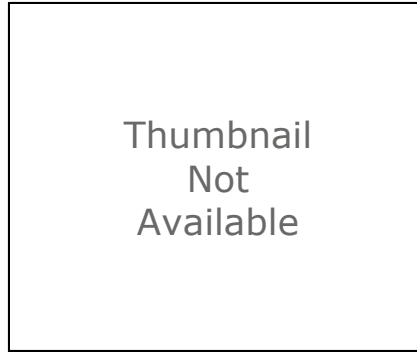


CentralAsia_tracts



Tags

potash, geology, global mineral resource assessment, permissive tracts, mineral resources, GIS, spatial database, geoscientificInformation

Summary

CentralAsia_tracts -- A spatial database for permissive tracts for undiscovered resources of potash (with quantitative assessment data and results for the Amu Darya tract) in the Central Asia Jurassic Salt Basin, Tajikistan, Turkmenistan, Uzbekistan, and Afghanistan (in Esri file geodatabase feature class format).

The spatial database was created for use in a geographic information system (GIS) as part of a global potash resource assessment by the U.S. Geological Survey.

Description

The Central Asia Salt Basin is a major Jurassic evaporite basin spanning five countries from Iran to Tajikistan. It was split into two parts during the Miocene and contains a significant portion of the world's potash resources. A mineral resource assessment of undiscovered potash resources in stratabound and halokinetic salt structures was completed for the Central Asian Salt Basin as part of a larger U.S. Geological Survey global mineral resources assessment. The purpose of the study was to (1) delineate permissive areas (tracts) for undiscovered potash deposits at a scale of 1:1,000,000; (2) provide a database of known potash deposits and significant prospects; (3) estimate numbers of undiscovered deposits within those permissive tracts; and (4) provide probabilistic estimates for halokinetic and hybrid zones, and volume calculations for hybrid and stratabound zones, of the amounts of potentially recoverable potash that could be contained in undiscovered deposits for each permissive tract. This study was conducted mainly by USGS scientists, with some collaboration with geologists from Canada and Poland, and limited input from geologists in the Russian Federation. Three spatial databases describe potash deposits, permissive tracts, and thickness of potash mineralization in the Central Asia Jurassic Salt Basin. These data were used to assess the area for potash resources. Results of the assessment are provided in the spatial database CentralAsia_tracts. Deposit data are provided in CentralAsia_deposits, and thickness data are in CentralAsia_thickness. All databases are stored as feature classes in the Esri file geodatabase (FGDB) CentralAsia_potash.gdb. Preferred reference: Wynn, Jeff, Orris, G.J., Dunlap, Pamela, Cocker, M.D., and Bliss, J.D., 2016, Geology and undiscovered resource assessment of

the potash-bearing Central Asia Salt Basin, Turkmenistan, Uzbekistan, Tajikistan, and Afghanistan: U.S. Geological Survey Scientific Investigations Report SIR 2010-5090-AA, 106 p., and spatial data, <http://dx.doi.org/10.3133/sir20105090AA>.

Credits

Greta J. Orris, Jeffrey C. Wynn, and Mark D. Cocker defined the permissive tracts and compiled geologic and potash resource data.

Pamela Dunlap converted the data to a vector GIS format, built the spatial database, 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

Maximum (zoomed in) 1:5,000

Minimum (zoomed out) 1:150,000,000

ArcGIS Metadata ►

Citation ►

TITLE CentralAsia_tracts

[Hide Citation ▲](#)

Resource Details ►

CREDITS

Greta J. Orris, Jeffrey C. Wynn, and Mark D. Cocker defined the permissive tracts and compiled geologic and potash resource data.

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[Hide Resource Details ▲](#)

Resource Constraints ►

CONSTRAINTS

LIMITATIONS OF USE

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Hide Resource Constraints ▲

Fields ►

DETAILS FOR OBJECT **CentralAsia_tracts** ►

DEFINITION

A spatial database of areas permissive for undiscovered potash resources.

DEFINITION SOURCE

Esri, accessed October 21, 2011 at
<http://support.esri.com/en/knowledgebase/GISDictionary/term/feature%20class>

FIELD **OBJECTID** ►

FIELD DESCRIPTION

Internal feature number.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES

Sequential unique whole numbers that are automatically generated.

Hide Field OBJECTID ▲

FIELD **Shape** ►

FIELD DESCRIPTION

Feature geometry.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES

Coordinates defining the features.

Hide Field Shape ▲

FIELD Shape_Length ►

FIELD DESCRIPTION

Length of feature in internal units.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES

Positive real numbers that are automatically generated.

Hide Field Shape_Length ▲

FIELD Shape_Area ►

FIELD DESCRIPTION

Area of feature in internal units squared.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES

Positive real numbers that are automatically generated.

Hide Field Shape_Area ▲

FIELD Coded_ID ►

FIELD DESCRIPTION

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

LIST OF VALUES

VALUE 142mxK0005a

DESCRIPTION Gissar tract

VALUE 142sbK0005b

DESCRIPTION Amu Darya tract

VALUE 142haK0005c
DESCRIPTION Afghan-Tajik tract

Hide Field Coded_ID ▲

FIELD Tract_name ►

FIELD DESCRIPTION

TRACT NAME -- Informal name of permissive tract.

Hide Field Tract_name ▲

FIELD Unregcode ►

FIELD DESCRIPTION

U.N. REGION CODE -- Three digit United Nations code for the region that underlies most of the permissive tract.

DESCRIPTION SOURCE

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

LIST OF VALUES

VALUE 142

DESCRIPTION Asia

Hide Field Unregcode ▲

FIELD Country ►

FIELD DESCRIPTION

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

Hide Field Country ▲

FIELD Commodity ►

FIELD DESCRIPTION

COMMODITY -- Primary commodity assessed.

LIST OF VALUES

VALUE K

DESCRIPTION potash

Hide Field Commodity ▲

FIELD Dep_type ►

FIELD DESCRIPTION

DEPOSIT TYPE -- Name of deposit type(s).

LIST OF VALUES

VALUE mixed stratabound potash-bearing salt and potash-bearing halokinetic salt structure

VALUE potash-bearing halokinetic salt structure

VALUE stratabound potash-bearing salt

Hide Field Dep_type ▲

FIELD Age ►

FIELD DESCRIPTION

AGE -- Age of geologic feature assessed.

LIST OF VALUES

VALUE Upper Jurassic-Lower Cretaceous(?)

Hide Field Age ▲

FIELD Unit ►

FIELD DESCRIPTION

UNIT -- Host unit in which potash mineralization occurs.

LIST OF VALUES

VALUE Gaurdak Formation

Hide Field Unit ▲

FIELD Geology ►

FIELD DESCRIPTION

GEOLOGY -- Geologic feature assessed.

Hide Field Geology ▲

FIELD Asmt_date ►

FIELD DESCRIPTION

ASSESSMENT DATE -- Year assessment was conducted.

RANGE OF VALUES

MINIMUM VALUE 2010

MAXIMUM VALUE 2011

UNITS OF MEASURE Year

[Hide Field Asmt_date ▲](#)

FIELD **Asmt_methd** ►

FIELD DESCRIPTION

ASSESSMENT METHOD -- Assessment method used.

LIST OF VALUES

VALUE Adaptive geometric estimation

DESCRIPTION A quantitative assessment method.

VALUE Qualitative

DESCRIPTION A qualitative assessment method.

[Hide Field Asmt_methd ▲](#)

FIELD **Asmt_depth** ►

FIELD DESCRIPTION

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

RANGE OF VALUES

MINIMUM VALUE 3

MAXIMUM VALUE 3

UNITS OF MEASURE kilometers

[Hide Field Asmt_depth ▲](#)

FIELD **Thickness** ►

FIELD DESCRIPTION

THICKNESS -- How thickness variation was determined for the assessment.

LIST OF VALUES

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

[Hide Field Thickness ▲](#)

FIELD **Volume_km3** ►

FIELD DESCRIPTION

VOLUME in CUBIC KILOMETERS -- Volume of tract.

LIST OF VALUES

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

RANGE OF VALUES

MINIMUM VALUE 201

MAXIMUM VALUE 201

UNITS OF MEASURE cubic kilometers

Hide Field Volume_km3 ▲

FIELD Density ►

FIELD DESCRIPTION

DENSITY -- Specific gravity used in assessment calculations.

LIST OF VALUES

VALUE 1.94

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

Hide Field Density ▲

FIELD Tonnage ►

FIELD DESCRIPTION

TONNAGE -- Tonnage of mineralized rock.

LIST OF VALUES

VALUE 376

VALUE estimated, triangular, min = 153.1, max = 510.3, mode = 229.6

DESCRIPTION Tonnages were estimated; triangular distribution; min = minimum value, max = maximum value, mode = mode or average value.

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

RANGE OF VALUES

UNITS OF MEASURE billion tonnes (gigatonnes or metric tons)

Hide Field Tonnage ▲

FIELD K2O_grade ►

FIELD DESCRIPTION

POTASH GRADE -- K2O grade (as percent K2O).

LIST OF VALUES

VALUE ZRN(15.84,4.42)

DESCRIPTION Distribution is specified in the format ZRN(mean,s.d.) where ZRN is SYSTAT code for normal distribution and s.d. = standard deviation.

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

RANGE OF VALUES

UNITS OF MEASURE percent K2O

Hide Field K2O_grade ▲

FIELD Embayments ►

FIELD DESCRIPTION

EMBAYMENTS -- Embayments (as percent of area).

LIST OF VALUES

VALUE est., TRRN(5,30,15)

DESCRIPTION Embayments were estimated; distribution is specified in the format TRRN(min,max,mode) where TRRN is SYSTAT code for triangular distribution, min = minimum value, max = maximum value, mode = mode or average value.

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

RANGE OF VALUES

UNITS OF MEASURE percent of area

Hide Field Embayments ▲

FIELD Anomalies ►

FIELD DESCRIPTION

ANOMALIES -- Anomalies (as percent of area).

LIST OF VALUES

VALUE estimated, TRRN(5,35,20)

DESCRIPTION Anomalies were estimated; distribution is specified in the format TRRN (min,max,mode) where TRRN is SYSTAT code for triangular distribution, min = minimum value, max = maximum value, mode = mode or average value.

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

RANGE OF VALUES

UNITS OF MEASURE percent of area

Hide Field Anomalies ▲

FIELD Other_adj ►

FIELD DESCRIPTION

OTHER ADJUSTMENTS -- Other needed adjustments.

LIST OF VALUES

VALUE Max: 60% for anom+embay

DESCRIPTION Maximum adjustment of 60 percent was applied for anomalies and embayments.

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

Hide Field Other_adj ▲

FIELD K2O_known ►

FIELD DESCRIPTION

POTASH KNOWN RESOURCES -- Known resources of potash.

RANGE OF VALUES

MINIMUM VALUE 0

MAXIMUM VALUE 1.63

UNITS OF MEASURE billion metric tons (gigatonnes)

Hide Field K2O_known ▲

FIELD K2O_median ►

FIELD DESCRIPTION

POTASH MEDIAN -- Median of undiscovered resources of contained potash.

LIST OF VALUES

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

RANGE OF VALUES

MINIMUM VALUE 27.90

MAXIMUM VALUE 39.00

UNITS OF MEASURE billion metric tons (gigatonnes)

Hide Field K2O_median ▲

FIELD K2O_mean ►

FIELD DESCRIPTION

POTASH MEAN -- Mean of undiscovered resources of contained potash.

LIST OF VALUES

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

RANGE OF VALUES

MINIMUM VALUE 29.80

MAXIMUM VALUE 39.30
UNITS OF MEASURE billion metric tons (gigatonnes)

[Hide Field K2O_mean ▲](#)

FIELD K2O_densit ►

FIELD DESCRIPTION

POTASH DENSITY -- Mean of undiscovered resources of contained potash divided by area of permissive tract.

LIST OF VALUES

VALUE Null

DESCRIPTION No value, because tract was not assessed quantitatively.

RANGE OF VALUES

MINIMUM VALUE 0.978

MAXIMUM VALUE 1.092

UNITS OF MEASURE million metric tons K2O per square kilometer

[Hide Field K2O_densit ▲](#)

FIELD Estimators ►

FIELD DESCRIPTION

ESTIMATORS -- Names of people on the estimation team (listed alphabetically).

[Hide Field Estimators ▲](#)

FIELD Area_km2 ►

FIELD DESCRIPTION

AREA in SQUARE KILOMETERS -- Areal extent of tract, rounded to three significant figures.

RANGE OF VALUES

MINIMUM VALUE 27300

MAXIMUM VALUE 58800

UNITS OF MEASURE square kilometers

[Hide Field Area_km2 ▲](#)

[Hide Details for object CentralAsia_tracts ▲](#)

[Hide Fields ▲](#)

Metadata Details ►

SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0

STANDARD OR PROFILE USED TO EDIT METADATA FGDC

LAST MODIFIED IN ARCGIS FOR THE ITEM 2016-02-10 14:35:38

Hide Metadata Details ▲

FGDC Metadata (read-only) ▼