Preliminary digital map of cryptocrystalline occurrences in northern Nevada: rkhnd (ArcView shapefile) and rkhnd_crypto (ArcInfo point coverage)

Metadata available as - [Questions & Answers] - [Parseable text] - [XML]

**Metadata:**
- **Identification Information**
- **Data Quality Information**
- **Spatial Data Organization Information**
- **Spatial Reference Information**
- **Entity and Attribute Information**
- **Distribution Information**
- **Metadata Reference Information**

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**Identification Information:**

**Citation:**
- **Originator:** Moyer, Lorre A.
- **Publication Date:** 1999
- **Title:** Preliminary digital map of cryptocrystalline occurrences in northern Nevada: rkhnd (ArcView shapefile) and rkhnd_crypto (ArcInfo point coverage)
- **Geospatial Data Presentation Form:** Digital
- **Series Information:**
  - **Series Name:** U.S. Geological Survey Open-File Report
  - **Issue Identification:** 99-523
- **Publication Information:**
  - **Publication Place:** Spokane, Washington
  - **Publisher:** U.S. Geological Survey

**Description:**

**Abstract:**
A polygon Arcview shapefile of northern Nevada cryptocrystalline occurrences derived from Nevada rockhound guides and converted to a coverage.

**Purpose:**
The polygon shapefile was combined with a point shapefile derived from the U.S. Geological Survey's Mineral Resources Data System (MRDS) to create a preliminary digital map of cryptocrystalline occurrences of northern Nevada. The original intent was to identify potential sources of raw materials for tools used by indigenous people of northern Nevada. The dataset was created to assist government agencies and others in making resource management decisions using geographic information systems (GIS). Uses of the spatial data set include, but are not limited to, natural and cultural resource management, interdisciplinary activities, recreational rockhounding, and gold exploration.

**Supplemental Information:**
The primary focus was potential raw material sites for tools made by native northern Nevadans. Archaeologists routinely rely on pottery and projectile points for dating techniques. Since basketry was more appropriate for the nomadic lifestyle of the native northern Nevadans, the major dating device for the Great Basin archaeological sites has been the projectile point. Preliminary investigation of the types of raw materials used for tool making by indigenous people of Northern Nevada led to decisions regarding the kind of occurrences considered to be cryptocrystalline for this spatial data set. The rockhound sites were descriptive and not based in a coordinate system. The ArcView distance-measuring tool was used to locate the sites in creating the ArcView 3.0 polygon theme, rkhnd.shp. Eighty-two cryptocrystalline sites were spatially referenced using Nevada 1:100,000 scale digital raster graphic (DRG) maps in UTM projection as background images (Nevada Bureau of Mines and Geology, 1996). Sites were located by measuring described distances and directions along roads and marking with polygon shapes. The size of the polygon represents the distributed or scattered area of the cryptocrystalline material, not the amount of material. The smooth, symmetrical (rather than irregular) shape of the polygon reflects the lack of point-to-point accuracy resulting from the location descriptions. A REFERENCE field numerically codes location accuracy in the polygon theme table, rkhnd.dbf. The polygon TYPE field categorizes the cryptocrystalline material for each rockhound site, and attribute color-coding corresponds to the TYPE field in the point theme table. A MRDS point theme and rockhound polygon theme were combined with an ARC/INFO coverage of Nevada county boundaries and an ArcView 3.0 layout was designed at 1:750,000 scale in UTM Zone 11 map projection. An additional ARC/INFO coverage of northern Nevada roads was used to create the digital preliminary map of northern Nevada cryptocrystalline occurrences.

**Time Period of Content:**
Time_Period_Information:

- Single_Date/Time:
  - Calendar_Date: 1975
- Single_Date/Time:
  - Calendar_Date: 1983
- Single_Date/Time:
  - Calendar_Date: 1989
- Single_Date/Time:
  - Calendar_Date: 1991

Currentness_Reference: Publication dates of rockhound guide sources

Status:
- Progress: Complete
- Maintenance_and_Update_Frequency: Unknown

Spatial_Domain:

- Bounding_Coordinates:
  - West_BoundingCoordinate: -120.0252
  - East_BoundingCoordinate: -114.4140
  - North_BoundingCoordinate: 41.9792
  - South_BoundingCoordinate: 39.0080

Keywords:

- Theme:
  - Theme_Keyword_Thesaurus: USGS Thesaurus
  - Theme_Keyword: geology
  - Theme_Keyword: non-metallic mineral resources
  - Theme_Keyword: natural resource exploration
  - Theme_Keyword: geospatial datasets

- Theme:
  - Theme_Keyword_Thesaurus: none
  - Theme_Keyword: chalcedony
  - Theme_Keyword: opal
  - Theme_Keyword: jasper
  - Theme_Keyword: chert
  - Theme_Keyword: obsidian
  - Theme_Keyword: cutting material

- Theme:
  - Theme_Keyword_Thesaurus: ISO 19115 Topic Categories
  - Theme_Keyword: geoscientificInformation

Place:

- Place_Keyword_Thesaurus: none
- Place_Keyword: northern Nevada

Place:

- Place_Keyword_Thesaurus: Augmented FIPS 10-4 and FIPS 6-4
  - Place_Keyword: f32031 = Washoe
  - Place_Keyword: f32027 = Pershing
  - Place_Keyword: f32013 = Humboldt
  - Place_Keyword: f32001 = Churchill
  - Place_Keyword: f32029 = Storey
  - Place_Keyword: f32033 = White Pine
  - Place_Keyword: f32015 = Lander
  - Place_Keyword: f32011 = Eureka
  - Place_Keyword: f32007 = Elko
  - Place_Keyword: f32019 = Lyon

Access_Constraints: None

Use_Constraints:

For use at 1:750,000 scale. Spatial data accuracy varies greatly due to data sources, and reliance on descriptive information rather than coordinate locations in rockhound guides. For some purposes a field check may be advisable.

Point_of_Contact:

Contact_Information:

- Contact_Organization_Primary:
  - Contact_Organization: U.S. Geological Survey, Reno Field Office
  - Contact_Person: Lorre A. Moyer
  - Contact_Position: Geologist
  - Contact_Address:
Data_Set_Credit:
Katherine Connors and Gary Raines of the USGS, and Ron Hess of the Nevada Bureau of Mines and Geology assisted in the direction and creation of this data set.

Native_Data_Set_Environment: ArcView version 3.1 shapefile format

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
Data accuracy varies greatly due to data sources, and reliance on descriptive information in rockhound guides (rather than coordinate locations). For some purposes a field check may be advisable. All attributes created were verified by display in the spatial database, but no formal tests were performed.

Logical_Consistency_Report:
These data are believed to be logically consistent, although no formal tests were performed.

Completeness_Report:
The area of interest was within the northern Nevada state boundary and bounded in the south by 39 degrees north latitude. The cryptocrystalline materials considered were chalcedony, chert, jasper, opal, obsidian, and cutting materials.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
No tests or field checks were performed, and accuracy varies according to description accuracy in the rockhound guides. Polygon size represents the distribution not quantity of the cryptocrystalline material. The smooth polygon shape reflects the lack of point to point accuracy resulting from the location descriptions.

Vertical_Positional_Accuracy:

Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: Johnson, Robert Neil
Publication_Date: 1978
Title: Nevada Utah Gem Atlas
Edition: 3rd
Geospatial_Data_Presentation_Form: location description
Publication_Information:
Publication_Place: Susanville, California
Publisher: Cy Johnson and Son

Type_of_Source_Media: paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1978
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: Johnson, 1978
Source_Contribution: site location descriptions

Source_Information:
Source_Citation:
Citation_Information:
Originator: Klein, James
Publication_Date: 1983
Title: Where to Find Gold and Gems in Nevada
Geospatial_Data_Presentation_Form: location description
Publication_Information:
Publication_Place: Pico Rivera, California
Publisher: Gem Guides Book Co.

Type_of_Source_Media: paper
Source_Time_Period_of_Content:
Source_Citation: Klein, 1983
Source_Contribution: site location descriptions

Source_Citation: Mitchell, James R.
Publication_Date: 1991
Title: Gem Trails of Nevada
Geospatial_Data_Presentation_Form: location description
Publication_Information:
  Publication_Date: Baldwin Park, California
  Publisher: Gem Guides Book Co.
Type_of_Source_Media: paper
Source_Time_Period_of_Content:
Time_Period_Information:
  Single_Date/Time:
    Calendar_Date: 1991
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: Mitchell, 1991
Source_Contribution: site location descriptions

Source_Citation: J.B. Murphy
Publication_Date: 1975
Title: Rockhound's Map of Nevada
Geospatial_Data_Presentation_Form: map
Series_Information:
  Series_Name: Special Publication
  Issue_Identification: 1
Publication_Information:
  Publication_Date: Nevada
  Publisher: Nevada Bureau of Mines and Geology
Source_Scale_Denominator: 100000
Type_of_Source_Media: paper map
Source_Time_Period_of_Content:
Time_Period_Information:
  Single_Date/Time:
    Calendar_Date: 1975
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: Murphy, 1975
Source_Contribution: site locations

Source_Citation: U.S. Geological Survey
Publication_Date: 1995
Title: Minerals Resources Data System (MRDS)
Publication_Information:
  Publication_Date: Reston, VA
  Publisher: U.S. Geological Survey
Type_of_Source_Media: digital database
Source_Time_Period_of_Content:
Time_Period_Information:
  Single_Date/Time:
    Calendar_Date: 1995
Source_Currentness_Reference: 1995
Source_Citation_Abbreviation: MRDS, 1995
Source_Contribution: Cryptocrystalline site locations

Source_Information:
The MRDS point theme was used with a polygon theme shapefile derived from Nevada rockhound guides to create a preliminary map of northern Nevada cryptocrystalline occurrences. The original intent was to identify potential sources of raw materials for tools used by indigenous people of northern Nevada. The dataset was created to assist governmental agencies and others in making resource management decisions through the use of geographic information systems (GIS). Uses of the spatial data set include, but are not limited to, natural and cultural resource management, interdisciplinary activities, recreational rockhounding, and gold exploration.

The original rockhound descriptions were used to locate sites using the ArcView distance measuring tool in an ArcView polygon theme, rkhnd.shp. The Nevada 1:100,000 scale digital raster graphic (DRG) maps were used as a spatial reference.

Several search strategies were designed to capture records from the MRDS database that represented cryptocrystalline occurrences. The following searches of MRDS fields were successful using the MRDS subsearch editor: NonOre Minerals CONTAINS opal@, chalcedon@, chert, jasper@; Ore Minerals CONTAINS opal@, chalcedon@, Vol@; CommodPresSort CONTAINS gem@, sil@; Host Rock Type CONTAINS opal@, chert@, sil@; DepDescComments CONTAINS crypto@; GeologyComments CONTAINS crypto@, vitr@; USGSModelfirst CONTAINS hot spring@. Obsidian searches of MRDS provided no additional records. The MRDS records meeting the search criteria (128) were converted to DBF files, brought into an ARC/INFO point coverage, projected to UTM Zone 11, and converted to an ArcView shapefile.

A point coverage of northern Nevada cryptocrystalline occurrences extracted from the U.S. Geological Survey's Minerals Resource Data System (MRDS) and converted into an ArcView shapefile.

Several search strategies were designed to capture records from the MRDS database that represented cryptocrystalline occurrences. The following searches of MRDS fields were successful using the MRDS subsearch editor: NonOre Minerals CONTAINS opal@, chalcedon@, chert, jasper@; Ore Minerals CONTAINS opal@, chalcedon@, Vol@; CommodPresSort CONTAINS gem@, sil@; Host Rock Type CONTAINS opal@, chert@, sil@; DepDescComments CONTAINS crypto@; GeologyComments CONTAINS crypto@, vitr@; USGSModelfirst CONTAINS hot spring@. Obsidian searches of MRDS provided no additional records. The MRDS records meeting the search criteria (128) were converted to DBF files, brought into an ARC/INFO point coverage, projected to UTM Zone 11, and converted to an ArcView shapefile.

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Postal Code: 89557  
Country: USA  
Contact_Voice_Telephone: 775-784-5552  
Contact_Facsimile_Telephone: 775-784-5079  
Contact_Electronic_Mail_Address: lorre@usgs.gov  
Hours_of_Service: 800 - 1600 PT

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
    Point_and_Vector_Object_Count: 82

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Grid_Coordinate_System:
        Grid_Coordinate_System_Name: Universal Transverse Mercator
        Universal_Transverse_Mercator:
          UTM_Zone_Number: 11
          Transverse_Mercator:
            Scale_Factor_at_Central_Meridian: 0.999600
            Longitude_of_Central_Meridian: -117
            Latitude_of_Projection_Origin: 0.0
            False_Easting: 500000
            False_Northing: 0.0

    Planar_Coordinate_Information:
      Planar_Coordinate_Encoding_Method: row and column
      Coordinate_Representation:
        Abscissa_Resolution: 200
        Ordinate_Resolution: 200

      Planar_Distance_Units: meters

    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1927
      Ellipsoid_Name: Clarke 1866
      Semi-major_Axis: 6378206.4
      Denominator_of_Flattening_Ratio: 294.98

  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
      Altitude_Datum_Name: National Geodetic Vertical Datum of 1929
      Altitude_Encoding_Method: Implicit coordinate

    Depth_System_Definition:

Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: rknd.dbf
      Entity_Type_Definition: Shapefile attribute table

    Attribute:
      Attribute_Label: TYPE
      Attribute_Definition: Cryptocrystalline occurrence type (character)
      Attribute_Domain_Values:
        Enumerated_Domain:
          Enumerated_Domain_Value: chalcedony

        Enumerated_Domain_Value: cutting material

        Enumerated_Domain_Value: jasper

        Enumerated_Domain_Value: obsidian

        Enumerated_Domain_Value:
Attribute:
  Attribute_Label: SUBTYPE
  Attribute_Definition: Cryptocrystalline occurrence subtype (character)
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: agate
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: Apache tears
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: onyx
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: chalcedony
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: chert
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: cinnabar
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: fire opal
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: jasper
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: obsidian
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: opal
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: opalite
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: petrified wood
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: precious opal
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: wood (petrified wood)

Attribute:
  Attribute_Label: LOCATION
  Attribute_Definition: Location accuracy estimation (integer)
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 1
      Enumerated_Domain_Value_Definition: reasonably accurate
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: 2
    Enumerated_Domain_Value_Definition: general area
  Enumerated_Domain_Value:
    Enumerated_Domain_Value: 3
    Enumerated_Domain_Value_Definition: vague
Enumerated_Domain_Value: 4
Enumerated_Domain_Value_Definition: inaccurate

Attribute:
  Attribute_Label: REFERENCE
  Attribute_Definition: Sources for rockhound site locations (integer)
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 1
      Enumerated_Domain_Value_Definition: Rockhound's Map of Nevada
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 2
      Enumerated_Domain_Value_Definition: Gem Trails of Nevada
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 3
      Enumerated_Domain_Value_Definition: Nevada-Utah Gem Atlas
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 4
      Enumerated_Domain_Value_Definition: Where to Find Gold and Gems in Nevada

Attribute:
  Attribute_Label: SITE_NAME
  Attribute_Definition: Site name (character)

Attribute:
  Attribute_Label: QUADRANGLE
  Attribute_Definition: 100k quadrangle map name (character)
  Attribute_Definition_Source: NBMG, 1996, Nevada DRG maps on CD-ROM

Overview_Description:
The following attributes were extracted from the MRDS database and their values (for the appropriate locations) included in mrds.dbf and mrds_crypto.pat of USGS Open-File Report 99-523:
RECORD_NO REPORTER REP_DATE REP_AFFIL UPDATE UPD_DATE UPD_AFFIL SITE SYNONYM DISTRICT REC_TYPE COUNTY_STATE_CODE_COUNTRY_CD QUAD QUAD1 LATITUDE LONGITUDE COMMODS PROD STATUS OWNER OPERATOR DEP_TYPE DEP_FORM DEP_SIZE SURF_UNDG HR_TYPE HR_AGE AGE_OF_MIN IG_RK_TYPE IG_RK_AGE ORE_CTRL TECTONICS ALTERATION CONCENTRAT ORE_MINS NONORE_MINS COMMENTS PROD1 PROD2 PROD3 CUM_PROD1 CUM_PROD2 CUM_PROD3 PR_COMMENT RESERVES1 RESERVES2 RESERVES3 RESV_COM REF1 REF2 REF3 REF4 REF5 STATE_NAME COUNTRY_NM MODEL_NAME MODEL_NUM

Entity_and_Attribute_Detail_Citation:
Mineral Resources Data System metadata at http://mrdata.usgs.gov/metadata/mrds.met

Detailed_Description:
Entity_Type:
  Entity_Type_Label: mrds data row
  Entity_Type_Definition:
    Fields extracted from MRDS attributes for this data set, with one additional field.

Attribute:
  Attribute_Label: TYPE
  Attribute_Definition: Cryptocrystalline type
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: chalcedony
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: chert
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: jasper
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: opal
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: silica

Distribution_Information:
Resource_Description: USGS Open-File Report 99-523

Distribution_Liability:
No warranty, expressed or implied, is made by the USGS as to the accuracy of the data and related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the USGS in the use of these data, software, or related materials.

Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information:
Format_Name: Shapefile
Format_Version_Number: 1.0
File_Depression_Technique: No compression applied
Format_Information_Content: Site locations and descriptions
Transfer_Size: 0.479

Digital_Transfer_Option:

Online_Option:

Computer_Contact_Information:
Network_Address:

Fees: none

Metadata_Reference_Information:
Metadata_Date: 20160610
Metadata_Review_Date: 1999
Metadata_Contact:

Contact_Information:
Contact_Person_Primary:
Contact_Person: Peter N Schweitzer
Contact_Organization: USGS Midwest Area

Contact_Position:

Contact_Address:
Address_Type: mailing address
Address:
Mail Stop 954
12201 Sunrise Valley Dr
City: Reston
State_or_Province: VA
Postal_Code: 20192-0002
Country: USA

Contact_Voice_Telephone: 703-648-6533
Contact_Facsimile_Telephone: 703-648-6252
Contact_Electronic_Mail_Address: porschweitzer@usgs.gov

Metadata_Standard_Name: Content Standard for Digital Geospatial Metadata

This page is <https://geo-nsdi.er.usgs.gov/metadata/open-file/99-523/metadata.html>
Abstract. The purpose was to identify potential cryptocrystalline material sources for tools used by indigenous people of the northern Nevada portion of the Great Basin. Cryptocrystalline occurrence data combed from the U.S. Geological Survey's Mineral Resources Data System (MRDS, 1995) were combined with sites described in Nevada rockhound guides and entered into a geographic information system (GIS). The map area encompasses northern Nevada (fig. 1). This open-file report describes the methods used to convert cryptocrystalline occurrence data into a digital format, documents the file str