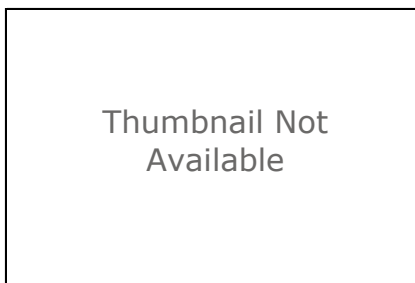


DDP_Tracts



Tags

evaporite-related potash, geology, mineral resource assessment, permissive tracts, mineral resources, GIS, spatial database, geoscientific information

Summary

DDP_Tracts -- A spatial database of permissive tracts and assessment results for undiscovered potash in the Pripyat and Dnieper-Donets basins, Belarus and Ukraine.

Description

An assessment of potash resources in the Pripyat and Dnieper-Donets Basins, Belarus and Ukraine, was undertaken as part of a global mineral resource assessment. Areas which are defined by geological criteria as permitting specific types of deposits are referred to as permissive tracts. Four permissive tracts with the potential for undiscovered potash deposits are delineated. These include permissive tracts for stratabound potash-bearing deposits in Famennian age (Upper Devonian) salt in the Pripyat Basin and in Famennian and Cisuralian age (lower Permian) salt in the Dnieper-Donets Basin. The geology of each of these permissive tracts is described. A qualitative assessment of each of these permissive tracts is attempted but varies with the amount and quality of available subsurface information. In addition, a tract is delineated for halokinetic potash-bearing salt in the Famennian of the Dnieper-Donets Basin, and a quantitative estimate of undiscovered resources is made for this tract. These evaporite basins formed within the Pripyat-Donbass Rift, an Upper Devonian continental rift structure, and their geology and potash potential are dependent on the evolution of the rift and potash-bearing salt deposition within the rift.

Credits

Mark D. Cocker defined the permissive tracts and compiled geologic and potash resource data. Mark D. Cocker (USGS), Bruce R. Lipin (USGS), Greta J. Orris (USGS), Robert J. Ryan (Nova Scotia Department of Natural Resources), Mirosław Slowakiewicz (Polish Geological Institute), Gregory T. Spanski (USGS), Jeffrey C. Wynn (USGS), and Chao Yang (Saskatchewan Ministry of Energy and Resources) participated in the quantitative assessment, with assistance from Steve Ludington (USGS).

Deborah A. Briggs, Heather L. Parks, and John C. Wallis (contractors) performed all image processing to produce georectified map images;

Leila Gass, Pamela Dunlap, and Deborah A. Briggs digitized tracts from georectified maps; and Pamela Dunlap wrote the metadata and prepared the digital data for publication.

Use limitations

None. The U.S. Geological Survey (USGS) provides these geographic data "as is." The USGS makes no guarantee or warranty concerning the accuracy of information contained in the geographic data. The USGS further makes no warranties, either expressed or implied as to any other matter whatsoever, including, without limitation, the condition of the product, or its fitness for any particular purpose. The burden for determining fitness for use lies entirely with

the user. Although these data have been processed successfully on computers of the USGS, no warranty, expressed or implied, is made by the USGS regarding the use of these data on any other system, nor does the fact of distribution constitute or imply such warranty.

Extent

There is no extent for this item.

Scale Range

There is no scale range for this item.

ArcGIS Metadata ▼

FGDC Metadata (read-only) ►

Identification ►

CITATION

CITATION INFORMATION

ORIGINATOR USGS

PUBLICATION DATE 2017

TITLE

DDP_Tracts

GEOSPATIAL DATA PRESENTATION FORM map

SERIES INFORMATION

SERIES NAME Scientific Investigations Report

ISSUE IDENTIFICATION 2010-5090-BB

OTHER CITATION DETAILS

Cocker, M.D., Orris, G.J., and Dunlap, Pamela, with contributions from Lipin, B.R., Ludington, Steve, Ryan, R.J., Słowakiewicz, Mirosław, Spanski, G.T., Wynn, Jeff, and Yang, Chao, 2017, Geology and undiscovered resource assessment of the potash-bearing Pripyat and Dnieper-Donets Basins, Belarus and Ukraine: U.S. Geological Survey Scientific Investigations Report 2010 -5090 -BB, 116 p., and spatial data, <https://doi.org/10.3133/sir20105090BB>.

ONLINE LINKAGE <https://doi.org/10.3133/sir20105090BB>

DESCRIPTION

ABSTRACT

An assessment of potash resources in the Pripyat and Dnieper-Donets Basins, Belarus and Ukraine, was undertaken as part of a global mineral resource assessment. Areas which are defined by geological criteria as permitting specific types of deposits are referred to as permissive tracts. Four permissive tracts with the potential for undiscovered potash deposits are delineated. These include permissive tracts for stratabound potash-bearing deposits in Famennian age (Upper Devonian) salt in the Pripyat Basin and in Famennian and Cisuralian age (lower Permian) salt in the Dnieper-Donets Basin. The geology of each of these permissive tracts is described. A qualitative assessment of each of these permissive tracts is attempted but varies with the amount and quality of available subsurface information. In addition, a tract is delineated for halokinetic potash-bearing salt in the Famennian of the Dnieper-Donets Basin, and a quantitative estimate of undiscovered resources is made for this tract. These evaporite basins formed within the Pripyat-Donbass Rift, an Upper Devonian continental rift structure, and their geology and potash potential are dependent on the evolution of the rift and potash-bearing salt deposition within the rift.

PURPOSE

DDP_Tracts -- A spatial database of permissive tracts and assessment results for undiscovered potash in the Pripyat and Dnieper-Donets basins, Belarus and Ukraine.

TIME PERIOD OF CONTENT

TIME PERIOD INFORMATION

SINGLE DATE/TIME

CALENDAR DATE 2016

CURRENTNESS REFERENCE

2016

STATUS

PROGRESS Complete

MAINTENANCE AND UPDATE FREQUENCY None planned

SPATIAL DOMAIN

BOUNDING COORDINATES

WEST BOUNDING COORDINATE 27.170955

EAST BOUNDING COORDINATE 38.440732

NORTH BOUNDING COORDINATE 52.983841

SOUTH BOUNDING COORDINATE 48.187956

KEYWORDS

THEME

THEME KEYWORD THESAURUS None

THEME KEYWORD evaporite-related potash, geology, mineral resource assessment, permissive tracts, mineral resources, GIS, spatial database

THEME

THEME KEYWORD THESAURUS ISO 19115 Topic Categories

THEME KEYWORD geoscientific information

PLACE

PLACE KEYWORD THESAURUS United Nations geographic regions and countries

PLACE KEYWORD Eastern Europe

ACCESS CONSTRAINTS

None

USE CONSTRAINTS

None. The U.S. Geological Survey (USGS) provides these geographic data "as is." The USGS makes no guarantee or warranty concerning the accuracy of information contained in the geographic data. The USGS further makes no warranties, either expressed or implied as to any other matter whatsoever, including, without limitation, the condition of the product, or its fitness for any particular purpose. The burden for determining fitness for use lies entirely with the user. Although these data have been processed successfully on computers of the USGS, no warranty, expressed or implied, is made by the USGS regarding the use of these data on any other system, nor does the fact of distribution constitute or imply such warranty.

POINT OF CONTACT

CONTACT INFORMATION

CONTACT ORGANIZATION PRIMARY

CONTACT ORGANIZATION U.S. Geological Survey

CONTACT PERSON Greta J. Orris

CONTACT POSITION Research Geologist

CONTACT ADDRESS

ADDRESS TYPE mailing and physical

ADDRESS 520 North Park Avenue

CITY Tucson

STATE OR PROVINCE AZ

POSTAL CODE 85719

COUNTRY UNITED STATES

CONTACT VOICE TELEPHONE 520-670-5583

DATA SET CREDIT

Mark D. Cocker defined the permissive tracts and compiled geologic and potash resource data.

Mark D.Cocker (USGS), Bruce R. Lipin (USGS), Greta J. Orris (USGS), Robert J. Ryan (Nova Scotia Department of Natural Resources), Mirosław Slowakiewicz (Polish Geological Institute), Gregory T. Spanski (USGS), Jeffrey C. Wynn (USGS), and Chao Yang (Saskatchewan Ministry of Energy and Resources) participated in the quantitative assessment, with assistance from Steve Ludington (USGS).

Deborah A. Briggs, Heather L. Parks, and John C. Wallis (contractors) performed all image processing to produce georectified map images;

Leila Gass, Pamela Dunlap, and Deborah A. Briggs digitized tracts from georectified maps; and

Pamela Dunlap wrote the metadata and prepared the digital data for publication.

NATIVE DATA SET ENVIRONMENT

Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.1.1.3143

Hide Identification ▲

Data Quality ►

LOGICAL CONSISTENCY REPORT

Tests for consistency have not been performed.

COMPLETENESS REPORT

Complete.

LINEAGE

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 1000000

TYPE OF SOURCE MEDIA hardcopy Paper

SOURCE CONTRIBUTION

Kovalevym, B.S., Utekhinym, D.N., and Dubinskim, A.Y., 1965, [Geological map of the U.S.S.R., sheet M-37 Kharkov, Map of the pre-Mesozoic rocks]: Leningrad, U.S.S.R. State Geological Committee, VSEGEI, scale 1:1,000,000. [in Russian.]

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 2000000

TYPE OF SOURCE MEDIA hardcopy Paper

SOURCE CONTRIBUTION

Korenevskiy, S.M., and Shamahov, V.A., 1990, Schematic map of potentially productive potash deposits in potassium-bearing Upper Famennian subformation of the Pripyat basin, fig. 1 in Kalienasyshchennosti pazpeza, kalienosnosti i udelinaya produktivnosti verchnefamenskoii kalienosnoi subformadii pripyatskoi vpadini [Potassium-bearing section, potassium content and specifics productive of the Upper Famennian potassium-bearing subformation of Pripyat cavity], in Petrichenko, O.I., ed., Geologiya i geokhimiya solenosnykh otozhenii neftegazonosnich provinpii [Geology and geochemistry of salt-bearing deposits of oil-and-gas content province]: Kiev, Naukova Dumka, p. 72, scale about 1:2,000,000. [in Russian.]

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 2000000

TYPE OF SOURCE MEDIA hardcopy Paper

SOURCE CONTRIBUTION

Kityk, V. I., 1970, [The diagram of the layout of salt raisings in the Dnieper-Donets Depression], fig. 34 in Solianaia tektonika Dniepero-Donetskoi vpadiny [Salt tectonics of the Dnieper-Donets Depression]: Ukrainian S.S.R. Academy of the Institute of Geology and Geochemistry, 201 p., scale 1:2,000,000. [in Russian.]

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 2000000

TYPE OF SOURCE MEDIA hardcopy Paper

SOURCE CONTRIBUTION

Makhnach, A.A., Kuleshov, V.N., Pokrovskii, B.G., Gulis, L.F., Mikhailov, N.D., and Kolosov, I.L., 2002, Distribution of upper saliferous sediments in the Pripyat Trough (Vysotskiy and others, 1988), fig. 1 in Isotopic composition of oxygen and carbon and formation temperature of accessory minerals from evaporitic sediments in the Pripyat Trough: Lithology and Mineral Resources, v. 37, no. 6, p. 536-545, fig. 1, scale about 1:2,000,000.

PROCESS STEP

PROCESS DESCRIPTION

See text in SIR 2010-5090-BB for description of tract creation steps.

PROCESS DATE 2012

Hide Data Quality ▲

Spatial Data Organization ►

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 4

Hide Spatial Data Organization ▲

Spatial Reference ►

HORIZONTAL COORDINATE SYSTEM DEFINITION

GEOGRAPHIC

LATITUDE RESOLUTION 8.9831528411952133e-009

LONGITUDE RESOLUTION 8.9831528411952133e-009

GEOGRAPHIC COORDINATE UNITS Decimal Degrees

GEODETTIC MODEL

HORIZONTAL DATUM NAME D WGS 1984

ELLIPSOID NAME WGS 1984

SEMI-MAJOR AXIS 6378137.0

DENOMINATOR OF FLATTENING RATIO 298.257223563

Hide Spatial Reference ▲

Entities and Attributes ►

DETAILED DESCRIPTION

ENTITY TYPE

ENTITY TYPE LABEL DDP_Tracts

ENTITY TYPE DEFINITION

FGDB Feature Class -- A collection of features with the same geometry type, the same attributes, and the same spatial reference.

ENTITY TYPE DEFINITION SOURCE Esri, accessed March 29, 2012 at <http://support.esri.com/en/knowledgebase/gisdictionary/term/shapefile>.

ATTRIBUTE

ATTRIBUTE LABEL OBJECTID

ATTRIBUTE DEFINITION

Internal feature number.

ATTRIBUTE DEFINITION SOURCE ESRI

ATTRIBUTE DOMAIN VALUES

UNREPRESENTABLE DOMAIN

Sequential unique whole numbers that are automatically generated.

ATTRIBUTE

ATTRIBUTE LABEL Shape

ATTRIBUTE DEFINITION

Feature geometry.

ATTRIBUTE DEFINITION SOURCE ESRI

ATTRIBUTE DOMAIN VALUES

UNREPRESENTABLE DOMAIN

Coordinates defining the features.

ATTRIBUTE

ATTRIBUTE LABEL Tract_ID

ATTRIBUTE DEFINITION

TRACT IDENTIFIER -- Unique numeric identifier for each tract.

ATTRIBUTE

ATTRIBUTE LABEL Coded_ID

ATTRIBUTE DEFINITION

CODED IDENTIFIER -- Coded, unique identifier assigned to permissive tract.

ATTRIBUTE

ATTRIBUTE LABEL Tract_name

ATTRIBUTE DEFINITION

TRACT NAME -- Informal name of permissive tract.

ATTRIBUTE

ATTRIBUTE LABEL Unregcode

ATTRIBUTE DEFINITION

U.N. REGION CODE -- Three-digit United Nations code for the region that underlies most of the permissive tract. (Can appear as one digit if there are leading zeros.)

ATTRIBUTE DEFINITION SOURCE United Nations, 2011, Composition of macro geographical (continental) regions, geographical sub-regions, and selected economic and other groupings: U.N. Statistics Division, accessed March 8, 2012, at <http://unstats.un.org/unsd/methods/m49/m49regin.htm>.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE 150

ENUMERATED DOMAIN VALUE DEFINITION

Europe [be aware that the Russian Federation is classified as Europe].

ATTRIBUTE

ATTRIBUTE LABEL Country

ATTRIBUTE DEFINITION

COUNTRY -- Country(s) in which permissive tract is located; multiple countries are listed alphabetically and are hyphen delimited.

ATTRIBUTE DEFINITION SOURCE United Nations, 2011, Composition of macro geographical (continental) regions, geographical sub-regions, and selected economic and other groupings: U.N. Statistics Division, accessed March 8, 2012, at <http://unstats.un.org/unsd/methods/m49/m49regin.htm>.

ATTRIBUTE

ATTRIBUTE LABEL Commodity

ATTRIBUTE DEFINITION

COMMODITY -- Primary commodity assessed.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE K
 ENUMERATED DOMAIN VALUE DEFINITION
 potash

ATTRIBUTE

ATTRIBUTE LABEL Dep_type

ATTRIBUTE DEFINITION

DEPOSIT TYPE -- Potash deposit type(s) most likely to be present.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE halokinetic potash-bearing salt

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE stratabound potash-bearing salt

ATTRIBUTE

ATTRIBUTE LABEL Geology

ATTRIBUTE DEFINITION

GEOLOGY -- A brief description of the geology with an emphasis on identifiable features related to the potential for potash mineralization.

ATTRIBUTE

ATTRIBUTE LABEL Asmt_depth

ATTRIBUTE DEFINITION

ASSESSMENT DEPTH -- Maximum depth beneath the Earth's surface used for the resource assessment.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

RANGE DOMAIN MINIMUM 3

RANGE DOMAIN MAXIMUM 3

ATTRIBUTE UNITS OF MEASURE kilometers

ATTRIBUTE

ATTRIBUTE LABEL Area_km2

ATTRIBUTE DEFINITION

AREA in SQUARE KILOMETERS -- Areal extent of tract, rounded to three significant figures; calculated using an equal area map projection.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

ATTRIBUTE UNITS OF MEASURE square kilometers

ATTRIBUTE

ATTRIBUTE LABEL Age

ATTRIBUTE DEFINITION

GEOLOGIC AGE -- Age of geologic feature assessed.

ATTRIBUTE DEFINITION SOURCE International Commission on Stratigraphy, 2010, International stratigraphic chart: accessed March 20, 2014, at <http://www.stratigraphy.org/ICSchart/StratChart2010.pdf>.

ATTRIBUTE

ATTRIBUTE LABEL Asmt_date

ATTRIBUTE DEFINITION

ASSESSMENT DATE --Year assessment was conducted.

ATTRIBUTE

ATTRIBUTE LABEL Shape_Length

ATTRIBUTE DEFINITION

Length of feature in internal units.

ATTRIBUTE DEFINITION SOURCE ESRI
 ATTRIBUTE DOMAIN VALUES
 UNREPRESENTABLE DOMAIN
 Positive real numbers that are automatically generated.

ATTRIBUTE
 ATTRIBUTE LABEL GT_model
 ATTRIBUTE DEFINITION
 Grade-tonnage model used for the undiscovered deposit estimate.

ATTRIBUTE
 ATTRIBUTE LABEL Est_levels
 ATTRIBUTE DEFINITION
 The set of percentile (probability) levels at which undiscovered deposit estimates were made.

ATTRIBUTE
 ATTRIBUTE LABEL N90
 ATTRIBUTE DEFINITION
 Estimated number of deposits associated with the 90th percentile (90 percent chance of at least the indicated number of deposits).
 ATTRIBUTE DOMAIN VALUES
 ENUMERATED DOMAIN
 ENUMERATED DOMAIN VALUE NULL
 ENUMERATED DOMAIN VALUE DEFINITION
 A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE
 ATTRIBUTE LABEL N50
 ATTRIBUTE DEFINITION
 Estimated number of deposits associated with the 50th percentile (50 percent chance of at least the indicated number of deposits).
 ATTRIBUTE DOMAIN VALUES
 ENUMERATED DOMAIN
 ENUMERATED DOMAIN VALUE NULL
 ENUMERATED DOMAIN VALUE DEFINITION
 A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE
 ATTRIBUTE LABEL N10
 ATTRIBUTE DEFINITION
 Estimated number of deposits associated with the 10th percentile (10 percent chance of at least the indicated number of deposits).
 ATTRIBUTE DOMAIN VALUES
 ENUMERATED DOMAIN
 ENUMERATED DOMAIN VALUE NULL
 ENUMERATED DOMAIN VALUE DEFINITION
 A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE
 ATTRIBUTE LABEL N05
 ATTRIBUTE DEFINITION
 Estimated number of deposits associated with the 5th percentile (5 percent chance of at least the indicated number of deposits).
 ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE NULL

ENUMERATED DOMAIN VALUE DEFINITION

A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE

ATTRIBUTE LABEL N01

ATTRIBUTE DEFINITION

Estimated number of deposits associated with the 1st percentile (10 percent chance of at least the indicated number of deposits).

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE NULL

ENUMERATED DOMAIN VALUE DEFINITION

A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE

ATTRIBUTE LABEL N_expected

ATTRIBUTE DEFINITION

Expected number of undiscovered deposits (corresponds to Nund in Table 17); $N_{\text{expected}} = (0.233 \cdot N_{90}) + (0.4 \cdot N_{50}) + (0.225 \cdot N_{10}) + (0.045 \cdot N_{05}) + (0.03 \cdot N_{01})$. Real number reported to two decimal places.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE NULL

ENUMERATED DOMAIN VALUE DEFINITION

A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE

ATTRIBUTE LABEL s

ATTRIBUTE DEFINITION

Standard deviation; $s = 0.121 - (0.237 \cdot N_{90}) - (0.093 \cdot N_{50}) + (0.183 \cdot N_{10}) + (0.073 \cdot N_{05}) + (0.123 \cdot N_{01})$. Real number reported to two decimal places.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE NULL

ENUMERATED DOMAIN VALUE DEFINITION

A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE

ATTRIBUTE LABEL Cv_percent

ATTRIBUTE DEFINITION

Coefficient of variance, in percent (corresponds to Cv% in Table 17); $Cv_{\text{percent}} = (s/N_{\text{Expected}}) \cdot 100$.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE NULL

ENUMERATED DOMAIN VALUE DEFINITION

A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE

ATTRIBUTE LABEL N_known

ATTRIBUTE DEFINITION

Number of known deposits in the tract that are included in the grade and tonnage model (corresponds to Nknown in Table 17); $N_{total} = N_{expected} + N_{known}$.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE NULL

ENUMERATED DOMAIN VALUE DEFINITION

A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE

ATTRIBUTE LABEL N_total

ATTRIBUTE DEFINITION

Total of expected number of deposits plus known deposits (corresponds to Ntotal in Table 17); $N_{total} = N_{expected} + N_{known}$.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE NULL

ENUMERATED DOMAIN VALUE DEFINITION

A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE

ATTRIBUTE LABEL Shape_Area

ATTRIBUTE DEFINITION

Area of feature in internal units squared.

ATTRIBUTE DEFINITION SOURCE ESRI

ATTRIBUTE DOMAIN VALUES

UNREPRESENTABLE DOMAIN

Positive real numbers that are automatically generated.

ATTRIBUTE

ATTRIBUTE LABEL DepDensity

ATTRIBUTE DEFINITION

Deposit density reported as the total number of deposits per square kilometer; $DepDensity = N_{total}/Area_{km2}$.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE NULL

ENUMERATED DOMAIN VALUE DEFINITION

A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE

ATTRIBUTE LABEL DepDen10E5

ATTRIBUTE DEFINITION

Deposit density per 100,000 square kilometers; $DepDen10E5 = DepDensity * 100,000$.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE NULL

ENUMERATED DOMAIN VALUE DEFINITION

A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

ATTRIBUTE

ATTRIBUTE LABEL Estimators

ATTRIBUTE DEFINITION

Names of geoscientists on the estimation team (listed alphabetically).

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE NULL

ENUMERATED DOMAIN VALUE DEFINITION

A NULL entry in a field indicates value not determined, because tract was not quantitatively assessed.

Hide Entities and Attributes ▲

Distribution Information ►

DISTRIBUTOR

CONTACT INFORMATION

CONTACT ORGANIZATION PRIMARY

CONTACT ORGANIZATION U.S. Geological Survey

CONTACT ADDRESS

ADDRESS TYPE mailing

ADDRESS Denver Federal Center, P.O. Box 25286

CITY Denver

STATE OR PROVINCE Colorado

POSTAL CODE 80225

COUNTRY UNITED STATES

CONTACT VOICE TELEPHONE 888-275-8747

CONTACT VOICE TELEPHONE 888-ASK-USGS

CONTACT ELECTRONIC MAIL ADDRESS infoservices@usgs.gov

DISTRIBUTION LIABILITY

See access and use constraints information.

STANDARD ORDER PROCESS

DIGITAL FORM

DIGITAL TRANSFER INFORMATION

FORMAT NAME Geodatabase

DIGITAL TRANSFER OPTION

ONLINE OPTION

ACCESS INSTRUCTIONS

<https://doi.org/10.3133/sir20105090BB>

FEES none

Hide Distribution Information ▲

Metadata Reference ►

METADATA DATE 2017-07-25

METADATA CONTACT

CONTACT INFORMATION

CONTACT ORGANIZATION PRIMARY

CONTACT ORGANIZATION U.S. Geological Survey

CONTACT PERSON Pamela Dunlap

CONTACT POSITION Geologist

CONTACT ADDRESS

ADDRESS TYPE mailing

ADDRESS 520 N. Park Ave., Ste. 355

CITY Tucson

STATE OR PROVINCE Arizona

POSTAL CODE 85719

COUNTRY UNITED STATES

CONTACT VOICE TELEPHONE 520-670-5573
CONTACT ELECTRONIC MAIL ADDRESS pdunlap@usgs.gov

METADATA STANDARD NAME FGDC Content Standard for Digital Geospatial Metadata
METADATA STANDARD VERSION FGDC-STD-001-1998
METADATA TIME CONVENTION local time

METADATA USE CONSTRAINTS
None.

Hide Metadata Reference ▲