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

Metadata also 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

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:
  - 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.
Currentness Reference: Publication dates of rockhound guide sources

Status:
Progress: Complete
Maintenance and Update Frequency: Unknown

Spatial Domain:
Bounding Coordinates:
  West Bounding Coordinate: -120.0252
  East Bounding Coordinate: -114.4140
  North Bounding Coordinate: 41.9792
  South Bounding Coordinate: 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:
Originator: Mitchell, James R.
Publication_Date: 1991
Title: Gem Trails of Nevada
Geospatial_Data_Presentation_Form: location description
Publication_Information:
Publication_Place: 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

Originator: 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_Place: 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

Originator: U.S. Geological Survey
Publication_Date: 1995
Title: Minerals Resources Data System (MRDS)
Publication_Information:
Publication_Place: 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
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 shapfile. 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

Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: rkhnd.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:
          Enumerated_Domain_Value: cutting material
        Enumerated_Domain:
          Enumerated_Domain_Value: jasper
        Enumerated_Domain:
          Enumerated_Domain_Value: obsidian
        Enumerated_Domain:
          Enumerated_Domain_Value:
Attribute: SUBTYPE
   Attribute_Label: Cryptocrystalline occurrence subtype (character)
   Attribute_Domain_Values:
      Enumerated_Domain:
         Enumerated_Domain_Value: agate
      Enumerated_Domain:
         Enumerated_Domain_Value: Apache tears
      Enumerated_Domain:
         Enumerated_Domain_Value: onyx
      Enumerated_Domain:
         Enumerated_Domain_Value: chalcedony
      Enumerated_Domain:
         Enumerated_Domain_Value: chert
      Enumerated_Domain:
         Enumerated_Domain_Value: cinnabar
      Enumerated_Domain:
         Enumerated_Domain_Value: fire opal
      Enumerated_Domain:
         Enumerated_Domain_Value: jasper
      Enumerated_Domain:
         Enumerated_Domain_Value: obsidian
      Enumerated_Domain:
         Enumerated_Domain_Value: opal
      Enumerated_Domain:
         Enumerated_Domain_Value: opalite
      Enumerated_Domain:
         Enumerated_Domain_Value: petrified wood
   Attribute_Domain_Values:
      Enumerated_Domain:
         Enumerated_Domain_Value: 1
         Enumerated_Domain_Value_Definition: reasonably accurate
      Enumerated_Domain:
         Enumerated_Domain_Value: 2
         Enumerated_Domain_Value_Definition: general area
      Enumerated_Domain:
         Enumerated_Domain_Value: 3
         Enumerated_Domain_Value_Definition: vague

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

Enumerated Domain Value: 4
Enumerated Domain Value Definition: inaccurate

Attribute: 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: Site Name
Attribute Definition: Site name (character)

Attribute: 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 UPDATER 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_MIN 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: 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_Informaton:
Format_Name: Shapefile
Format_Version_Number: 1.0
File_Compression_Technique: No compression applied
Format_Information_Content: Site locations and descriptions
Transfer_Size: 0.479

Digital_Transfer_Option:
Online_Option:

Metadata_Reference_Information:
Metadata_Date: 20160610
Metadata_Review_Date: 1999
Metadata_Contact:

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

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: pschweitzer@usgs.gov

Metadata_Standard_Name: Content Standard for Digital Geospatial Metadata
After starting ArcView, load the extension by clicking on File → Extensions…, scrolling down through the list of available extensions, and then clicking on the checkbox next to the extension called Topographic Position Index. This extension will new menu to your View: For detailed instructions, view on-line PDF version of TPI Documentation. Enjoy! Please contact the author if you have problems or find bugs. Jeff Jenness jeffj@jennessent.com. Jenness Enterprises http://www.jennessent.com.