ISBN 978-1-4606-1959-9 (CD)
ISBN 978-1-4606-1958-2 (zip file)

THESE TERMS GOVERN YOUR USE OF THIS DOCUMENT

Your use of this electronic information product ("EIP"), and the digital data files contained on it (the "Content"), is governed by the terms set out on this page ("Terms of Use"). By opening the EIP and viewing the Content , you (the "User") have accepted, and have agreed to be bound by, the Terms of Use.

EIP and Content: This EIP and Content is offered by the Province of Ontario's Ministry of Northern Development and Mines (MNDM) as a public service, on an "as-is" basis. Recommendations and statements of opinions expressed are those of the author or authors and are not to be construed as statement of government policy. You are solely responsible for your use of the EIP and its Content. You should not rely on the Content for legal advice nor as authoritative in your particular circumstances. Users should verify the accuracy and applicability of any Content before acting on it. MNDM does not guarantee, or make any warranty express or implied, that the Content is current, accurate, complete or reliable or that the EIP is free from viruses or other harmful components. MNDM is not responsible for any damage however caused, which results, directly or indirectly, from your use of the EIP or the Content. MNDM assumes no legal liability or responsibility for the EIP or the Content whatsoever.

Links to Other Web Sites: This EIP or the Content may contain links, to Web sites that are not operated by MNDM. Linked Web sites may not be available in French. MNDM neither endorses nor assumes any responsibility for the safety, accuracy or availability of linked Web sites or the information contained on them. The linked Web sites, their operation and content are the responsibility of the person or entity for which they were created or maintained (the "Owner"). Both your use of a linked Web site, and your right to use or reproduce information or materials from a linked Web site, are subject to the terms of use governing that particular Web site. Any comments or inquiries regarding a linked Web site must be directed to its Owner.

Copyright: Canadian and international intellectual property laws protect the Content. Unless otherwise indicated, copyright is held by the Queen's Printer for Ontario.

It is recommended that reference to the Content be made in the following form:

Ontario Geological Survey 2013. Ontario Drill Hole Database—2013; Ontario Geological Survey.

Use and Reproduction of Content: The EIP and the Content may be used and reproduced only in accordance with applicable intellectual property laws. Non-commercial use of unsubstantial excerpts of the Content is permitted provided that appropriate credit is given and Crown copyright is acknowledged. Any substantial reproduction of the Content or any commercial use of all or part of the Content is prohibited without the prior written permission of MNDM. Substantial reproduction includes the reproduction of any illustration or figure, such as, but not limited to graphs, charts and maps. Commercial use includes commercial distribution of the Content, the reproduction of multiple copies of the Content for any purpose whether or not commercial, use of the Content in commercial publications, and the creation of value-added products using the Content.

Contact:

FOR FURTHER INFORMATION ON	PLEASE CONTACT:	BY TELEPHONE:	BY E-MAIL:
The Reproduction of the EIP or Content	MNDM Publication Services	Local: (705) 670-5691 Toll-Free: 1-888-415-9845, ext. 5691 (inside Canada, United States)	Pubsales.ndm@ontario.ca
The Purchase of MNDM Publications	MNDM Publication Sales	Local: (705) 670-5691 Toll-Free: 1-888-415-9845, ext. 5691 (inside Canada, United States)	Pubsales.ndm@ontario.ca
Crown Copyright	Queen's Printer	Local: (416) 326-2678 Toll-Free: 1-800-668-9938 (inside Canada, United States)	Copyright@gov.on.ca

For information on purchasing all publications, including digital data, contact:
Publication Sales
Ministry of Northern Development and Mines
933 Ramsey Lake Rd., Level A3
Sudbury, Ontario P3E 6B5
Tel: 1-888-415-9845, ext. 5691 (toll-free inside Canada and the United States)
Tel: (705) 670-5691 (local calls)
Fax: (705) 670-5770

Users of OGS products are encouraged to contact those Aboriginal communities whose traditional territories may be located in the mineral exploration area to discuss their project.

Ontario Drill Hole Database—2013

by Ontario Geological Survey

This publication can be downloaded from
http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm_dir.asp?type=pub&id=ODHD

Geoscience data, including *Ontario Drill Hole Database—2013,* collected by the Ontario Geological Survey (OGS), are also provided as data layers through OGSEarth (www.ontario.ca/ogsearth), which can be viewed using user-friendly geographic information programs such as Google Earth™ mapping service.

Introduction

The Ministry of Northern Development and Mines is releasing an updated version of the Ontario Drill Hole Database (ODHD). This database is an inventory of drill holes in the province of Ontario. Drill hole data are compiled from assessment files on a regular basis; the Ontario Drill Hole Database is continuously updated and is released periodically on CD. This release includes drill holes for which information was received by March 31, 2013, adding more than 15 000 new drill holes since the last release (ERLIS Data Set 13—Revision 1, December 2005). A number of data and location errors have also been corrected. This release supersedes all previous releases.

The Ontario Drill Hole Database contains information for over 141 000 percussion, overburden, sonic and diamond-drill holes. Data include location, company name, company hole number, hole orientation, hole depth, and overburden depth if applicable. The presence of assay results with cutoff values for gold, silver, copper, zinc, lead, nickel and platinum group elements is noted. Source assessment file numbers are captured for cross referencing with the assessment file database (AFRI).

Data are provided in 2 formats in this release: 1) a relational database and 2) seamless ODHD provincial coverage in a geospatial GIS (ESRI® shape file) format. The complete ODHD relational database is provided in Microsoft® Access® 2007/2010 (*.accdb*) format. Geospatial data are provided in North American Datum 1983 (NAD83) geographic co-ordinate system using Geodetic Reference System 1980 (GRS80).

Database History

The drill hole database was created in 1995 from the provincial archive of assessment files submitted to MNDM. Assessment files that had already been converted to digital format during the Assessment File Research Image (AFRI) project, and were loaded into the AFRI database, were used as the original source for drill hole data. Assessment files submitted after the initial compilation were reviewed on an ongoing basis for drill holes to be added to the drill hole database. Updates have continued regularly since that time.

The drill hole database was made accessible to clients in 1996 on the Earth Resources and Land Information System (ERLIS) through central work stations installed at 4 MNDM offices: Toronto, Sudbury, Timmins and Thunder Bay. In 1999, the database was migrated to the Earth Resources Mineral Exploration webSite (ERMES) and made accessible to clients worldwide through the Internet. The Ontario Drill Hole Database is now available for viewing and querying on the GeologyOntario web site. The database and associated geospatial data was also released periodically on CD for sale to clients. This version, Ontario Drill Hole Database—2013, supersedes all previous releases.

Data Completeness and Level of Accuracy

Drill hole data are compiled from assessment files that have been submitted to MNDM in accordance with the Ontario *Mining Act*. Other drill hole information, for which MNDM may have information from other sources, may not be included in the database. Typical sources of this are

1. Patented Ground: drilling conducted on patented ground is not usually submitted for assessment, but information and/or core may have been donated to MNDM.
2. Drill Core Library: the Drill Core Library contains core from more than 12 000 drill holes, some of which has been donated from patented ground or other situations where assessment work was not submitted.
3. Donated Files: files donated to the Resident Geologist Program offices by exploration companies often contain data not included in assessment files.
4. RGP Unique Files: Resident Geologist Program offices may contain unique files that are not duplicated in the assessment file database and, therefore, were not included in the initial drill hole conversion.

The level of accuracy of drill hole locations is dependent upon the source document used to derive the hole location. The "Map Source" field in the database captures details regarding the map source. Source categories used, and the criteria that define each, are as follows:

CL (CLAIM MAP)
: A drill hole is located relative to a post on a claim. The claim itself may not be spatially located relative to any topographical features. For historic drilling, when possible, old claim maps were used to position the claim and thus obtain a location for the hole.

DT (DETAIL COMPANY MAP)
: Drill holes are located relative to a local grid plotted on a detailed grid map included in the assessment file. The local grids are usually tied to topographic or claim boundaries. Holes are digitized relative to each other, then the group of holes is referenced to an NTS base. The holes are spatially correct relative to each other. This ensures the accuracy of the detailed company map was not compromised by the difference in scale between it and the NTS base.

EE (EMR E SIZE)
: The locations are derived by digitizing points from a 1:50 000 plot of the 1:250 000 Federal Energy, Mines and Resources (EMR) maps.

SK (SKETCH MAP)
: The location is derived from a sketch map, generally an 8½ × 11″ drawing or other labelled sketch.

UTM (UTM CO-ORDINATES)
: Universal Transverse Mercator co-ordinates are provided for the drill hole location, or can be derived from geographic co-ordinates that are included in the assessment file.

WO (CENTRE OF CLAIM)
: The only source of information for the drill hole is the Report of Work form.

Data

The data are stored in 2 folders: 1) Access Database, and 2) Geospatial Data.

"Access Database" folder

The Ontario Drill Hole Database is provided as a Microsoft® Access® 2007/2010 (*odh_march2013.accdb*) format file. Supporting documentation, provided as a portable document format (*ODHD Data Model.pdf*) file in this folder, outlines the data model and table relationships, and gives definitions for the data. Please refer to this document for explanations of how the data are collected and the meaning of individual data fields.

"Geospatial Data" folder

The geospatial files are provided for the drill hole geospatial and attribute data. ESRI® software (*odh_march2013.shp*) utilizes the shape file format. The shape file consists of many subfiles, including a **feature geometry** file (*.shp*), a **database** file (*.dbf*), a **lookup index** file (*.shx*), a **projection** file (*.prj*) and feature index format files (*.sbn* and *.sbx*).

Projection

The georeferenced spatial data in this data release are provided in North American Datum 1983 (NAD83) geographic co-ordinate system (GCS_NAD83) (as latitudes and longitudes) using Geodetic Reference System 1980 (GRS80) and Transverse Mercator projection. The latitude and longitude co-ordinates in the drill hole database tabular data (*.accdb* file) are stored in NAD27; the Universal Transverse Mercator (UTM) co-ordinates can be either NAD27 or NAD83 as indicated in the corresponding "UTM datum" field.

Using the Data

1. Microsoft® Access® Database

The complete Ontario Drill Hole database, in Microsoft® Access® 2007/2010 (*.accdb*) format, contains data for over 140 000 percussion, overburden, sonic and diamond drill holes in Ontario. For a detailed description of the tables, fields and relationships in the database, please refer to the documentation contained in the Access Database folder (*ODHD Data Model.pdf*).

The database has been designed to work in Microsoft® Access® 2007 or 2010. If you have a later version of Microsoft® Access®, the query and report tools may not function correctly, although the database tables will still be accessible. To use the file, you must have a typical installation of Microsoft® Access® 2010 on your computer.

When the database opens, a query window is displayed that prompts for search criteria. Four search criteria are available: MNDM Hole ID, Hole Type Code, Township, and Element Code. These can be used in any combination to identify specific holes or groups of holes of interest.

Search criteria for MNDM Hole ID must be typed in manually. Please note that, for this field only, search criteria must be prefaced with a search parameter such as = or >. Simply entering the hole number will not work. Some examples of valid criteria are =234, <20, >304, Between 700 And 710.

Values for the other 3 criteria are chosen from a drop-down list of options. Definitions for the codes displayed are as follows:

Hole Type Code:

DD	diamond drill hole
DW	wedged diamond drill hole
OD	overburden drill hole (auger,wacker)
PD	percussion drill hole
RC	reverse circulation (sonic)
UD	underground drilling

Element Code:

AG	presence of silver: at least 35 grams per ton
AU	presence of gold: at least 3000 ppb
AU5	presence of gold: between 500 and 3000 ppb
CU	presence of copper: at least 0.1%
NI	presence of nickel: at least 0.1%
PB	presence of lead: at least 1.0
PGE	presence of platinum group elements: at least 500 ppb
ZN	presence of zinc: at least 0.25%

Selecting "GO" executes the search, causing a new window to open with a list of drill holes matching the query criteria. From this window, you can view details of a specific drill hole, or print a summary report, by selecting the hole (click on the square to the left of the hole ID so a triangle appears beside the record), then selecting any of the option buttons along the bottom of the window.

2. Geospatial Data

MNDM assumes no responsibility for any problems arising from the installation of ESRI® software. Clients install these applications at their own risk.

The geospatial data include most of the data fields from the drill hole database with the exception of element and log information. The data fields in the geospatial files include

MNDM_ID	a unique number assigned by MNDM to reference the drill hole in the database
TWP_AREA	geographic township or NTS map sheet area that covers the drill hole location
TYPE	type of drilling
COMPANY_NA	name of the company for whom the hole was drilled
COMPANY_HO	company hole number
MAP_SOURCE	source for the drill hole data
RGP_DISTRI	Resident Geologist Program district that covers the drill hole location
NTS	NTS quadrant for the location of the drill hole
AZIMUTH	azimuth for the drill hole

DIP	dip for the drill hole
LENGTH	length of the drill hole, in metres
OVERBURDEN	length of the hole down to bedrock, in metres
YEAR_DRILL	year the hole was drilled
AFRI_FID	file number, from the Assessment File Database (AFRI), for the file from which the drill hole information was derived. If more than one file was used additional AFRI numbers are noted in the comments.
COMMENTS	clarification relating to data source, additional information, or AFRI file source

Please refer to the *odh_march2013.accdb* file in the Access Database folder for complete data on individual drill hole records.

Ontario Geological Survey
April 2013