained scheelite occurs in tactite
along intrusive contact between limestone and granite. Known
mineralized body about 50 M long and up to several M wide. Copper
mineralization is in separate part of the contact zone which
contains no tungsten.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....MES
IGNEOUS ROCK TYPE.....granite
REFERENCE....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00263

MAP NUMBER.....263
SITE NAME.....El Tranvia
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-02- N LONGITUDE.....109-03- W
COMMODITIES.....PB ZN CU? AG? AU?
MAJOR.....PB ZN POTEN.....CU? AG? AU?
ORE MATERIALS.....galena, sphalerite
PRODUCTION.....S
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Galena-sphalerite-quartz vein trending N 6
W in Laramide-age granite.
HOST ROCK TYPE.....granite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granite
GANGUE MINERALS.....quartz
REFERENCES
Guild, 1981.
Perez Segura, 1985.

MRDS RECORD NUMBER....MX00264

MAP NUMBER.....264
SITE NAME.....Esqueda district
DISTRICT/AREA.....Esqueda/Frontera
STATE.....SONORA
LATITUDE.....30-50- N LONGITUDE.....109-22- W
COMMODITIES.....F
MAJOR.....F
PRODUCTION.....M
DEPOSIT MODEL.....Fluorite Vein
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Fluorite veins in Tertiary volcanic rocks.

HOST ROCK TYPE.....volcanic
IGNEOUS ROCK AGE.....TERT
IGNEOUS ROCK TYPE.....volcanic
REFERENCES

Guild, 1981.
Roldan-Quintana, 1979.
Salas, 1975.

MRDS RECORD NUMBER....MX00265

MAP NUMBER.....265
SITE NAME.....Fortuna Del Cobre
STATE.....SONORA
LATITUDE.....30-04- N LONGITUDE.....112-29- W
COMMODITIES.....CU MO
MAJOR.....CU MINOR.....MO
PRODUCTION.....M
DEPOSIT MODEL.....Porphyry Cu(?)
USGS MODEL NUMBER.....17?
DEPOSIT SIZE.....MEDIUM
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....quartzites
IGNEOUS ROCK TYPE.....(granodiorite) quartz porphyry
SIGNIFICANT ALTERATION.....potassic
REFERENCES

Guild, 1981.
Perez Segura, 1985.

MRDS RECORD NUMBER....MX00266

MAP NUMBER.....266
SITE NAME.....El Saturno
DISTRICT/AREA.....Hermosillo
STATE.....SONORA
LATITUDE.....29-10- N LONGITUDE.....110-48- W
COMMODITIES.....W CU
MAJOR.....W POTEN.....CU
ORE MATERIALS.....scheelite, chalcopryrite
PRODUCTION.....S
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Small scheelite-bearing tactite body at
the edge of silicated and silicified limestone near contact with
altered andesite or diorite. Scheelite occurs as stringers in the
metamorphosed limestone associated with pyrite, chalcopryrite and
quartz.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone
IGNEOUS ROCK TYPE.....andesite or diorite
GANGUE MINERALS.....pyrite, quartz
SIGNIFICANT ALTERATION.....silicification
REFERENCE....Wiese and Cardenas, 1945.
PRODUCTION COMMENTS.....164 units WO₃ produced, 1942.
SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER...MX00267

MAP NUMBER.....267
SITE NAME.....El Picacho
SYNONYM NAME.....La Florencia
DISTRICT/AREA.....Picacho
STATE.....SONORA
LATITUDE.....29-14- N LONGITUDE.....110-45- W
COMMODITIES.....AU W CU
MAJOR.....AU POTEN.....W OCCUR.....CU
ORE MATERIALS.....gold; scheelite, oxidized Cu minerals
PRODUCTION.....S
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Gold veins mined. Also discontinuous
tactite lenses similar to those on the El Nublado claim carry
small amounts of scheelite and oxidized Cu minerals.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....CRET
IGNEOUS ROCK TYPE.....granite
REFERENCE....Wiese and Cardenas, 1945.
SOURCE OF PRODUCTION INFORMATION.....M. Silberman, 1987, pers. com.

MRDS RECORD NUMBER...MX00268

MAP NUMBER.....268
SITE NAME.....El Nublado
DISTRICT/AREA.....Picacho
STATE.....SONORA
LATITUDE.....29-13-30N LONGITUDE.....110-44-35W
COMMODITIES.....W MO CU
MAIN....W MINOR....MO
ORE MATERIALS.....scheelite, powellite, oxidized Cu minerals
PRODUCTION.....N
EXPLORATION AND DEVELOPMENT COMMENTS.....Tungsten-bearing tactite
discovered in district in 1943. Three claims recorded: El Nublado,
El Picacho and La Florencia. Only a little work was done in 1943
and no W ore was mined. In more recent years El Picacho and La
Florencia were put into gold production.
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Epidote-garnet tactite with small amounts
of scheelite, powellite and ox. Cu minerals. Only two lenses of
tactite contained enough scheelite to be considered ore.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....CRET
IGNEOUS ROCK TYPE.....granite
GANGUE MINERALS.....epidote, garnet
REFERENCE....Wiese and Cardenas, 1945.
RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
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ORE W .300 ST 1945 2.0% WO₃
 ORE W 1.000 ST 1945 1.0% WO₃
 RESERVES COMMENTS.....Estimated to depths of 10 M from
 exposures in shallow pit and at the outcrops. Tactite is very hard
 and dense, difficult to work by hand methods.
 SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00269

MAP NUMBER.....269
 SITE NAME.....La Cruz
 DISTRICT/AREA.....San Nicolas
 STATE.....SONORA
 LATITUDE.....28-15-03N LONGITUDE.....109-10-03W
 COMMODITIES.....W CU MO
 MAJOR.....W POTEN.....CU OCCUR.....MO
 ORE MATERIALS.....scheelite, cuprotungstite, chalcopyrite,
 molybdenite
 GENERAL ANALYTICAL DATA.....Dike rock mined from caved stopes in 1943
 contained about 0.7% WO₃.
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Property denounced as a
 copper deposit in 1910 by J.H. King. Later sold to Phelps Dodge
 interests which operated it as a tungsten mine during WW1.
 Operated by Frank Fast from 1929-1935. Bought by Emilio Bouvet of
 Navajoa in 1935. Agency set up to purchase conc. from gambusinos
 then working the deposit. Sold to Sociedad Financiera de MX in
 1943, which continued purchasing conc. during that year.
 DEPOSIT MODEL.....W Pegmatite
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Pegmatite dike up to 8 M wide and 150 M
 long crops out at crest of steep ridge. Scheelite associated with
 chalcopyrite, molybdenite, chlorite and pyrite in pods and
 stringers in the dike. One 20-ton pocket of nearly pure scheelite
 found, another contained 4 tons.
 HOST ROCK TYPE.....pegmatite
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....chlorite, pyrite
 REFERENCE....Wiese and Cardenas, 1945.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
ORE W 1.000 ST		1914-1918
ORE W .200 ST		1929-1935

PRODUCTION COMMENTS.....No production as of 1943, when
 property was investigated for W deposits, but later went into gold
 production.
 SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00270

MAP NUMBER.....270
 SITE NAME.....El Bufalo
 DISTRICT/AREA.....San Nicolas
 STATE.....SONORA
 LATITUDE.....28-15-00N LONGITUDE.....109-10-03W
 COMMODITIES.....W CU

MAJOR.....W OCCUR.....CU
 ORE MATERIALS.....scheelite, cuprotungstite, chalcopyrite
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Two tons of conc. produced
 in 1934, derived mainly from small placers on hillside below mine
 and in adjacent arroyo. In 1942 and 1943, two tons of conc. was
 produced from hand-sorted high-grade ore that was treated in the
 owner's arrastre.
 DEPOSIT MODEL.....W Pegmatite
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite occurs in irregular stringers
 and pods of quartz and as thin coatings on joint planes in
 granite. Veinlets probably of pegmatitic origin and also contain
 minor pyrite and chalcopyrite. Nearly all scheelite free of Mo and
 Cu, but some contains a little cuprotungstite. Stringers generally
 less than 1 M long and 10 CM wide and are arranged with no
 systematic orientation within mineralized zone 20 SQ M in area,
 exposed to a depth of 10 M by an open cut. Adjacent hillside
 covered by colluvium.
 HOST ROCK TYPE.....pegmatite (?)
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....quartz, pyrite
 REFERENCE....Wiese and Cardenas, 1945.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE W	.500 ST	-1943	0.5% WO ₃

PRODUCTION COMMENTS.....Difficult to mine by hand methods
 due to hardness of granite.
 SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	1.000 ST	1945	0.5% WO ₃

RESERVES COMMENTS.....Mineralized rock within 5 M of
 workings.
 SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00271

MAP NUMBER.....271
 SITE NAME.....Lydia
 DISTRICT/AREA.....El Encinal
 STATE.....SONORA
 LATITUDE.....28-41- N LONGITUDE.....109-20- W
 COMMODITIES.....MO W
 MAJOR.....MO POTEN.....W
 ORE MATERIALS.....molybdenite, scheelite
 PRODUCTION.....S
 DEPOSIT MODEL.....W Pegmatite
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Zone of tabular lenses of pegmatite in
 granite. Individual lenses are a few M long and less than a M
 thick in NE-trending zone 30 M long and up to 2 M wide.
 Molybdenite present throughout zone to depth of 20 M, but
 scheelite found only between 5-meter and 15-meter levels in the

shaft and for a distance of 15 M along the drift at the 10-meter level.

HOST ROCK TYPE.....pegmatite
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 REFERENCE....Wiese and Cardenas, 1945.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MO	.170 ST	1914-1945	30% MOLYBDENITE
ORE MO	.035 ST	1914-1945	10% MOLYBDENITE

SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00272

MAP NUMBER.....272
 SITE NAME.....Veta Rey
 DISTRICT/AREA.....El Encinal
 STATE.....SONORA
 LATITUDE.....28-42-30N LONGITUDE.....109-19- W
 COMMODITIES.....W MO CU
 MAJOR.....W MO OCCUR.....CU
 ORE MATERIALS.....scheelite, molybdenite, chalcopryrite
 GENERAL ANALYTICAL DATA.....Vein zone as a whole contained less than about 0.5% WO₃ and 2.0% MoS₂.
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....In March 1943, a crew of three men were taking out W ore from underground workings and a few shallow open cuts. Ore was mined selectively using U/V lamp, crushed by hand and concentrated by panning. Molybdenite in pan was floated out by adding a spoonful of lard to each pan of mixed concentrates.

DEPOSIT MODEL.....W Pegmatite
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Irregular tabular zone of lenses and stringers of f. grained pegmatite in granite. 50 M long with max. width of 2 M. Scheelite, molybdenite, pyrite and minor chalcopryrite occur as small scattered clusters in the pegmatites.

HOST ROCK TYPE.....pegmatite
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granite
 REFERENCE....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00273

MAP NUMBER.....273
 SITE NAME.....El Tungsteno
 DISTRICT/AREA.....La Dura
 STATE.....SONORA
 LATITUDE.....28-20- N LONGITUDE.....109-37- W
 COMMODITIES.....W
 MAJOR.....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....S
 DEPOSIT MODEL.....W Pegmatite
 DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Three discontinuous parallel pegmatite dikes strike N and form low steep-sided ridges separated by narrow gravel-floored washes. At west end of claim quartzite caps mesa a few M above level of mineralized dikes. Pegmatites composed of feldspar, quartz, epidote, amphibole, muscovite, scheelite and magnetite, all med. grained. Numerous vugs lined with coarse intergrown crystals of quartz, feldspar and scheelite. Some scheelite present in soil mantle on hillsides below outcrops and in scattered throughout gravel of the arroyos, but richest concentration is in a thin layer a few CM just above bedrock at the base of the gravel. Gravel is up to 2 M thick at the center of the channel. Pegmatite lenses too small and discontinuous to be mined profitably on a large scale.

HOST ROCK TYPE.....pegmatite

IGNEOUS ROCK AGE.....CRET

IGNEOUS ROCK TYPE.....granite

GANGUE MINERALS.....feldspar, quartz, epidote, amphibole, muscovite, magnetite

REFERENCE....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00274

MAP NUMBER.....274

SITE NAME.....La Libertad

DISTRICT/AREA.....La Dura

STATE.....SONORA

LATITUDE.....28-21- N LONGITUDE.....109-36-30W

COMMODITIES.....W

MAIN....W

ORE MATERIALS.....scheelite

PRODUCTION.....N

DEPOSIT MODEL.....W Pegmatite

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Four short pegmatite dikes with spotty scheelite mineralization prospected by means of seven shallow pits, but little ore was found. Gambusinos worked soil mantle on slopes adjacent to pits and the gravel of nearby washes.

HOST ROCK TYPE.....pegmatite

IGNEOUS ROCK AGE.....CRET

IGNEOUS ROCK TYPE.....granite

REFERENCE....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00275

MAP NUMBER.....275

SITE NAME.....Llano Colorado

STATE.....SONORA

LATITUDE.....29-00-55N LONGITUDE.....109-52-40W

COMMODITIES.....W

MAJOR.....W

ORE MATERIALS.....scheelite

PRODUCTION.....S

DEPOSIT MODEL.....W Pegmatite

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Small stringers of scheelite-bearing pegmatite.

IGNEOUS ROCK AGE.....CRET?
 IGNEOUS ROCK TYPE.....granite
 REFERENCE....Wiese and Cardenas, 1945.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
CONC W	.150 KG	-1943	35% WO ₃

PRODUCTION COMMENTS.....No scheelite mined.
 SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00276

MAP NUMBER.....276
 SITE NAME.....La Paz
 DISTRICT/AREA.....Tecoripa
 STATE.....SONORA
 LATITUDE.....28-46-15N LONGITUDE.....109-53-35W
 COMMODITIES.....W AU BA
 MAIN....W
 ORE MATERIALS.....scheelite, gold, barite
 PRODUCTION.....U
 EXPLORATION AND DEVELOPMENT COMMENTS.....The three claims of the La Paz Group were located in 1943 on the western extension of the abandoned Realito copper property.
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Series of NE striking, vertically dipping replacement veins in granite. Veins consist of quartz, calcite, pyrite and scheelite. Assays showed presence of minor amounts of gold in one shoot, barite found in another, not associated with scheelite. The Realito mine, on the same veins 300 FT east of La Paz Group, produced chalcopryrite and gold in a gangue of magnetite, pyrite, specularite and very little quartz. No feldspar, mica or chlorite were noted in veins on either property.
 HOST ROCK TYPE.....granite
 IGNEOUS ROCK AGE.....CRET?
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....quartz, calcite, pyrite
 REFERENCE....Wiese and Cardenas, 1945.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	3.000 ST	1945	2.0% WO ₃

SOURCE OF RESERVES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00277

MAP NUMBER.....277
 SITE NAME.....El Cobre
 DISTRICT/AREA.....Tecoripa
 STATE.....SONORA
 LATITUDE.....28-43- N LONGITUDE.....110-02- W
 COMMODITIES.....W CU MO AU AG
 MAJOR....W CU MO MINOR....AU AG
 ORE MATERIALS.....scheelite, chalcopryrite, chalcocite, molybdenite, powellite, unknown Au-Ag

GENERAL ANALYTICAL DATA.....Tungsten ore shoots contain 2.0% WO₃, 1.0% MoS₂ and as much as 6.0% Cu. In the remainder of the veins, assays indicated 0.1-0.5% WO₃, 0.1-1.0% MoS₂ and up to 12.0% Cu.

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Property first worked in 1910 for gold, silver and copper. In 1923 the International Minerals Syndicate did exploratory work. Additional expl. work by Penoles Co. in 1937. Scheelite not recognized until 1942. In 1943, the American Smelting and Refining Co. purchased the property from W. C. Taylor, Jr. and was engaged in underground exploratory work.

DEPOSIT MODEL.....Polymetallic Vein

USGS MODEL NUMBER.....22c

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Group of subparallel, locally branching veins form a zone 15 M wide and 230 M long. Individual veins are from a few CM to 2 M wide and ave. about 1 M in width. In the veins, granite has been replaced by scheelite, chalcopyrite, pyrite and molybdenite in a gangue of quartz and calcite. Some pyrite and chalcopyrite disseminated through granite for several M away from the veins. Thin stringers and disseminated crystals of scheelite scattered through most of the veins, but are most prominent in two shoots at the SW end of the ore zone.

HOST ROCK TYPE.....granite

IGNEOUS ROCK AGE.....CRET?

IGNEOUS ROCK TYPE.....granite

GANGUE MINERALS.....quartz, calcite, pyrite

SIGNIFICANT ALTERATION.....Secondary oxides prominent in upper 40 FT of the veins.

REFERENCES

Radelli, 1985.

Wiese and Cardenas, 1945.

PRODUCTION COMMENTS.....Some scheelite mined from shallow pits in bedrock, but most taken from adjacent washes.

SOURCE OF PRODUCTION INFORMATION.....Wiese and Cardenas, 1945.

RESOURCES COMMENTS.....The two known tungsten shoots probably extend from the 21-meter level to at least 10 M below the 45-meter level and may contain as much as 4,000 tons of ore. Tungsten mineralization on the 43-meter level is strong and may continue considerably deeper than now exposed (in 1945).

SOURCE OF RESOURCES INFORMATION.....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00278

MAP NUMBER.....278

SITE NAME.....La Argentina

DISTRICT/AREA.....El Antimonio/La Montana

STATE.....SONORA

LATITUDE.....30-44-24N LONGITUDE.....112-35-13W

COMMODITIES.....SB AG

MAJOR.....SB AG

ORE MATERIALS.....antimony oxide, silver bromide and/or chloride

DEPOSIT MODEL.....Simple Sb

USGS MODEL NUMBER.....27d

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....At La Argentina, six main veins nearly parallel to purple-gray arenite and limonite. Eastern vein, 280 M long and from 10 CM to 2 M in width, has been most productive in the district. Middle part of eastern vein thins to 10-20 CM and contains 0.5-15 CM of low-grade ore along hanging wall. Middle and western veins, generally 20-40 CM wide, are cut by several premineral faults. Silver mineral, either Ag bromide or mixed bromide and chloride, occurs as coating on walls of fractures.

HOST ROCK AGE.....TRI

HOST ROCK TYPE.....purple-gray sandstone and siltstone

REFERENCES

Guiza and White, 1949.

White and Guiza, 1949.

PRODUCTION COMMENTS.....Total production has been between 600 and 1,000 tons of ore containing copper, gold, silver and molybdenum. Some of this ore must have also contained tungsten, but scheelite was not recognized in the mine until 1942.

SOURCE OF PRODUCTION INFORMATION.....Guiza and White, 1949.

MRDS RECORD NUMBER...MX00279

MAP NUMBER.....279

SITE NAME.....Santa Gertrudis

DISTRICT/AREA.....Magdalena

STATE.....SONORA

LATITUDE.....30-37-20N LONGITUDE.....110-29-30W

COMMODITIES.....AU

MAJOR.....AU

ORE MATERIALS.....gold

GENERAL ANALYTICAL DATA.....2-5 g/MT Au

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Exploration and production underway, 1987. Small heap leach operation processed 2000 MT grading 2-5 g/MT every two weeks (Silberman, et.al., 1987).

DEPOSIT MODEL.....Carbonate-Hosted Au-Ag

USGS MODEL NUMBER.....26a

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Disseminated gold in jasperoid and silicified brecciated calcareous rocks. Zones of high grade mineralization characterized by strong brecciation, silicification and oxidation. Quartz-hematite hydrothermal breccias common. Jarosite and limonite coatings on fracture surfaces.

HOST ROCK AGE.....CRET

HOST ROCK TYPE.....calcareous siltstone and sandstone, jasperoid

GANGUE MINERALS.....quartz, hematite, jarosite, limonite, fluorite(?)

SIGNIFICANT ALTERATION.....oxidation, silicification

REFERENCES

Silberman, 1987.

Silberman, Staude and Cox, 1987.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU	10.000 MT	1987	5.0 G/MT AU

PRODUCTION COMMENTS.....Low yield due to problems with
 crushing ore fine enough for efficient recovery from leach pads.
 SOURCE OF PRODUCTION INFORMATION.....Mine owner.

MRDS RECORD NUMBER....MX00280

MAP NUMBER.....280
 SITE NAME.....Amelia
 DISTRICT/AREA.....Sierra Azul
 STATE.....SONORA
 LATITUDE.....30-37- N LONGITUDE.....110-34- W
 COMMODITIES.....AU AG PB ZN PD
 MAJOR.....AU MINOR.....AG OCCUR.....PB ZN PD
 ORE MATERIALS.....gold
 GENERAL ANALYTICAL DATA.....Au content of silicified breccia: 15-20
 ppm, (Silberman, et.al., 1987).
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Bought by Phelps-Dodge in
 1984 and exploration begun. Production started in July 1987.
 DEPOSIT MODEL.....Carbonate-Hosted Au-Ag
 USGS MODEL NUMBER.....26a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Disseminated gold in jasperoids along
 high-angle normal and reverse faults in folded limestone
 and sandstone unit 5-10 m thick capped by 2-6 m chert layer.
 Similar to Santa Gertrudis. Mineralization primarily within 4 M of
 high-angle faults with richest ore at intersections of faults with
 lithologic contacts. Minor lead-zinc-silver mineralization
 associated with the gold. Limonite and hematite replace sulfides
 in oxidized ore. Jarosite along fracture surfaces.
 HOST ROCK AGE.....CRET?
 HOST ROCK TYPE.....limestone, sandstone, chert
 GANGUE MINERALS.....quartz, calcite, goethite, pyrite,
 arsenopyrite, barite
 SIGNIFICANT ALTERATION.....Chlorite and albite altered to muscovitic
 mica and kaolinite, widespread sericitization, and pervasive
 silicification.

REFERENCES

E&MJ, 1987, v. 188, no. 9, p. 11.
 Silberman, 1987.
 Silberman, Giles and Graubard-Smith, 1987.
 Silberman, Staude and Cox, 1987.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU	3000.000 ST	1987	0.06 OZ AU/ST

RESERVES COMMENTS.....Drill-indicated reserves.
 SOURCE OF RESERVES INFORMATION.....E&MJ, 1987.

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU	6000.000 ST	1987	SAME AS ABOVE

RESOURCES COMMENTS.....Additional potential for properties
 controlled by Minera Zapata.
 SOURCE OF RESOURCES INFORMATION.....E&MJ, 1987.

MRDS RECORD NUMBER....MX00281

MAP NUMBER.....281
 SITE NAME.....Cerro de San Francisco
 DISTRICT/AREA.....El Antimonio/Cerro de San Francisco
 STATE.....SONORA
 LATITUDE.....30-45-48N LONGITUDE.....112-35-12W
 COMMODITIES.....SB
 MAJOR.....SB
 ORE MATERIALS.....antimony oxide
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Production years: 1925-1935.
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Two veins about 200 M apart. Eastern vein occupies thrust fault that cuts a trachyte dike injected along earlier thrust with relatively large displacement. The thrust faults strike from due N to N 10 E and dip 35 to 50 E. Vein consists of stringers of quartz and antimony oxide filling breccia zone up to 1 M wide and about 100 M long. Vein worked down-dip to a max. depth of 15 M (as of 1943). Western vein: 70 M long in sandstone and diorite, strikes N 35 E and dips 40-60 E. (Bedding in sandstone strikes N 10 W and dips 55-75 W.) 10 CM to 1 M wide, worked to a depth of 8 M. Total production from both ore bodies small.
 HOST ROCK AGE.....TRI
 HOST ROCK TYPE.....red calcareous sandstone; trachyte
 IGNEOUS ROCK AGE.....TERT?
 IGNEOUS ROCK TYPE.....trachyte, fine-grained diorite
 GANGUE MINERALS.....quartz
 REFERENCES

Guiza and White, 1949.
 White and Guiza, 1949.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (×10 ³)	YEARS	GRADE
ORE SB	10.000 MT	1925-1935	5-10% SB

PRODUCTION COMMENTS.....Low yield due to problems with crushing ore fine enough for efficient recovery from leach pads.

SOURCE OF PRODUCTION INFORMATION.....Guiza and White, 1949.

MRDS RECORD NUMBER....MX00282

MAP NUMBER.....282
 SITE NAME.....Filadelfia
 DISTRICT/AREA.....Alamos
 STATE.....SONORA
 LATITUDE.....29-12- N LONGITUDE.....110-10- W
 COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Abandoned in the 1930's after litigation.
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Copper mineralization along fractures in granite that trend N 5 W and dip 40-60 SW. Conjugate fractures dip to the NE at about the same angle. Mining was in pegmatite veins where high-grade ore was found.

IGNEOUS ROCK TYPE.....granite

REFERENCE....Rocha, 1953.

MRDS RECORD NUMBER....MX00283

MAP NUMBER.....283

SITE NAME.....El Nacimiento

DISTRICT/AREA.....Nacimiento

STATE.....SONORA

LATITUDE.....28-12-25N LONGITUDE.....109-39-30W

COMMODITIES.....W CU MO

MAJOR.....W CU MINOR.....MO

ORE MATERIALS.....scheelite, chalcopyrite, azurite, molybdenite, powellite, pyrite

EXPLORATION AND DEVELOPMENT COMMENTS.....Originally mined (in the 1800's) for copper, later W became main commodity.

DEPOSIT MODEL.....W Pegmatite

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Both lode and placer tungsten. Copper and molybdenum mined from Pleistocene placer developed on Tertiary conglomerate.

HOST ROCK TYPE.....pegmatite

IGNEOUS ROCK AGE.....JUR-CRET

IGNEOUS ROCK TYPE.....granite, pegmatite

REFERENCES

Perez Segura, 1985.

Rocha, 1953.

MRDS RECORD NUMBER....MX00284

MAP NUMBER.....284

SITE NAME.....Adair

DISTRICT/AREA.....Desierto de Altar

STATE.....SONORA

LATITUDE.....31-33- N LONGITUDE.....113-40- W

COMMODITIES.....NA GYP

MAJOR.....NA GYP

ORE MATERIALS.....sodium carbonate, gypsum, anhydrite

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Site was producing in 1973.

DEPOSIT MODEL.....Trona

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Na-carbonate, gypsum and anhydrite in lacustrine sediments in a dry lake bed.

HOST ROCK AGE.....TERT-QUAT

HOST ROCK TYPE.....evaporites

REFERENCE....Salas, 1973.

MRDS RECORD NUMBER....MX00285

MAP NUMBER.....285

SITE NAME.....El Desierto de Sonora

DISTRICT/AREA.....Desierto de Altar
 STATE.....SONORA
 LATITUDE.....32-07-50N LONGITUDE.....113-45-00W
 COMMODITIES.....W
 MAJOR.....W
 ORE MATERIALS.....scheelite
 DEPOSIT MODEL.....W Pegmatite
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Tungsten-bearing pegmatite veins.
 HOST ROCK TYPE.....pegmatite
 IGNEOUS ROCK AGE.....LCRET-ETERT (LARAMIDE)
 IGNEOUS ROCK TYPE.....granite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00286

MAP NUMBER.....286
 SITE NAME.....Altar
 DISTRICT/AREA.....Caborca
 STATE.....SONORA
 LATITUDE.....30-43- N LONGITUDE.....111-51- W
 COMMODITIES.....AU
 MAIN....AU
 PRODUCTION.....N
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Thin CM to M scale discontinuous Au-
 bearing quartz veins of limited strike length. Veins characterized
 by brecciated coarse-grained quartz recemented by fine-grained
 quartz with hematite along fractures. Low to moderate Ag content,
 variable As, and variable but generally low to moderate base-metal
 content. Similar to Banco de Oro deposit.
 HOST ROCK AGE.....-JUR
 HOST ROCK TYPE.....silty argillites, sandstones
 GANGUE MINERALS.....quartz, hematite
 REFERENCES
 Silberman, 1986.
 Silberman, Giles and Graubard-Smith, 1987.

MRDS RECORD NUMBER....MX00287

MAP NUMBER.....287
 SITE NAME.....Banco de Oro
 DISTRICT/AREA.....Caborca
 STATE.....SONORA
 LATITUDE.....31-07-40N LONGITUDE.....112-30-35W
 COMMODITIES.....AU
 MAIN....AU
 GENERAL ANALYTICAL DATA.....3-4 g/MT Au, one sample ran 11 g/MT,
 (Silberman, et.al., 1987).
 PRODUCTION.....U
 EXPLORATION AND DEVELOPMENT COMMENTS.....Sampled by M. Silberman
 (USGS), 1984-85.
 DEPOSIT MODEL.....Flat-Fault Au(?)
 USGS MODEL NUMBER.....37b?
 DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Coarse-grained, brecciated quartz veins
with limonite and hematite in box work texture. Veins follow shear
zones 2-6 m wide along thrust fault.
HOST ROCK AGE.....-CRET
HOST ROCK TYPE.....chert, sandstone, biotite gneiss (JUR),
granite (CRET)
IGNEOUS ROCK AGE.....TERT?
IGNEOUS ROCK TYPE.....diorite, pyroxenite
GANGUE MINERALS.....quartz, adularia, hematite, limonite
SIGNIFICANT ALTERATION.....Sericitic alteration, distal
propylitization.

REFERENCES

Silberman, Miles, 1986.
Silberman, Giles and Graubard-Smith, 1987.

MRDS RECORD NUMBER....MX00288

MAP NUMBER.....288
SITE NAME.....Quitovac
DISTRICT/AREA.....Desierto de Altar
STATE.....SONORA
LATITUDE.....31-29-05N LONGITUDE.....112-46-00W
COMMODITIES.....AU FE CU
MAJOR.....AU OCCUR.....FE CU
ORE MATERIALS.....gold; galena, chalcopryrite, pyrite
GENERAL ANALYTICAL DATA.....0.5 - 2.5 g/MT
PRODUCTION.....S
EXPLORATION AND DEVELOPMENT COMMENTS.....Area was the site of a
small gold operation, and is surrounded by placer workings in
adjacent alluvium.
DEPOSIT MODEL.....Flat-Fault Au
USGS MODEL NUMBER.....37b
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Low angle shear zone, 20 M wide,
containing stockwork of quartz veinlets between phyllites (h/wall)
and metasandstones (f/wall). Au associated with minor iron and
lead oxides. Unoxidized ore from dump contained galena,
chalcopryrite and pyrite intergrown with coarse grained quartz in
brecciated, recemented vein material.
HOST ROCK AGE.....MES
HOST ROCK TYPE.....phyllites, metasandstones
GANGUE MINERALS.....quartz; iron and lead oxides
SIGNIFICANT ALTERATION.....Intense sericitic wall rock alteration.
Limonite-hematite staining.

REFERENCES

Giles, Silberman and Wenrich, 1986.
Silberman, 1986.
Silberman, Giles and Graubard-Smith, 1987.
Silberman, Staude and Cox, 1987.

MRDS RECORD NUMBER....MX00289

MAP NUMBER.....289
SITE NAME.....Gallo De Oro
STATE.....SONORA
LATITUDE.....28-45- N LONGITUDE.....109-40- W

COMMODITIES.....CU
 MAJOR.....CU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00290

MAP NUMBER.....290
 SITE NAME.....Basura
 DISTRICT/AREA.....Caborca
 STATE.....SONORA
 LATITUDE.....30-54-35N LONGITUDE.....112-09-15W
 COMMODITIES.....AU
 MAIN....AU
 ORE MATERIALS.....gold
 GENERAL ANALYTICAL DATA.....7 g/MT Au in sample of breccia,
 (Silberman, et.al., 1987).
 PRODUCTION.....U
 DEPOSIT MODEL.....Flat-Fault Au(?)
 USGS MODEL NUMBER.....37b?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Steep dipping white quartz veins, 1-2 m
 wide, locally auriferous. One gently dipping quartz veinlet zone
 5-8 M wide contains local gold values. Host rocks are silicified,
 sericitized and contain sulfide-bearing quartz-matrix breccias.
 HOST ROCK AGE.....JUR
 HOST ROCK TYPE.....siliceous argillite, sandstone
 IGNEOUS ROCK AGE.....JUR
 IGNEOUS ROCK TYPE.....felsic metavolcanics
 GANGUE MINERALS.....quartz
 SIGNIFICANT ALTERATION.....Silicification and sericitization.
 REFERENCES
 Giles, Silberman and Wenrich, 1986.
 Silberman, 1986.
 Silberman, Giles and Graubard-Smith, 1987.

MRDS RECORD NUMBER....MX00291

MAP NUMBER.....291
 SITE NAME.....Puerto Libertad
 DISTRICT/AREA.....Puerto Libertad
 STATE.....SONORA
 LATITUDE.....29-55-30N LONGITUDE.....112-36-30W
 COMMODITIES.....BRI
 MAJOR.....BRI
 ORE MATERIALS.....salt
 PRODUCTION.....S
 DEPOSIT MODEL.....Salt Mine
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Salt deposit in lake sediments and marine-
 bay evaporites.
 HOST ROCK AGE.....TERT-QUAT
 HOST ROCK TYPE.....evaporites
 REFERENCE....Salas, 1973.

MRDS RECORD NUMBER...MX00292

RESERVES

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER.....MX00293

MRDS RECORD NUMBER.....MX00294

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR
ORE W	.200 TPD	1979

PRODUCTION COMMENTS.....Mostly high-grade ore taken from two main veins. Estimate is between 8,000 to 10,000 metric tonnes.

SOURCE OF PRODUCTION INFORMATION.....Dunn and Burt, 1979.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	5300.00 MT	1985	0.5% WO ₃

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00296

MAP NUMBER.....296

SITE NAME.....Moradillas

SYNONYM NAME.....San Jose de Moradillas

DISTRICT/AREA.....Moradillas/Guaymas

STATE.....SONORA

LATITUDE.....28-37- N LONGITUDE.....110-30- W

COMMODITIES.....GRF

MAJOR.....GRF

ORE MATERIALS.....graphite

PRODUCTION.....L

DEPOSIT MODEL.....Amorphous GRF

DEPOSIT SIZE.....LARGE

DEPOSIT DESCRIPTION.....Stratiform graphite deposits in Triassic to Jurassic quartzites, shales and limestones of the Barranca Group, surrounded by Laramide-age granite.

HOST ROCK AGE.....TRI-JUR

HOST ROCK TYPE.....quartzites, carbonaceous shales

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....granite

REFERENCES

Guild, 1981.

Perez Segura, 1985.

Salas, 1975.

MRDS RECORD NUMBER....MX00297

MAP NUMBER.....297

SITE NAME.....Cerro Colorado

DISTRICT/AREA.....Sierra el Rajon

STATE.....SONORA

LATITUDE.....30-14-00N LONGITUDE.....111-49-30W

COMMODITIES.....AU AG PB CU

MAJOR.....AU MINOR.....AG PB CU

ORE MATERIALS.....gold, cerussite, Cu oxides

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Currently (1987) being mined by gambusinos working high-grade cerussite-gold-silver veins in limestone.

DEPOSIT MODEL.....Epithermal Vein

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Au occurs in hydrothermal breccias along periphery of rhyolite dome; associated with quartz, pyrite,

hematite, and copper oxide. High-grade cerussite-Au-Ag quartz veins in adjacent limestone.

HOST ROCK TYPE.....rhyolite dome intruded into limestone and gneiss

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....rhyolite

GANGUE MINERALS.....quartz, pyrite, hematite

SIGNIFICANT ALTERATION.....Strong sericitization and silicification.

REFERENCES

Giles, Silberman and Wenrich, 1986.

Perez Segura, 1985.

Silberman, M.L., Giles, D.A., and Graubard-Smith, C., 1987.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE AU CU	100.000 ST	-1920	HIGH-GRADE BRECCIA

PRODUCTION COMMENTS.....Mined from oxidized zone of breccia along S margin of dome.

SOURCE OF PRODUCTION INFORMATION.....Giles, et. al., 1986.

MRDS RECORD NUMBER....MX00298

MAP NUMBER.....298

SITE NAME.....La Cienega

DISTRICT/AREA.....Sierra el Rajon

STATE.....SONORA

LATITUDE.....30-11- N LONGITUDE.....112-06- W

COMMODITIES.....AU AG

MAJOR.....AU MINOR.....AG

GENERAL ANALYTICAL DATA.....Highest grade sample: 0.5 g/MT.

DEPOSIT MODEL.....Flat-Fault Au(?)

USGS MODEL NUMBER.....37b?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Minor gold-silver mineralization in quartz-feldspar gneiss with thin, discontinuous quartz veins. Intensely fractured and hematite stained metavolcanic bedrock overridden by thrust sheet of metasedimentary rocks.

HOST ROCK AGE.....PREC

HOST ROCK TYPE.....gneiss

GANGUE MINERALS.....quartz, hematite

SIGNIFICANT ALTERATION.....Sericitic and chloritic alteration along veins.

REFERENCES

Giles, Silberman and Wenrich, 1986.

Silberman, Staude and Cox, 1987.

Silberman, M.L., Giles, D.A., and Graubard-Smith, 1987.

MRDS RECORD NUMBER....MX00299

MAP NUMBER.....299

SITE NAME.....San Francisco

DISTRICT/AREA.....Cucurpe/Santa Ana

STATE.....SONORA

LATITUDE.....30-23-30N LONGITUDE.....111-08-15W

COMMODITIES.....AU AG

MAJOR.....AU AG

GENERAL ANALYTICAL DATA.....3-15 g/MT Au, 200 g/MT Ag, (Perez Segura, 1985). Silberman and others report 46 g/MT Au in one sample of tourmaline-quartz vein, and approx. 1 g/MT Au in altered granite with thin quartz-tourmaline veinlets, (Silberman, Giles, and Graubard-Smith, 1987).

PRODUCTION.....S

DEPOSIT MODEL.....Flat-Fault Au(?)

USGS MODEL NUMBER.....37b?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Gold-silver values in a system of steep-dipping tourmaline-bearing quartz veins and veinlets hosted in fractured and sericitically altered Precambrian granite over 300 by 300 meter area. Gold values attaining 15 G/MT have been mined to 60 M depth on one of the stronger structures. Area overlies low-angle structure containing a large quartz vein.

HOST ROCK AGE.....PREC

HOST ROCK TYPE.....granite

IGNEOUS ROCK AGE.....PREC

IGNEOUS ROCK TYPE.....granite

SIGNIFICANT ALTERATION.....Sericitic.

REFERENCES

Perez Segura, 1985.

Silberman, 1986.

Silberman, Giles and Graubard-Smith, 1987.

Silberman, Staude and Cox, 1987.

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE AU AG	125.000 MT	1985	3 G/MT AU, 70 G/MT AG

RESERVES COMMENTS.....District Reserves. San Antonio is one of 6 major mines in the district.

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00300

MAP NUMBER.....300

SITE NAME.....Lluvia de Oro

DISTRICT/AREA.....Magdalena

STATE.....SONORA

LATITUDE.....30-37-30N LONGITUDE.....110-59-02W

COMMODITIES.....AU CU

MAJOR.....AU MINOR.....CU

GENERAL ANALYTICAL DATA.....1 g/MT Au or more in all samples taken, Silberman, et.al., 1987.

EXPLORATION AND DEVELOPMENT COMMENTS.....Drilling by British Petroleum in 1984 failed to delineate a significant volume of ore.

DEPOSIT MODEL.....Flat-Fault Au

USGS MODEL NUMBER.....37b

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Discontinuous, locally coarse grained gold-copper bearing quartz veins have been mined over 1-3 M width in an area 2 by 1 KM. Host rocks are schists derived from limestone, shale, and sandstone. Veins controlled by series of closely spaced thrust faults that carry later stage siderite-specularite mineralization.

HOST ROCK AGE.....MES?

HOST ROCK TYPE.....schist
GANGUE MINERALS.....quartz; siderite, specularite, hematite,
limonite
SIGNIFICANT ALTERATION.....Sericitic alteration present.
REFERENCES

Giles, Silberman and Wenrich, 1986.

Silberman, Giles and Graubard-Smith, 1987.

MRDS RECORD NUMBER....MX00301

MAP NUMBER.....301
SITE NAME.....Unnamed occurrence
DISTRICT/AREA...../Agua Salada
STATE.....SONORA
LATITUDE.....29-31-30N LONGITUDE.....111-01-20W
COMMODITIES.....W
ORE MATERIALS.....scheelite
PRODUCTION.....N
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Outcrop of tactite containing sparsely
disseminated scheelite.
REFERENCE....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00302

MAP NUMBER.....302
SITE NAME.....Unnamed occurrence
DISTRICT/AREA...../Agua Salada
STATE.....SONORA
LATITUDE.....29-30-10N LONGITUDE.....110-57-20W
COMMODITIES.....W
ORE MATERIALS.....scheelite
PRODUCTION.....N
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Outcrop of tactite containing sparsely
disseminated scheelite.
REFERENCE....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00303

MAP NUMBER.....303
SITE NAME.....Granate
DISTRICT/AREA.....Zubiate
STATE.....SONORA
LATITUDE.....28-58-30N LONGITUDE.....110-38-45W
COMMODITIES.....W
ORE MATERIALS.....scheelite
PRODUCTION.....N
DEPOSIT MODEL.....W Skarn(?)
USGS MODEL NUMBER.....14a?
DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Scheelite found in float along poorly exposed contact between limestone and granite. No ore found in place.

HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....CRET
IGNEOUS ROCK TYPE.....granite
REFERENCE....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00304

MAP NUMBER.....304
SITE NAME.....Extension de Uranio
DISTRICT/AREA...../Tonichi
STATE.....SONORA
LATITUDE.....28-56-30N LONGITUDE.....109-19-40W
COMMODITIES.....W CU U?
MAIN....W MINOR....CU
ORE MATERIALS.....scheelite, cuprotungstite
PRODUCTION.....N
DEPOSIT MODEL.....W Pegmatite
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Scheelite and cuprotungstite occur sparsely disseminated in small pegmatite dike. Also, traces of scheelite in nearby outcrop of tactite. Unconfirmed report of U-bearing hornblende.

REFERENCE....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00305

MAP NUMBER.....305
SITE NAME.....Coker
DISTRICT/AREA...../Tonichi
STATE.....SONORA
LATITUDE.....29-06-00N LONGITUDE.....109-43-35W
COMMODITIES.....W
MAIN....W
ORE MATERIALS.....scheelite
GENERAL ANALYTICAL DATA.....Up to 2.0% WO₃
PRODUCTION.....N
EXPLORATION AND DEVELOPMENT COMMENTS.....Development discontinued after first few months of 1944.
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Med. to f. grained scheelite erratically disseminated in discontinuous lenticular bodies of tactite for a distance of several hundred meters along granite/limestone contact.

HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....CRET
IGNEOUS ROCK TYPE.....granite
REFERENCE....Wiese and Cardenas, 1945.

MRDS RECORD NUMBER....MX00306

STATE.....SONORA
 LATITUDE.....29-40-00N LONGITUDE.....110-17-20W
 COMMODITIES.....W
 MAJOR.....W
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00309

MAP NUMBER.....309
 SITE NAME.....Contrabando
 DISTRICT/AREA.....Baviacora
 STATE.....SONORA
 LATITUDE.....29-39-20N LONGITUDE.....110-16-50W
 COMMODITIES.....W
 MAJOR.....W
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00310

MAP NUMBER.....310
 SITE NAME.....Santa Elena
 DISTRICT/AREA.....Baviacora
 STATE.....SONORA
 LATITUDE.....29-39-35N LONGITUDE.....110-15-40W
 COMMODITIES.....W
 MAJOR.....W
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00311

MAP NUMBER.....311
 SITE NAME.....Picacho
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....29-10-45N LONGITUDE.....110-44-35W
 COMMODITIES.....W

MAJOR.....W
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00312

MAP NUMBER.....312
 SITE NAME.....Santa Rosa
 DISTRICT/AREA.....San Felipe de Jesus
 STATE.....SONORA
 LATITUDE.....29-53-28N LONGITUDE.....110-17-20W
 COMMODITIES.....ZN AG PB CU W
 MAJOR.....ZN AG MINOR.....PB CU POTEN.....W
 OCCUR.....AU
 ORE MATERIALS.....sphalerite, argentiferous galena,
 chalcopryrite, pyrite, covellite, marcasite, huebnerite, scheelite
 GENERAL ANALYTICAL DATA.....High-grade assay: 137 ppm Cu, 0.06 ppm Au,
 165 g/MT Ag, 0.06% Pb, 40.99% Zn; Three other samples contained
 80-100 ppm Cu, 10-120 g/MT Ag, 0.01-0.015% Pb and 0.02-1.25% Zn;
 Roldan-Quintana, 1979, table 4.
 PRODUCTION.....S
 DEPOSIT MODEL.....Zn-Pb Skarn
 USGS MODEL NUMBER.....18c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Two layers in limestone roof pendant
 selectively replaced by skarn. Tabular orebody. Maximum thickness:
 13 M. Also: scheelite-quartz-pyrite-sericite veinlets cutting
 limestone.
 HOST ROCK AGE.....ECRET
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....EO (50.47 +/- 1.6 M.Y.)
 IGNEOUS ROCK TYPE.....rhyolite porphyry
 GANGUE MINERALS.....grossularite, wollastinite, chlorite,
 calcite, sericite
 SIGNIFICANT ALTERATION.....silicic, sericitic
 REFERENCES
 Perez Segura, 1985.
 Roldan-Quintana, 1979.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE ZN	350-500 MT	1979	13-15% ZN

RESERVES COMMENTS.....Includes Las Lamas Mine.
 SOURCE OF RESERVES INFORMATION.....Roldan-Quintana, 1979.

MRDS RECORD NUMBER....MX00313

MAP NUMBER.....313
 SITE NAME.....San Felipe
 SYNONYM NAME.....San Felipe de Jesus
 DISTRICT/AREA.....San Felipe de Jesus

STATE.....SONORA
 LATITUDE.....29-52-49N LONGITUDE.....110-18-14W
 COMMODITIES.....AG PB CU ZN AU MO
 MAJOR.....AG PB CU MINOR.....ZN OCCUR.....AU MO
 ORE MATERIALS.....argentiferous galena, chalcopryrite,
 pyrite, sphalerite; native Ag, cerussite, anglesite, malachite,
 azurite, covellite, chrysocolla
 GENERAL ANALYTICAL DATA.....197,000 ppm Cu, 8.0 ppm Mo, 1060.0 g/MT
 Ag, 0.8 ppm Au, 17.4% Pb, 2.16% Zn, (assay by Consejo de Recursos
 Minerales); Roldan-Quintana, 1979, table 3.
 PRODUCTION.....S
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Veins follow fault contact between
 porphyritic rhyolite and metamorphic unit consisting of
 recrystallized limestone and andesitic flows and tuffs. Two
 principal veins, 0.8-3.6 M wide, separated by 5 M zone of massive
 quartz with disseminated pyrite. Primary ore: argentiferous
 galena, sphalerite, chalcopryrite and pyrite. Zone of secondary
 enrichment, 45 M thick, contains Cu-Pb carbonates, native Ag and
 abundant limonite. Only minor values found below secondary
 enrichment zone.
 HOST ROCK AGE.....ECRET
 HOST ROCK TYPE.....limestone, andesites
 IGNEOUS ROCK AGE.....EO (50.47 +/- 1.6 M.Y.)
 IGNEOUS ROCK TYPE.....rhyolite porphyry
 GANGUE MINERALS.....quartz, calcite, limonite
 SIGNIFICANT ALTERATION.....propylitic, silicic
 REFERENCES
 Perez Segura, 1985.
 Roldan-Quintana, 1979.
 POTENTIAL RESOURCES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE AG PB ZN CU	3100.000 MT	1985	100 G/MT AG, 8% PB, 10% ZN, 2% CU

 RESOURCES COMMENTS.....San Felipe District.
 SOURCE OF RESOURCES INFORMATION.....Perez Segura, 1985.
 RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE AG PB ZN	200.000 MT	1985	100 G/MT AG, 3% PB, 6% ZN

 RESERVES COMMENTS.....Capacity: 40 TPD
 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

 MRDS RECORD NUMBER....MX00314
 MAP NUMBER.....314
 SITE NAME.....Los Locos
 DISTRICT/AREA.....San Felipe de Jesus
 STATE.....SONORA
 LATITUDE.....29-51-25N LONGITUDE.....110-18-10W
 COMMODITIES.....PB ZN CU
 MAIN....PB ZN CU
 PRODUCTION.....U
 DEPOSIT MODEL.....Zn-Pb Skarn(?)

USGS MODEL NUMBER.....18c?
DEPOSIT SIZE.....SMALL
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00315

MAP NUMBER.....315
SITE NAME.....La Palma
DISTRICT/AREA.....Mazocahui
STATE.....SONORA
LATITUDE.....29-36-20N LONGITUDE.....110-00-55W
COMMODITIES.....PB ZN CU
MAJOR.....PB MINOR.....ZN CU
ORE MATERIALS.....galena, unknown Zn-Cu
DEPOSIT MODEL.....Polymetallic Vein(?)
USGS MODEL NUMBER.....22c?
DEPOSIT SIZE.....SMALL
HOST ROCK TYPE.....biotite granite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
GANGUE MINERALS.....quartz, pyrite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00316

MAP NUMBER.....316
SITE NAME.....La Morita
DISTRICT/AREA.....Baviacora
STATE.....SONORA
LATITUDE.....29-44-10N LONGITUDE.....110-16-25W
COMMODITIES.....W
MAIN....W
PRODUCTION.....U
DEPOSIT MODEL.....W Pegmatite
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....W-bearing pegmatite vein.
HOST ROCK TYPE.....pegmatite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00317

MAP NUMBER.....317
SITE NAME.....Lorena
DISTRICT/AREA.....Rayon
STATE.....SONORA
LATITUDE.....29-46-50N LONGITUDE.....110-24-50W
COMMODITIES.....W ZN MO F
MAJOR.....W MINOR.....ZN MO OCCUR.....F
ORE MATERIALS.....scheelite, sphalerite, powellite, fluorite
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....PERM
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....diorite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00318

MAP NUMBER.....318
 SITE NAME.....Los Amoles
 DISTRICT/AREA.....Rayon
 STATE.....SONORA
 LATITUDE.....29-46-35N LONGITUDE.....110-28-25W
 COMMODITIES.....U PB ZN CU BA
 MAJOR.....U POTEN.....PB ZN CU OCCUR.....BA
 ORE MATERIALS.....uraninite, pitchblende, uranopilite,
 zippeite, autunite, various sulfates and phosphates of uranium,
 coffinite, pyrite, galena, sphalerite, tetrahedrite, barite
 EXPLORATION AND DEVELOPMENT COMMENTS.....Discovered through
 airborne radiometric survey, 1960. Exploratory development, 1963-
 1968. Drilling program begun in area 100 M E of Los Amoles, 1977.
 DEPOSIT MODEL.....Volcanic-Hosted U
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Two areas of mineralization: 1> Los Amoles
 Mine, vertical biconic body, each cone approx. 175 M in diameter
 and 60 M in height. 2> Los Amoles I area (100 M E of Los Amoles),
 elliptical area 200 M in diameter, 250 M long, NW orientation,
 with ore found between 50 M and 125 M depth. U minerals in
 fractures cutting highly silicified trachyandesite (Los Amoles
 mine) and in lenses, averaging 25 M thick, hosted in fractures and
 breccia cavities in silicified trachyandesite and ignimbrite (Los
 Amoles I area). Most common mineralogic association: uraninite,
 pitchblende, uranopilite, zippeite, autunite. Minerals listed by
 Roldan (1979): pitchblende, hurolite, uranophane, bassettite,
 johannite, autunite, irinite, torbernite, metatorbernite.
 HOST ROCK AGE.....PALEO-EO
 HOST ROCK TYPE.....trachyandesite
 IGNEOUS ROCK AGE.....ETERT
 IGNEOUS ROCK TYPE.....andesites, trachyandesites
 GANGUE MINERALS.....pyrite, barite
 SIGNIFICANT ALTERATION.....silicic
 REFERENCES

Gomez-Tagle and Gutierrez, 1982.
 Perez Segura, 1985.
 Roldan-Quintana, 1979.

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE U	1250.000 MT	1982	0.06% U ₃ O ₈
ORE U	3000.000 MT	1982	0.05% U ₃ O ₈

RESOURCES COMMENTS.....Possible ore. 1> Los Amoles Mine.
 2> Los Amoles I area.

SOURCE OF RESOURCES INFORMATION.....Gomez-Tagle and Gutierrez, 1982.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE U	790.000 MT	1982	0.06% U ₃ O ₈
ORE U	825.000 MT	1982	0.06% U ₃ O ₈

SOURCE OF RESERVES INFORMATION.....Gomez-Tagle and Gutierrez, 1982.

MRDS RECORD NUMBER....MX00319

MAP NUMBER.....319
SITE NAME.....Victoria y Beatriz
DISTRICT/AREA.....Rayon
STATE.....SONORA
LATITUDE.....29-45-50N LONGITUDE.....110-29-50W
COMMODITIES.....MO
MAIN....MO
PRODUCTION.....U
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
HOST ROCK TYPE.....andesites
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesites
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00320

MAP NUMBER.....320
SITE NAME.....Maranatha
DISTRICT/AREA.....San Miguel de Horcasitas
STATE.....SONORA
LATITUDE.....29-35-20N LONGITUDE.....110-35-05W
COMMODITIES.....AG PB ZN CU
MAJOR....AG MINOR....PB POTEN....ZN CU
ORE MATERIALS.....galena, sphalerite, pyrite
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....quartzite
GANGUE MINERALS.....quartz, pyrite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00321

MAP NUMBER.....321
SITE NAME.....La Dorada
DISTRICT/AREA.....Carbo
STATE.....SONORA
LATITUDE.....29-33-50N LONGITUDE.....110-48-00W
COMMODITIES.....AG PB ZN CU
MAJOR....AG MINOR....PB POTEN....ZN CU
ORE MATERIALS.....galena, sphalerite, chalcopryrite
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00322

MAP NUMBER.....322
SITE NAME.....San Antonio
DISTRICT/AREA.....Hermosillo
STATE.....SONORA

LATITUDE.....29-21-05N LONGITUDE.....111-17-10W
 COMMODITIES.....AG CU PB ZN
 MAJOR.....AG POTEN.....CU PB ZN
 ORE MATERIALS.....Cu oxides
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00323

MAP NUMBER.....323
 SITE NAME.....El Tecolote
 DISTRICT/AREA...../Pitiquito
 STATE.....SONORA
 LATITUDE.....29-53-35N LONGITUDE.....111-32-10W
 COMMODITIES.....ZN CU AG MO W BI
 MAJOR....ZN CU MINOR....AG POTEN....W PB MO BI
 OCCUR.....NI
 ORE MATERIALS.....sphalerite (marmatite), chalcopyrite,
 marcasite, covellite, argentite, scheelite; galena, molybdenite,
 cubanite, native bismuth, bismuthinite, (mackinawite)
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Explored by EM and
 gravimetric methods.
 DEPOSIT MODEL.....Zn-Pb Skarn
 USGS MODEL NUMBER.....18c
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Cu-Zn-Ag mineralization in skarn
 associated with quartz monzonite porphyry. Three tactite beds
 separated by quartzite. Strike: N 50 W, changes to N 30 W to the
 SE due to fault. Dip: 60-90 NE. Ore consists of scheelite, pyrite,
 sphalerite, marcasite and chalcopyrite with minor amounts of
 galena, pyrrhotite, molybdenite, cubanite, native Bi,
 bismuthinite, mackinawite and hematite. Hosted in garnet-diopside-
 vesuvianite skarn with late-stage hydrothermal biotite-chlorite-
 quartz-calcite assemblage. Supergene covellite present.
 Gravimetric survey (@1978) indicated high-density zone that was
 later drilled. Two dd-holes intercepted 23 M section of tactite
 intercalated with quartzite. Drill holes indicated metallic
 content of 15% pyrite + pyrrhotite + magnetite and defined a 3 M
 thick zone containing 10% sphalerite.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone, quartzites
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....quartz monzonite porphyry (alaskite)
 GANGUE MINERALS.....garnet, diopside, hornblende, vesuvianite,
 quartz, calcite, biotite, chlorite; pyrite, pyrrhotite, hematite
 REFERENCES
 Farias G., 1978.
 Maravilla S., 1978.
 Onate de Leon, 1978.

Perez Segura, 1985.

Perez and Echavarri, 1978.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE ZN CU AG	.500 TPD	1978	6% ZN, 1.5% CU, 30 G/TON AG

SOURCE OF PRODUCTION INFORMATION.....Maravilla, 1978.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE ZN CU AG	700.000 MT	1978	30 G/TON AG, 1.5% CU, 6.0% ZN
ORE ZN CU AG	850.000 MT	1978	60 G/TON AG, 2.0% CU, 7.6% ZN?
ORE ZN CU AG	700.000 MT	1985	40 G/TON AG, 1.5% CU, 6.0% ZN, 0.5% WO ₃

SOURCE OF RESERVES INFORMATION.....Maravilla, 1978; Perez y Echavarri,
1978; Perez, 1985.

MRDS RECORD NUMBER....MX00324

MAP NUMBER.....324
SITE NAME.....Guadalupe
STATE.....SONORA
LATITUDE.....29-53-55N LONGITUDE.....111-28-55W
COMMODITIES.....PB ZN CU
MAIN....PB ZN CU
PRODUCTION.....U
DEPOSIT MODEL.....Zn-Pb Skarn
USGS MODEL NUMBER.....18c
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....limestone, quartzites
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....monzonite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00325

MAP NUMBER.....325
SITE NAME.....Alma Susana
STATE.....SONORA
LATITUDE.....29-14-35N LONGITUDE.....110-10-25W
COMMODITIES.....PB ZN CU
MAIN....PB ZN CU
PRODUCTION.....U
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
HOST ROCK TYPE.....andesites
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesites
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00326

MAP NUMBER.....326
SITE NAME.....Sierra Aconchi
DISTRICT/AREA.....Aconchi
STATE.....SONORA
LATITUDE.....29-49-00N LONGITUDE.....110-18-25W
COMMODITIES.....W

MAIN....W
 PRODUCTION.....U
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Perez Segura, 1985.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	60.000 MT	1985	2% WO ₃

 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

 MRDS RECORD NUMBER....MX00327
 MAP NUMBER.....327
 SITE NAME.....Mariscal
 DISTRICT/AREA.....Baviacora
 STATE.....SONORA
 LATITUDE.....29-33-00N LONGITUDE.....110-02-10W
 COMMODITIES.....AU MO
 MAIN....AU MO
 PRODUCTION.....U
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Perez Segura, 1985.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU MO	60.000 MT	1985	3 G/MT AU, .3% MO

 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

 MRDS RECORD NUMBER....MX00328
 MAP NUMBER.....328
 SITE NAME.....San Francisco
 DISTRICT/AREA.....Mazocahui
 STATE.....SONORA
 LATITUDE.....29-36-00N LONGITUDE.....110-11-30W
 COMMODITIES.....CU PB ZN BA
 MAIN....CU PB ZN MINOR....BA
 ORE MATERIALS.....chalcopryite, unknown Pb-Zn, barite
 PRODUCTION.....U
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....felsic volcanics
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....felsic volcanics
 GANGUE MINERALS.....quartz, barite
 REFERENCE....Perez Segura, 1985.

 MRDS RECORD NUMBER....MX00329
 MAP NUMBER.....329
 SITE NAME.....El Boludo
 SYNONYM NAME.....El Puerto, La Sierrita
 DISTRICT/AREA.....Trincheras
 STATE.....SONORA
 LATITUDE.....30-19-20N LONGITUDE.....111-45-45W
 COMMODITIES.....AU
 MAJOR....AU

DEPOSIT MODEL.....Placer Au
 USGS MODEL NUMBER.....39
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....LTERT
 HOST ROCK TYPE.....conglomerate, sandstone, tuff, ignimbrite,
 basalt

REFERENCE....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU	652.624 MT	1985	0.0-0.5 G/MT AU
ORE AU	81.140 MT	1985	0.5-1.0 G/MT AU
ORE AU	47.000 MT	1985	1.0-2.0 G/MT AU
ORE AU	29.760 MT	1985	2.0 G/MT AU

RESERVES COMMENTS.....Data for El Boludo and El Puerto.

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00330

MAP NUMBER.....330
 SITE NAME.....La Salada
 STATE.....SONORA
 LATITUDE.....30-59-30N LONGITUDE.....111-27-30W
 COMMODITIES.....B
 MAJOR.....B

ORE MATERIALS.....borates
 DEPOSIT MODEL.....Stratiform Borates
 DEPOSIT SIZE.....LARGE
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00331

MAP NUMBER.....331
 SITE NAME.....Tubutama
 DISTRICT/AREA.....Magdalena
 STATE.....SONORA
 LATITUDE.....30-54-30N LONGITUDE.....111-28-20W
 COMMODITIES.....MN

MAJOR.....MN
 ORE MATERIALS.....psilomelane
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Inactive, 1960.

DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesites

REFERENCES

Ayub M., 1960.
 Perez Segura, 1985.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.300 TONS	-1960	30% MN

PRODUCTION COMMENTS.....1978 production rate: 500 TPD,
 (Farias, 1978)

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	.744 TONS	1960	28% MN
ORE MN	2.640 TONS	1960	26% MN
ORE MN	4.560 TONS	1960	23-24% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00332

MAP NUMBER.....332

SITE NAME.....Dos Manueles

DISTRICT/AREA.....Magdalena/Estacion Llanos

STATE.....SONORA

LATITUDE.....30-27-00N LONGITUDE.....110-54-45W

COMMODITIES.....MN

MAJOR.....MN

ORE MATERIALS.....psilomelane, rhodochrosite, pyrolusite,
braunite

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL

HOST ROCK AGE.....LCRET-ETERT

HOST ROCK TYPE.....andesite, breccia

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....andesite

REFERENCES

Ayub M., 1960.

Perez Segura, 1985.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.600 TONS	-1960	42% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	1.283 TONS	1960	19% MN
ORE MN	1.920 TONS	1960	17% MN
ORE MN	2.678 TONS	1960	15% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00333

MAP NUMBER.....333

SITE NAME.....Santo Domingo

STATE.....SONORA

LATITUDE.....30-51-15N LONGITUDE.....110-45-05W

COMMODITIES.....AG PB ZN CU

MAIN....AG MINOR....PB ZN CU

PRODUCTION.....U

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

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MAP NUMBER.....334
SITE NAME.....Unnamed prospect
STATE.....SONORA
LATITUDE.....30-52-30N      LONGITUDE.....110-43-55W
COMMODITIES.....AU   AG   PB   CU
MAIN....AU   AG   MINOR....PB   CU
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....LCRET-ETERT
HOST ROCK TYPE.....andesites
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesites
REFERENCE....Perez Segura, 1985.
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MAP NUMBER.....335
SITE NAME.....Argentita
STATE.....SONORA
LATITUDE.....30-52-30N      LONGITUDE.....110-42-20W
COMMODITIES.....AG    PB    ZN    CU
MAIN....AG    MINOR....PB    ZN    CU
PRODUCTION.....U
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Perez Segura, 1985.
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MAP NUMBER.....336
SITE NAME.....Espiritu Santo
SYNONYM NAME.....El Espiritu
DISTRICT/AREA.....Cucurpe
STATE.....SONORA
LATITUDE.....30-39-10N      LONGITUDE.....110-35-55W
COMMODITIES.....AG   AU   PB   ZN   CU
MAJOR.....AG   AU   MINOR.....PB   ZN   CU
GENERAL ANALYTICAL DATA.....150 g/t Ag, 6 g/t Au, (Silberman, 1987).
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Au-Ag mineralization in quartz-fluorite
veins and Pb-Zn-Ag replacement deposits.
HOST ROCK AGE.....CRET
HOST ROCK TYPE.....limestone, calcareous sandstone
GANGUE MINERALS.....quartz, fluorite
REFERENCES
    Perez Segura, 1985.
    Silberman, 1987.

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RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG AU	30.000 MT	1985	AG: 150 G/MT, AU: 6 G/MT

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00337

MAP NUMBER.....337
 SITE NAME.....Santo Nino
 STATE.....SONORA
 LATITUDE.....30-56-05N LONGITUDE.....110-31-35W
 COMMODITIES.....AG PB ZN CU
 MAIN....AG MINOR....PB ZN CU
 PRODUCTION.....U
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesites
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00338

MAP NUMBER.....338
 SITE NAME.....Las Tortugas
 DISTRICT/AREA.....Opodepe
 STATE.....SONORA
 LATITUDE.....30-07-20N LONGITUDE.....110-33-40W
 COMMODITIES.....PB ZN
 MAIN....PB MINOR....ZN
 ORE MATERIALS.....galena
 PRODUCTION.....U
 DEPOSIT MODEL.....Polymetallic Vein(?)
 USGS MODEL NUMBER.....22c?
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....JUR-CRET
 HOST ROCK TYPE.....sandstone, shale
 GANGUE MINERALS.....quartz, pyrite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00339

MAP NUMBER.....339
 SITE NAME.....La Fortuna
 STATE.....SONORA
 LATITUDE.....30-40-50N LONGITUDE.....110-21-00W
 COMMODITIES.....AU AG PB CU
 MAIN....AU AG MINOR....PB CU
 PRODUCTION.....U
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....andesites
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00340

MAP NUMBER.....340
SITE NAME.....Mesa del Alamo
SYNONYM NAME.....El Alamo
DISTRICT/AREA...../Magdalena
STATE.....SONORA
LATITUDE.....30-35-35N LONGITUDE.....110-54-40W
COMMODITIES.....B ZEO
MAJOR.....B MINOR.....ZEO
ORE MATERIALS.....howlite, clinoptilolite, phillipsite
DEPOSIT MODEL.....Stratiform Borates
DEPOSIT SIZE.....LARGE
DEPOSIT DESCRIPTION.....Massive veins (2-30 CM wide) and nodules
 of howlite in interbedded tuffaceous shale and silty sandstone
 with interbeds of lithic tuff, zeolitic tuff and tuffaceous
 mudstones containing minor disseminated clinoptilolite.
HOST ROCK AGE.....TERT
HOST ROCK TYPE.....sandstone, shale, tuff, tuffaceous
 sediments
REFERENCES
 LeFond and Barker, 1979.
 Perez Segura, 1985.

MRDS RECORD NUMBER....MX00341

MAP NUMBER.....341
SITE NAME.....El Gachi
DISTRICT/AREA.....Arizpe
STATE.....SONORA
LATITUDE.....30-19-30N LONGITUDE.....110-07-55W
COMMODITIES.....PB ZN
MAJOR.....PB ZN
DEPOSIT MODEL.....Zn-Pb Skarn
USGS MODEL NUMBER.....18c
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....CRET
HOST ROCK TYPE.....limestone, shale
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00342

MAP NUMBER.....342
SITE NAME.....Puertecitos
DISTRICT/AREA.....Cananea
STATE.....SONORA
LATITUDE.....31-00-00N LONGITUDE.....110-23-15W
COMMODITIES.....CU ZN PB AG FE
MAJOR.....CU MINOR.....ZN PB AG POTEN.....FE
ORE MATERIALS.....bornite, chalcopryrite, chalcocite;
 sphalerite, galena, enargite, tetrahedrite; magnetite, specularite
PRODUCTION.....M
DEPOSIT MODEL.....Porphyry Cu, Skarn-Related
USGS MODEL NUMBER.....18a

DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Skarn associated with Cananea porphyry Cu.
 Primary ore: bornite, chalcopryrite, magnetite, specularite,
 sphalerite and minor galena. Oxidized ore: malachite, azurite,
 chrysocolla, chalcocite. Chalcopryrite predominates over bornite in
 NE-dipping faults cutting igneous rocks near contact with
 limestone.

HOST ROCK AGE.....PENN
 HOST ROCK TYPE.....limestones
 IGNEOUS ROCK AGE.....LCRET-ETERT (64 M.Y. U-PB, GDIOR)
 IGNEOUS ROCK TYPE.....granodiorite, quartz porphyries
 GANGUE MINERALS.....garnet, wollastinite, calcite

REFERENCES

Emmons, 1910.
 Meinert, 1979.
 Meinert, 1982.
 Perez Segura, 1985.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
CU	175000 LB	-1979

SOURCE OF PRODUCTION INFORMATION.....Meinert, 1982.

MRDS RECORD NUMBER....MX00343

MAP NUMBER.....343
 SITE NAME.....La Cienega
 DISTRICT/AREA.....Cananea
 STATE.....SONORA
 LATITUDE.....30-11-00N LONGITUDE.....111-57-30W
 COMMODITIES.....AU W
 MAJOR.....AU MINOR.....W
 DEPOSIT MODEL.....Placer Au-W
 USGS MODEL NUMBER.....39
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Concentrations of plate and wire gold on
 bedrock surface underneath alluvium.
 HOST ROCK AGE.....LTERT
 HOST ROCK TYPE.....conglomerate, sandstone, tuff, ignimbrite,
 basalt

REFERENCES

Perez Segura, 1985.
 Silberman, Giles and Graubard-Smith, 1987.

MRDS RECORD NUMBER....MX00344

MAP NUMBER.....344
 SITE NAME.....La Magnifica
 DISTRICT/AREA.....Baviacora
 STATE.....SONORA
 LATITUDE.....29-41-55N LONGITUDE.....110-12-00W
 COMMODITIES.....AU AG PB CU
 MAJOR.....AU AG MINOR.....PB CU
 ORE MATERIALS.....galena, chalcopryrite
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL

HOST ROCK TYPE.....granite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 GANGUE MINERALS.....quartz, pyrite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00345

MAP NUMBER.....345
 SITE NAME.....El Rialito
 DISTRICT/AREA.....Baviacora
 STATE.....SONORA
 LATITUDE.....29-40-00N LONGITUDE.....110-09-50W
 COMMODITIES.....AG PB
 MAJOR.....AG MINOR.....PB
 ORE MATERIALS.....galena
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....granite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 GANGUE MINERALS.....quartz, pyrite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00346

MAP NUMBER.....346
 SITE NAME.....Cumobabi
 SYNONYM NAME.....Transvaal, San Judas, El Molibdeno, La Verde,
 Transvaal West
 DISTRICT/AREA.....La Verde/Cumpas
 STATE.....SONORA
 LATITUDE.....29-52-20N LONGITUDE.....109-58-15W
 COMMODITIES.....MO CU ZN PB W
 MAJOR.....MO CU POTEN.....ZN PB AG? OCCUR.....W
 ORE MATERIALS.....molybdenite, pyrite, chalcoppyrite,
 bornite; tetrahedrite, sphalerite, galena; (wolframite)
 GENERAL ANALYTICAL DATA.....Ave. grade: 0.20% Mo, 0.25% Cu,
 (Scherkenbach, et.al., 1985).
 PRODUCTION.....M
 EXPLORATION AND DEVELOPMENT COMMENTS.....Became Mexico's first
 major producing Mo mine in Aug. 1980.
 DEPOSIT MODEL.....Porphyry Cu-Mo
 USGS MODEL NUMBER.....21a
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Mo-Cu mineralization localized in
 pegmatitic breccias and in collapse-type breccias along borders of
 intrusive. At least 35 breccia bodies in 12 SQ KM area. Ore grade
 mineralization restricted to a few centrally located bodies and
 associated stockworks. Known mineralized breccias have irregular,
 elongate shapes, ranging from a few M to more than 300 M in
 longest horizontal dimension. Depths to more than 400 M. Bodies
 pinch and swell vertically. Breccias have diverse characteristics-
 in clast size, angularity, degree of brecciation, gradational vs.
 abrupt contacts, etc. Breccias coincide with fingerlike

projections of potassic alteration within large propylitic zone. Crosscut by dominantly fracture controlled zones of sericitic alteration with pockets of argillic alteration. Distal, unmineralized breccias exhibit strong sericitization and tourmalinization. Two stages of post-brecciation alteration and mineralization: 1> potassic alteration and deposition of molybdenite-pyrite-quartz assemblage; 2> quartz-sericite alteration and replacement of pyrite by chalcopyrite + tetrahedrite.

HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE..... andesite, dacite, rhyolite, tuff
 IGNEOUS ROCK AGE.....PALEO
 IGNEOUS ROCK TYPE.....quartz monzonite porphyry, diorite, microgranite
 GANGUE MINERALS.....quartz, K-spar, biotite, anhydrite, apatite, ilmenite, sericite, calcite, siderite, tourmaline, rare fluorite; pyrite, magnetite
 SIGNIFICANT ALTERATION.....potassic, propylitic, sericitic, argillic, phyllic; tourmalinization
 REFERENCES

Cendejas F. and Barcenas R., 1978.
 Perez Segura, 1985.
 Roldan-Quintana, 1979.
 Scherkenbach and Sawkins, 1982.
 Scherkenbach, Sawkins and Seyfried, 1985.
 Sutulov, 1983.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
CONC MO	.300 MT	1980	NOT SOLD-LOW QUALITY
MO	.276 MT	1981	
MO	.680 MT	1982	

SOURCE OF PRODUCTION INFORMATION.....Intermet Molybdenum Yearbook (Sutolov), 1983, p. 77.

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MO	200000.0 MT	1983	0.1% MO

RESOURCES COMMENTS.....Includes all Cumobabi properties.
 SOURCE OF RESOURCES INFORMATION.....Intermet Molybdenum Yearbook, 1983, p. 144.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MO CU	2400.000 MT	1985	0.5% MO, 0.1% CU
ORE CU MO	50000.00 MT	1985	0.203% CU, 0.097% MO

RESERVES COMMENTS.....1>Transvaal deposit. 2>San Judas and El Molibdeno deposits. San Judas reserves listed in Molybdenum Yearbook (1983): 10 million tons, 0.2% Mo, 0.25% Cu.

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00347

MAP NUMBER.....347
 SITE NAME.....Cobre Rico
 DISTRICT/AREA.....Cumpas
 STATE.....SONORA
 LATITUDE.....29-53-25N LONGITUDE.....109-59-25W

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COMMODITIES.....MO      CU
MAIN....MO
ORE MATERIALS.....molybdenite, chalcopyrite
PRODUCTION.....U
DEPOSIT MODEL.....Porphyry Cu-Mo
USGS MODEL NUMBER.....21a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Molybdenite and chalcopyrite in collapse-
type breccia in propylitic zone of large porphyry system.
REFERENCES
    Cendejas F. and Barcenas R., 1978.
    Perez Segura, 1985.
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MAP NUMBER.....348
SITE NAME.....Buckeye
DISTRICT/AREA.....Moctezuma
STATE.....SONORA
LATITUDE.....29-51-15N      LONGITUDE.....110-00-10W
COMMODITIES.....AG    CU
MAJOR.....AG    MINOR.....CU
ORE MATERIALS.....argentite, chalcocite
DEPOSIT MODEL.....Polymetallic Vein(?)
USGS MODEL NUMBER.....22c?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Mineralization related to large porphyry
                        system (Transvaal-San Judas).
HOST ROCK TYPE.....volcanics
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granite
REFERENCES
      Cendejas F. and Barcenas R., 1978.
      Perez Segura, 1985.
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MAP NUMBER.....349
SITE NAME.....Archipielago
DISTRICT/AREA.....Moctezuma
STATE.....SONORA
LATITUDE.....29-50-50N      LONGITUDE.....109-59-25W
COMMODITIES.....AG    CU    BA
MAJOR.....AG    MINOR.....CU    OCCUR.....BA
ORE MATERIALS.....chalcocite, barite, chalcopyrite
DEPOSIT MODEL.....Polymetallic Vein(?)
USGS MODEL NUMBER.....22c?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Mineralization related to large porphyry
                        system (Transvaal-San Judas).
HOST ROCK TYPE.....volcanics
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granite
REFERENCES
    Cendejas F. and Barcenas R., 1978.
    Perez Segura, 1985.

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MRDS RECORD NUMBER...MX00350

MAP NUMBER.....350
 SITE NAME.....San Nicolas
 DISTRICT/AREA.....Cumpas
 STATE.....SONORA
 LATITUDE.....29-56-10N LONGITUDE.....109-58-50W
 COMMODITIES.....AG PB ZN AU BA
 MAJOR.....AG MINOR.....PB ZN AU OCCUR.....BA
 ORE MATERIALS.....argentite, pyrargyrite, argentiferous
 galena, barite
 DEPOSIT MODEL.....Creede Epithermal Vein(?)
 USGS MODEL NUMBER.....25b?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....San Nicolas vein: N 60 E, 72 SE; Veta
 Hughes: N 70 W, 69-83 NW; Veta Sureste: N 63 E, 78 SE; Veta
 Noroeste: N 60 E, 80 SE. Ore consists of argentite and pyrargyrite
 in San Nicolas vein and argentiferous galena and barite in Hughes
 vein. Mineralogy of other veins unknown.
 HOST ROCK AGE.....LCRET
 HOST ROCK TYPE.....andesites, limestone, tuff
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesites
 REFERENCE....Perez Segura, 1985.
 RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE AG PB ZN AU	49.815 MT	1985	AG: 92 G/MT, 0.6% PB, 0.12% ZN,

TRACE AU

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER...MX00351

MAP NUMBER.....351
 SITE NAME.....Oposura
 SYNONYM NAME.....Las Arenillas
 DISTRICT/AREA.....Sierra de la Huerta/Moctezuma
 STATE.....SONORA
 LATITUDE.....29-43-50N LONGITUDE.....109-45-10W
 COMMODITIES.....ZN PB AG CU MN AU
 MAJOR.....ZN PB AG MINOR.....CU POTEN.....MN
 OCCUR.....AU
 ORE MATERIALS.....sphalerite, galena, chalcopryrite, minor
 argentiferous tetrahedrite-tennantite; rhodonite, rhodochrosite,
 bustamite
 GENERAL ANALYTICAL DATA.....See Prod/Resv. Low-grade interlaminae in
 fine crystal tuff: 0.2-1.0% Pb, 0.2-3.0% Zn, anom. Ag, v.low Cu
 (2-8 ppm). 1.5 ppm Au detected in thick (0.5 M) interbeds of
 magnetite assoc. with semi-massive ore.
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Small-scale mining
 intermittently since the 1920's. Acquired by Anaconda in late
 1940's. Joint venture formed in 1975 between Anaconda and Servicios
 Industriales Penoles, S.A. to explore the deposit.
 DEPOSIT MODEL.....Kuroko Massive Sulfide

USGS MODEL NUMBER.....28a

DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....Four main types of mineralization: 1> sphalerite-galena-pyrite-chalcopryrite massive (90%) sulfide horizons, trace Ag-bearing tetrahedrite-tennantite, 20% of ore; 2> bedded semi-massive (20-50%) sphalerite-galena-pyrite interbedded with chlorite-epidote layers, beds 2-20 mm thick with local interbeds of magnetite 1-4 mm thick (max: 0.5 M), 60% of ore; 3> galena-sphalerite-chalcopryrite-pyrite replacing massive, thinly laminated, or brecciated limestone, assoc. with rhodonite, rhodochrosite and bustamite, 10-20% of ore; 4> thin layers of v. fine gr. low-grade galena-sphalerite-pyrite interlaminated with fine crystal lithic tuff layers of the Candelaria Lithic Tuff, assoc. with weakly calcareous Mn-oxide layers. Massive sulfide bodies are stratiform, lenticular to podiform in outline, and grade laterally into semi-massive and thinly bedded sulfides. Largest massive orebody: 100 M x 250 M, 0.5-3.5 M thick. 1-3 thinner, less extensive horizons occur stratigraphically above main body.

HOST ROCK AGE.....ETERT

HOST ROCK TYPE.....dacitic crystal tuff and crystal lithic tuff; limestone

IGNEOUS ROCK AGE.....TERT

IGNEOUS ROCK TYPE.....rhyolitic-dacitic flows, tuffs, tuff breccia and tuffaceous sediments; rhyolitic ignimbrite

GANGUE MINERALS.....pyrite, chlorite, epidote, magnetite, hematite, quartz, calcite, fluorite

SIGNIFICANT ALTERATION.....Ubiquitous chlorite-epidote.

REFERENCES

Gomez, 1981.
Maravilla S., 1978.
Marrs, 1978.
Marrs and Guilbert, 1981.
Perez Segura, 1985.

CUMULATIVE PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEARS</u>	<u>GRADE</u>
ORE ZN PB AG	1.000 TONS	LATE 1940'S	AVE: 29.5% ZN, 9.9% PB, 150 G AG/TON, 1.1% CU

PRODUCTION COMMENTS.....Initial prod. capacity: 2000 TPD from open pit on San Judas breccia.

SOURCE OF PRODUCTION INFORMATION.....Marrs and Guilbert, 1981.

POTENTIAL RESOURCES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE ZN PB AG	2000.000 MT	1978	40 G AG/MT, 10% PB+ZN
ORE ZN PB AG	1020.000 MT	1985	40 G/MT AG, 10% PB + ZN

SOURCE OF RESOURCES INFORMATION.....Maravilla, 1978; Perez, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE ZN PB AG	800.000 MT	1981	19 G AG/MT, 3.5% PB, 6.04% ZN

RESERVES COMMENTS.....Blocked-out (proven) reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1981.

MRDS RECORD NUMBER....MX00352

MAP NUMBER.....352

DEPOSIT SIZE.....SMALL
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER...MX00355

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MAP NUMBER.....355
SITE NAME.....La Chispa
DISTRICT/AREA.....San Pedro de la Cueva
STATE.....SONORA
LATITUDE.....29-13-30N      LONGITUDE.....109-36-50W
COMMODITIES.....AG?  PB    ZN    CU
MAIN....AG?    MINOR....PB    ZN    CU
ORE MATERIALS.....galena, sphalerite, Cu-oxides
PRODUCTION.....U
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....MES
HOST ROCK TYPE.....shale, sandstone, conglomerate
REFERENCE....Perez Segura, 1985.
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MRDS RECORD NUMBER...MX00356

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MAP NUMBER.....356
SITE NAME.....Santa Rosa
DISTRICT/AREA.....Sahuaripa
STATE.....SONORA
LATITUDE.....29-01-15N      LONGITUDE.....109-29-55W
COMMODITIES.....PB      ZN      CU
MAIN....PB      ZN      CU
PRODUCTION.....U
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Perez Segura, 1985.
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MRDS RECORD NUMBER...MX00357

MAP NUMBER.....357
SITE NAME.....Chinoverachi
DISTRICT/AREA.....Sahuaripa
STATE.....SONORA
LATITUDE.....29-06-00N LONGITUDE.....109-22-00W
COMMODITIES.....FE
MAJOR.....FE
ORE MATERIALS.....hematite, magnetite
GENERAL ANALYTICAL DATA.....41.20% total Fe, 17.90% silica, 0.008%
total S, 0.20% CaO, 0.046% P, 0.088% Mn; Cabrera, et.al., 1983,
table IV.
DEPOSIT MODEL.....Fe Skarn
USGS MODEL NUMBER.....18d
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fe skarn in roof pendant.
HOST ROCK AGE.....ECRET
HOST ROCK TYPE.....limestones
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....svenodiorite

GANGUE MINERALS.....garnet, epidote, quartz, serpentine,
chlorite, clinopyroxene, amphibole

REFERENCES

Cabrera F., Vega G. and Perez S., 1983.

Perez Segura, 1985.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	1500.000 MT	1983	42% FE

RESERVES COMMENTS.....Inferred reserves.

SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00358

MAP NUMBER.....358

SITE NAME.....El Realito

DISTRICT/AREA.....Sahuaripa

STATE.....SONORA

LATITUDE.....29-09-20N LONGITUDE.....109-21-10W

COMMODITIES.....PB ZN

MAJOR.....PB ZN

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

HOST ROCK TYPE.....andesites and tuffs

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....andesites and tuffs

REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00359

MAP NUMBER.....359

SITE NAME.....Santa Fe de Amarillas

DISTRICT/AREA.....Sahuaripa

STATE.....SONORA

LATITUDE.....29-08-35N LONGITUDE.....109-14-10W

COMMODITIES.....AU

MAJOR.....AU

ORE MATERIALS.....gold

DEPOSIT MODEL.....Epithermal Vein(?)

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

HOST ROCK TYPE.....monzonite-diorite intrusive

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....monzonite-diorite intrusive

GANGUE MINERALS.....quartz, limonite

REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00360

MAP NUMBER.....360

SITE NAME.....San Alejandro

DISTRICT/AREA.....Moctezuma

STATE.....SONORA

LATITUDE.....29-37-10N LONGITUDE.....109-49-45W

COMMODITIES.....U

MAIN....U

PRODUCTION.....U

DEPOSIT MODEL.....Volcanic-Hosted U

DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....andesite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00361

MAP NUMBER.....361
 SITE NAME.....Veta Ancha
 STATE.....SONORA
 LATITUDE.....28-33-45N LONGITUDE.....109-58-50W
 COMMODITIES.....AU AG PB CU
 MAIN....AU AG MINOR....PB CU
 PRODUCTION.....U
 DEPOSIT MODEL.....Au Skarn(?)
 DEPOSIT SIZE.....SMALL
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00362

MAP NUMBER.....362
 SITE NAME.....Santo Nino
 STATE.....SONORA
 LATITUDE.....28-42-40N LONGITUDE.....109-41-05W
 COMMODITIES.....AU AG PB CU
 MAIN....AU AG MINOR....PB CU
 PRODUCTION.....U
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....TRI-JUR
 HOST ROCK TYPE.....quartzites, carbonaceous shales
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00363

MAP NUMBER.....363
 SITE NAME.....Las Goteras
 SYNONYM NAME.....La Gotera
 DISTRICT/AREA.....San Javier/Soyopa
 STATE.....SONORA
 LATITUDE.....28-33-35N LONGITUDE.....109-41-05W
 COMMODITIES.....AG AU CU
 MAJOR....AG AU MINOR....CU
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Mill capacity: 205 TPD
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....TRI-JUR
 HOST ROCK TYPE.....quartzites, carbonaceous shales
 REFERENCE....Perez Segura, 1985.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG AU CU	.205 TPD	1985	NOT LISTED

PRODUCTION COMMENTS.....Produced during exploration and development program conducted by Anaconda.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG AU	12.000 MT	1985	7 G/MT AU, 100 G/MT AG

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00364

MAP NUMBER.....364
 SITE NAME.....Santa Clara
 DISTRICT/AREA.....San Javier/Soyopa
 STATE.....SONORA
 LATITUDE.....28-34-50N LONGITUDE.....109-37-40W
 COMMODITIES.....C
 MAJOR.....C
 ORE MATERIALS.....coal
 GENERAL ANALYTICAL DATA.....Anthracite to meta-anthracite grade coal.
 Low hydrogen, high moisture, moderate to high ash content.
 EXPLORATION AND DEVELOPMENT COMMENTS.....Operated by Southern
 Pacific RR, 1890's until 1911. Reopened in 1942.
 DEPOSIT MODEL.....Coal Mine
 DEPOSIT SIZE.....LARGE
 DEPOSIT DESCRIPTION.....Sixteen coal beds, averaging 1-2 m in
 thickness, over 1000 m strike lengths. Weathering completely
 destroyed coal to depths of 10-30 m.
 HOST ROCK AGE.....TRI-JUR
 HOST ROCK TYPE.....quartzitic sandstone, conglomerate,
 carbonaceous shale and intercalated coal beds
 REFERENCES
 Perez Segura, 1985.
 Wilson and Rocha, 1950.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
COAL	50.000 TONS	1942-1945

SOURCE OF PRODUCTION INFORMATION.....Wilson and Rocha, 1950.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR
COAL	30.000 TONS	1950
COAL	230.000 TONS	1950
COAL	2000.000 TONS	1950
COAL	4000.000 TONS	1950

RESERVES COMMENTS.....Item 1: measured ore, Item 2:
 indicated ore, Item 3: inferred ore, Item 4: possible ore.

SOURCE OF RESERVES INFORMATION.....Wilson and Rocha, 1950.

MRDS RECORD NUMBER....MX00365

MAP NUMBER.....365
 SITE NAME.....San Ignacio
 DISTRICT/AREA.....Tecoripa
 STATE.....SONORA
 LATITUDE.....28-28-00N LONGITUDE.....109-47-15W
 COMMODITIES.....CU MO
 MAJOR.....CU MO
 DEPOSIT MODEL.....Porphyry Cu
 USGS MODEL NUMBER.....17
 DEPOSIT SIZE.....SMALL

IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesites, granitic intrusives
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00366

MAP NUMBER.....366
SITE NAME.....La Cardelena
DISTRICT/AREA.....Tecoripa
STATE.....SONORA
LATITUDE.....28-23-15N LONGITUDE.....109-55-10W
COMMODITIES.....CU MO
MAJOR.....CU MO
DEPOSIT MODEL.....Porphyry Cu
USGS MODEL NUMBER.....17
DEPOSIT SIZE.....SMALL
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00367

MAP NUMBER.....367
SITE NAME.....El Cerrito
DISTRICT/AREA.....Cumuripa
STATE.....SONORA
LATITUDE.....28-16-40N LONGITUDE.....109-43-15W
COMMODITIES.....CU MO
MAJOR.....CU MO
DEPOSIT MODEL.....Porphyry Cu
USGS MODEL NUMBER.....17
DEPOSIT SIZE.....SMALL
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesites, granitic intrusives
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00368

MAP NUMBER.....368
SITE NAME.....La Prieta
SYNONYM NAME.....La Gloria
DISTRICT/AREA.....Rio Chico/Rosario
STATE.....SONORA
LATITUDE.....28-21-30N LONGITUDE.....109-34-50W
COMMODITIES.....AG PB ZN CU
MAIN...AG MINOR...PB ZN CU
ORE MATERIALS.....Ag-sulfosalts(?)
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Vein(?)
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Quartz fissure veins from 12 IN to several
FT in width. Strike lengths up to 1800 FT. Depths to 1040 FT.
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesites

REFERENCES

Perez Segura, 1985.
 Skinner and Plate, 1915.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU AG	3.000 MT	1985	1 G/MT AU, 150 G/MT AG

RESERVES COMMENTS.....La Gloria mine.
 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00369

MAP NUMBER.....369
 SITE NAME.....La Avispa
 DISTRICT/AREA.....Rio Chico
 STATE.....SONORA
 LATITUDE.....28-18-30N LONGITUDE.....109-31-50W
 COMMODITIES.....AG PB ZN CU
 MAJOR.....AG MINOR.....PB ZN CU
 ORE MATERIALS.....Ag-sulfosalts(?)
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....rhyolite tuff
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....rhyolite tuff, andesites
 GANGUE MINERALS.....quartz, limonite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00370

MAP NUMBER.....370
 SITE NAME.....Monica
 DISTRICT/AREA.....Rio Chico
 STATE.....SONORA
 LATITUDE.....28-18-25N LONGITUDE.....109-28-55W
 COMMODITIES.....CU MO
 MAIN....CU MO
 PRODUCTION.....U
 DEPOSIT MODEL.....Porphyry Cu
 USGS MODEL NUMBER.....17
 DEPOSIT SIZE.....SMALL
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesites, granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00371

MAP NUMBER.....371
 SITE NAME.....La Churumbella
 DISTRICT/AREA.....Tepoca
 STATE.....SONORA
 LATITUDE.....28-26-15N LONGITUDE.....109-19-40W
 COMMODITIES.....AU AG PB CU
 MAJOR.....AU AG MINOR.....PB CU
 ORE MATERIALS.....galena, pyrite, Ag-sulfosalts(?)
 DEPOSIT MODEL.....Epithermal Vein

USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Quartz-galena-pyrite vein.
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....andesite
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesite
 GANGUE MINERALS.....quartz, pyrite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00372

MAP NUMBER.....372
 SITE NAME.....El Tigre
 DISTRICT/AREA.....Tepoca
 STATE.....SONORA
 LATITUDE.....28-22-25N LONGITUDE.....109-16-05W
 COMMODITIES.....AG PB ZN CU
 MAIN....AG MINOR....PB ZN CU
 PRODUCTION.....U
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00373

MAP NUMBER.....373
 SITE NAME.....Penasco Blanco
 DISTRICT/AREA.....Yecora
 STATE.....SONORA
 LATITUDE.....28-22-20N LONGITUDE.....109-11-05W
 COMMODITIES.....AU AG PB CU
 MAIN....AU AG MINOR....PB CU
 PRODUCTION.....U
 DEPOSIT MODEL.....Porphyry Cu(?)
 USGS MODEL NUMBER.....17?
 DEPOSIT SIZE.....SMALL
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00374

MAP NUMBER.....374
 SITE NAME.....La Media Cuesta
 DISTRICT/AREA.....Yecora
 STATE.....SONORA
 LATITUDE.....28-24-05N LONGITUDE.....109-10-10W
 COMMODITIES.....AU AG PB CU
 MAJOR....AU AG MINOR....PB CU
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Quartz-pyrite vein.
 HOST ROCK TYPE.....rhyolite porphyry

IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....rhyolite porphyry, andesites
GANGUE MINERALS.....quartz, pyrite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00375

MAP NUMBER.....375
SITE NAME.....La Providencia
DISTRICT/AREA.....Yecora
STATE.....SONORA
LATITUDE.....28-25-10N LONGITUDE.....109-11-35W
COMMODITIES.....AU AG PB CU
MAJOR.....AU AG MINOR.....PB CU
ORE MATERIALS.....galena, chalcopryite, Cu-oxides, Fe-oxides
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Galena, chalcopryite, pyrite and oxides of
 copper in quartz and limonite gangue.
HOST ROCK AGE.....LCRET-ETERT
HOST ROCK TYPE.....andesite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesite
GANGUE MINERALS.....quartz, pyrite, limonite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00376

MAP NUMBER.....376
SITE NAME.....Los Tajos
DISTRICT/AREA.....Yecora
STATE.....SONORA
LATITUDE.....28-26-40N LONGITUDE.....109-09-45W
COMMODITIES.....AU AG PB ZN
MAJOR.....AU AG MINOR.....PB ZN
ORE MATERIALS.....pyrite, galena, sphalerite
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Pyrite-quartz-galena-sphalerite vein.
HOST ROCK AGE.....LCRET-ETERT
HOST ROCK TYPE.....andesite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesite
GANGUE MINERALS.....quartz, pyrite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00377

MAP NUMBER.....377
SITE NAME.....Las Mantequillas
DISTRICT/AREA.....Yecora
STATE.....SONORA
LATITUDE.....28-28-45N LONGITUDE.....109-09-20W
COMMODITIES.....AU CU
MAIN.....AU MINOR.....CU

MAP NUMBER.....380
 SITE NAME.....La Esperanza
 DISTRICT/AREA.....Bacanora
 STATE.....SONORA
 LATITUDE.....28-53-10N LONGITUDE.....109-33-35W
 COMMODITIES.....W
 MAIN....W
 PRODUCTION.....U
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00381

MAP NUMBER.....381
 SITE NAME.....La Esperanza bis
 DISTRICT/AREA.....Bacanora
 STATE.....SONORA
 LATITUDE.....28-54-30N LONGITUDE.....109-33-40W
 COMMODITIES.....W
 MAIN....W
 PRODUCTION.....U
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00382

MAP NUMBER.....382
 SITE NAME.....Las Aguilas
 DISTRICT/AREA.....Bacanora
 STATE.....SONORA
 LATITUDE.....28-58-25N LONGITUDE.....109-27-35W
 COMMODITIES.....CU FE
 MAIN....CU MINOR....FE
 ORE MATERIALS.....cuprite, cubanite(?), chalcocite
 PRODUCTION.....U
 DEPOSIT MODEL.....Cu Skarn
 USGS MODEL NUMBER.....18b
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Skarn containing cuprite, cubanite(?),
 epidote and chalcocite.
 HOST ROCK AGE.....PAL?
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives

GANGUE MINERALS.....epidote
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00383

MAP NUMBER.....383
SITE NAME.....El Tule
SYNONYM NAME.....Los Tejabanes
DISTRICT/AREA.....Tarachi
STATE.....SONORA
LATITUDE.....28-49-45N LONGITUDE.....108-50-40W
COMMODITIES.....AG PB ZN CU BA
MAJOR.....AG MINOR.....PB ZN CU POTEN.....BA
ORE MATERIALS.....Ag-sulfosalts, Cu-oxides, barite
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
HOST ROCK TYPE.....rhyolite, volcanic breccia
IGNEOUS ROCK AGE.....TERT
IGNEOUS ROCK TYPE.....rhyolite, ignimbrite, andesite
GANGUE MINERALS.....barite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00384

MAP NUMBER.....384
SITE NAME.....Igualema
DISTRICT/AREA.....Tonichi
STATE.....SONORA
LATITUDE.....28-32-55N LONGITUDE.....109-24-10W
COMMODITIES.....GRF
MAIN....GRF
ORE MATERIALS.....graphite
DEPOSIT MODEL.....Amorphous Graphite
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Stratabound graphite deposit in
metamorphic rocks of the Barranca Group.
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzites, carbonaceous shales
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00385

MAP NUMBER.....385
SITE NAME.....Los Graseros
STATE.....SONORA
LATITUDE.....28-40-00N LONGITUDE.....109-41-25W
COMMODITIES.....GRF
MAIN....GRF
ORE MATERIALS.....graphite
DEPOSIT MODEL.....Amorphous Graphite
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Stratabound graphite deposit in
metamorphic rocks of the Barranca Group.
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzites, carbonaceous shales
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER...MX00386

MAP NUMBER.....386
SITE NAME.....San Enrique
STATE.....SONORA
LATITUDE.....28-34-00N LONGITUDE.....109-19-05W
COMMODITIES.....C
MAIN....C
DEPOSIT MODEL.....Coal Mine
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzites, carbonaceous shales
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER...MX00387

MAP NUMBER.....387
SITE NAME.....Jacobito
STATE.....SONORA
LATITUDE.....28-35-20N LONGITUDE.....109-22-00W
COMMODITIES.....GRF
MAIN....GRF
ORE MATERIALS.....graphite
DEPOSIT MODEL.....Amorphous Graphite
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Stratabound graphite deposit in
 metamorphic rocks of the Barranca Group.
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzites, carbonaceous shale
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER...MX00388

MAP NUMBER.....388
SITE NAME.....La Gloria
DISTRICT/AREA.....Nacozari
STATE.....SONORA
LATITUDE.....30-25-05N LONGITUDE.....109-32-20W
COMMODITIES.....AG PB ZN CU
MAJOR....AG MINOR....PB ZN CU
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
HOST ROCK TYPE.....latites
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....latites, andesites
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER...MX00389

MAP NUMBER.....389
SITE NAME.....El Pavo
DISTRICT/AREA.....Nacozari
STATE.....SONORA
LATITUDE.....30-18-35N LONGITUDE.....109-54-15W
COMMODITIES.....AG PB ZN CU
MAIN....AG MINOR....PB ZN CU

PRODUCTION.....U
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesites
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00390

MAP NUMBER.....390
 SITE NAME.....El Bote
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....30-36-55N LONGITUDE.....109-46-20W
 COMMODITIES.....AU CU
 MAIN....AU MINOR....CU
 PRODUCTION.....U
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00391

MAP NUMBER.....391
 SITE NAME.....El Yeri
 SYNONYM NAME.....Maria Clarisa
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....30-47-50N LONGITUDE.....109-50-00W
 COMMODITIES.....CU
 MAIN....CU MINOR....PB? ZN?
 ORE MATERIALS.....Cu-oxides
 PRODUCTION.....U
 DEPOSIT MODEL.....Cu Skarn
 USGS MODEL NUMBER.....18b
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestones
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....quartz
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00392

MAP NUMBER.....392
 SITE NAME.....Hachita Hueca
 SYNONYM NAME.....Hachitahueca
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....30-36-30N LONGITUDE.....108-54-45W
 COMMODITIES.....FE

MAIN....FE
 ORE MATERIALS.....magnetite
 GENERAL ANALYTICAL DATA.....56.40% total Fe, 8.10% silica, 0.002%
 total S, 0.50% CaO, 0.186% P, 1.243% Mn; Cabrera, et.al., 1983,
 table IV.
 PRODUCTION.....U
 DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Fe skarn in roof pendant.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....calcite, quartz, garnet, serpentine,
 epidote, K-feldspar, muscovite
 REFERENCES
 Cabrera F., Vega G. and Perez S., 1983.
 Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE (x10³)</u>	<u>YEAR</u>	<u>GRADE</u>
ORE FE	492.000 MT	1983	56% FE

RESERVES COMMENTS.....Inferred reserves.
 SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00393

MAP NUMBER.....393
 SITE NAME.....Rosales
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....30-21-45N LONGITUDE.....109-26-35W
 COMMODITIES.....F
 MAIN....F

ORE MATERIALS.....fluorite
 PRODUCTION.....U
 DEPOSIT MODEL.....Fluorite Vein
 DEPOSIT SIZE.....MEDIUM
 IGNEOUS ROCK AGE.....LCRET
 IGNEOUS ROCK TYPE.....rhyolites, ignimbrites, andesites
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00394

MAP NUMBER.....394
 SITE NAME.....El Tigre
 SYNONYM NAME.....Veins: Tigre, Seitz-Kelley, Sooy
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....30-28-05N LONGITUDE.....109-03-20W
 COMMODITIES.....AG AU ZN PB CU
 MAJOR....AG AU POTEN....ZN PB CU
 ORE MATERIALS.....argentite, tetrahedrite, stromeyerite,
 native Au, native Ag, freibergite, cerargyrite; sphalerite,
 galena, pyrite, chalcopyrite

GENERAL ANALYTICAL DATA.....0.25 oz Au/ton, 39.0 oz Ag/ton, Au:Ag
ratio-1:162, (Buchanan, 1981). 1.5% Zn, 1.1% Pb, 0.4% Cu,
(Mischler and Budrow, 1925).

PRODUCTION.....M

DEPOSIT MODEL.....Creede Epithermal Vein

USGS MODEL NUMBER.....25b

DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....Three main veins, about 600 FT apart.

Length: 1500-6000 FT. Ave. depth: 1000-1200 FT. Ave. width: 1.1-
1.9 FT. Lenticular ore shoots have 6:1 ratio of horizontal to
vertical extent. Vertical extent: 300 M. Ore consists of
intergrowths of sphalerite-galena-pyrite-chalcopyrite-
tetrahedrite-stromeyerite in gangue of kaolinized or silicified
rhyolite. Silicification intense above ore, pyritization intense
below. ZnS increases with depth. Oxidized to 61 M depth.

HOST ROCK AGE.....OLIGO?

HOST ROCK TYPE.....rhyolite tuff and flows, latite breccia

IGNEOUS ROCK AGE.....OLIGO

IGNEOUS ROCK TYPE.....rhyolite, latite, ignimbrite, andesite

GANGUE MINERALS.....quartz, calcite, pyrite, kaolin

SIGNIFICANT ALTERATION.....propylitic, argillic, silicic

REFERENCES

Buchanan, 1981.
Cox and Singer, 1986.
Mischler and Budrow 1925.
Mosier, Menzie and Kleinhampl, 1986.
Perez Segura, 1985.
Skinner and Plate, 1915.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG	1.152 TONS	1912	348 OZ/TON; HAND-SORTED
ORE AG AU	67.832 TONS	1912	28.25 OZ/T AG, 0.138 OZ/T AU

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE AG AU	>700.00 TONS	-1981	0.25 OZ AU, 39.0 OZ AG/TON
AU	175.00 TOZ	-1981	
AG	27300.00 TOZ	-1981	
ORE AG PB ZN	1234.00 MT	1903-1938	8.6 G/T AU, 1337.0 G/T AG, 0.25% CU, 1.0% PB, 1.5% ZN

SOURCE OF PRODUCTION INFORMATION.....Skinner and Plate, 1915; Buchanan,
1981; Mosier, et.al., 1986 (Item 4).

MRDS RECORD NUMBER....MX00395

MAP NUMBER.....395

SITE NAME.....Pilares de Teras

DISTRICT/AREA.....Nacozari

STATE.....SONORA

LATITUDE.....30-38-35N LONGITUDE.....109-14-15W

COMMODITIES.....AG PB ZN

MAIN....AG MINOR....PB ZN

PRODUCTION.....U
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES

CRNNR, 1967.

Perez Segura, 1985.

MRDS RECORD NUMBER....MX00396

MAP NUMBER.....396
SITE NAME.....Minas Nuevas
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-03-35N LONGITUDE.....109-03-00W
COMMODITIES.....AG PB ZN CU AU
MAJOR.....AG MINOR.....PB ZN CU OCCUR.....AU
ORE MATERIALS.....Ag sulfosalts
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Ag sulfosalts in vein trending N 43 W in
andesite.
HOST ROCK TYPE.....andesite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesite
REFERENCE....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE AG	77.573 MT	1985	AG: 190 G/MT, AU: TRACE

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00397

MAP NUMBER.....397
SITE NAME.....La Cocinera
SYNONYM NAME.....Cocinera
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-02-50N LONGITUDE.....109-00-45W
COMMODITIES.....PB ZN CU
MAIN...PB ZN MINOR...CU
ORE MATERIALS.....galena, unknown Zn, Cu-oxides
PRODUCTION.....U
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
HOST ROCK TYPE.....granite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granite
GANGUE MINERALS.....quartz
REFERENCE....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE PB ZN? CU?	68.350 MT	1985	UNKNOWN

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00398

MAP NUMBER.....398
SITE NAME.....Margarita
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-03-55N LONGITUDE.....109-10-50W
COMMODITIES.....AG PB ZN CU
MAIN....AG MINOR....PB ZN CU
PRODUCTION.....U
DEPOSIT MODEL.....Zn-Pb Skarn(?)
USGS MODEL NUMBER.....18c?
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....JUR-CRET
HOST ROCK TYPE.....limestone?
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
REFERENCE....Perez Segura, 1985.
RESERVES
 ITEM TONNAGE(x10³) YEAR GRADE
 ORE AG 63.000 MT 1985 AG:250 G/MT
SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00399

MAP NUMBER.....399
SITE NAME.....Topiyeca
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-25-36N LONGITUDE.....108-56-05W
COMMODITIES.....GRF
MAIN....GRF
ORE MATERIALS.....graphite
DEPOSIT MODEL.....Amorphous Graphite
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Stratabound graphite deposit in
 metamorphic rocks of the Barranca Group.
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzites, carbonaceous shales
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00400

MAP NUMBER.....400
SITE NAME.....El Frijol
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-26-35N LONGITUDE.....109-00-00W
COMMODITIES.....GRF
MAIN....GRF
ORE MATERIALS.....graphite
DEPOSIT MODEL.....Amorphous Graphite
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Stratabound graphite deposit in
 metamorphic rocks of the Barranca Group.
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzites, carbonaceous shales

REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00401

MAP NUMBER.....401
SITE NAME.....San Cayetano
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-13-30N LONGITUDE.....108-52-05W
COMMODITIES.....W
MAIN....W
PRODUCTION.....U
DEPOSIT MODEL.....W Pegmatite
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Pegmatite vein deposit.
HOST ROCK TYPE.....pegmatite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
REFERENCE....Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE (x10³)</u>	<u>YEAR</u>	<u>GRADE</u>
ORE W	45.000 MT	1985	UNKNOWN

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00402

MAP NUMBER.....402
SITE NAME.....Gochico
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-22-55N LONGITUDE.....108-47-40W
COMMODITIES.....PB ZN CU
MAIN....PB ZN CU
PRODUCTION.....U
DEPOSIT MODEL.....Zn-Pb Skarn
USGS MODEL NUMBER.....18c
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....JUR-CRET
HOST ROCK TYPE.....limestone?
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00403

MAP NUMBER.....403
SITE NAME.....Sara Alicia
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-26-35N LONGITUDE.....108-45-05W
COMMODITIES.....AU CU
MAIN....AU MINOR....CU
PRODUCTION.....U
DEPOSIT MODEL.....Au Skarn
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....JUR-CRET
HOST ROCK TYPE.....limestone?

IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00404

MAP NUMBER.....404
SITE NAME.....Moniguasa
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-09-25N LONGITUDE.....108-47-35W
COMMODITIES.....W
MAIN....W
PRODUCTION.....U
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....JUR-CRET
HOST ROCK TYPE.....limestone?
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
REFERENCE....Perez Segura, 1985.
RESERVES

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
ORE W	50.000 MT	1985	0.5% WO ₃

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00405

MAP NUMBER.....405
SITE NAME.....Reyna del Cobre
SYNONYM NAME.....Zazueta
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-05-55N LONGITUDE.....108-40-00W
COMMODITIES.....AG PB ZN CU
MAIN....AG MINOR....PB ZN CU
PRODUCTION.....U
DEPOSIT MODEL.....Zn-Pb Skarn(?)
USGS MODEL NUMBER.....18c?
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....JUR-CRET
HOST ROCK TYPE.....limestone?
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00406

MAP NUMBER.....406
SITE NAME.....Promontorio de Obregon
SYNONYM NAME.....Promontorio
DISTRICT/AREA.....Cajeme
STATE.....SONORA
LATITUDE.....27-38-00N LONGITUDE.....109-42-15W
COMMODITIES.....AG PB ZN AU
MAIN....AG PB ZN MINOR....AU

EXPLORATION AND DEVELOPMENT COMMENTS.....exploration underway
(1985)

DEPOSIT MODEL.....Porphyry Cu(?)

USGS MODEL NUMBER.....17?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Porphyry-related breccia deposit.

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....andesites

REFERENCE....Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE AG PB ZN	400.000 MT	1985	AG:300 G/MT, PB+ZN:3.0%, AU:2.0 G/MT

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00407

MAP NUMBER.....407

SITE NAME.....El Triunfo

DISTRICT/AREA.....Alamos

STATE.....SONORA

LATITUDE.....27-08-40N LONGITUDE.....109-03-25W

COMMODITIES.....PB ZN CU

MAIN....PB ZN CU

PRODUCTION.....U

DEPOSIT MODEL.....Zn-Pb Skarn

USGS MODEL NUMBER.....18c

DEPOSIT SIZE.....SMALL

HOST ROCK AGE.....JUR-CRET?

HOST ROCK TYPE.....limestone?

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....granitic intrusives

REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00408

MAP NUMBER.....408

SITE NAME.....La Verde

SYNONYM NAME.....Los Verdes

DISTRICT/AREA.....Alamos

STATE.....SONORA

LATITUDE.....26-54-35N LONGITUDE.....108-40-05W

COMMODITIES.....AU CU

MAIN....AU CU

PRODUCTION.....U

DEPOSIT MODEL.....Epithermal Vein(?)

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....andesites

REFERENCE....Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE CU	5000.000 MT	1985	0.5% CU

RESERVES COMMENTS.....No data on Au content.

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00409

MAP NUMBER.....409
SITE NAME.....La Reyna (and others)
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....26-50-25N LONGITUDE.....108-38-10W
COMMODITIES.....PB ZN CU
MAIN....PB ZN CU
PRODUCTION.....U
DEPOSIT MODEL.....Zn-Pb Skarn
USGS MODEL NUMBER.....18c
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....JUR-CRET
HOST ROCK TYPE.....limestone?
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00410

MAP NUMBER.....410
SITE NAME.....El Tribilin (and others)
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....26-48-35N LONGITUDE.....108-32-25W
COMMODITIES.....AG PB CU ZN?
MAIN....AG MINOR....PB CU ZN?
ORE MATERIALS.....galena, chalcopryrite, pyrite
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Galena-chalcopryrite-pyrite vein trending N
30 E in andesite.
HOST ROCK TYPE.....andesite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesite
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00411

MAP NUMBER.....411
SITE NAME.....Maria Bonita
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....26-47-05N LONGITUDE.....108-36-05W
COMMODITIES.....PB ZN CU
MAIN....PB ZN CU
DEPOSIT MODEL.....Zn-Pb Skarn
USGS MODEL NUMBER.....18c
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....JUR-CRET
HOST ROCK TYPE.....limestone?
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granitic intrusives

REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00412

MAP NUMBER.....412
SITE NAME.....Las Trancas
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....26-49-50N LONGITUDE.....108-46-05W
COMMODITIES.....AG PB ZN CU
MAIN....AG MINOR....PB ZN CU
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Vein(?)
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesites
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00413

MAP NUMBER.....413
SITE NAME.....Ana Maria
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....26-53-05N LONGITUDE.....108-43-30W
COMMODITIES.....AG PB ZN CU AU
MAIN....AG PB ZN MINOR....CU AU
ORE MATERIALS.....galena, sphalerite
PRODUCTION.....U
DEPOSIT MODEL.....Creede Epithermal Vein
USGS MODEL NUMBER.....25b
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....North-south trending galena-sphalerite
 vein in andesite.
HOST ROCK TYPE.....andesite
IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....andesite
REFERENCE....Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE AG PB ZN	49.000 MT	1985	AG:200 G/MT, PB: 2.8%, ZN: 2.9%,

CU: 0.5%, AU:0.6 G/MT

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00414

MAP NUMBER.....414
SITE NAME.....San Marcos
STATE.....SONORA
LATITUDE.....31-08-20N LONGITUDE.....109-24-30W
COMMODITIES.....C
ORE MATERIALS.....coal
DEPOSIT MODEL.....Coal Mine
DEPOSIT SIZE.....LARGE
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00415

MAP NUMBER.....415
SITE NAME.....El Gallardo
STATE.....SONORA
LATITUDE.....31-18-25N LONGITUDE.....109-22-50W
COMMODITIES.....GYP
MAIN....GYP
ORE MATERIALS.....gypsum
DEPOSIT MODEL.....Bedded Gypsum
DEPOSIT SIZE.....SMALL
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00416

MAP NUMBER.....416
SITE NAME.....Claudia
STATE.....SONORA
LATITUDE.....31-04-25N LONGITUDE.....109-17-30W
COMMODITIES.....GYP
MAJOR.....GYP
ORE MATERIALS.....gypsum
DEPOSIT MODEL.....Bedded Gypsum
DEPOSIT SIZE.....SMALL
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00417

MAP NUMBER.....417
SITE NAME.....Sonora
STATE.....SONORA
LATITUDE.....31-00-30N LONGITUDE.....109-16-55W
COMMODITIES.....GYP
MAIN....GYP
ORE MATERIALS.....gypsum
DEPOSIT MODEL.....Bedded Gypsum
DEPOSIT SIZE.....SMALL
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00418

MAP NUMBER.....418
SITE NAME.....San Faustino
STATE.....SONORA
LATITUDE.....31-15-30N LONGITUDE.....109-26-10W
COMMODITIES.....F
MAIN....F
ORE MATERIALS.....fluorite
DEPOSIT MODEL.....Fluorite Vein
DEPOSIT SIZE.....SMALL
IGNEOUS ROCK AGE.....LTERT
IGNEOUS ROCK TYPE.....rhyolites, ignimbrites, andesites
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00419

MAP NUMBER.....419
SITE NAME.....La Sonora

STATE.....SONORA
 LATITUDE.....28-59-25N LONGITUDE.....110-36-30W
 COMMODITIES.....AU CU
 MAIN....AU MINOR....CU
 ORE MATERIALS.....Cu-oxides
 PRODUCTION.....U
 DEPOSIT MODEL.....Au Skarn
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00420

MAP NUMBER.....420
 SITE NAME.....Cerro de las Minas
 STATE.....SONORA
 LATITUDE.....28-28-00N LONGITUDE.....110-27-35W
 COMMODITIES.....GRF
 MAIN....GRF
 ORE MATERIALS.....graphite
 DEPOSIT MODEL.....Amorphous Graphite
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Stratabound graphite deposit in
 metamorphic rocks of the Barranca Group.
 HOST ROCK AGE.....TRI-JUR
 HOST ROCK TYPE.....quartzites, carbonaceous shales
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00421

MAP NUMBER.....421
 SITE NAME.....Tuquizon
 STATE.....SONORA
 LATITUDE.....28-25-20N LONGITUDE.....110-19-55W
 COMMODITIES.....GRF
 MAIN....GRF
 ORE MATERIALS.....graphite
 DEPOSIT MODEL.....Amorphous Graphite
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Stratabound graphite deposit in
 metamorphic rocks of the Barranca Group.
 HOST ROCK AGE.....TRI-JUR
 HOST ROCK TYPE.....quartzites, carbonaceous shales
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00422

MAP NUMBER.....422
 SITE NAME.....Las Penitas
 STATE.....SONORA
 LATITUDE.....28-32-35N LONGITUDE.....110-11-20W
 COMMODITIES.....GRF
 MAIN....GRF
 ORE MATERIALS.....graphite

DEPOSIT MODEL.....Amorphous Graphite
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Stratabound graphite deposit in
metamorphic rocks of the Barranca Group.
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzites, carbonaceous shales
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00423

MAP NUMBER.....423
SITE NAME.....El Zamotal
STATE.....SONORA
LATITUDE.....28-34-55N LONGITUDE.....110-07-10W
COMMODITIES.....GRF
MAIN....GRF
ORE MATERIALS.....graphite
DEPOSIT MODEL.....Amorphous Graphite
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Stratabound graphite deposit in
metamorphic rocks of the Barranca Group.
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzites, carbonaceous shales
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00424

MAP NUMBER.....424
SITE NAME.....El Salto
STATE.....SONORA
LATITUDE.....28-32-20N LONGITUDE.....110-18-45W
COMMODITIES.....C
MAIN....C
DEPOSIT MODEL.....Coal Mine
DEPOSIT SIZE.....MEDIUM
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....quartzites, carbonaceous shales
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00425

MAP NUMBER.....425
SITE NAME.....El Pozo
STATE.....SONORA
LATITUDE.....28-46-30N LONGITUDE.....110-11-00W
COMMODITIES.....AG PB ZN CU
MAIN....AG MINOR....PB ZN CU
DEPOSIT MODEL.....Porphyry Cu(?)
USGS MODEL NUMBER.....17?
DEPOSIT SIZE.....SMALL
REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00426

MAP NUMBER.....426
SITE NAME.....San Martin
STATE.....SONORA

LATITUDE.....28-17-25N LONGITUDE.....110-08-20W
 COMMODITIES.....AG PB CU ZN
 MAJOR....AG MINOR....PB CU ZN
 ORE MATERIALS.....galena, sphalerite, chalcopyrite,
 marcasite
 DEPOSIT MODEL.....Zn-Pb Skarn
 USGS MODEL NUMBER.....18c
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granite
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00427

MAP NUMBER.....427
 SITE NAME.....Carmelita
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....28-58-50N LONGITUDE.....110-56-05W
 COMMODITIES.....W
 MAIN....W
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00428

MAP NUMBER.....428
 SITE NAME.....Leonora
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....28-58-10N LONGITUDE.....110-57-40W
 COMMODITIES.....W
 MAIN....W
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00429

MAP NUMBER.....429
 SITE NAME.....Monica
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....28-56-25N LONGITUDE.....110-56-05W
 COMMODITIES.....GRF
 MAIN....GRF
 ORE MATERIALS.....graphite
 DEPOSIT MODEL.....Amorphous Graphite

DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Stratabound graphite deposit in
 metamorphic rocks of the Barranca Group.
 HOST ROCK AGE.....TRI-JUR
 HOST ROCK TYPE.....quartzites, carbonaceous shales
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00430

MAP NUMBER.....430
 SITE NAME.....Los Tajos
 DISTRICT/AREA.....Estacion Torres
 STATE.....SONORA
 LATITUDE.....28-33-45N LONGITUDE.....110-44-45W
 COMMODITIES.....AG PB ZN
 MAJOR.....AG MINOR.....PB ZN
 ORE MATERIALS.....galena, sphalerite, pyrite
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Galena-spalerite-quartz-pyrite vein in
 andesite.
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....andesites
 GANGUE MINERALS.....quartz
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00431

MAP NUMBER.....431
 SITE NAME.....Unnamed
 STATE.....SONORA
 LATITUDE.....28-07-25N LONGITUDE.....110-54-50W
 COMMODITIES.....W
 MAIN....W
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00432

MAP NUMBER.....432
 SITE NAME.....El Burro
 DISTRICT/AREA.....Tecoripa
 STATE.....SONORA
 LATITUDE.....28-38-40N LONGITUDE.....110-05-15W
 COMMODITIES.....W MO
 MAIN....W MINOR....MO
 ORE MATERIALS.....scheelite, molybdenite
 DEPOSIT MODEL.....W Pegmatite
 DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....Numerous scheelite occurrences over 10-20 sq. KM area. Scheelite in disseminated crystals, coating joints and in quartz-calcite stringers cutting monzogranite adjacent to silicified fault zones. Crystals of scheelite (+/- molybdenite) disseminated in aplites and quartz dikes cutting greisenized portions of granite. Veinlets, pods and stringers of scheelite occur in greisen along a ridge about 300 M long and 100-150 M wide. High-grade lenses of coarsely crystalline scheelite occur in pegmatitic phase of granite, associated with quartz, beryl, tourmaline and oxidized pyrite.

HOST ROCK TYPE.....pegmatite, biotite-hornblende monzogranite, aplite

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....granitic intrusives

GANGUE MINERALS.....quartz, calcite, muscovite, perthite, tourmaline, beryl, pyrite

REFERENCES

Perez Segura, 1985.

Radelli, 1985.

MRDS RECORD NUMBER....MX00433

MAP NUMBER.....433

SITE NAME.....El Pilar

DISTRICT/AREA.....Nogales

STATE.....SONORA

LATITUDE.....31-11-30N LONGITUDE.....110-38-50W

COMMODITIES.....CU MO

MAIN....CU MO

ORE MATERIALS.....pyrite, chalcopryrite, bornite, molybdenite, Cu-oxides

DEPOSIT MODEL.....Polymetallic Vein

USGS MODEL NUMBER.....22c

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Pyrite-chalcopryrite-bornite-molybdenite-quartz vein runs N 30 W in granite porphyry.

HOST ROCK TYPE.....granite porphyry

IGNEOUS ROCK AGE.....LCRET-ETERT

IGNEOUS ROCK TYPE.....granite porphyry

GANGUE MINERALS.....quartz

REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00434

MAP NUMBER.....434

SITE NAME.....La Concordia

STATE.....SONORA

LATITUDE.....31-04-00N LONGITUDE.....110-39-10W

COMMODITIES.....GYP

MAIN....GYP

ORE MATERIALS.....gypsum

DEPOSIT MODEL.....Bedded Gypsum

DEPOSIT SIZE.....SMALL

REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00435

MAP NUMBER.....435
 SITE NAME.....Planchas de Plata
 SYNONYM NAME.....Bonanza, Planchas Viejas, Colorado, Los Hilos,
 Mejia, Guadalupe
 DISTRICT/AREA.....Planchas de Plata/Nogales
 STATE.....SONORA
 LATITUDE.....31-13-30N LONGITUDE.....111-06-00W
 COMMODITIES.....AG PB ZN CU AU
 MAJOR.....AG MINOR.....PB ZN CU AU
 ORE MATERIALS.....native Ag, cerargyrite, malachite,
 chrysocolla
 GENERAL ANALYTICAL DATA.....Up to 350 oz Ag/ton, trace Au, <1% Cu,
 (Merrill, 1906).
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Impregnations of AgCl and minor Cu
 carbonates along shear zones in quartz porphyry conglomerate. Very
 large masses of native Ag have been found. Ore bodies in the form
 of lenses, egg-shaped masses, shoots and chimneys, extremely
 irregular but common in zone several 100 FT long and up to 200 FT
 wide.
 HOST ROCK AGE.....LCRET-ETERT
 HOST ROCK TYPE.....quartz porphyry conglomerate
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....quartz porphyry intrusive, monzonite
 GANGUE MINERALS.....limonite, Mn-oxide, Fe-oxide
 REFERENCES

Merrill, 1906.

Perez Segura, 1985.

MRDS RECORD NUMBER....MX00436

MAP NUMBER.....436
 SITE NAME.....Cerro Blanco
 DISTRICT/AREA.....Caborca
 STATE.....SONORA
 LATITUDE.....30-48-54N LONGITUDE.....112-03-17W
 COMMODITIES.....AU CU ZN
 MAJOR.....AU MINOR.....CU ZN
 ORE MATERIALS.....gold, pyrite, chalcopryrite, sphalerite
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Quartz-gold-pyrite-chalcopryrite-sphalerite
 vein in Jurassic meta-volcanic rocks.
 HOST ROCK AGE.....JUR
 HOST ROCK TYPE.....schist (volcaniclastic protolith)
 IGNEOUS ROCK AGE.....JUR
 IGNEOUS ROCK TYPE.....volcanic sedimentary terrane
 GANGUE MINERALS.....quartz
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00437

MAP NUMBER.....437

SITE NAME.....Zona 18
 STATE.....SONORA
 LATITUDE.....30-20-15N LONGITUDE.....112-19-50W
 COMMODITIES.....CU MO W
 MAIN....CU MO W
 DEPOSIT MODEL.....Cu Skarn
 USGS MODEL NUMBER.....18b
 DEPOSIT SIZE.....SMALL
 REFERENCE....Perez Segura, 1985.

MRDS RECORD NUMBER....MX00438

MAP NUMBER.....438
 SITE NAME.....El Divisadero
 DISTRICT/AREA.....El Antimonio/La Fortuna
 STATE.....SONORA
 LATITUDE.....30-43-17N LONGITUDE.....112-36-16W
 COMMODITIES.....SB
 MAIN.....SB
 EXPLORATION AND DEVELOPMENT COMMENTS.....Production negligible.
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Sb vein parallel to southern part of La
 Carta Blanca vein and in same intrusive body of quartz porphyry.
 Known strike length: 35 M, may possibly extend as far as 80 M.
 Average width: less than 10 CM. Only a little low-grade ore has
 been found.
 HOST ROCK TYPE.....quartz porphyry
 IGNEOUS ROCK AGE.....TERT?
 IGNEOUS ROCK TYPE.....quartz porphyry
 REFERENCE....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00439

MAP NUMBER.....439
 SITE NAME.....La Bolivia
 DISTRICT/AREA.....El Antimonio/La Montana
 STATE.....SONORA
 LATITUDE.....30-44-35N LONGITUDE.....112-35-24W
 COMMODITIES.....SB
 MAJOR.....SB
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....North and south veins were
 being mined by four gambusinos in June 1943.
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Three widely separated veins averaging 20
 CM in width and less than 50 M in length. North vein strikes N 70
 W and dips 50 S. Middle and south veins strike N 20-30 W and dip
 50-75 W, subparallel to bedding.
 HOST ROCK AGE.....TRI
 HOST ROCK TYPE.....gray sandstone
 REFERENCE....White and Guiza, 1949.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE SB	.200 MT	-1943	40% SB

PRODUCTION SCOMMENTS.....Total past production as of 1943 estimated at between 100 to 200 metric tons of shipping ore. Shipping ore consisted of hand-sorted material grading not less than 40% Sb.

SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00440

MAP NUMBER.....440
 SITE NAME.....La Escondida
 DISTRICT/AREA.....El Antimonio
 STATE.....SONORA
 LATITUDE.....30-42-41N LONGITUDE.....112-35-29W
 COMMODITIES.....SB
 MAJOR.....SB
 EXPLORATION AND DEVELOPMENT COMMENTS.....In June 1943, a vertical shaft was being sunk 10 M N of the outcrop.
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Vein 70 M long, averaging 20 CM in width, in brown sandstone. Vein splits near its south end into two branches, each containing antimony in coarse-grained quartz gangue.
 HOST ROCK TYPE.....brown sandstone
 REFERENCE....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00441

MAP NUMBER.....441
 SITE NAME.....El Pensamiento
 DISTRICT/AREA.....El Antimonio/La Montana
 STATE.....SONORA
 LATITUDE.....30-44-12N LONGITUDE.....112-35-07W
 COMMODITIES.....SB AU
 MAJOR.....SB AU
 ORE MATERIALS.....antimony oxide, native gold
 PRODUCTION.....M
 EXPLORATION AND DEVELOPMENT COMMENTS.....Minor activity at east end of vein in 1943.
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Widest and most persistent vein in district. Known strike length: 250 M. Probable total strike length of 500 M. Average width: 60 CM. Vein consists of coarse-grained milky quartz containing antimony oxide. Average recorded dips on the three mine levels, from upper to lower: 68, 74 and 64 degrees. Three largest ore bodies situated along portions of the vein where dip flattens out. Dip changes corresponding to these ore bodies are: change from 88 N on intermediate level to 75 S at the surface; flattening of dip from 72 on the middle part of the lower level to 66 at a distance of 6 M below the level; dip change from

53 in the upper part of the lower level stope to 43 in the middle and 55 in the lowest portion. Max. width of vein in stope: 1.8 M. About 35 CM of ore generally found along hanging wall and 10-20 CM in the middle and footwall portions of the vein. Much of the quartz is gold-bearing.

HOST ROCK AGE.....TRI

HOST ROCK TYPE.....siltstone

GANGUE MINERALS.....coarse-grained quartz

REFERENCE....White and Guiza, 1949.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE SB	2.000 MT	-1943	40% SB

PRODUCTION COMMENTS.....Past production as of 1943 estimated at between 1,000 and 2,000 tons of shipping ore. Shipping ore described as hand-sorted material grading at least 40% Sb.

SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

POTENTIAL RESOURCES COMMENTS.....1943 assessment concluded that mine contained large quantities of low-grade ore and probably also some undiscovered high-grade ore bodies.

SOURCE OF RESOURCES INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00442

MAP NUMBER.....442

SITE NAME.....El Brasil

DISTRICT/AREA.....El Antimonio/La Montana

STATE.....SONORA

LATITUDE.....30-44-27N LONGITUDE.....112-35-19W

COMMODITIES.....SB

MAJOR.....SB

PRODUCTION.....S

DEPOSIT MODEL.....Simple Sb

USGS MODEL NUMBER.....27d

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Two parallel veins, 40 M and 140 M long, in red and gray siltstone, separated by about 10 M of massive gray sandstone. Conformable to bedding. Longer vein is cut near its NW end by third vein occupying premineral fault zone striking N 0-20 E and dipping 25-60 E. Fault has been mineralized for a distance of 60 M. Average width of veins in stopes: at least 30 CM. Unmined portions of veins are about 10 CM wide. Most ore was taken from 140 M vein.

HOST ROCK AGE.....TRI

HOST ROCK TYPE.....red and gray siltstone, massive gray sandstone

REFERENCE....White and Guiza, 1949.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE SB	1.000 MT	-1943	NOT REPORTED

PRODUCTION COMMENTS.....Past production as of 1943 estimated at between 500 and 1,000 tonnes of ore.

SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00443

MAP NUMBER.....443
SITE NAME.....El Palo Verde
DISTRICT/AREA.....El Antimonio/La Montana
STATE.....SONORA
LATITUDE.....30-44-14N LONGITUDE.....112-35-15W
COMMODITIES.....SB AG AU
MAJOR.....SB AG MINOR.....AU
ORE MATERIALS.....antimony oxides, silver chloride and/or
bromide, native gold
PRODUCTION.....M
EXPLORATION AND DEVELOPMENT COMMENTS.....Active producer in 1943.
DEPOSIT MODEL.....Simple Sb
USGS MODEL NUMBER.....27d
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Main vein strikes N 70-85 W and dips 50-85
SW. Mined for a length of 170 M and a depth of 55.6 M. Vein is
persistent, ranging from 10 CM to 2 M, averaging about 50 CM. Vein
splits towards the SE, forming a subsidiary hanging-wall vein with
strike of N 55-75 W and 70-90 S dip. No large ore bodies noted (as
of 1943 report), but indications of large quantity of low-grade
mill ore consisting of coarse-grained quartz intermixed with
antimony oxides. Bromide or chloride of Ag associated with
antimony oxides. Native Au enclosed in quartz.
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....siltstone
GANGUE MINERALS.....quartz
REFERENCE....White and Guiza, 1949.
CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE SB	2.000 MT	-1943	40% SB

PRODUCTION COMMENTS.....Total past production as of 1943
estimated to be between 1,000 and 2,000 tons of shipping ore.
Shipping ore at that time was described as hand-sorted material
grading at least 40% Sb.
SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00444

MAP NUMBER.....444
SITE NAME.....La Loca
DISTRICT/AREA.....El Antimonio/La Montana
STATE.....SONORA
LATITUDE.....30-44-12N LONGITUDE.....112-34-55W
COMMODITIES.....SB
MAJOR.....SB
ORE MATERIALS.....antimony oxides
EXPLORATION AND DEVELOPMENT COMMENTS.....At early stage of
prospecting in 1943.
DEPOSIT MODEL.....Simple Sb
USGS MODEL NUMBER.....27d
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Small bodies of ore found in brecciated,
altered quartz porphyry. Ore consists of bunches of high-grade
antimony oxide associated with an intermixture of chalcedony and

antimony oxide. No clearly defined vein or fracture system in evidence.

HOST ROCK AGE.....TRI
 HOST ROCK TYPE.....quartz porphyry intruded into red siltstone
 IGNEOUS ROCK AGE.....TERT?
 IGNEOUS ROCK TYPE.....quartz porphyry
 GANGUE MINERALS.....chalcedony
 REFERENCE....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00445

MAP NUMBER.....445
 SITE NAME.....San Miguel
 DISTRICT/AREA.....El Antimonio
 STATE.....SONORA
 LATITUDE.....30-45-02N LONGITUDE.....112-36-08W
 COMMODITIES.....SB
 MAJOR.....SB
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....In June 1943, two gambusinos were producing about 1 ton ore/week.
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Max. thickness of vein: 3 M (Ave: 50 CM.)
 HOST ROCK AGE.....TRI
 HOST ROCK TYPE.....purple arkosic sandstone, highly altered trachyte
 IGNEOUS ROCK AGE.....TERT?
 IGNEOUS ROCK TYPE.....trachyte
 REFERENCE....White and Guiza, 1949.
 PRODUCTION COMMENTS.....Mine has produced only a few hundred tons of ore.
 SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00446

MAP NUMBER.....446
 SITE NAME.....La Carta Blanca
 DISTRICT/AREA.....El Antimonio/La Fortuna
 STATE.....SONORA
 LATITUDE.....30-43-21N LONGITUDE.....112-36-09W
 COMMODITIES.....SB
 MAJOR.....SB
 ORE MATERIALS.....antimony oxide
 PRODUCTION.....S
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Vein strikes N 20-70 E, curving gradually from easterly strike near south end to a northerly strike near north end and dips 37-80 W. Known length: 190 M. Possible total length: 270 M. Ave. Width: 15 CM. Consists of quartz enclosing evenly disseminated grains of antimony oxide.
 HOST ROCK TYPE.....quartz porphyry

IGNEOUS ROCK AGE.....TERT?
 IGNEOUS ROCK TYPE.....quartz porphyry
 GANGUE MINERALS.....quartz
 SIGNIFICANT ALTERATION.....Wall rock commonly altered.
 REFERENCE....White and Guiza, 1949.

CUMULATIVE PRODUCTION

ITEM	TONNAGE($\times 10^3$)	YEARS	GRADE
ORE SB	.100 MT	-1943	40% SB

SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00447

MAP NUMBER.....447
 SITE NAME.....La Fortuna
 DISTRICT/AREA.....El Antimonio/La Fortuna
 STATE.....SONORA
 LATITUDE.....30-43-26N LONGITUDE.....112-36-04W
 COMMODITIES.....SB
 MAJOR.....SB
 PRODUCTION.....S
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Sb-bearing vein .25-3.0 M wide. Vein splits repeatedly down dip, sending offshoots into hanging wall that are flat near the vein but steepen to the north. Most ore found at junctions of the main vein with offshoots.
 HOST ROCK TYPE.....quartz porphyry
 IGNEOUS ROCK AGE.....TERT?
 IGNEOUS ROCK TYPE.....quartz porphyry, diorite
 SIGNIFICANT ALTERATION.....Porphyry adjacent to vein is chalky white in color and has been impregnated with calcite.
 REFERENCE....White and Guiza, 1949.

CUMULATIVE PRODUCTION

ITEM	TONNAGE($\times 10^3$)	YEARS	GRADE
ORE SB	1.000 MT	-1943	40-45% SB

PRODUCTION COMMENTS.....Most productive mine in igneous host rocks of the district.

SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00448

MAP NUMBER.....448
 SITE NAME.....La Bofa
 DISTRICT/AREA.....El Antimonio/La Montana
 STATE.....SONORA
 LATITUDE.....30-44-04N LONGITUDE.....112-35-16W
 COMMODITIES.....SB
 MAJOR.....SB
 PRODUCTION.....S
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Four veins in arkosic sandstone, none worked for more than 12 M below surface. Attitudes of two strongest veins (strike, dip): N 65 E, 30 SE; and due N, 45-70 E.

Best ore came from intersection of two minor veins with attitudes of N 75 E, 35 N and N 30 W, 65 N. Intersection plunges approx. 25 N along N 20 W trend. Nearly all ore mined was close to intersection. Max. thickness of the ore body was approx. 1.5 meters and max. width approx. 3.0 meters.

HOST ROCK AGE.....TRI

HOST ROCK TYPE.....arkosic sandstone

REFERENCE....White and Guiza, 1949.

PRODUCTION COMMENTS.....Mine estimated to have produced several hundred tons of shipping ore (40% Sb) and a larger amount of mill ore (5-15% Sb) by 1943.

SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00449

MAP NUMBER.....449

SITE NAME.....San Jose

DISTRICT/AREA.....El Antimonio/San Francisco

STATE.....SONORA

LATITUDE.....30-46-18N LONGITUDE.....112-35-38W

COMMODITIES.....SB

MAJOR.....SB

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....In 1943, a few gambusinos mining on a small scale were producing less than 1 ton of ore per week.

DEPOSIT MODEL.....Simple Sb

USGS MODEL NUMBER.....27d

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Sb-bearing veins: ave. length 75 M, ave. strike N 35 E. Veins are subparallel in strike to sedimentary host rocks, but they dip steeply NW and SE, intersecting bedding planes at low angles. Best ore found on intersections of steeply dipping veins that diverge laterally and down dip. High-grade ore fills entire space between vein walls less than 2-5 M apart. Ore found only along the walls of wider veins.

HOST ROCK AGE.....TRI?

HOST ROCK TYPE.....red micaceous sandstone

IGNEOUS ROCK AGE.....TERT?

IGNEOUS ROCK TYPE.....quartz porphyry

REFERENCE....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00450

MAP NUMBER.....450

SITE NAME.....La Piedra Azul

DISTRICT/AREA.....El Antimonio/La Montana

STATE.....SONORA

LATITUDE.....30-44-10N LONGITUDE.....112-34-59W

COMMODITIES.....SB

MAJOR.....SB

ORE MATERIALS.....antimony oxides

GENERAL ANALYTICAL DATA.....Large ore body N of main shaft contained an average of 20% Sb; most of the ore bodies contained 5-15% Sb.

PRODUCTION.....M

EXPLORATION AND DEVELOPMENT COMMENTS.....Vein discovered, 1936.
 First ore body not found until 1941 or 1942. In 1943, became
 largest producer in the district, producing 2-3 tons of high-grade
 ore and about 8 tons of low-grade milling ore per day.

DEPOSIT MODEL.....Simple Sb

USGS MODEL NUMBER.....27d

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Veins strike N 45-90 E and dip 20-50 S;
 generally cut across bedding of wall rocks, locally at large
 angles. Veins consist mainly of chalcedony with higher antimony
 oxide content and lower proportion of coarse-grained quartz than
 any other mine in the district. High-grade bodies of yellow to
 cream-colored antimony oxide ore are generally surrounded by low-
 grade intermixtures of chalcedony and olive-green antimony oxide.
 High-grade bodies of antimony oxide ore contain small disseminated
 euhedral quartz crystals and irregular veinlets and masses of
 chalcedony that apparently replaced the ore minerals.

HOST ROCK AGE.....TRI

HOST ROCK TYPE.....red and gray siltstone, purple sandstone

GANGUE MINERALS.....chalcedony, quartz

SIGNIFICANT ALTERATION.....Siltstone and sandstone leached to white
 kaolinite and sand in zone extending 60-70 CM from vein walls.

REFERENCE....White and Guiza, 1949.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE SB	.400 MT	-1943	40% SB
ORE SB	1.000 MT	-1943	40% SB

PRODUCTION COMMENTS.....Item 1: Large ore body north of
 main shaft. Item 2: Mine as a whole.

SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE SB	.400 MT	1943	40% SB

RESERVES COMMENTS.....Large ore body north of main shaft.

SOURCE OF RESERVES INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00451

MAP NUMBER.....451

SITE NAME.....La Montana

DISTRICT/AREA.....El Antimonio/La Montana

STATE.....SONORA

LATITUDE.....30-44-07N LONGITUDE.....112-35-07W

COMMODITIES.....SB AG AU

MAJOR.....SB MINOR.....AG AU

ORE MATERIALS.....antimony oxides, silver bromide or mixed
 bromide + chloride

PRODUCTION.....M

EXPLORATION AND DEVELOPMENT COMMENTS.....Formerly one of the
 largest producers in the district. In early 1943, it produced only
 about 8 tons of low-grade ore per day. Inactive after May, 1943.

DEPOSIT MODEL.....Simple Sb

USGS MODEL NUMBER.....27d

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Main vein strikes N 65 E to due E and dips 30-57 S. Ore bodies localized at and below intersections of vein with premineral fractures that strike subparallel to the vein but dip more steeply to the south. Ore generally found extending below intersections for several meters along fractures and for 10+ meters along vein. Ore composed of antimony oxides in coarse-grained quartz. Some ore containing antimony in chalcedony gangue typical of La Piedra Azul mine found. Au and Ag values reported.

HOST ROCK AGE.....TRI

HOST ROCK TYPE.....sandstone, siltstone

GANGUE MINERALS.....quartz, chalcedony

REFERENCE....White and Guiza, 1949.

CUMULATIVE PRODUCTION

ITEM	TONNAGE($\times 10^3$)	YEARS	GRADE
ORE SB	4.000 MT	-1943	40% SB

PRODUCTION COMMENTS.....Total past production as of 1943: between 2,000 and 4,000 tons of shipping ore. Shipping ore reported elsewhere in paper to be hand-sorted material grading at least 40% Sb.

SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00452

MAP NUMBER.....452

SITE NAME.....La Limena

DISTRICT/AREA.....El Antimonio/La Montana

STATE.....SONORA

LATITUDE.....30-44-16N LONGITUDE.....112-35-21W

COMMODITIES.....SB AU

MAJOR.....SB AU

ORE MATERIALS.....antimony oxides, native gold

GENERAL ANALYTICAL DATA.....Most of the ore contained only 5-15% Sb; some ore could be hand-sorted to shipping grade product containing more than 40% Sb.

PRODUCTION.....M

EXPLORATION AND DEVELOPMENT COMMENTS.....One of the most productive mines in the district. In 1943 it was producing about 1 ton of high-grade ore and 3 tons of milling ore per day.

DEPOSIT MODEL.....Simple Sb

USGS MODEL NUMBER.....27d

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Sb-bearing vein cuts across bedding at low to moderate angles. Known length: 230 M. Width: 10 CM-1.0 M, ave. 40 CM. Mined to vertical depth of 60.4 M. Vein consists of banded coarse-grained quartz, antimony oxides and inclusions of wall rock oriented parallel to the walls. Native gold in quartz near antimony ore.

HOST ROCK AGE.....TRI

HOST ROCK TYPE.....massive gray siltstone

GANGUE MINERALS.....coarse-grained quartz

SIGNIFICANT ALTERATION.....Wall rock of main ore bodies bleached for as much as 50 CM from the vein.

REFERENCE....White and Guiza, 1949.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE SB	5.000 MT	-1943	40% SB

PRODUCTION COMMENTS.....Total production (before 1943)
estimated at 2,000 to 5,000 tons of high-grade shipping ore
(generally hand-sorted ore containing 40-45% Sb).

SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00453

MAP NUMBER.....453

SITE NAME.....El Promontorio

DISTRICT/AREA.....El Antimonio/La Montana

STATE.....SONORA

LATITUDE.....30-43-47N LONGITUDE.....112-35-21W

COMMODITIES.....SB

MAJOR.....SB

PRODUCTION.....S

DEPOSIT MODEL.....Simple Sb

USGS MODEL NUMBER.....27d

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Two subparallel veins, each about 60 M
long. Veins strike N 40-85 E and dip 2-45 S. Dip of southern vein
flattens to near horizontal at depth of 10 M, where large amount
of ore was found in section of the vein 2.4 M thick. Southward,
the dip increases to 20 degrees. Best ore found where the vein has
a low dip and a strike of about N 70 E. Vein narrow and barren
near eastern terminus, where dip steepens and strike swings to N
30 E.

HOST ROCK AGE.....TRI

HOST ROCK TYPE.....massive red siltstone

GANGUE MINERALS.....quartz

SIGNIFICANT ALTERATION.....Wall rock adjacent to ore bodies bleached
from red to white for a distance of up to 30 CM from the vein.

REFERENCE....White and Guiza, 1949.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE SB	.300 MT	-1943	40% SB

PRODUCTION COMMENTS.....Total past production (as of 1943)
probably about 300 tons of shipping ore. Shipping ore reported
elsewhere in the district as material containing at least 40% Sb.

SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER....MX00454

MAP NUMBER.....454

SITE NAME.....El Salero

DISTRICT/AREA.....El Antimonio/La Montana

STATE.....SONORA

LATITUDE.....30-43-50N LONGITUDE.....112-35-18W

COMMODITIES.....SB AG

MAJOR.....SB AG

ORE MATERIALS.....antimony oxide, bromyrite

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....In 1943 the mine was
producing about 1 ton of mill ore (low-grade) per day.

DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Main ore body at intersection of two
 veins. Veins range in width from 10 CM to 2 M, with ave. of about
 40 CM. Main vein 60 M long, with N 20-75 E strike and 20-60 SE
 dip. Intersects vein striking N 15-25 W and dipping 25-35 E. Most
 ore found within 5 M of intersection. Some ore taken from three
 other veins in the mine, none explored for more than 40 M along
 strike. Ore consists of low-grade antimony oxide in quartz. Much
 of the ore has been thoroughly brecciated and mylonitized by
 postmineral and postoxidation faulting parallel to the veins. Some
 ore contains abundant silver, which occurs as a bromyrite coating
 on fractures in the antimony oxide ore.
 HOST ROCK AGE.....TRI
 HOST ROCK TYPE.....gray and red siltstone, interbedded with
 sandstone
 GANGUE MINERALS.....quartz
 REFERENCE....White and Guiza, 1949.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE SB	.200 MT	-1943	40% SB

 PRODUCTION COMMENTS.....Past production probably no more
 than 200 tons of shipping ore.
 SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

 MRDS RECORD NUMBER....MX00455
 MAP NUMBER.....455
 SITE NAME.....El Placerito
 DISTRICT/AREA.....El Antimonio/La Montana
 STATE.....SONORA
 LATITUDE.....30-44-37N LONGITUDE.....112-35-22W
 COMMODITIES.....SB AU
 MAJOR.....SB MINOR.....AU
 GENERAL ANALYTICAL DATA.....50-70 kg of material assaying 45% Sb per
 cubic meter. (22.5-31.5 kg Sb /CM)
 PRODUCTION.....S
 DEPOSIT MODEL.....Placer Sb-Au
 USGS MODEL NUMBER.....39
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Antimony-bearing horizon in cemented
 gravels. Antimony generally confined to layer about 0.5 M thick,
 .75-2.5 M below the surface, consisting of reddish, clay-stained ,
 rounded-subrounded pebbles and boulders up to 20 CM in diameter,
 in partly cemented sand and gravel. Relatively barren overlying
 material more thoroughly cemented, (locally containing enough
 calcium carbonate to form a caliche). Less cemented material
 generally underlies the ore horizon. Old stream channels worked
 for gold content, but only negligible amounts of gold found in
 antimony layer.
 REFERENCE....White and Guiza, 1949.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE SB	1.000 MT	-1943	45% SB

PRODUCTION COMMENTS.....Aggregate production from other
 placers in the district is probably at least as great.
 SOURCE OF PRODUCTION INFORMATION.....White and Guiza, 1949.

MRDS RECORD NUMBER...MX00456

MAP NUMBER.....456
 SITE NAME.....Pearl Harbor
 DISTRICT/AREA.....Sierra de Juarez/Cerro El Topo
 STATE.....NBAJA
 LATITUDE.....32-14-25N LONGITUDE.....115-54-43W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....0.5-0.7% WO₃.
 PRODUCTION.....N
 EXPLORATION AND DEVELOPMENT COMMENTS.....About 15 tons of ore
 grading 0.5-0.7% WO₃ was sorted out during exploration of the
 prospect, but apparently was never shipped.
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite occurs in tactite along east
 side of two marble beds. Gangue is mainly garnet in easternmost
 tactite zone, western zone contains abundant epidote. Best ore
 exposed in eastern zone consisted of coarsely crystalline garnet,
 vesuvianite, calcite, quartz and axinite. Eastern ore body: 0.2 to
 1.0 meter in width with apparent length of 60 meters. Western ore
 body: 0.1 to 0.5 meters wide and about 40 meters long.
 HOST ROCK TYPE.....marble
 IGNEOUS ROCK TYPE.....diorite
 GANGUE MINERALS.....garnet, vesuvianite, calcite, quartz,
 axinite
 REFERENCE....Fries and Schmitter, 1945.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	6.000 MT	1943	0.2-0.3% WO ₃

 RESERVES COMMENTS.....Above estimate assumes average
 mining width of 1.2 meters.
 SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945.

MRDS RECORD NUMBER...MX00457

MAP NUMBER.....457
 SITE NAME.....Los Pinitos, El Osado
 DISTRICT/AREA.....Sierra de Juarez/Cerro El Topo
 STATE.....NBAJA
 LATITUDE.....32-14-36N LONGITUDE.....115-54-20W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....N
 EXPLORATION AND DEVELOPMENT COMMENTS.....A few tons of ore were
 sorted out during exploration, but weren't milled.
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a

DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Numerous small prospects which expose
tactite or hornfels containing minor to trace amounts of
scheelite. Most promising showing is discontinuous marble-tactite
bed that extends NE from the center of the Los Pinitos claim to
the center of the 16 de Septiembre claim.
HOST ROCK TYPE.....marble, hornfels
REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00458

MAP NUMBER.....458
SITE NAME.....El Topo Numero Tres
DISTRICT/AREA.....Sierra de Juarez/Cerro El Topo
STATE.....NBAJA
LATITUDE.....32-14-36N LONGITUDE.....115-54-53W
COMMODITIES.....W
MAIN....W
ORE MATERIALS.....scheelite
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Small pocket of scheelite, a few tenths of
a meter wide, in slightly wider zone of tactite. Exposed in the
northernmost of several trenches near the south end of the El Topo
Numero Tres claim.
HOST ROCK TYPE.....marble (tactite)
REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00459

MAP NUMBER.....459
SITE NAME.....Unnamed prospect
DISTRICT/AREA.....Sierra de Juarez/Cerro El Topo
STATE.....NBAJA
LATITUDE.....32-15-03N LONGITUDE.....115-55-36W
COMMODITIES.....W
MAIN....W
ORE MATERIALS.....scheelite
GENERAL ANALYTICAL DATA.....WO₃ content probably less than 0.4%.
PRODUCTION.....N
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Scheelite-bearing zone 0.4 M wide in
slightly wider zone of tactite between marble and underlying
schist and hornfels.
HOST ROCK TYPE.....marble bed overlying schist and hornfels
REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00460

MAP NUMBER.....460
SITE NAME.....Los Cinco Hermanos (North)
DISTRICT/AREA.....Sierra de Juarez/Cerro El Topo
STATE.....NBAJA
LATITUDE.....32-14-15N LONGITUDE.....115-54-21W

COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....Ore probably averaged less than 0.2% WO₃.
 PRODUCTION.....N
 EXPLORATION AND DEVELOPMENT COMMENTS.....A few tons of ore were
 sorted out during exploratory work. Too lean to ship to mill.
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Northernmost of four separate beds of
 marble-tactite on Los Cinco Hermanos claim. Tactite occurs along
 east side of marble bed trending NNE with 70 W dip. Only traces of
 scheelite found in surface workings, but shaft exposed a
 scheelite-bearing zone ranging from a few tenths of a meter to
 about 1.5 M in width.
 HOST ROCK TYPE.....marble, schist, hornfels
 IGNEOUS ROCK TYPE.....quartz diorite
 REFERENCE....Fries and Schmitter, 1945..

MRDS RECORD NUMBER....MX00461

MAP NUMBER.....461
 SITE NAME.....Los Cinco Hermanos
 DISTRICT/AREA.....Sierra de Juarez/Cerro El Topo
 STATE.....NBAJA
 LATITUDE.....32-14-09N LONGITUDE.....115-54-26W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....trace only
 PRODUCTION.....N
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Traces of scheelite in tactite bed a few
 meters long containing remnants of marble.
 HOST ROCK TYPE.....marble (tactite)
 REFERENCE....Fries and Schmitter, 1945..

MRDS RECORD NUMBER....MX00462

MAP NUMBER.....462
 SITE NAME.....Los Cinco Hermanos (Incline shaft)
 DISTRICT/AREA.....Sierra de Juarez/Cerro El Topo
 STATE.....NBAJA
 LATITUDE.....32-14-03N LONGITUDE.....115-54-31W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....Average WO₃ content probably less than
 0.3% .
 PRODUCTION.....N
 EXPLORATION AND DEVELOPMENT COMMENTS.....A few tons of low-grade
 ore were sorted out during exploratory work.
 DEPOSIT MODEL.....W Skarn

USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Shaft near center of marble bed exposed
narrow zone containing minor scheelite. Marble bed 180 M long by
20 M wide, flanked by hornfels except along east side where it is
in contact with large body of quartz diorite.
HOST ROCK TYPE.....marble, hornfels
IGNEOUS ROCK TYPE.....quartz diorite
REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00463

MAP NUMBER.....463
SITE NAME.....Los Cinco Hermanos (South)
DISTRICT/AREA.....Sierra de Juarez/Cerro El Topo
STATE.....NBAJA
LATITUDE.....32-13-48N LONGITUDE.....115-54-29W
COMMODITIES.....W
MAIN....W
ORE MATERIALS.....scheelite
GENERAL ANALYTICAL DATA.....Small amount of ore averaged 1.0% WO₃.
PRODUCTION.....N
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Marble bed, 225 M long and 10 M wide,
striking N with 65 W dip. Marble intruded along eastern margin and
truncated at both by quartz diorite. Zone of scheelite-bearing
tactite at south end of marble contained one small pocket of ore
from which 8-10 tons of material averaging 1.0% WO₃ was sorted
out. Only traces of scheelite remain in place.
HOST ROCK TYPE.....marble
IGNEOUS ROCK TYPE.....quartz diorite
REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00464

MAP NUMBER.....464
SITE NAME.....V for Victory
DISTRICT/AREA.....Sierra de Juarez/Cerro El Topo
STATE.....NBAJA
LATITUDE.....32-13-39N LONGITUDE.....115-55-10W
COMMODITIES.....W
MAIN....W
ORE MATERIALS.....scheelite
PRODUCTION.....N
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Scheelite-bearing zone in narrow layer of
tactite between marble and hornfels. Marble bed strikes N and dips
75 E. Scheelite occurs along west side of marble.
HOST ROCK TYPE.....marble, hornfels
REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00465

MAP NUMBER.....465
 SITE NAME.....Pasadena
 DISTRICT/AREA.....Sierra de Juarez
 STATE.....NBAJA
 LATITUDE.....32-08-31N LONGITUDE.....116-05-08W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 GENERAL ANALYTICAL DATA.....Estimated average grade: 0.3-0.5% WO₃.
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite-bearing zone up to 1.5 M wide in
 garnet-diopside tactite, about 30 M long and 1-4 M wide, in
 hornfels and schist; 20 M east of large quartz diorite intrusive.
 HOST ROCK TYPE.....tactite in hornfels and schist
 IGNEOUS ROCK TYPE.....quartz diorite
 GANGUE MINERALS.....garnet, diopside
 REFERENCE....Fries and Schmitter, 1945.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE W	2.500 MT	1943	0.3-0.4% WO ₃

 RESERVES COMMENTS.....Ave. mining width: 1.2 M.
 SOURCE OF RESERVES INFORMATION.....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00466

MAP NUMBER.....466
 SITE NAME.....El Socorro
 DISTRICT/AREA.....Sierra de Juarez
 STATE.....NBAJA
 LATITUDE.....32-11-00N LONGITUDE.....115-54-23W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....N
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite occurs in tactite without
 marble, in small pendant of schist and hornfels in quartz diorite.
 HOST ROCK TYPE.....tactite in schist and hornfels
 IGNEOUS ROCK TYPE.....quartz diorite
 REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00467

MAP NUMBER.....467
 SITE NAME.....Unnamed prospect
 DISTRICT/AREA.....Sierra de Juarez
 STATE.....NBAJA
 LATITUDE.....32-10-49N LONGITUDE.....115-55-20W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....N

DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Scheelite-bearing tactite less than 0.5 M
 wide between marble and hornfels, a few meters from contact with
 large quartz diorite body. Marble bed apparently less than 30 M
 long.
 HOST ROCK TYPE.....marble, hornfels
 IGNEOUS ROCK TYPE.....quartz diorite
 REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00468

MAP NUMBER.....468
 SITE NAME.....Unnamed prospect
 DISTRICT/AREA.....Sierra de Juarez
 STATE.....NBAJA
 LATITUDE.....32-11-09N LONGITUDE.....115-53-54W
 COMMODITIES.....W
 MAIN....W
 ORE MATERIALS.....scheelite
 PRODUCTION.....N
 DEPOSIT MODEL.....W Skarn
 USGS MODEL NUMBER.....14a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Minor amounts of scheelite in 0.5 M wide
 zone of tactite in schist a few meters east of contact with quartz
 diorite. No marble in or near the deposit.
 HOST ROCK TYPE.....schist
 IGNEOUS ROCK TYPE.....quartz diorite
 REFERENCE....Fries and Schmitter, 1945.

MRDS RECORD NUMBER....MX00469

MAP NUMBER.....469
 SITE NAME.....San Francisco
 DISTRICT/AREA...../Punta Penasco
 STATE.....SONORA
 LATITUDE.....31-37- N LONGITUDE.....113-07- W
 COMMODITIES.....LI RU U
 MAJOR.....LI MINOR.....RU U
 DEPOSIT MODEL.....Lithium Pegmatite
 DEPOSIT SIZE.....SMALL
 REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00470

MAP NUMBER.....470
 SITE NAME.....Trincheras
 DISTRICT/AREA...../Trincheras
 STATE.....SONORA
 LATITUDE.....30-22- N LONGITUDE.....111-35- W
 COMMODITIES.....SB AU
 EXPLORATION AND DEVELOPMENT COMMENTS.....Bonanza, 1920. Placers
 worked on small scale since then.
 DEPOSIT MODEL.....Simple Sb
 USGS MODEL NUMBER.....27d

DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Antimony vein deposit in area worked for
placer gold. Placers cover area approx. 20 KM long over width
ranging from 100 M to 1 KM. See record no. 329.

REFERENCES

Roldan-Quintana, 1979.

Salas, 1975.

MRDS RECORD NUMBER....MX00471

MAP NUMBER.....471
SITE NAME.....Cerro Toribio
DISTRICT/AREA...../Trincheras
STATE.....SONORA
LATITUDE.....29-55- N LONGITUDE.....111-40- W
COMMODITIES.....VRM CU
MAJOR.....VRM MINOR.....CU
DEPOSIT MODEL.....Vermiculite
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00472

MAP NUMBER.....472
SITE NAME.....Opodepe
DISTRICT/AREA...../Opodepe
STATE.....SONORA
LATITUDE.....29-52- N LONGITUDE.....111-08- W
COMMODITIES.....PB AG
MAIN....PB AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00473

MAP NUMBER.....473
SITE NAME.....Bahia de Quino
DISTRICT/AREA...../Hermosillo
STATE.....SONORA
LATITUDE.....28-52- N LONGITUDE.....112-00- W
COMMODITIES.....QTZ
DEPOSIT MODEL.....Quartz
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00474

MAP NUMBER.....474
SITE NAME.....Viznaga
DISTRICT/AREA...../Hermosillo
STATE.....SONORA
LATITUDE.....28-55- N LONGITUDE.....111-10- W
COMMODITIES.....CU
MAIN....CU
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00475

MAP NUMBER.....475
SITE NAME.....Alamos district
DISTRICT/AREA.....Alamos
STATE.....SONORA
LATITUDE.....27-03- N LONGITUDE.....108-57- W
COMMODITIES.....AU CU W
MAIN....AU MINOR....CU W
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00476

MAP NUMBER.....476
SITE NAME.....Yecora
DISTRICT/AREA...../Yecora
STATE.....SONORA
LATITUDE.....28-22- N LONGITUDE.....109-01- W
COMMODITIES.....MO
MAJOR.....MO
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00477

MAP NUMBER.....477
SITE NAME.....El Nevado
DISTRICT/AREA...../Tecate
STATE.....NBAJA
LATITUDE.....32-30- N LONGITUDE.....116-30- W
COMMODITIES.....QTZ
DEPOSIT MODEL.....Quartz
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00478

MAP NUMBER.....478
SITE NAME.....Ensenada
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....31-58- N LONGITUDE.....116-50- W
COMMODITIES.....TLC
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00479

MAP NUMBER.....479
SITE NAME.....Punta China
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....31-35- N LONGITUDE.....116-40- W
COMMODITIES.....LST

MAJOR.....LST
DEPOSIT MODEL.....Limestone
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00480

MAP NUMBER.....480
SITE NAME.....Viznaga
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....31-40- N LONGITUDE.....116-05- W
COMMODITIES.....AU AG
DEPOSIT MODEL.....Placer Au
USGS MODEL NUMBER.....39
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00481

MAP NUMBER.....481
SITE NAME.....San Fernando
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....29-55- N LONGITUDE.....115-15- W
COMMODITIES.....CU FE
MAJOR.....CU MINOR.....FE
DEPOSIT MODEL.....Cu Skarn
USGS MODEL NUMBER.....18b
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00482

MAP NUMBER.....482
SITE NAME.....El Marmol
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....30-00- N LONGITUDE.....114-45- W
COMMODITIES.....CA
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00483

MAP NUMBER.....483
SITE NAME.....El Desengano
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....29-35- N LONGITUDE.....114-20- W
COMMODITIES.....AU
MAIN....AU
ORE MATERIALS.....native gold
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00484

MAP NUMBER.....484
SITE NAME.....Columbia
DISTRICT/AREA...../Ensenada
STATE.....NBAJA
LATITUDE.....29-10- N LONGITUDE.....114-25- W
COMMODITIES.....AU CU
MAIN....AU CU
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00485

MAP NUMBER.....485
SITE NAME.....Punta Eugenia
DISTRICT/AREA...../Mulege
STATE.....SBAJA
LATITUDE.....27-27- N LONGITUDE.....114-17- W
COMMODITIES.....AU
MAIN....AU
ORE MATERIALS.....native gold
DEPOSIT MODEL.....Epithermal Vein(?)
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00486

MAP NUMBER.....486
SITE NAME.....Bartolome
DISTRICT/AREA...../Mulege
STATE.....SBAJA
LATITUDE.....27-33- N LONGITUDE.....114-45- W
COMMODITIES.....MG
MAJOR.....MG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00487

MAP NUMBER.....487
SITE NAME.....Morro Hermosa
DISTRICT/AREA...../Mulege
STATE.....SBAJA
LATITUDE.....27-32- N LONGITUDE.....114-43- W
COMMODITIES.....CU
MAIN....CU
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00488

MAP NUMBER.....488
SITE NAME.....Morro Hermosa
DISTRICT/AREA...../Mulege

STATE.....SBAJA
LATITUDE.....27-32- N LONGITUDE.....114-43- W
COMMODITIES.....MG
MAJOR.....MG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00489

MAP NUMBER.....489
SITE NAME.....Mulege
DISTRICT/AREA...../Mulege
STATE.....SBAJA
LATITUDE.....26-50- N LONGITUDE.....112-00- W
COMMODITIES.....MN
MAJOR.....MN
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....MEDIUM
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00490

MAP NUMBER.....490
SITE NAME.....Mision de San Juan
DISTRICT/AREA...../Comondu
STATE.....SBAJA
LATITUDE.....26-30- N LONGITUDE.....111-30- W
COMMODITIES.....MN
MAJOR.....MN
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX00491

MAP NUMBER.....491
SITE NAME.....Hermosillo
DISTRICT/AREA.....Hermosillo
STATE.....SONORA
LATITUDE.....29-09- N LONGITUDE.....110-58- W
COMMODITIES.....W
MAJOR.....W
ORE MATERIALS.....scheelite
PRODUCTION.....M
DEPOSIT MODEL.....W Skarn
USGS MODEL NUMBER.....14a
DEPOSIT SIZE.....MEDIUM
REFERENCES
 Guild, 1981.
 Mead and Kesler, 1984.
 Radelli, 1985.

MRDS RECORD NUMBER....MX00492

MAP NUMBER.....492

SITE NAME.....Isla Tiburon
 DISTRICT/AREA.....Hermosillo
 STATE.....SONORA
 LATITUDE.....28-51- N LONGITUDE.....112-21- W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Guild, 1981.
 Salas, 1975.
 Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00493

MAP NUMBER.....493
 SITE NAME.....Japon en Mexico
 DISTRICT/AREA.....Alamos
 STATE.....SONORA
 LATITUDE.....27-30-45N LONGITUDE.....108-44-10W
 COMMODITIES.....AG PB ZN AU
 MAJOR.....AG PB ZN MINOR.....AU
 PRODUCTION.....S
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....JUR-CRET
 HOST ROCK TYPE.....schists, volcaniclastics, shales,
 limestones (undivided)
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granitic intrusives
 REFERENCES
 Guild, 1981.
 Perez Segura, 1985.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE AG PB ZN	17.000 MT	1985	AU:9G/MT, AG:900G/MT, PB:2%, ZN:1.8%

SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985

MRDS RECORD NUMBER....MX00494

MAP NUMBER.....494
 SITE NAME.....La Antigua
 DISTRICT/AREA.....Alamos
 STATE.....SONORA
 LATITUDE.....27-16- N LONGITUDE.....109-02- W
 COMMODITIES.....AG PB ZN CU
 MAJOR.....AG MINOR.....PB ZN CU
 ORE MATERIALS.....pyrite, galena, sphalerite, Cu-oxides
 PRODUCTION.....S
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....granite

IGNEOUS ROCK AGE.....LCRET-ETERT
IGNEOUS ROCK TYPE.....granite
REFERENCES

Guild, 1981.

Perez Segura, 1985.

MRDS RECORD NUMBER....MX00495

MAP NUMBER.....495
SITE NAME.....La Candelaria
STATE.....SONORA
LATITUDE.....27-11- N LONGITUDE.....109-15- W
COMMODITIES.....CU AU
MAJOR.....CU AU
PRODUCTION.....S
DEPOSIT MODEL.....Cu Skarn
USGS MODEL NUMBER.....18b
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX00496

MAP NUMBER.....496
SITE NAME.....La Caridad
SYNONYM NAME.....La Caridad Vieja
DISTRICT/AREA...../Nacozari
STATE.....SONORA
LATITUDE.....30-20-35N LONGITUDE.....109-31-25W
COMMODITIES.....CU MO AG ZN PB
MAJOR.....CU MO MINOR.....AG POTEN.....ZN PB
ORE MATERIALS.....pyrite, chalcocite, covellite,
chalcopyrite, molybdenite, digenite, sphalerite, galena, bornite,
cubanite, tennantite
GENERAL ANALYTICAL DATA.....Hypogene ore: 0.3% Cu, 0.01-0.04% Mo,
Supergene ore: 0.75% Cu, (Saegart, et.al., 1974); Head grades
(run-of-mine): 0.6-0.8% Cu, 0.02-0.04% Mo, (Mining Magazine,
1987).
PRODUCTION.....M
EXPLORATION AND DEVELOPMENT COMMENTS.....El Tajo copper smelter
commissioned, June, 1986. Capacity: 180,000 st/y. Produces blister
copper (99.6% Cu) cast into anodes.
DEPOSIT MODEL.....Porphyry Cu-Mo
USGS MODEL NUMBER.....21a
DEPOSIT SIZE.....LARGE
DEPOSIT DESCRIPTION.....Dominant economic copper mineral is
chalcocite (+ covellite) in blanket-like enrichment zone with ave.
diameter of 1700 M and ave. thickness of 90 M (max: 250 M).
Chalcocite layer occurs beneath an oxidized leached cap, ave. 50 M
thick, composed mainly of hematite + goethite + jarosite. Primary
sulfides (2-3% by volume) occur as fracture-fillings,
disseminations and breccia matrix replacements. Dominantly pyrite
and chalcopyrite, with lesser amounts of molybdenite, bornite,
sphalerite and galena. Primary mineralization contemporaneous with
alteration. In the center of the deposit the ratio of pyrite to
chalcopyrite is 2:1 while at the distal edges it is 10:1.
Chalcopyrite, bornite, cubanite and molybdenite are solely

hypogene in origin and chalcocite, covellite and digenite are supergene. La Caridad Vieja: Pyrite-tennantite-bornite-chalcocite-quartz-barite vein in Laramide-age quartz porphyry and volcanic rocks.

HOST ROCK AGE.....LCRET-ETERT

HOST ROCK TYPE.....quartz monzonite, quartz diorite, latite porphyry, pegmatite

IGNEOUS ROCK AGE.....EO

(53.0 +/- 0.4 M.Y., sericite in quartz monzonite)

(52.5 +/- 1.3 M.Y., latite porphyry)

(54.3 +/- 1.2 M.Y., biotite in quartz monzonite)

(50.0 +/- 1.2 M.Y., quartz diorite)

IGNEOUS ROCK TYPE.....quartz diorite, quartz monzonite, latite porphyry, volcanic rocks

GANGUE MINERALS.....quartz, barite, sericite, pyrite

SIGNIFICANT ALTERATION.....Pervasive phyllic alteration grades outward into poorly defined argillic zone, enveloped by thin band of propylitic alteration. Leached cap indicates that main economic copper mineralization was secondary. Local tourmalinization. No significant potassic alteration.

REFERENCES

Contla J. and Martinez M., 1981.

Cox and Singer, 1986.

Echavarri, 1973.

Guild, 1981.

Hernandez P., 1978.

Livingston, 1974

Maravilla S., 1978.

Mining Magazine, 1987, v. 156, no. 5, p. 370-381.

Panczner, 1987.

Perez Segura, 1985.

Saegart, Sell and Kilpatrick, 1974.

Salas, 1975.

ANNUAL PRODUCTION

ITEM	TONNAGE ($\times 10^3$)	YEAR	GRADE
ORE CU MO	72.000 TPD	1985	0.7% CU, 0.02% MO
CONC CU	419.824 MT	1983	33.47% CU, 23.7% FE, 0.19% MO,
			139 G/MT AG, 0.4 G/MT AU
CONC MO	6.520 MT	1983	58.42% MO, 0.32% FE, 0.25% CU,
			87 G/MT AG
MO	3.200 MT	1983	
MO	4.500 MT	1982	

SOURCE OF PRODUCTION INFORMATION.....Perez Segura, 1985; Mining Journal, v. 303, p. 115; Intermet Molybdenum Yearbook, 1983.

POTENTIAL RESOURCES

ITEM	TONNAGE ($\times 10^3$)	YEAR	GRADE
ORE CU MO	800000.0 MT	1985	0.7% CU, 0.012% MO

SOURCE OF RESOURCES INFORMATION.....Perez Segura, 1985; Maravilla, 1978.

RESERVES

ITEM	TONNAGE ($\times 10^3$)	YEAR	GRADE
ORE CU MO	1274000.0 MT	1987	0.42% CU, 0.038% MO;

ORE CU MO 594000.0 MT 1987 WASTE:ORE = 0.42:1.
 0.6% CU, 0.012% MO;
 WASTE:ORE = 0.64:1.
 RESERVES COMMENTS.....Ore reserves blocked out using
 computerized systems analysis. Item 1> Open-pit reserves including
 Mo contribution using Cu-equivalent values. Item 2> Cu-only pit
 using 0.30% Cu cut-off.
 SOURCE OF RESERVES INFORMATION.....Mining Magazine, v. 156, no. 5, p.
 371. (May, 1987)

 MRDS RECORD NUMBER....MX00497
 MAP NUMBER.....497
 SITE NAME.....La Dura
 DISTRICT/AREA.....Mulatos/Sahuaripa
 STATE.....SONORA
 LATITUDE.....29-38-00N LONGITUDE.....108-47-20W
 COMMODITIES.....AG AU
 MAIN....AG AU
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Hydrothermal dissiminated zones of gold.
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....rhyolite, andesite, ignimbrite and
 associated felsic volcanics; granitic intrusive
 REFERENCES
 Cox and Singer, 1986.
 Guild, 1981.
 Perez Segura, 1985.
 RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE AU AG	20.000 MT	1985	AU 4 GR., AG 10 GR.

 SOURCE OF RESERVES INFORMATION.....Perez Segura, 1985.

 MRDS RECORD NUMBER....MX00498
 MAP NUMBER.....498
 SITE NAME.....Gamer
 SYNONYM NAME.....Shangri La
 STATE.....SONORA
 LATITUDE.....30-45- N LONGITUDE.....110-43- W
 COMMODITIES.....MN
 MAJOR....MN
 ORE MATERIALS.....rhodochrosite
 GENERAL ANALYTICAL DATA.....Surface ore: 22% Mn; Selected sample: 32%
 Mn
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Vein containing rhodochrosite, quartz,
 calcite and several sulfides, average width 30 CM, with average Mn
 content of 25%. Ore body appears to pinch out to the north. Vein
 is about 50% rhodochrosite, partly oxidized in weathered zone.
 HOST ROCK TYPE.....argillites

GANGUE MINERALS.....quartz, calcite

REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

ITEM	TONNAGE($\times 10^3$)	YEARS	GRADE
ORE MN	.500 MT	-1943	40% MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00499

MAP NUMBER.....499

SITE NAME.....Guadalupe

DISTRICT/AREA.....Punta Concepcion/Mulege

STATE.....SBAJA

LATITUDE.....26-49-07N LONGITUDE.....111-50-53W

COMMODITIES.....MN

MAJOR.....MN

ORE MATERIALS.....psilomelane, pyrolusite, manganite, wad;
(bustamite), (rhodonite)

GENERAL ANALYTICAL DATA.....Low grade Mn oxides impregnating andesite:
7.21% Mn; High grade psilomelane ore: 57.42% Mn; Average overall
grade: 20% Mn; Concentrations of psilomelane ore grading more than
36.33% Mn very rare.

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Two systems of veins cutting altered and
brecciated andesites. Principal veins: NW striking with var. dip,
0.2-0.75 M wide, intersected by EW striking system. Major ore
concentrations at intersections. Cellular-structured ore contains
psilomelane, pyrolusite, manganite and wad. Minor amounts of
bustamite and rhodonite present. Abundant quartz, Ca-sulfates and
carbonates.

HOST ROCK TYPE.....andesites

IGNEOUS ROCK TYPE.....andesites

GANGUE MINERALS.....gypsum, quartz, calcite, chalcedony, iron
oxides

REFERENCES

Gonzalez R., 1956.

Trask and Rodriguez, 1948.

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE MN	32.000 TONS	1956	7.21-36.33% MN

RESERVES COMMENTS.....Oxide ore mixed with some
impurities.

SOURCE OF RESERVES INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX00500

MAP NUMBER.....500

SITE NAME.....La Azteca

DISTRICT/AREA...../Mulege

STATE.....SBAJA

LATITUDE.....26-58-37N LONGITUDE.....112-04-38W

COMMODITIES.....MN

MAJOR.....MN

ORE MATERIALS.....pyrolusite, psilomelane, manganite, wad;
rhodochrosite, bustamite, rhodonite

GENERAL ANALYTICAL DATA.....Most ore: 19.21% Mn; selected ore: 42.50%
Mn

EXPLORATION AND DEVELOPMENT COMMENTS.....Several hundred tons of
selected ore mined, but not shipped as of 1956 report.

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Simple, well-defined Mn vein, 0.75 M wide
along best mineralized section. Ave. width: 30 CM. Attitude: N 45
W, 61 NE; changes strike to N 66 W at foot of Cerro de La Azteca.
Ore has banded structure. Ore minerals: pyrolusite, psilomelane,
manganite and wad. Rhodochrosite, bustamite and rhodonite known to
occur. Gangue: calcite, gypsum, quartz, epidote and rare Cu-
carbonates.

HOST ROCK TYPE.....hornblende andesite

IGNEOUS ROCK AGE.....MIO

IGNEOUS ROCK TYPE.....hornblende andesite

GANGUE MINERALS.....calcite, gypsum, quartz, epidote, rare Cu-
carbonates

REFERENCES

Gonzalez R., 1956.

Trask and Rodriguez, 1948.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	7.000 TONS	1956	19.2-42.5% MN

SOURCE OF RESERVES INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX00501

MAP NUMBER.....501

SITE NAME.....Guadalupe Numero 2

STATE.....NBAJA

LATITUDE.....32-29- N LONGITUDE.....116-15- W

COMMODITIES.....MN GRF

MAIN...MN MINOR...GRF

ORE MATERIALS.....pyrolusite, psilomelane, minor braunite,
graphite

GENERAL ANALYTICAL DATA.....Composite sample of Mn vein: 16.56% Mn,
59.95% silica, 1.67% C, 1.10% Pb, trace Cu, 0.10% Zn, 6.00% Al,
3.11% Fe; Composite sample of graphite lenses: 10.70% C.

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Mn-graphite vein in muscovite schist. 1.5
to 5.0 M wide. Ave: 2.5 M. Outcrops traceable for 600 M along
strike. Vein follows schistosity: N 10 E to N 15 W, 63-72 W.
Mineralization consists of pyrolusite, psilomelane and minor
braunite associated with finely disseminated graphite. Mn oxides
form a thin film on crystals of quartz, ferromagnesian minerals
and garnets. Lenses of massive graphite up to 1 M wide occur along
hanging-wall of vein, associated with a thin (2 CM) bed of
ferruginous sandstone.

HOST ROCK AGE.....TRI?

HOST ROCK TYPE.....muscovite schist with intercalated
quartzite, recrystallized limestone, ferruginous sandstone and
amphibolite breccia

IGNEOUS ROCK AGE.....LJUR?

IGNEOUS ROCK TYPE.....hornblende granite

GANGUE MINERALS.....quartz, amphibole, garnet

REFERENCE....Mapes-Vasquez, 1956.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	90.000 MT	1956	16.6% MN, 60% SiO ₂

RESERVES COMMENTS.....Outcrop strike length: 600 M; Ave.
width of vein: 2.5 M; Prob. minimum depth: 20 M; Density of ore +
quartz gangue: 3 g/cc.

SOURCE OF RESERVES INFORMATION.....Mapes, 1956.

MRDS RECORD NUMBER....MX00502

MAP NUMBER.....502

SITE NAME.....La Grulla

DISTRICT/AREA...../Ensenada

STATE.....NBAJA

LATITUDE.....31-33-30N LONGITUDE.....116-20-40W

COMMODITIES.....FE

MAJOR.....FE

ORE MATERIALS.....magnetite

DEPOSIT MODEL.....Volcanic-Hosted Magnetite

USGS MODEL NUMBER.....25i

DEPOSIT SIZE.....SMALL

REFERENCES

Cox and Singer, 1986.

Gomez R., 1961.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	486.00 MT	1961	61.3% FE, 0.10% S, 0.17% P
ORE FE	216.00 MT	1961	SEE ABOVE
ORE FE	378.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
Probable Reserves. Item 3: Possible Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00503

MAP NUMBER.....503

SITE NAME.....Tepustete

DISTRICT/AREA...../Ensenada

STATE.....NBAJA

LATITUDE.....31-17-50N LONGITUDE.....116-23-50W

COMMODITIES.....FE

MAIN....FE

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCE....Gomez R., 1961.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	354.00 MT	1961	65.2% FE, 0.38% S, 0.01% P
ORE FE	202.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
 Probable Reserves.
 SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00504

MAP NUMBER.....504
 SITE NAME.....Guadalupe y Solis
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....31-18-40N LONGITUDE.....116-16-20W
 COMMODITIES.....FE
 MAIN....FE
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Gomez R., 1961.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	1564.00 MT	1961	61.9% FE, 1.08% S, 0.17% P
ORE FE	35.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
 Probable Reserves.
 SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00505

MAP NUMBER.....505
 SITE NAME.....El Salto
 SYNONYM NAME.....Veta Grande
 DISTRICT/AREA...../San Fernando
 STATE.....NBAJA
 LATITUDE.....29-46-50N LONGITUDE.....115-21- W
 COMMODITIES.....FE
 MAIN....FE
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Gomez R., 1961

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	477.00 MT	1961	65.2% FE, 0.17% S, 0.04% P
ORE FE	818.00 MT	1961	SEE ABOVE
ORE FE	99.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
 Probable Reserves. Item 3: Possible Reserves.
 SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00506

MAP NUMBER.....506
 SITE NAME.....La Cochalosa
 SYNONYM NAME.....Manila Hill
 DISTRICT/AREA...../San Fernando
 STATE.....NBAJA
 LATITUDE.....29-53-20N LONGITUDE.....115-16-40W
 COMMODITIES.....FE
 MAIN....FE
 DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCE....Gomez R., 1961.

RESERVES

ITEM	TONNAGE ($\times 10^3$)	YEAR	GRADE
ORE FE	923.00 MT	1961	65.9% FE, 0.10% S, 0.04% P
ORE FE	249.00 MT	1961	SEE ABOVE
ORE FE	216.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:

Probable Reserves. Item 3: Possible Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00507

MAP NUMBER.....507

SITE NAME.....Cerro Blanco

DISTRICT/AREA...../San Fernando

STATE.....NBAJA

LATITUDE.....30-02-30N LONGITUDE.....115-10-40W

COMMODITIES.....FE

MAIN....FE

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCE....Gomez, 1961.

RESERVES

ITEM	TONNAGE ($\times 10^3$)	YEAR	GRADE
ORE FE	1482.00 MT	1961	64.9% FE, 0.16% S, 0.03% P
ORE FE	194.00 MT	1961	SEE ABOVE
ORE FE	311.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:

Probable Reserves. Item 3: Possible Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00508

MAP NUMBER.....508

SITE NAME.....Sauzalito

DISTRICT/AREA...../San Fernando

STATE.....NBAJA

LATITUDE.....30-16-10N LONGITUDE.....115-20-40W

COMMODITIES.....FE

MAIN....FE

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCE....Gomez, 1961.

RESERVES

ITEM	TONNAGE ($\times 10^3$)	YEAR	GRADE
ORE FE	637.00 MT	1961	60.7% FE, 0.08% S, 0.17% P
ORE FE	154.00 MT	1961	SEE ABOVE
ORE FE	16.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:

Probable Reserves. Item 3: Possible Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00509

MAP NUMBER.....509

SITE NAME.....Santa Catarina

DISTRICT/AREA...../San Fernando
 STATE.....NBAJA
 LATITUDE.....29-38-50N LONGITUDE.....114-58-50W
 COMMODITIES.....FE
 MAIN....FE
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Gomez, 1961.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	800.00 MT	1961	60.6% FE, 0.89% S, 0.07% P
ORE FE	566.00 MT	1961	SEE ABOVE
ORE FE	508.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
 Probable Reserves. Item 3: Possible Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00510

MAP NUMBER.....510
 SITE NAME.....El Taraicito
 DISTRICT/AREA...../Rosario
 STATE.....NBAJA
 LATITUDE.....30-24-50N LONGITUDE.....115-37-50W
 COMMODITIES.....FE
 MAIN....FE
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Gomez R., 1961.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	607.00 MT	1961	55.8% FE, 0.90% S, 0.06% P
ORE FE	473.00 MT	1961	SEE ABOVE
ORE FE	219.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
 Probable Reserves. Item 3: Possible Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00511

MAP NUMBER.....511
 SITE NAME.....Campo Rodriguez
 DISTRICT/AREA...../Rosario
 STATE.....NBAJA
 LATITUDE.....30-25-40N LONGITUDE.....115-12-00W
 COMMODITIES.....FE
 MAIN....FE
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Gomez R., 1961.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	454.00 MT	1961	64.7% FE, 0.14% S, 0.07% P
ORE FE	80.00 MT	1961	SEE ABOVE
ORE FE	228.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
 Probable Reserves. Item 3: Possible Reserves.
 SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00512

MAP NUMBER.....512
 SITE NAME.....Canada del Gringo
 DISTRICT/AREA...../Rosario
 STATE.....NBAJA
 LATITUDE.....30-33-00N LONGITUDE.....115-19-00W
 COMMODITIES.....FE
 MAIN....FE
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Gomez R., 1961.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	212.00 MT	1961	63.3% FE, 0.16% S, 0.04% P
ORE FE	55.000 MT	1961	SEE ABOVE
ORE FE	63.000 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
 Probable Reserves. Item 3: Possible Reserves.
 SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00513

MAP NUMBER.....513
 SITE NAME.....Palomas
 DISTRICT/AREA...../San Fernando
 STATE.....NBAJA
 LATITUDE.....29-09-40N LONGITUDE.....114-35-00W
 COMMODITIES.....FE
 MAJOR....FE
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Gomez R., 1961.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	488.00 MT	1961	45.2% FE, 0.00% S, 0.07% P
ORE FE	236.00 MT	1961	SEE ABOVE
ORE FE	162.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
 Probable Reserves. Item 3: Possible Reserves.
 SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00514

MAP NUMBER.....514
 SITE NAME.....San Isidro
 DISTRICT/AREA...../Ensenada
 STATE.....NBAJA
 LATITUDE.....31-10-00N LONGITUDE.....116-16-30W
 COMMODITIES.....FE
 MAIN....FE
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL

REFERENCE....Gomez R., 1961.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	150.00 MT	1961	NO DATA
ORE FE	150.00 MT	1961	NO DATA
ORE FE	500.00 MT	1961	NO DATA

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:

Probable Reserves. Item 3: Possible Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00515

MAP NUMBER.....515

SITE NAME.....Rosarito

DISTRICT/AREA...../Ensenada

STATE.....NBAJA

LATITUDE.....30-33-10N LONGITUDE.....115-09-40W

COMMODITIES.....FE

MAIN....FE

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCES

Gomez R., 1961.

Gonzalez R., 1956.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	100.00 MT	1961	NO DATA
ORE FE	100.00 MT	1961	NO DATA
ORE FE	500.00 MT	1961	NO DATA

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:

Probable Reserves. Item 3: Possible Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX00516

MAP NUMBER.....516

SITE NAME.....Barita de Sonora

SYNONYM NAME.....Barison

DISTRICT/AREA.....Villa Pesqueira

STATE.....SONORA

LATITUDE.....28-55- N LONGITUDE.....110-01- W

COMMODITIES.....BA

MAJOR....BA

ORE MATERIALS.....barite

GENERAL ANALYTICAL DATA.....Ave: 3.36-4.30 g/cc.

DEPOSIT MODEL.....Bedded Barite

USGS MODEL NUMBER.....31b

DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....Channelized barite turbidites of inner to middle fan facies. Mainly Pennsylvanian turbidites at least partly composed of reworked Devonian barite turbidites. Some conformable Devonian barite horizons, 0.05-15 meters thick, in Ord-Miss sedimentary sequence. Barite occurs in massive layers, "alternating-type" ore consisting of barite interlayered with shale and chert horizons, and nodules. (R.J. Madrid, writ. comm., Feb., 1987)

HOST ROCK AGE.....DEV PENN
 HOST ROCK TYPE.....shales, mudstones, chert and barite
 REFERENCES
 Damon, Clark, Shafiqullah, Roldan Q., and Islas L., 1981.
 Perez Segura, 1985.

ANNUAL PRODUCTION

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE BA	.500 TPD	1985	DENSITY: 4.2%

PRODUCTION COMMENTS.....Deposit supplies barite for all of Mexico's petroleum drilling.
 SOURCE OF PRODUCTION INFORMATION.....Perez Segura, 1985.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE BA	3007.884 MT	1981	AVE: 3.36-4.3 G/CC
ORE BA	875.500 MT	1981	
ORE BA	500.680 MT	1981	

RESERVES COMMENTS.....Bulk ore: Item 1> Proven, Item 2> Probable, Item 3> Possible.
 SOURCE OF RESERVES INFORMATION.....Damon, Clark, et.al., 1981.

RESERVES (BY GRADE)

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE BA	533.522 MT	1981	AVE: 4.2856 G/CC
ORE BA	1259.598 MT	1981	AVE: 3.91 G/CC
ORE BA	1057.517 MT	1981	AVE: 3.76 G/CC
ORE BA	146.967 MT	1981	AVE: 3.36 G/CC

RESERVES COMMENTS.....Split out by ore type: Item 1> massive ore, Item 2> massive ore (lower grade), Item 3> "alternating-type", Item 4> nodules.
 SOURCE OF RESERVES INFORMATION.....Damon, Clark, et.al., 1981.

MRDS RECORD NUMBER....MX00517

MAP NUMBER.....517
 SITE NAME.....Abra Negra
 DISTRICT/AREA.....Cananea/Magdalena
 STATE.....SONORA
 LATITUDE.....30-39-30N LONGITUDE.....111-02-00W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....rhyolite
 REFERENCES
 Ayub M., 1960.
 Cox and Singer, 1986.

CUMULATIVE PRODUCTION

ITEM	TONNAGE(x10 ³)	YEARS	GRADE
ORE MN	1.600 TONS	-1960	20% MN

PRODUCTION COMMENTS.....Total pre-1960 production.
 SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE MN	2.430 TONS	1960	16% MN

ORE MN 3.215 TONS 1960 8% MN
 ORE MN 5.672 TONS 1960 8% MN
 RESERVES COMMENTS.....Item 1: Positive ore. Item 2:
 Probable ore. Item 3: Possible ore.
 SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00518
 MAP NUMBER.....518
 SITE NAME.....La Noche
 DISTRICT/AREA.....Magdalena/Estacion Llanos
 STATE.....SONORA
 LATITUDE.....30-28-00N LONGITUDE.....110-55-00W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Two Mn veins. Ave. widths: 0.30 and 0.35
 M. Lengths: 85-95 M. Estimated total depth: 30 M.
 HOST ROCK TYPE.....rhyolite
 REFERENCE....Ayub M., 1960.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.100 TONS	-1960	42% MN

 PRODUCTION COMMENTS.....Total pre-1960 production.
 SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	.637 TONS	1960	21% MN
ORE MN	1.532 TONS	1960	19% MN
ORE MN	2.870 TONS	1960	18% MN

 RESERVES COMMENTS.....Item 1: Positive ore. Item 2:
 Probable ore. Item 3: Possible ore.
 SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00519

MAP NUMBER.....519
 SITE NAME.....La Mesa
 DISTRICT/AREA.....Magdalena/Estacion Llanos
 STATE.....SONORA
 LATITUDE.....30-27-10N LONGITUDE.....110-54-45W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....Tuff
 REFERENCE....Ayub M., 1960.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.100 TONS	-1960	42% MN

 PRODUCTION COMMENTS.....Total pre-1960 production.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	3.068 TONS	1960	22% MN

SOURCE OF RESOURCES INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	.380 TONS	1960	22% MN
ORE MN	.960 TONS	1960	20% MN
ORE MN	1.728 TONS	1960	20% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00520

MAP NUMBER.....520

SITE NAME.....El Dia

DISTRICT/AREA.....Magdalena/Estacion Llanos

STATE.....SONORA

LATITUDE.....30-26-30N LONGITUDE.....110-54-15W

COMMODITIES.....MN

MAJOR.....MN

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL

HOST ROCK TYPE.....tuff

REFERENCE....Ayub M., 1960.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.500 TONS	-1960	42% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	.702 TONS	1960	20% MN
ORE MN	.990 TONS	1960	17% MN
ORE MN	2.118 TONS	1960	15% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00521

MAP NUMBER.....521

SITE NAME.....La Virgen Morena

DISTRICT/AREA.....Magdalena/Estacion Llanos

STATE.....SONORA

LATITUDE.....30-26-25N LONGITUDE.....110-53-30W

COMMODITIES.....MN

MAJOR.....MN

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL

HOST ROCK TYPE.....rhyolite

REFERENCE....Ayub M., 1960.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.500 TONS	-1960	42% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	1.697 TONS	1960	37% MN
ORE MN	3.474 TONS	1960	35% MN
ORE MN	5.627 TONS	1960	35% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00522

MAP NUMBER.....522

SITE NAME.....La Negrita Num. 2

DISTRICT/AREA.....Magdalena/Estacion Llanos

STATE.....SONORA

LATITUDE.....30-26-20N LONGITUDE.....110-53-15W

COMMODITIES.....MN

MAJOR.....MN

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Several Mn veins, ave. widths: 0.40-0.90

M. Lengths range from 50-110 M. Estimated total depths: 14-40 M.

HOST ROCK TYPE.....rhyolite, tuff

REFERENCE....Ayub M., 1960.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.230 TONS	-1960	42% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	2.506 TONS	1960	35% MN
ORE MN	4.943 TONS	1960	33% MN
ORE MN	7.608 TONS	1960	29% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00523

MAP NUMBER.....523

SITE NAME.....La Negrita Num. 1

DISTRICT/AREA.....Magdalena/Estacion Llanos

STATE.....SONORA

LATITUDE.....30-26-10N LONGITUDE.....110-53-20W

COMMODITIES.....MN

MAJOR.....MN

PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Mn
USGS MODEL NUMBER.....25g
DEPOSIT SIZE.....SMALL
HOST ROCK TYPE.....rhyolite
REFERENCE....Ayub M., 1960.

CUMULATIVE PRODUCTION

ITEM	TONNAGE ($\times 10^3$)	YEARS	GRADE
ORE MN	.350 TONS	-1960	42% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE ($\times 10^3$)	YEAR	GRADE
ORE MN	.380 TONS	1960	28% MN
ORE MN	1.281 TONS	1960	26% MN
ORE MN	2.570 TONS	1960	23% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00524

MAP NUMBER.....524
SITE NAME.....El Salto
DISTRICT/AREA.....Magdalena/Estacion Llanos
STATE.....SONORA
LATITUDE.....30-26-15N LONGITUDE.....110-53-10W
COMMODITIES.....MN
MAJOR.....MN

PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Mn
USGS MODEL NUMBER.....25g
DEPOSIT SIZE.....SMALL
HOST ROCK TYPE.....rhyolite
REFERENCE....Ayub M., 1960.

CUMULATIVE PRODUCTION

ITEM	TONNAGE ($\times 10^3$)	YEARS	GRADE
ORE MN	.300 TONS	-1960	41% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE ($\times 10^3$)	YEAR	GRADE
ORE MN	.553 TONS	1960	29% MN
ORE MN	1.205 TONS	1960	27% MN
ORE MN	1.689 TONS	1960	24% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00525

MAP NUMBER.....525
SITE NAME.....Nacozari
SYNONYM NAME.....Gallito de Manganeso, Cerro La Esperanza
DISTRICT/AREA.....Nacozari
STATE.....SONORA

LATITUDE.....30-24-59N LONGITUDE.....109-38-55W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Three to four Mn veins. Ave. widths: 0.30-
 0.70 M. Length: 35-177 M. Estimated total depths: 10-23 M.
 HOST ROCK TYPE.....rhyolite
 REFERENCES

Ayub M., 1960.
 Cox and Singer, 1986.
 Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEARS</u>	<u>GRADE</u>
ORE MN	.760 TONS	-1960	40% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

Production rate (1960): 3 TPD of material grading 40% Mn.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
ORE MN	3.642 TONS	1960	34% MN
ORE MN	3.247 TONS	1960	33% MN
ORE MN	3.216 TONS	1960	29% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00526

MAP NUMBER.....526
 SITE NAME.....La Leona
 DISTRICT/AREA.....Nacozari
 STATE.....SONORA
 LATITUDE.....29-58-25N LONGITUDE.....109-51-05W
 COMMODITIES.....MN
 MAJOR.....MN

PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....rhyolite

REFERENCES

Ayub M., 1960.
 Cox and Singer, 1986.

CUMULATIVE PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEARS</u>	<u>GRADE</u>
ORE MN	.220 TONS	-1960	36% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
ORE MN	1.130 TONS	1960	26% MN

ORE MN 1.800 TONS 1960 24% MN
 ORE MN 1.300 TONS 1960 20% MN
 RESERVES COMMENTS.....Item 1: Positive ore. Item 2:
 Probable ore. Item 3: Possible ore.
 SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

 MRDS RECORD NUMBER....MX00527
 MAP NUMBER.....527
 SITE NAME.....La Montosa
 SYNONYM NAME.....El Mirador, San Francisco No. 1, San Francisco No.
 2, San Jose, San Alejandro
 DISTRICT/AREA.....Moctezuma
 STATE.....SONORA
 LATITUDE.....29-35-25N LONGITUDE.....109-49-35W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Five subparallel Mn veins, traceable for
 up to 4 KM along strike. Ave. widths: 0.30-1.30 M. Lengths: 50-390
 M. Estimated total depths: 15-65m.
 HOST ROCK TYPE.....rhyolite
 REFERENCE....Ayub M., 1960.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	7.910 TONS	-1960	40% MN

 PRODUCTION COMMENTS.....Total pre-1960 production.
 Production rate (1960): 10 TPD of material grading 40% Mn.
 SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	24.529 TONS	1960	32% MN
ORE MN	42.636 TONS	1960	29% MN
ORE MN	60.477 TONS	1960	25% MN

 RESERVES COMMENTS.....Item 1: Positive ore. Item 2:
 Probable ore. Item 3: Possible ore.
 SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

 MRDS RECORD NUMBER....MX00528
 MAP NUMBER.....528
 SITE NAME.....Oviachic
 SYNONYM NAME.....Tres Cerritos
 DISTRICT/AREA...../Cuidad Obregon
 STATE.....SONORA
 LATITUDE.....28-03-00N LONGITUDE.....109-15-50W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Three Mn veins. Ave. widths: 0.5-0.7 M.
Lengths: 165-292 M. Estimated total depth: 18-27 M.
HOST ROCK TYPE.....rhyolite

REFERENCES

Ayub M., 1960.

Cox and Singer, 1986.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	9.450 TONS	-1960	38% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

Production rate (1960): 4 TPD of material grading 40% Mn.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	7.620 TONS	1960	38% MN
ORE MN	10.242 TONS	1960	36% MN
ORE MN	13.219 TONS	1960	36% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00529

MAP NUMBER.....529

SITE NAME.....Saenz Properties

SYNONYM NAME.....Claims: Santa Eduvigis, Noche Buena, Guadalupe

DISTRICT/AREA...../Cuidad Obregon

STATE.....SONORA

LATITUDE.....28-01-35N LONGITUDE.....109-27-20W

COMMODITIES.....MN

MAJOR.....MN

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Scattered outcrops of Mn veins with
lengths of 34-70 M. Ave. widths: 1.4-2.5 M. Estimated total depth:
11-25 M.

HOST ROCK TYPE.....rhyolite

REFERENCE....Ayub M., 1960.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.430 TONS	-1960	17% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	2.286 TONS	1960	18% MN
ORE MN	3.365 TONS	1960	16% MN
ORE MN	4.169 TONS	1960	12% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00530

MAP NUMBER.....530
 SITE NAME.....Los Huesos
 DISTRICT/AREA...../San Bernardo
 STATE.....SONORA
 LATITUDE.....27-28-45N LONGITUDE.....109-02-30W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn(?)
 USGS MODEL NUMBER.....25g?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Two to three Mn veins. Ave. widths: 1.5-4.0 M. Lengths: 34-38 M. Estimated total depth: 15-20 M.
 HOST ROCK TYPE.....trachyte
 REFERENCE....Ayub M., 1960.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.005 TONS	-1960	42% MN

 PRODUCTION COMMENTS.....Total pre-1960 production.
 SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	1.778 TONS	1960	34% MN
ORE MN	2.520 TONS	1960	34% MN
ORE MN	4.479 TONS	1960	34% MN

 RESERVES COMMENTS.....Item 1: Positive ore. Item 2: Probable ore. Item 3: Possible ore.
 SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00531

MAP NUMBER.....531
 SITE NAME.....Sanaco
 DISTRICT/AREA...../San Bernardo
 STATE.....SONORA
 LATITUDE.....27-29-15N LONGITUDE.....109-02-45W
 COMMODITIES.....MN
 MAJOR.....MN
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....tuff
 REFERENCE....Ayub M., 1960.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.003 TONS	-1960	42% MN

 SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	3.044 TONS	1960	43% MN
ORE MN	4.720 TONS	1960	43% MN
ORE MN	6.100 TONS	1960	43% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00532

MAP NUMBER.....532

SITE NAME.....El Refugio

DISTRICT/AREA...../San Bernardo

STATE.....SONORA

LATITUDE.....27-29-30N LONGITUDE.....109-03-30W

COMMODITIES.....MN

MAJOR.....MN

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Inactive, 1960.

DEPOSIT MODEL.....Epithermal Mn(?)

USGS MODEL NUMBER.....25g?

DEPOSIT SIZE.....SMALL

HOST ROCK TYPE.....tuff

REFERENCE....Ayub M., 1960.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.001 TONS	-1960	42% MN

PRODUCTION COMMENTS.....Total pre-1960 production.

SOURCE OF PRODUCTION INFORMATION.....Ayub, 1960.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	.025 TONS	1960	21% MN
ORE MN	.156 TONS	1960	19% MN
ORE MN	.390 TONS	1960	19% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:

Probable ore. Item 3: Possible ore.

SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00533

MAP NUMBER.....533

SITE NAME.....San Pedro

DISTRICT/AREA...../San Bernardo

STATE.....SONORA

LATITUDE.....27-28-30N LONGITUDE.....109-03-15W

COMMODITIES.....MN

MAIN...MNPEXPLORATION AND DEVELOPMENT COMMENTS.....Inactive, 1960.

DEPOSIT MODEL.....Epithermal Mn(?)

USGS MODEL NUMBER.....25g?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Two to three Mn veins, ave. widths: 0.35-0.40 M. Range from 46-60 M in length. Estimated total depth: 15 M.

HOST ROCK TYPE.....tuff

REFERENCE....Ayub M., 1960.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	.103 TONS	1960	33-34% MN
ORE MN	.564 TONS	1960	33-34% MN
ORE MN	1.207 TONS	1960	33-34% MN

RESERVES COMMENTS.....Item 1: Positive ore. Item 2:
Probable ore. Item 3: Possible ore.
SOURCE OF RESERVES INFORMATION.....Ayub, 1960.

MRDS RECORD NUMBER....MX00534

MAP NUMBER.....534
SITE NAME.....Cunara
STATE.....SONORA
LATITUDE.....31-08- N LONGITUDE.....111-24- W
COMMODITIES.....MN
MAIN....MN
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposit.
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00535

MAP NUMBER.....535
SITE NAME.....Edmondson
DISTRICT/AREA.....Cananea
STATE.....SONORA
LATITUDE.....30-59- N LONGITUDE.....110-15- W
COMMODITIES.....MN
MAIN....MN
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00536

MAP NUMBER.....536
SITE NAME.....San Antonio
SYNONYM NAME.....Victoria, Spirit 1, Spirit 2
STATE.....SONORA
LATITUDE.....30-46- N LONGITUDE.....110-42- W
COMMODITIES.....MN
MAJOR.....MN
ORE MATERIALS.....rhodochrosite(?), Mn oxides
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Mn ore found as gangue in silver, lead and
gold veins in old mining area. Veins range up to 60 M in length
and 1 M in thickness. Ave. thickness: 60 CM.
HOST ROCK TYPE.....argillites, tuffs
REFERENCE....Trask and Rodriguez, 1948.
CUMULATIVE PRODUCTION

ITEM	TONNAGE(x10 ³)	YEARS
ORE MN	.400 MT	-1943

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.
PRODUCTION COMMENTS.....Rhodochrosite ore sorted out of
old dumps and sold for chemical purposes.
SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00537

MAP NUMBER.....537
SITE NAME.....La Dura
STATE.....SONORA
LATITUDE.....28-20- N LONGITUDE.....109-24- W
COMMODITIES.....MN
MAIN....MN
DEPOSIT MODEL.....Epithermal Mn
USGS MODEL NUMBER.....25g
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure veins from 15 to 120 CM wide in
volcanic rocks.
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00538

MAP NUMBER.....538
SITE NAME.....Navidad Group
STATE.....SBAJA
LATITUDE.....27-21- N LONGITUDE.....112-22- W
COMMODITIES.....MN
MAIN....MN
DEPOSIT MODEL.....Volcanogenic Mn
USGS MODEL NUMBER.....24c
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Patches, veinlets and irregular masses of
Mn oxides occur in at least two horizons in tuff members of the
Boleo Fm. Most ore bodies less than 1 M thick, tend to wedge out
within 20 M. Locally, a fossiliferous tuffaceous limestone member
of the Boleo is impregnated with Mn oxides and contains molds and
casts of pelyceps and gastropods replaced by Mn oxides.
HOST ROCK AGE.....EPLIO
HOST ROCK TYPE.....tuffs, tuffaceous limestone
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00539

MAP NUMBER.....539
SITE NAME.....Palmas
STATE.....SBAJA
LATITUDE.....27-23- N LONGITUDE.....112-23- W
COMMODITIES.....MN
MAJOR....MN
PRODUCTION.....S
DEPOSIT MODEL.....Volcanogenic Mn
USGS MODEL NUMBER.....24c
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Pockets, veinlets, or irregular masses of
Mn oxides at scattered localities in two horizons in tuffs and
tuffaceous conglomerates of the Boleo Fm. Most ore bodies less
than 1 M thick. At one location, a 1-meter layer of Mn ore extends
several meters into underlying gypsum bed.
HOST ROCK AGE.....EPLIO
HOST ROCK TYPE.....tuff, tuffaceous conglomerate
GANGUE MINERALS.....gypsum
REFERENCE....Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.120 MT	-1943	45%(?) MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00540

MAP NUMBER.....540
SITE NAME.....Eureka claim
SYNONYM NAME.....Isla San Marcos
STATE.....SBAJA
LATITUDE.....27-12- N LONGITUDE.....112-05- W
COMMODITIES.....MN
MAJOR.....MN
ORE MATERIALS.....pyrolusite, psilomelane
GENERAL ANALYTICAL DATA.....Best ore: 25-35% Mn
PRODUCTION.....S
DEPOSIT MODEL.....Sedimentary Mn
USGS MODEL NUMBER.....34b
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Soft, crystalline pyrolusite and hard, botryoidal psilomelane in veinlets, nodules and irregular masses in uppermost 0.5 to 1.0 meter of fossiliferous limestone bed. Locally, molds and casts of fossils have been replaced by Mn oxides. Occurrences are scattered over area 400 M long and 25-100 M wide. Individual concentrations of ore rarely exceed 10 M in length or 1 M in width.
HOST ROCK AGE.....LPLIO
HOST ROCK TYPE.....fossiliferous sandstone
REFERENCE....Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.080 MT	-1943	25% MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00541

MAP NUMBER.....541
SITE NAME.....Trinidad
STATE.....SBAJA
LATITUDE.....26-49- N LONGITUDE.....111-46- W
COMMODITIES.....MN
MAIN....MN
DEPOSIT MODEL.....Sedimentary Mn
USGS MODEL NUMBER.....34b
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Veins and nodules of Mn oxides and iron oxides sparsely distributed in sandstones and conglomerates.
HOST ROCK TYPE.....sandstones, conglomerates
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00542

MAP NUMBER.....542
SITE NAME.....Santa Rosa
STATE.....SBAJA
LATITUDE.....26-45- N LONGITUDE.....111-40- W

COMMODITIES.....MN

MAIN....MN

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Joints lined with Mn oxides.

REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00543

MAP NUMBER.....543

SITE NAME.....Santa Teresa

STATE.....SBAJA

LATITUDE.....26-41- N LONGITUDE.....111-35- W

COMMODITIES.....MN

MAIN....MN

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Veinlets from 1 mm to 15 CM thick in
basalt.

HOST ROCK TYPE.....basalt

IGNEOUS ROCK TYPE.....basalt

REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00544

MAP NUMBER.....544

SITE NAME.....San Juanico

STATE.....SBAJA

LATITUDE.....26-27- N LONGITUDE.....111-32- W

COMMODITIES.....MN

MAIN....MN

ORE MATERIALS.....psilomelane

DEPOSIT MODEL.....Sedimentary Mn

USGS MODEL NUMBER.....34b

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Scattered veinlets, pockets and irregular
masses of botryoidal psilomelane associated with calcite veinlets
occur in an area about 100 M long and 3-6 M wide. Veinlets range
from 1 mm to 10-15 CM in width and generally not traceable for
more than a few meters.

HOST ROCK TYPE.....fossiliferous sandy limestone

GANGUE MINERALS.....calcite

REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00545

MAP NUMBER.....545

SITE NAME.....Punta Pulpito

STATE.....SBAJA

LATITUDE.....26-31- N LONGITUDE.....111-27- W

COMMODITIES.....MN

MAIN....MN

DEPOSIT MODEL.....Epithermal Mn(?)

USGS MODEL NUMBER.....25g?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Veinlets in volcanic rocks(?).

REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00546

MAP NUMBER.....546
SITE NAME.....Punta Mangles
STATE.....SBAJA
LATITUDE.....26-18- N LONGITUDE.....111-24- W
COMMODITIES.....MN
MAIN....MN
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Veinlets in volcanic rocks(?).
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00547

MAP NUMBER.....547
SITE NAME.....Isla Carmen (Mn)
STATE.....SBAJA
LATITUDE.....26-03- N LONGITUDE.....111-06- W
COMMODITIES.....MN
MAIN....MN
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Veinlets in volcanic rocks(?).
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00548

MAP NUMBER.....548
SITE NAME.....Isla Santa Margarita (Mn)
STATE.....SBAJA
LATITUDE.....24-20- N LONGITUDE.....111-45- W
COMMODITIES.....MN
MAIN....MN
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Veinlets in volcanic rocks(?).
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00549

MAP NUMBER.....549
SITE NAME.....San Antonio (Mn)
STATE.....SBAJA
LATITUDE.....23-49- N LONGITUDE.....110-02- W
COMMODITIES.....MN
MAIN....MN
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Mn occurs as gangue in silver-gold-lead
ores.
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00550

DEPOSIT SIZE.....SMALL
 REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX00555

MAP NUMBER.....555
 SITE NAME.....El Perdido
 DISTRICT/AREA...../Hermosillo
 STATE.....SONORA
 LATITUDE.....28-57-15N LONGITUDE.....110-34-30W
 COMMODITIES.....FE
 MAJOR.....FE
 ORE MATERIALS.....magnetite, hematite
 GENERAL ANALYTICAL DATA.....63.00% total Fe, 3.20% silica, 0.022%
 total S, 1.30% CaO, 0.090% P, 0.710% Mn; Cabrera, et.al., 1983,
 table IV.
 DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....PERM
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....LCRET-ETERT
 IGNEOUS ROCK TYPE.....granite
 GANGUE MINERALS.....garnet, chlorite, calcite, quartz,
 actinolite, tremolite, sphene, epidote
 REFERENCE....Cabrera F., Vega G. and Perez S., 1983.
 RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE FE	400.000 MT	1983	63% FE

RESERVES COMMENTS.....Inferred reserves.
 SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00556

MAP NUMBER.....556
 SITE NAME.....Elisa
 DISTRICT/AREA.....Cananea
 STATE.....SONORA
 LATITUDE.....30-59-30N LONGITUDE.....110-21-15W
 COMMODITIES.....CU ZN PB
 MAJOR.....CU MINOR.....ZN POTEN.....PB
 ORE MATERIALS.....chalcopryrite, pyrite, chalcocite,
 malachite, azurite; sphalerite, galena, tetrahedrite
 PRODUCTION.....S
 DEPOSIT MODEL.....Porphyry Cu, Skarn-Related
 USGS MODEL NUMBER.....18a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Dominantly chalcopryrite and pyrite
 associated with garnet-diopside-quartz assemblage with minor
 amounts of sphalerite, galena and tetrahedrite. Secondary
 enrichment to chalcocite-malachite-azurite near the surface.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....quartz monzonite porphyry; intruded into
 dacitic tuff

GANGUE MINERALS.....garnet, diopside, quartz, epidote, calcite
SIGNIFICANT ALTERATION.....sericitic

REFERENCES

Einaudi, 1982.
Emmons, 1910.
Lee, 1912.
Meinert, 1982.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
CU	100000 LB	-1979

SOURCE OF PRODUCTION INFORMATION.....Meinert, 1982.

MRDS RECORD NUMBER....MX00557

MAP NUMBER.....557

SITE NAME.....Henrietta

DISTRICT/AREA.....Cananea

STATE.....SONORA

LATITUDE.....31-00-15N LONGITUDE.....110-22-00W

COMMODITIES.....CU AG AU ZN

MAJOR.....CU AG MINOR.....AU POTEN.....ZN

ORE MATERIALS.....chalcopryrite, bornite, pyrite, chalcocite,
native Cu, tetrahedrite, sphalerite

GENERAL ANALYTICAL DATA.....High-grade lens: 6% Cu, 8-10 oz/ton Ag,
minor Au.

PRODUCTION.....S

DEPOSIT MODEL.....Porphyry Cu

USGS MODEL NUMBER.....17

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Ore bodies up to 150 FT long and 10 FT
thick in breccia zones along igneous contact. Ore consists of
chalcopryrite, bornite, pyrite, sphalerite and minor tetrahedrite
in siliceous gangue. Secondary enrichment to chalcocite + native
Cu.

HOST ROCK AGE.....TRI

HOST ROCK TYPE....."diorite porphyry"

IGNEOUS ROCK AGE.....TERT

IGNEOUS ROCK TYPE.....quartz monzonite porphyry

REFERENCES

Einaudi, 1982.
Emmons, 1910.
Meinert, 1982.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
CU	50000 LB	-1979

SOURCE OF PRODUCTION INFORMATION.....Meinert, 1982.

MRDS RECORD NUMBER....MX00558

MAP NUMBER.....558

SITE NAME.....Cananea-Duluth

DISTRICT/AREA.....Cananea

STATE.....SONORA

LATITUDE.....30-57-45N LONGITUDE.....110-18-00W

COMMODITIES.....CU AG ZN PB

MAJOR.....CU AG MINOR..... POTEN.....ZN PB

ORE MATERIALS.....chalcopryite, pyrite, bornite, chalcocite,
 covellite; sphalerite, galena, tetrahedrite
 PRODUCTION.....S
 DEPOSIT MODEL.....Porphyry Cu
 USGS MODEL NUMBER.....17
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Elliptical breccia pipe, 330 M x 65 M in
 plan, cutting slightly inclined bedded tuffs and associated
 volcanics. Periphery of pipe consists of chalcopryite-pyrite-
 bornite with minor tetrahedrite, sphalerite and galena in quartz-
 carbonate-adularia gangue cementing breccia fragments impregnated
 with pyrite. Secondary chalcocite found coating primary sulfides
 in zones of supergene enrichment.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....andesitic flows, tuffs and agglomerates
 GANGUE MINERALS.....quartz, carbonates, adularia, alunite
 REFERENCES

Bushnell, 1980.
 Einaudi, 1982.
 Emmons, 1910.
 Meinert, 1982.
 Perry, 1961.
 Ruben Velasco, 1956.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
CU	75000 LB	-1979

SOURCE OF PRODUCTION INFORMATION.....Meinert, 1982.

MRDS RECORD NUMBER....MX00559

MAP NUMBER.....559
 SITE NAME.....Democrata
 SYNONYM NAME.....West Cobre Grande, Kirk
 DISTRICT/AREA.....Cananea
 STATE.....SONORA
 LATITUDE.....30-58-45N LONGITUDE.....110-19-30W
 COMMODITIES.....CU ZN
 MAJOR.....CU MINOR.....ZN
 ORE MATERIALS.....bornite, chalcocite, chalcopryite,
 sphalerite
 PRODUCTION.....S
 DEPOSIT MODEL.....Porphyry Cu, Skarn-Related
 USGS MODEL NUMBER.....18a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Bornite- and sphalerite-bearing skarn that
 has been brecciated and cemented by quartz-pyrite-chalcopryite
 assemblage. Abundant secondary chalcocite. Chalcocite content
 decreases with depth, sphalerite content increases.
 HOST ROCK AGE.....PAL?
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....andesitic volcanics
 GANGUE MINERALS.....quartz, garnet
 REFERENCES
 Einaudi, 1982.

Emmons, 1910.
Meinert, 1982.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
CU	125000 LB	-1979

SOURCE OF PRODUCTION INFORMATION.....Meinert, 1982.

MRDS RECORD NUMBER....MX00560

MAP NUMBER.....560
SITE NAME.....Cobre Grande
DISTRICT/AREA.....Cananea
STATE.....SONORA
LATITUDE.....30-58-30N LONGITUDE.....110-18-45W
COMMODITIES.....CU
MAJOR.....CU
PRODUCTION.....S
DEPOSIT MODEL.....Porphyry Cu
USGS MODEL NUMBER.....17
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Similar to America-Bonanza. Oxidized ore
within 100 FT of the surface was reportedly of extremely high
grade.
HOST ROCK AGE.....CRET
HOST ROCK TYPE.....andesitic volcanics
REFERENCES
Einaudi, 1982.
Emmons, 1910.
Meinert, 1982.

MRDS RECORD NUMBER....MX00561

MAP NUMBER.....561
SITE NAME.....America-Bonanza
DISTRICT/AREA.....Cananea
STATE.....SONORA
LATITUDE.....30-58-00N LONGITUDE.....110-18-30W
COMMODITIES.....CU
MAIN.....CU
ORE MATERIALS.....chalcocite, pyrite, chalcopyrite(?)
GENERAL ANALYTICAL DATA.....Max: 10% Cu.
DEPOSIT MODEL.....Porphyry Cu
USGS MODEL NUMBER.....17
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Pyrite-rich ore coated with chalcocite and
cross-cut by veinlets of chalcocite. Top 30-40 FT barren or only
slightly oxidized. Grade decreases with depth. Already low-grade
at 200 FT below surface.
HOST ROCK AGE.....CRET
HOST ROCK TYPE.....andesitic volcanics
REFERENCES
Einaudi, 1982.
Emmons, 1910.
Meinert, 1982.

MRDS RECORD NUMBER....MX00562

MAP NUMBER.....562
 SITE NAME.....Sierra de Cobre
 SYNONYM NAME.....Campana
 DISTRICT/AREA.....Cananea/Capote Basin
 STATE.....SONORA
 LATITUDE.....30-59-00N LONGITUDE.....110-20-30W
 COMMODITIES.....ZN CU
 MAIN.....ZN CU
 ORE MATERIALS.....sphalerite, pyrite, chalcopryite(?)
 GENERAL ANALYTICAL DATA.....Zn:Cu ratio-3:1 in Cu ore, 17:1 in Zn ore.
 DEPOSIT MODEL.....Zn-Pb Skarn
 USGS MODEL NUMBER.....18c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Zn-rich skarn. More than 3 KM long, 20-600
 M wide as exposed at the surface.
 HOST ROCK AGE.....PAL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....PALEO-EO (K-AR, 53-58 M.Y.)
 IGNEOUS ROCK TYPE.....quartz monzonite porphyry
 GANGUE MINERALS.....garnet, pyroxene, idocrase
 REFERENCES
 Einaudi, 1982.
 Emmons, 1910.
 Meinert, 1979.
 Meinert, 1982.
 Perry, 1961.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
CU	60000 LB	-1979

SOURCE OF PRODUCTION INFORMATION.....Meinert, 1982.

MRDS RECORD NUMBER....MX00563

MAP NUMBER.....563
 SITE NAME.....Oversight
 SYNONYM NAME.....Capote No. 17
 DISTRICT/AREA.....Cananea/Capote Basin
 STATE.....SONORA
 LATITUDE.....30-58-30N LONGITUDE.....110-20-15W
 COMMODITIES.....CU
 MAJOR.....CU
 ORE MATERIALS.....chalcocite, native Cu
 PRODUCTION.....S
 DEPOSIT MODEL.....Porphyry Cu
 USGS MODEL NUMBER.....17
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Series of lenticular ore bodies in breccia
 pipe. 1000 FT long zone of secondary chalcocite and native Cu. Top
 of ore body at 200 FT depth.
 SIGNIFICANT ALTERATION.....sericitic, pyritic
 REFERENCES
 Einaudi, 1982.
 Emmons, 1910.
 Meinert, 1982.
 Perry, 1961.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
CU	100000 LB	-1979

SOURCE OF PRODUCTION INFORMATION.....Meinert, 1982.

MRDS RECORD NUMBER....MX00564

MAP NUMBER.....564

SITE NAME.....Veta Grande

SYNONYM NAME.....Veta Grande No. 5

DISTRICT/AREA.....Cananea/Capote Basin

STATE.....SONORA

LATITUDE.....30-58-30N LONGITUDE.....110-19-45W

COMMODITIES.....CU

MAJOR.....CU

ORE MATERIALS.....chalcocite, copper carbonates, cuprite,
native Cu

PRODUCTION.....S

DEPOSIT MODEL.....Porphyry Cu

USGS MODEL NUMBER.....17

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Carbonates + cuprite + native Cu in
silicified breccia. Secondary chalcocite in middle levels. Ore
found to 500 FT depth.

HOST ROCK TYPE.....quartz monzonite porphyry(?)

REFERENCES

Einaudi, 1982.

Emmons, 1910.

Meinert, 1982.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
CU	100000 LB	-1979

SOURCE OF PRODUCTION INFORMATION.....Meinert, 1982.

MRDS RECORD NUMBER....MX00565

MAP NUMBER.....565

SITE NAME.....Esperanza

SYNONYM NAME.....Esperanza No. 1

DISTRICT/AREA.....Cananea/Capote Basin

STATE.....SONORA

LATITUDE.....30-58-35N LONGITUDE.....110-20-00W

COMMODITIES.....CU

MAIN....CU

DEPOSIT MODEL.....Porphyry Cu

USGS MODEL NUMBER.....17

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Similar to Capote breccia pipe.

HOST ROCK AGE.....CAMB

HOST ROCK TYPE.....quartzite

IGNEOUS ROCK AGE.....TERT

IGNEOUS ROCK TYPE.....quartz monzonite porphyry(?)

REFERENCES

Einaudi, 1982.

Emmons, 1910.

Meinert, 1982.

MRDS RECORD NUMBER....MX00566

MAP NUMBER.....566
 SITE NAME.....La Colorada
 SYNONYM NAME.....Colorada pit
 DISTRICT/AREA.....Cananea
 STATE.....SONORA
 LATITUDE.....30-58-00N LONGITUDE.....110-19-30W
 COMMODITIES.....CU MO AG PB ZN
 MAJOR.....CU MO MINOR.....AG POTEN.....PB ZN
 ORE MATERIALS.....chalcopryrite, molybdenite, chalcocite,
 pyrite; tennantite, luzonite, covellite; sphalerite, galena
 PRODUCTION.....L
 EXPLORATION AND DEVELOPMENT COMMENTS.....Breccia pipe discovered:
 1926.
 DEPOSIT MODEL.....Porphyry Cu-Mo
 USGS MODEL NUMBER.....21a
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....High-grade breccia pipe and disseminated
 supergene Cu-ore associated with NW-trending series of quartz
 monzonite porphyry intrusives in Mesa Volcanics. High-grade Cu ore
 enclosed in pegmatitic quartz-phlogopite sheath within collapse
 breccia near the apex of a quartz porphyry plug. Massive
 molybdenite-chalcopryrite-chalcocite ore formed ring within quartz
 shell, with pyrite zoned peripherally and in overlying quartz
 veinlets. Low-grade quartz-chalcopryrite-molybdenite veinlets
 extended downwards at least 500 M below pipe. Late stage
 mineralization consisted of pyrite-alunite veins with luzonite-
 tennantite-covellite-sphalerite-galena assemblage formed within
 the massive sulfide ring concurrent with brecciation of the early
 sulfide ore. Top of pipe: 200 M below surface.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....andesite; intruded by Tert QMP
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....quartz monzonite porphyry
 GANGUE MINERALS.....quartz, plogopite, alunite
 SIGNIFICANT ALTERATION.....Pipe surrounded by 15-60 M halo of silicic
 and sericitic alteration.

REFERENCES

Einaudi, 1982.
 Meinert, 1982.
 Ruben Velasco, 1956.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	
CU	1100000 LB	-1979	LA COLORADA PIPE
MO	50000 LB	-1979	LA COLORADA PIPE
CU	550000 LB	-1979	COLORADA PIT

SOURCE OF PRODUCTION INFORMATION.....Meinert, 1982.

MRDS RECORD NUMBER....MX00567

MAP NUMBER.....567
 SITE NAME.....La Lezna
 DISTRICT/AREA...../Sonoita
 STATE.....SONORA

LATITUDE.....31-39-15N LONGITUDE.....112-12-30W
 COMMODITIES.....FE
 MAIN....FE
 ORE MATERIALS.....specular hematite, magnetite
 DEPOSIT MODEL.....Volcanic-Hosted Magnetite(?)
 USGS MODEL NUMBER.....25i?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Series of discontinuous outcrops of Fe ore
 over 200 M distance. Each outcrop less than 10 square meters in
 area.
 HOST ROCK AGE.....CRET(?)
 HOST ROCK TYPE.....aplitic microgranite
 GANGUE MINERALS.....K-spar, apatite
 REFERENCE....Cabrera F., Vega G. and Perez S., 1983.
 RESERVES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE FE	5.000 MT	1983	35% FE

 RESERVES COMMENTS.....Inferred reserves.
 SOURCE OF RESERVES INFORMATION.....Cabrera, et.al., 1983, table VI.

MRDS RECORD NUMBER....MX00568

MAP NUMBER.....568
 SITE NAME.....El Cobota
 DISTRICT/AREA...../Sonoita
 STATE.....SONORA
 LATITUDE.....31-35-45N LONGITUDE.....112-06-15W
 COMMODITIES.....FE AG CU
 MAIN....FE MINOR....AG CU
 ORE MATERIALS.....hematite; Ag- and Cu-oxides
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Two iron-bearing veins. 1> N 65 E, 60 NW,
 60 M long by 2 M wide. 2> N 80 E, 60 NW, 1.5-2.0 M of Fe ore with
 abundant silica. Ag and Cu oxides found in old workings. Numerous
 specularite-hematite veinlets in wall rocks.
 HOST ROCK AGE.....CRET(?)
 HOST ROCK TYPE.....granite
 GANGUE MINERALS.....jasperoidal silica
 REFERENCE....Cabrera F., Vega G. and Perez S., 1983.
 POTENTIAL RESOURCES

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE FE	30.000 MT	1983	LOW GRADE

 RESOURCES COMMENTS.....Speculative resources.
 SOURCE OF RESOURCES INFORMATION.....Cabrera, et.al., 1983.

MRDS RECORD NUMBER....MX00569

MAP NUMBER.....569
 SITE NAME.....La Sirena
 DISTRICT/AREA...../El Barril
 STATE.....NBAJA
 LATITUDE.....28-16-45N LONGITUDE.....112-53-00W
 COMMODITIES.....AU CU FE
 MAJOR.....AU MINOR.....CU POTEN.....FE

ORE MATERIALS.....gold; Cu carbonates and silicates,
 (chalcopyrite); magnetite, specularite, hematite, limonite,
 (pyrite)
 GENERAL ANALYTICAL DATA.....0.5-88.0 g/MT Au, 0.5-3.0% Cu.
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Active: 1900-1904, 1940-
 1945.
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Au and Cu associated with magnetite,
 specularite, hematite and remnant pyrite and chalcopyrite in
 limonite boxwork along quartz-tourmaline-zircon veins and zones of
 quartz-sericite alteration. Dimensions of orebody, including both
 veins and quartz-sericite zone: 270 M continuous outcrop length,
 0.2-1.5 M width (ave: 1.0 M), 40 M known depth.
 HOST ROCK AGE.....LJUR-ECRET
 HOST ROCK TYPE.....granodiorite
 GANGUE MINERALS.....quartz, tourmaline, zircon, sericite,
 chlorite, calcite
 SIGNIFICANT ALTERATION.....phyllic
 REFERENCE....Gonzalez G. and Amaya M., 1980.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU	1.500 MT	1980	15 G/MT AU
ORE AU	6.000 MT	1980	4 G/MT AU
ORE AU	14.639 MT	1980	3-6 G/MT AU
ORE AU	25.913 MT	1980	3-6 G/MT AU
ORE AU	1.995 MT	1980	8 G/MT AU

RESERVES COMMENTS.....1-2> Proven ore (level 40) 3>
 Probable ore. 4> Possible ore. 5> Ore dumps.

SOURCE OF RESERVES INFORMATION.....Gonzalez and Amaya, 1980.

MRDS RECORD NUMBER....MX00570

MAP NUMBER.....570
 SITE NAME.....La Florida
 DISTRICT/AREA...../El Barril
 STATE.....NBAJA
 LATITUDE.....28-18-00N LONGITUDE.....112-55-30W
 COMMODITIES.....AU
 MAJOR.....AU
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Active: 1940-1945.
 DEPOSIT MODEL.....Flat-Fault Au(?)
 USGS MODEL NUMBER.....37b?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Discontinuous vein along fault dipping 30
 SW. Similar to Mina La Sirena.
 HOST ROCK AGE.....LJUR-ECRET
 HOST ROCK TYPE.....granodiorite
 REFERENCE....Gonzalez G. and Amaya M., 1980.
 RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU	1.000 MT	1980	3-6 G/MT AU
ORE AU	.172 MT	1980	8 G/MT AU

RESERVES COMMENTS.....1> Possible (inferred) reserves. 2>
Ore dump.

SOURCE OF RESERVES INFORMATION.....Gonzalez and Amaya, 1980.

MRDS RECORD NUMBER....MX00571

MAP NUMBER.....571

SITE NAME.....El Corsario

DISTRICT/AREA...../El Barril

STATE.....NBAJA

LATITUDE.....28-21-00N LONGITUDE.....112-54-15W

COMMODITIES.....AU

MAJOR.....AU

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Active: 1940-1945.

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Discontinuous vein along fault dipping 30
SW. Similar to Mina La Sirena.

HOST ROCK AGE.....LJUR-ECRET

HOST ROCK TYPE.....granodiorite

REFERENCE....Gonzalez G.and Amaya M., 1980

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU	.500 MT	1980	3-6 G/MT AU
ORE AU	1.243 MT	1980	8 G/MT AU

RESERVES COMMENTS.....1> Possible (inferred) ore. 2> Ore
dump.

SOURCE OF RESERVES INFORMATION.....Gonzalez and Amaya, 1980.

MRDS RECORD NUMBER....MX00572

MAP NUMBER.....572

SITE NAME.....Unnamed occurrence

DISTRICT/AREA...../El Barril

STATE.....NBAJA

LATITUDE.....28-20-15N LONGITUDE.....112-53-00W

COMMODITIES.....GYP

MAIN....GYP

ORE MATERIALS.....gypsum

DEPOSIT MODEL.....Bedded Gypsum

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Gypsum deposit, 4-8 M thick, 1500 M by 200
M, contains bands of argillaceous material. Coarse-grained in
upper part of bed, fine-grained at base.

REFERENCE....Gonzalez G.and Amaya M., 1980.

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
GYP	4000.000 MT	1980	INDUSTRIAL

SOURCE OF RESOURCES INFORMATION.....Gonzalez and Amaya, 1980.

MRDS RECORD NUMBER....MX00573

MAP NUMBER.....573

SITE NAME.....Las Lamas

DISTRICT/AREA.....San Felipe de Jesus

STATE.....SONORA

LATITUDE.....29-52-38N LONGITUDE.....110-18-22W
 COMMODITIES.....ZN AG PB CU
 MAJOR.....ZN AG MINOR.....PB CU
 ORE MATERIALS.....sphalerite, (marmatite?), chalcopryrite,
 pyrite, galena, minor marcasite
 GENERAL ANALYTICAL DATA.....168.0 g/MT Ag, 12.4% Zn, 0.004% Pb;
 Roldan-Quintana, 1979, p. 113.
 PRODUCTION.....S
 DEPOSIT MODEL.....Zn-Pb Skarn
 USGS MODEL NUMBER.....18c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Pyroxene hornfels with sphalerite,
 chalcopryrite, pyrite, galena, minor marcasite and pyrrhotite,
 crosscut by magnetite-calcite veinlets. Tabular orebody 2-5 M
 wide.
 HOST ROCK AGE.....ECRET
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....EO
 IGNEOUS ROCK TYPE.....rhyolite porphyry
 GANGUE MINERALS.....magnetite, pyrrhotite, wollastinite,
 hedenbergite, calcite
 REFERENCE....Roldan-Quintana, 1979.

MRDS RECORD NUMBER....MX00574

MAP NUMBER.....574
 SITE NAME.....Amarillos
 SYNONYM NAME.....Paredones-Amarillos
 DISTRICT/AREA.....San Antonio
 STATE.....SBAJA
 LATITUDE.....23-39-57N LONGITUDE.....110-04-04W
 COMMODITIES.....AU
 MAJOR.....AU
 EXPLORATION AND DEVELOPMENT COMMENTS.....Scheduled start-up in
 1988. Company plans 300,000 TPY heap leach operation averaging
 15,700 oz Au/year, Mining Journal, 1987.
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Gold deposit mineable by open-pit methods.
 IGNEOUS ROCK AGE.....CRET
 IGNEOUS ROCK TYPE.....granodiorite, diorite
 REFERENCES
 Mining Journal, 1987, v. 308, p. 185.
 Mining Magazine, 1985, v. 152, no. 1, p. 17.
 Mining Magazine, 1985a, v. 152, no. 3, p. 209.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU	2300-2900 MT	1985	2.4 G/MT AU
ORE AU	2300 MT	1985	1.7 G/MT AU

RESERVES COMMENTS.....Drill-indicated open-pit reserves.
 SOURCE OF RESERVES INFORMATION.....Mining Magazine, 1985a.

MRDS RECORD NUMBER....MX00575

MAP NUMBER.....575
 SITE NAME.....Punta Norte

LATITUDE.....28-06-30N LONGITUDE.....115-14-00W
 COMMODITIES.....CR
 MAIN....CR
 ORE MATERIALS.....chromite
 GENERAL ANALYTICAL DATA.....Chromite ore in serpentinite: 6% silica,
 20.2% Fe, 23.4% Mn dioxide, 49.5% chromic oxide, tr. Cu.
 PRODUCTION.....N
 DEPOSIT MODEL.....Podiform Cr
 USGS MODEL NUMBER.....8a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....About twenty chromite-bearing localities
 reported in ultramafic rocks from the lowest section of the Choyal
 Fm., adjacent to the San Carlos fault.
 HOST ROCK AGE.....EJUR
 HOST ROCK TYPE.....ultramafics
 REFERENCE....Kilmer, 1984.

MRDS RECORD NUMBER....MX00578

MAP NUMBER.....578
 SITE NAME.....Granaditas
 DISTRICT/AREA...../Arizpe
 STATE.....SONORA
 LATITUDE.....30-18-35N LONGITUDE.....109-54-05W
 COMMODITIES.....U PB ZN
 MAIN....U MINOR....PB ZN
 ORE MATERIALS.....pitchblende, kasolite, autunite,
 torbernite; galena, sphalerite
 PRODUCTION.....N
 DEPOSIT MODEL.....Volcanic-Hosted U
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....U minerals in hydrothermal breccias and
 fracture zones cutting altered dacitic ignimbrite. Associated with
 pyrite, galena and sphalerite.
 HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....dacitic ignimbrite
 GANGUE MINERALS.....kaolin, sericite, quartz, pyrite
 SIGNIFICANT ALTERATION.....phyllic
 REFERENCE....Marquina Martinez, 1983.

MRDS RECORD NUMBER....MX00579

MAP NUMBER.....579
 SITE NAME.....El Palmar
 SYNONYM NAME.....La Tinaja
 DISTRICT/AREA.....San Pedro de la Cueva/Arizpe
 STATE.....SONORA
 LATITUDE.....29-24-15N LONGITUDE.....109-43-55W
 COMMODITIES.....U
 MAIN....U
 ORE MATERIALS.....kasolite, autunite
 PRODUCTION.....N
 DEPOSIT MODEL.....Volcanic-Hosted U
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Low-grade U mineralization in three
 ignimbrite layers. Kasolite and autunite associated with "oxides

and silica" in small veinlets and disseminations in contact zones between dacitic ignimbrite and andesitic intrusives.

HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....dacitic ignimbrite
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....andesitic intrusives
 GANGUE MINERALS.....quartz
 SIGNIFICANT ALTERATION.....silicic, argillic
 REFERENCE....Marquina Martinez, 1983.

MRDS RECORD NUMBER....MX00580

MAP NUMBER.....580
 SITE NAME.....Tubutama
 DISTRICT/AREA.....Tubutama
 STATE.....SONORA
 LATITUDE.....30-59-52N LONGITUDE.....111-29-43W
 COMMODITIES.....B ZEO
 MAIN....B
 ORE MATERIALS.....colemanite, howlite, mcAllisterite, ulexite, wardsmithite
 EXPLORATION AND DEVELOPMENT COMMENTS.....Reserves calculated by Consejo de Recursos Minerales in 1979, using data from 29 dd-holes (70-300 M deep) and three trenches.
 DEPOSIT MODEL.....Stratiform Borates
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....4-20 M borate beds in Miocene lacustrine sequence. Beds consist of Ca- and Na- borates with subordinate shale, sandstone, gypsum and marl. Ore mainly colemanite, in thin layers, lenses, veinlets, granular masses and disseminations. Subordinate howlite occurs in veins and porcelaneous nodules. Minor ulexite, mcAllisterite and wardsmithite. Two main continuous horizons. Tubutama I: 1500 M by 8.9 M, ave. 8.58% B₂O₃. Tubutama II: 1000 M by 4.07 M, ave. 8.65% B₂O₃. Average depth: 29 M.
 HOST ROCK AGE.....MIO
 HOST ROCK TYPE.....shale, sandstone, limestone and interbedded volcanic rocks
 IGNEOUS ROCK AGE.....MIO (22.3 M.Y.)
 IGNEOUS ROCK TYPE.....latite flows
 GANGUE MINERALS.....gypsum
 REFERENCES
 Arriaga Melendez, Pena Rocha, and Gomez Caballero, 1986.
 Gomez Caballero, Nieto Obregon, Shafiqullah, M., Arriaga M., Carillo and Cerecero-Luna, 1981.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE B	29555.380 MT	1986	8.33% B ₂ O ₃
ORE B	3400.000 MT	1986	8.47% B ₂ O ₃

RESERVES COMMENTS.....Subarea Tubutama II: Item 1> Drill-indicated reserves at lowest cut-off grade. Item 2> Ore included in above calculation that has ave. depth of 29 M (i.e. could be exploited using low-cost open-pit methods.)
 SOURCE OF RESERVES INFORMATION.....Arriaga, et.al, 1986.

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE B	40000.00 MT	1986	8% B ₂ O ₃

RESOURCES COMMENTS.....Subarea Tubutama I.
 SOURCE OF RESOURCES INFORMATION.....Arriaga, et.al, 1986.

MRDS RECORD NUMBER....MX00581

MAP NUMBER.....581
 SITE NAME.....La Blanca
 DISTRICT/AREA.....Sierra de la Huerta
 STATE.....SONORA
 LATITUDE.....29-44- N LONGITUDE.....109-47- W
 COMMODITIES.....AG PB ZN AU CU
 MAJOR.....AG MINOR.....PB ZN AU OCCUR.....CU
 ORE MATERIALS.....Ag sulfosalts, galena, sphalerite;
 covellite
 GENERAL ANALYTICAL DATA.....Samples of randomly selected vein
 material: 4.9 oz/ton Ag, 0.2 oz/ton Au, 0.9% Pb, 0.2% Zn.
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Mined on a small scale.
 DEPOSIT MODEL.....Creede Epithermal Vein
 USGS MODEL NUMBER.....25b
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Vein composed of white "bull" quartz
 contains coarse grained sphalerite, galena and Ag sulfosalts over
 widths of several meters. Sphalerite partially replaced by
 covellite.
 HOST ROCK TYPE.....dacite
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....dacite
 GANGUE MINERALS.....quartz
 REFERENCE....Marrrs and Guilbert, 1981.

MRDS RECORD NUMBER....MX00582

MAP NUMBER.....582
 SITE NAME.....San Miguel
 DISTRICT/AREA...../Moctezuma
 STATE.....SONORA
 LATITUDE.....29-51- N LONGITUDE.....109-45- W
 COMMODITIES.....TE AG CU U
 MAIN....TE MINOR....AG CU
 ORE MATERIALS.....native Te, tetrahedrite, rickardite(?);
 mackayite, emmonsite, tellurite oxides, cliffordite, cerargyrite,
 (uranyl tellurite)
 DEPOSIT MODEL.....Au-Ag-Te Vein
 USGS MODEL NUMBER.....22b
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Barite-quartz vein carrying pyrite, native
 Te, tetrahedrite and rickardite(?). Secondary minerals present
 include: jarosite, mackayite, minor emmonsite and tellurite
 oxides, uncommon cliffordite and cerargyrite and rare uranyl
 tellurite.
 GANGUE MINERALS.....quartz, barite, pyrite; jarosite
 REFERENCE....Gaines, 1970.

MRDS RECORD NUMBER....MX00583

MAP NUMBER.....583
SITE NAME.....Las Coloradas placer claim
SYNONYM NAME.....El Apache creek
DISTRICT/AREA.....Bacoachi
STATE.....SONORA
LATITUDE.....30-38- N LONGITUDE.....109-58- W
COMMODITIES.....AU
MAJOR.....AU
ORE MATERIALS.....gold
PRODUCTION.....S
EXPLORATION AND DEVELOPMENT COMMENTS.....Small scale mining in mid-
1800's. Gambusinos active in the area in early 1980's. Bulk
sampling program underway in 1985.
DEPOSIT MODEL.....Placer Au
USGS MODEL NUMBER.....39
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Au in alluvial and elluvial gravels
derived from auriferous quartz veins exposed to the E of claim
area.
HOST ROCK AGE.....QUAT
HOST ROCK TYPE.....alluvial and elluvial gravels
REFERENCES
Mining Journal, v. 304, p. 445.
Mining Magazine, v. 153, no. 2, p. 89.

MRDS RECORD NUMBER....MX02002

MAP NUMBER.....2002
SITE NAME.....Agua Nueva
STATE.....CHIHUAHUA
LATITUDE.....29-52- N LONGITUDE.....106-22- W
COMMODITIES.....F
MAIN....F
DEPOSIT MODEL.....Stratabound Fluorite
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02003

MAP NUMBER.....2003
SITE NAME.....Agua Nueva
STATE.....CHIHUAHUA
LATITUDE.....29-41- N LONGITUDE.....106-12- W
COMMODITIES.....MN
MAIN....MN
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Veins of manganese and iron oxides(?).
REFERENCES
Guild, 1981.
Trask and Rodriguez, 1948.

MRDS RECORD NUMBER...MX02005

MAP NUMBER.....2005
SITE NAME.....Aldama
DISTRICT/AREA.....Aldama
STATE.....CHIHUAHUA
LATITUDE.....28-53- N LONGITUDE.....105-54- W
COMMODITIES.....CU
MAIN....CU
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER...MX02008

MAP NUMBER.....2008
SITE NAME.....Apache
STATE.....CHIHUAHUA
LATITUDE.....30-20- N LONGITUDE.....107-32- W
COMMODITIES.....MN
MAJOR.....MN
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposits in volcanic rocks(?).
REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEARS</u>	<u>GRADE</u>
ORE MN	.150 MT	-1943	40% MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER...MX02009

MAP NUMBER.....2009
SITE NAME.....Santa Maria
DISTRICT/AREA.....Sierra de Borregos/Ascencion
STATE.....CHIHUAHUA
LATITUDE.....31-11- N LONGITUDE.....107-21- W
COMMODITIES.....MN
MAJOR.....MN
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Mn
USGS MODEL NUMBER.....25g
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Two veins, 50 M long, 0.5-1.0 M wide (ave:
0.8 M), 35 M apart, mined to depth of 10 M. Another similar vein
300 M west. Ore: black calcite.
HOST ROCK TYPE.....rhyolite
REFERENCE....Trask and Rodriguez, 1948.
CUMULATIVE PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEARS</u>	<u>GRADE</u>
ORE MN	.350 MT	-1943	42% (?) MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02012

MAP NUMBER.....2012
SITE NAME.....Batopilillas
DISTRICT/AREA.....Urachic
STATE.....CHIHUAHUA
LATITUDE.....27-53- N LONGITUDE.....108-26- W
COMMODITIES.....HG
MAJOR.....HG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER....MX02013

MAP NUMBER.....2013
SITE NAME.....Batosegachic
SYNONYM NAME.....Mines: San Juan, Dolores, Patrocinio, San
Gregorio, Santa Teresa, San Luis.
DISTRICT/AREA...../Guazapares
STATE.....CHIHUAHUA
LATITUDE.....27-26-15N LONGITUDE.....108-16-45W
COMMODITIES.....AG AU
MAJOR.....AG AU
PRODUCTION.....Y
EXPLORATION AND DEVELOPMENT COMMENTS.....Inactive, 1956.
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Eight N-trending veins in andesites. Dips
to both the east and the west. Average width: @3 M. Traceable for
14 KM along strike.
HOST ROCK TYPE.....andesites
IGNEOUS ROCK AGE.....TERT
IGNEOUS ROCK TYPE.....andesites, rhyolites
REFERENCES

Gonzalez R., 1956.
Guild, 1981.

MRDS RECORD NUMBER....MX02014

MAP NUMBER.....2014
SITE NAME.....Bismark
DISTRICT/AREA...../La Ascension
STATE.....CHIHUAHUA
LATITUDE.....31-17-33N LONGITUDE.....107-39-44W
COMMODITIES.....ZN AU AG CU FE MN
MAJOR.....ZN MINOR.....AU AG POTEN.....CU FE MN
ORE MATERIALS.....unknown Au-Ag; Fe, Mn and Cu oxides
GENERAL ANALYTICAL DATA.....Reported to grade up to 14% Zn.
DEPOSIT MODEL.....Zn-Pb Skarn
USGS MODEL NUMBER.....18c
DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Zinc prospect described in earlier reports
as precious metal-bearing contact metasomatic deposit consisting
of pockets of Fe-, Mn- and Cu-oxides carrying Au-Ag values in
quartz matrix; in limestone along contact with rhyolite dike
trending N47E.

HOST ROCK AGE.....CRET
HOST ROCK TYPE.....limestones
IGNEOUS ROCK TYPE.....rhyolite dike
GANGUE MINERALS.....quartz
REFERENCES

Clark and Goodell, 1983.
Gonzalez R., 1956.
Guild, 1981.
Mining Magazine, 1986.

MRDS RECORD NUMBER....MX02015

MAP NUMBER.....2015
SITE NAME.....Bonanza
STATE.....CHIHUAHUA
LATITUDE.....30-51- N LONGITUDE.....105-39- W
COMMODITIES.....PB AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02016

MAP NUMBER.....2016
SITE NAME.....Boquillita
STATE.....CHIHUAHUA
LATITUDE.....29-16- N LONGITUDE.....104-46- W
COMMODITIES.....PB ZN AG
MAIN....PB ZN AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02022

MAP NUMBER.....2022
SITE NAME.....Carrizalillo
STATE.....CHIHUAHUA
LATITUDE.....28-57- N LONGITUDE.....105-12- W
COMMODITIES.....FE
MAIN....FE
DEPOSIT MODEL.....Fe Skarn
USGS MODEL NUMBER.....18d
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02023

MAP NUMBER.....2023
SITE NAME.....Casa de Janos
DISTRICT/AREA.....Janos
STATE.....CHIHUAHUA
LATITUDE.....30-43- N LONGITUDE.....108-31- W

COMMODITIES.....MN
 MAIN....MN
 PRODUCTION.....U
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Mn vein 2 meters wide in volcanic rocks.
 REFERENCES

Cox and Singer, 1986.
 Guild, 1981.
 Salas, 1975.
 Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02024

MAP NUMBER.....2024
 SITE NAME.....Casas Grandes (Mn)
 SYNONYM NAME.....Don Cuco
 DISTRICT/AREA...../Casas Grandes
 STATE.....CHIHUAHUA
 LATITUDE.....30-22-58N LONGITUDE.....107-53-02W
 COMMODITIES.....MN
 MAJOR....MN
 ORE MATERIALS.....pyrolusite, psilomelane, black calcite
 GENERAL ANALYTICAL DATA.....Average grade of main ore body: 30% Mn;
 Other veins: @25% Mn.
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Mn veins in rhyolitic rocks. Ave. width: 3
 M. Strike: N50W. Dip: vertical. Low grade. Principal deposit (Don
 Cuco deposit): Four vertical veins in rhyolite. Ore composed of
 partly leached black calcite was mined from intersection of two
 veins; 150 M vein trending E-W, 30 CM-10 M wide and 60 M vein
 striking N 75 W. Two other veins with N trend, 50 M long and 30-60
 CM wide.
 HOST ROCK TYPE.....rhyolite
 IGNEOUS ROCK TYPE.....rhyolite
 REFERENCES

Clark and Goodell, 1983.
 Cox and Singer, 1986.
 Gonzalez R., 1956.
 Guild, 1981.
 Salas, 1975.
 Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.500 MT	-1943	41-43% MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02028

MAP NUMBER.....2028
 SITE NAME.....Cerro Boludo
 SYNONYM NAME.....Paragatos, Veta de Oro

DISTRICT/AREA...../Temosachic
 STATE.....CHIHUAHUA
 LATITUDE.....28-21- N LONGITUDE.....108-32- W
 COMMODITIES.....AU AG
 MAJOR.....AU AG
 ORE MATERIALS.....native gold, unidentified Ag minerals
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Inactive for many years
 prior to 1956 investigation.
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....MEDIUM
 DEPOSIT DESCRIPTION.....Fractured and mineralized quartz veins in
 andesites. Main vein (Veta de Oro) persists over 8 KM, up to 19 M
 thick, trending N 80-90 E. Veins are drusy and show brecciation
 due to post-mineral movement.
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....andesites, rhyolites
 GANGUE MINERALS.....quartz
 REFERENCES

Gonzalez R., 1956.

Guild, 1981.

MRDS RECORD NUMBER....MX02030

MAP NUMBER.....2030
 SITE NAME.....Cerro del Chile
 STATE.....CHIHUAHUA
 LATITUDE.....30-37-44N LONGITUDE.....107-01-48W
 COMMODITIES.....PB AG FE
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES

Clark and Goodell, 1983.

Guild, 1981.

MRDS RECORD NUMBER....MX02032

MAP NUMBER.....2032
 SITE NAME.....Cerro del Plomo
 STATE.....CHIHUAHUA
 LATITUDE.....30-27-05N LONGITUDE.....106-55-33W
 COMMODITIES.....PB AG
 MAIN....PB AG
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES

Clark and Goodell, 1983.

Guild, 1981.

MRDS RECORD NUMBER....MX02033

MAP NUMBER.....2033
 SITE NAME.....Cerro Prieto
 STATE.....CHIHUAHUA
 LATITUDE.....28-53- N LONGITUDE.....105-23- W

COMMODITIES.....PB AG
MAIN....PB AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02035

MAP NUMBER.....2035
SITE NAME.....Chinipas
DISTRICT/AREA.....Chinipas
STATE.....CHIHUAHUA
LATITUDE.....27-26- N LONGITUDE.....108-31- W
COMMODITIES.....AU AG
MAIN....AU AG
DEPOSIT MODEL.....Epithermal Vein(?)
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....MEDIUM
REFERENCES
Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER....MX02038

MAP NUMBER.....2038
SITE NAME.....Lluvia de Oro
DISTRICT/AREA...../Urique
STATE.....CHIHUAHUA
LATITUDE.....27-05-45N LONGITUDE.....108-18-15W
COMMODITIES.....AU AG
MAJOR....AU AG
ORE MATERIALS.....free gold, pyrite
GENERAL ANALYTICAL DATA.....85-312 g/t Au, 850 g/t Ag.
PRODUCTION.....M
DEPOSIT MODEL.....Carbonate-Hosted Au-Ag
USGS MODEL NUMBER.....26a
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Lenticular bodies of silicified limestone,
12-21 M wide, along fracture striking E-W and dipping 45 degrees
N. Associated with diabase intrusive.
HOST ROCK AGE.....JUR
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....TERT
IGNEOUS ROCK TYPE.....diabase intrusive
GANGUE MINERALS.....quartz
SIGNIFICANT ALTERATION.....silicic
REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02039

MAP NUMBER.....2039
SITE NAME.....Concheno
SYNONYM NAME.....Conchenito; Mines: Veta Grande, Navidad, San
Ciriaco, Gracia de Dios, Teocali.
DISTRICT/AREA...../Ocampo
STATE.....CHIHUAHUA
LATITUDE.....28-19-45N LONGITUDE.....108-11-15W

COMMODITIES.....AU AG PB ZN MN
 MAJOR.....AU AG POTEN.....PB ZN MN
 ORE MATERIALS.....native Au, argentite, pyrargyrite; galena,
 sphalerite, pyrolusite
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Denounced, 1897. Owned and
 operated by Concheno Mining Co., 1907-1928. Leased to Dolores
 Mining Co., 1928-1930. Reverted to Concheno Mining, Feb. 1930.
 DEPOSIT MODEL.....Comstock Epithermal Vein
 USGS MODEL NUMBER.....25c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Mineralized fault in andesites. Vein with
 variable width up to 3.0 M and over 12 KM strike length. Mostly
 barren, but contains very rich concentrations of native Au,
 argentite, pyrargyrite, pyrite and galena with minor amounts of
 sphalerite and pyrolusite in quartz-calcite matrix.
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK TYPE.....andesites, rhyolites, basalts
 GANGUE MINERALS.....quartz, calcite, pyrite
 REFERENCES

Gonzalez R., 1956.
 Guild, 1981.
 Salas, 1975.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AU AG	32.722 TONS	1928	6.05 G/TON AU, 462 G/TON AG
ORE AU AG	2.839 TONS	1929	5.6 G/TON AU, 498 G/TON AG
ORE AU AG	12.513 TONS	1951	99.8 KG AU, 5341.5 KG AG
ORE AU AG	11.211 TONS	1952	98.2 KG AU, 5789.8 KG AG

PRODUCTION COMMENTS.....Dolores Mining Co. data. Item 1>
 contained metal: 157 kg Au, 11,029 kg Ag.

SOURCE OF PRODUCTION INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX02040

MAP NUMBER.....2040
 SITE NAME.....Conejos
 DISTRICT/AREA.....Ascencion
 STATE.....CHIHUAHUA
 LATITUDE.....31-16-30N LONGITUDE.....107-11-16W
 COMMODITIES.....AG AU
 MAIN...AG AU
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL

REFERENCES

Clark and Goodell, 1983.
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX02042

MAP NUMBER.....2042
 SITE NAME.....Coyame
 DISTRICT/AREA...../Coyame
 STATE.....CHIHUAHUA

REFERENCES

Clark and Goodell, 1983.

Guild, 1981.

MRDS RECORD NUMBER....MX02056

MAP NUMBER.....2056
 SITE NAME.....El Pilar
 STATE.....CHIHUAHUA
 LATITUDE.....28-08- N LONGITUDE.....108-33- W
 COMMODITIES.....AU AG
 MAIN....AU AG
 DEPOSIT MODEL.....Au Skarn(?)
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02057

MAP NUMBER.....2057
 SITE NAME.....El Pinito
 SYNONYM NAME.....Emilia
 STATE.....CHIHUAHUA
 LATITUDE.....28-04- N LONGITUDE.....108-41- W
 COMMODITIES.....AU AG SB
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02059

MAP NUMBER.....2059
 SITE NAME.....El Sauz
 SYNONYM NAME.....El Saus
 DISTRICT/AREA...../Moris
 STATE.....CHIHUAHUA
 LATITUDE.....28-11-45N LONGITUDE.....108-49-00W
 COMMODITIES.....AG AU
 MAJOR....AG AU
 ORE MATERIALS....."sulfides"
 GENERAL ANALYTICAL DATA.....14.179-17.015 kg/ton Ag; No data on Au
 content.
 PRODUCTION.....Y
 EXPLORATION AND DEVELOPMENT COMMENTS.....Very little mining.
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Vein deposit(s) similar to Sahuayacan.
 REFERENCES

Gonzalez R., 1956.

Guild, 1981.

MRDS RECORD NUMBER....MX02060

MAP NUMBER.....2060
 SITE NAME.....El Sotolar
 DISTRICT/AREA.....Ojinaga/Manuel Benavides
 STATE.....CHIHUAHUA
 LATITUDE.....29-09-30N LONGITUDE.....103-50-45W

COMMODITIES.....U V
 MAIN....U MINOR....V
 ORE MATERIALS.....carnotite
 GENERAL ANALYTICAL DATA.....Range: 0.01%-12.5% U. Generally 0.05-0.2%
 U.
 PRODUCTION.....N
 DEPOSIT MODEL.....Carbonate-Hosted U
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Carnotite in secondary calcite-gypsum-clay
 gangue filling fractures and caverns in limestone along S limb of
 anticline. Individual orebodies: 10 CM to 2.3 M in diameter.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone, shale
 GANGUE MINERALS.....calcite, gypsum, clay
 REFERENCES
 Gonzalez R., 1956.
 Guild, 1981.
 Salas, 1975.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE U	25.000 MT	1956	0.1% U ₃ O ₈

 SOURCE OF RESERVES INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX02062

MAP NUMBER.....2062
 SITE NAME.....El Zapote
 STATE.....CHIHUAHUA
 LATITUDE.....27-59- N LONGITUDE.....108-40- W
 COMMODITIES.....AU AG
 MAIN....AU AG
 DEPOSIT MODEL.....Au Skarn(?)
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02063

MAP NUMBER.....2063
 SITE NAME.....El Zorillo
 STATE.....CHIHUAHUA
 LATITUDE.....28-03- N LONGITUDE.....108-49- W
 COMMODITIES.....AU AG
 MAIN....AU AG
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02064

MAP NUMBER.....2064
 SITE NAME.....Eureka
 STATE.....CHIHUAHUA
 LATITUDE.....29-22- N LONGITUDE.....108-28- W
 COMMODITIES.....PB SB
 MAJOR....PB MINOR....SB
 DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02065

MAP NUMBER.....2065
SITE NAME.....Gioconda
STATE.....CHIHUAHUA
LATITUDE.....29-20- N LONGITUDE.....104-32- W
COMMODITIES.....CU
MAIN....CU
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02068

MAP NUMBER.....2068
SITE NAME.....Hacienda Casa de Adobe
STATE.....CHIHUAHUA
LATITUDE.....30-37- N LONGITUDE.....108-28- W
COMMODITIES.....SN
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02070

MAP NUMBER.....2070
SITE NAME.....Huaymopa
SYNONYM NAME.....Guanopa
STATE.....CHIHUAHUA
LATITUDE.....29-31- N LONGITUDE.....108-30- W
COMMODITIES.....CU
MAIN....CU
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02074

MAP NUMBER.....2074
SITE NAME.....Juarez
STATE.....CHIHUAHUA
LATITUDE.....31-25- N LONGITUDE.....106-15- W
COMMODITIES.....CU
MAIN....CU
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02075

MAP NUMBER.....2075
SITE NAME.....Klondyke
STATE.....CHIHUAHUA
LATITUDE.....31-00-40N LONGITUDE.....106-11-33W
COMMODITIES.....AU AG
MAIN....AU AG

DEPOSIT MODEL.....Not Classified

DEPOSIT SIZE.....SMALL

REFERENCES

Clark and Goodell, 1983.

Guild, 1981.

MRDS RECORD NUMBER....MX02076

MAP NUMBER.....2076

SITE NAME.....La Amargosa

STATE.....CHIHUAHUA

LATITUDE.....28-35- N LONGITUDE.....105-11- W

COMMODITIES.....BA

MAIN....BA

DEPOSIT MODEL.....Bedded Barite(?)

USGS MODEL NUMBER.....31b?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Stratabound barite in miogeosynclinal
sedimentary terrane.

REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02077

MAP NUMBER.....2077

SITE NAME.....La Ascencion

STATE.....CHIHUAHUA

LATITUDE.....30-55- N LONGITUDE.....107-56- W

COMMODITIES.....MN

MAIN....MN

DEPOSIT MODEL.....Epithermal Mn(?)

USGS MODEL NUMBER.....25g?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Fissure deposits in rhyolite.

HOST ROCK TYPE.....rhyolite

REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02078

MAP NUMBER.....2078

SITE NAME.....La Ascencion

STATE.....CHIHUAHUA

LATITUDE.....30-08- N LONGITUDE.....107-38- W

COMMODITIES.....MN

MAIN....MN

PRODUCTION.....U

DEPOSIT MODEL.....Epithermal Mn(?)

USGS MODEL NUMBER.....25g?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Veins of manganese and iron oxides(?).

REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02079

MAP NUMBER.....2079

SITE NAME.....La Ceja-Hormigas
STATE.....CHIHUAHUA
LATITUDE.....29-08- N LONGITUDE.....105-40- W
COMMODITIES.....PB ZN AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02080

MAP NUMBER.....2080
SITE NAME.....La Cobriza
SYNONYM NAME.....Florescia, La Central
STATE.....CHIHUAHUA
LATITUDE.....30-54-13N LONGITUDE.....107-39-38W
COMMODITIES.....CU AG
MAIN....CU AG
DEPOSIT MODEL.....Epithermal Vein(?)
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
REFERENCES
 Clark and Goodell, 1983.
 Guild, 1981.

MRDS RECORD NUMBER....MX02082

MAP NUMBER.....2082
SITE NAME.....La Escondida
STATE.....CHIHUAHUA
LATITUDE.....30-16- N LONGITUDE.....106-10- W
COMMODITIES.....PB AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02083

MAP NUMBER.....2083
SITE NAME.....La Gloria
STATE.....CHIHUAHUA
LATITUDE.....29-48-55N LONGITUDE.....106-26-56W
COMMODITIES.....MN
MAJOR.....MN
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
REFERENCES
 Clark and Goodell, 1983.
 Guild, 1981.

MRDS RECORD NUMBER....MX02085

MAP NUMBER.....2085
SITE NAME.....La Lagrima
STATE.....CHIHUAHUA
LATITUDE.....30-23- N LONGITUDE.....105-27- W
COMMODITIES.....PB AG
MAIN....PB AG

DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02086

MAP NUMBER.....2086
SITE NAME.....La Lolita
SYNONYM NAME.....San Blas
STATE.....CHIHUAHUA
LATITUDE.....30-57-02N LONGITUDE.....107-03-48W
COMMODITIES.....CU
MAIN....CU
DEPOSIT MODEL.....Cu Skarn
USGS MODEL NUMBER.....18b
DEPOSIT SIZE.....SMALL
REFERENCES
 Clark and Goodell, 1983.
 Guild, 1981.

MRDS RECORD NUMBER....MX02087

MAP NUMBER.....2087
SITE NAME.....La Millonaria
DISTRICT/AREA...../Guazapares
STATE.....CHIHUAHUA
LATITUDE.....27-15-15N LONGITUDE.....108-26-30W
COMMODITIES.....AU AG
MAJOR.....AU MINOR.....AG
ORE MATERIALS.....native gold
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Breccia zone between two faults in
 andesite. Wedge-shaped ore body containing auriferous quartz.
HOST ROCK AGE.....TERT
HOST ROCK TYPE.....andesite
IGNEOUS ROCK AGE.....TERT
IGNEOUS ROCK TYPE.....andesite
GANGUE MINERALS.....quartz
REFERENCES
 Gonzalez R., 1956.
 Guild, 1981.

CUMULATIVE PRODUCTION

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEARS</u>	<u>GRADE</u>
ORE AU	300.000 TONS	-1956	UNKNOWN

PRODUCTION COMMENTS.....Minimum estimate.
SOURCE OF PRODUCTION INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX02088

MAP NUMBER.....2088
SITE NAME.....La Morita
STATE.....CHIHUAHUA
LATITUDE.....28-30- N LONGITUDE.....104-20- W
COMMODITIES.....MN
MAJOR.....MN

DEPOSIT MODEL.....Epithermal Mn(?)
 USGS MODEL NUMBER.....25g?
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02089

MAP NUMBER.....2089
 SITE NAME.....La Negra
 DISTRICT/AREA...../Camargo
 STATE.....CHIHUAHUA
 LATITUDE.....28-12-39N LONGITUDE.....104-11-50W
 COMMODITIES.....FE
 MAJOR.....FE
 ORE MATERIALS.....hematite, magnetite, martite, specularite
 GENERAL ANALYTICAL DATA.....Average Grade: 67.000% Fe, 0.130% P,
 0.046% S, 3.760% silica, 0.480% CaO, (Minas del Norte, S.A.).
 Range: 56.48-70.00% Fe, 0.29-0.063% S, 0.178-0.067% P, (Gonzalez,
 1956).
 EXPLORATION AND DEVELOPMENT COMMENTS.....Explored by dd-holes and
 underground workings.
 DEPOSIT MODEL.....Volcanic-Hosted Magnetite
 USGS MODEL NUMBER.....25i
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....160 M x 40 M area contains lenticular
 bodies of high-grade, compact iron ore in large in situ fracture
 blocks. Numerous veinlets and fracture fillings 1-5 CM thick and
 veins 10-50 M long and up to 50 CM wide in surrounding quartz
 monzonite. Similar 600 sq. M exposure lies 1600 M NE of main body.
 HOST ROCK TYPE.....aplite
 IGNEOUS ROCK TYPE.....quartz monzonite porphyry stock
 GANGUE MINERALS.....apatite
 SIGNIFICANT ALTERATION.....chloritization, kaolinization
 REFERENCES

 Cardenas and del Castillo, 1964.
 Cox and Singer, 1986.
 Gomez R., 1961.
 Gonzalez R., 1956.
 Guild, 1981.
 Salas, 1975.

RESERVES

<u>ITEM</u>	<u>TONNAGE</u> (x10 ³)	<u>YEAR</u>	<u>GRADE</u>
ORE FE	130.00 MT	1961	67.0% FE, 0.05% S, 0.13% P

RESERVES COMMENTS.....Proven Reserves.
 SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX02091

MAP NUMBER.....2091
 SITE NAME.....La Perla
 SYNONYM NAME.....Cerro de Fierro, La Vibora
 DISTRICT/AREA...../Camargo
 STATE.....CHIHUAHUA
 LATITUDE.....28-18-44N LONGITUDE.....104-33-36W
 COMMODITIES.....FE
 MAJOR.....FE

ORE MATERIALS.....hematite, magnetite, minor martite,
specularite
GENERAL ANALYTICAL DATA.....Average Grade: 59.790% Fe, 0.104% P,
0.475% S, 6.100% silica, 3.130% CaO (Minas del Norte, S.A.) Range:
56-70% Fe, 0.07-0.18% P, 0.06-0.30% S, (Dutton, 1955).
PRODUCTION.....M
EXPLORATION AND DEVELOPMENT COMMENTS.....Explored by dd-holes and
underground workings.
DEPOSIT MODEL.....Volcanic-Hosted Magnetite
USGS MODEL NUMBER.....25i
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Iron deposit in the shape of a flattened
cone with an elliptical base. Minimum thickness: 78 M. Small
lenses and masses of hematite and magnetite, 0.5-2.0 M thick, in
trachytic rocks. Locally, Fe minerals and gypsum found cementing
trachyte breccias.
HOST ROCK AGE.....TERT
HOST ROCK TYPE.....trachyte, sodic rhyolite porphyry
GANGUE MINERALS.....quartz, calcite, gypsum, pyrite
SIGNIFICANT ALTERATION.....Local silicification.
REFERENCES

Cardenas and del Castillo, 1964.
Cox and Singer, 1986.
Dutton, 1955.
Gomez R., 1961.
Gonzalez R., 1956.
Guild, 1981.
Salas, 1975.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	24828.000 MT	1961	59.9% FE, 0.55% S, 0.11% P
ORE FE	18278.000 MT	1961	SEE ABOVE
ORE FE	4500.000 MT	1961	SEE ABOVE
ORE FE	58535.897 MT	1964	58.34-59.79% FE

RESERVES COMMENTS.....Item 1: Proven Reserves. Item 2:
Probable Reserves. Item 3: Possible Reserves. Item 4: Total
Reserves (different estimate).

SOURCE OF RESERVES INFORMATION.....Gomez, 1961; Cardenas and del
Castillo, 1964.

MRDS RECORD NUMBER....MX02093

MAP NUMBER.....2093
SITE NAME.....La Plomosa
STATE.....CHIHUAHUA
LATITUDE.....30-17- N LONGITUDE.....104-52- W
COMMODITIES.....PB AG
MAIN....PB AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02095

MAP NUMBER.....2095
SITE NAME.....La Reforma

DISTRICT/AREA.....Urique
 STATE.....CHIHUAHUA
 LATITUDE.....26-58- N LONGITUDE.....108-09- W
 COMMODITIES.....ZN PB CU AG AU
 MAJOR.....ZN PB CU MINOR.....AG AU
 ORE MATERIALS.....pyrite, magnetite, galena, sphalerite,
 chalcoppyrite
 PRODUCTION.....M
 DEPOSIT MODEL.....Zn-Pb Skarn
 USGS MODEL NUMBER.....18c
 DEPOSIT SIZE.....LARGE
 DEPOSIT DESCRIPTION.....Hypogene pyrite, magnetite, galena,
 sphalerite and chalcoppyrite in garnet-wollastinite-actinolite
 gangue. Skarn-contact zone 5-15 M thick.
 HOST ROCK AGE.....MES
 HOST ROCK TYPE.....marble
 IGNEOUS ROCK AGE.....EO
 IGNEOUS ROCK TYPE.....granodiorite
 GANGUE MINERALS.....garnet, wollastinite, actinolite
 REFERENCES

Busch, 1980.
 Guild, 1981.
 Salas, 1975.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE ZN PB CU AG	168.000 MT	1976	55 G/MT AG, 2.1% PB, 8.05% ZN, 0.8% CU

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS
AG	51.371 KG	1973-1978
AU	.014 KG	1973-1975
CU	1.299 MT	1973-1975
PB	9.891 MT	1973-1976
ZN	45.188 MT	1973-1976

SOURCE OF PRODUCTION INFORMATION.....Busch, 1980.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE PB ZN CU	680.000 MT	1980	SEE PROD GRADE
ORE PB ZN CU	500.000 MT	1980	

RESERVES COMMENTS.....Item 1: Proven + probable ore. Item
 2: Possible ore.

SOURCE OF RESERVES INFORMATION.....Busch, 1980.

MRDS RECORD NUMBER....MX02098

MAP NUMBER.....2098
 SITE NAME.....La Senorita
 SYNONYM NAME.....San Vicente
 STATE.....CHIHUAHUA
 LATITUDE.....28-58-35N LONGITUDE.....106-09-46W
 COMMODITIES.....PB AG CU
 MAJOR.....PB AG MINOR.....CU
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL

REFERENCES

Clark and Goodell, 1983.

Guild, 1981.

MRDS RECORD NUMBER....MX02099

MAP NUMBER.....2099
 SITE NAME.....La Victoria
 STATE.....CHIHUAHUA
 LATITUDE.....29-00- N LONGITUDE.....103-33- W
 COMMODITIES.....PB AG
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02100

MAP NUMBER.....2100
 SITE NAME.....La Virgen y La Providencia
 STATE.....CHIHUAHUA
 LATITUDE.....28-47- N LONGITUDE.....106-21- W
 COMMODITIES.....MN
 MAIN....MN
 PRODUCTION.....U
 DEPOSIT MODEL.....Epithermal Mn(?)
 USGS MODEL NUMBER.....25g?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Fissure deposits in volcanic rocks(?).

REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02103

MAP NUMBER.....2103
 SITE NAME.....Las Encinillas
 STATE.....CHIHUAHUA
 LATITUDE.....29-15- N LONGITUDE.....106-18- W
 COMMODITIES.....MN
 MAIN....MN
 PRODUCTION.....U
 DEPOSIT MODEL.....Epithermal Mn(?)
 USGS MODEL NUMBER.....25g?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Veins of manganese and iron oxides(?).

REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02104

MAP NUMBER.....2104
 SITE NAME.....Las Hormigas
 SYNONYM NAME.....Hormigas
 DISTRICT/AREA.....Aldama
 STATE.....CHIHUAHUA
 LATITUDE.....29-14- N LONGITUDE.....105-44- W
 COMMODITIES.....PB ZN AG U MN

MAJOR.....PB ZN AG MINOR.....U POTEN.....MN
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposit.
REFERENCES

 Guild, 1981.
 Salas, 1975.
 Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02105

MAP NUMBER.....2105
SITE NAME.....Las Manchas
STATE.....CHIHUAHUA
LATITUDE.....30-56- N LONGITUDE.....105-52- W
COMMODITIES.....F
MAIN.....F
DEPOSIT MODEL.....Stratabound Fluorite
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02106

MAP NUMBER.....2106
SITE NAME.....Las Margaritas
SYNONYM NAME.....El Puerto
STATE.....CHIHUAHUA
LATITUDE.....29-12- N LONGITUDE.....106-04- W
COMMODITIES.....U
DEPOSIT MODEL.....Volcanic-Hosted U(?)
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02107

MAP NUMBER.....2107
SITE NAME.....Las Marias
STATE.....CHIHUAHUA
LATITUDE.....29-07- N LONGITUDE.....103-40- W
COMMODITIES.....PB ZN
MAIN....PB ZN
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02108

MAP NUMBER.....2108
SITE NAME.....Loreto
SYNONYM NAME.....El Trigo, Santa Ana
STATE.....CHIHUAHUA
LATITUDE.....27-40- N LONGITUDE.....108-35- W
COMMODITIES.....AU AG
MAIN....AU AG
DEPOSIT MODEL.....Epithermal Vein(?)
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02110

MAP NUMBER.....2110
SITE NAME.....Los Arenales
SYNONYM NAME.....Arenales
DISTRICT/AREA.....Coyame
STATE.....CHIHUAHUA
LATITUDE.....29-48- N LONGITUDE.....105-11- W
COMMODITIES.....CU
MAIN....CU
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.
Salas, 1975.

MRDS RECORD NUMBER....MX02111

MAP NUMBER.....2111
SITE NAME.....Los Borregos
SYNONYM NAME.....Consolidada, Verdun, Corriente, Nueva Carolina,
Ampliacion Wallito, Russell.
DISTRICT/AREA.....Sierra de Borregos/Ascencion
STATE.....CHIHUAHUA
LATITUDE.....31-03-16N LONGITUDE.....107-17-30W
COMMODITIES.....MN
MAJOR.....MN
ORE MATERIALS.....psilomelane, pyrolusite(?)
GENERAL ANALYTICAL DATA.....Ave. grade: 20-25% Mn. (Hand sorted ore:
40% Mn).
PRODUCTION.....S
EXPLORATION AND DEVELOPMENT COMMENTS.....Active during WW1, WW2 and
1950-1954.
DEPOSIT MODEL.....Epithermal Mn
USGS MODEL NUMBER.....25g
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Mn oxide ore in well-defined steep-dipping
fissure veins in Tertiary volcanic rocks and brecciated zones. At
least 15 "exploitable" veins along two main fracture systems
running NS and EW. Strike lengths up to 830 M, ave. 50-200 M. Ave.
thickness: 1.0-1.5 M, max. 2-3 M. Depth to bottom: @50 M. (Smaller
veins, 10-30 CM wide, not considered economic.) Veins consist of
@50% psilomelane plus "black calcite" containing finely
disseminated Mn oxides and 50% white calcite. Veins have banded
structure and commonly contain vugs lined with calcite crystals.
Also: brecciated zones containing Mn oxides cementing fragments of
volcanic rocks, generally along hanging-walls of veins.
Paragenesis: 1> black calcite, 2> psilomelane, 3> white calcite.
HOST ROCK TYPE.....andesites, rhyolitic-dacitic volcanics
IGNEOUS ROCK AGE.....TERT
IGNEOUS ROCK TYPE.....andesites and younger rhyolitic-dacitic
volcanics
GANGUE MINERALS.....calcite, barite, hematite, minor quartz
REFERENCES

Clark and Goodell, 1983.

Cox and Singer, 1986.
 Guild, 1981.
 Salas, 1975.
 Trask and Rodriguez, 1948.
 Wilson, 1956a.

CUMULATIVE PRODUCTION

ITEM	TONNAGE(x10 ³)	YEARS	GRADE
ORE MN	10.000 TONS	1941-1944	LOW GRADE
ORE MN	60.000 TONS	1951-1954	LOW GRADE
ORE MN	6.000 MT	1941-1942	42%(?) MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948; Wilson, 1956a.

MRDS RECORD NUMBER....MX02112

MAP NUMBER.....2112
 SITE NAME.....Los Camaleones
 STATE.....CHIHUAHUA
 LATITUDE.....30-48-44N LONGITUDE.....107-06-38W
 COMMODITIES.....MN
 MAJOR.....MN
 DEPOSIT MODEL.....Epithermal Mn(?)
 USGS MODEL NUMBER.....25g?
 DEPOSIT SIZE.....SMALL
 REFERENCES

Clark and Goodell, 1983.
 Guild, 1981.

MRDS RECORD NUMBER....MX02115

MAP NUMBER.....2115
 SITE NAME.....Los Volcanes
 DISTRICT/AREA.....N. Benavides
 STATE.....CHIHUAHUA
 LATITUDE.....28-59- N LONGITUDE.....104-09- W
 COMMODITIES.....MN
 MAJOR.....MN
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 REFERENCES

Cox and Singer, 1986.
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX02120

MAP NUMBER.....2120
 SITE NAME.....Minillas
 DISTRICT/AREA...../Chihuahua
 STATE.....CHIHUAHUA
 LATITUDE.....28-41-00N LONGITUDE.....106-11-20W
 COMMODITIES.....PB AG
 MAIN....PB AG
 PRODUCTION.....U
 DEPOSIT MODEL.....Polymetallic Replacement
 USGS MODEL NUMBER.....19a

DEPOSIT SIZE.....SMALL
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK TYPE.....porphyry dikes

REFERENCES

Clark and Goodell, 1983.
 Gonzalez R., 1956.
 Guild, 1981.

MRDS RECORD NUMBER....MX02122

MAP NUMBER.....2122
 SITE NAME.....Monterde
 DISTRICT/AREA...../Guazapares
 STATE.....CHIHUAHUA
 LATITUDE.....27-34-00N LONGITUDE.....108-03-30W
 COMMODITIES.....AU AG
 MAJOR.....AU MINOR.....AG
 ORE MATERIALS.....native gold
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Quartz + Au and minor Ag in fissure veins.
 HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....andesites and rhyolite tuffs
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....andesites, rhyolite tuffs
 GANGUE MINERALS.....quartz

REFERENCES

Gonzalez R., 1956.
 Guild, 1981.

MRDS RECORD NUMBER....MX02123

MAP NUMBER.....2123
 SITE NAME.....Namiquipa
 SYNONYM NAME.....La Venturosa, La Princesa, La Esmerelda, Mexico,
 America Viejo
 DISTRICT/AREA.....Namiquipa
 STATE.....CHIHUAHUA
 LATITUDE.....29-10-06N LONGITUDE.....107-25-49W
 COMMODITIES.....AG PB ZN AU CU
 MAJOR.....AG PB ZN MINOR.....AU CU
 ORE MATERIALS.....Oxide ore: native silver, cerargyrite,
 cerussite, (anglesite), (wulfenite); Sulfide ore: galena,
 sphalerite, pyrite, chalcopryrite
 GENERAL ANALYTICAL DATA.....Oxide ore: 567 g/MT Ag, 2.59% Pb; Sulfide
 ore: 401 g/MT Ag, 3.76% Pb, 7.07% Zn; Mining Engineering, v. 9,
 no. 10, p. 1096.
 PRODUCTION.....S
 DEPOSIT MODEL.....Creede Epithermal Vein
 USGS MODEL NUMBER.....25b
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Six steeply dipping quartz veins along
 breccia-filled fissure zones in andesite. Sulfide ore: quartz,
 sphalerite, galena, pyrite, fluorite, chalcopryrite, with Ag-Au

values. Some chalcedony. Oxidized to 100 M depth. Oxide ore: native Ag and cerargyrite associated with limonite, cerussite, rare anglesite or wulfenite and barite. Ba content increases near surface. Zones of Ag and Pb enrichment occur at base of oxidized zone.

HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....brecciated andesite flow
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....andesite tuff, rhyolite
 GANGUE MINERALS.....quartz, pyrite, fluorite, chalcedony;
 limonite, barite
 SIGNIFICANT ALTERATION.....silicic
 REFERENCES

Clark and Goodell, 1983.
 Cox and Singer, 1986.
 Guild, 1981.
 Mosier, Menzie and Kleinhampl, 1986.
 Salas, 1975.
 Shefelbine, 1957.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG PB ZN	11.814 MT	1948	830 G/MT AG, 6.42% PB, 5.78% ZN
ORE AG PB ZN	83.270 MT	1949	604 G/MT AG, 4.79% PB, 6.13% ZN
ORE AG PB ZN	111.891 MT	1950	664 G/MT AG, 4.11% PB, 6.04% ZN
ORE AG PB ZN	127.411 MT	1951	474 G/MT AG, 2.82% PB, 4.71% ZN
ORE AG PB ZN	127.984 MT	1952	394 G/MT AG, 3.47% PB, 5.13% ZN
ORE AG PB ZN	117.154 MT	1953	363 G/MT AG, 3.37% PB, 5.05% ZN
ORE AG PB ZN	90.093 MT	1954	308 G/MT AG, 3.01% PB, 4.97% ZN
ORE AG PB ZN	67.139 MT	1955	214 G/MT AG, 1.77% PB, 2.14% ZN

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
SULFIDE ORE	522.629 MT	1948-1955	401 G/MT AG, 3.76% PB, 7.07% ZN
OXIDE ORE	214.127 MT	1948-1955	567 G/MT AG, 2.59% PB
COMBINED	736.756 MT	1948-1955	448 G/MT AG, 3.42% PB, 5.01% ZN
ORE AG PB ZN	900.000 MT	1922-1955	448.0 G/T, 3.4% PB, 5.0% ZN

PRODUCTION COMMENTS.....Production through Aug. 31, 1955.

SOURCE OF PRODUCTION INFORMATION.....Shefelbine, 1957; Mosier, et.al., 1986 (Item 4).

MRDS RECORD NUMBER....MX02125

MAP NUMBER.....2125

SITE NAME.....Nuevo Casas Grandes

STATE.....CHIHUAHUA

LATITUDE.....30-17- N LONGITUDE.....107-55- W

COMMODITIES.....PB ZN AG AU CU
 MAJOR.....PB ZN AG MINOR.....AU CU
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02126

MAP NUMBER.....2126
 SITE NAME.....Ojo Caliente
 STATE.....CHIHUAHUA
 LATITUDE.....29-54-36N LONGITUDE.....107-11-20W
 COMMODITIES.....PB AG
 MAIN....PB AG
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Clark and Goodell, 1983.
 Guild, 1981.

MRDS RECORD NUMBER....MX02128

MAP NUMBER.....2128
 SITE NAME.....Palo Blanco (Lamentos B)
 STATE.....CHIHUAHUA
 LATITUDE.....30-26- N LONGITUDE.....106-13- W
 COMMODITIES.....PB AG
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....MEDIUM
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02133

MAP NUMBER.....2133
 SITE NAME.....Plomosas
 SYNONYM NAME.....Sierra las Plomosas
 DISTRICT/AREA.....Alamos
 STATE.....CHIHUAHUA
 LATITUDE.....27-30- N LONGITUDE.....108-35- W
 COMMODITIES.....PB ZN AG CU
 MAJOR.....PB ZN AG MINOR.....CU
 PRODUCTION.....M
 DEPOSIT MODEL.....Polymetallic Replacement(?)
 USGS MODEL NUMBER.....19a?
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....limestone
 REFERENCES

Guild, 1981.
 Perez Segura, 1985.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE ZN PB AG	194.000 MT	1975	13.0% ZN, 6.7% PB, 66 G/MT AG
WASTE	15000 KG	1975	

SOURCE OF PRODUCTION INFORMATION.....E&MJ Intl. Directory, 1976, p.
 255.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE ZN PB	890.000 MT	1975	14.0% ZN, 7.7% PB, 63 G AG/MT
ORE ZN PB	40.000 MT	1975	13.3% ZN, 7.7% PB, 61 G AG/MT
ORE AG PB CU	31.000 MT	1985	100 G/MT AG, 4% PB, 3% CU

RESERVES COMMENTS.....Item 1: Probable Ore. Item 2: Possible Ore. Item 3: May refer to another deposit with same name.

SOURCE OF RESERVES INFORMATION.....Items 1-2: E&MJ Intl. Directory, 1976, p. 255; Item 3: Perez Segura, 1985.

MRDS RECORD NUMBER....MX02136

MAP NUMBER.....2136
 SITE NAME.....Rancho del Medio
 STATE.....CHIHUAHUA
 LATITUDE.....31-03- N LONGITUDE.....108-39- W
 COMMODITIES.....MN
 MAJOR.....MN
 DEPOSIT MODEL.....Epithermal Mn(?)
 USGS MODEL NUMBER.....25g?
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02137

MAP NUMBER.....2137
 SITE NAME.....Roque
 STATE.....CHIHUAHUA
 LATITUDE.....28-39- N LONGITUDE.....105-20- W
 COMMODITIES.....PB ZN BA
 MAJOR.....PB ZN MINOR.....BA
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02139

MAP NUMBER.....2139
 SITE NAME.....Samalayuca
 DISTRICT/AREA.....Juarez
 STATE.....CHIHUAHUA
 LATITUDE.....31-20-08N LONGITUDE.....106-32-34W
 COMMODITIES.....PB AG CU
 MAIN....PB AG MINOR....CU
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Clark and Goodell, 1983.
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX02140

MAP NUMBER.....2140
 SITE NAME.....San Antonio
 STATE.....CHIHUAHUA
 LATITUDE.....28-11- N LONGITUDE.....108-43- W
 COMMODITIES.....AU AG SB

MAJOR.....AU AG MINOR.....SB
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02141

MAP NUMBER.....2141
SITE NAME.....San Bernardino
STATE.....CHIHUAHUA
LATITUDE.....28-19- N LONGITUDE.....104-57- W
COMMODITIES.....MN
MAJOR.....MN
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....MEDIUM
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02142

MAP NUMBER.....2142
SITE NAME.....San Carlos
STATE.....CHIHUAHUA
LATITUDE.....29-10- N LONGITUDE.....103-58- W
COMMODITIES.....HG
MAJOR.....HG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02144

MAP NUMBER.....2144
SITE NAME.....San Ignacio
DISTRICT/AREA...../Villa Ahumada
STATE.....CHIHUAHUA
LATITUDE.....30-35-30N LONGITUDE.....106-19-00W
COMMODITIES.....AG PB ZN CU AU
MAJOR.....AG PB ZN MINOR.....CU AU
ORE MATERIALS.....argentite, galena, pyrite, sphalerite,
cerargyrite
GENERAL ANALYTICAL DATA.....425 g/MT Ag, 20.0% Pb, 20.0% Zn, 3.0% Fe,
minor Au; 30% Cu in oxidized zone.
PRODUCTION.....S
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Orebodies plunge 5-10 degrees S within E-W
striking, nearly vertical veins. Width: 0.6-1.2 M.
HOST ROCK TYPE.....sandstone
IGNEOUS ROCK TYPE.....dacite porphyry
GANGUE MINERALS.....quartz, calcite, hematite, limonite
REFERENCES
Gonzalez R., 1956.
Guild, 1981.

MRDS RECORD NUMBER....MX02147

MAP NUMBER.....2147
SITE NAME.....San Joaquin
STATE.....CHIHUAHUA
LATITUDE.....30-05-39N LONGITUDE.....107-46-42W
COMMODITIES.....AG AU CU
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES

Clark and Goodell, 1983.

Guild, 1981.

MRDS RECORD NUMBER....MX02150

MAP NUMBER.....2150
SITE NAME.....San Juan
STATE.....CHIHUAHUA
LATITUDE.....31-10- N LONGITUDE.....105-52- W
COMMODITIES.....CU
MAIN....CU
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02155

MAP NUMBER.....2155
SITE NAME.....San Luis
STATE.....CHIHUAHUA
LATITUDE.....27-49- N LONGITUDE.....108-50- W
COMMODITIES.....AU AG
MAIN....AU AG
DEPOSIT MODEL.....Epithermal Vein(?)
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02156

MAP NUMBER.....2156
SITE NAME.....San Miguel
DISTRICT/AREA.....N. Benavides
STATE.....CHIHUAHUA
LATITUDE.....28-41- N LONGITUDE.....104-09- W
COMMODITIES.....CU FE
MAJOR....CU MINOR....FE
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX02157

MAP NUMBER.....2157
SITE NAME.....La Candelaria
SYNONYM NAME.....Mines: La Candelaria, San Nicolas, La Cobriza
DISTRICT/AREA.....San Pedro Corralitos/Casas Grandes
STATE.....CHIHUAHUA

ORE MATERIALS.....native gold
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Thin, but locally rich and persistent
 auriferous quartz veins along pre-existing fractures in andesites.
 HOST ROCK TYPE.....andesite
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....andesite
 GANGUE MINERALS.....quartz
 REFERENCES

Gonzalez R., 1956.
 Guild, 1981.

MRDS RECORD NUMBER...MX02161

MAP NUMBER.....NONE
 SITE NAME.....Santa Eulalia district
 DISTRICT/AREA.....Santa Eulalia
 STATE.....CHIHUAHUA
 LATITUDE.....28-36-33N LONGITUDE.....105-51-55W
 COMMODITIES.....AG PB ZN CU SN V AU
 MAJOR.....AG PB ZN MINOR.....CU SN V AU
 GENERAL ANALYTICAL DATA.....Ave. grade: 10.7 oz/MT Ag, 8.4% Pb, 7.2%
 Zn, (Maldonado and Megaw, 1983); Oxidized ores: 15 oz Ag/ton,
 Sulfide ores: 4.2 oz Ag/ton, 3.1% Zn, 0.2% Cu, (MINOBRAS, 1984).
 PRODUCTION.....L
 EXPLORATION AND DEVELOPMENT COMMENTS.....Discovered @1591 but no
 denouncements or production recorded until 1707. Oxidized Ag-rich
 ore bodies mined by Spanish Colonial operators, 1707-1790.
 District relatively inactive, 1790-1880. Potosi Mining Co. (now
 Minerales Nacionales de Mexico) and ASARCO MEXICANA (now
 Industrial Minera Mexico) entered district in 1880. First
 selective flotation plant built in 1925. Sulfide ore production,
 1925-present.
 DEPOSIT MODEL.....Polymetallic Replacement
 DEPOSIT SIZE.....LARGE
 DEPOSIT DESCRIPTION.....District consists of two main mineralized
 zones: the East Camp (San Antonio Mine) and the West Camp (Buena
 Tierra and El Potosi Mines). The two areas are separated by @6 KM
 of apparently barren ground. Mineralization is dominantly in the
 form of manto and chimney replacement bodies in limestone, with
 significant skarn ores in the East Camp. West Camp orebodies occur
 in a gently warped zone over a vertical distance of 1000 M. See
 record numbers MX02213 and MX02214.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....sills and dikes of dolerite and micro-
 diorite; andesitic and rhyolitic flows and tuffs, volcaniclastic
 sediments
 REFERENCES

Clark and Goodell, 1983.
 Cox and Singer, 1986.
 Guild, 1981.

Maldonado and Megaw, 1983.

MINOBRAS, 1984.

Salas, 1975.

CUMULATIVE PRODUCTION

ITEM	TONNAGE($\times 10^3$)	YEARS
AG	395000.0 OZ	-1982
PB	2716.000 MT	-1982
ZN	1797.000 MT	-1982
CU	5.000 MT	-1982
SN	4.000 MT	-1982
V	.700 MT	-1982
AU	.001 MT	-1982

PRODUCTION COMMENTS.....Total estimated tonnage of ore: 37 million MT averaging 10.7 oz/MT Ag, 8.4% Pb and 7.2% Zn. An additional 10 million MT of ore with similar grade was probably produced but not recorded.

SOURCE OF PRODUCTION INFORMATION.....Maldonado and Megaw, 1983.

RESERVES

ITEM	TONNAGE($\times 10^3$)	YEAR	GRADE
ORE AG PB ZN	10000.0 MT	1982	10.7 OZ/MT AG, 8.4% PB, 7.2% ZN

SOURCE OF RESERVES INFORMATION.....Maldonado and Megaw, 1983.

MRDS RECORD NUMBER....MX02163

MAP NUMBER.....2163
SITE NAME.....Santa Teresa
STATE.....CHIHUAHUA
LATITUDE.....28-35- N LONGITUDE.....105-20- W
COMMODITIES.....PB AG
DEPOSIT MODEL.....Zn-Pb Skarn
USGS MODEL NUMBER.....18c
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02166

MAP NUMBER.....2166
SITE NAME.....Chilicote
SYNONYM NAME.....Sierra Chilicote
STATE.....CHIHUAHUA
LATITUDE.....29-02- N LONGITUDE.....104-49- W
COMMODITIES.....AG PB CU MN
MAIN....AG PB CU MINOR....MN
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Vein(?)
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposit in volcanic rocks(?).
REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02167

MAP NUMBER.....2167
SITE NAME.....Sierra de Encinillas

STATE.....CHIHUAHUA
LATITUDE.....28-15- N LONGITUDE.....104-10- W
COMMODITIES.....HG
MAJOR.....HG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02168

MAP NUMBER.....2168
SITE NAME.....Sierra de Guadalupe
STATE.....CHIHUAHUA
LATITUDE.....31-15- N LONGITUDE.....106-09- W
COMMODITIES.....AU AG
MAIN....AU AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02169

MAP NUMBER.....2169
SITE NAME.....Sierra de La Alcaparra
STATE.....CHIHUAHUA
LATITUDE.....30-40- N LONGITUDE.....106-05- W
COMMODITIES.....PB AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02170

MAP NUMBER.....2170
SITE NAME.....Sierra de La Magdalena
STATE.....CHIHUAHUA
LATITUDE.....30-35-35N LONGITUDE.....106-20-30W
COMMODITIES.....PB AG CU ZN FE
MAIN....PB AG MINOR....CU ZN FE
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES
 Clark and Goodell, 1983.
 Guild, 1981.

MRDS RECORD NUMBER....MX02171

MAP NUMBER.....2171
SITE NAME.....Sierra de Las Damas
STATE.....CHIHUAHUA
LATITUDE.....29-35- N LONGITUDE.....105-48- W
COMMODITIES.....PB ZN AU
MAIN....PB ZN MINOR....AU
DEPOSIT MODEL.....Zn-Pb Skarn
USGS MODEL NUMBER.....18c
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02172

MAP NUMBER.....2172
SITE NAME.....Sierra de Las Minas
STATE.....CHIHUAHUA
LATITUDE.....30-23-33N LONGITUDE.....106-28-47W
COMMODITIES.....PB ZN AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES
 Clark and Goodell, 1983.
 Guild, 1981.

MRDS RECORD NUMBER....MX02173

MAP NUMBER.....2173
SITE NAME.....Sierra de Los Mosqueteros
SYNONYM NAME.....Mosqueteros
DISTRICT/AREA.....Ahumada
STATE.....CHIHUAHUA
LATITUDE.....30-46- N LONGITUDE.....106-14- W
COMMODITIES.....PB AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES
 Guild, 1981.
 Salas, 1975.

MRDS RECORD NUMBER....MX02174

MAP NUMBER.....2174
SITE NAME.....Sierra La Mojina
STATE.....CHIHUAHUA
LATITUDE.....29-50-33N LONGITUDE.....106-49-31W
COMMODITIES.....PB AG
MAIN...PB AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES
 Clark and Goodell, 1983.
 Guild, 1981.

MRDS RECORD NUMBER....MX02175

MAP NUMBER.....2175
SITE NAME.....Sierra Placer de Guadalupe
STATE.....CHIHUAHUA
LATITUDE.....29-20- N LONGITUDE.....105-24- W
COMMODITIES.....AU AG PB ZN
MAJOR....AU AG MINOR....PB ZN
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02176

MAP NUMBER.....2176
SITE NAME.....Santo Domingo
STATE.....CHIHUAHUA

LATITUDE.....30-32-10N LONGITUDE.....106-47-37W
COMMODITIES.....PB AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCES

Clark and Goodell, 1983.

Guild, 1981.

MRDS RECORD NUMBER....MX02178

MAP NUMBER.....2178
SITE NAME.....Temoris
STATE.....CHIHUAHUA
LATITUDE.....27-17- N LONGITUDE.....108-16- W
COMMODITIES.....HG
MAJOR.....HG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Guild, 1981.

MRDS RECORD NUMBER....MX02179

MAP NUMBER.....2179
SITE NAME.....Terrenates
SYNONYM NAME.....Zona de Las Varas, Campo Grande, Mina La Venganza,
Ocateca, Atravisada.
DISTRICT/AREA.....Terrenates/Buenaventura
STATE.....CHIHUAHUA
LATITUDE.....29-41-56N LONGITUDE.....106-47-36W
COMMODITIES.....MN
MAJOR.....MN
ORE MATERIALS.....pyrolusite, psilomelane, cryptomelane,
hollandite(?), wad
GENERAL ANALYTICAL DATA.....30-43% Mn, Max: 70% Mn, 350-850 ppm Tl.
PRODUCTION.....M
EXPLORATION AND DEVELOPMENT COMMENTS.....No significant production
until 1955.
DEPOSIT MODEL.....Epithermal Mn
USGS MODEL NUMBER.....25g
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION.....Mn oxides in NW trending vein system
covering 5 x 10 KM area. Numerous ore bodies 0.5-0.6 M wide,
laterally continuous but low grade. Ore minerals occur as
fracture-fillings in breccia zones, in extremely localized high-
grade ore bodies (e.g. Mina La Venganza) and in well-defined Mn
oxide veins of shallow depth. At Campo Grande, several parallel
ore bodies with average width of 2 M were mined to 20 M depth.
HOST ROCK AGE.....TERT
HOST ROCK TYPE.....andesitic and rhyolitic flows and tuffs
GANGUE MINERALS.....calcite, barite, quartz, gypsum, hematite
REFERENCES

Clark and Goodell, 1983.

Cox and Singer, 1986.

Garcia-Gutierrez and Garcia-Gutierrez, 1969.

Guild, 1981.

Jimenez V., 1956.

McAnulty, 1969.

Salas, 1975.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	40.000 TONS	1953-1954	38% MN, 20% SILICA
ORE MN	25.000 TONS	1953-1954	43% MN, 8% SILICA

SOURCE OF PRODUCTION INFORMATION.....Jimenez, 1956.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE MN	500.000 MT	1969	>35% MN
ORE MN	500.000 MT	1969	LOW GRADE

RESERVES COMMENTS.....Large tonnage of milling-grade ore
on dumps.

SOURCE OF RESERVES INFORMATION.....McAnulty, 1969.

MRDS RECORD NUMBER....MX02180

MAP NUMBER.....2180
SITE NAME.....Tosisihua
DISTRICT/AREA.....Coyame
STATE.....CHIHUAHUA
LATITUDE.....29-47- N LONGITUDE.....105-22- W
COMMODITIES.....PB AG
MAIN....PB AG
DEPOSIT MODEL.....Zn-Pb Skarn
USGS MODEL NUMBER.....18c
DEPOSIT SIZE.....SMALL

REFERENCES

Guild, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX02182

MAP NUMBER.....2182
SITE NAME.....Uruachic
SYNONYM NAME.....Mines: El Alacran, Las Animas, Santa Rosa, Nueva
Union (Restauradora)
DISTRICT/AREA...../Uruachic
STATE.....CHIHUAHUA
LATITUDE.....27-52- N LONGITUDE.....108-13- W
COMMODITIES.....AG AU PB ZN CU
MAJOR....AG MINOR....AU PB ZN CU
ORE MATERIALS.....argentite, stephanite, argentiferous
tetrahedrite, native silver; native gold, galena, sphalerite,
chalcopryrite
GENERAL ANALYTICAL DATA.....High grade selected ore: 11.34-17.01
kg/ton Ag; "Second class" ore: 2.83-5.67 kg/ton Ag; Ore at Las
Animas ran: 5.67-7.08 kg/ton Ag.
PRODUCTION.....S
DEPOSIT MODEL.....Creede Epithermal Vein
USGS MODEL NUMBER.....25b
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....El Alacran: Ag-veins in fractures cutting
diabases and propylitized andesites. Argentite, stephanite, arg.
tetrahedrite, native Ag, galena and sphalerite in quartz-calcite-
pyrite gangue. Main veins named Veta Negra and Veta Blanca due to

color of ore. Las Animas: Ag-bearing vein in andesite. Argentite and arg. tetrahedrite associated with large amounts of sphalerite and good gold values. Santa Rosa: Bonanza-type ore body. 1,500,000 oz of Ag taken from ore body only 50 FT long. Nueva Union: (aka Restauradora) Similar to El Alacran.

HOST ROCK AGE.....TERT

HOST ROCK TYPE.....andesite-rhyolite flows and breccias, diabases

IGNEOUS ROCK AGE.....TERT

IGNEOUS ROCK TYPE.....andesites, diabases, rhyolites

GANGUE MINERALS.....quartz, calcite, pyrite

SIGNIFICANT ALTERATION.....propylitic

REFERENCES

Cox and Singer, 1986.

Gonzalez R., 1956.

Guild, 1981.

Mosier, Menzie and Kleinhampl, 1986.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
AG	57.5385 KG	-1956	
ORE AG PB CU AU	.371 TONS	1929-1930	17.5 G/TON AG, 5.6 G/TON AU,
			5.3% PB
AG	.903 KG	1929-1930	SEE COMMENTS
AU	.001 KG	1929-1930	
PB	.546 KG	1929-1930	
CU	.011 KG	1929-1930	
ORE AU AG PB ZN	33.000 MT	1928-1941	32.0 G/T AU, 1357.0 G/T AG,
			0.15% CU, 1.6% PB, 0.2% ZN

PRODUCTION COMMENTS.....Item 1: Total prod. from Santa Rosa ore body; Item 2: 1929-1930 tonnage for Nueva Union; Items 3-6: Metals recovered from ore listed in item 2; Item 7: Separate estimate.

SOURCE OF PRODUCTION INFORMATION.....Gonzalez, 1956; Mosier, et.al., 1986 (Item 7).

MRDS RECORD NUMBER....MX02184

MAP NUMBER.....2184

SITE NAME.....Los Lamentos

SYNONYM NAME.....Mines: Erupcion, Ahumada, La Victoria, El Labrador, Ano Nuevo y Prosperidad; Ore Bodies: Berenda, Mexico

DISTRICT/AREA.....Sierra de Los Lamentos/Villa Ahumada

STATE.....CHIHUAHUA

LATITUDE.....30-36-15N LONGITUDE.....105-49-15W

COMMODITIES.....PB AG V ZN FE MO CU

MAJOR.....PB AG MINOR.....V POTEN.....ZN FE

OCCUR.....MO CU

ORE MATERIALS.....anglesite, cerussite, plumbojarosite, (galena); vanadinite, descloizite; willemite, hydrozincite, (sphalerite), hematite, goethite, limonite, (pyrite); wulfenite, (brochantite)

GENERAL ANALYTICAL DATA.....19-65% Pb, @1 oz Ag per 1% Pb, up to 12% vanadium oxide.

PRODUCTION.....S

EXPLORATION AND DEVELOPMENT COMMENTS.....Inactive (1978).

DEPOSIT MODEL.....Polymetallic Replacement

USGS MODEL NUMBER.....19a

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Erupcion-Ahumada manto: continuous pipe-like ore body in lower part of Los Lamentos Fm. Ore body dips 14 degrees N, parallel to bedding. Upper portions of the pipe (Erupcion Mine) measured 10 M X 50 M in cross section and consisted of massive and disseminated anglesite +/- gypsum and sulfur. Masses of high-grade anglesite contained up to 65% Pb. Large bodies of plumbojarosite assaying 19% Pb were also found. In the lower portions of the ore body (Ahumada Mine) the ore consisted of hematite + cerussite (ave. 30% Pb) with minor wulfenite, vanadinite and descloizite and rare residual masses of galena. Several stopes consisted of spongy masses of vanadinite needles in ore containing 65% Pb and 12% vanadium oxide. Zn minerals present include willemite, hydrozincite and one occurrence of sphalerite + pyrite. One specimen of brochantite (hydrous copper sulfate) was found.

HOST ROCK AGE.....CRET

HOST ROCK TYPE.....dolomitized limestone

GANGUE MINERALS.....calcite, dolomite, gypsum, native sulfur, Fe-oxides

SIGNIFICANT ALTERATION.....Dolomitization associated with ore pipes.

REFERENCES

Clark and de la Fuente, 1978.

Foshag, 1934.

Gonzalez R., 1956.

Guild, 1981.

Salas, 1975.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	CONTAINED METAL
ORE AG PB	28.005 MT	1929	385 KG AG, 16,285 KG PB
ORE AG PB	35.879 MT	1930	15,794 KG AG, 7,502,610 KG PB

PRODUCTION COMMENTS.....Maximum grade: 409 g/MT Ag, 25.91% Pb.

SOURCE OF PRODUCTION INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX02186

MAP NUMBER.....2186

SITE NAME.....Wilkie

STATE.....CHIHUAHUA

LATITUDE.....30-09- N LONGITUDE.....108-13- W

COMMODITIES.....MN

MAIN...MN

PRODUCTION.....U

DEPOSIT MODEL.....Epithermal Mn(?)

USGS MODEL NUMBER.....25g?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Fissure deposit.

REFERENCES

Guild, 1981.

Trask and Rodriguez, 1948.

MRDS RECORD NUMBER...MX02187

MAP NUMBER.....2187
 SITE NAME.....Yoquivo
 SYNONYM NAME.....Concamena, Cojurichic, San Antonio, San Francisco,
 Esperanza, Numero 2, C.Q. y Don Carlos.
 DISTRICT/AREA.....Yoquivo/Ocampo
 STATE.....CHIHUAHUA
 LATITUDE.....28-03-30N LONGITUDE.....108-04-00W
 COMMODITIES.....AG AU CU PB ZN
 MAJOR.....AG AU MINOR.....CU PB ZN
 ORE MATERIALS.....argentite, stephanite, stromeyerite,
 native Ag, native Au, electrum; pyrite, chalcopryite, malachite,
 chrysocolla, covellite, bornite, galena, sphalerite
 GENERAL ANALYTICAL DATA.....0.35 oz Au/ton, 36.0 oz Ag/ton, Au:Ag
 ratio = 1:74, (Buchanan, 1981).
 PRODUCTION.....S
 DEPOSIT MODEL.....Comstock Epithermal Vein(?)
 USGS MODEL NUMBER.....25c?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Ore shoots have horizontal to vertical
 ratio of 2:1. Vertical extent of ore: 295 M. Max. vein width: 12
 M. Post-ore calcite in veins. Data on individual veins; San
 Antonio vein: 1.2-12.0 M wide. N 14 E, 75 SE. Quartz + sulfides of
 Zn, Pb and Ag assoc. with calcite, Fe oxides and chalcedony. La
 Esperanza vein: Max. width 5 M at intersection with San Francisco
 vein. Same attitude as San Antonio vein. Contains breccia
 fragments of wall rocks and sulfides of Cu, Ag, Zn and Pb in
 silicified matrix. Au values assoc. with Ag sulfides. Partially
 oxidized. C.Q. y Don Carlos veins: Independent system, N 35 E, 75
 SE. Variable width, max. 3.5 M. Hosted in augite andesite. Primary
 sulfides of Ag, Pb and Zn + native Au in quartz. Numerous altered
 fragments of andesite, locally pulverized by post-min. movement.
 Veins occupy fracture system limited by major fault running N 55
 W, 65 NE.
 HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....andesite flows and tuff, latite flows
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....andesite, latite, rhyolite
 GANGUE MINERALS.....quartz, adularia, calcite, chalcedony;
 pyrite
 SIGNIFICANT ALTERATION.....propylitic, potassic, argillic, silicic

REFERENCES

Buchanan, 1981.

Gonzalez R., 1956.

Guild, 1981.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE AU AG	150.000 TONS	-1981	0.35 OZ AU/TON, 36.0 OZ AG/TON
ORE AU AG	75.000 TONS	1908-1956	10.8 G/TON AU, 1119 G/TON AG

AU	.810	KG	1908-1956
AG	83.925	KG	1908-1956

SOURCE OF PRODUCTION INFORMATION.....Buchanan, 1981; Gonzalez, 1956.

MRDS RECORD NUMBER....MX02189

MAP NUMBER.....2189
 SITE NAME.....Zona de Contencion
 STATE.....CHIHUAHUA
 LATITUDE.....30-07-36N LONGITUDE.....106-49-14W
 COMMODITIES.....PB ZN AG AU CU
 MAJOR.....PB ZN AG MINOR.....AU CU
 DEPOSIT MODEL.....Zn-Pb Skarn
 USGS MODEL NUMBER.....18c
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Clark and Goodell, 1983.
 Guild, 1981.

MRDS RECORD NUMBER....MX02192

MAP NUMBER.....2192
 SITE NAME.....Sierra de Enmedio
 DISTRICT/AREA.....Janos
 STATE.....CHIHUAHUA
 LATITUDE.....30-59- N LONGITUDE.....108-36- W
 COMMODITIES.....MN
 MAJOR.....MN
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 REFERENCES
 Cox and Singer, 1986.
 Salas, 1975.

MRDS RECORD NUMBER....MX02193

MAP NUMBER.....2193
 SITE NAME.....Ascencion
 DISTRICT/AREA.....Ascencion
 STATE.....CHIHUAHUA
 LATITUDE.....30-55- N LONGITUDE.....107-35- W
 COMMODITIES.....CU AG
 MAIN....CU AG
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX02194

MAP NUMBER.....2194
 SITE NAME.....Guadalupe Bravo
 DISTRICT/AREA.....Guadalupe
 STATE.....CHIHUAHUA
 LATITUDE.....31-18- N LONGITUDE.....106-10- W
 COMMODITIES.....AU AG
 MAIN....AU AG

DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX02195

MAP NUMBER.....2195
SITE NAME.....Sierra de Cuilman
DISTRICT/AREA.....Guadalupe
STATE.....CHIHUAHUA
LATITUDE.....30-58- N LONGITUDE.....105-47- W
COMMODITIES.....PB AG
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX02196

MAP NUMBER.....2196
SITE NAME.....Casas Grandes (Pb-Zn)
DISTRICT/AREA...../Casas Grandes
STATE.....CHIHUAHUA
LATITUDE.....30-23-18N LONGITUDE.....107-54-47W
COMMODITIES.....PB ZN AG AU CU
MAJOR.....PB ZN AG MINOR.....AU CU
DEPOSIT MODEL.....Polymetallic Vein
USGS MODEL NUMBER.....22c
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Sparse Pb-Ag mineralization associated
with calcite and barite in veins trending N-S with vertical dip.
Ave. width: 1 M. (Gonzalez, 1956) Note: This reference makes no
mention of Zn, Au or Cu mineralization, although these commodities
are listed in Salas (1975).
HOST ROCK TYPE.....limestone
GANGUE MINERALS.....calcite, barite
REFERENCES
Clark and Goodell, 1983.
Gonzalez R., 1956.
Salas, 1975.

MRDS RECORD NUMBER....MX02197

MAP NUMBER.....2197
SITE NAME.....Galeana
DISTRICT/AREA.....Galeana
STATE.....CHIHUAHUA
LATITUDE.....30-12- N LONGITUDE.....107-47- W
COMMODITIES.....AG AU
MAIN...AG AU
DEPOSIT MODEL.....Epithermal Vein(?)
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX02198

MAP NUMBER.....2198
SITE NAME.....Temosachi

DISTRICT/AREA.....Madera
 STATE.....CHIHUAHUA
 LATITUDE.....29-20- N LONGITUDE.....108-30- W
 COMMODITIES.....CU
 MAIN....CU
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX02199

MAP NUMBER.....2199
 SITE NAME.....La Boquilla
 DISTRICT/AREA.....Ojinaga
 STATE.....CHIHUAHUA
 LATITUDE.....29-25- N LONGITUDE.....104-54- W
 COMMODITIES.....CU
 MAIN....CU
 DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX02200

MAP NUMBER.....2200
 SITE NAME.....Milagros
 DISTRICT/AREA.....Madera
 STATE.....CHIHUAHUA
 LATITUDE.....28-42- N LONGITUDE.....108-32- W
 COMMODITIES.....AU AG
 MAIN....AU AG
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX02203

MAP NUMBER.....2203
 SITE NAME.....Sierra Gomez
 SYNONYM NAME.....Site N-2
 DISTRICT/AREA.....Aldama
 STATE.....CHIHUAHUA
 LATITUDE.....28-58-20N LONGITUDE.....105-42-25W
 COMMODITIES.....U NI
 MAJOR.....U POTEN.....NI
 ORE MATERIALS.....carnotite, metayuyamunite, uranophane;
 garnierite
 GENERAL ANALYTICAL DATA.....Mineralized samples contained: 320-27000
 ppm U, 10-320 ppm Th; one sample with garnierite ran 1.70% Ni;
 possibly significant values of Mo and V also found.
 DEPOSIT MODEL.....Carbonate-Hosted U
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Disseminated hexavalent U minerals in
 breccia zones along thrust faults in massive limestone. U
 mineralization associated with Fe-oxides and calcite +/- fluorite.
 U minerals also found in silicified and iron-enriched collapse

breccia associated with paleokarst features in limestone. Zonation in collapse breccia consists of loosely cemented limestone breccia core, surrounded by thin (5 CM) garnierite-calcite zone and outer zone of purple fluorite (0.5 CM).

HOST ROCK AGE.....CRET (MIDDLE ALBIAN)

HOST ROCK TYPE.....thin bedded calcareous mudstone and wackestone

GANGUE MINERALS.....calcite, pyrite, chalcedony, fluorite, selenite

REFERENCES

Mitchell, Goodell, LeMone and Pingitore, 1981.

Salas, 1975.

MRDS RECORD NUMBER....MX02205

MAP NUMBER.....2205

SITE NAME.....Los Organos

SYNONYM NAME.....San Miguel, Antonio Farias

DISTRICT/AREA.....Camargo

STATE.....CHIHUAHUA

LATITUDE.....28-17- N LONGITUDE.....104-55- W

COMMODITIES.....MN

MAJOR.....MN

GENERAL ANALYTICAL DATA.....25-35% Mn

PRODUCTION.....S

DEPOSIT MODEL.....Epithermal Mn

USGS MODEL NUMBER.....25g

DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....Two veins in rhyolite. Main vein: 250 M long (continuous for 150 M), 60-240 CM wide (ave: 120 CM). Vein branches at S end. Ore consists of "black calcite".

HOST ROCK TYPE.....rhyolite

REFERENCES

Salas, 1975.

Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.300 MT	-1943	41-43% MN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02206

MAP NUMBER.....2206

SITE NAME.....Moris

DISTRICT/AREA.....Moris

STATE.....CHIHUAHUA

LATITUDE.....28-40- N LONGITUDE.....108-29- W

COMMODITIES.....AU AG

MAIN....AU AG

DEPOSIT MODEL.....Epithermal Vein(?)

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

REFERENCE....Salas, 1975.

MRDS RECORD NUMBER....MX02207

MAP NUMBER.....2207

SITE NAME.....Ocampo
 DISTRICT/AREA...../Ocampo
 STATE.....CHIHUAHUA
 LATITUDE.....28-12-45N LONGITUDE.....108-22-30W
 COMMODITIES.....AG AU PB ZN CU
 MAJOR.....AG AU OCCUR.....PB ZN CU
 ORE MATERIALS.....argentite, native Au, electrum,
 tetrahedrite, stephanite; minor sphalerite, chalcopryrite, galena
 GENERAL ANALYTICAL DATA.....0.25 oz/ton Au, 9.5 oz/ton Ag, Au:Ag
 ratio-1:60, (Buchanan, 1981).
 PRODUCTION.....M
 DEPOSIT MODEL.....Comstock Epithermal Vein
 USGS MODEL NUMBER.....25c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Steeply dipping quartz veins up to 10-12 M
 wide in shear zones along major NW striking faults. Major
 producing zone (W side of Arroyo Ocampo) is 2.5 KM wide and 4 KM
 long. Minor NE striking fissure-vein trend in the N part of the
 area. Vertical extent of ore bodies is at least 600 M. Ore
 minerals: argentite + smaller amounts of gold. Minor base metal
 sulfides occur distally and in andesite-quartz breccia.
 HOST ROCK TYPE.....andesite flows and tuff, rhyolite tuff
 IGNEOUS ROCK AGE.....EO
 IGNEOUS ROCK TYPE.....andesites, rhyolites, tuffs
 GANGUE MINERALS.....quartz, calcite, pyrite
 SIGNIFICANT ALTERATION.....propylitic, argillic, phyllic, silicic
 REFERENCES
 Bockoven, 1981.
 Buchanan, 1981.
 Gonzalez R., 1956.
 Knowling, 1976.
 Salas, 1975.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE AU AG	700.00 TONS	-1981	0.25 OZ AU, 9.5 OZ AG/TON
AU	175.00 TOZ	-1981	
AG	6650.00 TOZ	-1981	

SOURCE OF PRODUCTION INFORMATION.....Buchanan, 1981.

MRDS RECORD NUMBER....MX02213

MAP NUMBER.....2213
 SITE NAME.....San Antonio
 SYNONYM NAME.....(Santa Eulalia-East Camp)
 DISTRICT/AREA.....Santa Eulalia
 STATE.....CHIHUAHUA
 LATITUDE.....28-35-40N LONGITUDE.....105-46-10W
 COMMODITIES.....AG ZN PB CU SN V W NB
 MAJOR.....AG ZN PB MINOR.....CU SN V POTEN.....W
 OCCUR.....NB
 ORE MATERIALS.....silver-rich oxide ore, sphalerite, galena,
 chalcopryrite, cassiterite, vanadium-bearing silicates, wolframite,
 columbite
 GENERAL ANALYTICAL DATA.....10.7 oz/MT Ag, 8.4% Pb, 7.2% Zn (district
 averages); San Antonio Tin Chimney stopes averaged 1.5% Sn with

max. values up to 4-5%. Assays from different parts of the mine showed 0.23-0.50% V.

PRODUCTION.....L

EXPLORATION AND DEVELOPMENT COMMENTS.....Early production (prior to @ 1925) came from oxidized ores. Later mining exploited sulfide ores. Major tin ore bodies were mined out by the early 1940's.

DEPOSIT MODEL.....Polymetallic Replacement

USGS MODEL NUMBER.....19a

DEPOSIT SIZE.....LARGE

DEPOSIT DESCRIPTION.....Mineralization dominantly in the form of a tabular calc-silicate, Zn-rich chimney that is zoned across the San Antonio Dike from a skarn assemblage to a massive sulfide. Chimney is crosscut by smaller Pb-rich mantos of lesser economic importance. Skarn silicates are zoned in relation to the dike, grading from a narrow epidote-chlorite-fluorite zone adjacent to the dike outward into an actinolite rich (+/- grossular) zone, which in turn grades outward into a grossular-rich (+/- actinolite) zone. Silicates locally grade into massive sulfide ores, but may show sharp outer contacts with limestone. Silicate bodies contain economic amounts of sphalerite, galena, pyrite and minor amounts of chalcopyrite and arsenopyrite. Massive sulfide chimneys composed of sphalerite and pyrite and mantos consisting of galena and pyrrhotite with sphalerite, both occur locally outside of the silicate zones. Several tin-chimneys and vein replacement lodes also occur on upper levels of the mine. Major tin body was a chimney over 300 M in vertical extent adjacent to the San Antonio Dike. Mineral assemblage consisted of cassiterite associated with specularite, quartz, topaz, fluorite, magnetite, tourmaline and wolframite. Significant amounts of vanadium associated with oxidized silicate ore.

HOST ROCK AGE.....CRET

HOST ROCK TYPE.....limestone

IGNEOUS ROCK AGE.....TERT

IGNEOUS ROCK TYPE.....felsite

GANGUE MINERALS.....Primary minerals at San Antonio mine (not including ore minerals): pyrite, pyrrhotite, arsenopyrite, magnetite, ilmenite, hematite, quartz, garnet, epidote, hedenbergite(?), tremolite, actinolite, idocrase(?), ilvaite, scapolite, topaz, tourmaline, orthoclase, muscovite, fluorite.

SIGNIFICANT ALTERATION.....Contact between limestone and silicate or sulfide bodies generally sharp. Limestone often exhibits a 1 CM thick bleached and recrystallized selvage.

REFERENCES

Cox and Singer, 1986.
Hewitt, 1943.
Maldonado and Megaw, 1983.

PRODUCTION COMMENTS.....See record for Santa Eulalia District (MRDS Record Number MX02161).

MRDS RECORD NUMBER....MX02214

MAP NUMBER.....2214

SITE NAME.....El Potosi

SYNONYM NAME.....Buena Tierra, (Santa Eulalia-West Camp)

DISTRICT/AREA.....Santa Eulalia

STATE.....CHIHUAHUA
LATITUDE.....28-36-45N LONGITUDE.....105-51-30W
COMMODITIES.....AG PB ZN CU
MAJOR.....AG PB ZN MINOR.....CU
ORE MATERIALS.....argentiferous(?) galena, sphalerite;
chalcopryrite; native silver, pyrrargyrite
GENERAL ANALYTICAL DATA.....1> sulfide ore: 230 g/MT Ag, 12% Pb, 11%
Zn, 30% Fe. 2> silicate ore: 50-150 g/MT Ag, 0.8-1.6% Pb, 1.4-1.6%
Zn. 3> oxide ore: 495-5320 g/MT Ag, 0.8-3.1% Pb, 1.8-3.0% Zn, 7.3-
11.9% Fe, 31.2% Mn; Hewitt (1968), p.253-254.
PRODUCTION.....L
DEPOSIT MODEL.....Polymetallic Replacement
USGS MODEL NUMBER.....19a
DEPOSIT SIZE.....LARGE
DEPOSIT DESCRIPTION.....Mineralization is dominantly in the form
of manto and chimney deposits localized by a complex interplay of
lithology, structure and intrusive bodies. Three major types of
ore mineralization are present: 1> "normal" sulfide ores composed
of pyrite, pyrrhotite, sphalerite and galena with sparse
chalcopryrite and arsenopyrite; mantos are Pb-Ag-rich and chimneys
are Zn-rich. 2> small irregular silicate bodies, scattered
throughout higher levels of the mine area, composed of fayalite,
ilvaite, magnetite and knebelite and containing economic amounts
of galena and sphalerite. The silicate bodies bear no zonal
relationship to the sulfide ores. 3> oxide ores consisting of
massive oxides and carbonates of Pb, Zn and Fe. These were
exploited mainly in the early days of the district. The ores are
Mn-rich and have a calcite gangue. A fourth, less important, type
of ore currently (1983) mined in the northern part of the El
Potosi area consists of highly manganiferous limestone with finely
disseminated native silver and pyrrargyrite. This material averages
2.5 oz/MT Ag and is used as a smelter flux.
HOST ROCK AGE.....CRET
HOST ROCK TYPE.....limestone
IGNEOUS ROCK AGE.....TERT
(26.6 M.Y., felsite; Date suspect due to alteration)
IGNEOUS ROCK TYPE.....felsite and diabase dikes and sills;
quartz monzonite pluton
GANGUE MINERALS.....pyrite, pyrrhotite, arsenopyrite, quartz,
calcite, gypsum, limonite, Mn-oxides, fayalite, ilvaite,
magnetite, knebelite, fluorite
SIGNIFICANT ALTERATION.....Alteration is very limited. Narrow zones
of silicification, bleaching, recrystallization and some minor
zones of hydrothermal dolomite.
REFERENCES
Cox and Singer, 1986.
Hewitt, 1968.
Maldonado and Megaw, 1983.
Skinner and Plate, 1915.
PRODUCTION COMMENTS.....See record for Santa Eulalia
district (MRDS Record Number MX02161).

MRDS RECORD NUMBER....MX02215
MAP NUMBER.....2215

SOURCE OF PRODUCTION INFORMATION.....Giles, 1983.

POTENTIAL RESOURCES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG	300.000 ST	1983	SEE BELOW

RESOURCES COMMENTS.....Potential based on extension of Fortuna and Santo Nino veins and adjacent Virgin Julieta and San David veins.

SOURCE OF RESOURCES INFORMATION.....Giles, 1983.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE AG	200.000 ST	1983	9.0 OZ/ST AG

RESERVES COMMENTS.....Reserves of Fortuna and Santo Nino veins as delineated in six levels to 210 meter depth with 2 meters averaged width.

SOURCE OF RESERVES INFORMATION.....Giles, 1983.

MRDS RECORD NUMBER....MX02219

MAP NUMBER.....2219

SITE NAME.....El Leon

DISTRICT/AREA.....San Pedro Corralitos/Casas Grandes

STATE.....CHIHUAHUA

LATITUDE.....30-36-58N LONGITUDE.....107-40-05W

COMMODITIES.....PB ZN AG AU CU MO FE

MAJOR....PB ZN MINOR....AG AU POTEN....CU MO FE

ORE MATERIALS.....galena, sphalerite, cerussite, wulfenite, mimetite, smithsonite, hemimorphite, pyrite, malachite, azurite, aurichalcite, auriferous limonite and hematite

DEPOSIT MODEL.....Polymetallic Replacement

USGS MODEL NUMBER.....19a

DEPOSIT SIZE.....MEDIUM

DEPOSIT DESCRIPTION.....Mineralization in the form of cavern fillings or mantos subparallel to bedding in limestone and , less commonly, in chimneys perpendicular to bedding. Highly altered diorite dikes form the footwall of some of the ore bodies, which are otherwise constrained to the limestone.

HOST ROCK AGE.....CRET

HOST ROCK TYPE.....limestone

IGNEOUS ROCK TYPE.....diorite dikes

REFERENCES

Clark and Goodell, 1983.

Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02220

MAP NUMBER.....2220

SITE NAME.....Sabinal

DISTRICT/AREA...../La Ascension

STATE.....CHIHUAHUA

LATITUDE.....30-55-35N LONGITUDE.....107-38-51W

COMMODITIES.....AU AG PB ZN

MAIN....AU AG MINOR....PB ZN

ORE MATERIALS.....native gold, argentite, cerargyrite, proustite, pyrargyrite, galena, sphalerite

DEPOSIT MODEL.....Polymetallic Vein

USGS MODEL NUMBER.....22c

DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Well-defined vein occupying fracture, 0.5-
 1.5 M thick. Banded ore consists of native gold, argentite,
 cerargyrite, proustite, pyrargyrite, galena, sphalerite, barite,
 calcite and quartz.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone
 GANGUE MINERALS.....barite, calcite, quartz
 REFERENCES
 Clark and Goodell, 1983.
 Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02221

MAP NUMBER.....2221
 SITE NAME.....Cinco de Mayo
 DISTRICT/AREA...../Casas Grandes
 STATE.....CHIHUAHUA
 LATITUDE.....30-40-15N LONGITUDE.....107-40-31W
 COMMODITIES.....PB AG ZN CU
 MAJOR.....PB AG ZN MINOR.....CU
 ORE MATERIALS.....argentiferous galena, sphalerite, Cu
 minerals
 DEPOSIT MODEL.....Polymetallic Vein
 USGS MODEL NUMBER.....22c
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Silver-bearing base metal veins in
 sedimentary terrane. Strike length: 500-2500 meters.
 HOST ROCK TYPE.....limestone(?)
 IGNEOUS ROCK TYPE.....andesite
 GANGUE MINERALS.....quartz, fluorite, calcite
 REFERENCES
 Clark and Goodell, 1983.
 Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02222

MAP NUMBER.....2222
 SITE NAME.....Guaynopita
 DISTRICT/AREA...../Madera
 STATE.....CHIHUAHUA
 LATITUDE.....29-24-15N LONGITUDE.....108-23-30W
 COMMODITIES.....CU AG AU PB
 MAIN...CU AG AU MINOR...PB
 EXPLORATION AND DEVELOPMENT COMMENTS.....Reported inactive, 1956.
 DEPOSIT MODEL.....Porphyry Cu, Skarn-Related(?)
 USGS MODEL NUMBER.....18a?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Two ore systems present: 1> Cu-Ag-Au
 mineralization along contact between limestone and granites. 2>
 Cu-Ag-Pb +/- Au mineralization in quartz veins associated with
 similarly mineralized diabase porphyry dikes. Veins crosscut
 limestone/granite contact at about a 45 degree angle. Disseminated
 chalcopryite found in granite.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone

IGNEOUS ROCK TYPE.....granite and aplites cut by diabase
 porphyry dikes
 GANGUE MINERALS.....garnet, epidote, quartz
 SIGNIFICANT ALTERATION.....Country rock marmorized and serpentinized
 along granitic contact.
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02223

MAP NUMBER.....2223
 SITE NAME.....Barrial
 SYNONYM NAME.....Barreal
 DISTRICT/AREA...../La Ascension
 STATE.....CHIHUAHUA
 LATITUDE.....31-18-00N LONGITUDE.....107-07-30W
 COMMODITIES.....CU AG FE
 MAIN....CU AG FE
 ORE MATERIALS.....Cu carbonates, Ag and Fe sulfides, Fe
 oxides
 PRODUCTION.....N
 DEPOSIT MODEL.....Polymetallic Vein(?)
 USGS MODEL NUMBER.....22c?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Cu-Ag veins trending N60W with nearly
 vertical dips in Cretaceous limestone. Minerals present: Cu
 carbonates, Ag and Fe sulfides, Fe oxides, calcite and quartz.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone
 GANGUE MINERALS.....calcite, quartz
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02224

MAP NUMBER.....2224
 SITE NAME.....Sierra de los Cantilas
 DISTRICT/AREA...../La Ascension
 STATE.....CHIHUAHUA
 LATITUDE.....31-12- N LONGITUDE.....107-33- W
 COMMODITIES.....CU PB AG
 MAIN....CU PB AG
 PRODUCTION.....N
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Well-defined veins 0.5-1.5 M wide. Cu-Pb
 minerals with Ag values in gangue of calcite, barite and fluorite.
 Subeconomic.
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK TYPE.....andesites
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02225

MAP NUMBER.....2225
 SITE NAME.....Tutuaca
 DISTRICT/AREA...../Temosachic
 STATE.....CHIHUAHUA

LATITUDE.....28-30-15N LONGITUDE.....108-10-15W
COMMODITIES.....AU AG
MAIN....AU AG
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....High grade Au-Ag deposits. Erratic quartz
 veins in pre-existing fractures cutting andesites.
HOST ROCK TYPE.....andesite
IGNEOUS ROCK AGE.....TERT
IGNEOUS ROCK TYPE.....andesite
GANGUE MINERALS.....quartz
REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER...MX02226

MAP NUMBER.....2226
SITE NAME.....El Letrero
DISTRICT/AREA...../Temosachic
STATE.....CHIHUAHUA
LATITUDE.....28-23-15N LONGITUDE.....108-03-45W
COMMODITIES.....AG CU
MAJOR.....AG MINOR.....CU
ORE MATERIALS.....freibergite
PRODUCTION.....U
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Silicified breccia along fault zone 3 to 4
 meters wide, trending N 40 E with NW dip. Veinlets of
 argentiferous tetrahedrite (freibergite) and pyrite in quartz.
GANGUE MINERALS.....quartz, pyrite
REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER...MX02227

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MAP NUMBER.....2227
SITE NAME.....Cinco de Abril
DISTRICT/AREA...../Temosachic
STATE.....CHIHUAHUA
LATITUDE.....28-30-00N      LONGITUDE.....108-24-00W
COMMODITIES.....AU      AG
MAIN....AU      AG
PRODUCTION.....U
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Au-Ag-bearing quartz vein (Veta Columna).
GANGUE MINERALS.....quartz
REFERENCE....Gonzalez R., 1956.
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MRDS RECORD NUMBER...MX02228

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MAP NUMBER.....2228
SITE NAME.....Santa Brigida
SYNONYM NAME.....Mines: Oregon, Protectora, Cuatro Hermanos, Tres
                  Hermanos
DISTRICT/AREA...../Temosachic
STATE.....CHIHUAHUA
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LATITUDE.....28-21-45N LONGITUDE.....108-26-15W
 COMMODITIES.....AU AG
 MAJOR.....AU AG
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Identical to Tutuaca deposit.
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK TYPE.....andesites
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02229

MAP NUMBER.....2229
 SITE NAME.....Magistral
 DISTRICT/AREA...../Temosachic
 STATE.....CHIHUAHUA
 LATITUDE.....28-27- N LONGITUDE.....108-08- W
 COMMODITIES.....AU
 MAJOR.....AU
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Vein(?)
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Fault zone containing mineralized breccia
 100 M wide. Best ore in 2 M zone along lower fault boundary.
 Various Au quartz veins in fractures cutting andesites, rhyolites
 and ignimbrites.
 HOST ROCK TYPE.....andesites, rhyolites, ignimbrites
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....andesites, rhyolites, ignimbrites
 GANGUE MINERALS.....quartz
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02230

MAP NUMBER.....2230
 SITE NAME.....Dolores
 SYNONYM NAME.....Mines: San Francisco, Alma de Maria
 DISTRICT/AREA...../Madera
 STATE.....CHIHUAHUA
 LATITUDE.....28-51-00N LONGITUDE.....108-29-00W
 COMMODITIES.....AU AG PB CU
 MAJOR.....AU AG MINOR.....PB CU
 ORE MATERIALS.....native gold, galena, sphalerite,
 chalcopryite
 GENERAL ANALYTICAL DATA.....Ave. grade: 78.68 g/ton Au, 3,360 g/ton
 Ag, (Gonzalez, 1956). Production grade: 9.2 g/t Au, 483.0 g/t Ag,
 (Mosier, et.al., 1986).
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Placer gold disc. 1860,
 followed by small gold rush (>1000 gambusinos). Systematic
 development began in 1898.
 DEPOSIT MODEL.....Comstock Epithermal Vein
 USGS MODEL NUMBER.....25c

DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Gold veins and placers. Silicified veins
 6-8 M wide in diabase dikes. Zone of silicic and propylitic
 alteration forms a band 25 M on each side of vein deposits,
 obscuring the boundary between veins and wall rock. Alteration
 marked by Fe-oxides at surface. Veins trend NNW, over 1600 M long,
 122 M deep. Oxidized to 61-122 M depth.

HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....diabase
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....diabase; andesite, rhyolite, dacite,
 basalt

SIGNIFICANT ALTERATION.....silicic, propylitic

REFERENCES

Cox and Singer, 1986.
 Gonzalez R., 1956.
 Mosier, Menzie and Kleinhampl, 1986.
 Skinner and Plate, 1915.
 Wisser, 1966.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	VALUE
ORE AU AG	38.700 TONS	1909	\$1,160,531.67
ORE AU AG	50.741 TONS	1910	\$1,163,359.39
ORE AU AG	53.275 TONS	1911	\$1,041,145.99
ORE AU AG	46.778 TONS	1912	AVE: \$22.00/TON

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
AU	3.387 KG	1922-1930	SEE COMMENTS
AG	178.274 KG	1922-1930	" "
AU	.108 KG	1929-1930	" "
AG	4.844 KG	1929-1930	" "
PB	1.688 KG	1929-1930	" "
CU	.259 KG	1929-1930	" "
ORE AG CU PB	334.000 MT	1922-1936	9.2 G/T AU, 483.0 G/T AG, 0.15% CU, 0.1% PB

PRODUCTION COMMENTS.....Items 1 and 2: produced from
 368,386 tons of ore. Items 3-6: produced from 4,992 tons of ore.

SOURCE OF PRODUCTION INFORMATION.....Skinner and Plate, 1915; Gonzalez,
 1956; Mosier, et.al., 1986 (Item 7).

MRDS RECORD NUMBER....MX02232

MAP NUMBER.....2232
 SITE NAME.....Candamena
 SYNONYM NAME.....Mines: Nuestra Senora de Loreta, San Nicolas.
 DISTRICT/AREA...../Ocampo
 STATE.....CHIHUAHUA
 LATITUDE.....28-05-15N LONGITUDE.....108-15-45W
 COMMODITIES.....AG AU PB CU SB
 MAJOR.....AG MINOR.....AU PB CU OCCUR.....SB
 ORE MATERIALS.....Ag sulfides with minor Pb, Cu and Sb
 values; native gold
 PRODUCTION.....S
 DEPOSIT MODEL.....Creede Epithermal Vein
 USGS MODEL NUMBER.....25b

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Ag-bearing veins (2-5 M thick) and replaced wall rocks form lenses of various dimensions in fissure zone trending N 25 E. Closely spaced fractures dipping 70-80 degrees N cover area up to 60 M wide and 4 KM long. Ore: Ag sulfides with minor amounts of Pb, Cu and Sb in quartz matrix. Locally massive. Some native silver.

HOST ROCK TYPE.....andesites, andesitic breccia

IGNEOUS ROCK TYPE.....andesites

GANGUE MINERALS.....quartz, pyrite

SIGNIFICANT ALTERATION.....Mineralized zone marked by Fe-oxides along surface.

REFERENCE....Gonzalez R., 1956.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE/CONTAINED METAL
ORE AG	.018 TONS	1929	12,666 G/TON AG; 2.7% PB, 1.3% CU
ORE AG	1.999 TONS	1930	637 G/TON AG; 1209 KG AG
ORE AG	2.319 TONS	1951	0.538 KG AU, 2588.1 KG AG
ORE AG	2.636 TONS	1952	0.758 KG AU, 2277.7 KG AG

PRODUCTION COMMENTS.....Compania Minera La Candamena y Anaxis, S.A. (1929-1930). Compania Minera La Caridad, S.A. (1951-1952).

SOURCE OF PRODUCTION INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX02233

MAP NUMBER.....2233

SITE NAME.....Pinos Altos

SYNONYM NAME.....Mines: Mina Brava, Acrobato de Loco, San Eligio, San Nicandro, Providencia, Santo Nino, San Matias, Veta Grande, Transvaal.

DISTRICT/AREA...../Ocampo

STATE.....CHIHUAHUA

LATITUDE.....28-15-45N LONGITUDE.....108-17-30W

COMMODITIES.....AU AG CU

MAJOR.....AU AG POTEN.....CU

ORE MATERIALS.....native gold, native silver, silver sulfides, chalcopryrite

PRODUCTION.....Y

DEPOSIT MODEL.....Epithermal Vein

USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Three main veins in rhyolite and andesite country rocks. 1-15 M wide. Main veins are cut by a transverse system of veins having limited widths. Mineralization hosted in veins and quartz-cemented breccia.

HOST ROCK TYPE.....andesites and rhyolite flows

IGNEOUS ROCK TYPE.....andesites, rhyolites

GANGUE MINERALS.....quartz, pyrite

REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02234

MAP NUMBER.....2234

SITE NAME.....La Cienega

MRDS RECORD NUMBER....MX02238

MAP NUMBER.....2238
 SITE NAME.....Palmarejo
 SYNONYM NAME.....Juan de Dios
 DISTRICT/AREA...../Chinipas
 STATE.....CHIHUAHUA
 LATITUDE.....27-22-30N LONGITUDE.....108-25-15W
 COMMODITIES.....AG AU
 MAJOR.....AG AU
 ORE MATERIALS.....cerargyrite, bromargyrite, argentite,
 stephanite, native Ag, native Au
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Mined nearly continuously
 from time of discovery until at least 1956.
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Ag-Au veins along fractures in andesite,
 associated with granitic intrusive rocks. Two main veins. La
 Blanca vein: N 50.5 W strike, 50 SW dip, 1.3-4.0 M wide. La Prieta
 vein: E-W trend, max. of 22.5 M in width, mineralized in two
 sections separated by 3-9 M of barren material. Best ore in
 secondary veinlets in sections up to 100 M along the course of the
 main vein. Huge bonanza found where veins intersect, about 240 M
 from the portal of the Socorro tunnel (Descubridora Mine). Angle
 between veins at intersection: 51 degrees.
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....andesites, rhyolites; granitic intrusives
 GANGUE MINERALS.....quartz, pyrite, Mn oxide, minor Sb and As
 minerals
 REFERENCE....Gonzalez R., 1956.
 CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE AG AU	1.271 TONS	1922-1927	AVE: 1016 G/TON AG, 16.25 G/TON AU
AG	1.233 KG	1922-1927	
AU	.014 KG	1922-1927	

 PRODUCTION COMMENTS.....Work stoppages in 1924 and 1926
 hampered production.
 SOURCE OF PRODUCTION INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX02239

MAP NUMBER.....2239
 SITE NAME.....Agua Caliente
 DISTRICT/AREA...../Chinipas
 STATE.....CHIHUAHUA
 LATITUDE.....27-28-30N LONGITUDE.....108-33-30W
 COMMODITIES.....AG AU
 MAJOR.....AG AU
 PRODUCTION.....Y
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?

DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Similar to Palmarejo.
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02240

MAP NUMBER.....2240
 SITE NAME.....Tetamoa
 SYNONYM NAME.....San Agustin; El Durazno vein
 DISTRICT/AREA...../Chinipas
 STATE.....CHIHUAHUA
 LATITUDE.....27-34-00N LONGITUDE.....108-38-30W
 COMMODITIES.....AU AG
 MAJOR.....AU AG
 ORE MATERIALS.....native gold, Au tellurides
 PRODUCTION.....Y
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Gold veins in fractures cutting andesites.
 Associated with granitic intrusives. Nearby Ag-Au bearing vein(?)
 at San Agustin.
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....MIO-PLIO
 IGNEOUS ROCK TYPE.....andesites, granite, rhyolites
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02241

MAP NUMBER.....2241
 SITE NAME.....Santa Barbara
 DISTRICT/AREA...../Guazapares
 STATE.....CHIHUAHUA
 LATITUDE.....27-16-15N LONGITUDE.....108-15-45W
 COMMODITIES.....AG
 MAJOR.....AG
 PRODUCTION.....Y
 EXPLORATION AND DEVELOPMENT COMMENTS.....Rio Plata Mining Co.
 installed 25-stamp mill and 1560 M aquaduct to provide water for
 hydraulically powered concentrator.
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Veins in fractures cutting andesites.
 HOST ROCK AGE.....TERT
 HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....andesites, tuffs
 REFERENCE....Gonzalez R., 1956.
 ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE/CONTAINED METAL
ORE AG	6.010 TONS	1924	1,904 KG AG

 PRODUCTION COMMENTS.....Production for other years not
 known.
 SOURCE OF PRODUCTION INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX02242

MAP NUMBER.....2242
SITE NAME.....Rio Plata
DISTRICT/AREA...../Guazapares
STATE.....CHIHUAHUA
LATITUDE.....27-13-00N LONGITUDE.....108-17-30W
COMMODITIES.....AG
MAJOR.....AG
ORE MATERIALS.....argentite, bromargyrite, native Ag
GENERAL ANALYTICAL DATA.....High grade zones of secondary veinlets:
3,671-11,343 g/ton Ag.
PRODUCTION.....Y
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Ag veins in fractured andesites. General
attitude: N 30 W, 65 SW. 1.3-3.0 M wide. Best ore in secondary
veinlets, 0.3-2.5 M wide, along walls of larger veins. Ore:
argentite, bromargyrite and native Ag in quartz-calcite-iron oxide
matrix.
HOST ROCK AGE.....TERT
HOST ROCK TYPE.....andesites
IGNEOUS ROCK AGE.....TERT
IGNEOUS ROCK TYPE.....andesites, diorites, rhyolites, basalts
REFERENCES
Gonzalez R., 1956.
Skinner and Plate, 1915.
ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR
AG	422.137 OZ	1909
AG	834.862 OZ	1910
AG	846.698 OZ	1911
AG	291.963 OZ	1912

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	
ORE AG	43.447 TONS	1909-1912	ORE MILLED
ORE AG	49.424 TONS	1909-1912	TAILS CYANIDED

SOURCE OF PRODUCTION INFORMATION.....Skinner and Plate, 1915.

MRDS RECORD NUMBER....MX02243

MAP NUMBER.....2243
SITE NAME.....Septentrion
DISTRICT/AREA...../Guazapares
STATE.....CHIHUAHUA
LATITUDE.....27-11-00N LONGITUDE.....108-20-00W
COMMODITIES.....AG AU
MAIN...AG AU
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Principal vein: 10 M wide, very shallow
dip, exposed over a wide area.
HOST ROCK AGE.....TERT

HOST ROCK TYPE.....andesites
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....andesites
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02244

MAP NUMBER.....2244
 SITE NAME.....San Carlos
 DISTRICT/AREA...../Manuel Benavides
 STATE.....CHIHUAHUA
 LATITUDE.....29-02-45N LONGITUDE.....103-55-00W
 COMMODITIES.....FE
 MAJOR.....FE
 ORE MATERIALS.....hematite, magnetite
 DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Three irregular contact metamorphic
 deposits in limestone near granitic intrusives. Average
 dimensions: 50 M x 20-30 M x 5-20 M. Ore consists of hematite and
 magnetite associated with limonite, Fe-garnets, epidote, quartz
 and calcite.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....TERT
 IGNEOUS ROCK TYPE.....hornblende granite
 GANGUE MINERALS.....limonite, Fe-garnet, epidote, quartz,
 calcite
 REFERENCES
 Cox and Singer, 1986.
 Gomez R., 1961.
 Gonzalez R., 1956.

RESERVES

<u>ITEM</u>	<u>TONNAGE (x10³)</u>	<u>YEAR</u>	<u>GRADE</u>
ORE FE	182.00 MT	1961	52.76-62.0% FE

RESERVES COMMENTS.....Possible Ore.
 SOURCE OF RESERVES INFORMATION.....Gomez, 1961. Gonzalez, 1956.

MRDS RECORD NUMBER....MX02245

MAP NUMBER.....2245
 SITE NAME.....San Eduardo
 SYNONYM NAME.....Orebodyes: Ortega Num.1, 2 and 3, Rey del Fierro,
 Hematita.
 DISTRICT/AREA...../Coyame
 STATE.....CHIHUAHUA
 LATITUDE.....29-35-30N LONGITUDE.....105-13-45W
 COMMODITIES.....FE
 MAIN.....FE
 ORE MATERIALS.....hematite, magnetite, specularite
 GENERAL ANALYTICAL DATA.....Ore analysis: 65.9% Fe, 3.0% silica, 0.2%
 S, 0.025% P.
 PRODUCTION.....U
 DEPOSIT MODEL.....Fe Skarn
 USGS MODEL NUMBER.....18d

DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Several small, shallow contact metamorphic
 deposits.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK TYPE.....granitic intrusives
 GANGUE MINERALS.....quartz, calcite, grossularite, amphibole
 REFERENCES

Gomez R., 1961.
 Gonzalez R., 1956.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	38.00 MT	1961	65.1% FE, 0.20% S, 0.03% P

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

RESERVES COMMENTS.....Possible Ore.

MRDS RECORD NUMBER....MX02246

MAP NUMBER.....2246
 SITE NAME.....Chorreras
 DISTRICT/AREA...../Coyame
 STATE.....CHIHUAHUA
 LATITUDE.....29-30-00N LONGITUDE.....105-00-45W
 COMMODITIES.....FE

MAIN....FE

ORE MATERIALS.....hematite

GENERAL ANALYTICAL DATA.....60% Fe

PRODUCTION.....U

DEPOSIT MODEL.....Fe Skarn

USGS MODEL NUMBER.....18d

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Irregular contact metamorphic deposit at
 limestone/granite contact.

HOST ROCK AGE.....CRET

HOST ROCK TYPE.....limestone

IGNEOUS ROCK TYPE.....granitic intrusives

REFERENCES

Gomez R., 1961.
 Gonzalez R., 1956.

RESERVES

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE FE	100.00 MT	1961	60.0% FE
ORE FE	200.00 MT	1961	SEE ABOVE

RESERVES COMMENTS.....Item 1: Probable Reserves. Item 2:
 Possible Reserves.

SOURCE OF RESERVES INFORMATION.....Gomez, 1961.

MRDS RECORD NUMBER....MX02249

MAP NUMBER.....2249
 SITE NAME.....Guazapares
 DISTRICT/AREA...../Guazapares
 STATE.....CHIHUAHUA
 LATITUDE.....27-22-30N LONGITUDE.....108-17-00W
 COMMODITIES.....AU AG
 MAJOR.....AU AG

DEPOSIT MODEL.....Epithermal Vein
USGS MODEL NUMBER.....25?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Au-Ag-bearing epithermal veins along
 faults in andesite.
HOST ROCK TYPE.....andesites
IGNEOUS ROCK AGE.....TERT
IGNEOUS ROCK TYPE.....andesite, rhyolite
REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02250

MAP NUMBER.....2250
SITE NAME.....Sabinal
STATE.....CHIHUAHUA
LATITUDE.....30-56- N LONGITUDE.....107-35- W
COMMODITIES.....MN
MAIN....MN
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposits in rhyolite.
HOST ROCK TYPE.....rhyolite
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02251

MAP NUMBER.....2251
SITE NAME.....Salazar 2
STATE.....CHIHUAHUA
LATITUDE.....31-03- N LONGITUDE.....107-38- W
COMMODITIES.....MN
MAIN....MN
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposits in rhyolite.
HOST ROCK TYPE.....rhyolite
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02252

MAP NUMBER.....2252
SITE NAME.....Dominguez
STATE.....CHIHUAHUA
LATITUDE.....30-57- N LONGITUDE.....107-23- W
COMMODITIES.....MN
MAIN....MN
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposits in rhyolite.
HOST ROCK TYPE.....rhyolite
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02253

MAP NUMBER.....2253
SITE NAME.....Salazar 1
SYNONYM NAME.....Fresnal
STATE.....CHIHUAHUA
LATITUDE.....31-04- N LONGITUDE.....107-22- W
COMMODITIES.....MN
MAIN....MN
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposits in rhyolite.
HOST ROCK TYPE.....rhyolite
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02254

MAP NUMBER.....2254
SITE NAME.....Rancheria
STATE.....CHIHUAHUA
LATITUDE.....31-03- N LONGITUDE.....106-21- W
COMMODITIES.....MN
MAIN....MN
PRODUCTION.....U
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposits in rhyolite.
HOST ROCK TYPE.....rhyolite
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02255

MAP NUMBER.....2255
SITE NAME.....Refugio
STATE.....CHIHUAHUA
LATITUDE.....30-37- N LONGITUDE.....106-06- W
COMMODITIES.....MN
MAIN....MN
PRODUCTION.....S
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposits in volcanic rocks.
HOST ROCK TYPE.....volcanic
REFERENCE....Trask and Rodriguez, 1948.
PRODUCTION COMMENTS.....350 tons of ore stockpiled in
1943. None was known to have been sold or shipped.
SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02256

MAP NUMBER.....2256
SITE NAME.....Aguilar
STATE.....CHIHUAHUA

MRDS RECORD NUMBER....MX02259

MAP NUMBER.....2259
SITE NAME.....Sostenes
STATE.....CHIHUAHUA
LATITUDE.....29-15- N LONGITUDE.....105-17- W
COMMODITIES.....MN
MAIN....MN
PRODUCTION.....U
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Fissure deposit.
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02260

MAP NUMBER.....2260
SITE NAME.....Santa Rosa
SYNONYM NAME.....Coronel
STATE.....CHIHUAHUA
LATITUDE.....28-43- N LONGITUDE.....106-04- W
COMMODITIES.....MN
MAIN....MN
PRODUCTION.....U
DEPOSIT MODEL.....Not Classified
DEPOSIT SIZE.....SMALL
REFERENCE....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02264

MAP NUMBER.....2264
SITE NAME.....Socorro
STATE.....CHIHUAHUA
LATITUDE.....28-16- N LONGITUDE.....105-02- W
COMMODITIES.....MN
MAIN....MN
PRODUCTION.....N
DEPOSIT MODEL.....Epithermal Mn(?)
USGS MODEL NUMBER.....25g?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION.....Two systems: 1> W continuation of
Escondida vein system, relatively barren. 2> Two SE trending veins
up to 150 M long and 120 CM wide.
HOST ROCK TYPE.....volcanic(?)
REFERENCE....Trask and Rodriguez, 1948.
RESERVES

<u>ITEM</u>	<u>TONNAGE</u> ($\times 10^3$)	<u>YEAR</u>	<u>GRADE</u>
ORE MN	.500 MT	1948	25% MN

SOURCE OF RESERVES INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02265

MAP NUMBER.....2265
SITE NAME.....Escondida
STATE.....CHIHUAHUA
LATITUDE.....28-16- N LONGITUDE.....105-01- W
COMMODITIES.....MN
MAJOR....MN

GENERAL ANALYTICAL DATA.....20-25% Mn
 PRODUCTION.....S
 DEPOSIT MODEL.....Epithermal Mn
 USGS MODEL NUMBER.....25g
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Two main vein systems. 1> NE trending system 150 M long, containing lenses of ore 30 M or less in length and up to 1 M thick. 2> NW trending system consisting of two veins: (a) N 30 W vein with max. width of 6 M (ave: 1.5 M) and 40 M long ore body. (b) N 10 W, 80 E vein, 1 M wide with ore body 15 M long.

HOST ROCK TYPE.....volcanic(?)

REFERENCE....Trask and Rodriguez, 1948.

CUMULATIVE PRODUCTION

ITEM	TONNAGE (x10 ³)	YEARS	GRADE
ORE MN	.100 MT	-1943	UNKNOWN

SOURCE OF PRODUCTION INFORMATION.....Trask and Rodriguez, 1948.

MRDS RECORD NUMBER....MX02266

MAP NUMBER.....2266
 SITE NAME.....San Carlos
 DISTRICT/AREA...../Manuel Benavides
 STATE.....CHIHUAHUA
 LATITUDE.....29-02-30N LONGITUDE.....103-55-30W
 COMMODITIES.....PB ZN CU V
 MAJOR.....PB ZN MINOR.....CU V
 ORE MATERIALS.....galena, cerussite, sphalerite, pyrite, minor chalcopryite, malachite, vanadinite
 PRODUCTION.....S
 EXPLORATION AND DEVELOPMENT COMMENTS.....Pb-Zn orebodies mined by ASARCO before 1952: Produced Pb, Zn, minor Cu and a small amount of V.
 DEPOSIT MODEL.....Polymetallic Replacement
 USGS MODEL NUMBER.....19a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Fe-rich ore containing galena, cerussite, shalerite, pyrite, minor chalcopryite, malachite and small amounts of vanadinite occurs in metasomatic replacement deposits and cavern-fillings in limestone.
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK TYPE.....dioritic intrusives(?)
 GANGUE MINERALS.....hematite, limonite, calcite, quartz, selenite

REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02267

MAP NUMBER.....2267
 SITE NAME.....Unnamed occurrence
 DISTRICT/AREA...../Manuel Benavides
 STATE.....CHIHUAHUA
 LATITUDE.....29-02-30N LONGITUDE.....103-54-30W
 COMMODITIES.....HG
 MAIN....HG
 ORE MATERIALS.....cinnabar

DEPOSIT MODEL.....Not Classified
 DEPOSIT SIZE.....SMALL
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK TYPE.....rhyolitic rocks
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02269

MAP NUMBER.....2269
 SITE NAME.....Descubridora
 DISTRICT/AREA...../Chihuahua
 STATE.....CHIHUAHUA
 LATITUDE.....28-38-30N LONGITUDE.....105-58-15W
 COMMODITIES.....AG AU PB FE MN
 MAJOR.....AG AU MINOR.....PB POTEN.....FE MN
 GENERAL ANALYTICAL DATA.....340 g/MT Ag, 8.5 g/MT Au, minor Pb, large
 amounts of Fe and Mn.
 PRODUCTION.....S
 DEPOSIT MODEL.....Polymetallic Replacement
 USGS MODEL NUMBER.....19a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Manto-type orebody, max. thickness of 12
 M, consisting of limestone impregnated with ferromanganese
 minerals and carrying Ag + Au. Dip: 8-10 SE. Crosscut by calcite
 veinlets.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone
 GANGUE MINERALS.....calcite, selenite, clay minerals, iron-
 oxides
 REFERENCE....Gonzalez R., 1956.
 ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR	GRADE
ORE PB AG	1.774 MT	1930	8.5 G/MT AU, 295 G/MT AG
PB	1.967 KG	1930	RECOVERED
AG	.497 KG	1930	RECOVERED
AU	.015 KG	1930	RECOVERED

SOURCE OF PRODUCTION INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX02270

MAP NUMBER.....2270
 SITE NAME.....Placer de Santo Domingo
 DISTRICT/AREA...../Aldama
 STATE.....CHIHUAHUA
 LATITUDE.....29-01-15N LONGITUDE.....105-11-45W
 COMMODITIES.....AU
 MAJOR.....AU
 ORE MATERIALS.....gold
 DEPOSIT MODEL.....Placer Au
 USGS MODEL NUMBER.....39
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Placer gold deposit. Nuggets up to 4-5 g.
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02271

MAP NUMBER.....2271

SITE NAME.....Las Vigas
 SYNONYM NAME.....Alicia, Anexas de Alicia, Santa Elena
 DISTRICT/AREA...../Coyame
 STATE.....CHIHUAHUA
 LATITUDE.....29-16-15N LONGITUDE.....104-59-15W
 COMMODITIES.....CU PB AG AU
 MAJOR.....CU PB MINOR.....AG AU
 ORE MATERIALS.....chalcocite, azurite, malachite, cuprite,
 chalcopyrite
 GENERAL ANALYTICAL DATA.....Composite ore sample: 5.2% Cu, 41.1 g/MT
 Ag, 17 g/MT Au. High-grade ore up to 20-30% Cu.
 PRODUCTION.....S
 DEPOSIT MODEL.....Polymetallic Replacement(?)
 USGS MODEL NUMBER.....19a?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Three layers of sandstone and shale
 impregnated with carbonates, oxides and sulfides of Cu. 1.65-3.92
 M thick. Nodules and films of azurite, malachite and cuprite
 grading into chalcopyrite and chalcocite at depth (35-50 ft). Main
 ore beds cut by cross faults and veins of gypsum and calcite with
 minor Cu values.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....sandstone, shale
 GANGUE MINERALS.....calcite, gypsum
 REFERENCES

Gonzalez R., 1956.

Weed, 1902.

ANNUAL PRODUCTION

ITEM	TONNAGE(x10 ³)	YEAR	GRADE
ORE CU PB AG	.270 MT	1929	96 G/MT AG, 10% CU, 10% PB

SOURCE OF PRODUCTION INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX02272

MAP NUMBER.....2272
 SITE NAME.....Cuchillo Parado
 DISTRICT/AREA...../Coyame
 STATE.....CHIHUAHUA
 LATITUDE.....29-24-30N LONGITUDE.....104-55-45W
 COMMODITIES.....AG PB CU
 MAJOR.....AG PB MINOR.....CU
 GENERAL ANALYTICAL DATA.....Assay: 227 g/MT Ag, 36.7% Pb, minor Cu.
 PRODUCTION.....S
 DEPOSIT MODEL.....Polymetallic Replacement
 USGS MODEL NUMBER.....19a
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Cavern-fillings and metasomatic
 replacement deposits in limestone.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone
 REFERENCE....Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02273

MAP NUMBER.....2273
 SITE NAME.....Sierra Rica

DEPOSIT DESCRIPTION.....Cu skarns along limestone/diorite contact.
 Numerous Pb-Ag-bearing veinlets cut both rocks.
 HOST ROCK AGE.....CRET
 HOST ROCK TYPE.....limestone
 IGNEOUS ROCK AGE.....TERT?
 IGNEOUS ROCK TYPE.....diorite
 GANGUE MINERALS.....garnet

REFERENCES

Clark and Goodell, 1983.
 Gonzalez R., 1956.
 Salas, 1975.

ANNUAL PRODUCTION

ITEM	TONNAGE (x10 ³)	YEAR
AU	.001 KG	1929
AG	.162 KG	1929
PB	7.740 KG	1929
CU	93.588 KG	1929

PRODUCTION COMMENTS.....Production from 4,554 MT of ore.

SOURCE OF PRODUCTION INFORMATION.....Gonzalez, 1956.

MRDS RECORD NUMBER....MX02276

MAP NUMBER.....2276

SITE NAME.....Puerto del Aire

SYNONYM NAME.....La Esperanza, La Providencia

DISTRICT/AREA...../Aldama

STATE.....CHIHUAHUA

LATITUDE.....29-07-30N LONGITUDE.....105-21-45W

COMMODITIES.....AU U

MAJOR.....AU U

ORE MATERIALS.....native gold, uraninite

DEPOSIT MODEL.....Polymetallic Vein(?)

USGS MODEL NUMBER.....22c?

DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION.....Five subparallel veins separated by 15-30 M, with ore bands 0.1-0.15 M wide. Typical vein (La R. vein): 0.40-1.00 M wide, average @0.70 M, with shale footwall and porphyry hanging wall, composed of calcite and quartz. Native gold associated with uraninite occurs in 10 CM band along footwall.

HOST ROCK AGE.....JUR(?)

HOST ROCK TYPE.....shale

IGNEOUS ROCK AGE.....TERT(?)

IGNEOUS ROCK TYPE.....granodiorite(?) porphyry

GANGUE MINERALS.....calcite, quartz

REFERENCES

Gonzalez R., 1946.
 Gonzalez R., 1956.

MRDS RECORD NUMBER....MX02277

MAP NUMBER.....2277

SITE NAME.....Placer de Guadalupe

SYNONYM NAME.....La Virgen, Bolanos, San Blas

DISTRICT/AREA...../Aldama

STATE.....CHIHUAHUA

LATITUDE.....29-08-45N LONGITUDE.....105-26-00W

COMMODITIES.....AU U CU
 MAJOR.....AU U OCCUR.....CU
 ORE MATERIALS.....native gold, uraninite, pyrite, magnetite,
 (chalcopyrite)
 GENERAL ANALYTICAL DATA.....Ave. grade: 30 g/ton Au.
 PRODUCTION.....Y
 EXPLORATION AND DEVELOPMENT COMMENTS.....Major underground mining
 activity: 1887-1917.
 DEPOSIT MODEL.....Epithermal Vein
 USGS MODEL NUMBER.....25?
 DEPOSIT SIZE.....SMALL
 DEPOSIT DESCRIPTION.....Au and uraninite in quartz-calcite veins
 and stringers, NW-trending, up to 4 M wide. Porphyry hanging wall
 and shaley limestone footwall. Au and U values fluctuated with
 composition of gangue. Calcite > quartz: good values of Au and U.
 Calcite = quartz: lower grade Au-U. Quartz > calcite: Au with
 little or no U. Quartz only: barren.
 HOST ROCK AGE.....ECRET
 HOST ROCK TYPE.....shaley limestone
 IGNEOUS ROCK AGE.....TERT(?)
 IGNEOUS ROCK TYPE.....granodiorite(?) porphyry
 GANGUE MINERALS.....calcite, quartz, limonite, pyrolusite,
 malachite, uranophane
 SIGNIFICANT ALTERATION.....sericitic, kaolinitic
 REFERENCES
 Gonzalez R., 1946.
 Gonzalez R., 1956.

Appendix I

List of Deposits Sorted by Deposit Type

LIST OF ABBREVIATIONS -- ORE MINERALS

ANG	anglesite	EN	enargite	POW	powellite
ANHY	anhydrite	FAM	famatinite	PRGY	pyrargyrite
ARG	argentite	FL	fluorite	PROU	proustite
ASPY	arsenopyrite	FREI	freibergite	PSIL	psilomelane
ATA	atacamite	GAL	galena	PTC	pitchblende
AUT	autunite	GARN	garnierite	PY	pyrite
AZ	azurite	GOE	goethite	PYRO	pyrolusite
BAR	barite	GRAP	graphite	PYRR	pyrrhotite
BETA	betauranophane	GYP	gypsum	RAMS	ramsdellite
BEUD	beudantite	HEM	hematite	RD	rhodonite
BN	bornite	HEMI	hemimorphite	RHOD	rhodochrosite
BOUL	boulangerite	HOLL	hollandite	RICK	rickardite
BRAU	braunite	HOWL	howlite	SCH	scheelite
BRGY	bromargyrite	IRI	iriginite	SMIT	smithsonite
BUST	bustamite	KASO	kasolite	SPEC	specularite
CARN	carnotite	LIM	limonite	SPL	sphalerite
CASS	cassiterite	LUZ	luzonite	STEP	stephanite
CC	chalcocite	MACK	mackayite	STIB	stibnite
CER	cerussite	MAG	magnetite	STRO	stromeyerite
CHR	chromite	MAL	malachite	TENN	tennantite
CHRY	chrysocolla	MANG	manganite	TETR	tetrahedrite
CINN	cinnabar	MARC	marcasite	TNR	tenorite
CLIN	clinoptilolite	MARM	marmatite	TORB	torbernite
COLE	colemanite	MART	martite	ULEX	ulexite
CORO	coronadite	McAL	McAllisterite	URAN	uranophane
CPY	chalcopyrite	MGNS	magnesite	URNI	uraninite
CRGY	cerargyrite	MIM	mimetite	URNP	uranopilite
CRYP	cryptomelane	MOCT	moctezumite	VANA	vanadinite
CTNG	cuprotungstite	MOLY	molybdenite	WAD	wad
CUB	cubanite	MTORB	metatorbernite	WARD	wardsmithite
CUP	cuprite	MTY	metatyuyaminite	WEEK	weeksite
CV	covellite	NAG	nagyagite	WOLF	wolframite
DESC	descloizite	PETZ	petzite	WULF	wulfenite
DIG	digenite	PHIL	phillipsite	ZIPP	zippeite
ELEC	electrum	PLMJ	plumojarosite		
EMM	emmonsite	POLY	polybasite		

LIST OF ABBREVIATIONS -- HOST ROCKS

agglom	agglomerate	evp	evaporite	peg	pegmatite
alt.	altered	f.g.	fine grained	phy	phyllite
amph	amphibolite	fels	felsite	pp	porphyry
and	andesite	fels.	felsic	pp.	porphyritic
and.	andesitic	fossil.	fossiliferous	QMP	quartz monzonite
apl	aplite	gn	gneiss		porphyry
apl.	aplitic	gr	granite	qtz	quartz
aren	arenite	gr.	granitic	qtzite	quartzite
aren.	arenaceous	gs	greenstone	rhy	rhyolite
arg	argillite	hblnd	hornblende	rhy.	rhyolitic
arg.	argillaceous	hfels	hornfels	rx	rocks
ark	arkose	ignm	ignimbrite	sch	schist
ark.	arkosic	intr	intrusive	sed.	sedimentary
bio	biotite	jsp	jasperoid	seric.	sericitic
brec.	brecciated	lat	latite	sl	slate
bslt	basalt	lat.	latitic	slt	siltstone
bx	breccia	lhr	lahar	ss	sandstone
calc.	calcareous	ls	limestone	t.bd.	thin bedded
carb.	carbonaceous	m-	meta-	tct	tactite
chl.	chloritic	mic.	micaceous	ton	tonalite
cong	conglomerate	mm	metamorphic	try	trachyte
dac	dacite	mrbl	marble	try.	trachytic
dac.	dacitic	ms	mudstone	tuff	tuff
dbase	diabase	musc	muscovite	um	ultramafic
dior	diorite	mz	monzonite	volc	volcanic
dior.	dioritic	mz.	monzonitic	volcsed	volcaniclastic
dolo.	dolomitic	ol	olivine	ws	wackestone

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
Amorphous Graphite	Moradillas	296	L	28-37- N	110-30- W	GRF
Amorphous Graphite	San Marcial	77	M	28-30- N	110-20- W	GRF
Amorphous Graphite	Iqualama	384	M	28-32-55N	109-24-10W	GRF
Amorphous Graphite	Los Graseros	385	M	28-40-00N	109-41-25W	GRF
Amorphous Graphite	Topiyeca	399	M	27-25-36N	108-56-05W	GRF
Amorphous Graphite	El Frijol	400	M	27-26-35N	109-00-00W	GRF
Amorphous Graphite	Cerro de las Minas	420	M	28-28-00N	110-27-35W	GRF
Amorphous Graphite	Tuquizon	421	M	28-25-20N	110-19-55W	GRF
Amorphous Graphite	Las Penitas	422	M	28-32-35N	110-11-20W	GRF
Amorphous Graphite	Jacobito	387	S	28-35-20N	109-22-00W	GRF
Amorphous Graphite	El Zamotal	423	S	28-34-55N	110-07-10W	GRF
Amorphous Graphite	Monica	429	S	28-56-25N	110-56-05W	GRF
Au Skarn	Golfo de Oro	73	S	28-37- N	109-37- W	AU AG PB ZN
Au Skarn	El Socorro	103	S	31-02- N	115-45- W	AU
Au Skarn	Sara Alicia	403	S	27-26-35N	108-45-05W	AU CU
Au Skarn	La Sonora	419	S	28-59-25N	110-36-30W	AU CU
Au Skarn(?)	Veta Ancha	361	S	28-33-45N	109-58-50W	AU AG PB CU
Au Skarn(?)	El Pilar	2056	S	28-08- N	108-33- W	AU AG
Au Skarn(?)	El Zapote	2062	S	27-59- N	108-40- W	AU AG
Au-Ag-Te Vein	La Bamboya	208	S	29-41-05N	109-41-35W	AU TE U PB HG
Au-Ag-Te Vein	San Miguel	582	S	29-51- N	109-45- W	TE AG CU U
Basaltic Cu	El Boleo	125	L	27-17- N	112-18- W	CU ZN AG MN PB CO
Bedded Barite	El Refugio	215	M	28-57-30N	110-04-45W	BA
Bedded Barite	Cobachi	216	M	28-49-45N	110-11-45W	BA
Bedded Barite	Barita de Sonora	516	M	28-55- N	110-01- W	BA
Bedded Barite	Magdalena del Kino	26	S	30-40- N	110-52- W	BA
Bedded Barite(?)	La Amargosa	2076	S	28-35- N	105-11- W	BA
Bedded Gypsum	San Marcos	139	L	27-13- N	112-05- W	GYP
Bedded Gypsum	El Gallardo	415	S	31-18-25N	109-22-50W	GYP
Bedded Gypsum	Claudia	416	S	31-04-25N	109-17-30W	GYP
Bedded Gypsum	Sonora	417	S	31-00-30N	109-16-55W	GYP
Bedded Gypsum	La Concordia	434	S	31-04-00N	110-39-10W	GYP
Bedded Gypsum	Unnamed occurrence	572	S	28-20-15N	112-53-00W	GYP
Carbonate-Hosted Au-Ag	Lluvia de Oro	2038	M	27-05-45N	108-18-15W	AU AG
Carbonate-Hosted Au-Ag	Caborca	9	S	30-43- N	112-10- W	AU CU SB BA
Carbonate-Hosted Au-Ag	Santa Gertrudis	279	S	30-37-20N	110-29-30W	AU
Carbonate-Hosted Au-Ag	Amelia	280	S	30-37- N	110-34- W	AU AG PB ZN PD
Carbonate-Hosted U	El Sotolar	2060	S	29-09-30N	103-50-45W	U V
Carbonate-Hosted U	Sierra Gomez	2203	S	28-58-20N	105-42-25W	U NI
Coal Mine	Santa Clara	364	L	28-34-50N	109-37-40W	C
Coal Mine	San Marcos	414	L	31-08-20N	109-24-30W	C
Coal Mine	El Salto	424	M	28-32-20N	110-18-45W	C
Coal Mine	San Enrique	386	S	28-34-00N	109-19-05W	C
Coal Mine	Sierra Rica	2273	S	29-02-45N	104-13-30W	C
Comstock Epithermal Vein	Sahuayacan	2237	M	28-08-00N	108-38-15W	AU AG PB CU SB TE
Comstock Epithermal Vein	Concheno	2039	S	28-19-45N	108-11-15W	AU AG PB ZN MN
Comstock Epithermal Vein	Ocampo	2207	S	28-12-45N	108-22-30W	AG AU PB ZN CU
Comstock Epithermal Vein	Dolores	2230	S	28-51-00N	108-29-00W	AU AG PB CU
Comstock Epithermal Vein	La Republica	2235	S	28-10-15N	108-49-45W	AG ZN
Comstock Epithermal Vein(?)	Yoquivo	2187	S	28-03-30N	108-04-00W	AG AU CU PB ZN
Creede Epithermal Vein	El Tigre	394	M	30-28-05N	109-03-20W	AG AU ZN PB CU
Creede Epithermal Vein	La Chipriona	182	S	28-43-30N	108-52-45W	AG PB CU ZN
Creede Epithermal Vein	Los Pinos	183	S	28-42-35N	108-55-50W	AG PB ZN
Creede Epithermal Vein	La Bronzuda	220	S	28-53-30N	110-33-20W	AG PB CU
Creede Epithermal Vein	Santo Domingo	228	S	27-10- N	108-58- W	AG PB ZN
Creede Epithermal Vein	Ana Maria	413	S	26-53-05N	108-43-30W	AG PB ZN CU AU
Creede Epithermal Vein	La Blanca	581	S	29-44- N	109-47- W	AG PB ZN AU CU
Creede Epithermal Vein	Namiquipa	2123	S	29-10-06N	107-25-49W	AG PB ZN AU CU
Creede Epithermal Vein	Uruachic	2182	S	27-52- N	108-13- W	AG AU PB ZN CU
Creede Epithermal Vein	La Fortuna	2218	S	30-08-14N	107-48-05W	AG PB ZN BA
Creede Epithermal Vein	Candamena	2232	S	28-05-15N	108-15-45W	AG AU PB CU SB
Creede Epithermal Vein(?)	La Quintera	224	S	27-01-30N	109-01-05W	AG PB CU ZN AU
Creede Epithermal Vein(?)	San Nicolas	350	S	29-56-10N	109-58-50W	AG PB ZN AU BA
Cu Skarn	La Verde	29	S	29-24-20N	111-17-20W	CU
Cu Skarn	Las Tablas	57	S	26-48-30N	108-40-45W	CU
Cu Skarn	Puebla	72	S	28-59- N	109-30- W	CU
Cu Skarn	San Cleotilde	79	S	29-20- N	111-50- W	CU AU
Cu Skarn	Chapala	97	S	29-40- N	114-25- W	CU
Cu Skarn	El Gato	101	S	29-53- N	115-17- W	CU FE

ORE MINERALOGY	HOST ROCK TYPE	HOST ROCK AGE
GRAP	qtzite, carb. sh	TRI-JUR
GRAP	qtzite, carb. sh	TRI-JUR
GRAP	qtzite, carb. sh	TRI-JUR
GRAP	qtzite, carb. sh	TRI-JUR
GRAP	qtzite, carb. sh	TRI-JUR
GRAP	qtzite, carb. sh	TRI-JUR
GRAP	qtzite, carb. sh	TRI-JUR
GRAP	qtzite, carb. sh	TRI-JUR
GRAP	qtzite, carb. sh	TRI-JUR
GRAP	qtzite, carb. sh	TRI-JUR
GRAP	qtzite, carb. sh	TRI-JUR
PY, PYRR; GAL, SPL, TETR	carb., calc. sh, slt	MES
	ls?	JUR-CRET
CU oxides	ls	PAL
native TE, various AU-TE minerals, native AU, MOCT, CINN	tuff	LCRET-ETERT
native TE, TETR, RICK(?); MACK, EMM, TE oxides		
CC, CPY, BN, CV, native CU, CHRY, AZ	arg. tuff, tuff. cong	EPLIO
BAR		
BAR	chert, ls, ss, barite	DEV
BAR	sh, ms, chert, barite	DEV PENN
BAR	lake sed, sh, ss, cong	MIO
GYP		
GYP		
GYP		
GYP		
GYP		
GYP		
free AU, PY	ls	JUR
AU, CPY, AZ, MAL, unknown SB, BAR	ls	PENN-PERM
AU	calc. slt-ss, jsp	CRET
AU, unknown PB-ZN-AG	ls, ss, chert	CRET?
CARN	ls, sh	CRET
CARN, MTY, URAN; GARN	t.bd.calc. ms, ws	CRET
coal	qtzite, cong, carb. sh	TRI-JUR
coal	qtzite, carb. sh	TRI-JUR
coal	qtzite, carb. sh	TRI-JUR
coal	qtzite, carb. sh	TRI-JUR
coal	ss, ls	CRET
native AU, (PETZ), (NAG); native AG, ARG, PRGY,	sh, pp. and	
native AU, ARG, PRGY; GAL, SPL, PYRO	and	
ARG, native AU, ELEC, TETR, STEP; minor SPL	and flows, tuff; rhy tuff	
native AU, GAL, SPL, CPY	dbase	TERT
ARG, native AG; SPL	and, rhy. tuff	
ARG, STEP, STRO, native AG, native AU, ELEC; PY	and flows, tuff; lat flows	TERT
ARG, TETR, STRO, native AU, native AG, FREI, CRGY	rhy tuff, rhy flows, lat bx	OLIGO?
AG sulfosalts, PY, SPL	and	
SPL, GAL	ignm	
arg. GAL, ARG, PY, CPY	and pp	
	and	
GAL, SPL	and	
AG sulfosalts, GAL, SPL; CV	dac	
Oxide ore: native AG, CRGY, CER, (ANG), (WULF);	brec. and flow	TERT
ARG, STEP, arg. TETR, native AG; native AU	and-rhy flows, bxs; dbase	TERT
arg. GAL, SPL, PY	rhy. ignm, flows, bxs	TERT
AG sulfides with minor PB, CU, and SB values; native AU	and, and. bx	
AG sulfosalts, TETR	and	
ARG, PRGY, arg. GAL, BAR	and, ls, tuff	LCRET
CPY(?)	ls, qtzite, sh, chert	PAL
	ls?	JUR-CRET

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
Cu Skarn	La Pirinola (and others)	353	S	29-01-15N	109-34-35W	CU ZN PB
Cu Skarn	Las Aguilas	382	S	28-58-25N	109-27-35W	CU FE
Cu Skarn	El Yeri	391	S	30-47-50N	109-50-00W	CU
Cu Skarn	Zona 18	437	S	30-20-15N	112-19-50W	CU MO W
Cu Skarn	San Fernando	481	S	29-55- N	115-15- W	CU FE
Cu Skarn	La Candelaria	495	S	27-11- N	109-15- W	CU AU
Cu Skarn	La Lolita	2086	S	30-57-02N	107-03-48W	CU
Cu Skarn	Terrazas	2275	S	28-58-09N	106-01-33W	CU PB AG AU
Epithermal Mn	Casa de Janos	2023	M	30-43- N	108-31- W	MN
Epithermal Mn	Casas Grandes (Mn)	2024	M	30-22-58N	107-53-02W	MN
Epithermal Mn	Terrenates	2179	M	29-41-56N	106-47-36W	MN
Epithermal Mn	Los Organos	2205	M	28-17- N	104-55- W	MN
Epithermal Mn	Atil	4	S	30-58- N	111-31- W	MN
Epithermal Mn	Dos Cabezas	15	S	30-21- N	108-38- W	MN
Epithermal Mn	La Guadalupeana	37	S	30-25-55N	110-53-05W	MN
Epithermal Mn	Los Dardanelos	56	S	30-26-30N	110-54-40W	MN
Epithermal Mn	San Vicente	78	S	27-34- N	109-44- W	MN
Epithermal Mn	Saric	81	S	31-10- N	111-22- W	MN
Epithermal Mn	Tesia Y Navojoa	88	S	27-20- N	109-23- W	MN
Epithermal Mn	El Gavilan	126	S	26-52-32N	111-50-25W	MN V
Epithermal Mn	Santa Isabel (San Nicolas)	141	S	26-29- N	111-33- W	MN
Epithermal Mn	Tubutama	331	S	30-54-30N	111-28-20W	MN
Epithermal Mn	Dos Manueles	332	S	30-27-00N	110-54-45W	MN
Epithermal Mn	Isla Tiburon	492	S	28-51- N	112-21- W	MN
Epithermal Mn	Gamer	498	S	30-45- N	110-43- W	MN
Epithermal Mn	Guadalupe	499	S	26-49-07N	111-50-53W	MN
Epithermal Mn	La Azteca	500	S	26-58-37N	112-04-38W	MN
Epithermal Mn	Abra Negra	517	S	30-39-30N	111-02-00W	MN
Epithermal Mn	La Noche	518	S	30-28-00N	110-55-00W	MN
Epithermal Mn	La Mesa	519	S	30-27-10N	110-54-45W	MN
Epithermal Mn	El Dia	520	S	30-26-30N	110-54-15W	MN
Epithermal Mn	La Virgen Morena	521	S	30-26-25N	110-53-30W	MN
Epithermal Mn	La Negrita Num. 2	522	S	30-26-20N	110-53-15W	MN
Epithermal Mn	La Negrita Num. 1	523	S	30-26-10N	110-53-20W	MN
Epithermal Mn	El Salto	524	S	30-26-15N	110-53-10W	MN
Epithermal Mn	Nacozari	525	S	30-24-59N	109-38-55W	MN
Epithermal Mn	La Leona	526	S	29-58-25N	109-51-05W	MN
Epithermal Mn	La Montosa	527	S	29-35-25N	109-49-35W	MN
Epithermal Mn	Oviachic	528	S	28-03-00N	109-15-50W	MN
Epithermal Mn	Saenz Properties	529	S	28-01-35N	109-27-20W	MN
Epithermal Mn	Sanaco	531	S	27-29-15N	109-02-45W	MN
Epithermal Mn	La Dura	537	S	28-20- N	109-24- W	MN
Epithermal Mn	Santa Maria	2009	S	31-11- N	107-21- W	MN
Epithermal Mn	Cuatro Amigos	2043	S	30-35- N	107-32- W	MN
Epithermal Mn	Los Borregos	2111	S	31-03-16N	107-17-30W	MN
Epithermal Mn	Los Volcanes	2115	S	28-59- N	104-09- W	MN
Epithermal Mn	Sierra de Enmedio	2192	S	30-59- N	108-36- W	MN
Epithermal Mn	Aguilar	2256	S	30-22- N	107-59- W	MN
Epithermal Mn	Escondida	2265	S	28-16- N	105-01- W	MN
Epithermal Mn(?)	Mulege	489	M	26-50- N	112-00- W	MN
Epithermal Mn(?)	San Bernardino	2141	M	28-19- N	104-57- W	MN
Epithermal Mn(?)	La Independencia	39	S	31-15- N	110-52- W	MN
Epithermal Mn(?)	Las Antillas	55	S	30-40-00N	111-01-45W	MN
Epithermal Mn(?)	Mision de San Juan	490	S	26-30- N	111-30- W	MN
Epithermal Mn(?)	Los Huesos	530	S	27-28-45N	109-02-30W	MN
Epithermal Mn(?)	El Refugio	532	S	27-29-30N	109-03-30W	MN
Epithermal Mn(?)	San Pedro	533	S	27-28-30N	109-03-15W	MN
Epithermal Mn(?)	San Antonio	536	S	30-46- N	110-42- W	MN
Epithermal Mn(?)	Punta Pulpito	545	S	26-31- N	111-27- W	MN
Epithermal Mn(?)	Punta Mangles	546	S	26-18- N	111-24- W	MN
Epithermal Mn(?)	Isla Carmen (Mn)	547	S	26-03- N	111-06- W	MN
Epithermal Mn(?)	Isla Santa Margarita (Mn)	548	S	24-20- N	111-45- W	MN
Epithermal Mn(?)	Agua Nueva	2003	S	29-41- N	106-12- W	MN
Epithermal Mn(?)	Apache	2008	S	30-20- N	107-32- W	MN
Epithermal Mn(?)	El Carrizo	2050	S	30-13- N	106-40- W	MN
Epithermal Mn(?)	La Ascencion	2077	S	30-55- N	107-56- W	MN
Epithermal Mn(?)	La Ascencion	2078	S	30-08- N	107-38- W	MN
Epithermal Mn(?)	La Gloria	2083	S	29-48-55N	106-26-56W	MN
Epithermal Mn(?)	La Morita	2088	S	28-30- N	104-20- W	MN

ORE MINERALOGY	HOST ROCK TYPE	HOST ROCK AGE
CPY, SPL, GAL	ls	PAL
CUP, CUB(?), CC	ls	PAL?
CU oxides	ls	PAL
CUP, AZ, MAL, sub. CPY, minor native CU, GAL	ls	CRET
PYRO, PSIL	rhy	
PYRO, PSIL, CRYP, HOLL(?), WAD	and.-rhy. lava, tuff	TERT
	rhy	
	rhy	
	tuff	
PYRO, PSIL, HOLL, RAMS, MANG, WAD, (BUST)	hblnd and, ol bslt	
PSIL	volc cong	
PSIL	and	
PSIL, RHOD, PYRO, BRAU	and, bx	LCRET-ETERT
RHOD	arg	
PSIL, PYRO, MANG, WAD; (BUST), (RD)	and	
PYRO, PSIL, MANG, WAD; RHOD, BUST, RD	hblnd and	
	rhy	
	rhy	
	tuff	
	tuff	
	rhy	
	rhy, tuff	
	rhy	
	rhy	
	rhy	
	rhy	
	rhy	
	rhy	
	tuff	
	rhy	
	volc	
PSIL, PYRO(?)	and, rhy.-dac. volc	
	rhy	
	volc?	
	gr	
PYRO, PSIL	gr. gn.	MES
	try	
	tuff	
	tuff	
RHOD(?), Mn oxides	arg, tuff	
	rhy	

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
Epithermal Mn(?)	La Virgen y La Providencia	2100	S	28-47- N	106-21- W	MN
Epithermal Mn(?)	Las Encinillas	2103	S	29-15- N	106-18- W	MN
Epithermal Mn(?)	Los Camaleones	2112	S	30-48-44N	107-06-38W	MN
Epithermal Mn(?)	Rancho del Medio	2136	S	31-03- N	108-39- W	MN
Epithermal Mn(?)	Wilkie	2186	S	30-09- N	108-13- W	MN
Epithermal Mn(?)	Sabinal	2250	S	30-56- N	107-35- W	MN
Epithermal Mn(?)	Salazar 2	2251	S	31-03- N	107-38- W	MN
Epithermal Mn(?)	Dominguez	2252	S	30-57- N	107-23- W	MN
Epithermal Mn(?)	Salazar 1	2253	S	31-04- N	107-22- W	MN
Epithermal Mn(?)	Rancheria	2254	S	31-03- N	106-21- W	MN
Epithermal Mn(?)	Refugio	2255	S	30-37- N	106-06- W	MN
Epithermal Mn(?)	Orizabena	2257	S	30-21- N	107-59- W	MN
Epithermal Mn(?)	Socorro	2264	S	28-16- N	105-02- W	MN
Epithermal Vein	Cerro Boludo	2028	M	28-21- N	108-32- W	AU AG
Epithermal Vein	Baroyeca	6	S	27-34-35N	109-29-25W	AG AU
Epithermal Vein	La Estrella	35	S	28-47-25N	109-04-40W	AG PB
Epithermal Vein	La Guadalupe	38	S	27-18- N	108-50- W	CU AG AU
Epithermal Vein	Antonio Rosales	52	S	26-56- N	108-56- W	CU PB ZN AU AG
Epithermal Vein	Mulatos	65	S	28-39-00N	108-44-30W	AU CU
Epithermal Vein	San Francisco	75	S	31-30- N	113-02- W	AU PB MO
Epithermal Vein	Santa Rosa	80	S	28-36-00N	109-45-15W	AG PB ZN AU MO? BA
Epithermal Vein	Cucurpe district	100	S	30-25- N	110-39- W	AU AG PB CU
Epithermal Vein	Las Chispas	158	S	30-13-00N	110-10-15W	AG AU ZN PB CU
Epithermal Vein	La Ramona	176	S	29-19-35N	110-34-05W	AG PB ZN CU
Epithermal Vein	El Victor	181	S	28-39-50N	108-42-45W	AU
Epithermal Vein	El Oro	186	S	28-24-50N	109-25-00W	AU AG PB CU
Epithermal Vein	San Guillermo	189	S	28-32-10N	109-59-15W	AG PB BA
Epithermal Vein	Tres Huevos	192	S	28-51-10N	109-47-15W	AU AG PB CU
Epithermal Vein	Santa Rosalia	194	S	30-24-30N	110-18-45W	AU AG PB CU U
Epithermal Vein	El Toro	195	S	27-12- N	108-50- W	AU ZN PB CU
Epithermal Vein	Klondike	196	S	30-27-15N	110-23-20W	AU AG PB CU
Epithermal Vein	El Claro	201	S	30-09-35N	109-34-55W	AG PB ZN CU
Epithermal Vein	El Chilicote	204	S	29-08-55N	109-46-35W	AG AU PB ZN CU BA
Epithermal Vein	16 de Septiembre	205	S	29-12-25N	109-44-10W	AG PB ZN CU
Epithermal Vein	San Nicolas	209	S	30-26-30N	109-37-10W	AG PB AU
Epithermal Vein	Myriam and Ano Nuevo	221	S	28-55-10N	110-43-55W	AU AG PB CU
Epithermal Vein	Promontorio	225	S	27-00-10N	109-00-00W	AG PB CU ZN AU
Epithermal Vein	Cerro Colorado	297	S	30-14-00N	111-49-30W	AU AG PB CU
Epithermal Vein	Unnamed prospect	334	S	30-52-30N	110-43-55W	AU AG PB CU
Epithermal Vein	Santo Nino	337	S	30-56-05N	110-31-35W	AG PB ZN CU
Epithermal Vein	La Fortuna	339	S	30-40-50N	110-21-00W	AU AG PB CU
Epithermal Vein	La Avispa	369	S	28-18-30N	109-31-50W	AG PB ZN CU
Epithermal Vein	La Churumbella	371	S	28-26-15N	109-19-40W	AU AG PB CU
Epithermal Vein	La Providencia	375	S	28-25-10N	109-11-35W	AU AG PB CU
Epithermal Vein	Los Tajos	376	S	28-26-40N	109-09-45W	AU AG PB ZN
Epithermal Vein	Las Mantequillas	377	S	28-28-45N	109-09-20W	AU CU
Epithermal Vein	El Tule	383	S	28-49-45N	108-50-40W	AG PB ZN CU BA
Epithermal Vein	La Gloria	388	S	30-25-05N	109-32-20W	AG PB ZN CU
Epithermal Vein	El Pavo	389	S	30-18-35N	109-54-15W	AG PB ZN CU
Epithermal Vein	Minas Nuevas	396	S	27-03-35N	109-03-00W	AG PB ZN CU AU
Epithermal Vein	El Tribilin (and others)	410	S	26-48-35N	108-32-25W	AG PB CU ZN?
Epithermal Vein	Los Tajos	430	S	28-33-45N	110-44-45W	AG PB ZN
Epithermal Vein	La Dura	497	S	29-38-00N	108-47-20W	AG AU
Epithermal Vein	Batosegachic	2013	S	27-26-15N	108-16-45W	AG AU
Epithermal Vein	Huizopa	2047	S	28-46-45N	108-33-15W	AU AG
Epithermal Vein	El Sauz	2059	S	28-11-45N	108-49-00W	AG AU
Epithermal Vein	La Millonaria	2087	S	27-15-15N	108-26-30W	AU AG
Epithermal Vein	Monterde	2122	S	27-34-00N	108-03-30W	AU AG
Epithermal Vein	Santa Maria (y Moctezuma)	2159	S	28-12- N	108-39- W	AU AG
Epithermal Vein	Sierra de los Cantilas	2224	S	31-12- N	107-33- W	CU PB AG
Epithermal Vein	Tutuaca	2225	S	28-30-15N	108-10-15W	AU AG
Epithermal Vein	Santa Brigida	2228	S	28-21-45N	108-26-15W	AU AG
Epithermal Vein	Pinos Altos	2233	S	28-15-45N	108-17-30W	AU AG CU
Epithermal Vein	La Cienega	2234	S	28-06-00N	108-39-45W	AU AG
Epithermal Vein	Socorro	2236	S	28-05-45N	108-37-15W	AU AG
Epithermal Vein	Palmarejo	2238	S	27-22-30N	108-25-15W	AG AU
Epithermal Vein	Agua Caliente	2239	S	27-28-30N	108-33-30W	AG AU
Epithermal Vein	Tetamoa	2240	S	27-34-00N	108-38-30W	AU AG
Epithermal Vein	Santa Barbara	2241	S	27-16-15N	108-15-45W	AG

ORE MINERALOGY	HOST ROCK TYPE	HOST ROCK AGE
	rhy	
	rhy	
	rhy	
	rhy	
	rhy	
	volc	
	rhy	
	volc?	
native AU, unknown AG	and	
CRGY, GAL, ASPY	cong	LCRET
AU, PY	rhy dome, and	
native AU, PY, GOE, MIM, WULF		
AG sulfosalts, GAL, SPL, MOLY(?), BAR, GRAP	qtzite	TRI-JUR
	and, acid. tuff	LCRET-ETERT
ARG, POLY, PRGY, PROU, STEP, native AG, native AU	rhy, brecc. tuff, fels pp	LCRET-ETERT
TETR	tuff, apl	LCRET-ETERT
PY, AU	rhy tuff, rhy dome	TERT
PY, GAL, CPY, CU oxides, FE oxides	and, dior	
GAL, BAR	and	LCRET-ETERT
unknown AU-AG, GAL, SPL, CPY, KASO, MTORB	lat pp	TERT
AU, SPL, GAL, CPY, PY, LIM	and	
	and	
arg. GAL, PY	fels. volc	
arg. GAL, AU, SPL, CPY, BAR	dac. tuff, and, qtz dior	LCRET-ETERT
GAL, SPL, CPY	and	LCRET-ETERT
	and	LCRET-ETERT
	and	
AG sulfosalts, CU oxides	and	
AU, CER, CU oxides	rhy dome, ls, gn.	LCRET-ETERT
	and	LCRET-ETERT
	and	LCRET-ETERT
	and	LCRET-ETERT
AG sulfosalts(?)	rhy tuff	LCRET-ETERT
GAL, PY, AG sulfosalts(?)	and	LCRET-ETERT
GAL, CPY, CU oxides, FE oxides	and	LCRET-ETERT
PY, GAL, SPL	and	LCRET-ETERT
AG sulfosalts, CU oxides, BAR	rhy, volc bx	
	lat	
	and	LCRET-ETERT
AG sulfosalts	and	
GAL, CPY, PY	and	
GAL, SPL, PY	and	LCRET-ETERT
	and	
	and	
sulfides		
native AU	and	TERT
native AU	and and rhy tuff	TERT
native AU	and	
	and	
	and	
	and	
native AU, native AG, AG sulfides, CPY	and -rhy flows	
	and	
native AU, unknown AG	and	
CRGY, BRGY, ARG, STEP, native AG, native AU	and	
native AU, AU tellurides	and	
	and	TERT

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
Epithermal Vein	Rio Plata	2242	S	27-13-00N	108-17-30W	AG
Epithermal Vein	Septentrion	2243	S	27-11-00N	108-20-00W	AG AU
Epithermal Vein	Guazapares	2249	S	27-22-30N	108-17-00W	AU AG
Epithermal Vein	Placer de Guadalupe	2277	S	29-08-45N	105-26-00W	AU U CU
Epithermal Vein(?)	El Triunfo-San Antonio Zone	128	M	23-48-14N	110-02-05W	AG AU PB ZN SB CO
Epithermal Vein(?)	Chinipas	2035	M	27-26- N	108-31- W	AU AG
Epithermal Vein(?)	Cieneguita	12	S	29-08- N	109-12- W	CU AG
Epithermal Vein(?)	Dos Naciones	16	S	30-10- N	110-35- W	AU AG PB
Epithermal Vein(?)	Maria Bonita	50	S	26-47- N	108-36- W	AU AG CU MO
Epithermal Vein(?)	Los Tanques	61	S	31-40- N	112-57- W	AU
Epithermal Vein(?)	Maria	63	S	26-58- N	108-35- W	CU AU FE
Epithermal Vein(?)	San Eduardo	74	S	29-30- N	111-45- W	PB ZN AG
Epithermal Vein(?)	Sierra Prieta	86	S	31-18- N	113-02- W	AU
Epithermal Vein(?)	La Colorada	149	S	28-47-52N	110-34-15W	AU AG PB ZN CU
Epithermal Vein(?)	La Cocinera Blanca	185	S	28-22-50N	109-25-10W	AU AG CU BA
Epithermal Vein(?)	El Albur	206	S	29-10-00N	109-50-20W	PB AG CU
Epithermal Vein(?)	Santa Fe de Amarillas	359	S	29-08-35N	109-14-10W	AU
Epithermal Vein(?)	La Prieta	368	S	28-21-30N	109-34-50W	AG PB ZN CU
Epithermal Vein(?)	La Media Cuesta	374	S	28-24-05N	109-10-10W	AU AG PB CU
Epithermal Vein(?)	La Verde	408	S	26-54-35N	108-40-05W	AU CU
Epithermal Vein(?)	Las Trancas	412	S	26-49-50N	108-46-05W	AG PB ZN CU
Epithermal Vein(?)	Punta Eugenia	485	S	27-27- N	114-17- W	AU
Epithermal Vein(?)	Conejos	2040	S	31-16-30N	107-11-16W	AG AU
Epithermal Vein(?)	El Capiro	2049	S	28-13- N	108-30- W	AU AG
Epithermal Vein(?)	El Madrono	2052	S	28-20- N	108-20- W	AU AG
Epithermal Vein(?)	El Zorillo	2063	S	28-03- N	108-49- W	AU AG
Epithermal Vein(?)	La Cobriza	2080	S	30-54-13N	107-39-38W	CU AG
Epithermal Vein(?)	Loreto	2108	S	27-40- N	108-35- W	AU AG
Epithermal Vein(?)	Nuevo Casas Grandes	2125	S	30-17- N	107-55- W	PB ZN AG AU CU
Epithermal Vein(?)	San Luis	2155	S	27-49- N	108-50- W	AU AG
Epithermal Vein(?)	Santa Margarita	2158	S	28-13- N	108-16- W	AU AG
Epithermal Vein(?)	Chilicote	2166	S	29-02- N	104-49- W	AG PB CU MN
Epithermal Vein(?)	Ascencion	2193	S	30-55- N	107-35- W	CU AG
Epithermal Vein(?)	Galeana	2197	S	30-12- N	107-47- W	AG AU
Epithermal Vein(?)	Milagros	2200	S	28-42- N	108-32- W	AU AG
Epithermal Vein(?)	Moris	2206	S	28-40- N	108-29- W	AU AG
Epithermal Vein(?)	Magistral	2229	S	28-27- N	108-08- W	AU
Evaporite Na	Oro Blanco	69	M	29-50-15N	109-05-50W	NA
Evaporite Na	Isla del Carmen	129	S	24-54- N	111-11- W	NA
Evaporite Na	Cuchillo Parado	2044	S	29-20- N	104-55- W	NA
Fe Skarn	Caracahui	41	S	30-15-15N	111-02-00W	FE
Fe Skarn	Cuesta de Fierro	42	S	28-55-45N	109-27-45W	FE
Fe Skarn	San Marcos	43	S	28-46-45N	109-24-00W	FE
Fe Skarn	Cerro Blanco	47	S	29-32-15N	110-11-30W	FE
Fe Skarn	Arroyo Coronado	48	S	29-38-00N	109-20-15W	FE
Fe Skarn	Campodonico	51	S	29-28-15N	110-35-15W	FE
Fe Skarn	El Choro	70	S	29-21-45N	111-09-00W	FE
Fe Skarn	Piedras Negras	71	S	29-12-45N	111-04-15W	FE
Fe Skarn	Hercules Coloso, et.al.	105	S	31-17- N	116-15- W	FE
Fe Skarn	Picacho	211	S	29-10- N	110-45- W	FE
Fe Skarn	Chinoverachi	357	S	29-06-00N	109-22-00W	FE
Fe Skarn	Hachita Hueca	392	S	30-36-30N	108-54-45W	FE
Fe Skarn	El Perdido	555	S	28-57-15N	110-34-30W	FE
Fe Skarn	Carrizalillo	2022	S	28-57- N	105-12- W	FE
Fe Skarn	San Carlos	2244	S	29-02-45N	103-55-00W	FE
Fe Skarn	San Eduardo	2245	S	29-35-30N	105-13-45W	FE
Fe Skarn	Chorreras	2246	S	29-30-00N	105-00-45W	FE
Flat-Fault Au	La Choya	83	S	31-32-30N	112-51-30W	AU
Flat-Fault Au	Quitovac	288	S	31-29-05N	112-46-00W	AU FE PB
Flat-Fault Au	Lluvia de Oro	300	S	30-37-30N	110-59-02W	AU CU
Flat-Fault Au(?)	La Herradura	91	S	31-12-00N	112-56-45W	AU
Flat-Fault Au(?)	Las Laminas	159	S	30-27-45N	110-34-45W	AU CU
Flat-Fault Au(?)	Banco de Oro	287	S	31-07-40N	112-30-35W	AU
Flat-Fault Au(?)	Basura	290	S	30-54-35N	112-09-15W	AU
Flat-Fault Au(?)	La Cienega	298	S	30-11- N	112-06- W	AU AG
Flat-Fault Au(?)	San Francisco	299	S	30-23-30N	111-08-15W	AU AG
Flat-Fault Au(?)	La Florida	570	S	28-18-00N	112-55-30W	AU
Fluorite Vein	Esqueda district	264	M	30-50- N	109-22- W	F
Fluorite Vein	La Barra	292	M	30-38-25N	109-28-15W	F

ORE MINERALOGY	HOST ROCK TYPE	HOST ROCK AGE
ARG, BRGY, native AG	and	TERT
	and	TERT
	and	
native AU, URNI, PY, MAG, (CPY)	shaly ls	ECRET
PY, ASPY, SPL, GAL, TETR, BOUL, STIB	sch	
PY, CPY, MOLY	and	
native AU		
	rhy	
native AU		
AU, GAL, PY, SPL, CPY	qtz pp, dior	LCRET-ETERT
PY, TETR, BAR	pp. and, dacite	
GAL, CPY, PY, CU and FE oxides	and, gr	
AU	mz-dior intr	
AG sulfosalts(?)		
	rhy pp	
native AU		
	and, rhy, ignm	
NA sulfate		TERT
HEM, MAG	ls	ECRET
MAG, HEM, PY	ls	PAL
MAG, HEM	ls	PERM?
MAG, HEM, GOE	ls	PERM
MAG, HEM, PY	aren, ls	CRET?
MAG, HEM	ls	PAL
GOE, HEM	ls	PAL
	cong, ss, bslt, and	TERT
HEM, MAG	ls	ECRET
MAG	ls	CRET
MAG, HEM	ls	PERM
HEM, MAG	ls	CRET
HEM, MAG, SPEC	ls	CRET
HEM	ls	CRET
AU	pp. gr, apl	ETERT?
AU, GAL, CPY, PY	phy, m-ss	MES
	sch	MES?
AU	gn, sch	PREC
AU, MAL, AZ, minor oxidized PY	dior	JUR
	chert, ss, bio gn, gr	-CRET
AU	siliceous arg, ss	JUR
	gn	PREC
	gr	PREC
	gdior	LJUR-ECRET
	volc	
FL	rhy, and	TERT

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
Fluorite Vein	La California	293	M	30-27-50N	109-27-25W	F
Fluorite Vein	Los Alisos	378	M	28-35-40N	109-08-25W	F
Fluorite Vein	Rosales	393	M	30-21-45N	109-26-35W	F
Fluorite Vein	San Faustino	418	S	31-15-30N	109-26-10W	F
Hot-Spring Au-Ag	Magallanes	49	S	31-03- N	109-50- W	AU AG U
Kuroko Massive Sulfide	Oposura	351	M	29-43-50N	109-45-10W	ZN PB AG CU MN AU
Limestone	Punta China	479	S	31-35- N	116-40- W	LST
Lithium Pegmatite	Sierra Pinta	85	S	31-41- N	113-10- W	LI RU
Lithium Pegmatite	San Francisco	469	S	31-37- N	113-07- W	LI RU U
Low-Sulfide Au	Real del Castillo	115	S	31-55- N	116-15- W	AU
Low-Sulfide Au(?)	La Otilia	576	S	28-10- N	113-30- W	AU
Placer Au	El Boludo	329	S	30-19-20N	111-45-45W	AU
Placer Au	Viznaga	480	S	31-40- N	116-05- W	AU AG
Placer Au	Las Coloradas placer claim	583	S	30-38- N	109-58- W	AU
Placer Au	Placer de Santo Domingo	2270	S	29-01-15N	105-11-45W	AU
Placer Au-W	Todos Santos	144	S	23-26- N	110-11- W	AU AG W
Placer Au-W	Yaqui River placer	307	S	28-11-35N	109-41-00W	AU W
Placer Au-W	La Cienega	343	S	30-11-00N	111-57-30W	AU W
Placer Sb-Au	El Placerito	455	S	30-44-37N	112-35-22W	SB AU
Podiform Cr	El Tigre	127	S	27-33- N	114-42- W	CR
Podiform Cr	Unnamed occurrences	577	S	28-06-30N	115-14-00W	CR
Polymetallic Replacement	San Antonio	2213	L	28-35-40N	105-46-10W	AG ZN PB CU SN V W
Polymetallic Replacement	El Potosi	2214	L	28-36-45N	105-51-30W	AG PB ZN CU
Polymetallic Replacement	Lampazos	54	M	29-24-35N	109-24-40W	AG PB ZN CU
Polymetallic Replacement	El Leon	2219	M	30-36-58N	107-40-05W	PB ZN AG AU CU MO
Polymetallic Replacement	Minillas	2120	S	28-41-00N	106-11-20W	PB AG
Polymetallic Replacement	Los Lamentos	2184	S	30-36-15N	105-49-15W	PB AG V ZN FE MO CU
Polymetallic Replacement	San Carlos	2266	S	29-02-30N	103-55-30W	PB ZN CU V
Polymetallic Replacement	Descubridora	2269	S	28-38-30N	105-58-15W	AG AU PB FE MN
Polymetallic Replacement	Cuchillo Parado	2272	S	29-24-30N	104-55-45W	AG PB CU
Polymetallic Replacement	Los Arados	2274	S	30-11-15N	106-44-00W	CU AG
Polymetallic Replacement(?)	Luciano	112	S	29-40- N	115-05- W	CU
Polymetallic Replacement(?)	Coyame	2042	S	29-25-45N	105-05-00W	CU
Polymetallic Replacement(?)	Plomosas	2133	S	27-30- N	108-35- W	PB ZN AG CU
Polymetallic Replacement(?)	Las Vigas	2271	S	29-16-15N	104-59-15W	CU PB AG AU
Polymetallic Vein	San Javier	184	M	28-36-35N	109-47-10W	AG PB AU ZN BA GRF
Polymetallic Vein	La Candelaria	2157	M	30-45-30N	107-39-00W	AG PB ZN AU CU FE
Polymetallic Vein	La Confianza	8	S	28-49- N	110-26- W	W ZN PB AG
Polymetallic Vein	Noche Buena	68	S	29-54-50N	111-07-35W	U PB ZN AG
Polymetallic Vein	San Jose del Cabo	138	S	23-04- N	109-40- W	AU AG W
Polymetallic Vein	La Republicana	175	S	30-56-05N	112-12-05W	AU AG PB CU
Polymetallic Vein	Santo Nino	177	S	29-23-00N	110-33-15W	AG PB ZN CU
Polymetallic Vein	San Juan	178	S	29-13-50N	110-33-55W	AG PB ZN CU
Polymetallic Vein	San Felix	180	S	30-36-25N	112-38-45W	AU AG PB ZN CU
Polymetallic Vein	Mina Mexico	188	S	28-51-55N	109-25-05W	AG AU PB ZN CU
Polymetallic Vein	Cerro de Plata	198	S	30-47-45N	110-55-30W	CU PB ZN
Polymetallic Vein	Myriam, El Toro, El Padre	199	S	30-49-00N	110-58-30W	CU PB ZN
Polymetallic Vein	La Batalla	202	S	29-02-10N	109-06-15W	AG PB ZN CU BA
Polymetallic Vein	La Curra	203	S	29-16-50N	109-43-10W	AU AG PB CU
Polymetallic Vein	Edna Lucia	207	S	29-10-35N	109-48-15W	AG PB ZN CU
Polymetallic Vein	El Zubiate	217	S	28-55-55N	110-35-15W	AG AU CU ZN SB
Polymetallic Vein	La Mazonena	219	S	28-54-45N	110-34-30W	AG PB ZN CU SB
Polymetallic Vein	Ubarbo	222	S	28-46-40N	110-55-25W	AU AG PB CU
Polymetallic Vein	El Vidolin	223	S	28-30-45N	110-45-00W	AG CU PB? ZN?
Polymetallic Vein	San Manuel	227	S	27-00-10N	109-01-55W	AG PB ZN CU AU
Polymetallic Vein	El Tranvia	263	S	27-02- N	109-03- W	PB ZN CU? AG? AU?
Polymetallic Vein	La Paz	276	S	28-46-15N	109-53-35W	W AU BA
Polymetallic Vein	El Cobre	277	S	28-43- N	110-02- W	W CU MO AU AG
Polymetallic Vein	San Felipe	313	S	29-52-49N	110-18-14W	AG PB CU ZN AU MO
Polymetallic Vein	Maranatha	320	S	29-35-20N	110-35-05W	AG PB ZN CU
Polymetallic Vein	La Dorada	321	S	29-33-50N	110-48-00W	AG PB ZN CU
Polymetallic Vein	San Antonio	322	S	29-21-05N	111-17-10W	AG CU PB ZN
Polymetallic Vein	Espiritu Santo	336	S	30-39-10N	110-35-55W	AG AU PB ZN CU
Polymetallic Vein	La Magnifica	344	S	29-41-55N	110-12-00W	AU AG PB CU
Polymetallic Vein	El Rialito	345	S	29-40-00N	110-09-50W	AG PB
Polymetallic Vein	La Chispa	355	S	29-13-30N	109-36-50W	AG? PB ZN CU
Polymetallic Vein	Santo Nino	362	S	28-42-40N	109-41-05W	AU AG PB CU
Polymetallic Vein	La Cocinera	397	S	27-02-50N	109-00-45W	PB ZN CU
Polymetallic Vein	El Pilar	433	S	31-11-30N	110-38-50W	CU MO

ORE MINERALOGY	HOST ROCK TYPE	HOST ROCK AGE
FL	rhy	
FL		
FL		
FL		
disseminated AU	rhy	ECRET
SPL, GAL, CPY, minor arg. TETR-TENN	dac. xtal tuff, xtal lithic tuff; ls	ETERT
native AU	chl. sch, sl	
	sch, sl	
	cong	LTERT-QUAT
AU	alluvial/elluvial gravs	QUAT
AU		
AU, SCH		
AU, SCH?	cong	LTERT-QUAT
CHR	um	EJUR
AG-rich oxide ore, SPL, GAL, CPY, CASS, VANA	ls	CRET
arg.(?) GAL, SPL; CPY; native AG, PRGY	ls	CRET
ARG, POLY, PRGY, PROU; CPY, GAL, PY	and, lat, tuff, ls	LCRET
GAL, SPL, CER, WULF, MIM, SMIT, HEMI	ls	CRET
	ls	CRET
ANG, CER, PLMJ, (GAL); VANA, DESC	dolo. ls	CRET
GAL, CER, SPL, PY, minor CPY, MAL, VANA	ls	
	ls	CRET
	ls	CRET
CPY, CC, ARG, native CU, AZ, MAL	ls	CRET
	ls, ss	CRET
	ls	
CC, AZ, MAL, CUP, CPY	ss, sh	CRET
AG sulfosalts, arg. TETR, GAL, SPL, BAR, GRAP	qtzite	TRI-JUR
GAL, PY, SPL, CPY, ARG	ls, sh	CRET
SCH, SPL; GAL, arg. ASPY, PY	ls	PERM-TRI
PTC, KASO, URAN, TORB, MTORB; GAL, SPL	gr	
GAL, PY, CPY, LIM, MAL	and, volcseds	JUR-
arg. GAL	gr	
BEUD	ls	PAL
PY, GAL, PRGY, SPL, TETR, CER, ANG	sch	JUR?
arg. TETR, GAL, SPL; PY, ASPY	qtzite, sh, ls?	PERM
PYRR, ATA, CU and FE oxides	rhy pp	
	sch, ls, volcsed, sh	JUR-CRET
arg. GAL, AG sulfides, SPL, PY, CPY, TETR	ss, sh	ECRET
GAL, PY	aren. ls	PAL
CPY, GAL, SPL	sed. rx, and	CRET
PY, CPY, SPL, FAM, POLY, CV	ls, qtz dior	PAL
GAL, PY, PRGY, TETR, FAM, CV	qtz mz	
	gr	
CC	qtzite	TRI-JUR
PY, GAL, SPL	gr	
GAL, SPL	gr	
SCH, AU, BAR	gr	
SCH, CPY, CC, MOLY, POW, unknown AU-AG	gr	
arg. GAL, CPY, PY, SPL; native AG, CERR	ls, and	ECRET
GAL, SPL, PY	qtzite	PAL
GAL, SPL, CPY	ls	PAL
CU oxides	ls	PAL
	ls, calc. ss	CRET
GAL, CPY	gr	
GAL	gr	
GAL, SPL, CU oxides	sh, ss, cong	MES
	qtzite, carb. sh	TRI-JUR
GAL, unknown Zn, CU oxides	gr	
PY, CPY, BN, MOLY, CU oxides	gr pp	

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
Polymetallic Vein	Planchas de Plata	435	S	31-13-30N	111-06-00W	AG PB ZN CU AU
Polymetallic Vein	Cerro Blanco	436	S	30-48-54N	112-03-17W	AU CU ZN
Polymetallic Vein	La Antigua	494	S	27-16- N	109-02- W	AG PB ZN CU
Polymetallic Vein	San Ignacio	2144	S	30-35-30N	106-19-00W	AG PB ZN CU AU
Polymetallic Vein	Casas Grandes (Pb-Zn)	2196	S	30-23-18N	107-54-47W	PB ZN AG AU CU
Polymetallic Vein	Sabinal	2220	S	30-55-35N	107-38-51W	AU AG PB ZN
Polymetallic Vein	Cinco de Mayo	2221	S	30-40-15N	107-40-31W	PB AG ZN CU
Polymetallic Vein(?)	Cerro de Oro	46	S	29-37-10N	110-37-50W	AU CU FE
Polymetallic Vein(?)	Sierra Cabullona	82	S	31-05- N	109-31- W	CU ZN AG
Polymetallic Vein(?)	La Princesa	98	S	31-40- N	116-05- W	AU ZN CU PB
Polymetallic Vein(?)	La Ventana	152	S	28-14-00N	109-46-00W	AU AG
Polymetallic Vein(?)	Las Cabecitas	155	S	29-48-00N	110-02-50W	AG PB BA
Polymetallic Vein(?)	Mina del Agua	170	S	29-34-30N	110-02-30W	AG PB
Polymetallic Vein(?)	Santa Amalia	193	S	28-49-40N	109-52-55W	AU AG
Polymetallic Vein(?)	La Palma	315	S	29-36-20N	110-00-55W	PB ZN CU
Polymetallic Vein(?)	Las Tortugas	338	S	30-07-20N	110-33-40W	PB ZN
Polymetallic Vein(?)	Buckeye	348	S	29-51-15N	110-00-10W	AG CU
Polymetallic Vein(?)	Archipelago	349	S	29-50-50N	109-59-25W	AG CU BA
Polymetallic Vein(?)	Barrial	2223	S	31-18-00N	107-07-30W	CU AG FE
Polymetallic Vein(?)	Puerto del Aire	2276	S	29-07-30N	105-21-45W	AU U
Porphyry Cu	Cananea	2	L	30-57-15N	110-19-00W	CU MO AG
Porphyry Cu	El Arco	99	L	28-03-20N	113-23-05W	CU AU MO
Porphyry Cu	Florida-Barrigon	21	M	30-22-50N	109-43-20W	CU MO ZN AG
Porphyry Cu	La Mariquita	23	M	31-03-20N	110-25-15W	CU MO
Porphyry Cu	El Alacran	24	M	30-51-10N	110-10-35W	CU MO
Porphyry Cu	Pilares	27	M	30-20-10N	109-38-00W	CU AG AU W ZN PB
Porphyry Cu	San Antonio del Cobre	31	M	28-37-40N	109-37-10W	CU MO U
Porphyry Cu	Los Alisos	58	M	30-24-25N	109-27-30W	CU MO AG PB ZN F
Porphyry Cu	Bella Esperanza	22	S	30-16-10N	109-41-55W	CU
Porphyry Cu	El Batamote	25	S	30-28-55N	109-45-10W	CU
Porphyry Cu	Washington	28	S	29-53-55N	110-03-45W	CU MO W AG AU ZN PB
Porphyry Cu	Piedras Verdes	145	S	27-10-05N	109-01-10W	CU MO
Porphyry Cu	Suaqui Verde	214	S	28-24-15N	109-48-30W	CU MO
Porphyry Cu	San Ignacio	365	S	28-28-00N	109-47-15W	CU MO
Porphyry Cu	La Cardelena	366	S	28-23-15N	109-55-10W	CU MO
Porphyry Cu	El Cerrito	367	S	28-16-40N	109-43-15W	CU MO
Porphyry Cu	Monica	370	S	28-18-25N	109-28-55W	CU MO
Porphyry Cu	Henrietta	557	S	31-00-15N	110-22-00W	CU AG AU ZN
Porphyry Cu	Cananea-Duluth	558	S	30-57-45N	110-18-00W	CU AG ZN PB
Porphyry Cu	Cobre Grande	560	S	30-58-30N	110-18-45W	CU
Porphyry Cu	America-Bonanza	561	S	30-58-00N	110-18-30W	CU
Porphyry Cu	Oversight	563	S	30-58-30N	110-20-15W	CU
Porphyry Cu	Veta Grande	564	S	30-58-30N	110-19-45W	CU
Porphyry Cu	Esperanza	565	S	30-58-35N	110-20-00W	CU
Porphyry Cu(?)	Nacozari	67	M	30-26- N	109-42- W	CU MO
Porphyry Cu(?)	Fortuna Del Cobre	265	M	30-04- N	112-29- W	CU MO
Porphyry Cu(?)	Penasco Blanco	373	S	28-22-20N	109-11-05W	AU AG PB CU
Porphyry Cu(?)	Promontorio de Obregon	406	S	27-38-00N	109-42-15W	AG PB ZN AU
Porphyry Cu(?)	El Pozo	425	S	28-46-30N	110-11-00W	AG PB ZN CU
Porphyry Cu, Skarn-Related	Capote	150	M	30-58-45N	110-20-30W	CU
Porphyry Cu, Skarn-Related	Puertecitos	342	M	31-00-00N	110-23-15W	CU ZN PB AG FE
Porphyry Cu, Skarn-Related	Elisa	556	S	30-59-30N	110-21-15W	CU ZN PB
Porphyry Cu, Skarn-Related	Democrata	559	S	30-58-45N	110-19-30W	CU ZN
Porphyry Cu, Skarn-Related(?)	Guaynopita	2222	S	29-24-15N	108-23-30W	CU AG AU PB
Porphyry Cu-Mo	La Caridad	496	L	30-20-35N	109-31-25W	CU MO AG ZN PB
Porphyry Cu-Mo	Los Verdes	34	M	28-22-20N	109-09-05W	CU MO W
Porphyry Cu-Mo	Cumobabi	346	M	29-52-20N	109-58-15W	MO CU ZN PB W
Porphyry Cu-Mo	La Colorada	566	M	30-58-00N	110-19-30W	CU MO AG PB ZN
Porphyry Cu-Mo	Aurora	20	S	28-31-35N	109-37-15W	CU MO AU
Porphyry Cu-Mo	Cuatro Hermanos	32	S	28-23-10N	109-39-25W	CU MO
Porphyry Cu-Mo	Lucia	33	S	28-24-10N	109-52-20W	CU MO
Porphyry Cu-Mo	Tres Piedras	306	S	28-27-55N	109-07-00W	CU MO W
Porphyry Cu-Mo	Cobre Rico	347	S	29-53-25N	109-59-25W	MO CU
Porphyry Mo, Low-F	El Creston	30	M	29-55-50N	110-39-25W	MO CU PB ZN
Quartz	Bahia de Quino	473	S	28-52- N	112-00- W	QTZ
Quartz	El Nevado	477	S	32-30- N	116-30- W	QTZ
Replacement Mn	Carr	11	S	31-15- N	109-41- W	MN
Sado Epithermal Vein(?)	Tajitos	173	S	30-58-15N	112-22-20W	AU AG PB ZN CU MO
Salt Mine	Guerro Negro	76	M	27-55- N	114-15- W	BRI

ORE MINERALOGY	HOST ROCK TYPE	HOST ROCK AGE
native AG, CRGY, MAL, CHRY	qtz pp cong	LCRET-ETERT
AU, PY, CPY, SPL	sch	JUR
PY, GAL, SPL, CU oxides	gr	
ARG, GAL, PY, SPL, CRGY	ss	
	ls	
native AU, ARG, CRGY, PROU, PRGY, GAL, SPL	ls	CRET
arg. GAL, SPL, unknown CU	ls?	
AU, FE oxides	qtzites, carb. sh	TRI-JUR
native AU, SPL, CPY, GAL, PY, MARC	qtz dior; basic-dac. dikes	
AU, AG salts (CRGY?), HEM	qtzite	TRI-JUR
GAL, BAR		
GAL		
HEM	fels. intr	
GAL, unknown ZN-CU	bio gr	
GAL	ss, sh	JUR-CRET
ARG, CC	volc	
CC, BAR, CPY	volc	
CU carbonates, AG and FE sulfides, FE oxides	ls	CRET
native AU, URNI	sh	JUR?
CC, PY, CPY, CV, MOLY	and. volc	LCRET
CPY, PY, BN, MOLY, AU; CC, CV, DIG	and pp, and bx	LJUR-ECRET
CPY, CHRY, MAL; MOLY, SPL	and?	EO
PY, CPY, SPEC, CC	cong, ss, tuff, ignm, bsit	TERT
PY, CPY, CC	and. qtz lat. volcsed	LCRET-ETERT
PY, CPY, CC, SPEC; SCH, SPL, GAL	and, lat	LCRET-ETERT
CC, CV, CPY, CUP, TNR, CHRY, MAL	quartzite	ORD?
CPY, PY, MOLY, GAL, SPL(?), FL	and, tuff, mz dior	
PY, CPY	qtz mz, and	
	tuff, and, gdior	
CPY, MOLY, SCH, PY; trace TETR, SPL	try, and, lat, sh, ls	TERT
PY, CPY, MOLY, CC	qtzite, sch	MES
PY, CPY, MOLY	qtz dior, and	
CPY, BN, PY, CC, native CU, TETR, SPL	dior pp	TRI
CPY, PY, BN, CC, CV; SPL, GAL, TETR	and. lava, tuff, agglom	CRET
	and. volc	CRET
CC, PY, CPY(?)	and. volc	CRET
CC, native CU		
CC, CU carbonates, CUP, native CU	qtz mz pp?	
	qtzite	CAMB
CC, unknown MO		
	qtzite	PAL
PY, CPY, BN, CC	gr; qtzite, ls	PREC-PAL
BN, CPY, CC; SPL, GAL, EN, TETR	ls	PENN
CPY, PY, CC, MAL, AZ; SPL, GAL, TETR	ls	PAL
BN, CC, CPY, SPL	ls	PAL?
	ls	CRET
PY, CC, CV, CPY, MOLY, DIG, SPL	qtz mz, qtz dior, lat pp, peg	LCRET-ETERT
PY, CPY, MOLY, SCH, WOLF	gdior, and	
MOLY, PY, CPY, BN; TETR, SPL, GAL	and, dacite, rhy, tuff	LCRET-ETERT
CPY, MOLY, CC, PY; TENN, LUZ, CV	and; Tert QMP	CRET
PY, CPY, MOLY, TETR, AU	and?	TERT
PY, CPY, MOLY, CC(?)		
PY, CPY, MOLY	ton, and	
unknown CU, MOLY, SCH		
MOLY, CPY		
MOLY; CC, minor GAL, SPL, CPY	gn. gr, dior pp	PREC-PAL
BRAU	ls	MES
AU, aurif(?) PY; GAL, CPY, trace MAL	m-ss, rhy. qtz pp	JUR
salt		

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
Salt Mine	Puerto Libertad	291	S	29-55-30N	112-36-30W	BRI
Sedimentary Mn	Eureka claim	540	S	27-12- N	112-05- W	MN
Sedimentary Mn	Trinidad	541	S	26-49- N	111-46- W	MN
Sedimentary Mn	San Juanico	544	S	26-27- N	111-32- W	MN
Serpentine-Hosted Asbestos(?)	Cajon de Onapa	10	S	28-46- N	109-06- W	ASB
Serpentine-Hosted Asbestos(?)	Punta Eugenia	134	S	27-27- N	114-15- W	ASB
Serpentine-Hosted Magnesite	Isla Magdalena	130	S	24-54- N	112-13- W	MG
Serpentine-Hosted Magnesite	Isla Santa Margarita	131	S	24-30- N	111-55- W	MG
Serpentine-Hosted Magnesite(?)	San Bartolome District	135	S	27-28- N	114-25- W	MG
Serpentine-Hosted Talc	Mexicali	113	S	32-35- N	115-30- W	TLC
Serpentine-Hosted Talc	Comondu	124	S	26-05- N	111-50- W	TLC
Serpentine-Hosted Talc(?)	Matape	64	S	29-10- N	109-56- W	TLC VRM
Simple Sb	Arizpe	3	S	30-20- N	110-07- W	SB
Simple Sb	Valedora	90	S	30-22- N	111-30- W	SB
Simple Sb	San Francisco	146	S	30-46-37N	112-35-20W	SB
Simple Sb	San Federico	147	S	30-43-56N	112-35-20W	SB
Simple Sb	El Rincon	174	S	30-43-53N	112-36-20W	SB
Simple Sb	La Argentina	278	S	30-44-24N	112-35-13W	SB AG
Simple Sb	Cerro de San Francisco	281	S	30-45-48N	112-35-12W	SB
Simple Sb	El Divisadero	438	S	30-43-17N	112-36-16W	SB
Simple Sb	La Bolivia	439	S	30-44-35N	112-35-24W	SB
Simple Sb	La Escondida	440	S	30-42-41N	112-35-29W	SB
Simple Sb	El Pensamiento	441	S	30-44-12N	112-35-07W	SB AU
Simple Sb	El Brasil	442	S	30-44-27N	112-35-19W	SB
Simple Sb	El Palo Verde	443	S	30-44-14N	112-35-15W	SB AG AU
Simple Sb	La Loca	444	S	30-44-12N	112-34-55W	SB
Simple Sb	San Miguel	445	S	30-45-02N	112-36-08W	SB
Simple Sb	La Carta Blanca	446	S	30-43-21N	112-36-09W	SB
Simple Sb	La Fortuna	447	S	30-43-26N	112-36-04W	SB
Simple Sb	La Bofa	448	S	30-44-04N	112-35-16W	SB
Simple Sb	San Jose	449	S	30-46-18N	112-35-38W	SB
Simple Sb	La Piedra Azul	450	S	30-44-10N	112-34-59W	SB
Simple Sb	La Montana	451	S	30-44-07N	112-35-07W	SB AG AU
Simple Sb	La Limena	452	S	30-44-16N	112-35-21W	SB AU
Simple Sb	El Promontorio	453	S	30-43-47N	112-35-21W	SB
Simple Sb	El Salero	454	S	30-43-50N	112-35-18W	SB AG
Simple Sb	Trincheras	470	S	30-22- N	111-35- W	SB AU
Stratabound Fluorite	Agua Nueva	2002	S	29-52- N	106-22- W	F
Stratabound Fluorite	Las Manchas	2105	S	30-56- N	105-52- W	F
Stratiform Borates	La Salada	330	L	30-59-30N	111-27-30W	B
Stratiform Borates	Mesa del Alamo	340	L	30-35-35N	110-54-40W	B ZEO
Stratiform Borates	Tubutama	580	M	30-59-52N	111-29-43W	B ZEO
Trona	Bahia de Adair	5	L	31-35- N	113-45- W	NA
Trona	Adair	284	S	31-33- N	113-40- W	NA GYP
Upwelling-Type P	San Hilario Norte	136	M	24-28- N	111-09- W	P
Upwelling-Type P	San Hilario Sur	137	M	24-17- N	111-00- W	P
Upwelling-Type P	San Juan de la Costa	151	M	24-22-57N	110-42-08W	P
Vermiculite	Cerro Toribio	471	S	29-55- N	111-40- W	VRM CU
Volcanic-Hosted Magnetite	El Volcan	45	M	27-45-00N	109-18-30W	FE
Volcanic-Hosted Magnetite	La Perla	2091	M	28-18-44N	104-33-36W	FE
Volcanic-Hosted Magnetite	San Pascual	19	S	27-10-45N	109-01-00W	FE
Volcanic-Hosted Magnetite	San Miguelito	44	S	28-51-30N	109-04-15W	FE
Volcanic-Hosted Magnetite	La Grulla	502	S	31-33-30N	116-20-40W	FE
Volcanic-Hosted Magnetite	La Negra	2089	S	28-12-39N	104-11-50W	FE
Volcanic-Hosted Magnetite(?)	La Lezna	567	S	31-39-15N	112-12-30W	FE
Volcanic-Hosted U	Los Amoles	318	M	29-46-35N	110-28-25W	U PB ZN CU BA
Volcanic-Hosted U	El Picacho	210	S	30-35-30N	110-04-50W	U AU AG MO
Volcanic-Hosted U	San Alejandro	360	S	29-37-10N	109-49-45W	U
Volcanic-Hosted U	Granaditas	578	S	30-18-35N	109-54-05W	U PB ZN
Volcanic-Hosted U	El Palmar	579	S	29-24-15N	109-43-55W	U
Volcanic-Hosted U	Margaritas	2215	S	29-07-16N	106-04-04W	U MO
Volcanic-Hosted U	Nopal 1	2216	S	29-06-40N	106-02-02W	U MO
Volcanic-Hosted U	Puerto 3	2217	S	29-07-22N	106-04-13W	U MO
Volcanic-Hosted U(?)	Las Margaritas	2106	S	29-12- N	106-04- W	U
Volcanogenic Mn	Lucifer	133	M	27-21-34N	112-23-12W	MN
Volcanogenic Mn	Navidad Group	538	S	27-21- N	112-22- W	MN
Volcanogenic Mn	Palmas	539	S	27-23- N	112-23- W	MN
W Pegmatite	El Desierto de Sonora	285	M	32-07-50N	113-45-00W	W
W Pegmatite	El Burro	432	M	28-38-40N	110-05-15W	W MO

ORE MINERALOGY	HOST ROCK TYPE	HOST ROCK AGE
salt	evp	TERT-QUAT
PYRO, PSIL	fossil. ss	LPLIO
	ss, cong	
PSIL	fossil. ls	
MGNS		
MGNS		
SB oxide, STIB	ss	TRI?
SB oxide	ss, f.g. dior	TRI
SB oxide	cong, slt, ss; dior	TRI-JUR
SB oxide, AG bromide and/or chloride	ss, slt	TRI
SB oxide	calc. ss; try	TRI
	qtz pp	
	ss	TRI
	ss	
SB oxide, native AU	slt	TRI
	slt, ss	TRI
SB oxides, AG chloride and/or bromide, native AU	slt	TRI
SB oxides	qtz pp, slt	TRI
	ark. ss, alt. try	TRI
SB oxide	qtz pp	
	qtz pp	
	ark. ss	TRI
	mic. ss	TRI?
SB oxides	slt, ss	TRI
SB oxides, AG bromide or mixed bromide + chloride	ss, slt	TRI
SB oxides, native AU	slt	TRI
	slt	TRI
SB oxide, BRGY	slt, ss	TRI
borates		
HOWL, CLIN, PHIL	ss, sh, tuff, tuff. seds	TERT
COLE, HOWL, McAl, ULEX, WARD	sh, ss, ls, interbed. volc rx	MIO
trona		
NA carbonate, GYP, ANHY	evp	TERT-QUAT
HEM, MAG, PY	rhy dome	
HEM, MAG, minor MART, SPEC	try, sodic rhy pp	TERT
MAG, HEM	and, ls	CRET
MAG	and	
MAG		
HEM, MAG, MART, SPEC	apl	
SPEC, MAG	aplitic microgr	CRET?
URNI, PTC, URNP, ZIPP, AUT	tryand	PALEO-EO
TORB, AUT, IRI, unknown AU-AG, (MOLY)	ignm	TERT
	and	
PTC, KASO, AUT, TORB; GAL, SPL	dac. ignm	TERT
KASO, AUT	dac. ignm	TERT
URAN, BETA, CARN, WEEK, MTY	rhy. ignm, thr	
URNI, URAN, BETA, WEEK, CARN, MTY	rhy. ignm	
URAN, BETA, CARN, WEEK, MTY; POW		
CRYP, PYRO, HOLL, CORO	aren. tuff	
	tuff, tuff. ls	EPLIO
	tuff, tuff. cong	EPLIO
SCH	peg	
SCH, MOLY	peg, bio-hblnd mzgr, apl	

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
W Pegmatite	La Victoria	53	S	27-03- N	108-58- W	W
W Pegmatite	San Julian	244	S	28-16- N	109-15- W	W
W Pegmatite	La Cruz	269	S	28-15-03N	109-10-03W	W CU MO
W Pegmatite	El Bufalo	270	S	28-15-00N	109-10-03W	W CU
W Pegmatite	Lydia	271	S	28-41- N	109-20- W	MO W
W Pegmatite	Veta Rey	272	S	28-42-30N	109-19- W	W MO CU
W Pegmatite	El Tungsteno	273	S	28-20- N	109-37- W	W
W Pegmatite	La Libertad	274	S	28-21- N	109-36-30W	W
W Pegmatite	Llano Colorado	275	S	29-00-55N	109-52-40W	W
W Pegmatite	El Nacimiento	283	S	28-12-25N	109-39-30W	W CU MO
W Pegmatite	Extension de Uranio	304	S	28-56-30N	109-19-40W	W CU U?
W Pegmatite	La Morita	316	S	29-44-10N	110-16-25W	W
W Pegmatite	San Cayetano	401	S	27-13-30N	108-52-05W	W
W Pegmatite(?)	El Tordillo	1	S	28-23- N	109-39- W	W MO
W Pegmatite(?)	El Trueno-Nacimiento	243	S	28-11- N	109-45- W	W
W Skarn	San Antonio (Jaralito)	295	L	29-40-40N	110-16-50W	W CU MO
W Skarn	San Alberto	154	M	27-21-00N	108-56-20W	W
W Skarn	Hermosillo	491	M	29-09- N	110-58- W	W
W Skarn	Ures	89	S	29-27- N	110-29- W	W
W Skarn	La Oliva	108	S	32-05- N	115-45- W	W
W Skarn	Los Gavilanes	111	S	32-10- N	116-10- W	W
W Skarn	La Venada	169	S	29-07-50N	109-51-20W	W CU MO
W Skarn	Palo Verde	212	S	29-03-20N	110-59-10W	W CU
W Skarn	Villa de Seris	213	S	29-04-20N	110-57-00W	W
W Skarn	Tungsteno de Baviacora	218	S	29-41- N	110-20- W	W
W Skarn	El Fenomeno	229	S	32-08- N	116-08- W	W CU AU
W Skarn	La Raza	230	S	32-15- N	116-00- W	W
W Skarn	El Topo	231	S	32-12-40N	115-59-58W	W
W Skarn	Tio Pepe	232	S	32-11- N	115-54- W	W
W Skarn	Olivia	233	S	32-10- N	115-57- W	W
W Skarn	Los Aliados de America	234	S	32-12-39N	116-00-15W	W
W Skarn	El Audaz	235	S	32-12-55N	115-59-45W	W
W Skarn	El Dieciseis de Septiembre	236	S	32-12-45N	116-00-00W	W
W Skarn	La Esperanza	237	S	32-09- N	115-59- W	W
W Skarn	Cienpies	238	S	32-08- N	116-04- W	W
W Skarn	El Pinalito	239	S	32-11- N	116-03- W	W
W Skarn	Corte de Madera	240	S	32-07-58N	116-04- W	W
W Skarn	El Fenomeno del Topo	241	S	32-12-50N	116-00-00W	W
W Skarn	La Cruz	242	S	29-06-23N	110-54-53W	W
W Skarn	Maria Luisa	245	S	29-04-38N	110-56-03W	W
W Skarn	El Tungsteno	246	S	29-04-35N	110-56-01W	W
W Skarn	Noche	247	S	29-04-36N	110-56-04W	W
W Skarn	Los Cuates	248	S	29-04-37N	110-56-01W	W MO
W Skarn	Santa Eduviges	249	S	29-04-43N	110-56-00W	W
W Skarn	Beatriz	250	S	29-04-50N	110-55-08W	W
W Skarn	Carnaval	251	S	29-04-43N	110-55-12W	W
W Skarn	San Juan de Dias	252	S	29-04-42N	110-55-16W	W
W Skarn	Santa Ana	253	S	29-06-30N	110-55- W	W
W Skarn	El Espejo	254	S	29-06-17N	110-54-47W	W
W Skarn	Maravilla	255	S	29-04-41N	110-56-01W	W
W Skarn	Cinco de Mayo	256	S	29-04-33N	110-56-01W	W MO
W Skarn	La Luz Azul, La Leonora	257	S	29-02-50N	110-55-50W	W
W Skarn	El Camino	258	S	28-59-40N	110-57-45W	W
W Skarn	Josefina, Los Andes, Carmelita	259	S	29-02-50N	110-55-10W	W
W Skarn	Virgen de Guadalupe	260	S	28-12- N	110-58- W	W CU FE
W Skarn	Tecolote	261	S	28-40- N	109-25- W	W
W Skarn	Cadena del Cobre	262	S	29-12- N	109-22- W	W CU
W Skarn	El Saturno	266	S	29-10- N	110-48- W	W CU
W Skarn	El Picacho	267	S	29-14- N	110-45- W	AU W CU
W Skarn	El Nublado	268	S	29-13-30N	110-44-35W	W MO CU
W Skarn	Unnamed occurrence	301	S	29-31-30N	111-01-20W	W
W Skarn	Unnamed occurrence	302	S	29-30-10N	110-57-20W	W
W Skarn	Coker	305	S	29-06-00N	109-43-35W	W
W Skarn	Santo Nino	308	S	29-40-00N	110-17-20W	W
W Skarn	Contrabando	309	S	29-39-20N	110-16-50W	W
W Skarn	Santa Elena	310	S	29-39-35N	110-15-40W	W
W Skarn	Picacho	311	S	29-10-45N	110-44-35W	W
W Skarn	Lorena	317	S	29-46-50N	110-24-50W	W ZN MO F
W Skarn	La Gloria	352	S	29-18-35N	109-13-10W	W CU MO AU

ORE MINERALOGY	HOST ROCK TYPE	HOST ROCKAGE
SCH	peg	
SCH, CTNG, CPY, MOLY	peg	
SCH, CTNG, CPY	peg?	
MOLY, SCH	peg	
SCH, MOLY, CPY	peg	
SCH	peg	
SCH	peg	
SCH		
SCH, CPY, AZ, MOLY, POW, PY	peg	
SCH, CTNG		
	peg	
	peg	
SCH, MOLY	qtz-mz. gr	LORET-ETERT
SCH, WOLF, CPY, MOLY	ls	PERM
		CRET
SCH		
SCH; PY, CPY, POW, tr. MOLY	mrbl	
SCH, CPY, PY	ls	PERM
	ls, qtzite, sh, chert	PAL
SCH	mrbl	LPAL
SCH	tct, hfels, sch	
SCH	mrbl, hfels, sch, qtz dior	
SCH	mrbl	
SCH	mrbl	
SCH	mrbl, hfels	
SCH	mrbl	
SCH	mrbl	
SCH	tct	
SCH	tct	
SCH	tct	
SCH	mrbl	
SCH	mrbl	
SCH	ls	PAL
SCH	ls	PAL
SCH	ls	PAL
SCH	ls	PAL
SCH, POW	ls	PAL
SCH	ls	PAL
SCH	ls	PAL
SCH	ls	PAL
SCH	ls	PAL
SCH	ls	PAL
SCH, POW	ls	PAL
SCH	ls	PAL
SCH	ls	PAL
SCH	ls	PAL
SCH, CU and FE oxides	ls	PAL
SCH	ls	PAL
SCH	ls	PAL
SCH, CPY	ls	PAL
AU; SCH, CU oxides	ls	PAL
SCH, POW, CU oxides	ls	PAL
SCH		
SCH		
SCH	ls	PAL
	ls	PAL
	ls	PAL
	ls	PAL
	ls	PAL
SCH, SPL, POW, FL	ls	PERM
SCH, CPY, aurif. PY, ASPY, MOLY	ls	ECRET

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
W Skarn	El Zacate	354	S	29-08-40N	109-57-45W	W
W Skarn	La Nortena	379	S	28-51-26N	109-30-12W	W CU MO FE ZN
W Skarn	La Esperanza	380	S	28-53-10N	109-33-35W	W
W Skarn	La Esperanza bis	381	S	28-54-30N	109-33-40W	W
W Skarn	Moniguasa	404	S	27-09-25N	108-47-35W	W
W Skarn	Carmelita	427	S	28-58-50N	110-56-05W	W
W Skarn	Leonora	428	S	28-58-10N	110-57-40W	W
W Skarn	Unnamed	431	S	28-07-25N	110-54-50W	W
W Skarn	Pearl Harbor	456	S	32-14-25N	115-54-43W	W
W Skarn	Los Pinitos, El Osado	457	S	32-14-36N	115-54-20W	W
W Skarn	El Topo Numero Tres	458	S	32-14-36N	115-54-53W	W
W Skarn	Unnamed prospect	459	S	32-15-03N	115-55-36W	W
W Skarn	Los Cinco Hermanos (North)	460	S	32-14-15N	115-54-21W	W
W Skarn	Los Cinco Hermanos	461	S	32-14-09N	115-54-26W	W
W Skarn	Los Cinco Hermanos (Incline)	462	S	32-14-03N	115-54-31W	W
W Skarn	Los Cinco Hermanos (South)	463	S	32-13-48N	115-54-29W	W
W Skarn	V for Victory	464	S	32-13-39N	115-55-10W	W
W Skarn	Pasadena	465	S	32-08-31N	116-05-08W	W
W Skarn	El Socorro	466	S	32-11-00N	115-54-23W	W
W Skarn	Unnamed prospect	467	S	32-10-49N	115-55-20W	W
W Skarn	Unnamed prospect	468	S	32-11-09N	115-53-54W	W
W Skarn(?)	La Estrella	13	S	29-05- N	110-33- W	W
W Skarn(?)	Granate	303	S	28-58-30N	110-38-45W	W
Zn-Pb Skarn	La Reforma	2095	L	26-58- N	108-09- W	ZN PB CU AG AU
Zn-Pb Skarn	El Tecolote	323	M	29-53-35N	111-32-10W	ZN CU AG MO W BI
Zn-Pb Skarn	San Francisco	148	S	29-14-40N	109-50-45W	PB ZN CU
Zn-Pb Skarn	El Manto	157	S	27-25- N	108-45- W	AG ZN AU
Zn-Pb Skarn	Santa Rosa	312	S	29-53-28N	110-17-20W	ZN AG PB CU W
Zn-Pb Skarn	Guadalupe	324	S	29-53-55N	111-28-55W	PB ZN CU
Zn-Pb Skarn	El Gachi	341	S	30-19-30N	110-07-55W	PB ZN
Zn-Pb Skarn	Gochico	402	S	27-22-55N	108-47-40W	PB ZN CU
Zn-Pb Skarn	El Triunfo	407	S	27-08-40N	109-03-25W	PB ZN CU
Zn-Pb Skarn	La Reyna (and others)	409	S	26-50-25N	108-38-10W	PB ZN CU
Zn-Pb Skarn	Maria Bonita	411	S	26-47-05N	108-36-05W	PB ZN CU
Zn-Pb Skarn	San Martin	426	S	28-17-25N	110-08-20W	AG PB CU ZN
Zn-Pb Skarn	Sierra de Cobre	562	S	30-59-00N	110-20-30W	ZN CU
Zn-Pb Skarn	Las Lamas	573	S	29-52-38N	110-18-22W	ZN AG PB CU
Zn-Pb Skarn	Bismark	2014	S	31-17-33N	107-39-44W	ZN AU AG CU FE MN
Zn-Pb Skarn	Santa Teresa	2163	S	28-35- N	105-20- W	PB AG
Zn-Pb Skarn	Sierra de Las Damas	2171	S	29-35- N	105-48- W	PB ZN AU
Zn-Pb Skarn	Tosisihua	2180	S	29-47- N	105-22- W	PB AG
Zn-Pb Skarn	Zona de Contencion	2189	S	30-07-36N	106-49-14W	PB ZN AG AU CU
Zn-Pb Skarn(?)	Los Locos	314	S	29-51-25N	110-18-10W	PB ZN CU
Zn-Pb Skarn(?)	Margarita	398	S	27-03-55N	109-10-50W	AG PB ZN CU
Zn-Pb Skarn(?)	Reyna del Cobre	405	S	27-05-55N	108-40-00W	AG PB ZN CU
Not Classified	Las Goterias	363	S	28-33-35N	109-41-05W	AG AU CU
Not Classified	San Joaquin	2147	S	30-05-39N	107-46-42W	AG AU CU
Not Classified	El Letrero	2226	S	28-23-15N	108-03-45W	AG CU
Not Classified	Sierra Hachita Hueca	84	S	30-35- N	108-52- W	AG PB
Not Classified	Los Crestones	60	S	29-11- N	109-39- W	AG PB ZN
Not Classified	Pilares de Teras	395	S	30-38-35N	109-14-15W	AG PB ZN
Not Classified	Japon en Mexico	493	S	27-30-45N	108-44-10W	AG PB ZN AU
Not Classified	Santo Domingo	333	S	30-51-15N	110-45-05W	AG PB ZN CU
Not Classified	Argentita	335	S	30-52-30N	110-42-20W	AG PB ZN CU
Not Classified	El Tigre	372	S	28-22-25N	109-16-05W	AG PB ZN CU
Not Classified	Blanca	7	S	27-04- N	109-10- W	AU
Not Classified	Algorroba-Pichucate	17	S	26-56- N	108-31- W	AU
Not Classified	La Escondida	106	S	29-05- N	113-40- W	AU
Not Classified	La Milla	107	S	32-15- N	116-00- W	AU
Not Classified	Las Chollas	109	S	28-50- N	113-30- W	AU
Not Classified	Leon Grande	110	S	29-15- N	114-25- W	AU
Not Classified	San Juan	119	S	28-40- N	113-30- W	AU
Not Classified	Valladares	122	S	31-01- N	115-25- W	AU
Not Classified	La Minita	132	S	27-29- N	114-11- W	AU
Not Classified	Altar	286	S	30-43- N	111-51- W	AU
Not Classified	El Desengano	483	S	29-35- N	114-20- W	AU
Not Classified	El Corsario	571	S	28-21-00N	112-54-15W	AU
Not Classified	Amarillos	574	S	23-39-57N	110-04-04W	AU
Not Classified	El Mimbire	2053	S	31-20- N	106-04- W	AU AG

ORE MINERALOGY	HOST ROCK TYPE	HOST ROCK AGE
SCH; CPY, MOLY, (POW); PY, PYRR, SPL	mrbl, chert	CARB
	ls	PAL
	ls	PAL
	ls?	JUR-CRET
SCH	mrbl	
SCH	mrbl, hfels	
SCH	mrbl, tct	
SCH	mrbl, sch, hfels	
SCH	mrbl, sch, hfels	
SCH	mrbl, tct	
SCH	mrbl, hfels	
SCH	mrbl	
SCH	mrbl, hfels	
SCH	tct, hfels, sch	
SCH	tct, sch, hfels	
SCH	mrbl, hfels	
SCH	sch	
SCH	ls	PAL
SCH	ls	PAL
PY, MAG, GAL, SPL, CPY	mrbl	MES
SPL (MARM), CPY, MARC, CV, ARG, SCH	ls, qtzite	PAL
SPL, arg. GAL, CPY, PY, CV, MARC	ls	ECRET
	ls, qtzite	PAL
	ls, sh	CRET
	ls?	JUR-CRET
	ls?	JUR-CRET?
	ls?	JUR-CRET
	ls?	JUR-CRET
GAL, SPL, CPY, MARC	ls	PAL
SPL, PY, CPY(?)	ls	PAL
SPL, (MARM?), CPY, PY, GAL, minor MARC	ls	ECRET
unknown AU-AG; FE, Mn, and CU oxides	ls	CRET
	ls?	JUR-CRET
	ls?	JUR-CRET
	qtzite, carb. sh	TRI-JUR
FREI		
	sch, volcsed, sh, ls	JUR-CRET
native AU		
native AU		
native AU		
native AU		
native AU		
	arg, ss	-JUR
native AU		
	gdior	LJUR-ECRET

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
Not Classified	Klondyke	2075	S	31-00-40N	106-11-33W	AU AG
Not Classified	Sierra de Guadalupe	2168	S	31-15- N	106-09- W	AU AG
Not Classified	Guadalupe Bravo	2194	S	31-18- N	106-10- W	AU AG
Not Classified	Cinco de Abril	2227	S	28-30-00N	108-24-00W	AU AG
Not Classified	Sierra Placer de Guadalupe	2175	S	29-20- N	105-24- W	AU AG PB ZN
Not Classified	El Pinito	2057	S	28-04- N	108-41- W	AU AG SB
Not Classified	San Antonio	2140	S	28-11- N	108-43- W	AU AG SB
Not Classified	Santiago	142	S	23-30- N	109-45- W	AU AG W
Not Classified	Mascara de Hierro Mine	156	S	28-10- N	115-10- W	AU CU
Not Classified	El Tiro	197	S	30-17-30N	111-44-30W	AU CU
Not Classified	La Carolina	200	S	30-10-30N	111-43-30W	AU CU
Not Classified	El Bote	390	S	30-36-55N	109-46-20W	AU CU
Not Classified	Columbia	484	S	29-10- N	114-25- W	AU CU
Not Classified	La Ultima	179	S	29-58-25N	110-43-20W	AU CU AG? PB?
Not Classified	San Antonio del Mar	116	S	31-05- N	116-15- W	AU CU FE
Not Classified	Santa Teresa	121	S	31-05- N	116-01- W	AU CU FE
Not Classified	La Sirena	569	S	28-16-45N	112-53-00W	AU CU FE
Not Classified	Alamos district	475	S	27-03- N	108-57- W	AU CU W
Not Classified	Mariscal	327	S	29-33-00N	110-02-10W	AU MO
Not Classified	Mina de Barita	114	S	30-00- N	114-40- W	BA
Not Classified	Los Duartes	191	S	28-44-50N	109-50-55W	BA
Not Classified	Guadalupe	190	S	28-43-50N	109-54-20W	BA PB
Not Classified	Aconchi	294	S	30-03- N	110-06-30W	BE
Not Classified	El Marmol	482	S	30-00- N	114-45- W	CA
Not Classified	Lupita	62	S	26-54- N	108-45- W	CU
Not Classified	Nacori Chico	66	S	29-28- N	108-43- W	CU
Not Classified	Zona Viznaga	92	S	28-55- N	111-06- W	CU
Not Classified	Aguajito	93	S	30-03- N	115-28- W	CU
Not Classified	Alejandra	94	S	30-10- N	115-22- W	CU
Not Classified	Cerro Colorado	96	S	32-28- N	116-55- W	CU
Not Classified	Esmeralda	104	S	29-45- N	115-10- W	CU
Not Classified	San Jose	118	S	31-05- N	115-35- W	CU
Not Classified	Vibora	123	S	30-10- N	115-46- W	CU
Not Classified	San Roque	140	S	27-15- N	114-24- W	CU
Not Classified	Todos Santos	143	S	23-30- N	110-12- W	CU
Not Classified	El Cobre	153	S	26-58- N	108-43- W	CU
Not Classified	Filadelfia	282	S	29-12- N	110-10- W	CU
Not Classified	Gallo De Oro	289	S	28-45- N	109-40- W	CU
Not Classified	Viznaga	474	S	28-55- N	111-10- W	CU
Not Classified	Morro Hermosa	487	S	27-32- N	114-43- W	CU
Not Classified	Aldama	2005	S	28-53- N	105-54- W	CU
Not Classified	Gioconda	2065	S	29-20- N	104-32- W	CU
Not Classified	Huaymopa	2070	S	29-31- N	108-30- W	CU
Not Classified	Juarez	2074	S	31-25- N	106-15- W	CU
Not Classified	Los Arenales	2110	S	29-48- N	105-11- W	CU
Not Classified	San Juan	2150	S	31-10- N	105-52- W	CU
Not Classified	Temosachi	2198	S	29-20- N	108-30- W	CU
Not Classified	La Boquilla	2199	S	29-25- N	104-54- W	CU
Not Classified	Punta Norte	575	S	28-21-41N	115-14-26W	CU AU
Not Classified	La Plumosita	40	S	29-09- N	109-22- W	CU FE
Not Classified	San Miguel	2156	S	28-41- N	104-09- W	CU FE
Not Classified	Bonet	95	S	28-20- N	113-54- W	CU FE AU AG
Not Classified	Dolores	14	S	29-00- N	109-44- W	CU PB AG
Not Classified	San Francisco	328	S	29-36-00N	110-11-30W	CU PB ZN BA
Not Classified	El Manzano	102	S	30-17- N	115-37- W	FE
Not Classified	Santa Ursula	120	M	29-55- N	115-25- W	FE
Not Classified	Tepustete	503	S	31-17-50N	116-23-50W	FE
Not Classified	Guadalupe y Solis	504	S	31-18-40N	116-16-20W	FE
Not Classified	El Salto	505	S	29-46-50N	115-21- W	FE
Not Classified	La Cochalosa	506	S	29-53-20N	115-16-40W	FE
Not Classified	Cerro Blanco	507	S	30-02-30N	115-10-40W	FE
Not Classified	Sauzalito	508	S	30-16-10N	115-20-40W	FE
Not Classified	Santa Catarina	509	S	29-38-50N	114-58-50W	FE
Not Classified	El Taraicito	510	S	30-24-50N	115-37-50W	FE
Not Classified	Campo Rodriguez	511	S	30-25-40N	115-12-00W	FE
Not Classified	Canada del Gringo	512	S	30-33-00N	115-19-00W	FE
Not Classified	Palomas	513	S	29-09-40N	114-35-00W	FE
Not Classified	San Isidro	514	S	31-10-00N	116-16-30W	FE
Not Classified	Rosarito	515	S	30-33-10N	115-09-40W	FE

DEPOSIT MODEL TYPE	SITE NAME	MAP #	SIZE	LATITUDE	LONGITUDE	COMMODITY
Not Classified	El Cobota	568	S	31-35-45N	112-06-15W	FE AG CU
Not Classified	El Coyote	2051	S	28-38- N	104-05- W	FE CU
Not Classified	Batopilillas	2012	S	27-53- N	108-26- W	HG
Not Classified	San Carlos	2142	S	29-10- N	103-58- W	HG
Not Classified	Sierra de Encinillas	2167	S	28-15- N	104-10- W	HG
Not Classified	Temoris	2178	S	27-17- N	108-16- W	HG
Not Classified	Unnamed occurrence	2267	S	29-02-30N	103-54-30W	HG
Not Classified	Bartolome	486	S	27-33- N	114-45- W	MG
Not Classified	Morro Hermosa	488	S	27-32- N	114-43- W	MG
Not Classified	Cunara	534	S	31-08- N	111-24- W	MN
Not Classified	Edmondson	535	S	30-59- N	110-15- W	MN
Not Classified	Santa Rosa	542	S	26-45- N	111-40- W	MN
Not Classified	Santa Teresa	543	S	26-41- N	111-35- W	MN
Not Classified	San Antonio (Mn)	549	S	23-49- N	110-02- W	MN
Not Classified	Triunfo (Mn)	550	S	23-49- N	110-06- W	MN
Not Classified	Cerro del Centinela	551	S	32-38- N	115-44- W	MN
Not Classified	Zacatos	552	S	32-14- N	116-18- W	MN
Not Classified	Socorro (Mn)	553	S	31-05- N	115-36- W	MN
Not Classified	Sierra de Juarez	554	S	32-10- N	115-45- W	MN
Not Classified	Ojo Caliente	2258	S	30-20- N	106-26- W	MN
Not Classified	Sostenes	2259	S	29-15- N	105-17- W	MN
Not Classified	Santa Rosa	2260	S	28-43- N	106-04- W	MN
Not Classified	Guadalupe Numero 2	501	S	32-29- N	116-15- W	MN GRF
Not Classified	La Gloria-Santa Rosa	36	S	28-20- N	109-01- W	MO
Not Classified	Victoria y Beatriz	319	S	29-45-50N	110-29-50W	MO
Not Classified	Yecora	476	S	28-22- N	109-01- W	MO
Not Classified	Opodepe	472	S	29-52- N	111-08- W	PB AG
Not Classified	Bonanza	2015	S	30-51- N	105-39- W	PB AG
Not Classified	Cerro del Plomo	2032	S	30-27-05N	106-55-33W	PB AG
Not Classified	Cerro Prieto	2033	S	28-53- N	105-23- W	PB AG
Not Classified	El Alamillo	2048	S	30-56- N	105-46- W	PB AG
Not Classified	El Nopal	2055	S	30-00-51N	106-05-52W	PB AG
Not Classified	La Escondida	2082	S	30-16- N	106-10- W	PB AG
Not Classified	La Lagrima	2085	S	30-23- N	105-27- W	PB AG
Not Classified	La Plomosa	2093	S	30-17- N	104-52- W	PB AG
Not Classified	La Victoria	2099	S	29-00- N	103-33- W	PB AG
Not Classified	Ojo Caliente	2126	S	29-54-36N	107-11-20W	PB AG
Not Classified	Palo Blanco (Lamentos B)	2128	M	30-26- N	106-13- W	PB AG
Not Classified	Sierra de La Alcaparra	2169	S	30-40- N	106-05- W	PB AG
Not Classified	Sierra de Los Mosqueteros	2173	S	30-46- N	106-14- W	PB AG
Not Classified	Sierra La Mojina	2174	S	29-50-33N	106-49-31W	PB AG
Not Classified	Santo Domingo	2176	S	30-32-10N	106-47-37W	PB AG
Not Classified	Sierra de Cuilman	2195	S	30-58- N	105-47- W	PB AG
Not Classified	Los Bronces	59	S	28-37- N	109-29- W	PB AG AU CU
Not Classified	La Senorita	2098	S	28-58-35N	106-09-46W	PB AG CU
Not Classified	Samalayuca	2139	S	31-20-08N	106-32-34W	PB AG CU
Not Classified	Sierra de La Magdalena	2170	S	30-35-35N	106-20-30W	PB AG CU ZN FE
Not Classified	Cerro del Chile	2030	S	30-37-44N	107-01-48W	PB AG FE
Not Classified	Eureka	2064	S	29-22- N	108-28- W	PB SB
Not Classified	Santa Eduwiges	187	S	28-28-40N	109-20-20W	PB ZN
Not Classified	El Realito	358	S	29-09-20N	109-21-10W	PB ZN
Not Classified	Las Marias	2107	S	29-07- N	103-40- W	PB ZN
Not Classified	Boquillita	2016	S	29-16- N	104-46- W	PB ZN AG
Not Classified	La Ceja-Hormigas	2079	S	29-08- N	105-40- W	PB ZN AG
Not Classified	Sierra de Las Minas	2172	S	30-23-33N	106-28-47W	PB ZN AG
Not Classified	Las Hormigas	2104	S	29-14- N	105-44- W	PB ZN AG U MN
Not Classified	Roque	2137	S	28-39- N	105-20- W	PB ZN BA
Not Classified	Alma Susana	325	S	29-14-35N	110-10-25W	PB ZN CU
Not Classified	Santa Rosa	356	S	29-01-15N	109-29-55W	PB ZN CU
Not Classified	San Felipe	117	S	31-00- N	114-50- W	S
Not Classified	Hacienda Casa de Adobe	2068	S	30-37- N	108-28- W	SN
Not Classified	Ensenada	478	S	31-58- N	116-50- W	TLC
Not Classified	Tecoripa	87	S	28-38- N	109-57- W	W
Not Classified	Sierra Aconchi	326	S	29-49-00N	110-18-25W	W

Appendix II

Site Name Index

SITE NAME	MAP #	SITE NAME	MAP #
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Aconchi	294	Batamote	25
Acrobato de Loco	2233	Batopilillas	2012
Adair	284	Batosegachic	2013
Agua Caliente	2239	Baviacora	295
Agua Nueva	2002	Beatriz	33
Agua Nueva	2003	Beatriz	250
Agujito	93	Bella Esperanza	22
Aguilar	2256	Bismark	2014
Ahumada	2184	Blanca	7
Alamos a la Victoria	53	Bolanos	2277
Alamos district	475	Bonanza	435
Aldama	2005	Bonanza	2015
Alejandra	94	Bonet	95
Algorroba-Pichucate	17	Boquillita	2016
Alicia	2271	Buckeye	348
Alma de Maria	2230	Buena Tierra	2214
Alma Susana	325	Buena Ventura	2234
Altar	286	Buena Vista	184
Amarillos	574	C.Q. y Don Carlos.	2187
Amelia	280	Cabeza Blanca	100
America Viejo	2123	Caborca	9
America-Bonanza	561	Cadena del Cobre	262
Ampliacion Wallito	2111	Cajon de Onapa	10
Ana Maria	100	Calmalli	99
Ana Maria	413	Campana	562
Anexas de Alicia	2271	Campo Grande	2179
Animas	184	Campo Rodriguez	511
Ano Nuevo y Prosperidad	2184	Campodonico	51
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Antonio Rosales	52	Cananea	2
Apache	2008	Cananea-Duluth	558
Archipiélago	349	Candamena	2232
Arenales	2110	Candelaria	2047
Argentina	250	Capote	150
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Arizpe	3	Caracahui	41
Arroyo Coronado	48	Carmelita	427
Ascencion	2193	Carnaval	251
Atil	4	Carr	11
Atravisada	2179	Carrizalillo	2022
Aurora	20	Casa de Janos	2023
Azatlan	2257	Casas Grandes (Mn)	2024
Bacadehuachi	69	Casas Grandes (Pb-Zn)	2196
Bahia de Adair	5	Cata Luisita	126
Bahia de Quino	473	Cata Panchita	126
Banco de Oro	287	Cata Panzon	126
Barison	516	Cerro Blanco	47
Barita de Sonora	516	Cerro Blanco	63
Barollega	6	Cerro Blanco	436
Baroyeca	6	Cerro Blanco	507
Barreal	2223	Cerro Boludo	2028
Barrial	2223	Cerro Cobachi	216
Bartolome	486	Cerro Colorado	96

SITE NAME	MAP #	SITE NAME	MAP #
Cerro Colorado	297	Cuchillo Parado	2272
Cerro de Fierro	2091	Cucurpe district	100
Cerro de las Minas	420	Cuesta de Fierro	42
Cerro de Oro	46	Cumobabi	346
Cerro de Plata	198	Cunara	534
Cerro de San Francisco	281	Democrata	559
Cerro del Centinela	551	Descubridora	2269
Cerro del Chile	2030	Dieciseis de Septiembre	205
Cerro del Plomo	2032	Dolores	14
Cerro La Esperanza	525	Dolores	2013
Cerro Prieto	2033	Dolores	2230
Cerro Toribio	471	Dominguez	2252
Chapala	97	Don Carlos	99
Chicote	204	Don Cuco	2024
Chilicote	2166	Dos Cabezas	15
Chinipas	2035	Dos Manueles	332
Chinoverachi	357	Dos Naciones	16
Choloma	2275	Edmondson	535
Chorreras	2246	Edna Lucia	207
Cieneguita	12	El Alacran	24
Cienpies	238	El Alacran	2182
Cinco de Abril	2227	El Alamillo	2048
Cinco de Mayo	256	El Alamo	340
Cinco de Mayo	2047	El Albur	206
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Claudia	416	El Apache	117
Cobachi	216	El Apache creek	583
Cobre Grande	560	El Arco	99
Cobre Rico	347	El Audaz	235
Cocinera	397	El Batamote	25
Cocinera Blanca	185	El Boleo	125
Cojurichic	2187	El Boludo	329
Coker	305	El Bote	390
Colorada pit	566	El Brasil	442
Colorado	435	El Bufalo	270
Columbia	484	El Burro	432
Comondu	124	El Cabiro	2049
Concamena	2187	El Camino	258
Conchenito	2039	El Carrizo	2050
Concheno	2039	El Cerrito	367
Conejos	2040	El Chilicote	204
Consolidada	2111	El Choro	70
Contrabando	309	El Chorro	70
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Corona de Oro	100	El Cobota	568
Coronel	2260	El Cobre	153
Corriente	2111	El Cobre	277
Corte de Madera	240	El Cobre Mine	31
Coyame	2042	El Corsario	571
Cuate	248	El Coyote	2051
Cuatro Hermanos	32	El Creston	30
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El Durazno	2240	El Salto	424
El Espejo	254	El Salto	505
El Espiritu	336	El Salto	524
El Fenomeno	229	El Saturno	266
El Fenomeno del Topo	241	El Saus	2059
El Frijol	400	El Sauz	2059
El Gachi	341	El Socorro	103
El Gallardo	415	El Socorro	466
El Gato	101	El Sotolar	2060
El Gavilan	126	El Taraicito	510
El Hondido	65	El Tecolote	323
El Jaralito	295	El Templar	2236
El Labrador	2184	El Tigre	127
El Leon	2219	El Tigre	372
El Letrero	2226	El Tigre	394
El Madrono	2052	El Tiro	197
El Manto	157	El Topo	231
El Manzano	102	El Topo Numero Tres	458
El Marmol	482	El Tordillo	1
El Mimbre	2053	El Toro	195
El Mirador	527	El Toro	199
El Molibdeno	346	El Tranvia	263
El Nacimiento	283	El Tribilin	410
El Nevado	477	El Trigo	2108
El Nogal	2055	El Triunfo	407
El Nopal	2055	El Triunfo-San Antonio Zone	128
El Nopal	2216	El Trueno-Nacimiento	243
El Nublado	268	El Tule	383
El Oro	186	El Tungsteno	246
El Osado	457	El Tungsteno	273
El Padre	199	El Victor	181
El Palo Verde	443	El Vidolin	223
El Pavo	389	El Voladero	65
El Pensamiento	441	El Volcan	45
El Perdido	555	El Yeri	391
El Picacho	210	El Zacate	354
El Picacho	267	El Zamotal	423
El Pilar	433	El Zapote	2062
El Pilar	2056	El Zorillo	2063
El Pilar	2236	El Zubiarte	217
El Pinalito	239	Elisa	556
El Pinito	2057	Emilia	2057
El Placerito	455	Ensenada	478
El Potosi	2214	Erupcion	2184
El Pozo	425	Escondida	2265
El Promontorio	453	Esmeralda	104
El Puerto	329	Esperanza	565
El Puerto	2106	Esperanza	575
El Realito	358	Esperanza	2187
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SITE NAME	MAP #	SITE NAME	MAP #
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Filadelfia	282	Juan de Dios	2238
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Florencia	2080	Juarez	2074
Florida-Barrigon	21	Kirk	559
Fortuna	2218	Klondike	196
Fortuna Del Cobre	265	Klondyke	2075
Fresnal	2253	La Amargosa	2076
Galeana	2197	La Antigua	494
Gallito de Manganeso	525	La Argentina	278
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Gamer	498	La Ascencion	2078
Gioconda	2065	La Avispa	369
Gochico	402	La Azteca	500
Golfo de Oro	73	La Bamboya	208
Gracia de Dios	2039	La Barra	292
Granaditas	578	La Batalla	202
Granate	303	La Blanca	581
Guadalupe	190	La Bofa	448
Guadalupe	324	La Bolivia	439
Guadalupe	435	La Boquilla	2199
Guadalupe	499	La Bronzuda	220
Guadalupe	529	La California	293
Guadalupe Bravo	2194	La Candelaria	495
Guadalupe Numero 2	501	La Candelaria	2157
Guadalupe y Solis	504	La Cardelena	366
Guanopa	2070	La Caridad	71
Guaynopita	2222	La Caridad	496
Guazapares	2249	La Caridad Vieja	496
Guerro Negro	76	La Carolina	200
Hachita Hueca	392	La Carta Blanca	446
Hachitahueca	392	La Ceja-Hormigas	2079
Hacienda Casa de Adobe	2068	La Central	2080
Hematita	2245	La Chipriona	182
Henrietta	557	La Chispa	355
Hercules	250	La Choya	83
Hercules Coloso	105	La Churumbella	371
Hermosillo	491	La Cienega	298
Hormigas	2104	La Cienega	343
Huaymopa	2070	La Cienega	2234
Huisopa	2047	La Cobriza	2080
Huizopa	2047	La Cobriza	2157
Igualama	384	La Cochalosa	506
Inca y Fortuna	2218	La Cocinera	397
Isla Carmen (Mn)	547	La Cocinera Blanca	185
Isla del Carmen	129	La Colorada	149
Isla Magdalena	130	La Colorada	566
Isla Margarita	131	La Colorada Norte	149
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SITE NAME	MAP #	SITE NAME	MAP #
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La Cruz	269	La Montosa	527
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La Cura	203	La Morita	2088
La Curra	203	La Negra	2089
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La Dura	497	La Negrita Num. 2	522
La Dura	537	La Noche	518
La Escondida	106	La Nortena	379
La Escondida	440	La Oliva	108
La Escondida	2082	La Otilia	576
La Esmerelda	2123	La Palma	315
La Esperanza	237	La Paz	276
La Esperanza	380	La Perla	2091
La Esperanza	2276	La Piedra Azul	450
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La Estrella	13	La Plomosa	2093
La Estrella	35	La Plumosita	40
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La Florida	570	La Princesa	98
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La Fortuna	447	La Providencia	375
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La Gloria	352	La Ramona	176
La Gloria	368	La Raza	230
La Gloria	388	La Reforma	2095
La Gloria	2083	La Republica	2235
La Gloria-Santa Rosa	36	La Republicana	175
La Gotera	363	La Reyna	409
La Grulla	502	La Salada	330
La Guadalupana	37	La Senorita	2098
La Guadalupe	38	La Sierrita	329
La Guila	65	La Sirena	569
La Herradura	91	La Sonora	419
La Independencia	39	La Tinaja	579
La Lagrima	2085	La Ultima	179
La Leona	526	La Union	2047
La Leonora	257	La Venada	169
La Lezna	567	La Ventana	152
La Libertad	274	La Venturosa	2123
La Limena	452	La Verde	29
La Loca	444	La Verde	346
La Lolita	2086	La Verde	408
La Luz Azul	257	La Vibora	2091
La Magnifica	344	La Victoria	53
La Mariquita	23	La Victoria	2099
La Mazonena	219	La Victoria	2184
La Media Cuesta	374	La Virgen	2277
La Mesa	519	La Virgen Morena	521
La Milla	107	La Virgen y La Providencia	2100
La Millonaria	2087	Lampazos	54

SITE NAME	MAP #	SITE NAME	MAP #
Las Aguilas	382	Los Pinitos	457
Las Animas	2182	Los Pinos	183
Las Antillas	55	Los Tajos	186
Las Arenillas	351	Los Tajos	376
Las Cabecitas	155	Los Tajos	430
Las Chispas	158	Los Tanques	61
Las Chollas	109	Los Tejabanes	383
Las Coloradas	583	Los Verdes	34
Las Encinillas	2103	Los Verdes	408
Las Goteras	363	Los Volcanes	2115
Las Hormigas	2104	Lucia	33
Las Lamas	573	Luciano	112
Las Laminas	159	Lucifer	133
Las Lomas	7	Lupita	62
Las Manchas	2105	Lydia	271
Las Mantequillas	377	Magallanes	49
Las Margaritas	2106	Magdalena del Kino	26
Las Marias	2107	Magistral	2229
Las Penitas	422	Manila Hill	506
Las Tablas	57	Maranatha	320
Las Tortugas	338	Maravilla	255
Las Trancas	412	Margarita	398
Las Vigas	2271	Margaritas	2215
Leon Grande	110	Maria	63
Leonora	428	Maria Bonita	50
Llano Colorado	275	Maria Bonita	411
Lluvia de Oro	300	Maria Clarisa	391
Lluvia de Oro	2038	Maria Elena	2047
Lorena	317	Maria Luisa	245
Loreto	2108	Maria Luisa	2236
Los Aliados de America	234	Maria Virginia	2158
Los Alisos	58	Mariquita	23
Los Alisos	378	Mariscal	327
Los Amoles	318	Mascara de Hierro Mine	156
Los Andes	259	Matape	64
Los Arenales	2110	Mejia	435
Los Borregos	2111	Mercedes	100
Los Bronces	59	Mesa del Alamo	340
Los Camaleones	2112	Mexicali	113
Los Cinco Hermanos	461	Mexico	2123
Los Cinco Hermanos (Incline)	462	Milagros	2200
Los Cinco Hermanos (North)	460	Mina Brava	2233
Los Cinco Hermanos (South)	463	Mina de Barita	114
Los Crestones	60	Mina del Aqua	170
Los Cuates	248	Mina La Venganza	2179
Los Dardanelos	56	Mina Mexico	188
Los Duarte	191	Mina Pilares	27
Los Gavilanes	111	Minas Nuevas	396
Los Graseros	385	Minillas	2120
Los Hilos	435	Miriam	221
Los Huesos	530	Mision de San Juan	490
Los Lamentos	2184	Moctezuma Mine	208
Los Locos	314	Monica	370
Los Organos	2205	Monica	429

SITE NAME	MAP #	SITE NAME	MAP #
Moniguasa	404	Pearl Harbor	456
Monterde	2122	Penasco Blanco	373
Moradillas	296	Picacho	211
Moris	2206	Picacho	311
Morro Hermosa	487	Piedra Iman	45
Morro Hermosa	488	Piedras Negras	71
Mosqueteros	2173	Piedras Verdes	145
Mulatos	65	Pilares	27
Mulege	489	Pilares de Teras	395
Myriam	199	Pinos Altos	2233
Myriam and Ano Nuevo	221	Placer de Guadalupe	2277
Nacori Chico	66	Placer de Santo Domingo	2270
Nacozari	67	Planchas de Plata	435
Nacozari	525	Planchas Viejas	435
Nacozari de Garcia	67	Plomosas	2133
Namiquipa	2123	Pragedia	100
Navidad	2039	Praxedis	100
Navidad Group	538	Promontorio	225
Noche	247	Promontorio	406
Noche Buena	68	Promontorio de Obregon	406
Noche Buena	529	Protectora	2228
Noche Buena-Veta Grande	195	Providencia	2233
Nopal 1	2216	Puebla	72
Nuestra Senora de Loreta	2232	Puertecitos	342
Nueva Carolina	2111	Puerto 3	2217
Nueva Union	2182	Puerto de Buenavista	244
Nuevas Quinteras	224	Puerto de Oro	100
Nuevo Casas Grandes	2125	Puerto del Aire	2276
O'Callahan	2047	Puerto Libertad	291
Ocampo	2207	Punta China	479
Ocateca	2179	Punta Eugenia	134
Ojo Caliente	2126	Punta Eugenia	485
Ojo Caliente	2258	Punta Mangles	546
Ojo de Liebre	76	Punta Norte	575
Olivia	233	Punta Pulpito	545
Opodepe	472	Punto Rico	55
Oposura	351	Quinteras	224
Oregon	2228	Quitovac	288
Orizabena	2257	Rancheria	2254
Oro Blanco	69	Rancho del Medio	2136
Ortega Num. 2	2245	Real del Castillo	115
Ortega Num. 3	2245	Refugio	2255
Ortega Num.1	2245	Restauradora	2182
Oversight	563	Rey del Fierro	2245
Oviachic	528	Reyna del Cobre	405
Palmarejo	2238	Rio Plata	2242
Palmas	539	Rio Tinto	2275
Palo Blanco (Lamentos B)	2128	Roque	2137
Palo Verde	212	Rosa de Castilla	229
Palomas	513	Rosales	393
Paragatos	2028	Rosarito	515
Paredones-Amarillos	574	Russell	2111
Pasadena	465	Sabinal	2220
Patrocinio	2013	Sabinal	2250

SITE NAME	MAP #	SITE NAME	MAP #
Sacramento	2275	San Francisco	2230
Saenz Properties	529	San Francisco No. 1	527
Sahuayacan	2237	San Francisco No. 2	527
Sahuayacancito	2159	San Gregorio	2013
Salazar 1	2253	San Guillermo	189
Salazar 2	2251	San Hilario Norte	136
Samalayuca	2139	San Hilario Sur	137
San Agustin	2240	San Ignacio	365
San Alberto	154	San Ignacio	2144
San Alejandro	360	San Isidro	514
San Alejandro	527	San Javier	184
San Antonio	322	San Joaquin	2147
San Antonio	536	San Jose	118
San Antonio	2140	San Jose	449
San Antonio	2187	San Jose	527
San Antonio	2213	San Jose de Moradillas	296
San Antonio	2237	San Jose del Cabo	138
San Antonio (Jaralito)	295	San Juan	119
San Antonio (Mn)	549	San Juan	178
San Antonio de la Huerta	31	San Juan	184
San Antonio del Cobre	31	San Juan	2013
San Antonio del Mar	116	San Juan	2150
San Bartola	153	San Juan de Dias	252
San Bartolome District	135	San Juan de la Costa	151
San Bernardino	2141	San Juanico	544
San Blas	2086	San Judas	346
San Blas	2277	San Julian	244
San Carlos	244	San Luis	2013
San Carlos	2142	San Luis	2155
San Carlos	2244	San Manuel	227
San Carlos	2266	San Marcial	77
San Cayetano	401	San Marcos	43
San Ciriaco	2039	San Marcos	139
San Cleotilde	79	San Marcos	414
San David	2218	San Martin	426
San Eduardo	74	San Matias	2233
San Eduardo	2245	San Miguel	445
San Eligio	2233	San Miguel	582
San Enrique	386	San Miguel	2156
San Faustino	418	San Miguel	2205
San Federico	147	San Miguelito	44
San Felipe	117	San Nicandro	2233
San Felipe	202	San Nicolas	209
San Felipe	313	San Nicolas	350
San Felipe de Jesus	313	San Nicolas	2157
San Felix	180	San Nicolas	2232
San Fernando	481	San Pascual	19
San Francisco	75	San Pedro	533
San Francisco	146	San Roque	140
San Francisco	148	San Vicente	78
San Francisco	299	San Vicente	2098
San Francisco	328	Sanaco	531
San Francisco	469	Santa Amalia	193
San Francisco	2187	Santa Ana	253

SITE NAME	MAP #	SITE NAME	MAP #
Santa Ana	2108	Sierra de Encinillas	2167
Santa Barbara	2241	Sierra de Enmedio	2192
Santa Brigida	2228	Sierra de Guadalupe	2168
Santa Catarina	509	Sierra de Juarez	554
Santa Clara	364	Sierra de La Alcaparra	2169
Santa Eduvigis	249	Sierra de La Magdalena	2170
Santa Eduvigis	529	Sierra de Las Damas	2171
Santa Eduwiges	187	Sierra de Las Minas	2172
Santa Elena	310	Sierra de los Cantilas	2224
Santa Elena	2271	Sierra de Los Mosqueteros	2173
Santa Eulalia district	2161	Sierra de Tajitos	173
Santa Eulalia-East Camp	2213	Sierra Gomez	2203
Santa Eulalia-West Camp	2214	Sierra Hachita Hueca	84
Santa Fe de Amarillas	359	Sierra La Mojina	2174
Santa Gertrudis	279	Sierra las Plomosas	2133
Santa Isabel (San Nicolas)	141	Sierra Pinta	85
Santa Margarita	2158	Sierra Placer de Guadalupe	2175
Santa Maria	2009	Sierra Prieta	86
Santa Maria (y Moctezuma)	2159	Sierra Rica	2273
Santa Rosa	80	Site N-2	2203
Santa Rosa	312	Socorro	2236
Santa Rosa	356	Socorro	2264
Santa Rosa	542	Socorro (Mn)	553
Santa Rosa	2182	Sonora	417
Santa Rosa	2260	Sonora Hill	1
Santa Rosalia	194	Sooy	394
Santa Teresa	121	Sostenes	2259
Santa Teresa	543	Spirit 1	536
Santa Teresa	2013	Spirit 2	536
Santa Teresa	2163	Suaqui Verde	214
Santa Teresa	2237	Tajitos	173
Santa Ursula	120	Tapatia	2257
Santiago	142	Tecolote	261
Santo Domingo	228	Tecoripa	87
Santo Domingo	333	Temoris	2178
Santo Domingo	2176	Temosachi	2198
Santo Nino	177	Teocali	2039
Santo Nino	308	Tepustete	503
Santo Nino	337	Terrazas	2275
Santo Nino	362	Terrenates	2179
Santo Nino	2218	Tesia Y Navojoa	88
Santo Nino	2233	Tetamoa	2240
Santo Nino	2237	Tigre	394
Sara Alicia	403	Tio Pepe	232
Saric	81	Todos Santos	143
Sauzalito	508	Todos Santos	144
Seitz-Kelley	394	Topiyeca	399
Septentrion	2243	Tosisihua	2180
Shangri La	498	Tragedia	100
Sierra Aconchi	326	Transvaal	346
Sierra Cabullona	82	Transvaal	2233
Sierra Chilicote	2166	Transvaal West	346
Sierra de Cobre	562	Tres Cerritos	528
Sierra de Cuilman	2195	Tres Hermanos	2228

SITE NAME	MAP #
Tres Huevos	192
Tres Piedras	306
Trincheras	470
Trinidad	95
Trinidad	541
Triunfo (Mn)	550
Tubutama	331
Tubutama	580
Tungsteno de Baviacora	218
Tuquizon	421
Tutuaca	2225
Ubarbo	222
Ures	89
Urrea	7
Uruachic	2182
V for Victory	464
Valedora	90
Valladares	122
Verdun	2111
Veronica Segunda	2236
Veta Ancha	361
Veta de Oro	2028
Veta Grande	505
Veta Grande	564
Veta Grande	2039
Veta Grande	2233
Veta Grande No. 5	564
Veta Rey	272
Vibora	123
Victoria	536
Victoria y Beatriz	319
Vidolin	223
Villa de Seris	213
Virgen de Guadalupe	260
Virgin Julieta	2218
Viznaga	474
Viznaga	480
Washington	28
West Cobre Grande	559
Wilkie	2186
William Tell	158
Yaqui River placer	307
Yecora	476
Yoquivo	2187
Zacatosa	552
Zazueta	405
Zona 18	437
Zona de Contencion	2189
Zona de Las Varas	2179
Zona Viznaga	92