

DDP_Deposits

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Available

Tags

potash, geology, mineral resource assessment, potash deposits, potash mines, potash occurrences, mineral resources, GIS, spatial database, geoscientificInformation

Summary

DDP_Deposits -- A spatial database of evaporite-related potash deposits and occurrences in the Pripyat and Dnieper-Donets Basins, Belarus and Ukraine.

Description

This spatial database of evaporite-related potash deposits and occurrences provides location and descriptive information for 65 deposits and occurrences that are considered useful and (or) significant in assessing potash resources in the Pripyat and Dnieper-Donets Basins, Belarus and Ukraine. The database contains location, geologic, and some limited economic data, as well as one or more references for each site. The spatial database was created for use in a geographic information system (GIS) to support a global potash resource assessment by the U.S. Geological Survey. The purpose of this inventory is to document the geologic occurrence of (1) rocks enriched in water-soluble potassium minerals and (2) naturally-occurring brines enriched in potassium. Potash, as used in this report, refers to potassium-bearing minerals, ores, and processed products. Databases that summarize the distribution of known occurrences and their geologic setting are an integral part of a geologically-based evaluation of undiscovered mineral resources. The distribution of known occurrences allows us to understand the factors which control their distributions and to forecast areas with potential. These deposits and occurrences also serve as analogs for the types of resources that may be present; the size and composition of undiscovered deposits is likely to be similar to those that have been found.

Credits

Mark D. Cocker and Greta J. Orris compiled the raw data into a spreadsheet format; Greta J. Orris designed the data model, standardized the data content, and proofed location information; Pamela Dunlap converted the data from a spreadsheet format to a spatial database (Esri File Geodatabase feature class of points), further standardized the data, wrote 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. Locations for

deposits and occurrences were derived from a variety of source maps, the smallest scale of which was about 1:1,000,000; thus, these data should not be used or portrayed at scales larger than 1:1,000,000 (for example, 1:500,000).

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_Deposits

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

This spatial database of evaporite-related potash deposits and occurrences provides location and descriptive information for 65 deposits and occurrences that are considered useful and (or) significant in assessing potash resources in the Pripyat and Dnieper-Donets Basins, Belarus and Ukraine. The database contains location, geologic, and some limited economic data, as well as one or more references for each site. The spatial database was created for use in a geographic information system (GIS) to support a global potash resource assessment by the U.S. Geological Survey. The purpose of this inventory is to document the geologic occurrence of (1) rocks enriched in water-soluble potassium minerals and (2) naturally-occurring brines enriched in potassium. Potash, as used in this report, refers to potassium-bearing minerals, ores, and processed products. Databases that summarize the distribution of known occurrences and their geologic setting are an integral part of a geologically-based evaluation of undiscovered mineral resources. The distribution of known occurrences allows us to understand the factors which control their distributions and to forecast areas with potential. These deposits and occurrences also serve as analogs for the types of resources that may be present; the size and composition of undiscovered deposits is likely to be similar to those that have been found.

PURPOSE

DDP_Deposits -- A spatial database of evaporite-related potash deposits and

occurrences 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 27.380800

EAST BOUNDING COORDINATE 37.341900

NORTH BOUNDING COORDINATE 52.900000

SOUTH BOUNDING COORDINATE 48.396400

KEYWORDS

THEME

THEME KEYWORD THESAURUS None

THEME KEYWORD potash, geology, mineral resource assessment, potash deposits, potash mines, potash occurrences, 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, Belarus, Ukraine

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. Locations for deposits and occurrences were derived from a variety of source maps, the smallest scale of which was about 1:1,000,000; thus, these data should not be used or portrayed at scales larger than 1:1,000,000 (for example, 1:500,000).

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 and Greta J. Orris compiled the raw data into a spreadsheet format; Greta J. Orris designed the data model, standardized the data content, and proofed location information; Pamela Dunlap converted the data from a spreadsheet format to a spatial database (Esri File Geodatabase feature class of points), further standardized the data, wrote 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

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Belarus Ministry of the Economy, 2011, The advisory about carrying out of the first stage of tender for choice of the investor for commercial development of the Petrikov deposit of potash salts together with building up of ore mining and dressing complex: Minsk, Belarus Ministry of Economy press release, October 6, 2011, 1 p., accessed November 2, 2011, at http://www.economy.gov.by/en/news/the-advisory-about-carrying-out-of-the-first-stage-of-tender-for-choice-of-the-investor-for-commercial-development-of-the-petrikov-deposit-of-potash-salts-together-with-building-up-of-ore-mining-and-dressing-complex_i_0000001091.html.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Belarusian Telegraph Agency, 2011a, Belarus to rack up extraction of potash fertilizers: Belarusian Telegraph Agency press release, December 8, 2011, 1 p., accessed January 28, 2012, at <http://news.belta.by/en/news/president?id=669047>.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Belarusian Telegraph Agency, 2011b, Belaruskali commissions second priority complex at Krasnoslobodsky mine: Belarusian Telegraph Agency press release, December 26, 2011, 1 p., accessed December 31, 2011, at <http://news.belta.by/en/news/econom?id=670557>.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

British Sulphur Corporation Ltd., 1975, World survey of potash resources (2d ed.): London, British Sulphur Corporation Ltd., 148 p.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

British Sulphur Corporation Ltd., 1984, World survey of potash resources (4th ed.): London, British Sulphur Corporation Ltd., 145 p.

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 2500000

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Commission for the Geologic Map of the World, 1973, Carte métallogénique de l'Europe, Liste de gites minéraux, feuille 5, Europe Centre (Prague): Orléans, Bureau de Recherches Géologiques et Minières and United Nations Educational Scientific and Cultural Organization (UNESCO), 32 p., scale 1:2,500,000.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Dakuko, N., 2003, Technical and technological development of PA Belaruskali: IFA Production and International Trade Conference and Regional Conference for Eastern Europe and Central Asia, St.Petersburg, Russia, 2003, [Proceedings], 10 p.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Derevyangin, Y., Ivanova, N., and Derevyankina, L., 1998, Gold in potash ores of the Starobin deposit: Fizykochemiczne Problemy Mineralurgii, v. 32, p. 275–280.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Eroshina, D.M., and Kislik, V.Z., 1980, Ob usloviyakh formirovaniya kaliynykh soley verkhnefranskoy solenosnoy formatsii Pripyatskoy vpadiny [Formation conditions for the potassium salts of the upper Frasnian salt-bearing formation in the Pripyat Basin]: Sovetskaya Geologiya, v. 10, p. 43–50.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Foreign Policy and Security Research Center, 2011, Belaruskali commissions second priority complex at Krasnoslobodsky mine: Minsk, Foreign Policy and Security (FPS) Research Center press release, December 12, 2012, 1 p., accessed January 4, 2012, at <http://forsecurity.org/belaruskali-commissions-second-priority-complex-krasnoslobodsky-mine>.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Garetskiy, R.G., Kislik, V.Z., Vysotskiy, E.A., Eroshina, D.M., Petrov, N.S., Obrovets, S.M., Sedun, E.V., Protasevich, B.V., 1982, [Schematic map of the thickness of the Upper Famennian salt formation], fig. 9 in Devonskie soleonosnye formatsii Pripiatskogo progiba [The Devonian salt-bearing formations of the Pripyat trough]: Minsk, Byelorussian SSR, Izd. Nauka i Tekhnika, 207 p. [In Russian.]

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Garrett, D.E., 1996, Potash—Deposits, processing, properties and uses: New York, Chapman and Hall, 734 p.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Jakubiak, Z., and Smakowski, T., 1994, Classification of mineral reserves in the former Comecon countries: The Geological Society (London) Special Publications, v. 79, p. 17–28, accessed July 20, 2012, at <http://sp.lyellcollection.org/content/79/1/17.abstract>.

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 2000000

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

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.]

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 2000000

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

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.]

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Korenevskiy, S.M., 1990, Lithotypes of potassium-bearing formations: Lithology and Mineral Resources, v. 25, no. 2, p. 99–106.

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 2000000

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Korenevskiy, S.M., and Shamahov, V.A., 1990, 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 Depression], in Petrichenko, O.I., ed., Geologiya i geokhimiya solenosnykh otozhenii neftegazonosnich provincii [Geology and geochemistry of salt-bearing deposits of oil-and-gas content province]: Kiev, Naukova Dumka, fig. 1, p. 72, scale about 1:2,000,000. [In Russian.]

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 1000000

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Kovalevym, B.S., Utekhynym, 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, USSR State Geological Committee, VSEGEI, scale 1:1,000,000. [In Russian.]

SOURCE INFORMATION

SOURCE SCALE DENOMINATOR 2000000

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Makhnach, A.A., Kuleshov, V.N., Pokrovskii, B.G., Gulis, L.F., Mikhailov, N.D., and Kolosov, I.L., 2002, 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. (Also available at <http://dx.doi.org/10.1023/A:1020965321838>.)

SOURCE INFORMATION

TYPE OF SOURCE MEDIA CD-ROM

SOURCE CONTRIBUTION

McFaul, E.J., Mason, G.T., Ferguson, W B., and Lipin, B.R., 2002, U.S. Geological Survey mineral databases—MRS and MAS/MILS: U.S. Geological Survey Digital Data Series 52, 2 CD-ROMs.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Nokleberg, W.J., Bawiec, W.J., Doebrich, J.L., Lipin, B.R., Miller, R.J., Orris, G.J., and Zientek, M.L., 2005, Geology and nonfuel mineral deposits of Greenland, Europe, Russia, and northern central Asia: U.S. Geological Survey Open-File Report OF 2005–1294D, 173 p., available at <http://pubs.usgs.gov/of/2005/1294/d/of2005-1294d.pdf>.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Petrychenko, O.Y., and Peryt, T.M., 2004, Geochemical conditions of deposition in the Upper Devonian Prypiac' and Dnipro-Donets evaporite basins (Belarus and Ukraine): The Journal of Geology, v. 112, p. 577–592.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Roskill Information Services, 1989, The economics of potash (2d ed.): London, Roskill Information Services Ltd., 121 p.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Rundkvist, D.V., ed., 2001, Mineragenetic map of Russian Federation and adjacent states (within the boundaries of former USSR), with contributions from M.A. Kraush, V.K. Gavrilov, and A.M. Portnov, Ministry of Natural Resources of Russian Federation, State Research and Development Enterprise "AEROGEOLOGIA", 1 map on 18 sheets.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Smycznick, A., Wysocki, E., Machnacz, A., Kruczek, S., and Gulis, L., 2006, Starobin potash salt deposit—Geology, exploitation, methods and perspectives: Polish Salt Mining Association, XI International Symposium on Salt "Quo Vadis Sal", Schreiberhau, Poland, November 9–10, 2006, [Proceedings], p. 81–82.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Troitskiy, Vladimir, Petrov, Igor, and Grishaev, Sergey, 1998, Industrial minerals of the CIS: Worcester Park, England, Industrial Minerals Information Ltd., 135 p.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Ulmishek, G.F., Bogino, V.A., Keller, M.B., and Poznyakevich, Z.L., 1994, Structure, stratigraphy, and petroleum geology of the Pripyat and Dnieper-Donets Basins, Byelarus and Ukraine, in Landon, S.M., ed., Interior rift basins: American Association of Petroleum Geologists Memoir 59, p. 125–156.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

U.S. Department of State, 2009, Small-scale digital international land boundaries (SSIB)—Lines, edition 10 and Polygons, beta edition 1: Boundaries and Sovereignty Encyclopedia (B.A.S.E.), U.S. Department of State, Office of the Geographer and Global Issues

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Vysotskiy, E.A., Garetskiy, R.G., and Kislik, V.Z., 1988, Kalienosnye basseiny mira [Potassium-bearing basins of the world]: Minsk, Izd. Nauka i Tekhnika, Byelorussian SSR, 387 p
Zharkov, M.A., 1984, Paleozoic salt bearing formations of the world: New York, Springer-Verlag, 427 p.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Weslosky, Tracy, 2011, Potash companies appear intent on pushing the capacity envelope: Toronto, Potash and Phosphate blog, December 27, 2011, 1 p., accessed March 20, 2014, at <http://investorintel.com/potash-phosphate-intel/capacity-concerns-will-no-doubt-continue-to-weigh-on-the-potash-sector-given-the-number->

of-greenfield-projects-and-brownfiel/.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Williams-Stroud, S.C., Searls, J.P., and Hite, R.J., 1994, Potash resources, in Carr, D.D., ed., *Industrial minerals and rocks*: Littleton, Colorado, Society for Mining, Metallurgy and Exploration, p. 783–802.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Yermakov, V., and Galushko, S., 2002, Iodized salt situational analysis in Ukraine: Kiev, United Nations Children's Fund (UNICEF), 34 p.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Zharkov, M.A., 1984, *Paleozoic salt bearing formations of the world*: New York, Springer-Verlag, 427 p.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Leeder, Mike, 1999, *Sedimentology and sedimentary basins—From turbulence to tectonics*: Oxford, Blackwell, 592 p.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Merle, Olivier, 2011, A simple continental rift classification: *Tectonophysics*, v. 513, p. 88–95. (Also available at <http://dx.doi.org/10.1016/j.tecto.2011.10.004>.)

SOURCE INFORMATION

TYPE OF SOURCE MEDIA hardcopyPaper

SOURCE CONTRIBUTION

Miall, A.D., 1984, *Principles of Sedimentary Basin Analysis*: New York, Springer-Verlag, 490 p.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Middleton, M.F., 1989, A model for the formation of intracratonic sag basins: *Geophysical Journal International*, v. 99, p. 665–676. (Also available at <http://dx.doi.org/10.1111/j.1365-246X.1989.tb02049.x>.)

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

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

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Korenevskiy, S.M., 1990, Lithotypes of potassium-bearing formations: *Lithology and Mineral Resources*, v. 25, no. 2, p. 99–106.

SOURCE INFORMATION

TYPE OF SOURCE MEDIA onLine

SOURCE CONTRIBUTION

Petrova, N.S., Bakhmutskaya, L.V., and Zhuravskaya, A.M., 2012, Assessments of the sylvinite ore dressability at the Starobin potassium salt deposit: *Geology, Geophysics & Environment*, v. 38, no. 1, p. 93–97.

PROCESS STEP

PROCESS DESCRIPTION

Tabular data were exported from a Microsoft Excel spreadsheet format to an Esri File

Geodatabase feature class of points (vector GIS). Spatial locations were plotted with respect to a spatial database of political boundaries of countries to proof entries for COUNTRY item. Attributes were further standardized and corrected in the attribute table. Attributes were also proofed to make sure that data were not truncated in the conversion process.

PROCESS CONTACT

CONTACT INFORMATION

CONTACT ORGANIZATION PRIMARY

CONTACT ORGANIZATION U.S. Geological Survey

CONTACT PERSON Pamela Dunlap

CONTACT POSITION Geologist

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 Entity point

POINT AND VECTOR OBJECT COUNT 43

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_Deposits

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 October 21, 2011 at

<http://support.esri.com/en/knowledgebase/GISDictionary/term/feature%20class>

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 ID_NO

ATTRIBUTE DEFINITION

IDENTIFICATION NUMBER -- Unique numeric identifier.

ATTRIBUTE

ATTRIBUTE LABEL SITE_NAME

ATTRIBUTE DEFINITION

SITE NAME -- Name of site.

ATTRIBUTE

ATTRIBUTE LABEL ALT_NAMES

ATTRIBUTE DEFINITION

ALTERNATE NAMES -- Other name(s) for site.

ATTRIBUTE

ATTRIBUTE LABEL TYPE_REC

ATTRIBUTE DEFINITION

TYPE of RECORD -- Site type(s), queried where uncertain; multiple descriptive terms may be present.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE deposit

ENUMERATED DOMAIN VALUE DEFINITION

Restricted to entities with known reserves and (or) resources, including production if the site has produced potash.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE grouped mines/occurrences

ENUMERATED DOMAIN VALUE DEFINITION

Several smaller mines or occurrences occur within 4 km of each other, smaller mines were merged into larger mines, reserves/resources are reported at the aggregated level, or the literature refers to the aggregated entity.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE mine

ENUMERATED DOMAIN VALUE DEFINITION

Mine.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE mineral occurrence

ENUMERATED DOMAIN VALUE DEFINITION

Mineral occurrence.

ATTRIBUTE

ATTRIBUTE LABEL COUNTRY

ATTRIBUTE DEFINITION

COUNTRY -- Country.

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 LATITUDE

ATTRIBUTE DEFINITION

LATITUDE -- Positive number represents latitude north of the equator.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

ATTRIBUTE UNITS OF MEASURE decimal degrees

ATTRIBUTE

ATTRIBUTE LABEL LONGITUDE

ATTRIBUTE DEFINITION

LONGITUDE -- Positive number represents longitude east of the Greenwich meridian.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

ATTRIBUTE UNITS OF MEASURE decimal degrees

ATTRIBUTE

ATTRIBUTE LABEL BASIN

ATTRIBUTE DEFINITION

BASIN -- Evaporite basin which contains potash mineralization.

ATTRIBUTE

ATTRIBUTE LABEL BASIN_TYPE

ATTRIBUTE DEFINITION

BASIN TYPE -- Type of sedimentary basin, queried where uncertain.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE continental rift basin

ENUMERATED DOMAIN VALUE DEFINITION

Narrow trough bounded by normal faults marking zone where lithosphere has ruptured under extensional tectonics. Extension terminated prior to plate breakup.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE

Leeder (1999), Merle (2011), and Miall (1984).

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE intracratonic basin

ENUMERATED DOMAIN VALUE DEFINITION

A basin formed within the interior region of a continent, as a regional downwarp away from plate boundaries.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE

Middleton (1980), and Miall (1984).

ATTRIBUTE

ATTRIBUTE LABEL TRACT_NAME

ATTRIBUTE DEFINITION

TRACT NAME -- Informal name of potash permissive tract in which site occurs.

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

ENUMERATED DOMAIN VALUE DEFINITION

Significantly disturbed by halokinesis; strata-bound potash deposits that have been subjected to halokinesis.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE stratabound potash-bearing salt

ENUMERATED DOMAIN VALUE DEFINITION

Evaporite mineralization in strata-bound form; strata-bound potash deposits are accumulations of relatively flat-lying and undeformed potassium chloride and potassium sulfate evaporite minerals intimately associated with halite and related basin wide evaporites.

ATTRIBUTE

ATTRIBUTE LABEL COMMODS

ATTRIBUTE DEFINITION

COMMODITIES -- Significant commodities present, queried if presence is uncertain; multiple commodities are listed in approximate order of significance (and are delimited by double spaces).

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE BR

ENUMERATED DOMAIN VALUE DEFINITION
bromine

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE HAL

ENUMERATED DOMAIN VALUE DEFINITION
halite

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE K

ENUMERATED DOMAIN VALUE DEFINITION
potash

ATTRIBUTE

ATTRIBUTE LABEL K_MINERALS

ATTRIBUTE DEFINITION

POTASH MINERALS -- Potash minerals and materials known to be present, queried where uncertain; listed in approximate order of abundance or importance. Terms are listed and defined in appendix C.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates minerals and materials not determined and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL OTHER_MINS

ATTRIBUTE DEFINITION

OTHER MINERALS -- Other mineral(s) of significance or interest, queried where uncertain; listed in approximate order of abundance or importance.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates minerals not determined and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL AGE_ERA

ATTRIBUTE DEFINITION

AGE as GEOLOGIC ERA -- Geologic era(s) of potash mineralization; multiple terms are delimited by hyphens.

ATTRIBUTE DEFINITION SOURCE International Commission on Stratigraphy, 2010, International stratigraphic chart: accessed March 20, 2014, at

<http://www.stratigraphy.org/ICSchart/StratChart2010.pdf>.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE Paleozoic

ATTRIBUTE

ATTRIBUTE LABEL AGE_PERIOD

ATTRIBUTE DEFINITION

AGE as GEOLOGIC PERIOD -- Geologic period(s) of potash mineralization, queried where uncertain; multiple terms are delimited by hyphens.

ATTRIBUTE DEFINITION SOURCE International Commission on Stratigraphy, 2010, International stratigraphic chart: accessed March 20, 2014, at

<http://www.stratigraphy.org/ICSchart/StratChart2010.pdf>.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates geologic period(s) not determined and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL AGE_EPOCH

ATTRIBUTE DEFINITION

AGE as GEOLOGIC EPOCH -- Geologic epoch(s) of potash mineralization, queried where uncertain; multiple terms are delimited by hyphens.

ATTRIBUTE DEFINITION SOURCE International Commission on Stratigraphy, 2010, International stratigraphic chart: accessed March 20, 2014, at

<http://www.stratigraphy.org/ICSchart/StratChart2010.pdf>.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates geologic epoch(s) not determined and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL AGE_STAGE

ATTRIBUTE DEFINITION

AGE as GEOLOGIC STAGE -- Geologic stage(s) of potash mineralization, queried where uncertain; multiple terms are delimited by hyphens.

ATTRIBUTE DEFINITION SOURCE International Commission on Stratigraphy, 2010, International stratigraphic chart: accessed March 20, 2014, at

<http://www.stratigraphy.org/ICSchart/StratChart2010.pdf>.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates geologic stage(s) not determined and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL MAX_AGE

ATTRIBUTE DEFINITION

MAXIMUM GEOLOGIC AGE -- Oldest age of potash mineralization, queried where uncertain; presented as a hyphen-delimited concatenation of geologic era, followed by geologic period, epoch, and stage, where known.

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 MIN_AGE

ATTRIBUTE DEFINITION

MINIMUM GEOLOGIC AGE -- Youngest age of potash mineralization, queried where uncertain; presented as a hyphen-delimited concatenation of geologic era, followed by geologic period, epoch, and stage, where known.

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 UNIT

ATTRIBUTE DEFINITION

UNIT -- Host rock unit in which potash mineralization occurs, queried where uncertain.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates host rock unit(s) not determined and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL LITH

ATTRIBUTE DEFINITION

LITHOLOGY -- Lithology and (or) composition of the host rock and (or) unconsolidated sediment; multiple terms are delimited by commas.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates lithology(s) not determined and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL K_THK_M

ATTRIBUTE DEFINITION

POTASH THICKNESS in METERS -- Reported thickness or range in thickness of the potash or potash-bearing sequence(s); values for multiple sequences are delimited by semicolons.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

ATTRIBUTE UNITS OF MEASURE meter

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates thickness not reported and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL K_DEPTH_M

ATTRIBUTE DEFINITION

POTASH DEPTH in METERS -- Reported depth to top of potash mineralization; values may represent a range in depth; values for multiple sequences are delimited by semicolons.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

ATTRIBUTE UNITS OF MEASURE meters

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates depth not reported and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL P_STATUS

ATTRIBUTE DEFINITION

PRODUCTION STATUS -- Production and (or) development status year in parentheses indicates date information was current.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE Active Production (2012)

ENUMERATED DOMAIN VALUE DEFINITION

Site is producing potash.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE None

ENUMERATED DOMAIN VALUE DEFINITION

Site did not produce potash.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE Not Determined

ENUMERATED DOMAIN VALUE DEFINITION

Production of potash at site has not been determined.

ATTRIBUTE

ATTRIBUTE LABEL COMPANY

ATTRIBUTE DEFINITION

COMPANY -- Name of company(s); year in parentheses indicates the date the information was known to be correct.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates company(s) not determined and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL P_K2O_MT

ATTRIBUTE DEFINITION

PRODUCTION of K2O in MILLION METRIC TONS -- Reported production of contained potash.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

ATTRIBUTE UNITS OF MEASURE million metric tons

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates production not reported and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL P_REFS

ATTRIBUTE DEFINITION

PRODUCTION REFERENCES -- Abbreviated citation(s) for source reference(s) of production data provided in P_K2O_MT. Full references are listed in the Lineage section of the metadata.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates production not reported and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL P_YEARS

ATTRIBUTE DEFINITION

PRODUCTION YEARS -- Year(s) or range of years of production data provided in P_K2O_MT.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

ATTRIBUTE UNITS OF MEASURE year

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates year of production not reported and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL MEAS_INVEN

ATTRIBUTE DEFINITION

MEASURED INVENTORY -- Categorical field for known reserves or resources.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE Yes

ENUMERATED DOMAIN VALUE DEFINITION

Reserves or resources are reported.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates reserves or resources not reported and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL RR_ORE_MT

ATTRIBUTE DEFINITION

RESERVES and (or) RESOURCES of ORE in MILLION METRIC TONS -- Reported reserves and (or) resources of ore. Abbreviations used: C1 — Reserves which have been identified and examined to such an extent as to enable a positive definition of their suitability for exploitation; these reserves are often in the early production phases; C2 — Reserves which have been identified and documented at a preliminary stage only (Jakubiak and Smakowski, 1994).

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates tonnage not reported and (or) not known.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

ATTRIBUTE UNITS OF MEASURE million metric tons

ATTRIBUTE

ATTRIBUTE LABEL RR_K2O_MT

ATTRIBUTE DEFINITION

RESERVES and (or) RESOURCES of K2O in MILLION METRIC TONS -- Reported reserves and (or) resources of contained K2O.

ATTRIBUTE DOMAIN VALUES

RANGE DOMAIN

ATTRIBUTE UNITS OF MEASURE million metric tons

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates tonnage not reported and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL RR_K2O_PCT

ATTRIBUTE DEFINITION

RESERVES and (or) RESOURCES of K2O in PERCENT -- Grade of reported reserves and (or) resources.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates grade not reported and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL RR_REFS

ATTRIBUTE DEFINITION

RESERVES and (or) RESOURCES REFERENCES -- Abbreviated citation(s) for source reference(s) of reserve and (or) resource data provided in RR_ORE_MT, RR_K2O_MT, and RR_K2O_PCT. Full references are listed in the Lineage section of the metadata.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates reserves or resources not reported and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL RR_YEARS

ATTRIBUTE DEFINITION

RESERVES and (or) RESOURCES YEARS -- Year of reserve and (or) resource data provided in RR_ORE_MT, RR_K2O_MT, and RR_K2O_PCT.

ATTRIBUTE DOMAIN VALUES

ENUMERATED DOMAIN

ENUMERATED DOMAIN VALUE [no entry]

ENUMERATED DOMAIN VALUE DEFINITION

No entry indicates year(s) not determined and (or) not known.

ATTRIBUTE

ATTRIBUTE LABEL MISC_NOTES

ATTRIBUTE DEFINITION

MISCELLANEOUS NOTES -- Additional general information, if any, for site.

ATTRIBUTE

ATTRIBUTE LABEL SHORT_REFS

ATTRIBUTE DEFINITION

SHORT REFERENCES -- Abbreviated citation(s) for source reference(s) used in compiling the data; multiple citations are delimited by commas. Full references are listed in the Lineage section of the metadata.

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METADATA CONTACT

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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

METADATA USE CONSTRAINTS
None.

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