U.S. GEOLOGICAL SURVEY CIRCULAR 966

Nevada Mineral-Resource Data: Information Available Through the U.S. Geological Survey Mineral Resource Data System

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By Maureen G. Sherlock and Joseph V. Tingley

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1985

Department of the Interior
DONALD PAUL HODEL, *Secretary*

U.S. Geological Survey
Dallas L. Peck, *Director*

Library of Congress Cataloging in Publication Data

Sherlock, Maureen G.
Nevada mineral-resource data: information available through the U.S. Geological Survey mineral resource data system.
(U.S. Geological Survey circular 966)
Bibliography
Supt. of Docs. no.: I 19.4/2:966
1. Mines and mineral resources--Nevada--Information services. 2. Geology--Nevada--Information services.
I. Tingley, Joseph V. II. Title. III. Series
TN24.N3S54 1985 553'.09793 85-600094

Free on application to Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304

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Nevada Mineral-Resource Data: Information Available Through the U.S. Geological Survey Mineral Resource Data System

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INTRODUCTION

The U.S. Geological Survey's (USGS), revised and expanded computerized resource information data set for Nevada is now available to the public through the Mineral Resource Data System (MRDS). MRDS provides a central source of documented or verified geologic and resource information about metal and nonmetal mineral localities for the United States and the world. It stores specific information about the economic geology of a site, which permits easy retrieval and comparison of individual facts within a large or small region or for one or more commodities. Because MRDS is computer based, it readily accommodates new information, documentation, verification, and corrections, as they become available. The current status of the Nevada portion of MRDS encompasses nearly complete geographic coverage of the state, but new information derived from concurrent field studies is frequently added to the data set.

MRDS retrieval methods allow highly selective rapid searches of this data base so that the user can obtain the specific information required. The information can be selected by geographic area, commodity, deposit type, production, and many other criteria, and it can be reproduced in several formats. MRDS resides on a main-frame computer at the USGS in Reston, VA; procedures for public access can be obtained from a regional MRDS manager at either of the following addresses:

Antoinette A. Medlin
Eastern Region Representative
U.S. Geological Survey, MS 920
12201 Sunrise Valley Drive
Reston, VA 22092
703-860-6455

Donald F. Huber
Central and Western Region Representative
U.S. Geological Survey, MS 984
345 Middlefield Road
Menlo Park, CA 94025
415-323-8111

The data, which are nonconfidential, are compiled from published literature, private reports, and unpublished USGS files (see U.S. Geological Survey, 1979), Nevada Bureau of Mines and Geology (NBMG) files, and field examinations by some reporters. Geologic and resource information about historical mineral deposits, currently economic and productive deposits, and subeconomic occurrences that may contain potentially useable metallic or nonmetallic resource materials make this file more than an inventory of past and present productive deposits. Compilation required the gathering of data from many sources. Some of the many people who organized and entered data into the file include Joel R. Bergquist, Will N. Blair, D. A. Brobst, Margaret Cooper, Anny B. Coury, Dennis P. Cox, James Donahoe, James E. Elliott, Gilbert H. Espenshade, J. Bart. Fiebelkorn, Richard P. Fischer, Judith S. Gassaway, Albert John Gorgi, Robert R. Hall, Joy L. Harner, Maureen G. Johnson, David McQueen, Mary H. Miller, Jocelyn A. Peterson, James R. Reeves, Paul G. Schruben, Martha R. Smith, Ted G. Theodore, George W. Walker, Helmuth Wedow, Robert Weeks, George Wong, Ronald G. Worl, and Jan L. Zigler, of the USGS, and J. L. Bentz, Mary S. Depta, Patricia Dodd Flynn, Abby Gruen, Richard A. Kirkham, D. D. La Pointe, Paul Martin, M. Lorrie Meier, Ahmed Mohsen, Mark P. Molinari, Sue E. Royse, Peggy L. Smith, Joseph K. Taylor, Joseph V. Tingley and Becky S. Weimer of the NBMG. We especially thank Donald F. Huber, USGS in Menlo Park, Calif., who coordinated the contracts with the NBMG as well as the work within the USGS, and D. D. La Pointe, NBMG, for patiently reviewing the data set for consistency and accuracy.

PURPOSE OF THE NEVADA MRDS DATA SET

The MRDS, in general, and the Nevada MRDS in particular, is designed to be a working reference source to help meet advisory responsibilities of the SGS. The data are used by Federal, State, and mineral industry geologists (1) to assess known and potentially locatable mineral

resources of the nation, (2) as a first-time look at the mineral deposits in a new area of study, and (3) as a tool for compiling regional metallogenic data and commodity data. Focus is therefore on those commodities (metallic, nonmetallic, and energy related) of broad national or international interest, rather than equally important materials, such as sand and gravel, that are generally abundant but of more local economic significance.

COMPLEMENTARY FILES

The Nevada MRDS data complement other USGS resource files pertaining to organic fuels, water resources, geothermal resources, and coal resources described briefly in USGS Circular 817 (1979). Information about economic factors for production of metallic and nonmetallic commodities can be found in the Mineral Availability System (MAS) of the U.S. Bureau of Mines (1974). The Mineral Industry Location System (MILS), a location subsystem of MAS, contains many of the same commodity occurrences as the MRDS data set (Berg and Carillo, 1980) but differs in the geologic information contained. MAS and MILS information on Nevada is available through the U.S. Bureau of Mines, Western Field Operations Center, E. 315 Montgomery Avenue, Spokane, WA 99107.

DESCRIPTION OF THE NEVADA MRDS DATA SET

The Nevada MRDS data set currently contains 6,132 entries similar in format to the example shown in table 1. The records include available data such as the name, location, geologic setting, commodity information, development, production, resource potential, and references to the published or unpublished information sources. Information about any parameter stored in a given record can be retrieved through interactive access; it can provide computer text (table 1), can be used to create tabular printout (table 3), or formatted to generate map plots (figures 2-25). Essentially a point-site file, most records are flagged with the record type code of "X1M", "X1N, or "X1B" to indicate that they are for metallic, nonmetallic, or metallic and nonmetallic commodities locations, respectively. Those records that describe a district are either a duplicate entry for certain commodities or were entered specifically for the study of a 1° by 2° map area and flagged with different record type codes (see below).

The data set currently uses the storage and retrieval system GIPSY, an English-based computer-language format by which new data and new records can be added, old data corrected and revised, and superfluous or duplicate records deleted (Keefer and Calkins, 1978; Orris and Stoltz, 1982).

SOURCES OF MRDS INFORMATION

The Nevada MRDS data set combines several overlapping sources of data from individual programs within the USGS and the NBMG and from other public and private sources. Data were supplied by geologists researching a specific commodity as well as by geologists studying the regional distribution of all potentially economic deposits in an area. Principal contributions of the USGS include data from the mercury, tungsten, platinum, and titanium and vandium commodity files, and data from the Walker Lake and Tonopah 2° Conterminous United States Mineral Assessment Program (CUSMAP). Principal contributions of the NBMG include 1° by 2° topographic quadrangle maps of the State which were augmented by data collected for the Mineral Resource Inventory Program of the U.S. Bureau of Land Management (BLM). Coordination and cooperation by the USGS and the State of Nevada ensured the inclusion of all currently or formerly productive mines in Nevada and comprehensive areal coverage of nonproductive occurrences in the MRDS data set. The major source of information used by all reporters is the published literature on mines and mining districts. MRDS synthesizes specific data facts from this body of literature and serves as an adjunct to the published data; the records are not meant to replace these sources. Unpublished data from the files of both the USGS and the NBMG were also culled for information. Onsite field examinations of some mines and occurrences, performed as part of the USGS's CUSMAP program and the work performed under contract for the BLM by the NBMG, complements the Nevada MRDS data. An example of one of these field examination records is included as table 2. The NBMG has an ongoing mineral inventory program which will generate additional field-examination records. Original sources are cited in the reference section for each deposit record.

LEVELS OF COVERAGE AND ACCURACY

The total number of records and the distribution of major commodity groups by county in Nevada are given in table 2. The records vary in the amount of detail, quality, and consistency, mostly because of variations in the original data, and also because of differences in intensity and specialization of individual contributors, the particular program emphasis of the contributor, and the varied capabilities of individuals to condense data. The large number of people who contributed to the Nevada MRDS data set over a period of years and the changing standards for reporting also introduced variations between records. However, most of the records used the

revised format and instructions devised by Donald F. Huber (1981) and many of the older entries were brought up to current standards for essential data fields. If the depth of information currently in the files is insufficient for the user's purposes, appropriate references should be consulted.

Location by Universal Transverse Mercator coordinates are from measurements on the 15-minute or 7 1/2-minute topographic quadrangle map (or AMS sheet where only those were available); these were subsequently converted to latitude and longitude. Both sets of coordinates are stored in each record. The location of each mine or occurrence is plotted as accurately as possible; many descriptions of locations are imprecise, and only those mines that can be specifically matched to a location are recorded as having an "accurate" location. Most locations are recorded as "estimated". Criteria for designation as accurate include: location checked by field examination; location corroborated by more than one reference source; mine is identified on a topographic map. For those mines whose locations on an up-to-date topographic map are recorded as estimated, the following guidelines were used: location to the quarter section, or center of section, when this information was available; location to the probable topographic feature described in the reference source; location to the center of claims or ridge lines; location to the center of mining districts. Estimates of distance of accuracy are given in many instances.

In the construction of a data set such as this, in which reporters from several large projects contributed over a period of years, different, but very similar records were submitted and incorporated in the file for the same locality. This is particularly evident in this Nevada file for certain commodities especially those cited in USGS Circular 817 (1979) as constituting a separate file and for the Walker Lake 1° by 2° sheet. A serious effort was made to combine duplicated information, but in some instances, this was impractical. For those localities where a complete record was entered by the commodity geologist and also by an areal geology specialist, the commodity record was given a record type "X4M" to distinguish it from the standard point-site record whose record type is "X1M". The locality records for the Walker Lake 1° by 2° sheet are designated as record type "X5". The data set also contains locations for a few hundred localities where prospecting occurred, but the mineral or commodities looked for are unknown to us; these records are identified as "X1" and (or) contain the commodity code "UNF". Their presence is retained in the data set because future regional studies may benefit by the knowledge that such prospects exist and may result in identification of the commodity at that site.

SUMMARY MAPS OF METAL AND NONMETAL MINERAL LOCALITIES

The series of maps that follows provides a visual estimate of the individual commodity localities documented in Nevada MRDS as detailed in table 2. These maps reproduce computer-generated plots and do not include all the information expected from maps that comply with USGS standards and nomenclature. An index to the 1° by 2° quadrangle base maps in Nevada is inset in figure 1. The distribution maps of the standard point-site records (5,056 in number; figs. 2-20) are in order of precious metals (gold and silver), platinum-group metals, base metals (copper, lead, and zinc); ferrous metals (iron, manganese, titanium, molybdenum, and vanadium); uranium, tungsten, mercury, antimony, arsenic, bismuth, chromium, cobalt and nickel, and other important but less abundant materials—tin, beryllium, flourine, and barium, and nonmetal commodities, gypsum, perlite, and diatomite. The location of those records that describe a district (X2) were entered by a commodity geologist (X4), or were entered for the CUSMAP program (X5) as shown on figure 25. Not all locality points are resolvable at the reduced scale shown, but local areas can be resolved by generating computer plots at a larger scale.

REFERENCES CITED

Berg, A. W., and Carrillo, F. V., 1980, MILS: The mineral industry location system of the Federal Bureau of Mines: U.S. Bureau of Mines Information Circular IC-8815, 24 p.

Huber, D. F., 1981, Mineral data system, computerized resources information bank, U.S. CRIB-site form, instructions for reporters: U.S. Geological Survey unpublished instruction manual.

Keefer, E. K., and Calkins, J. A., 1978, Description of individual data items and codes in CRIB: U.S. Geological Survey Circular 755-B, p. B1-B32.

Orris, G. J., and Stoltz, Melissa, 1982, MDS-CRIB user's manual: Using GIPSY: U.S. Geological Survey Open-File Report 82-826.

U.S. Bureau of Mines, 1974, The Bureau of Mines minerals availability system and resource classification manual: U.S. Bureau of Mines Information Circular 8654, 199 p.

U.S. Geological Survey, 1979, Scientific and technical, spatial, and bibliographic data bases of the U.S. Geological Survey: U.S. Geological Survey Circular 817, 181 p.

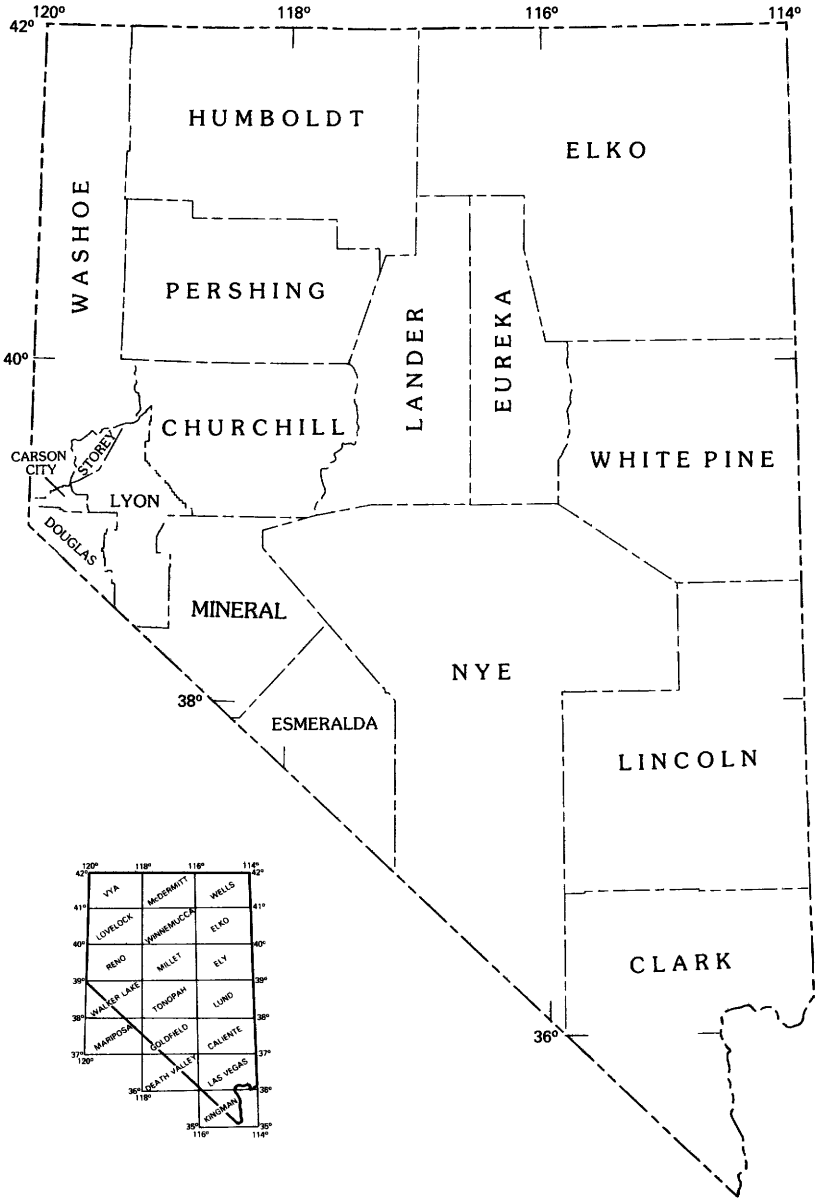

Figure 1.—Nevada county boundaries and 2° sheet locations.

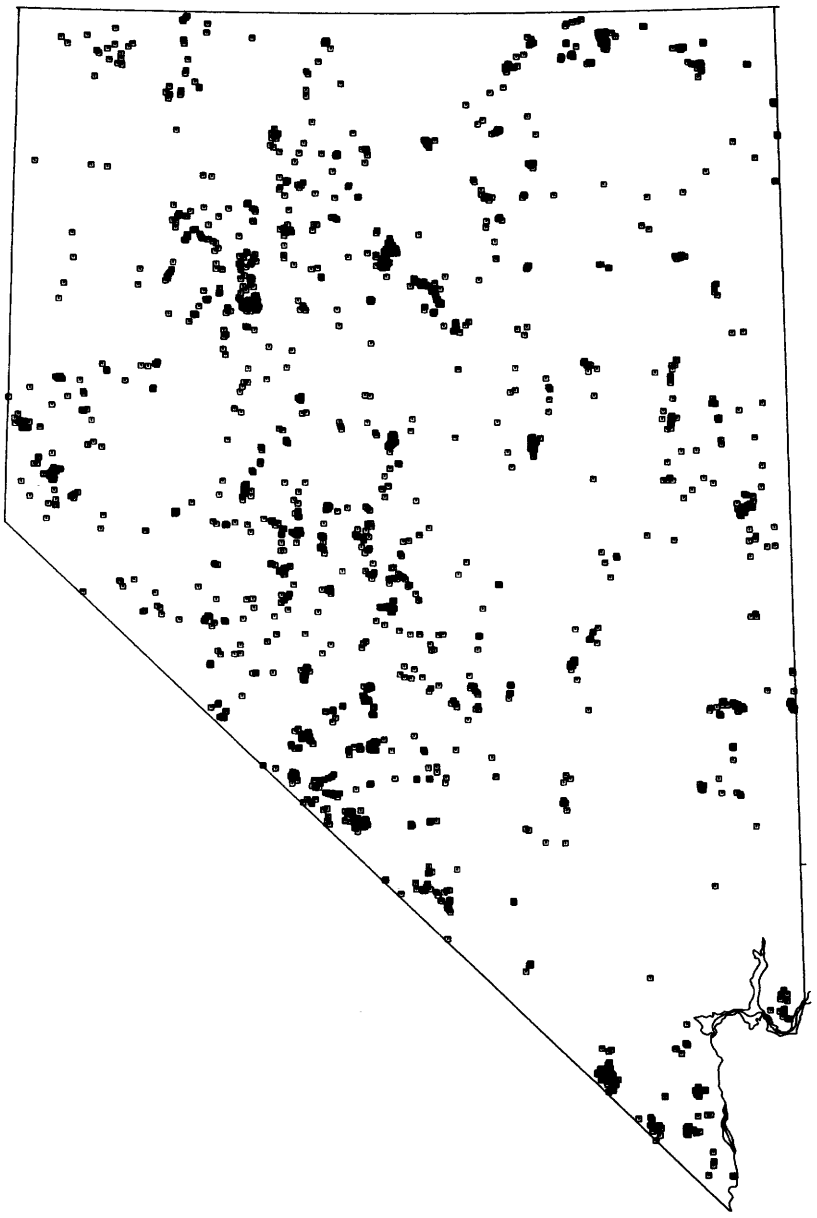

Figure 2.—Deposits and occurrences of gold included in Nevada MRDS records.

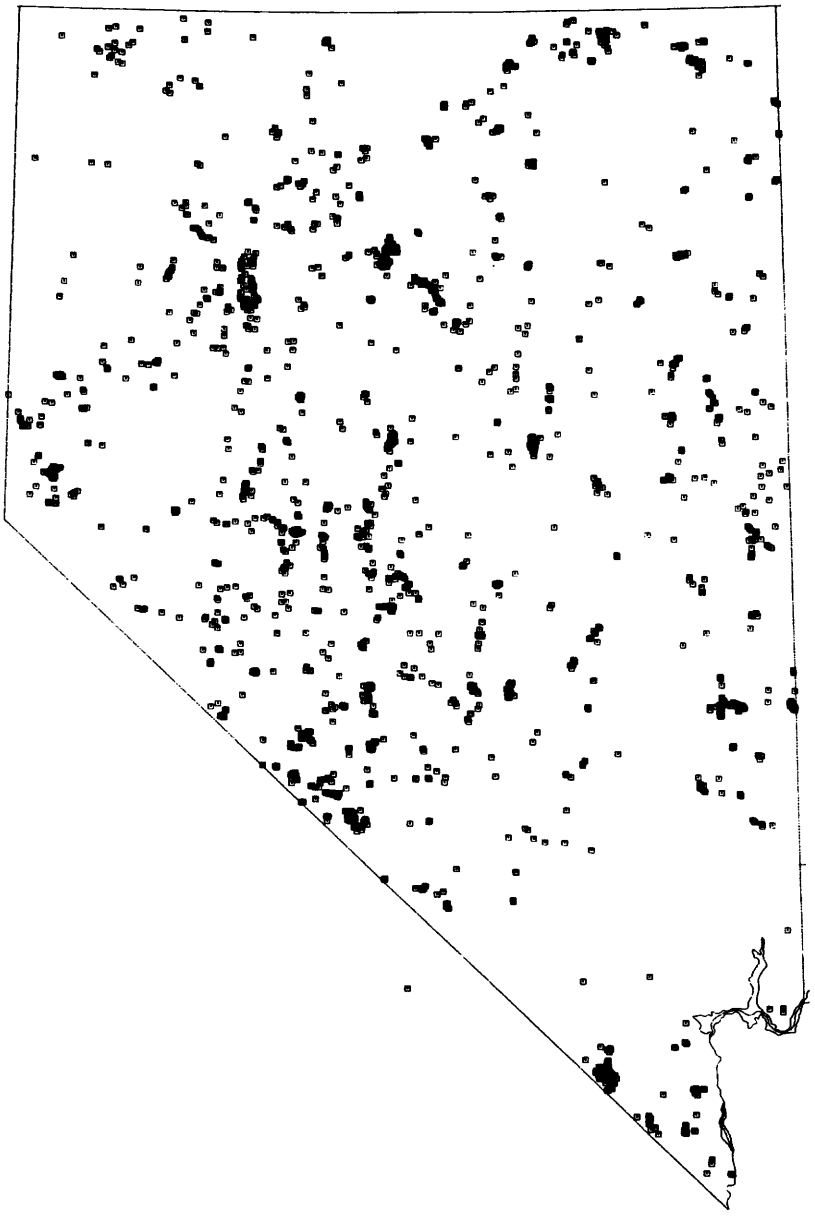

Figure 3.—Deposits and occurrences of silver included in Nevada MRDS records.

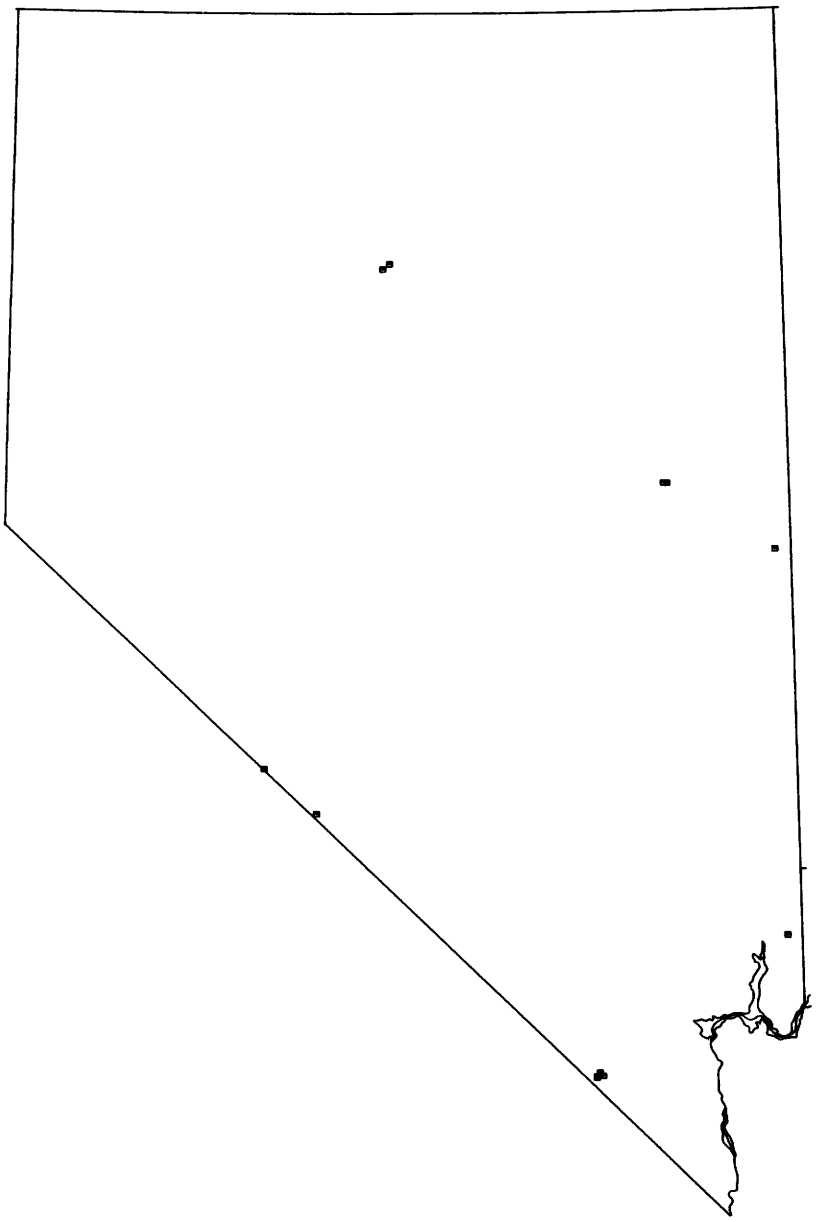

Figure 4.--Deposits and occurrences of platinum group metals (platinum, palladium, osmium, iridium, rhenium and rhodium) included in Nevada MRDS records.

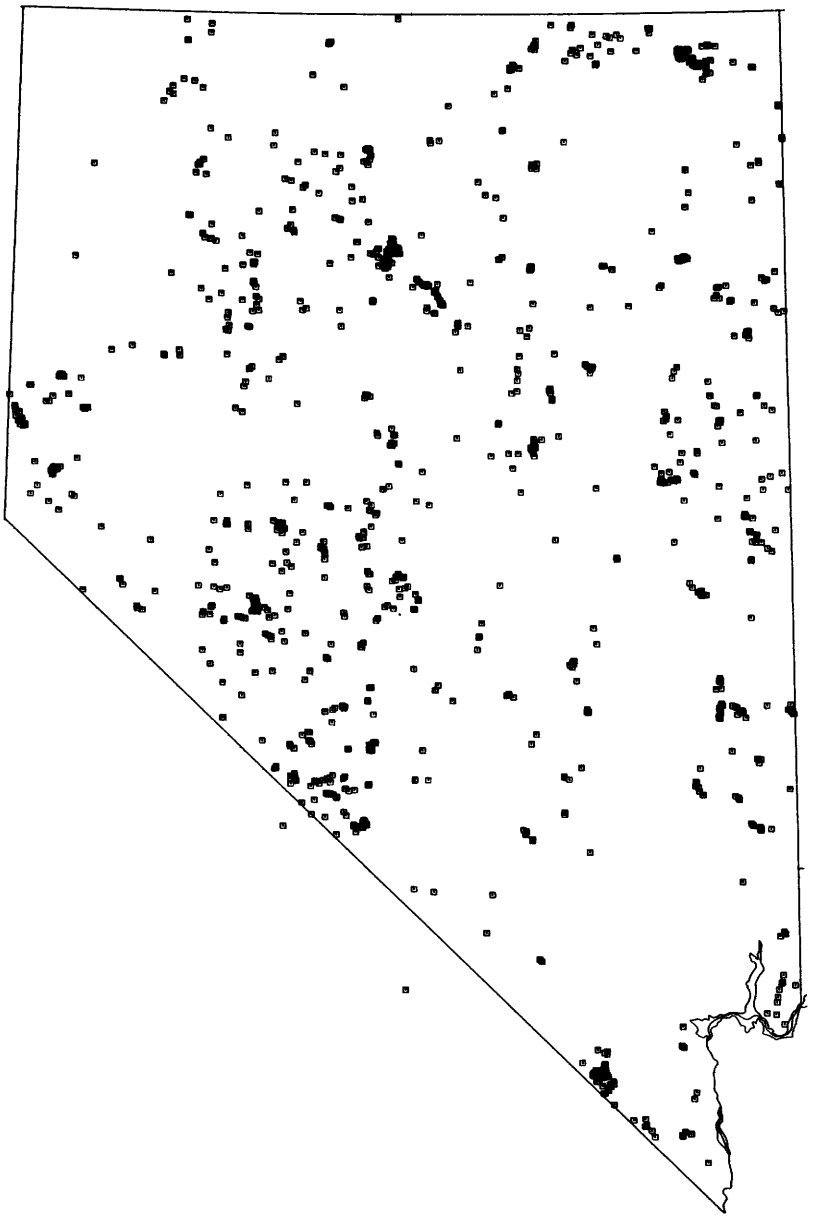

Figure 5.—Deposits and occurrences of copper included in Nevada MRDS records.

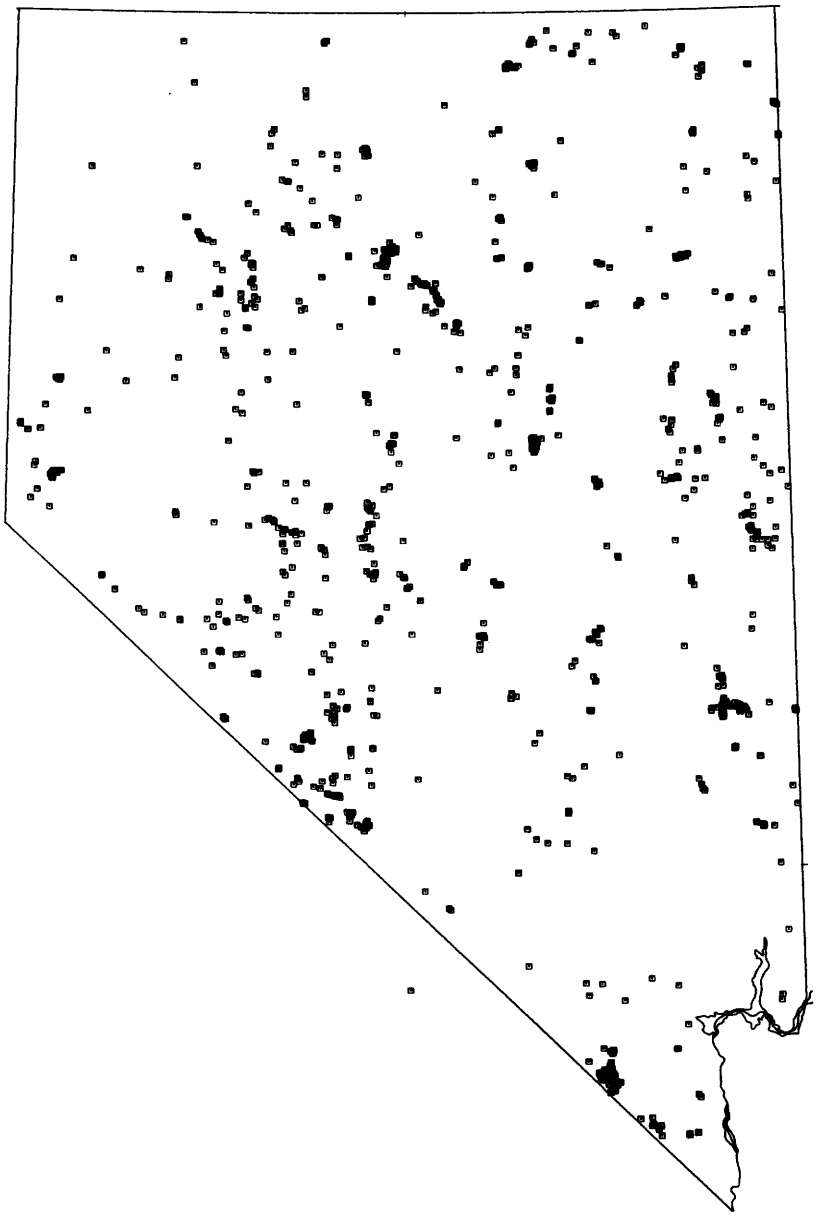

Figure 6.—Deposits and occurrences of lead included in Nevada MRDS records.

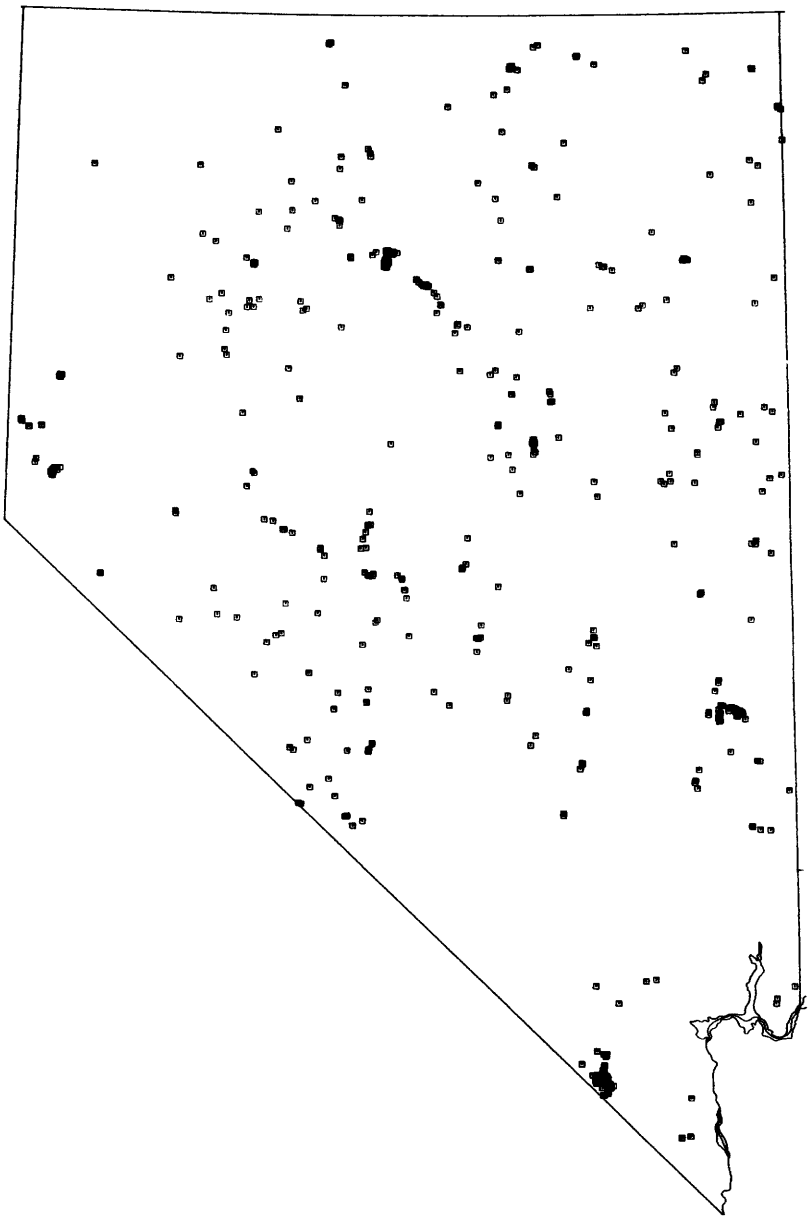

Figure 7.– Deposits and occurrences of zinc included in Nevada MRDS records.

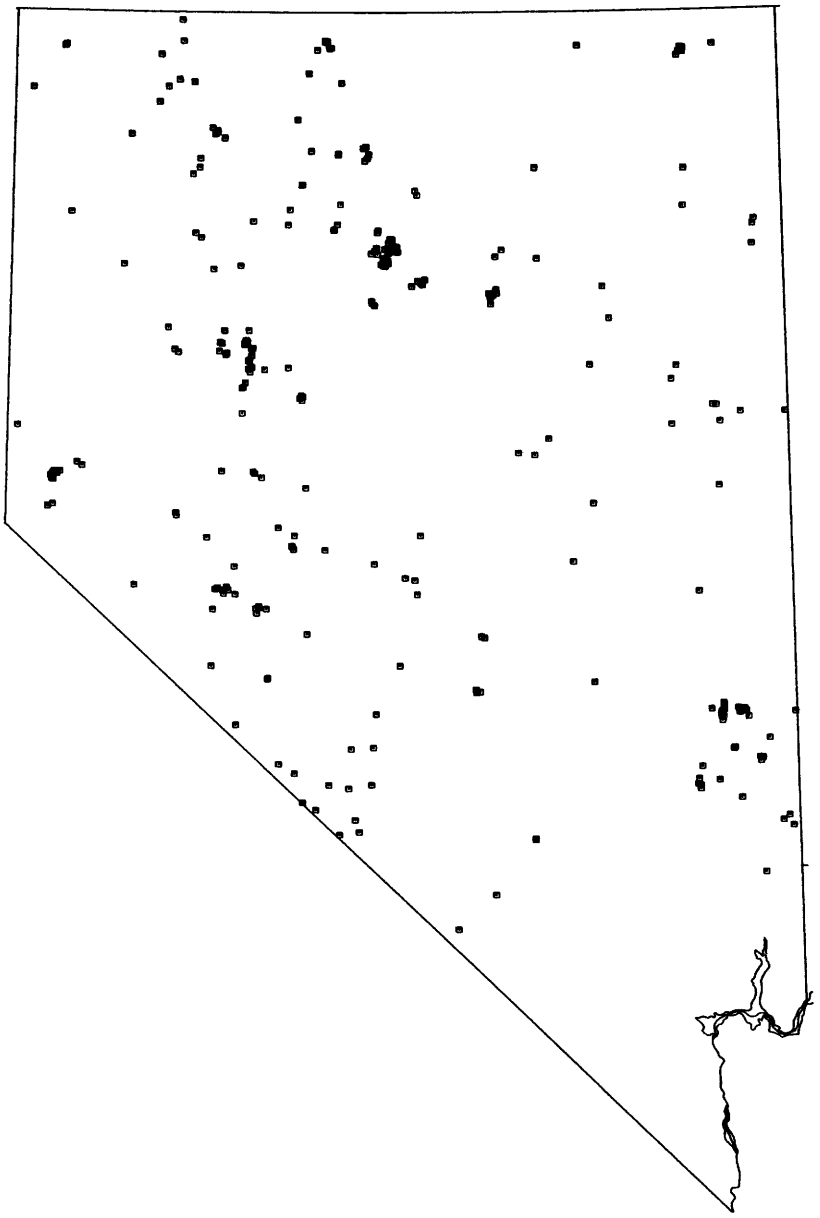

Figure 8.—Deposits and occurrences of iron included in Nevada MRDS records.

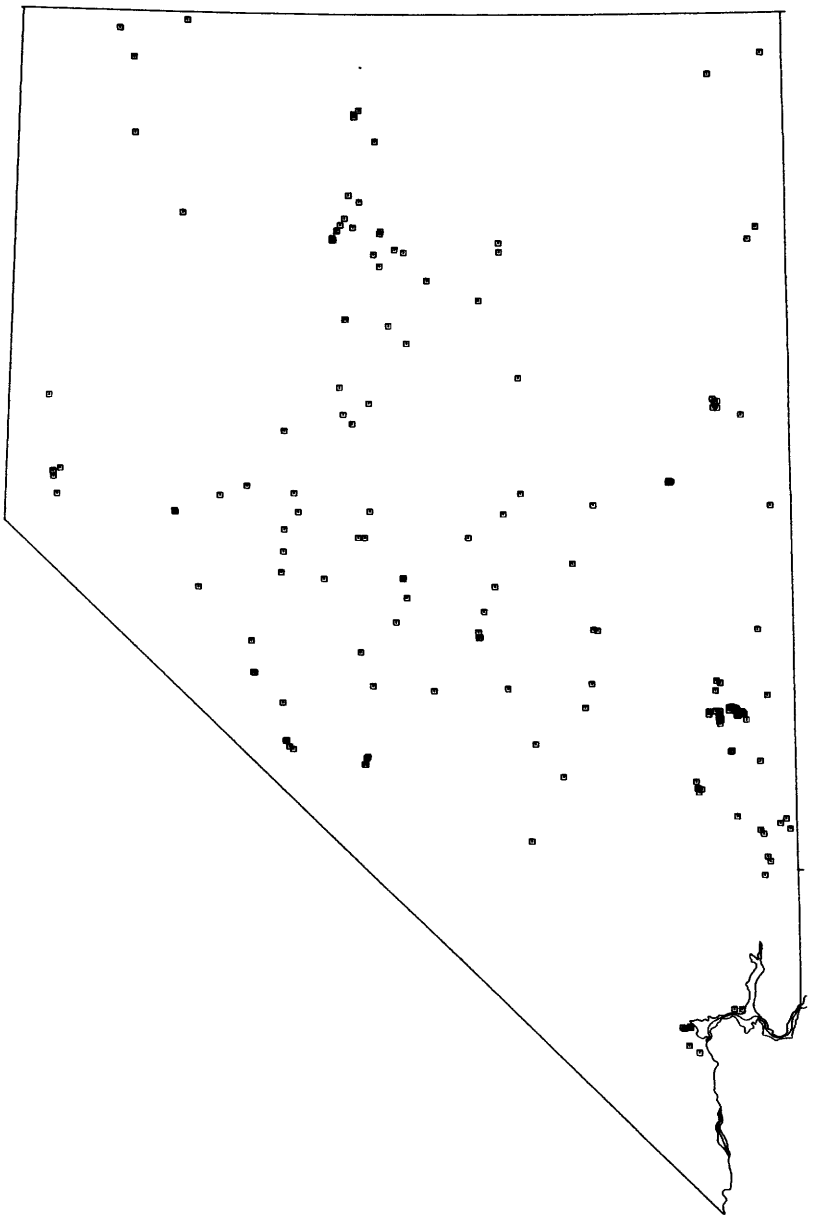

Figure 9.- Deposits and occurrences of manganese included in Nevada MRDS record.

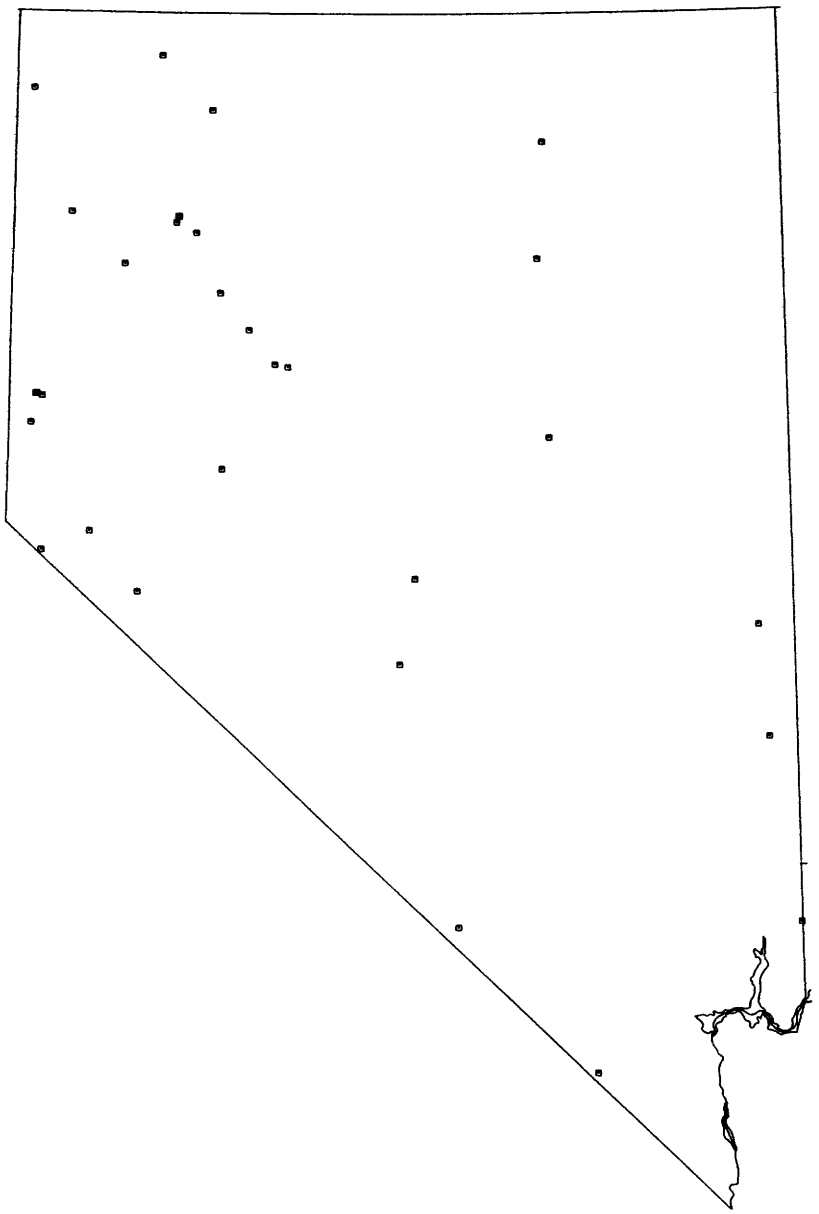

Figure 10.—Deposits and occurrences of titanium included in Nevada MRDS records.

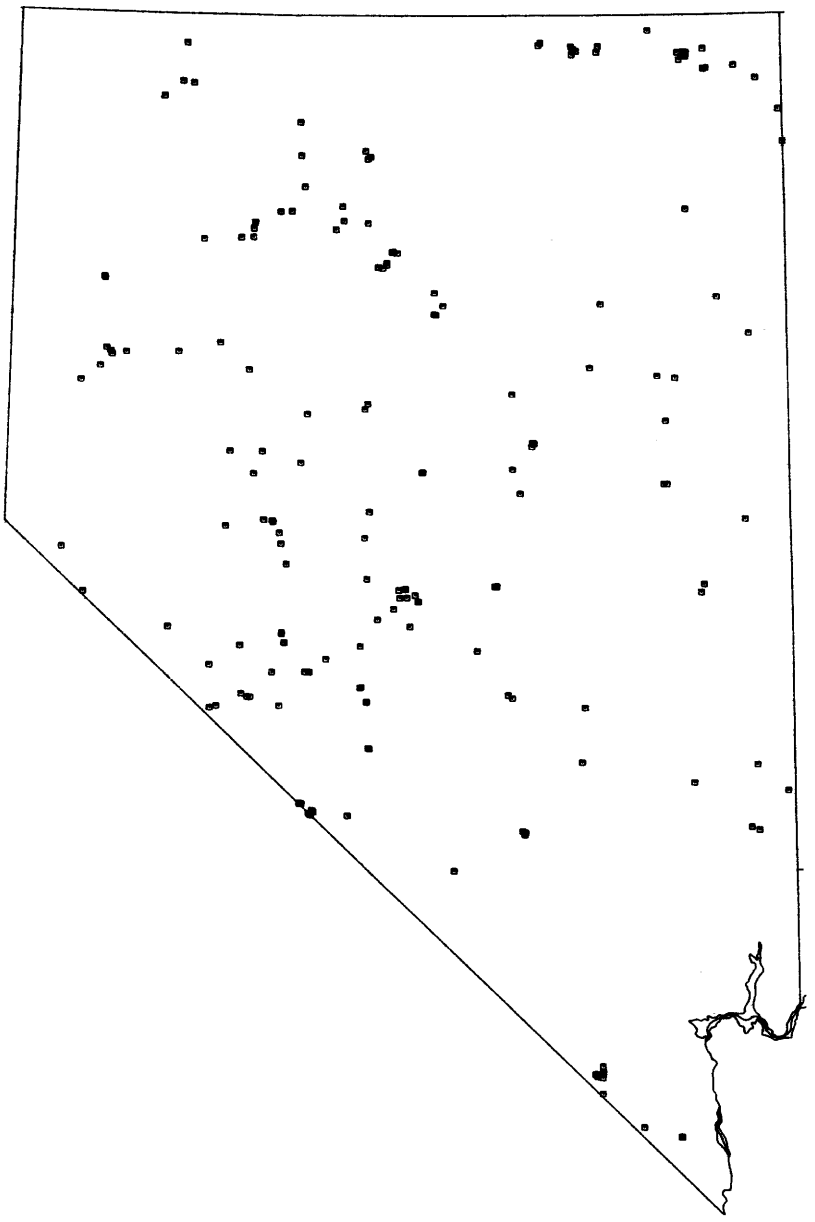

Figure 11.—Deposits and occurrences of molybdenum included in Nevada MRDS records.

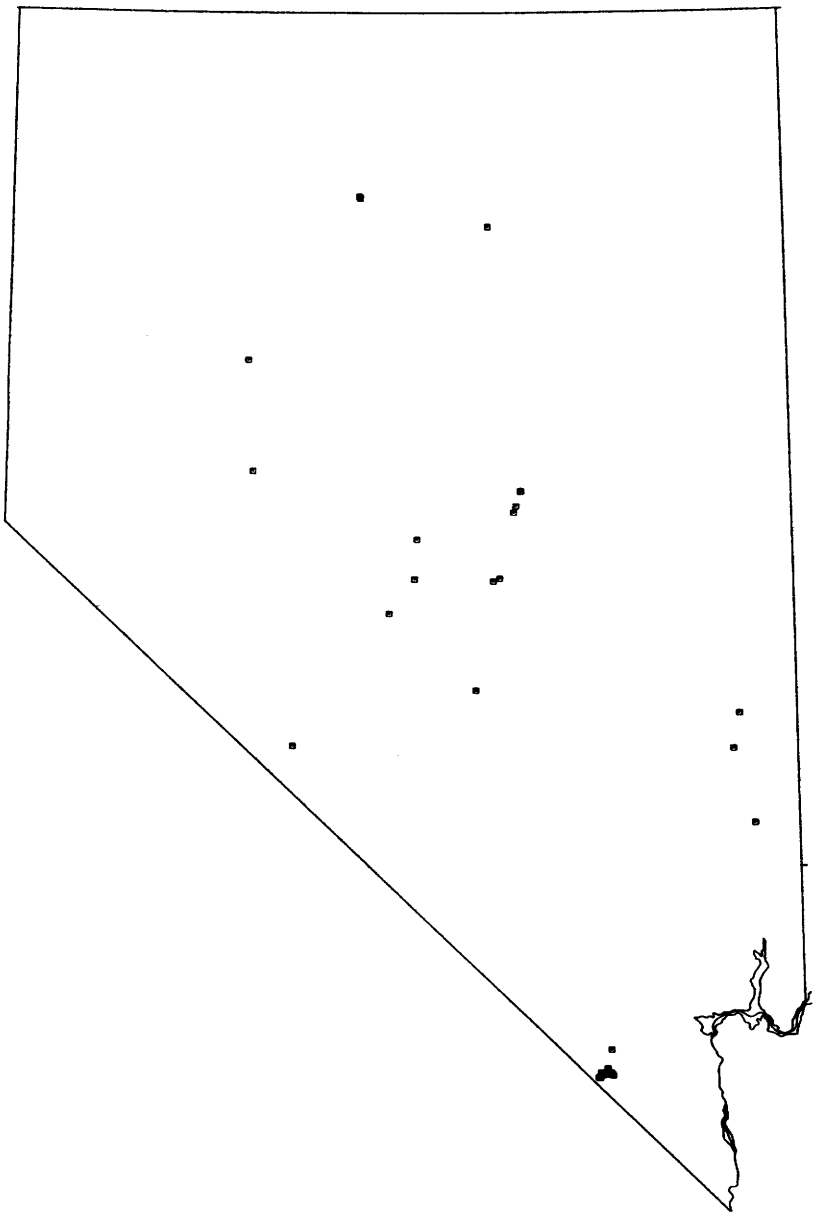

Figure 12.—Deposits and occurrences of vanadium included in Nevada MRDS records.

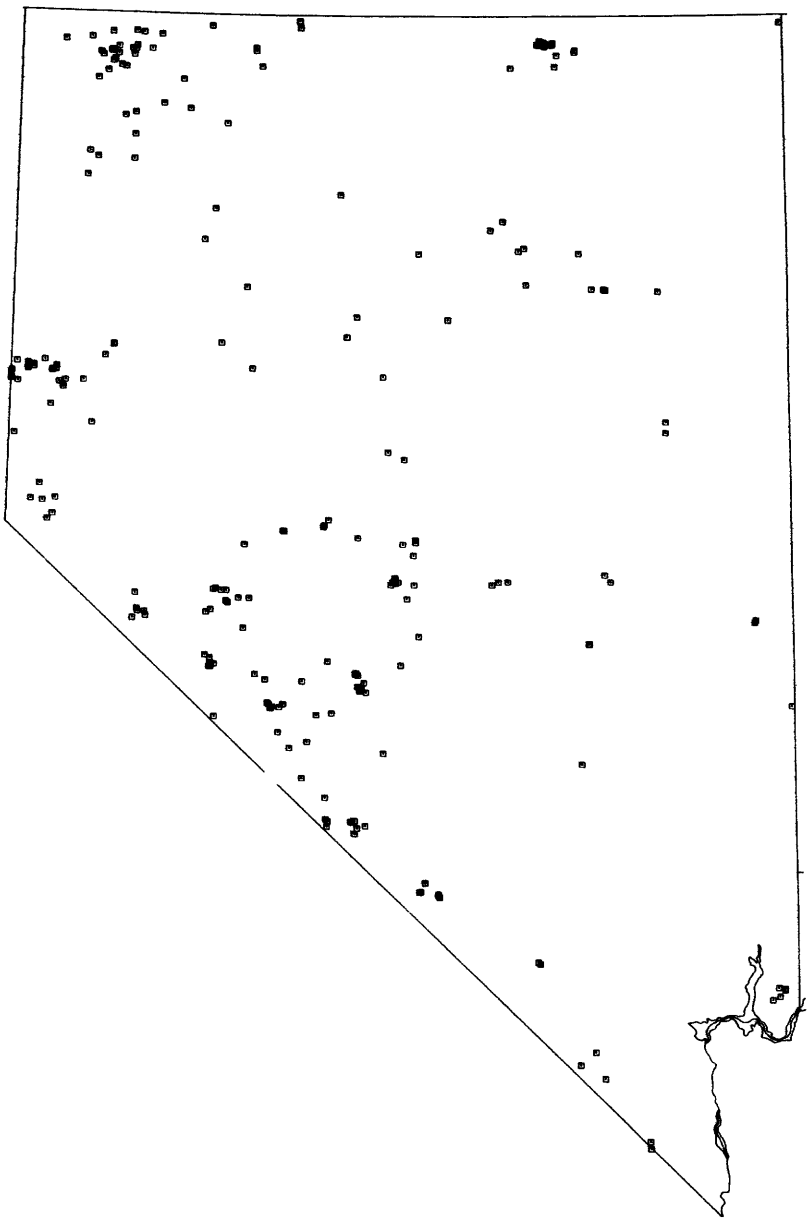

Figure 13.—Deposits and occurrences of uranium included in Nevada MRDS records.

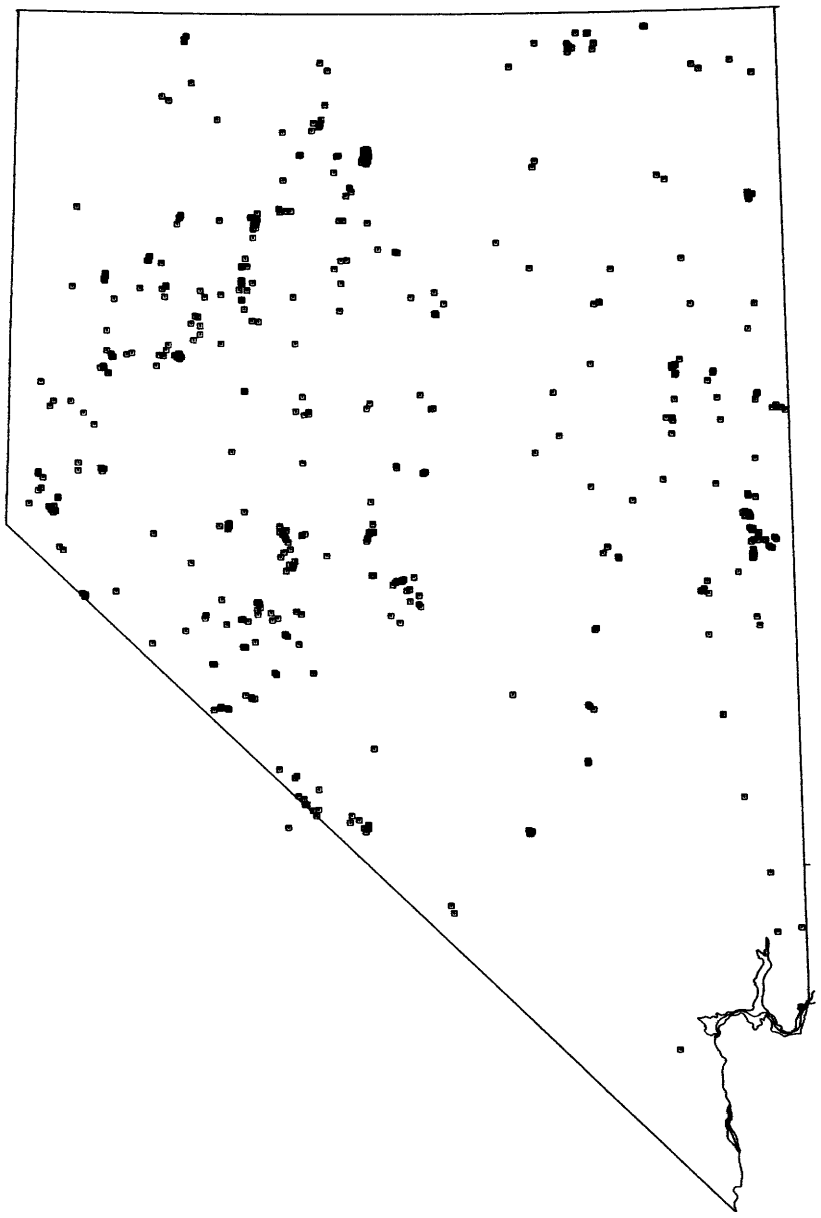

Figure 14.—Deposits and occurrences of tungsten included in Nevada MRDS records.

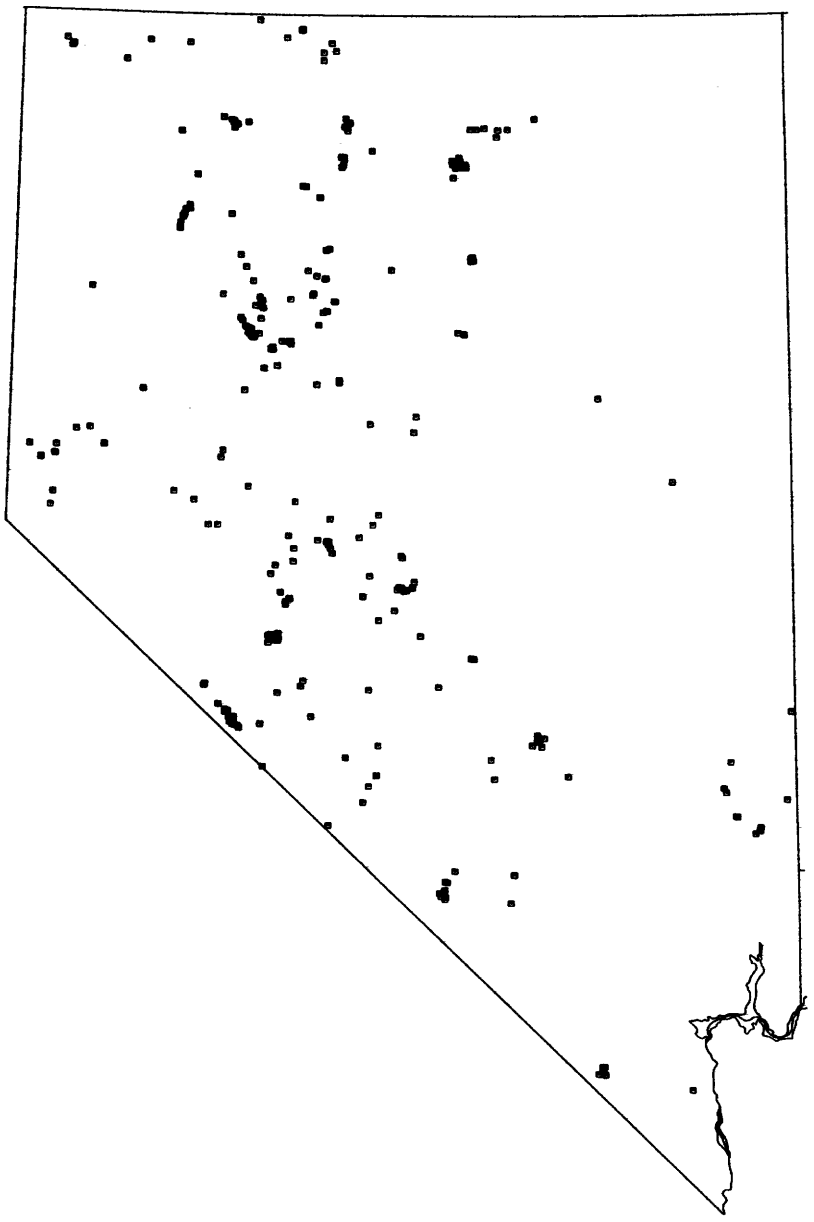

Figure 15.—Deposits and occurrences of mercury included in Nevada MRDS records.

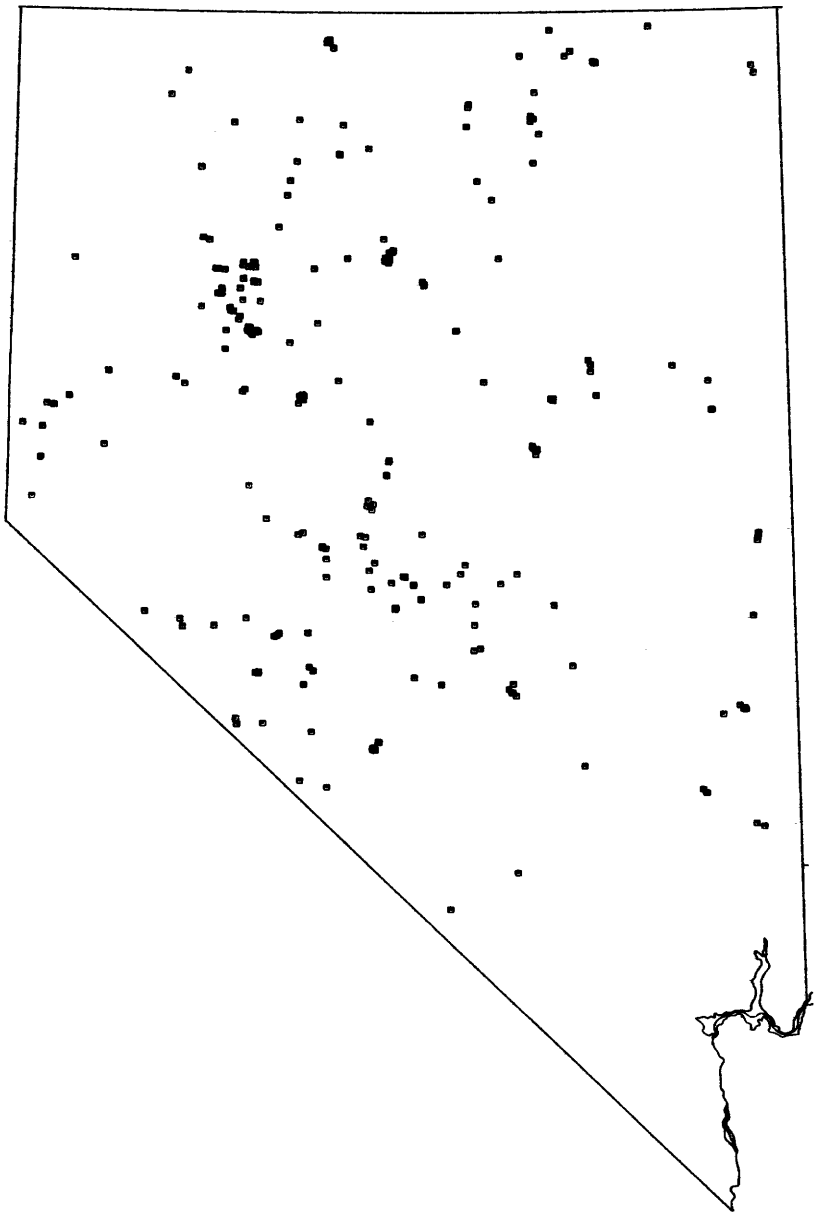

Figure 16.—Deposits and occurrences of antimony included in Nevada MRDS records.

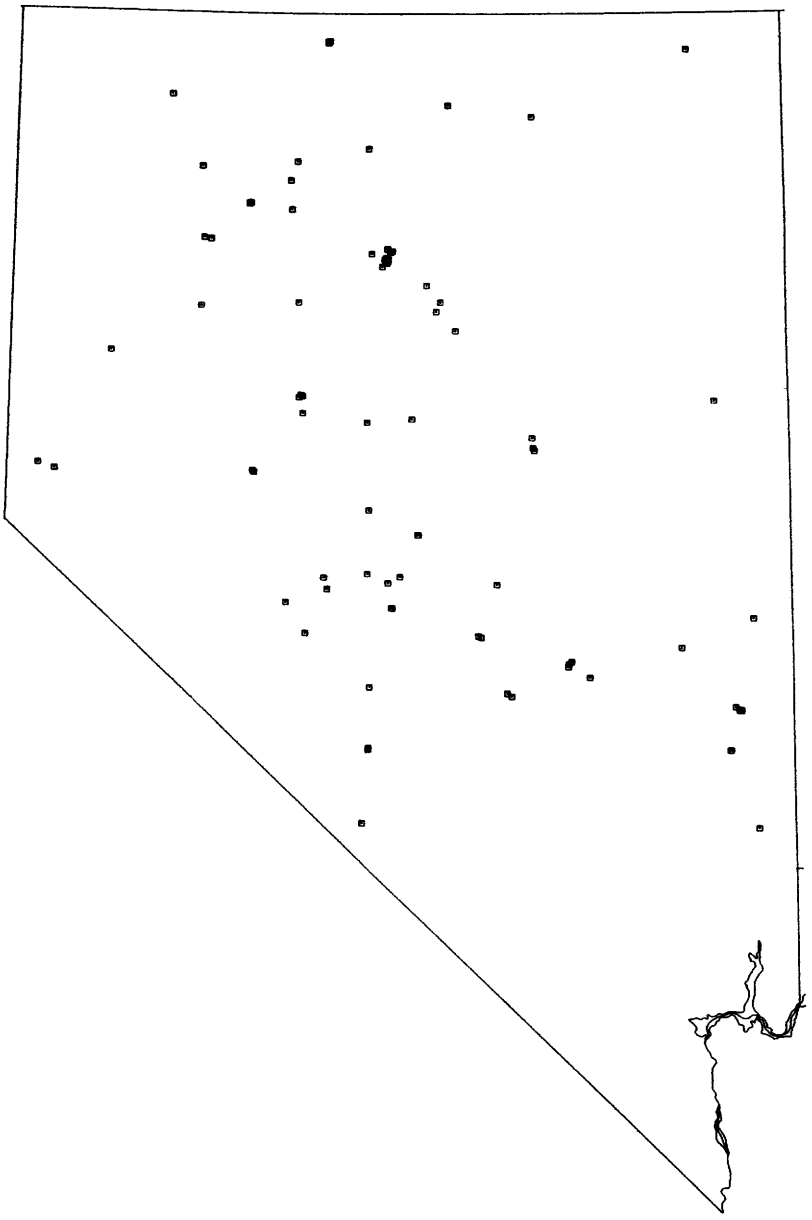

Figure 17.--Deposits and occurrences of arsenic included in Nevada MRDS records.

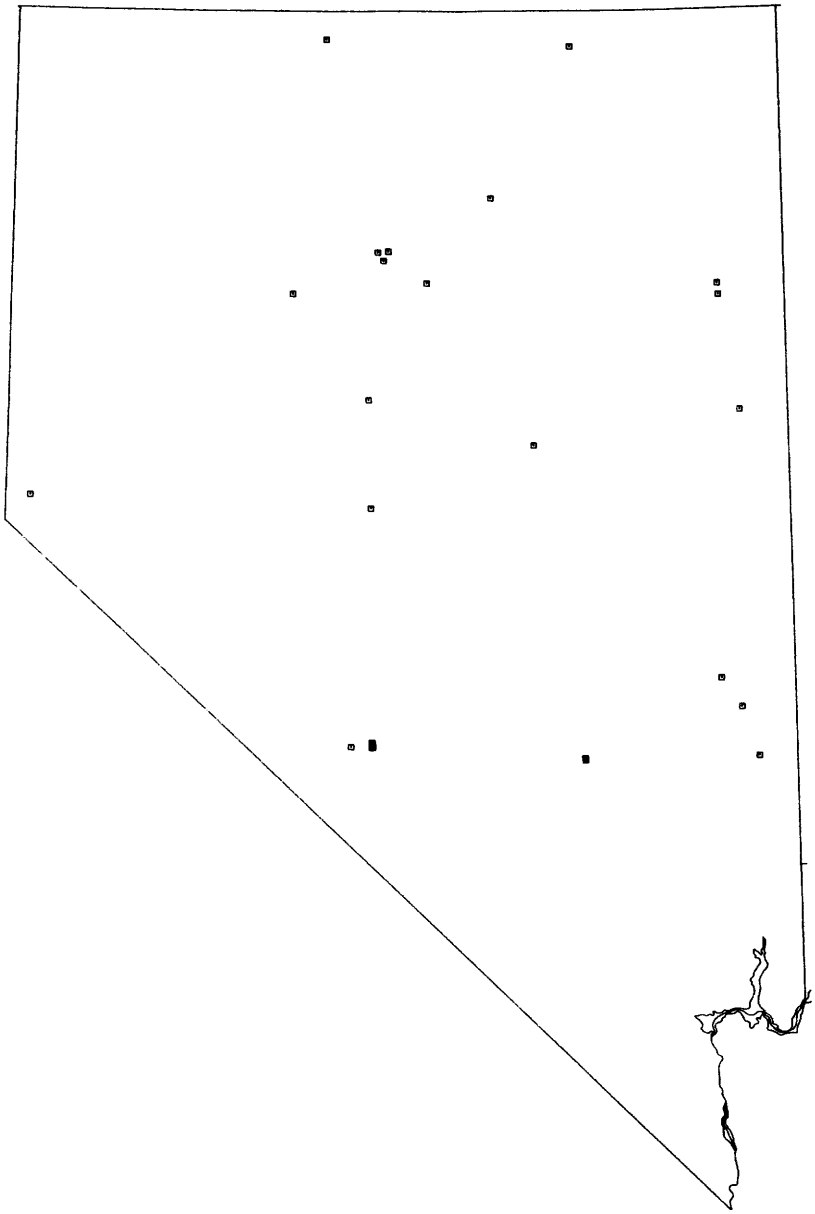

Figure 18.—Deposits and occurrences of bismuth included in Nevada MRDS records.

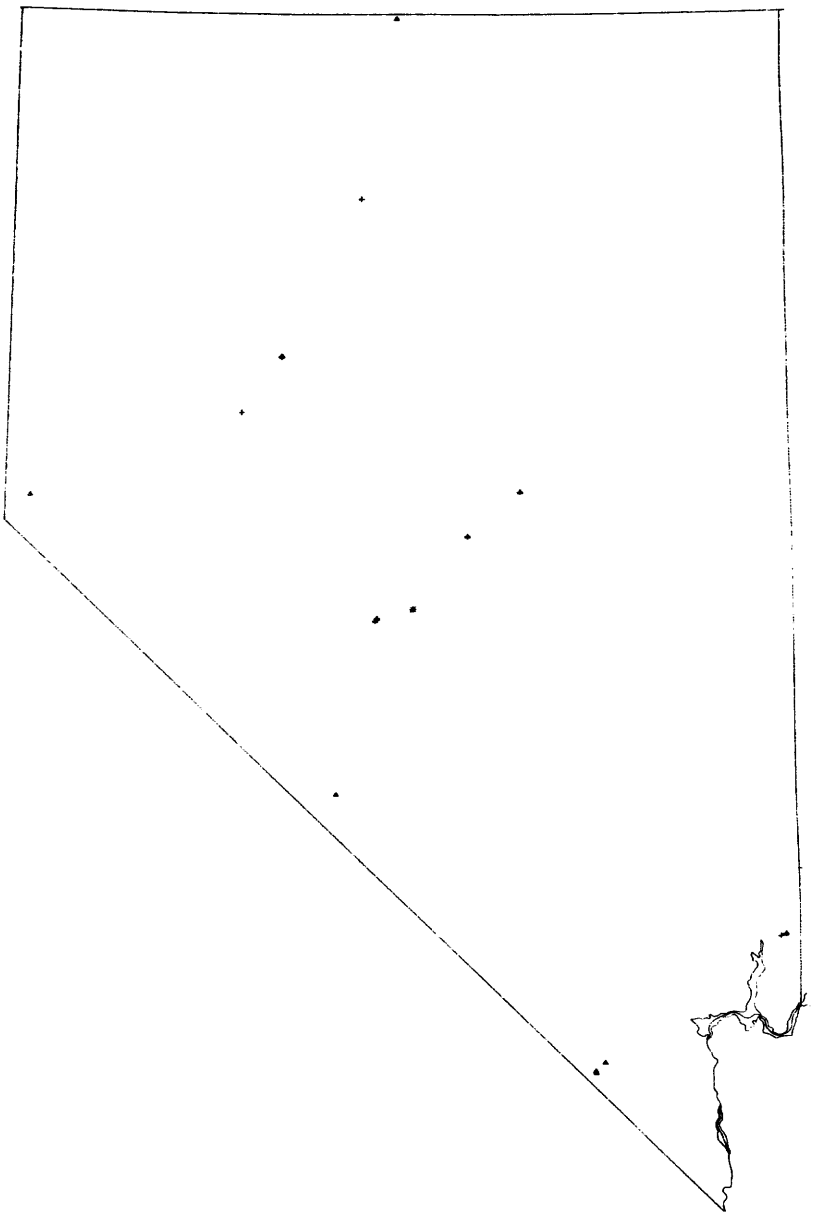

Figure 19.—Deposits and occurrences of chromium (square), nickel (asterisk), and cobalt (star) included in Nevada MRDS records.

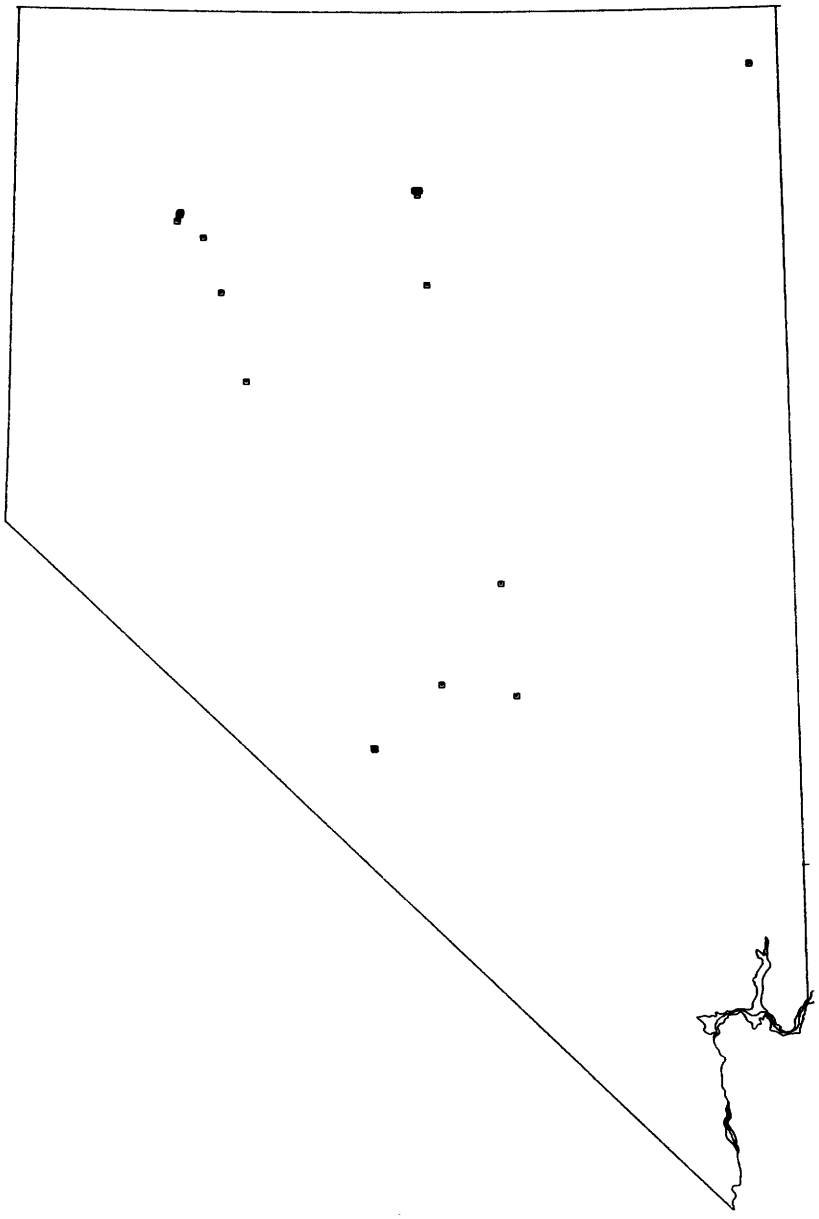

Figure 20.—Deposits and occurrences of tin included in Nevada MRDS records.

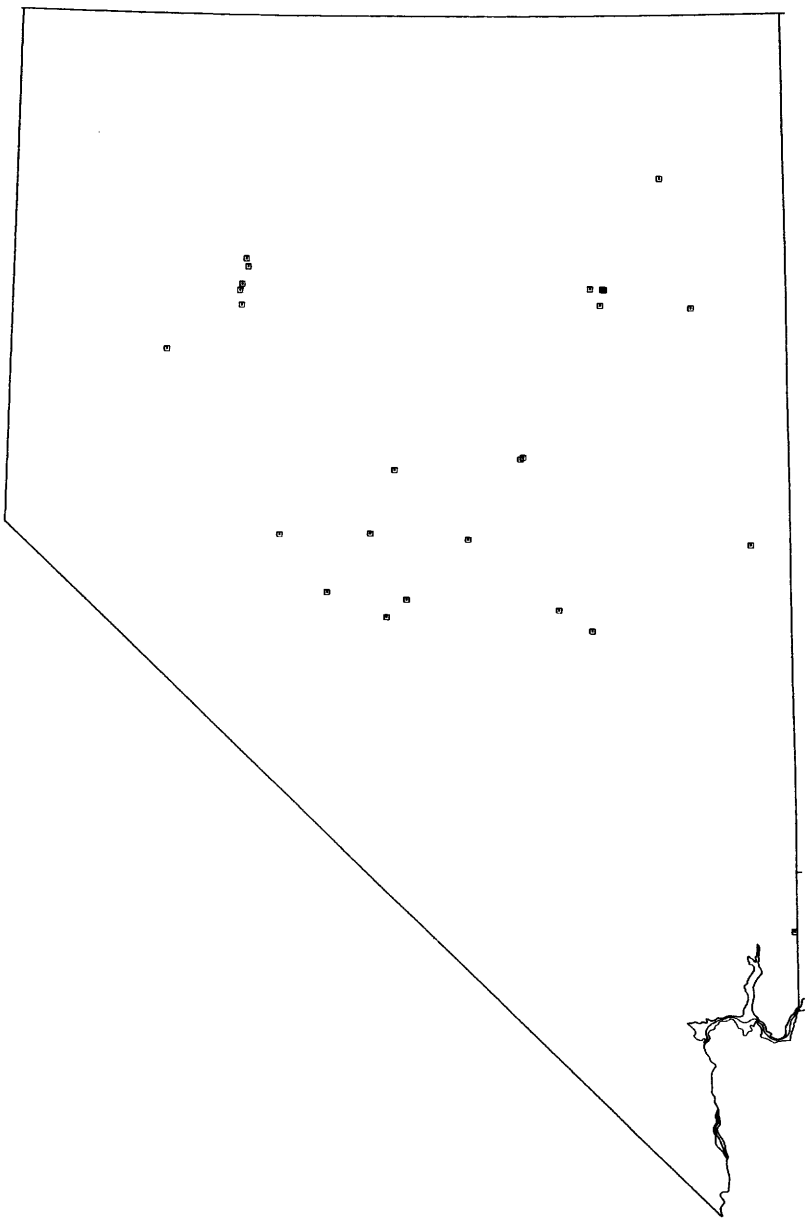

Figure 21.--Deposits and occurrences of beryllium included in Nevada MRDS records.

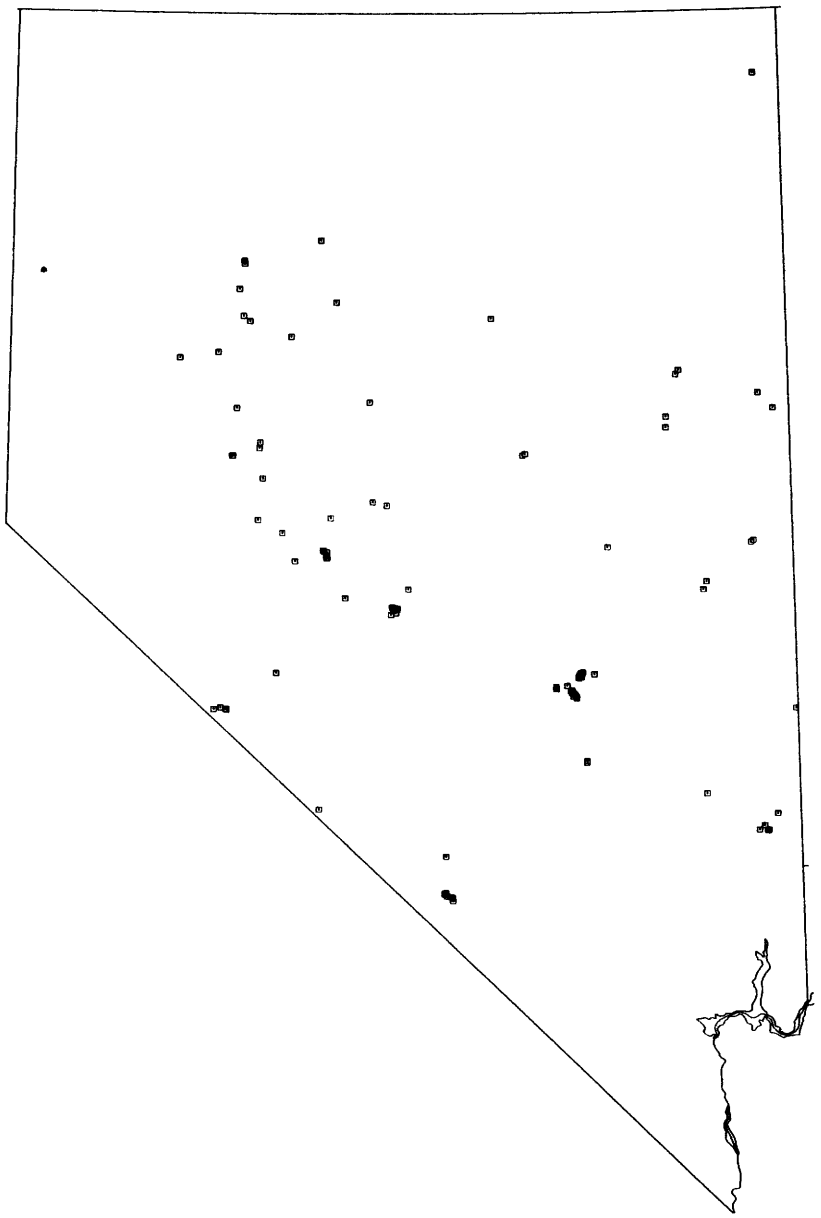

Figure 22.—Deposits and occurrences of fluorine included in Nevada MRDS records.

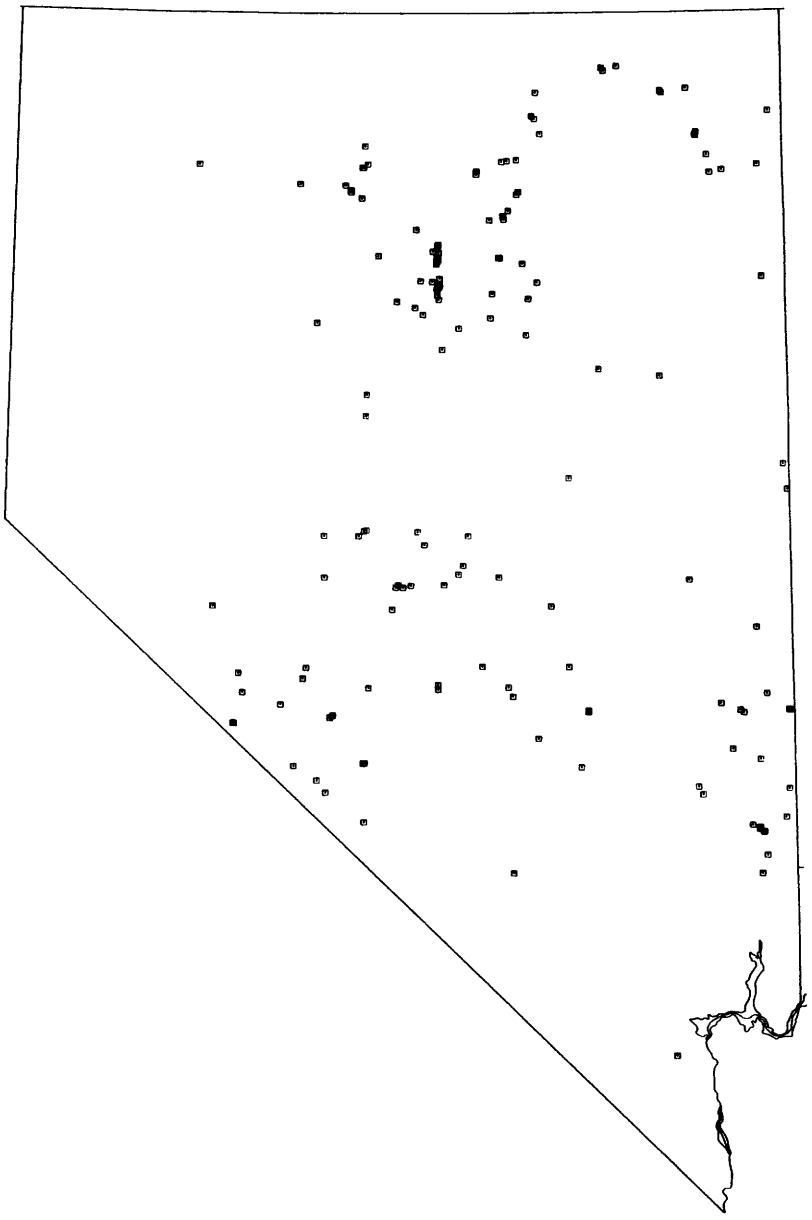

Figure 23.—Deposits and occurrences of barium included in Nevada MRDS record.

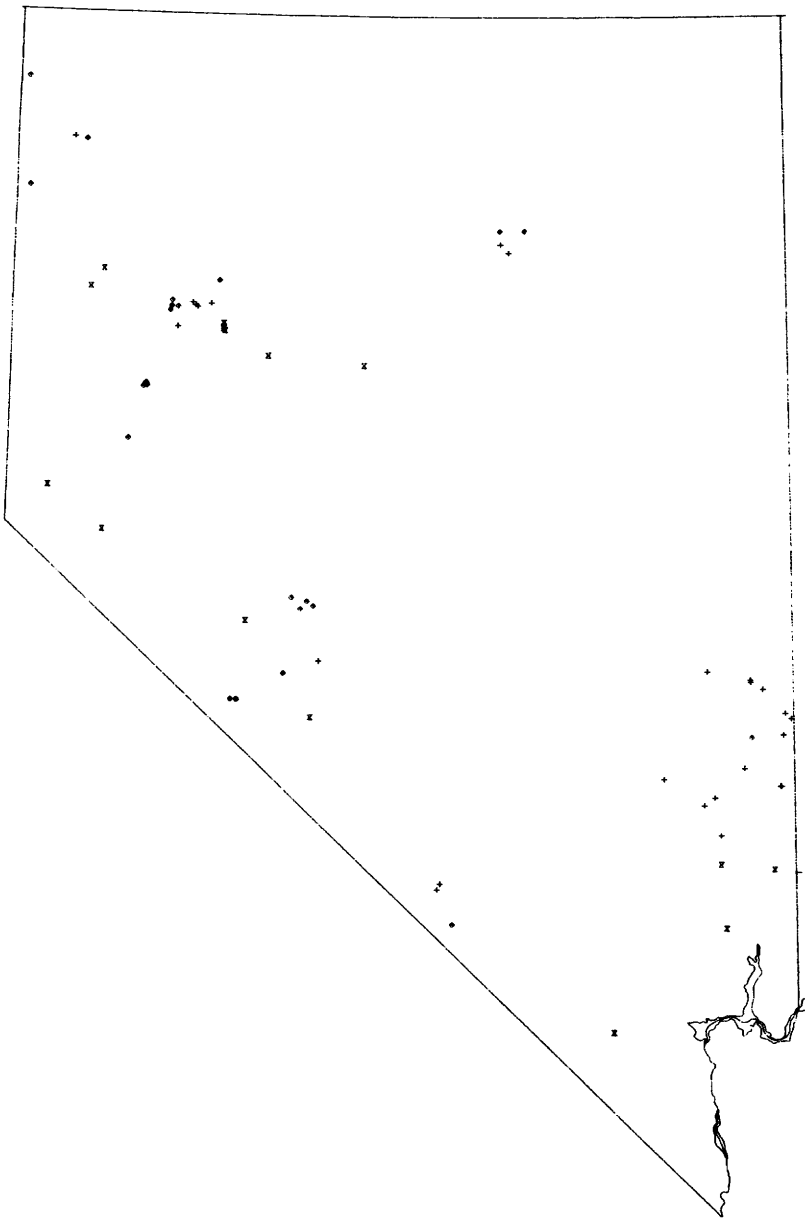

Figure 24.—Deposits and occurrences of gypsum, (asterisk), perlite (diamond), and diatomite (square) included in Nevada MRDS records.

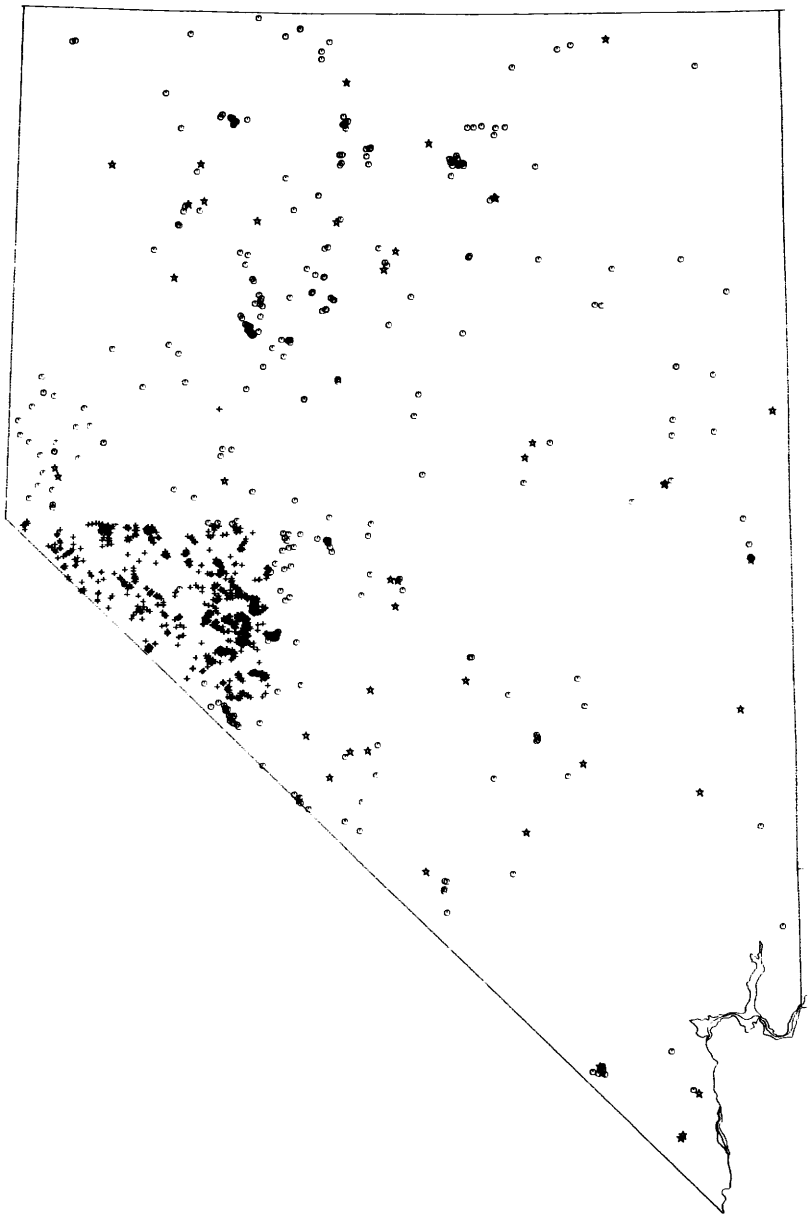

Figure 25.—District (asterisk), commodity (square), and CUSMAP (cross) records included in the Nevada MRDS files.

TABLE 1.—*Example of Nevada MRDS data set*

```
CRIB MINERAL RESOURCES FILE 12

                                RECORD IDENTIFICATION
                                  RECORD NO.............  M060272
                                  RECORD TYPE...........  X1B
                                  COUNTRY/ORGANIZATION.  USGS
                                  INFORMATION SOURCE...  1
                                  MAP CODE NO. OF REC..

                                REPORTER
                                  NAME.........  HARNER, JOY L. (ROBERTS, RALPH)
                                  AFFILIATION..  NBMG
                                  DATE.........  79 11
                                  UPDATED......  80 10
                                  BY...........  ROYSE, SUE E.

NAME AND LOCATION
  DEPOSIT NAME                    MAJUBA HILL MINE

  MINING DISTRICT/AREA/SUBDIST.   ANTELOPE DISTRICT

  COUNTRY CODE.................   US
  COUNTRY NAME:  UNITED STATES

  STATE CODE.............  NV
  STATE NAME:  NEVADA

  COUNTY.................  PERSHING
  DRAINAGE AREA..........  16
  PHYSIOGRAPHIC PROV.....  12
  LAND CLASSIFICATION....  01

  QUAD SCALE          QUAD NO OR NAME
   1: 24000             MAJUBA MTN. (1971)
   1:                   LOVELOCK

  LATITUDE            LONGITUDE
   40-41-00N            118-32-00W

  UTM NORTHING        UTM EASTING         UTM ZONE NO
   4502890              375840               +11

  TWP.....  032N
  RANGE....  031E
  SECTION..  02
  MERIDIAN.  MT. DIABLO

  ALTITUDE.  6250 FT

  ACCURACY OF LOCATION
    ESTIMATED  UNKNOWN PRECISION

  POSITION FROM NEAREST PROMINENT LOCALITY:  18 MI. FROM IMLAY
```

TABLE 1.—*Example of Nevada MRDS data set--Continued*

```
COMMODITY INFORMATION
  COMMODITIES PRESENT.....  CU  SN  AU  AG  PB  MO  AS  U

  PRODUCER (PAST OR PRESENT):
             MAJOR PRODUCTS...  CU  SN

  OCCURRENCE(S) OR POTENTIAL PRODUCT(S):
             POTENTIAL.....
             OCCURRENCE.....  MO  AS  PB  U  AU  AG

  COMMODITY SPECIALIST INFORMATIN:

    SPECIAL FIELD 1  IGNEOUS

    SPECIAL FIELD 2  CENOZOIC

  ORE MATERIALS (MINERALS, ROCKS, ETC.):
    CHALCOCITE, CHALCOPYRITE, CUPRITE, CASSITERITE, METAZEUNERITE

      MAIN ORE MINERALS:
        CHALCOCITE, CUPRITE, CHRYSOCOLLA, CASSITERITE

      MINOR ORE MINERALS:
        ARSENOPYRITE, MALACHITE, AZURITE, CHALCOPYRITE


EXPLORATION AND DEVELOPMENT
  STATUS OF EXPLOR. OR DEV.  6
                             PROPERTY IS INACTIVE
  YEAR OF DISCOVERY.....  PRE-1914
  NATURE OF DISCOVERY.....  A
  YEAR OF FIRST PRODUCTION.  ABOUT 1914
  PRESENT/LAST OPERATOR....  GREENAN-KERR TIN CO.


DESCRIPTION OF DEPOSIT

  DEPOSIT TYPES:
    FAULT: VEIN
  FORM/SHAPE OF DEPOSIT:  TABULAR

  SIZE/DIRECTIONAL DATA
    SIZE OF DEPOSIT.....  MEDIUM
    MAX LENGTH.....  20 FT
    MAX WIDTH.....  20 FT
    MAX THICKNESS.....  10 FT
    STRIKE OF OREBODY...  N30W
    DIP OF OREBODY.....  54-84 SW

DESCRIPTION OF WORKINGS
    UNDERGROUND
    DEPTH OF WORKINGS BELOW SURFACE..   350 FT
    LENGTH OF WORKINGS.....  2040 FT
```

TABLE 1.—*Example of Nevada MRDS data set--Continued*

COMMENTS (DESCRIP. OF WORKINGS):
3 TUNNELS

PRODUCTION
YES
MEDIUM PRODUCTION

ANNUAL PRODUCTION (ORE, COMMOD., CONC., OVERBURD.)

	ITEM	ACC	AMOUNT	THOUS. UNITS	YEAR	GRADE, REMARKS
1	ORE SN	ACC	0000.350	TONS	1943	2-4% SN
2	CU	EST	23.000	TONS	1942	4% CU
3	SN	EST	.350	TONS	1942	2-4% SN

CUMULATIVE PRODUCTION (ORE, COMMOD., CONC., OVERBURD.)

	ITEM	ACC	AMOUNT	THOUS. UNITS	YEAR	GRADE, REMARKS
15	ORE CU	ACC	0004.000	TONS	1916-1919	12% CU
16	ORE CU SN	EST	0275.000	DOLLARS	1943-1945	AU AG PB
17	CU	EST	2849.000	LB	1914-1971	2-4% SN
18	SN	EST	0021.000	LB	1914-1971	

SOURCE OF INFORMATION (PRODUCTION).. MACKENZIE AND BOOKSTROM, 1976; JOHNSON, 1977

SOURCE OF INFORMATION (RESERVES/POT RESOURCES).. JOHNSON, 1977.

COMMENTS (RESERVES/POT RESOURCES)..ONLY VERY SMALL RESERVES OF KNOWN CU AND SN ORE REMAIN. RECENT EXPLORATORY DRILLING INDICATES POSSIBLE ADDITIONAL RESERVES.

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... TERTIARY
HOST ROCK TYPES..... RHYOLITE, BRECCIA

AGE OF ASSOC. IGNEOUS ROCKS.. TERTIARY
IGNEOUS ROCK TYPES..... RHYOLITE

PERTINENT MINERALOGY..... ARSENOPYRITE, PYRITE, QUARTZ SERICITE, IRON OXIDE, TOURMALINE, FLUORITE

IMPORTANT ORE CONTROL/LOCUS.. FAULT ZONES

LOCAL GEOLOGY
NAMES/AGE OF FORMATION, UNITS, OR ROCK TYPES
AGE: TERTIARY

NAMES;AGE OF IGNEOUS UNITS OR IGNEOUS ROCK TYPES
AGE: TERTIARY

SIGNIFICANT LOCAL STRUCTURES:
MAJUBA FAULT

SIGNIFICANT ALTERATION:
TOURMALINIZATION, SERICITIZATION, ARGILLIZATION

TABLE 1.—*Example of Nevada MRDS data set--Continued*

GEOLOGICAL PROCESSES OF CONCENTRATION OR ENRICHMENT:
SUPERGENE ENRICHMENT

COMMENTS (GEOLOGY AND MINERALOGY):
THE COPPER ORE BODIES WERE FORMED BY THE ENRICHMENT IN COPPER OF A RELATIVELY NARROW ZONE BENEATH THE OXIDIZED ZONE, LOCALIZED ALONG THE MAJUBA FAULT. CASSITERITE OCCURS WIDELY AND UNEVENLY IN MANY ROCK TYPES IN THE MINE, BUT IS ECONOMICALLY CONCENTRATED IN SOME RUBBLY, VUGGY BRECCIA (ABOUT 20X20X10 FT.) NEAR THE MAJUBA FAULT, IN THE ZONE OF SUPERGENE ENRICHMENT OF COPPER. IT IS SUGGESTED (BY SMITH AND GIANELLA, 1942) THAT THE TIN AND COPPER DEPOSITS WERE FORMED EITHER DURING TWO SEPARATE PERIODS OF MINERALIZATION OR DURING TWO DISTINCT PHASES OF A SINGLE PERIOD OF MINERALIZATION. THE URANIUM DEPOSIT (METAZEUNERITE) OCCURS IN A 3-FOOT-WIDE CU AND SN BEARING VEIN IN THE SOUTH PART OF THE COPPER STOPE. TRITES AND THURSTON (1958) BELIEVE THE METAZEUNERITE WAS DERIVED FROM THE OZIDATION OF A PRIMARY URANIUM MINERAL, EITHER URANINITE OR COFFINITE, DEPOSITED WITH THE PRIMARY SULFIDE MINERALS AND SUBSEQUENTLY MOVED DOWNWARD TO COMBINE WITH THE COPPER TO FORM THE SECONDARY URANIUM MINERAL IN THE ZONE OF SUPERGENE ENRICHMENT. THE WALLROCKS ARE TOURMALINIZED AND CUT BY CHALCOPYRITE-BEARING TOURMALINE STOCKWORK VEINLETS. THE MAIN CU STOPE CONTAINS CHALCOCITE-RICH PODS 1-10 INCHES, WITH CENTERS OF PYRITE, CHALCOPYRITE, AND MINOR ENARGITE, SURROUNDED BY DIGENITE AND CHALCOCITE.

GENERAL COMMENTS:
THE MAJUBA HILL MINE OPERATED BY MASON VALLEY MINES CO., SHIPPED 4,000 TONS OF 12% CU ORE BETWEEN 1916-1919. IN 1943 THE MAJUBA MINE WAS REACTIVATED BY THE GREENAN-KERR TIN MINE CO. AND MINED 350 TONS OF ORE WITH 2-4% SN. BETWEEN 1943 & 1945 THE MINE PRODUCED CU & SN ORE CONTAINING AU, AG & PB, VALUED AT MORE THAN $275,000. ONLY A SMALL QUANTITY OF CU HAS BEEN MINED SINCE THEN. DEVELOPED BY 3 TUNNELS.

GENERAL REFERENCES:

1) JOHNSON, M.G., 1977, GEOLOGY AND MINERAL DEPOSITS OF PERSHING COUNTY, NEVADA: NBMG BULL. 89.
2) TRITES, A.F., JR., AND THURSTON, R.H., 1958, GEOLOGY OF MAJUBA HILL, PERSHING CO., NEV: USGS BULL. 1046-I P. 183.
3) STEVENS, D.L., 1971, THE GEOLOGY AND ORE DEPOSITS OF THE ANTELOPE (MAJUBA HILL) MINING DISTRICT, PERSHING CO., NEVADA: MS THESIS, UNIV. OF NEV., RENO.
4) SMITH, W.C. AND GIANELLA, V.P., 1942, THE TIN DEPOSIT OF MAJUBA HILL, PERSHING COUNTY, NEV: USGS BULL. 931-C, P. 39.
5) VANDERBURG, W.O., 1936, RECONNAISSANCE OF MINING DISTRICTS IN PERSHING COUNTY, NEVADA: US. BUR. MINES INF. CIRC. 6902.
6) SOUTHERN PACIFIC CO., 1964, MINERALS FOR INDUSTRY-NORTHERN NEVADA AND NORTHWESTERN UTAH, SUMMARY OF GEOLOGICAL SURVEY OF 1955-1961, V. 1: SAN FRANCISCO, SOUTHERN PACIFIC CO., P. 14.
7) MACKENZIE AND BOOKSTROM, 1976, GEOLOGY OF THE MAJUBA HILL AREA, PERSHING COUNTY, NEVADA: NBMG BULL. 86.
8) SHILLING, 1962, MOLYBDENUM IN NEVADA: NBMG REPORT 2.

TABLE 2—*Example of Nevada MRDS onsite field examination record*

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CRIB MINERAL RESOURCES FILE 12

                                RECORD IDENTIFICATION
                                  RECORD NO.............  M233453
                                  RECORD TYPE...........  X1M
                                  INFORMATION SOURCE...   3
                                  MAP CODE NO. OF REC..

                                REPORTER
                                  NAME..................................  BEINTZ, J.L.
                                  AFFILIATION...........................  NBMG
                                  DATE..................................  81 05

NAME AND LOCATION
  DEPOSIT NAME.................  UNKNOWN

  MINING DISTRICT/AREA/SUBDIST.  DOLLY VARDEN

  COUNTRY CODE.................  US
  COUNTRY NAME:  UNITED STATES

  STATE CODE...................  NV
  STATE NAME:  NEVADA

  COUNTY.......................  ELKO
  PHYSIOGRAPHIC PROV...........  12 BASIN AND RANGE
  LAND CLASSIFICATION..........  00

  QUAD SCALE          QUAD NO OR NAME
   1: 24000             CURRIE 1NE (ORTHOPHOTO)
   1:                   ELKO

  LATITUDE            LONGITUDE
   44-53-09N            114-22-39W

  UTM NORTHING        UTM EASTING        UTM ZONE NO
   4973400             0707120              +11
  MERIDIAN.  MT. DIABLO

  ACCURACY OF LOCATION
    ESTIMATED  UNKNOWN PRECISION


COMMODITY INFORMATION
  COMMODITIES PRESENT...........  CU  AU

  ORE MATERIALS (MINERALS, ROCKS, ETC.):
    COPPER SULFITE, PYRITE, BORMITE


EXPLORATION AND DEVELOPMENT
  STATUS OF EXPLOR. OR DEV. 2
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TABLE 2.—*Example of Nevada MRDS onsite field examination record--Continued*

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DESCRIPTION OF DEPOSIT

  DEPOSIT TYPES:
    SHEAR ZONE
  FORM/SHAPE OF DEPOSIT:  TABULAR

  SIZE/DIRECTIONAL DATA
    SIZE OF DEPOSIT.....  SMALL
  COMMENTS (DESCRIPTION OF DEPOSIT):
    SHEAR ZONE

DESCRIPTION OF WORKINGS):
    SURFACE

  COMMENTS (DESCRIP. OF WORKINGS):
    CUTS & PITS


PRODUCTION
    UNDETERMINED

GEOLOGY AND MINERALOGY

  PERTINENT MINERALOGY.....  CUOX, FEOX, CALCITE, QUARTZ

  LOCAL GEOLOGY

  COMMENTS (GEOLOGY AND MINERALOGY):
    N30 W HORIZONTAL SYSTEM IN QUARTZ.  FEOX + CUOX ON FRACTURE SURFACES.
    COPPER SULFIDE PRESENT.


GENERAL REFERENCES
  1)  FIELD EXAMINATION BY J. V. TINGLEY, NBMG, 8/11/80.
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TABLE 3—*Distribution of Nevada MRDS commodity localties by county (March 1985)*

County	No. of entries N=5069	Precious metals (Au, Ag, Pt gp) N=2793	Base metals (Cu, Pb, and Zn) N=1848	Ferrous metals (Fe, Mn, V, Ti, and Mo) N=660	Misc. metals (U, W, Hg, and Sb) N=1362	Other misc. metals (As, Bi, Cr, Co, Ni, Sn, and Be) N=178	Monmetals (F and Ba) N=260	Industrial minerals (Gypsum, perlite, and diatomite) N=66
Carson City -----	23	7	4	4	16	1	--	--
Churchill -------	150	81	31	34	41	9	7	5
Clark -----------	215	141	132	32	21	7	1	2
Douglas ---------	10	2	2	3	8	--	--	--
Elko ------------	603	327	289	50	111	16	30	1
Esmeralda -------	600	322	190	50	119	20	18	5
Eureka ----------	228	142	131	26	24	7	13	3
Humboldt --------	329	157	82	69	167	13	10	--
Lander ----------	416	271	171	60	62	32	27	1
Lincoln ---------	349	185	187	93	49	17	43	17
Lyon ------------	43	26	12	4	14	--	--	2
Mineral ---------	258	94	91	30	135	1	8	2
Nye -------------	881	512	222	84	221	31	78	7
Pershing --------	424	213	90	49	196	17	10	16
Storey ----------	53	48	24	21	6	1	--	--
Washoe ----------	141	66	46	14	70	1	--	5
White Pine ------	339	195	140	26	99	3	14	--
Unassigned ------	7	4	4	1	3	2	1	--
Total plotted-- (Feb. 1985)	N=5056	Au=2206 Ag=2203 Pt gp= 14	Cu=1257 Pb=1156 Zn= 517	Fe=322 Mn=192 V= 31 Ti= 31 Mo=192	U=244 W=519 Hg=386 Sb=294	As=92 Bi=34 Cr= 1 Co=15 Ni=12 Sn=21 Be=26	F=109 Ba=155	Gyp=16 Per=25 Diat=25

GPO 587-044/10026