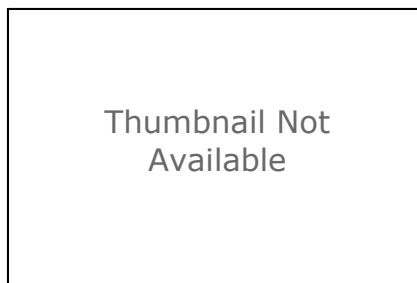


## DDP\_Diapirs



### Tags

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

### Summary

DDP\_Diapirs -- A spatial database of diapirs in Tract 150haK0042b (Dnieper-Donets Devonian halokinetic), in Esri File Geodatabase Feature Class format.

### 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 identified diapirs to be included in the GIS and provided names for each (translated from Russian). Deborah A. Briggs (contractor), Leila Gass and John C. Wallis (contractor) georectified maps and figures and converted the data to a vector GIS format. Pamela Dunlap built the spatial database, wrote the metadata and prepared the digital data for publication.

### Use limitations

None

### 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 Mark D. Cocker, U.S. Geological Survey, Research Geologist, retired

PUBLICATION DATE 2017

##### TITLE

DDP\_Diapirs

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>.

#### 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\_Diapirs -- A spatial database of diapirs in Tract 150haK0042b (Dnieper-Donets Devonian halokinetic), in Esri File Geodatabase Feature Class format.

#### TIME PERIOD OF CONTENT

##### TIME PERIOD INFORMATION

##### SINGLE DATE/TIME

CALENDAR DATE 2016

##### CURRENTNESS REFERENCE

2016

#### STATUS

PROGRESS Complete, no updates planned.

MAINTENANCE AND UPDATE FREQUENCY None planned

#### SPATIAL DOMAIN

##### BOUNDING COORDINATES

WEST BOUNDING COORDINATE 30.494358

EAST BOUNDING COORDINATE 38.123516

NORTH BOUNDING COORDINATE 51.987714

SOUTH BOUNDING COORDINATE 48.553031

#### KEYWORDS

##### THEME

THEME KEYWORD THESAURUS None

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

##### THEME

THEME KEYWORD THESAURUS ISO 19115 Topic Categories

THEME KEYWORD geoscientificInformation

##### PLACE

PLACE KEYWORD THESAURUS United Nations geographic regions and countries

PLACE KEYWORD Eastern Europe

#### ACCESS CONSTRAINTS

None

#### USE CONSTRAINTS

None

#### POINT OF CONTACT

##### CONTACT INFORMATION

CONTACT ORGANIZATION PRIMARY

CONTACT ORGANIZATION U.S. Geological Survey

CONTACT PERSON Mark D. Cocker

CONTACT POSITION Research Geologist, Retired

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CONTACT ELECTRONIC MAIL ADDRESS mcocker@usgs.gov

#### DATA SET CREDIT

Mark D. Cocker identified diapiers to be included in the GIS and provided names for each (translated from Russian).

Deborah A. Briggs (contractor), Leila Gass and John C. Wallis (contractor) georectified maps and figures and converted the data to a vector GIS format. Pamela Dunlap built the spatial database, 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

Checks for consistency have not been performed.

#### COMPLETENESS REPORT

Complete.

#### LINEAGE

##### SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 2000000

TYPE OF SOURCE MEDIA   hardcopyPaper

SOURCE CONTRIBUTION

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

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR   2000000

TYPE OF SOURCE MEDIA   hardcopyPaper

SOURCE CONTRIBUTION

Klimenko, V.I., 1957, [Tectonic structure of the Dnieper-Donets cavity], fig. (unknown number) in Kityk, V. I., 1970, Solianaia tektonika Dniepero-Donetskoi vpadiny [Salt tectonics of the Dnieper-Donets cavity]: Academy of the Institute of Geology and Geochemistry, Ukrainian S.S.R., 201 p., scale 1:2,000,000. [In Russian.]

PROCESS STEP

PROCESS DESCRIPTION

Diapirs were digitized in a GIS from georeferenced maps.

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   247

*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   DD\_Diapirs

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 Coded\_ID

ATTRIBUTE DEFINITION

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

#### ATTRIBUTE

ATTRIBUTE LABEL Site\_No

ATTRIBUTE DEFINITION

Unique, numeric identifier for diapiir

#### ATTRIBUTE

ATTRIBUTE LABEL Diapir

ATTRIBUTE DEFINITION

Name of diapiir

#### ATTRIBUTE

ATTRIBUTE LABEL Tract\_name

ATTRIBUTE DEFINITION

TRACT NAME -- Informal name of permissive tract.

#### ATTRIBUTE

ATTRIBUTE LABEL Age

ATTRIBUTE DEFINITION

Geologic age

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 Area\_km2

ATTRIBUTE DEFINITION

AREA in SQUARE KILOMETERS -- Areal extent of tract.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

RANGE DOMAIN MINIMUM 2

RANGE DOMAIN MAXIMUM 424

ATTRIBUTE UNITS OF MEASURE square kilometers

## 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 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 Short\_Refs

ATTRIBUTE DEFINITION

Short citation for source reference, in author and year format.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE Kityk (1970)

ENUMERATED DOMAIN VALUE DEFINITION

Kityk, V.I., 1970, Solianaia tektonika Dneprovskso-Donetskoi vpadiny [Salt tectonics of the Dnieper-Donets Depression]: Kiev, Ukrainian SSR Academy of the Institute of Geology and Geochemistry, 201 p., fig. 34, scale 1:2,000,000. [In Russian.]

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE Klimenko (1957)

ENUMERATED DOMAIN VALUE DEFINITION

Klimenko, V.I., 1957, [Tectonic structure of the Dnieper-Donets cavity] in Kityk, V. I., 1970, Solianaia tektonika Dniepero-Donetskoi vpadiny [Salt tectonics of the Dnieper-Donets Depression]: Kiev, Ukrainian SSR Academy of the Institute of Geology and Geochemistry, 201 p., unnumbered fig., scale 1:2,000,000. [In Russian.]

## ATTRIBUTE

ATTRIBUTE LABEL Ref\_site\_no

ATTRIBUTE DEFINITION

Reference number assigned to diapir on figure in source reference.

*Hide Entities and Attributes ▲***Distribution Information ►**

## DISTRIBUTOR

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DISTRIBUTION LIABILITY

See access and use constraints information.

*Hide Distribution Information ▲*

## Metadata Reference ►

METADATA DATE 2017-07-25

METADATA CONTACT

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CONTACT PERSON Pamela Dunlap

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METADATA STANDARD NAME FGDC Content Standard for Digital Geospatial Metadata

METADATA STANDARD VERSION FGDC-STD-001-1998

METADATA TIME CONVENTION local time

*Hide Metadata Reference ▲*