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Ontario Geological Survey Preliminary Map P.3804
Geological Survey of Canada Open File 8200
Precambrian Geology of the Winiskisis Channel Area, "Ring of Fire" Region, Ontario—Northern Sheet, scale 1:100 000.

Ontario Geological Survey Preliminary Map P.3805
Geological Survey of Canada Open File 8201
Precambrian Geology of the McFaulds Lake Area, "Ring of Fire" Region, Ontario—Central Sheet, scale 1:100 000.

Ontario Geological Survey Preliminary Map P.3806
Geological Survey of Canada Open File 8202
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Miscellaneous Release—Data 343

Geochronology, Mineral Deposit, Drill-Core Relogging and Drill-Core Compilation Data from the Winiskisis Channel, McFaulds Lake and Highbank Lake Areas, "Ring of Fire" Region, Northern Ontario

by R.T. Metsaranta[1] and M.G. Houlé[2]

This publication can be downloaded from
http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm_dir.asp?type=pub&id=MRD343

This digital release contains compiled drill-hole data from the "Ring of Fire" area of northern Ontario and complements the information displayed on Ontario Geological Survey Preliminary Maps P.3804, P.3805 and P.3806. The data were compiled as part of the McFaulds Lake area mapping project (Project Unit 10-005) between June 2010 and September 2016.

This release comprises 10 Microsoft® Excel® 2010 (*.xlsx*) workbook files.

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Data are organized into 3 folders:

1. Drill Hole Data
2. Mineral Deposit Inventory Data
3. Geochronology

1. Drill Hole Data. This folder contains 4 Microsoft® Excel® 2010 (*.xlsx*) workbook files. The workbook files in this folder provide a summary of the overburden and diamond-drilling data used in conjunction with geophysical data and outcrop mapping to aid in the interpretation of contacts shown on maps OGS Preliminary Maps P.3804, P.3805 and P.3806.

"MRD343_DH_Collar.xlsx" contains 1 worksheet. It provides information about the location and orientation of 1905 compiled drill holes. Unedited information from the Ontario Drill Hole Database (OGS 2014) is provided for cross-referencing purposes only. The AFRI identifier allows the reader to search for the specific assessment files containing company drill-core logs and assay reports. Note that many of the drill holes provided in this table are not currently listed in OGS (2014). The worksheet includes the following columns.

Column Name	Explanation
IDENTIFIER	A unique number identifier for the row.
HOLE IDENTIFIER	A unique identifier for the drill hole. Usually the name given by the company that drilled the hole. Consistent in all of the worksheets in this data release.
SYMBOL	Symbol used on Maps P.3804, P.3805 and P.3806. Abbreviations: DHD - diamond-drill hole, DHRC - reverse circulation or sonic overburden drill hole.
UTM Zone	UTM zone, typically Zone 16.
UTM NAD83 Easting	Easting of drill collar provided in metres in UTM Zone 16 NAD83.
UTM NAD83 Northing	Northing of drill collar provided in metres in UTM Zone 16 NAD83.
AZIMUTH	The azimuth of the drill hole provided in degrees relative to true north.
DIP	The plunge of the drill hole in degrees. All holes are from the surface and thus point downward and are given a negative number.
DEPTH	The total depth of the drill hole in metres.
ELEVATION compiled	In some cases an elevation in metres was provided by the compilation source. If so it is listed here.
ELEVATION zero	Elevation of collar is arbitrarily assigned to 0 m.
STATUS Collar	A statement of where the collar information was derived from.
STATUS Logs	A statement of where the drill log information comes from.
DATA SOURCE	A statement about the data source, including specific references in sources of information.

ADDITIONAL DATA SOURCE	A note if multiple data sources about the collar data are known. References from the literature are provided in the reference list at the end of this read_me file.
YEAR	The year the hole was drilled.
COMPANY	The name of the company that drilled the hole. This data should be verified if the information is critical.
NAME in ODH	The drill-hole name (unedited) in the Ontario Drill-Hole Database (ODH) (OGS 2014).
ODH Company	The company that drilled the hole according to the ODH (OGS 2014). Unedited.
TOWNSHIP or AREA	The name of the township or base map area in which the hole was drilled from ODH (OGS 2014).
NTS	The National Topographic System (NTS) map sheet in which the drill hole was drilled. From OGS (2014).
AFRI IDENTIFIER	The Assessment File Record Inventory (AFRI) file that contains information about the drill hole including logs. From OGS (2014).
MNDM IDENTIFIER	MNDM drill-hole identifier from ODH (OGS 2014).
AZIMUTH ODH	Drill-hole azimuth from ODH (OGS 2014) in degrees.
DIP ODH	Drill-hole dip from ODH (OGS 2014) in degrees.
LENGTH ODH	Drill-hole length from ODH (OGS 2014) in metres.
OVERBURDEN ODH	Thickness of overburden in metres, from ODH (OGS 2014).

"MRD343_DH_SURVEY_DATA.xlsx" contains 1 worksheet. It provides some down-hole orientation data that were compiled during this project. It does not include all the drill holes listed in MRD343_DH_Collar. It is compiled from both assessment files and data provided by companies. It is provided for information purposes and should not be relied upon, as the quality of individual readings could not be verified. The worksheet includes the following columns.

Column Name	**Explanation**
HOLE IDENTIFIER	A unique identifier for the drill hole. Usually the name given by the company that drilled the hole. Consistent in all of the workbooks in this data release.
DEPTH	The depth (in metres) the orientation measurement was taken.
AZIMUTH	The azimuth of the drill holes at the depth the measurement was taken, in degrees relative to true north.
DIP	The dip of the drill hole, in degrees, at the depth the measurement was taken.

"MRD343_DH_ROCK_CODES.xlsx" contains 1 worksheet. The compiled diamond-drilling data presented in this workbook are an attempt to homogenize drill logs compiled from various sources including assessment files and proprietary company data. Data are provided in tabular format that includes location information in a three dimensional format. The various columns in the tables included in the data release are explained below and in Tables 1 and 2 of this read_me file.

The data sources used for the compilation are of varied quality and detail. Data compilation focused on determination of rock type. Listed rock types may differ significantly from the actual rock types found at the specified location. Note that compiled rock unit intervals were not verified and are presented here independent of the summary of re-logging observations in the workbook "*MRD343_DH_RELOG_DATA.xlsx*". As such, when plotted these data may not be wholly in agreement with the interpreted map unit contacts displayed on P3804, P3805 and P3806. Also note that the published scale of the aforementioned maps required simplification of the detailed scale of compiled intervals presented in this table.

Column Name	Explanation
IDENTIFIER	A unique number identifier for the row.
HOLE IDENTIFIER	A unique identifier for the drill hole. Usually the name given by the company that drilled the hole. Consistent in all of the workbooks in this data release.
From	The distance measured from the top of the drill hole (set at 0 metres) to the top of the rock unit in metres.
To	The distance measured from the top of the drill hole (set at 0 metres) to the base of the rock unit, in metres These provide the upper (From) and lower (To) depths of each rock interval logged in the core in metres.
ROCK CLASS	A broad subdivision of the rock interval utilizing the OGS data collection system used by the author, following Muir et al. (2016). See Table 1 for subdivisions.
ROCK SUBCLASS	This column further subdivides the rock interval into subclasses based on broad composition, following Muir et al. (2016). See Table 1 for subdivisions.
ROCK TYPE	This column provides a specific rock name for the interval, following Muir et al. (2016). See Table 1 for rock types used.
Simple Compilation Code	This column provides a simple subdivision of the rock units in the compilation into the categories listed below. D1 Ultramafic metavolcanic rocks D2 Mafic metavolcanic rocks D3 Felsic to intermediate metavolcanic rocks D4 Clastic metasedimentary rocks D5 Chemical metasedimentary rocks D6 Ultramafic metaintrusive rocks D7 Mafic metaintrusive rocks D8 Felsic to intermediate intrusive rocks, includes syenitic rocks and felsic-intermediate dikes Dalt Logged as altered rock Dfault Logged as fault, shear, breccia, phyllonite, cataclastic, etc. Dkim Logged as kimberlite

Dlamp	Logged as lamprophyre
Dmd	Mafic dike
Dnd	No data
Dob	Logged as overburden, till, etc.
Dpz	Logged as Paleozoic rock
Dqv	Logged as quartz vein
Dreg	Logged as weathered and/or altered zone at the Paleozoic–Precambrian unconformity
Dsm	Logged as sulphide mineralized interval
Dumd	Ultramafic dike
?	Unknown

Simple Code Modifiers

This column provides some additional detailed rock-type information that supplements the information in the simple compilation column.

Unit D8 modifiers are included where possible.

a	tonalite
b	granodiorite
c	granite and/or alkali feldspar granite
d	monzonite and/or quartz monzonite
e	syenite and/or quartz syenite
f	diorite and/or quartz diorite
g	biotite-bearing
h	hornblende-bearing
i	magnetite-bearing
j	muscovite-bearing
k	garnet-bearing
l	xenolith-bearing
m	quartz phyric
n	alkali feldspar phyric
o	plagioclase phyric
p	pegmatitic dike or sill
q	fine-grained dike or sill
r	graphic texture
s	strongly foliated or gneissic

Unit D7 modifiers are included where possible.

a	melagabbro to pyroxenite
b	gabbro
c	olivine gabbro
d	leucogabbro
e	anorthosite
f	quartz gabbro
g	magnetitite
h	magnetite-bearing
i	apatite-bearing
j	ilmenite-bearing
k	biotite-bearing
l	pegmatitic
m	amphibolitized
n	schistose

Unit D6 modifiers are included where possible.

a	dunite
b	peridotite

	c olivine pyroxenite d pyroxenite (foliated) e pyroxenite (typically massive) f chromitite g semi-massive chromite h interlayered chromite and peridotite-dunite i chromite-bearing (typically a few percent of disseminated oxide) j magmatic breccia k strongly serpentinized l talc-carbonate schist Unit D5 modifiers are included where possible. a oxide iron formation b chert c carbonate ironstone, marble d sulfide iron formation Unit D4 modifiers are included where possible. a sandstone b siltstone c mudstone d graphitic and/or sulphide-rich mudstone f schistose g gneissic to migmatitic Unit D3 modifiers are included where possible. a massive flow c vesicular and/or amygdaloidal flows d tuff, lapilli-tuff e tuff breccia, pyroclastic breccia h schistose Unit D2 modifiers are included where possible. a massive flow b pillowed flow d tuff, lapilli-tuff e tuff breccia, pyroclastic breccia f flow-top breccia and/or hyaloclastite and/or autobrecciated g amphibolitized h schistose i porphyritic Unit D1 modifiers are included where possible. a massive (aphyric) b massive (cumulate)
Projected Easting FROM_TO	UTM coordinate (in Zone 16 NAD83) of the centre point of the “From”, “To” interval projected vertically to surface. Note that the projected location may differ significantly from the actual location as in most instances the strike and/or dip of the rock unit described is unknown. Or, the projected location may not even project to surface depending on the specific, poorly understood, local geological conditions.
Projected Northing FROM_TO	UTM coordinate (in Zone 16 NAD83) of the centre point of the “From”, “To” interval projected vertically to surface. Note that the projected location may differ significantly from the actual location as in most instances the strike

	and/or dip of the rock unit described is unknown. Or, the projected location may not even project to surface depending on the specific, poorly understood, local geological conditions.
Drill hole Relative Elevation FROM_TO	Relative elevation of the centre point of the "From", "To' interval. True elevations of all of the drill collar locations are not known and as such all are arbitrarily assigned a value of 0 metres. Thus, the values in this column are relative to an imaginary flat plane covering the project area that has an elevation value of 0 metres.
Projected Easting TO	UTM coordinate (in Zone 16 NAD83) of the lower contact (e.g., depth of "To" column) of the "From", "To" interval projected vertically to surface.
Projected Northing TO	UTM coordinate (in Zone 16 NAD83) of the lower contact (e.g., depth of "To" column) of the "From", "To" interval projected vertically to surface.
Elevation TO	Relative elevation of lower contact of the rock interval of the "From", "To"

"MRD343_DH_RELOG_NOTES_CODES.xlsx" contains 1 worksheet. This table provides a summary of core relogging observations made by the author. The table provides simple coding for comparison with compiled rock type information in *MRD343_DH_ROCK_CODES.xlsx* and coding consistent with the map legend on maps P.3804, P.3805 and P.3806. It includes the following columns.

Column Name	Explanation
IDENTIFIER	A unique number identifier for the row.
HOLE IDENTIFIER	A unique identifier for the drill hole. Usually the name given by the company that drilled the hole. Consistent in all of the workbooks in this data release.
From	The distance measured from the top of the drill hole (set at 0 metres) to the top of the rock unit in metres.
To	The distance measured from the top of the drill hole (set at 0 metres) to the base of the rock unit, in metres. These provide the upper (From) and lower (To) depths of each rock interval logged in the core in metres.
Length	The thickness of the rock unit in metres as measured along the drill-core long axis, i.e., "To" value minus "From" value.
ROCK CLASS	A broad subdivision of the rock interval utilizing the OGS data collection system used by the author, following Muir et al. (2016). See Table 1 for subdivisions.
ROCK SUBCLASS	This column further subdivides the rock interval based into subclasses based on broad composition, following Muir et al. (2016). See Table 1 for subdivisions.
ROCK TYPE	This column provides a specific rock name for the interval, following Muir et al. (2016). See Table 1 for rock types used.
Simple Compilation Code	This column provides a simple subdivision of the rock units in the compilation into the categories listed below. 1 Ultramafic metavolcanic rocks 2 Mafic metavolcanic rocks

3	Felsic to intermediate metavolcanic rocks
4	Clastic metasedimentary rocks
5	Chemical metasedimentary rocks
6	Ultramafic metaintrusive rocks
7	Mafic metaintrusive rocks
8	Felsic to intermediate intrusive rocks, includes syenitic rocks and felsic-intermediate dikes
alt	alteration zone without specified rock type
fault	fault, shear zone, high-strain zone, etc.
md	mafic dike, likely Proterozoic
nd	no data
OB	overburden, till, etc.
pz	Paleozoic rock
qv	vein
reg	regolith and or altered zone at the Paleozoic-Precambrian unconformity
SM	sulphide mineralization

MAP CODE

Interval coded according to the map legend common to maps P.3804, P.3805 and P.3806.

Additional modifier codes that may be present in this column of the table that are not present in the map legends. These are as follows:

Units 12-19

a	tonalite
b	granodiorite
c	granite and/or alkali feldspar granite
d	monzonite and/or quartz monzonite
e	syenite and/or quartz syenite
f	diorite and/or quartz diorite
g	biotite-bearing
h	hornblende-bearing
i	magnetite-bearing
j	muscovite-bearing
k	garnet-bearing
l	xenolith-bearing
m	quartz phyric
n	alkali feldspar phyric
o	plagioclase phyric
p	pegmatitic dike or sill
q	fine-grained dike or sill
r	graphic texture
s	strongly foliated or gneissic

Units 6 and 9

a	dunite
b	peridotite
c	olivine pyroxenite
d	pyroxenite (foliated)
e	pyroxenite (typically massive)
f	chromitite
g	semi-massive chromite
h	interlayered chromite and peridotite-dunite
i	chromite-bearing
j	magmatic breccia
k	strongly serpentinized
l	talc-carbonate schist

	Units 7,8,10,11 a melagabbro to pyroxenite b gabbro c olivine gabbro d leucogabbro e anorthosite f quartz gabbro g magnetitite h magnetite-bearing i apatite-bearing j ilmenite-bearing k biotite-bearing l pegmatitic m amphibolitized n schistose Also identified in this column are: alt alteration zone without specified rock type fault fault, shear zone, high-strain zone, etc. md mafic dike, likely Proterozoic nd no data OB overburden, till, etc. pz Paleozoic rock qv vein reg regolith and or altered zone at the Paleozoic Precambrian unconformity SM sulphide mineralization
MINERAL	Noteworthy alteration or metamorphic mineralogy. See Table 2 for list of mineral abbreviations.
MINERALIZATION	Noteworthy occurrences of sulphide and/or oxide ore minerals. See Table 2 for list of mineral abbreviations.
Projected Easting FROM_TO	UTM coordinate (in Zone 16 NAD83) of the centre point of the “From”, “To” interval projected vertically to surface. Note that the projected location may differ significantly from the actual location as in most instances the strike and/or dip of the rock unit described is unknown. Or, the projected location may not even project to surface depending on the specific, poorly understood, local geological conditions
Projected Northing FROM_TO	UTM coordinate (in Zone 16 NAD83) of the centre point of the “From”, “To” interval projected vertically to surface. Note that the projected location may differ significantly from the actual location as in most instances the strike and/or dip of the rock unit described is unknown. Or, the projected location may not even project to surface depending on the specific, poorly understood, local geological conditions.
Elevation FROM_TO	Relative elevation of centre point of the “From”, “To’ interval. True elevations of all of the drill collar locations are not known and as such all are arbitrarily assigned a value of 0 metres. Thus, the values in this column are relative to an imaginary flat plane covering the project area that has an elevation value of 0 metres.

Projected Easting TO	UTM coordinate (in Zone 16 NAD83) of the lower contact (e.g., depth of "To" column) of the "From", "To" interval projected vertically to surface.
Projected Northing TO	UTM coordinate (in Zone 16 NAD83) of the lower contact (e.g. depth of "To" column) of the "From", "To" interval projected vertically to surface.
Elevation TO	Relative elevation of lower contact of the rock interval of the "From", "To"

Table 1. Listing of ROCK CLASS, ROCK SUBCLASS, and ROCK TYPE names used in workbooks "*MRD343_DH_ROCK_CODES.xlsx*" and "*MRD343_DH_RELOG_NOTES_CODES.xlsx*". See Muir et al. (2016) for details on the various categories and rock names.

ROCK CLASS	ROCK SUBCLASS	ROCK TYPE
Overburden	Overburdern	
INTRUSIVE	Anorthosite	
	Dioritoid	
	Gabbroid	
	Granitoid	
	Special Cases	
	Ultramafic Rock	
VOLCANIC	Felsic	
PYROCLASTIC	Intermediate	
	Mafic	
	Mafic Rocks	
	Ultramafic	
VOLCANIC FLOWS	Felsic	
	Intermediate	
	Mafic	
	Mafic Rocks	
	Ultramafic	
VOLCANIC	Unsubdivided	
SEDIMENT	Chemical	
	Terrigenous-clastic	
METAMORPHIC	Gneiss	
	Schist	
OTHER	No Data	
	Not applicable	
	Unsubdivided	
		alkali-feldspar granite
		amphibolite
		anorthosite
		calcitic rock
		chert
		chromite
		dike
		diorite
		dolostone
		felsic dike
		felsic gneiss
		felsic schist
		gabbro
		granite

granodiorite
hematite ironstone
impure dolomitic limestone
impure limestone
intermediate dike
intermediate gneiss
intermediate schist
lapilli-tuff
lava flow
limestone
mafic dike
mafic gneiss
mafic schist
magnetite ironstone
magnetitite
muddy sandstone
muddy sandy conglomerate
mudstone
no data
not applicable
olivine pyroxenite
ortho-amphibolite
overburden
paragneiss
peridotite
pyroxenite
quartz diorite
sandstone
sandy mudstone
sandy siltstone
siltstone
silty sandstone
tonalite
tuff
tuffaceous sandstone
tuff-breccia
ultramafic schist
unsubdivided

Table 2. Listing of mineral abbreviations used in workbook "*MRD343_DH_RELOG_NOTES_CODES.xlsx*".

Abbreviation	Mineral	Abbreviation	Mineral (Sulphides and Oxides)
amp	amphibole	chr	chromite
ank	ankerite	Cpy	chalcopyrite
bt	biotite	Ilm	ilmenite
c	carbonate	Mag	magnetite
chl	chlorite	Pn	pentlandite
crd	cordierite	Po	pyrrhotite
ep	epidote	Py	pyrite
grt	garnet	SM	sulphide minerals
gru	grunerite	Sp	sphalerite
hem	hematite		
kfs	potassium feldspar		
ms	muscovite		
oam	ortho-amphibole		
phl	phlogopite		
pl	plagioclase		
qtz	quartz		
ser	sericite		
slf	silification		
srp	serpentine		
st	staurolite		
tlc	talc		
tur	tourmaline		

2. Mineral Deposit Inventory Data. This folder contains 3 Microsoft® Excel® 2010 (*.xlsx*) files. Each file contains the Mineral Deposit Inventory (OGS 2016) and other compiled mineral deposit information that is contained on OGS Maps P.3804, P.3805, and P.3806, respectively.

3. Geochronology. This folder contains 3 Microsoft® Excel® 2010 (*.xlsx*) files. Each file contains the tabulated geochronology information that is contained on Maps P.3804, P.3805, and P.3806, respectively.

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Additional Data Sources

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