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Mining Claim Activity on Federal Land in the United States

By J. Douglas Causey

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Abstract

Several statistical compilations of mining claim activity on Federal land derived from the Bureau of Land Management's LR2000 database have previously been published by the U.S Geological Survey (USGS). The work in the 1990s did not include Arkansas or Florida. None of the previous reports included Alaska because it is stored in a separate database (Alaska Land Information System) and is in a different format. This report includes data for all states for which there are Federal mining claim records, beginning in 1976 and continuing to the present. The intent is to update the spatial and statistical data associated with this report on an annual basis, beginning with 2005 data.

The statistics compiled from the databases are counts of the number of active mining claims in a section of land each year from 1976 to the present for all states within the United States. Claim statistics are subset by lode and placer types, as well as a dataset summarizing all claims including mill site and tunnel site claims. One table presents data by case type, case status, and number of claims in a section. This report includes a spatial database for each state in which mining claims were recorded, except North Dakota, which only has had two claims. A field is present that allows the statistical data to be joined to the spatial databases so that spatial displays and analysis can be done by using appropriate geographic information system (GIS) software.

The data show how mining claim activity has changed in intensity, space, and time. Variations can be examined on a state, as well as a national level. The data are tied to a section of land, approximately 640 acres, which allows it to be used at regional, as well as local scale. The data only pertain to Federal land and mineral estate that was open to mining claim location at the time the claims were staked.

Introduction

Federal land management agencies need to predict trends in activity on land they manage in order to design mechanisms to minimize conflicts created by competing uses. By examining where mining claims have been located and changes brought about by technical, economic, and political factors, it is possible to construct predictive models for areas of future activity. This set of data provides the user with a view of the spatial and temporal variations, and the intensity of mining claim activity on public land since national recordation was required in 1976. In conjunction with other data, these trends can be used to create predictive models of future mineral activity.

Mining claim activity on Federal land has been recorded with the U.S. Bureau of Land Management (BLM) since it was required by the Federal Land Policy and Management Act of

1976 (Public Law 94-579), Sec. 314. Within the United States, mining claims have been recorded in 17 states: Alaska, Arkansas, Arizona, California, Colorado, Florida, Idaho, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

Previous statistical compilations of mining claim activity by Campbell and Hyndman (1996) and Hyndman and Campbell (1999a, 1999b, 1999c, 1999d, 1999e, 1999f, 1999g, 1999h, 1999i, 1999j, 1999k, 1999l) provided a density statistic (Campbell, 1996) for the western United States. Causey (2005) provided a statistical analysis of the data for the continental United States, except Alaska and North Dakota. Causey and Frank (2006) recompiled BLM mining claim data through 2004. This report updates Causey (2005) and Causey and Frank (2006) by adding mining claim statistics from Alaska. A complete new extraction of data from the BLM's LR2000 (http://www.blm.gov/lr2000/, last accessed Nov. 8, 2006) database was used to generate most of these statistics. Alaska data are stored in the BLM's Alaska Land Information System (ALIS) database by using a different database design for information than the LR2000 database and, as such, is not directly comparable.

The statistical data in Causey (2005), Causey and Frank (2006), and this report are not the same as that done by Campbell and Hyndman in their publications. The main modification used by Causey (2005) was to attach a value (claim count) to each PLSS (Public Land Survey System) section in which a claim occurred. The previous work of Hyndman and Campbell assigned a claim entirely to one section, even when it was listed as being in two or more sections. Hyndman and Campbell also provided counts for mill site and tunnel site claims. Yearly mill site and tunnel site statistics are not provided in this study.

There were 19 fewer claim records in 2005 that did not have a PLSS record in the conterminous U.S. data than were reported in Causey and Frank (2006). Minor improvements were made in some of the PLSS spatial databases to improve joining statistical data to the spatial data in the files provided with this report. New PLSS spatial datasets covering Alaska, Arkansas, South Dakota, and Utah were obtained in 2006 and are used in this report. No spatial database is provided for North Dakota as there have been only two claims (placer) filed in that state, both of which were active for only one year. Figure 1 shows the PLSS sections in which at least part of a mining claim was listed as being active by BLM in 2005 for all other states in the conterminous United States. (Note that the areas containing active claims are too small in Arkansas and Florida to show at the scale of figure 1.)
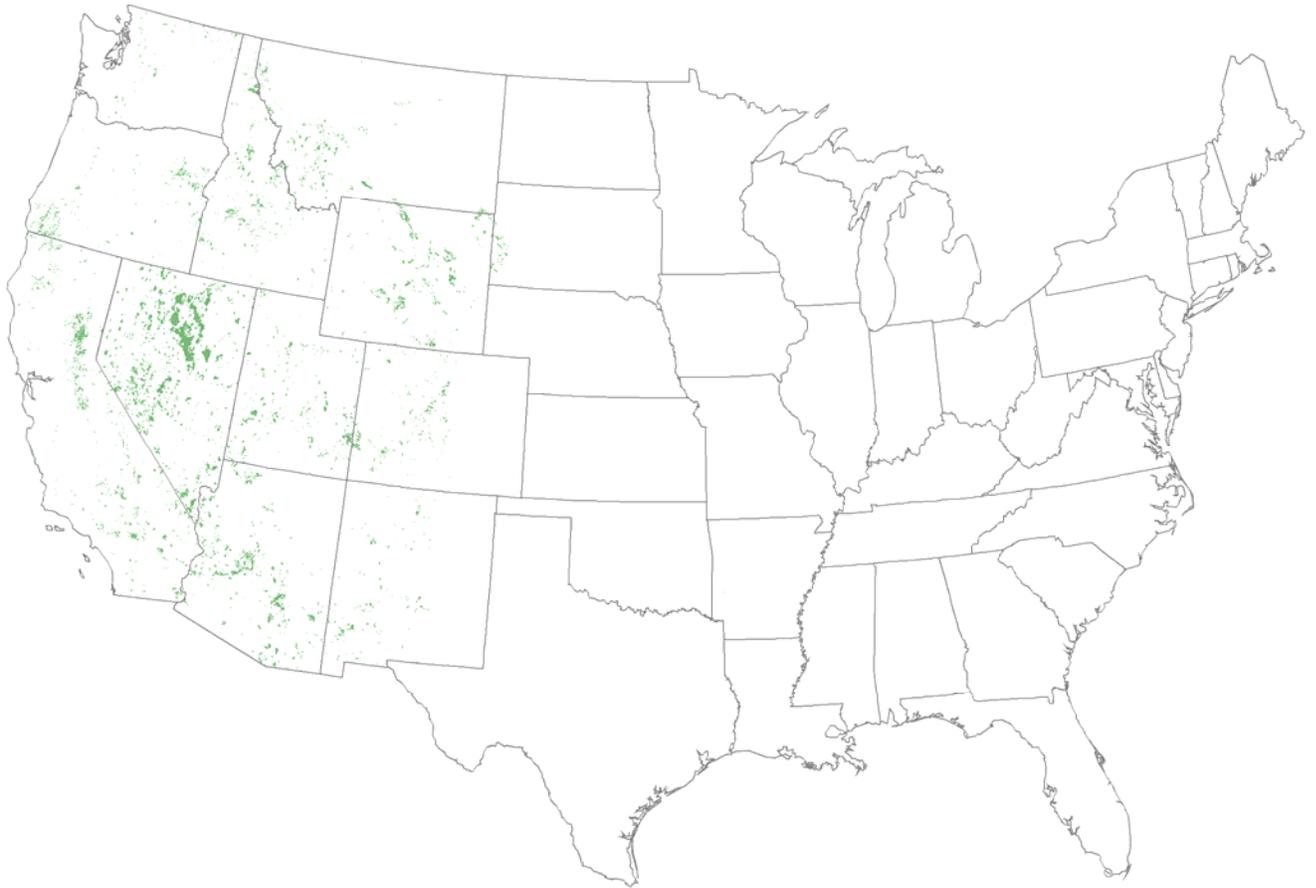
Figure 1. Public Land Survey sections (shown in green) that contained an active claim in 2005.

       Alaska mining claim records are in poorer shape than those for the rest of the country and, therefore, the data should not be used for more than the most cursory examination of location. Figure 2 only shows sections in Alaska where claims have been recorded by BLM. It is not possible to determine the status of all the claims in 2005 from information provided by BLM.
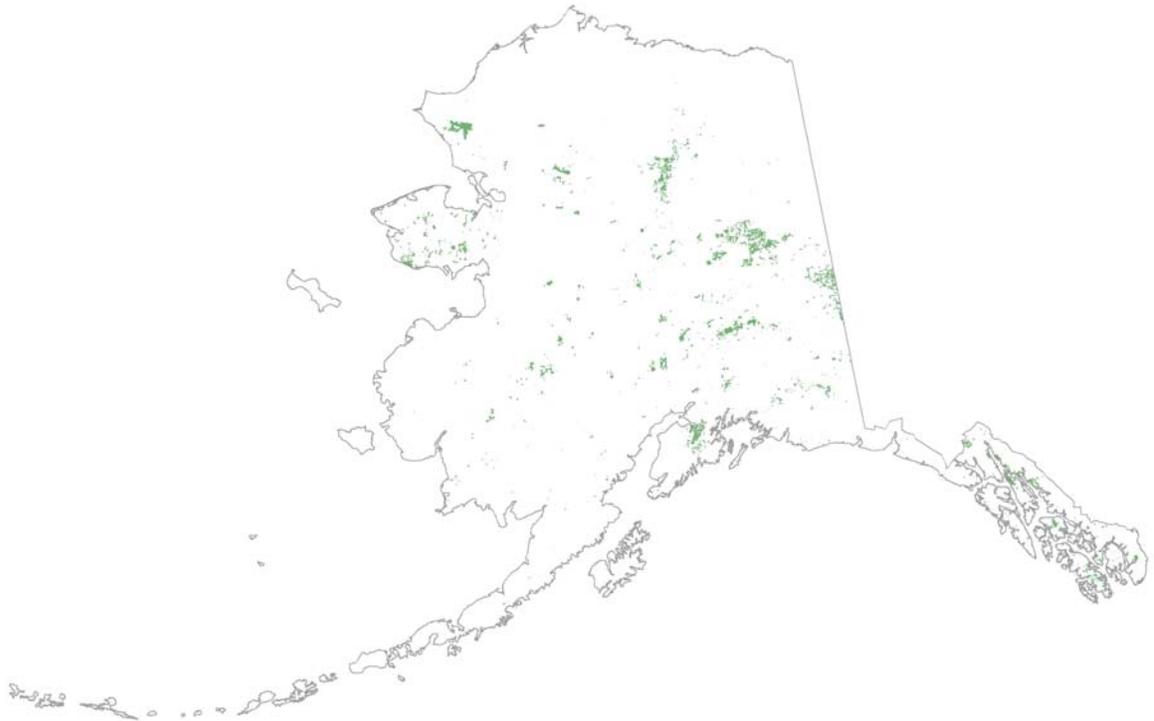
Figure 2. Public Land Survey sections (shown in green) in Alaska in which a mining claim was recorded with the U.S. Bureau of Land Management.

Acknowledgments

Overview of Data Files

The data for mining claim activity are organized by state and provided in several files that are listed and briefly described in table 1. The dBASE (.dbf) and ASCII (.txt) files provide two versions of the same statistical-summary data in a proprietary and non-proprietary format, respectively.

The statistical-summary data files for each state include:

- number of all claims (sum of lode, placer, tunnel site, and mill site) in each PLSS section, by year (for example, az_claim.dbf and az_claim.txt),
- number of lode claims in each PLSS section, by year (for example, az_lode.dbf and az_lode.txt),

- number of placer claims in each PLSS section, by year (for example, az_placr.dbf and az_placr.txt), and
- total number of claims in each PLSS section by status (active or closed) at the end of the most current year and type of claim (lode, placer, mill site, tunnel site; for example, az_total.dbf and az_total.txt).

While the data was processed using Microsoft's Access database program, neither the original data nor the Access databases used for this analysis are supplied with this report. There are two practical reasons not to include the source data. First, the data is time stamped. It is a snapshot of the BLM databases, which is only valid for the date the data was extracted. Another extraction of data will produce different statistics. Second, the database is massive. The files provided by BLM exceeded 750 MB (megabytes), compressed. The Access databases created from this data total 4.5 gigabytes (GB) in size; the largest, Nevada, being more than 1.3 GB.

State spatial databases provide PLSS-section polygons to which a user can attach data from the summary tables. The spatial databases are in shapefile (.shp) format. Federal Geographic Data Committee (FGDC; http://fgdc.gov, last accessed Nov. 8, 2006) compliant metadata provides information about the spatial databases and includes information about data sources, data quality, projection, and how to obtain the data on the World Wide Web, in addition to providing a data dictionary (metadata) for the information in the database tables. All the spatial databases contain metadata that can be read in ESRI's (http://www.esri.com, last accessed Nov. 8, 2006) ArcCatalog module (ArcGIS, ver. 9.x).

Table 1. List of digital files provided in this data release.

File Name	File Description
Spatial Databases	
Shapefile filenames are listed as they are displayed and viewed in ArcCatalog (for example, az_pls_YY.shp, where YY stands for the last two digits in the twenty-first century year). ESRI shapefiles consist of a collection of files with the extensions dbf, prj, sbn, shp, shp.xml, and shx. ArcCatalog only displays the shp extension (and hides all the others) in a directory listing, whereas the operating-system directory listings will show the complete collection of files.	
AK_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Alaska (ESRI shapefile format)
AZ_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Arizona (ESRI shapefile format)
AR_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Arkansas (ESRI shapefile format)
CA_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in California (ESRI shapefile format)
CO_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Colorado (ESRI shapefile format)
FL_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Florida (ESRI shapefile format)
ID_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Idaho (ESRI shapefile format)
MT_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Montana (ESRI shapefile format)
NE_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Nebraska (ESRI shapefile format)
NM_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in New Mexico (ESRI shapefile format)
NV_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Nevada (ESRI shapefile format)

OR_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Oregon (ESRI shapefile format)
SD_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in South Dakota (ESRI shapefile format)
UT_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Utah (ESRI shapefile format)
WA_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Washington (ESRI shapefile format)
WY_pls_YY.shp	Public Land Survey System sections in which mining claims have been recorded with BLM in Wyoming (ESRI shapefile format)
Metadata	
State-specific metadata files are provided in XML format (file with .shp.xml filename extension in Spatial directories). Images are provided in PDF (Portable Document Format) format.	
Metadata.txt	General description of information in the spatial mining claim databases (shapefiles) in an FGDC compliant, parseable ASCII text format. (Information specific to each state's spatial data base is provided in separate metadata files for each state.)
AK_pls_YY.shp.xml	Description of information specific to the Alaska spatial database (ak_pls_YY.shp).
AK_claims.pdf	Graphic image, created in ArcGIS, showing sections in Alaska where claims have been active from 1976 through 20YY.
AZ_pls_YY.shp.xml	Description of information specific to the Arizona spatial database (az_pls_YY.shp).
AZ_claims.pdf	Graphic image, created in ArcGIS, showing sections in Arizona where claims have been active from 1976 through 20YY.
AR_pls_YY.shp.xml	Description of information specific to the Arkansas spatial database (ar_pls_YY.shp).
AR_claims.pdf	Graphic image, created in ArcGIS, showing sections in Arkansas where claims have been active from 1976 through 20YY.
CA_pls_YY.shp.xml	Description of information specific to the California spatial database (ca_pls_YY.shp).
CA_claims.pdf	Graphic image, created in ArcGIS, showing sections in California where claims have been active from 1976 through 20YY.
CO_pls_YY.shp.xml	Description of information specific to the Colorado spatial database (az_pls_YY.shp).
CO_claims.pdf	Graphic image, created in ArcGIS, showing sections in Colorado where claims have been active from 1976 through 20YY.
FL_pls_YY.shp.xml	Description of information specific to the Florida spatial database (fl_pls_YY.shp).
FL_claims.pdf	Graphic image, created in ArcGIS, showing sections in Florida where claims have been active from 1976 through 20YY.
ID_pls_YY.shp.xml	Description of information specific to the Idaho spatial database (id_pls_YY.shp).
ID_claims.pdf	Graphic image, created in ArcGIS, showing sections in Idaho where claims have been active from 1976 through 20YY.
MT_pls_YY.shp.xml	Description of information specific to the Montana spatial database (mt_pls_YY.shp).
MT_claims.pdf	Graphic image, created in ArcGIS, showing sections in Montana where claims have been active from 1976 through 20YY.
NE_pls_YY.shp.xml	Description of information specific to the Nebraska spatial database (ne_pls_YY.shp).
NE_claims.pdf	Graphic image, created in ArcGIS, showing sections in Nebraska where claims have been active from 1976 through 20YY.
NM_pls_YY.shp.xml	Description of information specific to the New Mexico spatial database (nm_pls_YY.shp).
NM_claims.pdf	Graphic image, created in ArcGIS, showing sections in New Mexico where claims have been active from 1976 through 20YY.
NV_pls_YY.shp.xml	Description of information specific to the Nevada spatial database (nv_pls_YY.shp).
NV_claims.pdf	Graphic image, created in ArcGIS, showing sections in Nevada where claims have been active from 1976 through 20YY.
OR_pls_YY.shp.xml	Description of information specific to the Oregon spatial database (or_pls_YY.shp).
OR_claims.pdf	Graphic image, created in ArcGIS, showing sections in Oregon where claims have been active from 1976 through 20YY.
SD_pls_YY.shp.xml	Description of information specific to the South Dakota spatial database (sd_pls_YY.shp).
SD_claims.pdf	Graphic image, created in ArcGIS, showing sections in South Dakota where claims have been active from 1976 through 20YY.
UT_pls_YY.shp.xml	Description of information specific to the Utah spatial database (ut_pls_YY.shp).

UT_claims.pdf	Graphic image, created in ArcGIS, showing sections in Utah where claims have been active from 1976 through 20YY.
WA_pls_YY.shp.xml	Description of information specific to the Washington spatial database (wa_pls_YY.shp).
WA_claims.pdf	Graphic image, created in ArcGIS, showing sections in Washington where claims have been active from 1976 through 20YY.
WY_pls_YY.shp.xml	Description of information specific to the Wyoming spatial database (wy_pls_YY.shp).
WY_claims.pdf	Graphic image, created in ArcGIS, showing sections in Wyoming where claims have been active from 1976 through 20YY.
Non-Spatial Data Files
Each database is provided in two different file formats: dBASE III format (.dbf file name extension) and ASCII text format (.txt file name extension).
ak_claim.dbf ak_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Alaska, 1976-20YY. (Note: source dataset is incomplete.)
ak_lode.dbf ak_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Alaska, 1976-20YY. (Note: source dataset is incomplete.)
ak_placr.dbf ak_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Alaska, 1976-20YY. (Note: source dataset is incomplete.)
ak_total.dbf ak_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, lode-np, placer, placer-np, mill site, tunnel site), and claims status (Active or Closed) at end of 20YY for Alaska. (Note: source dataset is incomplete.)
az_claim.dbf az_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Arizona, 1976-20YY.
az_lode.dbf az_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Arizona, 1976-20YY.
az_placr.dbf az_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Arizona, 1976-20YY.
az_total.dbf az_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, mill site, tunnel site), and claims status (Active or Closed) at end of 20YY for Arizona.
ar_claim.dbf ar_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Arkansas, 1976-20YY.
ar_lode.dbf ar_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Arkansas, 1976-20YY.
ar_placr.dbf ar_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Arkansas, 1976-20YY.
ar_total.dbf ar_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, mill site, tunnel site), and claims status (Active or Closed) at end of 20YY for Arkansas.
ca_claim.dbf ca_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for California, 1976-20YY.
ca_lode.dbf ca_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for California, 1976-20YY.
ca_placr.dbf ca_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for California, 1976-20YY.
ca_total.dbf ca_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for California.
co_claim.dbf co_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Colorado, 1976-20YY.
co_lode.dbf co_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Colorado, 1976-20YY.

co_placr.dbf co_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Colorado, 1976-20YY.
co_total.dbf co_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for Colorado.
fl_claim.dbf fl_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Florida, 1976-20YY.
fl_lode.dbf fl_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Florida, 1976-20YY.
fl_placr.dbf fl_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Florida, 1976-20YY.
fl_total.dbf fl_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for Florida.
id_claim.dbf id_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Idaho, 1976-20YY.
id_lode.dbf id_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Idaho, 1976-20YY.
id_placr.dbf id_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Idaho, 1976-20YY.
id_total.dbf id_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for Idaho.
mt_claim.dbf mt_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Montana, 1976-20YY.
mt_lode.dbf mt_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Montana, 1976-20YY.
mt_placr.dbf mt_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Montana, 1976-20YY.
mt_total.dbf mt_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for Montana.
ne_claim.dbf ne_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Nebraska, 1976-20YY.
ne_lode.dbf ne_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Nebraska, 1976-20YY.
ne_placr.dbf ne_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Nebraska, 1976-20YY.
ne_total.dbf ne_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for Nebraska.
nm_claim.dbf nm_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for New Mexico, 1976-20YY.
nm_lode.dbf nm_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for New Mexico, 1976-20YY.
nm_placr.dbf nm_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for New Mexico, 1976-20YY.
nm_total.dbf nm_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for New Mexico.

nv_claim.dbf nv_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Nevada, 1976-20YY.
nv_lode.dbf nv_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Nevada, 1976-20YY.
nv_placr.dbf nv_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Nevada, 1976-20YY.
nv_total.dbf nv_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for Nevada.
or_claim.dbf or_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Oregon, 1976-20YY.
or_lode.dbf or_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Oregon, 1976-20YY.
or_placr.dbf or_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Oregon, 1976-20YY.
or_total.dbf or_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for Oregon.
sd_claim.dbf sd_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for South Dakota, 1976-20YY.
sd_lode.dbf sd_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for South Dakota, 1976-20YY.
sd_placr.dbf sd_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for South Dakota, 1976-20YY.
sd_total.dbf sd_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for South Dakota.
ut_claim.dbf ut_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Utah, 1976-20YY.
ut_lode.dbf ut_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Utah, 1976-20YY.
ut_placr.dbf ut_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Utah, 1976-20YY.
ut_total.dbf ut_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for Utah.
wa_claim.dbf wa_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Washington, 1976-20YY.
wa_lode.dbf wa_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Washington, 1976-20YY.
wa_placr.dbf wa_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Washington, 1976-20YY.
wa_total.dbf wa_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for Washington.
wy_claim.dbf wy_claim.txt	Database of mining claim intensity: total for all claim types (lode, placer, tunnel site, and mill site), by PLSS section and year for Wyoming, 1976-20YY.
wy_lode.dbf wy_lode.txt	Database of mining claim intensity totaled for lode claims, by PLSS section and year for Wyoming, 1976-20YY.
wy_placr.dbf wy_placr.txt	Database of mining claim intensity totaled for placer claims, by PLSS section and year for Wyoming, 1976-20YY.

wy_total.dbf wy_total.txt	Database of all mining claims for the period 1976-20YY; by PLSS section, claim type (lode, placer, tunnel site, and mill site), and claims status (Active or Closed) at end of 20YY for Wyoming.

Data Sources and Processing

Data Sources

There are two types of data provided with this report (1) statistics derived from BLM mining claim records in two formats (dBASE III and ASCII) and (2) selected polygons and attributes from spatial databases of Public Land Surveys in shapefile format. The PLSS databases were obtained from a variety of sources, which are documented in the metadata provided with each of the shapefiles. The statistical data were produced from an analysis of BLM records of mining claims located on Federal Lands in the United States.

Mining Claim Data

Mining claim data for the conterminous United States were extracted from the BLM's LR2000 database on May 4, 2006. The extracted data were in ASCII format with │ (pipe) delimiters between fields. The SQL (Structured Query Language) statements BLM used to create the tables from which the mining claim data were extracted are included in appendix A. One set of files was extracted from LR2000 for each of BLM's 11 administrative areas (Arizona, California, Colorado, Eastern States, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, and Wyoming). These administrative areas include 16 states in which mining claims have been recorded (Arizona, Arkansas, California, Colorado, Florida, Idaho, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming). Arkansas and Florida data are included in the Eastern States administrative area, Nebraska is included in the Wyoming administrative area, North and South Dakota are included in the Montana administrative area, and Washington is included in the Oregon administrative area.

Mining claim records for Alaska are stored in ALIS and maintained in Anchorage. As such, the database design, fields, and terms used are not all the same as data in LR2000. The records also are incomplete, and about half are not useful for this analysis. The most common problem is that the location date is not given.

On the date data was extracted from LR2000, there were 3,229,344 claim records in the conterminous United States database. The number of records for each state and a comparison to previous reports (Causey, 2005; Causey and Frank, 2006) is shown in table 2. The ALIS database in Alaska had 117,245 mining claim records as of August 31, 2006.

Table 2. Number of mining claim records, by state, on January 15, 2004 (Causey, 2005), May 25, 2005 (Causey and Frank, 2006), and May 4, 2006.

State	Number of Mining Claim records, Jan. 15, 2004	Number of Mining Claim records, May 26, 2005	Number of Mining Claim records, May 4, 2006
Alaska	Not determined	Not determined	117,245
Arizona	358,438	364,995	371,275
Arkansas	11,571	11,571	11,577
California	280,494	280,677	284,189
Colorado	251,486	253,315	257,030
Florida	439	439	439
Idaho	184,673	186,138	187,248
Montana	167,213	168,424	170,121
Nebraska[1]	787	787	787
Nevada	852,463	891,625	920,027
New Mexico	168,678	169,950	172,065
North Dakota	2	2	2
Oregon	104,946	106,057	106,499
South Dakota	40,730	40,838	41,599
Utah	369,430	374,398	381,834
Washington	52,581	53,108	53,411
Wyoming	258,506	263,146	271,237
Unknown[2]		4	4
TOTAL	3,102,437	3,165,474	3,346,589

[1]Nebraska claims were determined using the geo_state codes in the CASE_LAND table because the geo_state field in the CASE_TBL contains many errors.
[2]Four claims in the Eastern States Office records do not have a location, but conversations with BLM indicate these probably are in Arkansas.

There were 17 mining claim records in the May 4, 2006, LR2000 data that did not have a PLSS location; this was the lowest level to date. Table 3 compares the number of claims in this report without a location with numbers in Causey (2005) and Causey and Frank (2006). These records are an insignificant part of the total claim record. (These data are listed in table 3 by administrative area because some of the claims are in administrative areas that include multiple states and the records do not identify which state the claim is in.)

Table 3. Comparison of claim records in LR2000 database CASE_TBL table on January 15, 2004, May 25, 2005, and May 4, 2006 that do not have a MTRS value in the CASE_LAND table.

BLM Administrative Area	Number of claims in LR2000 without a location in Causey (2005)	Number of claims in LR2000 without a location in Causey and Frank (2006)	Number of claims in LR2000 without a location in this report
Arizona	5	1	0
California	2	3	0
Colorado	8	8	7
Eastern States	1	9	4
Idaho	0	0	0
Montana	2	2	0
Nevada	5	10	3
New Mexico	1	1	1
Oregon	1	0	0
Utah	1	0	0
Wyoming	2	1	2
TOTAL	28	35	17

It should be noted that not all claim records in the dataset obtained from BLM are used in creating the statistics in this report. Since the statistics represent a complete year, any claims located or dropped in the calendar year from which the data was extracted were not counted. In addition, for Alaska, only claim records for which a location and closure date could be determined were used.

Spatial Data

Spatial datasets were obtained from a variety of sources, which are described in the associated metadata. All fields, except the required spatial data attributes and a meridian-township-range-section code field (*mtrs*), were stripped out of the spatial data sets and all polygons that did not have claims were deleted.

Processing Procedures

Mining Claim Data

Procedures used to process the LR2000 mining record data used in this analysis were documented in Causey (2005). Alaska data were processed the same way, but preparation of the data to do the statistical analysis required a slight modification. It was necessary to substitute case status information for case disposition information, which was used in the LR2000 data to determine if a claim was still active. The case-status coding in the Alaska dataset was void, pending, recorded, authorized, inactive, interim, or closed. The values used in this analysis to determine if a claim was active in a year are pending=active, recorded=active, and authorized=active. The other terms, equated with closed claims, are void, inactive, and closed.

Public Land Surveys

Improved spatial Public Land Survey databases for Arkansas, Nebraska, South Dakota, and Utah were acquired in 2006. A spatial PLSS dataset for Alaska was acquired from BLM's

Geocommunicator website (http://www.geocommunicator.gov/GeoComm/index.shtm, downloaded December 7, 2005). The quality of public-domain PLSS spatial databases is highly variable. Errors in polygon labels and shapes, or data in less than optimum format for this project, are present in all the spatial databases acquired. Some corrections to polygon labels were made in order to produce a reasonably accurate depiction of the spatial distribution of mining claims, but these datasets are still not perfect. BLM's Cadastral Survey is currently developing high-quality PLSS databases, but has not yet completed any states. The other spatial Public Land Survey databases used for this report are those used in Causey (2005) and Causey and Frank (2006). Table 4 shows the relationship between the statistical data and the spatial data. The PLSS datasets of California and New Mexico are the poorest quality for this work.

Table 4. Discrepancies in claim locations between U.S Bureau of Land Management claim records and Public Land Survey spatial databases.

State	Number of sections containing claims, May 4, 2006 LR2000	Number of matching sections in PLSS spatial database	Number of claim sections not in PLSS spatial database	Percent of claim sections without polygons
Alaska	12,831	12,697	134	1.04
Arizona	19,587	19,560	27	0.14
Arkansas	541	538	3	0.55
California	23,405	22,091	1,314	5.61
Colorado	15,025	15,020	5	0.03
Florida	22	22	0	0.00
Idaho	12,290	12,290	0	0.00
Montana	9,689	9,680	9	0.09
Nebraska	58	58	0	0.00
Nevada	35,982	35,890	92	0.26
New Mexico	9,273	8,933	340	3.67
North Dakota	1	NA	NA	NA
Oregon	7,818	7,747	71	0.91
South Dakota	1,648	1,633	15	0.06
Utah	20,275	20,176	99	0.49
Washington	3,751	3,749	2	0.03
Wyoming	13,833	13,709	124	0.90
TOTAL	186,029	183,793	2,235	

Sections with the same Meridian, township, and range along the California-Nevada border make it impractical to combine statistical and spatial data for all the states. There are also duplicate townships within some states. No solution to providing one-to-one relationships between polygons and statistical data is possible until the BLM databases provide unique designators for all sections as is being done by the Cadastral Survey in their spatial databases.

North Dakota only had two placer claims, which are no longer active. No spatial or statistical data is provided for North Dakota.

Discrepancies between the LR2000 data and state PLSS files are due to several factors:
1. Errors and omissions in the PLSS spatial databases. For example, some townships in the New Mexico spatial database are not subdivided into sections and some National Forest lands in California were not gridded with PLSS section polygons.

2. Data entry errors in the BLM records. For example, a *mtrs* value for 3 claims in Nevada did not include a section number, and the range direction for those claims was incorrect.
3. Location errors by the mining claimants. Many parts of the National Forests are unsurveyed and no sections lines are shown on U.S. Geological Survey topographic maps, so claimants have to guess what the township, range, and section might be. Claimants are required to enter a PLSS value, which may have been based on a projection they made that might not correspond to a Cadastral Survey projection.

Note that the shapefiles included with this report are only for use with the associated statistical data. BLM data are continually being updated and new claims may be located in areas where BLM did not previously have a record of activity. New shapefiles must be created for any analysis involving another extraction of mining claim data from BLM's mining claim databases.

User procedures

In order to use the data in a spatial context, the statistical data should be joined to the spatial databases in a geographic information system (GIS). There are two ways to connect the databases -- join or relate/link. Data can be joined or relate/linked, by using either the dBASE format or ASCII (text) format files, to the appropriate spatial database on the common field (*mtrs*). All of the files with names like XX_claim, XX_lode, and XX_placr should be connected by using a join. The files XX_total should be connected to a GIS database by using link or relate since they have a one-to-many relationship. The relationships between the statistics tables and the spatial-database feature-attribute table are shown in figure 3.
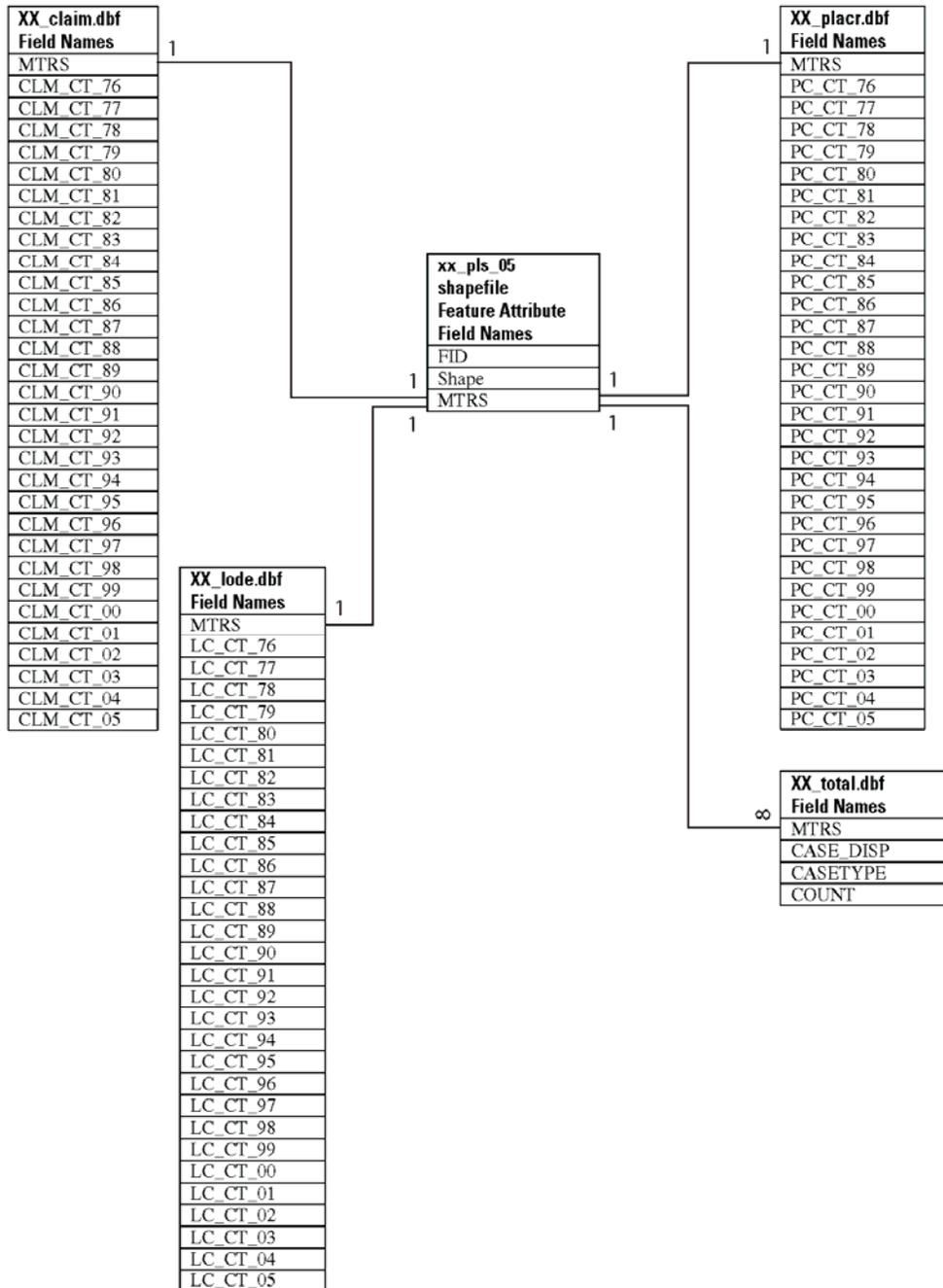
Figure 3. Relationships between mining claim statistical tables (XX_claim, XX_lode, XX_placr, and XX_total) and Public Land Survey polygon attribute tables (xx_pls_YY).

Each statistics field in the XX_claim, XX_lode, and XX_placr files represents data for a single year with the two-digit suffix indicating the year (for example, LC_CT_81 is count of lode claims in 1981 and PC_CT_02 is count of placer claims in 2002). The three fields in XX_total are *CASE_DISP* (disposition of the case – A = Active, C = Closed), *CASETYPE* (type of mining claim – LODE CLAIM, LODE CLAIM-NP, PLACER CLAIM, PLACER CLAIM-NP, TUNNEL SITE, TUNNEL SITE-NP, MILLSITE CLAIM, MILLSITE-NP), and *COUNT* (number of claims in a section meeting the *CASE_DISP* and *CASETYPE* criteria).

The *CASETYPE* –NP indicates the claims are in a National Park. These claim types do not occur in all states. The *CASETYPE*s LODE CLAIM-NP, PLACER CLAIM-NP, TUNNEL SITE-NP, and MILLSITE-NP are used in California, Nevada, and Utah. The *CASETYPE*s LODE CLAIM-NP and PLACER CLAIM-NP are used in Alaska and Oregon. The *CASETYPE* LODE CLAIM-NP is used in Arizona and Idaho. The *CASETYPE* PLACER CLAIM-NP is used in Wyoming.

Data Discussion

It is important to understand the limits of the data developed in this process. The data only pertains to Federal land or patented land with mineral rights reserved to the Federal Government and is open to mineral entry at the time the claim is located. Another consideration is that although BLM mining claim recordation began in 1976, the data between 1976 and 1979 are incomplete. While any new claims staked from1976 on had to be recorded with the BLM, older claims did not have to be recorded until 1979. During that 3-year window, older claims could have been dropped and no record of them would have been entered into the BLM system. For this reason, 1979 is considered the first year of complete data. Also, some of the information in the LR2000 database was incomplete making it necessary to interpret the actual date a claim was finally abandoned or closed. Lastly, the Alaska statistics are included to show the potential to include them if the records in the ALIS database can be cleaned up, but at this time the statistics only include about half the records.

The data show that the total number of active mining claims in the United States was relatively stable between1979 and 1988 (fig. 4). After 1988, there was an extended period where the number of active claims in the United States decreased. Between 1988 and 1993, there was a decline of about 63 percent in the number of active claims. The decrease in number of active claims between 1993 and 2002 was more gradual. Since 2002, there has been a steady increase in active mining claims as more claims are being located than dropped.
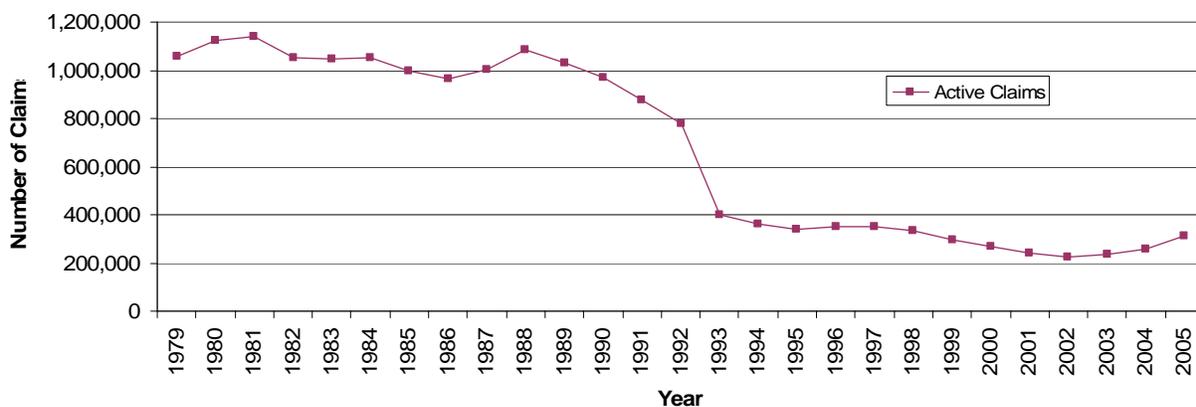
Figure 4. Number of active claims in the United States each year from 1979 to 2005.

While the trend in active mining claims in the United States shows some uniformity, there are major differences between the states. Figure 5 shows the difference between California and Wyoming between 1979 and 2005. From 1982 to 1988, California was experiencing a rise in the number of active claims while in Wyoming it was declining. Nationwide, this averaged out to a fairly steady number of active claims (fig. 4) during that same period.
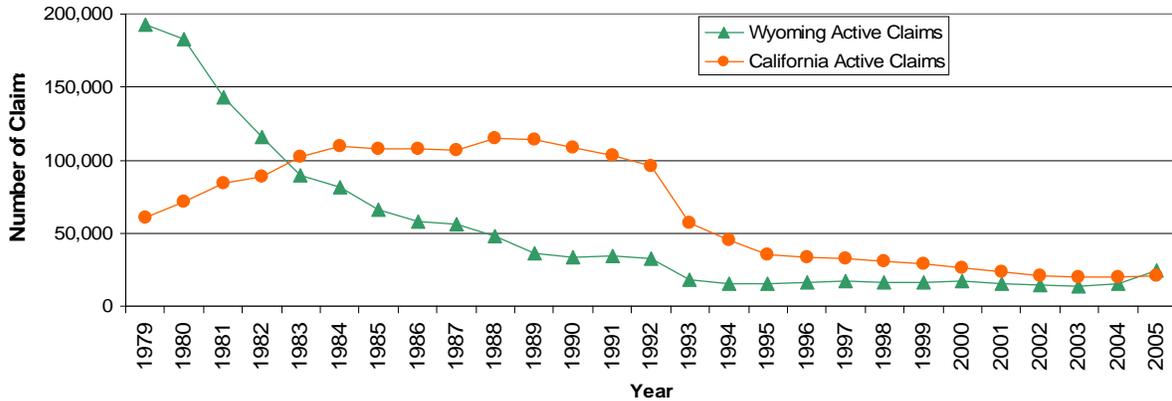
Figure 5. Number of active claims in California and Wyoming for each year from 1979 to 2005.

In 2005, there were more than 65,404 new claims recorded in the conterminous United States, more than 45 percent of which were in Nevada (table 5). Wyoming had the second-most new claim activity in 2005, followed by Utah and Arizona. The records show that the change from year-to-year can be highly variable. For example, in Colorado there was a 10-fold increase in the number of new claims recorded between 2004 and 2005, while in Idaho there was a decrease in new claim recordation for the same period (table 5). Much of this new activity is probably due to a significant increase in precious metal, copper, and uranium prices since 2002; shortfalls of global inventories; and forecasts of shortages in the near future. (U.S. Geological Survey, 2006; Cameco, 2006; The Uranium Committee, 2006; The UX Consulting Company, LLC, 2006).

Table 5. Comparison of the number of new claims, by state, between 2004 and 2005.

State	Number of new claims in 2004[1]	Number of new claims in 2005
Arizona	4,525	5,926
Arkansas	0	1
California	1,438	1,810
Colorado	464	4,456
Florida	0	0
Idaho	1,304	987
Nebraska	0	0
Montana	1,022	1,734
Nevada	28,183	29,846
New Mexico	1,056	2,123
North Dakota	0	0
Oregon	516	433
South Dakota	102	759
Utah	2,997	7,743
Washington	227	509
Wyoming	3,540	9,076
Total	45,374	65,403

[1] Corrections in data by U.S. Bureau of Land Management resulted in some of these numbers being different than those reported in Causey and Frank (2006).

In general, the pattern of claim activity in individual states varies from that of the U.S. as a whole. It is possible to examine the activity in the individual states and correlate that with the known mineral endowment, market price fluctuation of commodities, favorable political climate, and other factors. For example, significant price increases for gold, uranium, and copper during the last three years can be correlated with new claim locations in states containing large areas of potentially favorable geologic environment and resources in those commodities. Nevada, which has largest known gold and silver resources in the United States, had the most new mining claim activity in 2005 of any state. Favorable areas for uranium resources in Utah, Wyoming, Colorado, and New Mexico, and copper in Arizona, are undoubtedly factors in the large increase in activity in those states.

In 2005, the spatial extent of mining claims was a fraction of the maximum area covered in the past. Overall, the number of sections in which there were active claims in 2005 is significantly less than the number of sections in which claims have been recorded in the past 30 years (table 6). Only 21 percent of all sections in which claims were recorded since 1976, had active claims in 2005.

Table 6. Number of Public Land Survey sections containing claims in each state and number of sections with active claims in 2005.

State	Number of PLSS sections in which a claim has been recorded since 1976	Number of PLSS sections in which there was an active claim in 2005
Arizona	19,475	4,247
Arkansas	537	9
California	23,267	4,935
Colorado	14,990	1,495
Florida	22	4
Idaho	12,271	2,278
Montana	9,668	1,825
Nebraska	58	1
Nevada	35,642	12,025
New Mexico	9,223	1,186
North Dakota	1	0
Oregon	7,799	1,641
South Dakota	1,638	295
Utah	20,211	2,513
Washington	3,743	527
Wyoming	13,745	2,731
Total	172,290	35,712

The pattern of locating claims is variable over time and space; this is also true for the relinquishment of claims. In general though, claim activity after 1992 has been relatively stable, while in the years prior to 1992, the pattern of locating new claims and dropping claims was more volatile (fig. 6).
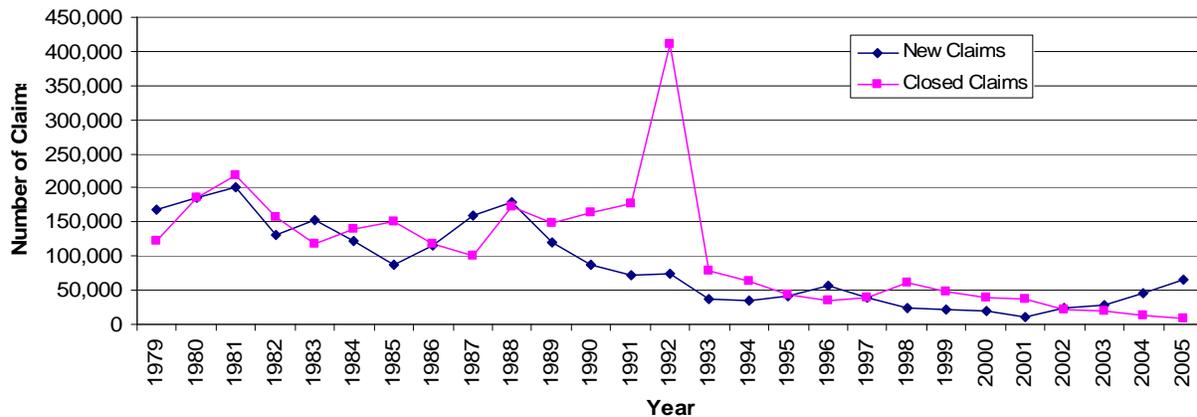
Figure 6. Number of new and closed claims each year from 1979 to 2005 in the conterminous United States.

Mining claim activity had a watershed year in 1992, and there was a marked decrease in the number of mining claims throughout the United States. However, it has been noted that a decrease in mineral-exploration activity between 1988 and 1992 was not unique to the U.S. (Minerals and Metals Sector, 1997; Cranstone, 2002). Although Public Law 102-381 (October 1992) imposed a $100 annual assessment fee for each claim on holders of large blocks of claims,

it was not the only factor affecting activity at that time. Base and precious metal prices also had been falling. Several global activities around this time probably also had a profound affect on mining claim activity. The USSR broke up in December 1991, resulting in changes from a centrally-planned economy to market or mixed economy in the Soviet-block nations. This situation allowed foreign investors to consider projects in a part of the world formerly denied them. The Tiananmen Square protests in 1989 presaged the conversion of China in the early 1990s from a socialist market economy to one that contained special economic zones with few government restrictions. Also in the 1990s the stock market boom provided a means to make better profits than did the risky mining sector.

Other factors, such as increased government regulation and environmental activism created long delays in mineral development, which negatively affected the time-value of money, and hence dampened interest in investment in mining exploration. The United States is a well-explored country. Most of the significant deposits that have surface expression have probably been discovered, and their general extents are known. New technology needed to discover buried deposits, especially in virgin terrain, was not available.

The claim count can be used to estimate the maximum area that could be covered by lode mining claims. Assuming each lode claim was the maximum size allowed (600 feet by 1,500 feet) and that there were no overlapping claims, the maximum area encompassed by the claims can be estimated (table 7). Since many claims are smaller than the maximum size, the area covered by claims in 2005 is less than the maximum. For reference, the total area covered by active lode mining claims in the conterminous United States is less than the area of either of the two largest national parks (Wrangell-St. Elias National Park and Gates of the Arctic National Park). Because placer claims can be any size up to 160 acres, but most are 20 acres or less; it is not as reasonable to estimate the amount of land encompassed by this type of claim.

Table 7. Maximum area that could potentially be covered by lode mining claims in 2005.

State	Total Claims	Lode Claims	Maximum Lode Claim Area (sq. mi.)
Arizona	32,251	24,250	789
Arkansas	24	8	0.3
California	20,838	9,386	303
Colorado	9,452	7,797	252
Florida	3	3	0.1
Idaho	12,273	9,548	308
Montana	11,766	8,839	285
Nebraska	3	3	0.1
Nevada	162,663	149,348	4,821
New Mexico	9,458	7,943	256
Oregon	5,785	2,972	96
South Dakota	1,797	1,326	43
Utah	19,483	15,960	515
Washington	2,781	2,388	77
Wyoming	24,302	18,689	603
Total	312,879	258,460	8,349

Barring another major action, such as changing from a mining claim location system to a leasing system for mineral rights, the pattern of the last decade of a small but sub-equal number of claims being located and dropped in any year may continue. Commodity prices will likely be the most influential factor in determining whether staking or dropping claims is more dominant

in any given year. Technological advances in metal recovery, or demand for previously unimportant commodities, could also spur activity in some areas of the country.

Obtaining Digital Data

The spatial databases are available in shapefile format with associated data files. The spatial data is maintained in:

Projection: Geographic

Units: Decimal Degrees

Datum: NAD27

Spheroid: Clarke1866

To obtain copies of the digital data:

Download from the USGS World Wide Web site: URL = http://pubs.usgs.gov/ds/2007/290

Note that the uncompressed files take more than 400 megabytes of space.

The Internet site contains the spatial data, associated .dbf and .txt format tables, and metadata for the state PLSS spatial databases (see listing of files in table 1). Formatted metadata (Federal Geographic Data Committee-compliant) is included with each spatial database.

To manipulate the spatial databases, you must have software that is capable of reading shapefile format.

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Appendix A – Table Design SQL (Structured Query Language)

The following SQL statement provided by BLM shows how the case_tbl and case_land tables were created in LR2000 and the table structure as it existed on May 4, 2006. This SQL is Oracle specific. The SQL language may have to be modified to create the same tables in other relational database programs.

```
create table case_tbl
(
    case_id                 DECIMAL(16)         not null,
    system_id               CHAR(2)                     ,
    serial_nr_full          CHAR(17)                    ,
    serial_nr_prefix        CHAR(4)                     ,
    number_prefix           CHAR(1)                     ,
    serial_nr               CHAR(6)                     ,
    serial_nr_num_part      INTEGER                     ,
    serial_nr_suf           CHAR(2)                     ,
    st_case_part            CHAR(2)                     ,
    admin_state             CHAR(2)                     ,
    geo_state               CHAR(2)                     ,
    last_assess_yr          CHAR(4)                     ,
    last_assess_cd          CHAR(3)                     ,
    ttl_case_acres          DECIMAL(12,3)               ,
    commodity               CHAR(3)                     ,
    commodity_txt           VARCHAR(25)                 ,
    case_disp               CHAR(1)                     ,
    case_disp_txt           VARCHAR(25)                 ,
    case_disp_gp            VARCHAR(25)                 ,
    disp_act_cd             CHAR(3)                     ,
    disp_act_txt            VARCHAR(25)                 ,
    disp_dt                 TIMESTAMP                   ,
    case_modif_dt           TIMESTAMP                   ,
    casetype                CHAR(6)                     ,
    casetype_txt            VARCHAR(25)                 ,
    last_action_cd          CHAR(3)                     ,
    last_action_txt         VARCHAR(25)                 ,
    last_action_dt          TIMESTAMP                   ,
    mc_claim_nm             VARCHAR(20)                 ,
    cr_legal_ref            VARCHAR(40)                 ,
    mc_lead_case_ser_nr     VARCHAR(17)                 ,
    mc_county_bk_pg         VARCHAR(30)                 ,
    mc_loc_dt               TIMESTAMP                   ,
    mc_cert_issue_dt        TIMESTAMP                   ,
    mc_cert_canc_dt         TIMESTAMP                   ,
    chargeable_acres_flg    CHAR(1)                     ,
    case_group              CHAR(2)                     ,
    lease_auth_dt           TIMESTAMP                   ,
    action_669_flg          CHAR(1)                     ,
    reinstatement_flg       CHAR(1)                     ,
    hi_reference_nr         CHAR(25)                    ,
    hi_kind_of_entry        CHAR(50)                    ,
    loadts_dt               TIMESTAMP
);
create table case_land
(
```

```
        case_id                 DECIMAL(16)             not null,
        blm_adm_st              CHAR(2)                 not null,
        geo_state               CHAR(2)                         ,
        land_id                 DECIMAL(16)             not null,
        cty_dist_ra_id          DECIMAL(16)             not null,
        system_id               CHAR(2)                         ,
        ser_nr_full             CHAR(17)                        ,
        withdrawal_flg          CHAR(1)                         ,
        meridian_cd             CHAR(2)                         ,
        meridian_txt            VARCHAR(25)                     ,
        mer_twp_rng             CHAR(14)                        ,
        township                CHAR(5)                         ,
        range                   CHAR(5)                         ,
        twp_rng_dir             CHAR(2)                         ,
        entire_twp_flg          CHAR(1)                         ,
        st_entire_twp_exc_flg   CHAR(1)                         ,
        st_indemn_lands_flg     CHAR(1)                         ,
        st_twp_loc_unkn_flg     CHAR(1)                         ,
        section                 CHAR(3)                         ,
        entire_sec_flg          CHAR(1)                         ,
        st_sec_loc_unkn_flg     CHAR(1)                         ,
        mtrs                    CHAR(18)                        ,
        geost_county_cd         CHAR(5)                         ,
        county_txt              VARCHAR(25)                     ,
        admst_dist_ra_cd        CHAR(6)                         ,
        district_txt            VARCHAR(25)                     ,
        ra_txt                  VARCHAR(25)                     ,
        adm_agency              CHAR(8)                         ,
        adm_agency_txt          VARCHAR(25)                     ,
        aliquot_part            CHAR(25)                        ,
        cong_dist               CHAR(4)                         ,
        ls_inc                  CHAR(1)                         ,
        sur_nr                  CHAR(5)                         ,
        sur_suffix              CHAR(2)                         ,
        survey_type             CHAR(1)                         ,
        sur_type_txt            VARCHAR(25)                     ,
        sur_sort                CHAR(2)                         ,
        case_land_acres         DECIMAL(8,3)                    ,
        st_sur_note             CHAR(1)                         ,
        es_pol_twnshp           VARCHAR(2)                      ,
        es_map_ref              VARCHAR(6)                      ,
        es_quad                 VARCHAR(4)                      ,
        es_set_id               smallint                        ,
        es_sortkey              smallint
);
```

Appendix B – Access 2000 Table Design

ASCII text files supplied by BLM were imported into a Microsoft Access 2000 database. By using the names and data types provided in the table creation SQL supplied by BLM (Appendix A), a similar data design was created in Access. Additional fields necessary for statistical processing were also added to the design. The Access table design is provided in tables B-1 and B-2. BLM provided definitions for most of the LR2000 fields. It is noted in the tables where a definition was not supplied, or the definition is from this report (non-BLM field). Questions concerning metadata and definitions for the tables and fields in LR2000 should be directed to the BLM (http://www.blm.gov/lr2000/).

The following tables can be used to reconstruct the Access 2000 database used to create the information provided with this report. Since BLM is constantly updating their data and correcting errors in older data, new downloads of the database may provide slightly different yearly results from those included in this data release.

Table B-1. CASE_TBL table structure

Field Name	Type	Size	Description
Case_id	Number	Long Integer	A numeric identifier assigned to each case.
System_id	Text	2	The system by which the data element is referenced. Case system Id's = MCR, CR, ST.
Serial_nr_full	Text	17	The entire serial number, including suffix and case part for Status.
Serial_nr_prefix	Text	4	The second 4 character string of a serial number (land office).
Number_prefix	Text	1	The preceding zero portion of the serial number.
Serial_nr	Text	6	BLM field, no definitions supplied.
Serial_nr_num_part	Number	Long Integer	The number portion of the serial number that is currently only populated for MCR and is used in MCR reports to sort numbers.
Serial_nr_suf	Text	2	Suffix portion of the serial number use in CR and Status only.
St_case_part	Text	2	BLM field, no definitions supplied.
Admin_state	Text	2	The administrative state code.
Geo_state	Text	2	The two character geo-state code portion of the serial number.
Last_assess_yr	Text	4	The last assessment year for a mining claim. (MCR only).
Last_assess_cd	Text	3	The latest maintenance fee or waiver action code on a mining claim (MCR only).
Ttl_case_acres	Number	Double	Shows the total case acres in a case. (CR only).
Commodity	Text	3	3-digit commodity code used in (CR and MCR only).
Commodity_txt	Text	25	The text description of the commodity code.
Case_disp	Text	1	1-character code field indicating the disposition of a MCR or CR case. For CR the codes are 1 = Void, 2 = Pending, 3 = Rejected, 4 = withdrawn, 5 = authorized, 6 = cancelled, 7 = expired, 8 = Relinquished, 9 = Closed. For MCR the codes are A = Active, C = Closed, and V = Void.
Case_disp_txt	Text	25	The text value of the code (void, expired) CR & MCR only.
Case_disp_gp	Text	25	Same as the *Case_disp_txt*.
Disp_act_cd	Text	3	The action code that set the case disposition.
Disp_act_txt	Text	25	The textual description of the action code that set the case

25

Field Name	Type	Size	Description
			disposition.
Disp_dt	Text	25	The date of the action code that set the case disposition.
Case_modif_dt	Text	25	The last date that anything concerning the case was updated.
Casetype	Text	6	The coded value for a specific casetype.
Casetype_txt	Text	25	The textual description for a casetype.
Last_action_cd	Text	3	The most recent action taken on a case.
Last_action_txt	Text	25	The textual description of the last action code.
Last_action_dt	Text	25	The date of the most recent action on a case.
Mc_claim_nm	Text	20	The mining claim name (MCR only).
Cr_legal_ref	Text	40	For CR system only: Some casetypes have legal information that must appear on the top of the report.
Mc_lead_case_ser_nr	Text	17	The lead-case serial number for a mining claim and is generated from the action remarks field for action codes 500 or 501 (MCR only).
Mc_county_bk_pg	Text	30	This field contains the county documentation reference information, book and page, for a mining claim. This information was retrieved from the action remarks field for action code 404 (MCR only).
Mc_loc_dt	Text	25	This field contains the location date for the mining claim. This information was retrieved from the action-remarks field for action code 403 (MCR only).
Mc_cert_issue_dt	Text	25	This is the date that the certification was issued regarding the mining claim, Action codes 630 or 212. This data is used to determine if the yearly assessment is missing for the mining claim. If a certification has been issued, the assessment is not missing (MCR only).
Mc_cert_canc_dt	Text	25	This the date that the certification was canceled regarding the mining claim, Action code 359. This data is used to determine if the yearly assessment is missing for the mining claim. If a certification has been issued, the assessment is not missing; but if the certification was canceled, the assessment is missing if other criteria such as payment of maintenance fee was not met (MCR only).
Chargeable_acres_flg	Text	1	This field is used for acreage hold reporting for oil and gas leases. A "Y" in the field means the acres are chargeable (CR only).
Case_group	Text	2	This field contains the first pair of digits in the casetype field. For example, 27 is Land Sales.
Lease_auth_dt	Text	25	The date that a lease was authorized, action_dt for action code 237 in the action table. Only applicable for case rec cases of certain casetypes.
Action_669_flg	Text	1	This is the date associated with the action code 669 (Land Status Checked) A Y value indicates the land status has been checked. Use only for MCR.
Reinstatement_flg	Text	1	This field applies only to CR cases, with casetypes 312011, 311111, 311211, 312012, 311112, 311212, 322000, or 321000. If there is an action date (action.act_dt) with an attached action code (action.act_cd) of 666 or 970 or 199 or 234 or 244 or 310, and that same record has an action code of 282 with an action date greater than the action date of the action codes previously mentioned, then this reinstatement flag is set to "Y". Otherwise this field is NULL.
Hi_reference_nr	Text	25	BLM field, no definitions supplied.

Field Name	Type	Size	Description
Hi_kind_of_entry	Text	50	BLM field, no definitions supplied.
load_dt	Text	25	BLM field, no definitions supplied.
location_yr	Number	Integer	Year (four-digit form) mining claim was located (non-BLM field).
disposal_yr	Number	Integer	Last year (four-digit form) mining claim was active (non-BLM field).
no_sec	Number	Integer	Number of sections in which the claim is situated. (non-BLM field).
fraction	Number	Double	1/no_sec (non-BLM field).

Table B-2. CASE_LAND table structure

Field Name	Type	Size	Description
Case_id	Number	Long Integer	A numeric identifier assigned to each case.
Blm_adm_state	Text	2	The administrative state code.
Geo_state	Text	2	The geographic state where the land in the case is located.
Land_id	Number	16	A numeric ID assigned to each piece of land within a case.
Cty_dist_ra_id	Number	16	A numeric ID assigned to the county/district/resource area codes attached to the land description.
System_id	Text	2	The system that the data element is referenced by. Case system IDs = MCR, CR, ST.
Ser_nr_full	Text	15	The entire serial number including suffix and case part for Status.
Withdrawal_flg	Text	1	Currently (as of 8/23/99) set to null; originally intended to indicate that the land specified was withdrawn, which is usually indicated with a "7" in the first digit of the section field, in the CR system.
Meridian_cd	Text	2	The two digit meridian code used for land descriptions.
Meridian_txt	Text	25	The textual description of the meridian code.
Mer_twp_rng	Text	14	The concatenation of the meridian, township & range fields, in that order. Used for easy selection for reporting.
Township	Text	5	Contains township data (number and direction).
Range	Text	5	Contains range data (number and direction).
Twp_rng_dir	Text	2	The direction component from both the township and range fields. Example: SW, NE.
Entire_twp_flg	Text	1	A field that was created to indicate that the land description is for the entire township. This Flag has not been populated and is currently not used.
St_entire_twp_exc_flg	Text	1	A field that was created to indicate that the land description is for an entire township excluding certain descriptions. This flag has not been populated and is currently not used (Status Only).
St_indemn_lands_flg	Text	1	Indemnity lands indicate an acreage assigned to that township for purposes of computing acreage to determine the lands owed to the state under various grants. This flag applies only to data from the Status system. This information is also stored as section 888.
St_twp_loc_unkn_flg	Text	1	A field that was created to indicate that the location in the township is unknown. This flag has not been populated, and the lands are currently identified with

Field Name	Type	Size	Description
			the number of 777 in the section field (Status Only).
Section	Text	1	The field where section number is stored.
Entire_sec_flg	Text	3	A field that was created to indicate that all the land descriptions with a section are included.
St_sec_loc_unkn_flg	Text	1	This flag applies only to data from the Status system, and is not used in CR or MC. It indicates that the section's exact location is unknown. It was not populated for LR20000.
Mtrs	Text	18	The concatenation of the meridian, township, range, and section fields, in that order. Used for easy selection for reporting.
Geostate_county_cd	Text	5	The concatenation of the geographic state (2 characters) with the county code.
County_txt	Text	25	The decoded textual description/name of the county code. It does not include the *geo_state* name.
Admst_dist_ra_cd	Text	6	The concatenation of the BLM admin state with BLM district and BLM resource area.
District_txt	Text	25	The textual description of the BLM District Office or Field Office.
Ra_txt	Text	25	The textual description of the BLM Resource Area Office.
Adm_agency	Text	8	The code of the administrative agency for the land.
Adm_agency_txt	Text	25	The textual description of the administrative agency.
Aliquot_part	Text	25	The aliquot part portion of the land description (NE,NE etc.).
Cong_dist	Text	4	Status data only and is the congressional where the land is located.
Ls_inc	Text	1	Incomplete indicator; calculated by the system, not directly entered. Brought over from CR only.
Sur_nr	Text	5	The survey number field from caseland.
Sur_suffix	Text	2	The survey suffix field from caseland.
Survey_type	Text	1	The survey type field from case land.
Sur_type_txt	Text	25	The textual description of the survey type.
Sur_sort	Number	2	Case rec report Location Index sorts based on this; COBOL program pads it with another character, so we will do this in the transforms.
Case_land_acres	Number	Double	This field is populated for status cases only, and its source is st_acreage in the ltp_case_land table. It is the number of acres for this parcel represented in the case_land table row.
St_sur_note	Text	1	BLM field, no definitions supplied.
Es_pol_twnshp	Text	2	BLM field, no definitions supplied.
Es_map_ref	Text	6	BLM field, no definitions supplied.
Es_quad	Text	4	BLM field, no definitions supplied.
Es_set_id	Number	Integer	BLM field, no definitions supplied.
Es_sortkey	Number	Integer	BLM field, no definitions supplied.