

**Metadata format: ISO 19139****ATA GeoMAP geological units (v.2022-08)****ISO 19139 metadata content**

- Resource Identification Information
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- Reference System Information
- Data Quality Information
- Distribution Information
- Metadata Information

**Resource Identification Information**

## CITATION

TITLE ATA GeoMAP geological units (v.2022-08)

CREATION DATE 2015-01-01

PRESENTATION FORMAT mapDigital

COLLECTION TITLE ATA SCAR GeoMAP Geology (v.2022-08)

OTHER CITATION DETAILS GeoMAP Team: Compilers: S.C. Cox, B. Smith Lyttle (GNS Science). 'Engine room' Workers: T. Abu-Alam (Norway), M. Ballinger (Australia), L. Bamber (UK), S. Elkind (USA), B. Kitchener (Australia), L. Lelli (Italy), J. Mawson (NZ), A. Millikin (USA), N. Dal Seno (Italy), L. Whitburn (NZ), T. White (USA). Principal Collaborators: A. Burton-Johnson (UK), G. Capponi (Italy), L. Crispini (Italy), D. Elliot (USA), S. Elvevold (Norway), J. Goodge (USA), J. Halpin (Australia), A. Läufer (Germany), E. Mikhalsky (Russia), P. Morin (USA), C. Siddoway (USA), A. Martin (NZ), F. Morgan (NZ). Scientific and Technical Advisors: J. Galindo-Zaldívar (Spain), D. Heron (NZ), J. López-Martínez (Spain), W.B. Lyons (USA), P. Morin (USA), N. Pant (India), M. Rattenbury (NZ), O. Raymond (Australia), P. Scadden (NZ), B. Storey (NZ), G. Wilson (NZ).

THEMES OR CATEGORIES OF THE RESOURCE geoscientificInformation

## PLACE KEYWORDS

KEYWORDS Antarctica

## DESCRIPTIVE KEYWORDS

KEYWORDS geology, lithology, geomorphology

## DESCRIPTIVE KEYWORDS

KEYWORDS Downloadable Data

THESAURUS ArcIMS Metadata Service Content Types

## ABSTRACT

This layer comprises geological unit data for Antarctica. It represents a synthesis of existing published and unpublished mapping of the geology of this area in a single dataset at a regional scale. These data comprise polygon geometry with each polygon having attributes describing the unit type, name, age, lithology, stratigraphy, and supporting background information, where this is known. This layer complies with the GeoSciML Lite (version 4.1) standard for GeologicalUnitView and fields required by that standard were populated using

the CGI Controlled Vocabulary (version 2016.01).The GeoMAP dataset was produced as part of the Regional Geological Map Archive and Datafile, one of the Nationally Significant Collections and Databases supported by the New Zealand Government's Strategic Science Investment Fund (contract C05X1701).DOI <https://doi.org/10.21420/7SH7-6K05>

## PURPOSE

This vector data layer spatially represents the geological units exposed in surface rock outcrops and surficial deposits, at a regional scale.

DATASET LANGUAGE English

DATASET CHARACTER SET utf8

STATUS completed

MAINTENANCE

UPDATE FREQUENCY asNeeded

## RESOURCE CONSTRAINTS

## CONSTRAINTS

## LIMITATIONS OF USE

This material is licensed under a Creative Commons Attribution 4.0 International License. Acknowledging the source of data from both GNS Science and SCAR (The Scientific Committee on Antarctic Research) is requested. The following citation is suggested:

Cox, Simon Christopher; Smith Lyttle, Belinda; Elkind, Samuel; Smith Siddoway, Christine; Morin, Paul; Capponi, Giovanni; Abu-Alam, Tamer; Ballinger, Matilda; Bamber, Lauren; Kitchener, Brett; Lelli, Luigi; Mawson, Jasmine F; Millikin, Alexie; Dal Seno, Nicola; Whitburn, Louis; White, Tristan; Burton-Johnson, Alex; Crispini, Laura; Elliot, David; Elvevold, Synnove; Goodge, John W; Halpin, Jacqueline A; Jacobs, Joachim; Mikhalsky, Eugene; Martin, Adam P; Morgan, Fraser; Smellie, John; Scadden, Phil; Wilson, Gary (2023): The GeoMAP (v.2022-08) continent-wide detailed geological dataset of Antarctica. PANGAEA, <https://doi.org/10.1594/PANGAEA.951482>

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## RESOURCE CONSTRAINTS

## LEGAL CONSTRAINTS

ACCESS CONSTRAINTS otherRestrictions

## OTHER CONSTRAINTS

<http://creativecommons.org/publicdomain/zero/1.0/>

## OTHER CONSTRAINTS

Public Domain Dedication

SPATIAL REPRESENTATION TYPE vector

PROCESSING ENVIRONMENT Version 6.2 (Build 9200) ; Esri ArcGIS 10.8.1.14362

## SPATIAL RESOLUTION

## DATASET'S SCALE

SCALE DENOMINATOR 100000

## EXTENT

## GEOGRAPHIC EXTENT

## BOUNDING RECTANGLE

EXTENT CONTAINS THE RESOURCE true

WEST LONGITUDE -180

EAST LONGITUDE 180  
NORTH LATITUDE -52.784007  
SOUTH LATITUDE -90

#### CREDITS

Cox, Simon Christopher; Smith Lyttle, Belinda; Elkind, Samuel; Smith Siddoway, Christine; Morin, Paul; Capponi, Giovanni; Abu-Alam, Tamer; Ballinger, Matilda; Bamber, Lauren; Kitchener, Brett; Lelli, Luigi; Mawson, Jasmine F; Millikin, Alexie; Dal Seno, Nicola; Whitburn, Louis; White, Tristan; Burton-Johnson, Alex; Crispini, Laura; Elliot, David; Elvevold, Synnove; Goodge, John W; Halpin, Jacqueline A; Jacobs, Joachim; Mikhalsky, Eugene; Martin, Adam P; Morgan, Fraser; Smellie, John; Scadden, Phil; Wilson, Gary (2023).

#### POINT OF CONTACT - CUSTODIAN

INDIVIDUAL'S NAME GMNZ Data Manager  
ORGANIZATION'S NAME GNS Science

#### CONTACT INFORMATION

PHONE  
VOICE +6445701444

#### ADDRESS

DELIVERY POINT PO Box 30368  
CITY Lower Hutt  
POSTAL CODE 5040  
COUNTRY NEW ZEALAND  
E-MAIL ADDRESS [spatialdata@gns.cri.nz](mailto:spatialdata@gns.cri.nz)

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## Spatial Representation - Vector

LEVEL OF TOPOLOGY FOR THIS DATASET geometryOnly

#### GEOMETRIC OBJECTS

OBJECT TYPE composite  
OBJECT COUNT 99080

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## Reference System Information

#### REFERENCE SYSTEM IDENTIFIER

VALUE 3031

#### CODESPACE EPSG

VERSION 6.7(9.0.0)

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## Data Quality Information

#### SCOPE OF QUALITY INFORMATION

RESOURCE LEVEL dataset

## LINEAGE

## LINEAGE STATEMENT

1. High resolution geographic information layers sourced from SCAR Antarctic Digital Database (ADD) consisting of a rock polygon layer, moraine polygon layer and water polygon layer.
2. Landsat Image Mosaic of the Antarctic (LIMA) or other imagery was used to correct spatial location of combined polygon feature class. Additional rock outcrops and surface deposits were digitised from LIMA imagery.
3. Existing published or unpublished geological maps were georeferenced and used to assign a source geological unit code to spatially corrected polygons of outcropping rock. In some cases, existing GIS layers or research papers were used to assign a source geological unit code.
4. LIMA imagery and Reference Elevation Model of Antarctica (REMA) elevation data were used to identify surface deposits and assign source geological unit code.
5. A GeoSciML compliant table of attributes were compiled for all source geological unit in each dataset using MS Excel. This table includes a generalised chronostratigraphic code consistent throughout the GeoMAP geological unit data.
6. The table of attributes is checked for consistency and appended to the polygon geometry.
7. Data checked for logical consistency.

GeoMAP v.202208 supercedes an earlier beta version (v.2019-07) made available at the XIII International Symposium on Antarctic Earth Sciences (ISAES), Incheon, Republic of Korea 22-26 July 2019.

This release v.2022-08 updates and corrects the dataset following informal feedback and peer review, and/or improves local areas with more attention to detail.

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## Distribution Information

## FORMAT

NAME File Geodatabase Feature Class

VERSION 10.5.1.7333

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## Metadata Information

LAST UPDATE 2022-08-15

## MAINTENANCE

UPDATE FREQUENCY asNeeded

## METADATA CONTACT - CUSTODIAN

INDIVIDUAL'S NAME GMNZ Data Manager

ORGANIZATION'S NAME GNS Science

## CONTACT INFORMATION

## PHONE

VOICE +6445701444

## ADDRESS

DELIVERY POINT PO Box 30368

CITY Lower Hutt

POSTAL CODE 5040

COUNTRY NEW ZEALAND  
E-MAIL ADDRESS [spatialdata@gns.cri.nz](mailto:spatialdata@gns.cri.nz)

ONLINE RESOURCE  
FUNCTION PERFORMED information

SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset  
SCOPE NAME dataset

METADATA LANGUAGE English  
METADATA CHARACTER SET utf8

NAME OF THE METADATA STANDARD USED ISO 19139 Geographic Information - Metadata -  
Implementation Specification  
VERSION OF THE METADATA STANDARD 2007

METADATA IDENTIFIER 600C1153-7C74-447A-98AC-DEE65C130170  
PARENT IDENTIFIER 333C1D5A-1F80-4ED2-B6A6-52AB2B03A52F

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