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Series 171
Série des 171

WITHDRAWAL

December 2016

Standards in series Geomatics

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CAN/CGSB-171.100-2009

North American Profile of ISO 19115:2003 – Geographic Information – Metadata (NAP – Metadata) (ICS 35.240.70)

CAN/CGSB-171.101-2010

Canadian Geographic Information Standard – Canadian Geographical Names, Level 1 (CGIS - CGN1) (ICS 35.240.70)

CAN/CGSB-171.102-2010

Canadian Geographic Information Standard – National Road Network 2.0 (CGIS – NRN2) (ICS 35.240.70)

CAN/CGSB-171.103-2010

Canadian Geographic Information Standard – Canadian Digital Elevation Data, Level 1 (CGIS – CDED1) (ICS 35.240.70)

CAN/CGSB-171.104-2010

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CAN/CGSB-171.100-2009

Profil nord-américain de la norme ISO 19115:2003 – Information géographique – Métadonnées (PNA – Métadonnées) (ICS 35.240.70)

CAN/CGSB-171.101-2010

Norme canadienne de l'information géographique – Toponymes canadiens, niveau 1 (NCIG – TC1) (ICS 35.240.70)

CAN/CGSB-171.102-2010

Norme canadienne de l'information géographique – Réseau routier national 2.0 (NCIG - RRN2) (ICS 35.240.70)

CAN/CGSB-171.103-2010

Norme canadienne de l'information géographique – Données numériques d'élévation du Canada, niveau 1 (NCIG - DNEC1) (ICS 35.240.70)

CAN/CGSB-171.104-2010

Norme canadienne de l'information géographique – Imagerie Landsat 7 orthorectifiée du Canada (NCIG – IOR) (ICS 35.240.70)



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ICS 35.240.70



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Canadian Geographic Information Standard – Canadian Geographical Names, Level 1 (CGIS – CGN1)

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE.

Prepared by the

**Natural Resources Canada,
Canadian Council on Geomatics**



Canadian Council
on Geomatics



Conseil canadien
de géomatique

Reviewed by the

Canadian General Standards Board



Approved by the

Standards Council of Canada



Published November 2010 by the
Canadian General Standards Board
Gatineau, Canada K1A 1G6

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Acknowledgment is made for the translation of this National Standard of Canada by Natural Resources Canada.

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Introduction

Canadian Geographic Information Standards

This document is part of a series of Canadian Geographic Information Standards (CGIS). These standards are localized national standards for particular types of geographic data, such as the product specifications for the GeoBase suite of publicly available data products, or specializations or profile of international standards in the Canadian or North American context.

The International Organization for Standardization Technical Committee TC/211 Geographic information - Geomatics has developed a suite of international standards for geographic information. These are primarily high level abstract standards that describe the fundamental information components for feature oriented vector based, or coverage (imagery and gridded) data, or geospatial services. The ISO standards tend to be too high a level to be directly implementable. It is necessary to be able to develop profiles to address specific national needs or implementations of the ISO standards such as the development of feature catalogues and product specifications in accordance with the ISO standards.

GeoBase

GeoBase is an initiative of the federal, provincial and territorial governments in Canada operating through the Canadian Council on Geomatics (CCOG) to ensure the provision of, and access to a common, up-to-date and maintained base of quality geospatial data for all of Canada. This allows Canadians to have access to the wealth of knowledge about the geography of Canada. This data is provided on line and free of charge under common terms and conditions by the participating members of the CCOG through Natural Resources Canada. The data is structured based on international standards to ensure maximum compatibility with users' systems.

The GeoBase suite of Product Specifications has been made into National Standards of Canada to stabilize the specifications and to make them permanently available. As national standards these specifications may also be referenced by other specifications and standards within and external to Canada thereby increasing the level of interoperability. Geospatial information is presented in GeoBase in separate layers, each one addressing a specific topic. There are initially four layers of geospatial information available through GeoBase which have been produced as National Standards.

These standards describe the information content of the GeoBase data layers. They do not mandate the encoding or representation of the data. GML is described as a neutral encoding. This permits multiple encodings that may be used in different media and services. A common metadata schema is used that is compatible with the CAN/CGSB-171.100-2009 (NAP — Metadata). The actual metadata elements were developed using the earlier US Federal Geospatial Data Committee (FGDC) metadata standard; however, this is directly convertible to the new North American standard. For those data layers that are geographically feature oriented a geospatial feature catalogue is included as an appendix to the standard.

Canadian Geographic Information Standard – Canadian Geographical Names, Level 1 (CGIS – CGN1)

1 Scope

This National Standard of Canada describes a product specification in compliance to ISO 19131:2007 – Geographic information – Data product specification for the provision of fundamental geographic information to the public through the GeoBase initiative of the CCOG. This product specification describes the Canadian Geographical Names (CGN) Level 1 data product that provides the currently approved geographical names in Canada, but not the previously approved names¹ which are available elsewhere. The CGNS Level 1 also provides the core attributes of the Canadian Geographical Names Data Base (CGNDB). The CGNDB is the official set of all geographic names ever approved by the Geographical Names Board of Canada². Hence the CGN Level 1 dataset is a subset of the CGNDB.

2 Conformance

Any data set claiming conformance with this National Standard shall pass all the requirements described in the abstract test suites in Appendix A.

3 Normative references

The following documents contain provisions that, through reference in this text, constitute provisions of this National Standard of Canada. The referenced documents may be obtained from the sources noted below. The following referenced documents are indispensable for the application of this document.

A dated reference in this standard is to the issue specified. An undated reference in this standard is to the latest issue, unless otherwise specified by the authority applying this standard.

3.1 Canadian General Standards Board

CAN/CGSB-171.100:2009 *North American Profile of ISO19115:2003 Geographic information – Metadata (NAP – Metadata)*³

¹ The CGN1 is an output from the CGNDB. The historical (previous) name(s) of a feature and the date the feature name officially changed is recorded in the CGNDB.

² The CGNDB is the national repository or warehouse for geographic names information within Canada and includes those names recommended and approved by the appropriate national, provincial or territorial agencies or boards within their own jurisdictions. Many provinces have their own Geographic Names Boards and submit names approved within their own jurisdictions for inclusion in the CGNDB.

³ This standard contains a cross reference from the US FGDC Metadata fields used in the data to the definitions in the NAP Metadata standard. All the definitions, codes and tables from CAN/CGSB-171.100-2009 are available at <http://www.geoconnections.org/nap/metadata/>

3.1.1 Source

The above may be obtained from the Canadian General Standards Board, Sales Centre, Gatineau, Canada K1A 1G6. Telephone 819-956-0425 or 1-800-665-2472. Fax 819-956-5644. E-mail ncr.cgsb-ongc@tpsgc-pwgsc.gc.ca. Web site www.ongc-cgsb.gc.ca

3.2 International Organization for Standardization

ISO 3166-1:2006 *Codes for the representation of names of countries and their subdivisions – Part 1: Country codes and Cor 1: 2007*

ISO 8859-1:1998, *Information technology 8-bit single-byte coded graphic character sets – Part 1: Latin alphabet No. 1*

ISO19131:2007 *Geographic information – Data product specification*

ISO 19115: 2003⁴ *Geographic Information – Metadata*

ISO 19136:2007 *Geographic information – Geography Markup Language (GML)*

3.2.1 Source

The above may be obtained from IHS Canada, 1 Antares Drive, Suite 200, Ottawa, Ontario K2E 8C4, telephone 613-237-4250 or 1-800-387-4408, fax 613-237-4251, e-mail gic@ihscanada.ca, Web site canada.ihs.com.

3.3 Natural Resources Canada

Feature ID Assigning Procedure V.6, CCOG / GNBC http://gnss.nrcan.gc.ca/gnss-srt/docs/FID_assigning_procedure_v6.pdf

3.3.1 Source

The above document can be viewed at Natural Resources Canada's web site http://gnss.nrcan.gc.ca/gnss-srt/docs/FID_assigning_procedure.pdf

3.4 Open Geospatial Consortium

OGC Geography Markup Language (GML) Implementation Specification, version 2.1.2, http://portal.opengeospatial.org/files/?artifact_id=11339

3.4.1 Source

The above document can be viewed at the website www.opengeospatial.org

⁴ The normative reference is to the base ISO 19115 metadata standard. Although ISO 19115-2 exists for Imagery, this part is not applicable here.

4 Terms and definitions

For the purposes of this National Standard of Canada, the following terms and definitions apply.

4.1

Concise Term attribute

regroup of the Generic Term attribute value according to the type of feature [see appendix D]

4.2

Feature Catalogue

catalogue containing definitions and descriptions of the feature types, feature attributes, and feature relationships occurring in one or more sets of geographic data, together with any feature operations that may be applied. [ISO 19101]

4.3

Generic_Term attribute

type of natural geographical feature, place or administrative limit being identified. [see Appendix E]

4.4

Language attribute

three letter International codes from the ISO-639-3 identifying languages [see Appendix G]

4.5

Universal Unique Identifier (UUID)

a identifier that allows objects to be uniquely identified within a particular context. Within an application domain a UUID is assigned to an object when it is created and is stable over the entire life span of the object. A UUID of a deleted object can not be used again. [adapted from ISO 19118]

Note: The definition and method used for the generation of a Universal Unique Identifier is defined in the document National Vector Data – Identification Rules [See [9]].

5 Acronyms and abbreviations

CCOG	Canadian Council on Geomatics
CGSB-CoG	Canadian General Standards Board – Committee on Geomatics
CGIS	Canadian Geographic Information Standard
CGN	Canadian Geographical Names
CGN1	Canadian Geographical Names, Level 1
CGNDB	Canadian Geographical Names Data Base
CGNS	Canadian Geographical Names Service
CGSB	Canadian General Standards Board
CRS	Coordinate Reference System
FGDC	(United States) Federal Geographic Data Committee
FTP	File Transfer Protocol

GML	Geography Markup Language
GNBC	Geographical Names Board of Canada
HTTP	Hyper Text Transfer Protocol
NAD83	North American Datum 1983
NAD83CSRS	North American Datum 1983 Canadian Spatial Reference System
NAP	North American Profile
NRCan	Natural Resources Canada
NTS	National Topographic Series
RDBMS	Relational Data Base Management System
UTF-8	Unicode Encoding Form that uses 8-bit code units
UML	Universal Modeling Language
UUID	Universal Unique Identifier

6 Overview

6.1 Title

Canadian Geographical Information Standard – Canadian Geographical Names, Level 1 (CGIS – CGN1)

6.2 Reference date

Data product specifications creation date: 2010-11-10

6.3 Responsible party

GeoBase
Natural Resources Canada
Earth Sciences Sector
Centre for Topographic Information
2144 King Street West, Suite 010
Sherbrooke (Quebec), Canada J1J 2E8

Telephone: 1-800-661-2638 (Canada and USA)
Fax: 819-564-5698
E-mail: supportgeobase@NRCan.gc.ca
URL: <http://www.geobase.ca/>

6.4 Language

This data product is available in:

eng – English
fra - French

6.5 Informal description of the data product

The CGNDB is the data bank of Canada's geographical names, maintained by the Geographical Names Section, part of the Centre for Topographic Information, Geomatics Canada, Natural Resources Canada. Its purpose is to store names and their attributes that have been approved by the GNBC and to make these authoritative records available for government and public use. The CGNDB is the national repository for geographic names. Provinces and territories also have their own Geographic Names boards and manage names within their own jurisdictions. Provinces and territories may submit these names to the national CGNDB.

The subset of the CGNDB data which is available from the GeoBase Portal <http://geobase.ca> for data extraction and visualization consists of currently officially approved names and a selected set of attributes, and is referred to as the CGN1 dataset. Additional attributes for this dataset as well as information on formerly approved names are available through the Canadian Geographical Names Service (CGNS) at <http://cgns.nrcan.gc.ca/> and <http://geonames.nrcan.gc.ca/>.

The geographic extent of this data is the Canadian landmass and water bodies.

The temporal extent of the data is from 1897 to present.

The purpose of the CGN Level 1 data set is to provide official names of natural geographical features, places and administrative limits for mapping and charting, gazetteer production, and World Wide Web reference, and other geo-referenced digital systems.

The data structure of the CGNDB is a relational model and the data is stored in a Relational Data Base Management System, but the CGN Level 1 data set is delivered as single records. The data format of each record consists of four fixed length and ten variable length fields.

The data is defined independently of the encoding and can be made available in several formats. The standard default delivery format is GML. Alternatively the information is available in a manufacturer dependent form (SHAPE file format [11]).

The delivery media is through a Web browser on the Internet.

7 Product specification scope

7.1 Scope general

This product specification describes the CGN Level 1 data product that contains the officially approved geographical names in Canada. This set is a subset of the complete CGNDB that is the set of all geographical names ever approved by the Geographical Names Board of Canada, including those names which provinces and territories have chosen to submit to the national CGMDB. The CGN Level 1 dataset is a subset of the CGNDB in the sense that it doesn't contain all the attributes of the CGNDB, and it doesn't contain the names that have been withdrawn (potentially replaced) or rescinded (not replaced and no longer official).

7.2 Scope identification

Global

Note: "Global" means that this scope refers to all parts of this data product specifications

7.3 Level

This scope refers to the following level according to the ISO 19115 and CAN/CGSB-171.100-2009 standards:

006 - series

7.4 Level name

CGN Level 1 or CGN1

7.5 Extent

This section describes the spatial and temporal extent of the data.

7.5.1 Description

The geographical names product covers all of Canada as well as the features located offshore. Hence, the geographic area within which the data is available is the Canadian land mass, water bodies and the surrounding offshore features of Canada.

The geographical names have been collected since 1897. Hence, the temporal extent for the content of the data is from 1897 to the present.

7.5.2 Geographic extent

The geographic extent is given by the following geographic bounding box.

Note: the geographic extent includes waters surrounding Canada to support offshore names.

7.5.2.1 Westbound longitude

150° West (or -150°)

7.5.2.2 Eastbound longitude

40° West (or -40°)

7.5.2.3 Southbound latitude

41° North (or +41°)

7.5.2.4 Northbound latitude

90° North (or +90°)

7.5.3 Temporal extent

The temporal extent is given by the following period of time.

7.5.3.1 Beginning

1897-01-01

7.5.3.2 Ending

Now

Note: "Now" means the current date of publication of an instance of the CGN1. That is, an instance of the CGN1 includes the geographic names that are current at the time of publication

7.6 Coverage

Data covers Canada and offshore, and may be subdivided by province, territory or NTS map sheet coverage. There is continuity within a province or territory. Overlap in records occurs when a geographical name has been approved in more than one language or by multiple provinces or territories because it crosses provincial or territorial boundaries.

8 Data production identification

8.1 Title

Canadian Geographical Names, Level 1

8.2 Alternate Title

CGN1

8.3 Abstract

The CGN Level 1 dataset is a text file of official names of natural geographical features, places and administrative limits together with their related location, generic term and unique identifiers.

8.4 Purpose

The purpose of the CGN Level 1 data set is to provide official names of natural geographical features, places, and administrative limits for mapping and charting, gazetteer production, World Wide Web reference, and other geo-referenced digital systems.

8.5 Topic category

003 - biota

007 - environment

008 - geoscientificInformation

011 - intelligenceMilitary

012 - inlandWaters

013 - location

014 - oceans

016 - society

8.6 Spatial representation type

001 - vector

8.7 Spatial resolution

Spatial resolution denominator of the data:
10 000

8.8 Geographic description

8.8.1 Authority

International Organization for Standardization (ISO)

8.8.1.1 Title

Standard of the code of geographical regions:

ISO 3166-1:1997 *Codes for the representation of names of countries and their subdivisions Part 1: Country codes.*

8.8.1.2 Date

Reference date of the ISO 3166-1 standard:

1997-10-01

8.8.1.3 Date type code

The type of date is based on ISO 19115.

002 – publication

8.8.2 Code

Code of the geographical region covered by the product according to the ISO 3166-1:

CA – Canada

8.8.3 Extent type code

The type of extent is based on ISO 19115.

1 – inclusion

8.9 Reference to specification scope

Global (see 7.2)

9 Data content and structure

9.1 Description

The CGN Level 1 data set consists of official geographical names together with a point location and descriptive attributes such as name type, feature type, language and generic portion of the toponym.

The data model of the CGN Level 1 dataset is simply a set of single records containing fourteen fields as shown in Figure 1 and 2, and Appendix B.

9.2 Reference to specification scope

Global (See 7.2)

9.3 Feature information

9.3.1 Application schema

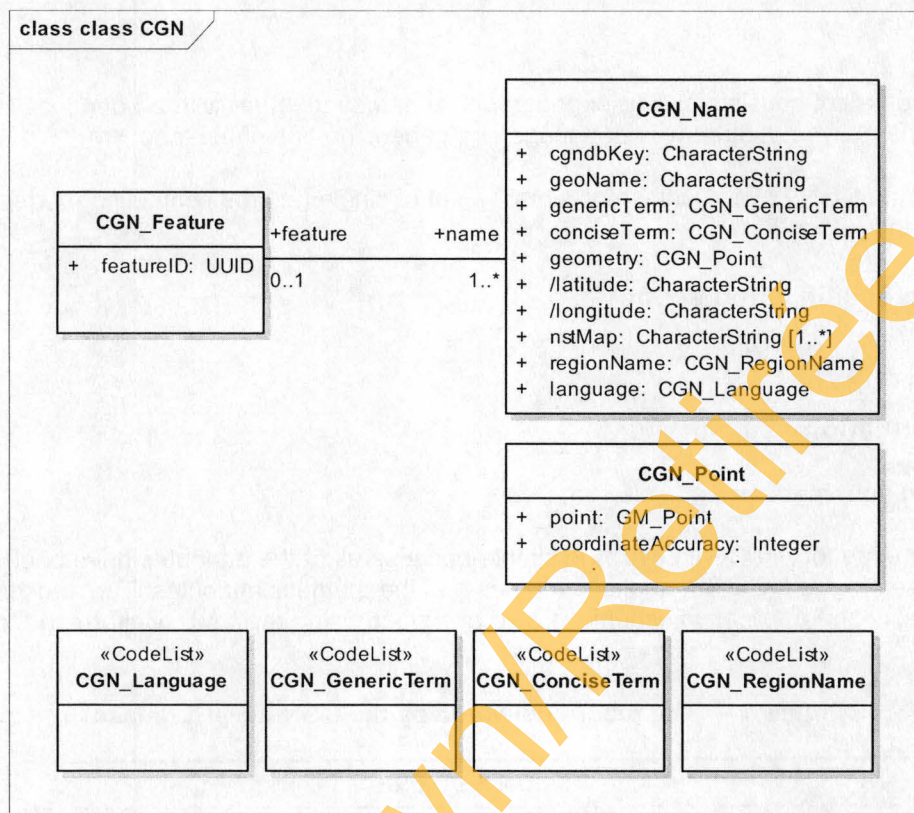
The Application Schema for the CGN Level 1 is simple because all of the attributes have been implemented in a single record. These include the CRS, spatial attributes and the thematic attributes. The structure of the record is described in Figure 1. The application schema is also described using the UML (Uniformed Model Language) in Figure 2.

Figure 1 — The record delivered by the CGN Level 1 dataset

CGN FEATURE
+ GeoName: CharacterString (100)
+ CGNDB_Key: CharacterString (5)
+ Generic_Term: CharacterString (60)
+ Concise_Term: CharacterString (4)
+ LatDec: Number
+ LonDec: Number
+ Latitude: CharacterString (20)
+ Longitude: CharacterString (20)
+ Coordinate_Accuracy: Integer (4)
+ Datum: CharacterString (5)
+ NTS_Map: CharacterString (4000)
+ Language: CharacterString (3)
+ Region_Name: CharacterString (30)
+ Feature_Id: CharacterString (32)

The Feature Id has a relation of one to many CGNDB_Key. The CGNDB_Key has a relation of one to one to all the other attributes (the name, the region, the language including the geometry, as a point feature, given by the attributes LatDec, LonDec and Datum). The Feature_Id may have a number of GeoNames in different languages, or the same GeoName adopted in more than one Region_Name.

Figure 2 — The conceptual model of the CGN Level 1 dataset



The data model as illustrated in Figure 2 is described through seven components: A CGN Feature is a geographic feature (feature) identified by a data type (UUID) linked to a name (name) sometimes adopted in a number of regions and languages with attributes (CGN Name); each name adopted having a point representation (CGN Point) in the region of adoption and four of the attributes being defined by a code list.

The CGN feature, CGN Name and CGN Point are defined in section 9.3.2.2. The data type for UUID is defined in section 4. The Feature Identifier Assigning Procedure is identified in Appendix C. The four code lists are given in Appendices D, E, F and G.

9.3.2 Feature catalogue

The Feature Catalogue for GeoBase Product Specification - Canadian Geographical Names, Level 1 is the set of all feature types and feature attributes that may be used in a data set complying with this product specification.

The feature catalogue as a whole includes a description of the Name, Scope, Field of application, Producer, Version number, Version date, and Functional language for the whole feature catalogue.

The entries in the feature catalogue consist of:

- 1 - Feature type description including a CGN feature;
- 2 - Attribute description consisting of featureID, name, CGN_Name, cgndbKey, geoName, genericTerm, conciseTerm, geometry, Latitude, Longitude, Datum, ntsMap, regionName, language,
- 3 - Attribute description for an attribute to hold the geographic position of a CGN_Point representing the position of a feature;
- 4 - Attribute description for the point value of the CGN_Point together with the coordinate accuracy.

9.3.2.1 Geographic Feature

CGN Data Dictionary:

Name	CGN Feature Catalogue
Scope	This is a Data Dictionary for CGN Level 1. CGN Level 1 consists of a geographic feature located in Canada, sometimes adopted in a number of provinces, territories and languages, each represented by a geographical point located in the province and territory of adoption.
Field of application	CGN Level 1 data set provides official names of natural geographical features, places, and administrative limits for mapping and charting, gazetteer production, World Wide Web reference, and other geo-referenced digital systems.
Producer	Organization Name: Canadian Council on Geomatics
Version Number	1.0
Version Date	May 29, 2009
Functional Language	English and French

Feature type:

Type name	CGN_Feature
Definition	A geographical feature that has a name that may be represented on a map. It may be a natural feature, a place or an administrative limit.
isAbstract	false
Type name	CGN_Feature

Attributes:

Name	featureID
Definition	The unique identifier of the natural feature, a place or an administrative area. The feature may possess many names (in English, French and Aboriginal languages), or may extend into many provinces or territories, in which case, the same Feature Id is found on many records, each record identifying only one Region Name and only one Language. The Feature Id links all the records related to one feature. The Feature Id is best described by the document "Feature ID Assigning Procedure v.6" available at http://gnss.nrcan.gc.ca/gnss-sr/docs/FID_Assigning_Procedure_v6.pdf
Cardinality	1..1
Value type	UUID

Name	name
Definition	The names (in English, French or Aboriginal languages) approved for the geographical feature by each of the provinces or territories in which the feature is located, or by other federal members of the GNBC.
Cardinality	1..*
Value type	CGN_Name

Feature type:

Type name	CGN_Name
Definition	A name approved by a province or territory in which the feature is located, or by other federal members of the GNBC.
isAbstract	false

Attributes:

Name	cgndbKey
Definition	The unique identifier of the record. The CGNDB Key is a five digit alphabetical sequence code assigned to each record in the CGNDB. As a new record is entered in the database, a unique CGNDB Key is automatically assigned to the new entry. The first letter of the CGNDB Key indicates the region (see REGION_NAME below) in which the feature is located.
Cardinality	1..1
Value type	CharacterString

Name	geoName
Definition	The Feature Name is an alpha-numeric field that shows the actual name of a natural geographical feature, place or administrative limit.
Cardinality	1..1
Value type	CharacterString

Name	genericTerm
Definition	<p>The Generic Term indicates the type of natural geographical feature, place, or administrative limit being identified. The generic term is often found in the name itself. There are currently more than 1200 generic terms in use, and this number is growing. The values accepted in this field are available on the Web at <a href="http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=cgns_codes&request=getFeature&filter=<Filter><PropertyIsEqualTo><PropertyName>COLUMN_NAME</PropertyName><Literal>GENERIC_CODE</Literal></PropertyIsEqualTo></Filter>">http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=cgns_codes&request=getFeature&filter=<Filter><PropertyIsEqualTo><PropertyName>COLUMN_NAME</PropertyName><Literal>GENERIC_CODE</Literal></PropertyIsEqualTo></Filter> (see also Appendix E).</p>
Cardinality	1..1
Value type	« CodeList » CL_GenericTerm

Name	conciseTerm
Definition	<p>The Concise Term is used to regroup the generic terms according to the type of feature. The values currently accepted in this field are listed below. The current list is available on the Web at <a href="http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=cgns_codes&request=getFeature&filter=<Filter><PropertyIsEqualTo><PropertyName>COLUMN_NAME</PropertyName><Literal>CONCISE_CODE</Literal></PropertyIsEqualTo></Filter>">http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=cgns_codes&request=getFeature&filter=<Filter><PropertyIsEqualTo><PropertyName>COLUMN_NAME</PropertyName><Literal>CONCISE_CODE</Literal></PropertyIsEqualTo></Filter></p> <p>The relation between the concise terms and the generic terms shall follow the list provided on the Web at http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=generic_codes&request=getFeature.</p>

	See also Appendix D.
Cardinality	1..1
List of values	Air navigation feature
	Bay
	Beach
	Miscellaneous campsite
	Cape
	Cave
	Channel
	City
	Cliff
	Crater
	District municipality
	Falls
	Forest
	Geographical area
	Glacier
	Hamlet
	Hydraulic construction
	Indian Reserve
	Island
	Lake
	Marine navigation feature
	Military area
	Miscellaneous
	Mountain
	Other municipal/district area - major agglomeration
	Other municipal/district area - miscellaneous
	Conservation area
	Plain
	Province
	Railway feature
	Rapids
	Recreational site
	Natural resources site
	River
	River feature
	Road feature
	Sea
	Sea feature

	Undersea feature
	Shoal
	Miscellaneous site
	Spring
	Territory
	Town
	Unincorporated area
	Valley
	Low vegetation
	Village
Value type	« CodeList » CL_ConciseTerm

Name	geometry
Definition	The point location of the centroid of the natural feature, place or administrative limit, or the point location of the mouth of rivers.
Cardinality	1..1
Value type	CGN_Point

Name	Latitude
Definition	Latitude expressed in degrees, minutes (required) and seconds (optional) followed by "North", e.g., 45° 55' North or 45° 55' 05" North. The seconds are provided only if the coordinates are precise to approximately 30 metres or better. Otherwise, the coordinates are considered precise to two kilometres and provided in degrees and minutes only. See CGN_Point
Cardinality	1..1
Value type	CharacterString

Name	Longitude
Definition	Longitude expressed in degrees, minutes (required) and seconds (optional) followed by "West", e.g., 100° 55' 05" West. The seconds are provided only if the coordinates are precise to approximately 30 metres or better. Otherwise, the coordinates are considered precise to two kilometres and provided in degrees and minutes only. See CGN_Point.
Cardinality	1..1
Value type	CharacterString

Name	Datum
Definition	The horizontal coordinates reference system code for the LatDec and LonDec above. The "NAD83" System (North American Datum of 1983 Canadian Spatial Reference System) is the only permitted code value here for DATUM.
Cardinality	1..1
Value type	CharacterString

Name	ntsMap
Definition	<p>The list of the NTS map sheets on which the feature, place, or administrative limit can be found. It is a comma-separated list without spaces. The NTS sheet at scale 1:50 000 have the format 999A99, at scale 1:250 000, 999A or 999A00 and chart number of Canadian Hydrographic Service charts have the format C.9999.</p> <p>Individual NTS map sheet numbers can be validated as existing map sheets by using cgnsServices on the Web, by entering the map number following the examples of the URI shown below:</p> <p>http://cgns.nrcan.gc.ca/cgnsServices/services?request=validateMap&mapNumber=011P16.</p> <p>http://cgns.nrcan.gc.ca/cgnsServices/services?request=validateMap&mapNumber=011P00.</p> <p>http://cgns.nrcan.gc.ca/cgnsServices/services?request=validateMap&mapNumber=C.1511.</p>
Cardinality	1..1
Value type	CharacterString

Name	regionName
Definition	<p>The Region Name is used to identify the province(s) or territory(ies) within which the record is official. The Region Name together with the Feature ID are used to identify all the provinces and territories within which a natural feature, place, or administrative limit is located. If a feature lies on or crosses a provincial or territorial boundary, it is therefore approved by all jurisdictions involved, and it has a separate record and a different Region Name for the part of the feature within each province or territory. The Feature ID links all the records related to one feature. The values currently accepted in this field are listed below. The current list is available on the Web at</p> <p><a href="http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=cgns_codes&request=getFeature&filter=<Filter><PropertyIsEqualTo><PropertyName>COLUMN_NAME</PropertyName><Literal>REGION_CODE</Literal></PropertyIsEqualTo></Filter>">http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=cgns_codes&request=getFeature&filter=<Filter><PropertyIsEqualTo><PropertyName>COLUMN_NAME</PropertyName><Literal>REGION_CODE</Literal></PropertyIsEqualTo></Filter>. See also Appendix F.</p>
List of values	<p>Prince Edward Island</p> <p>Newfoundland and Labrador</p> <p>Nova Scotia</p> <p>New Brunswick</p> <p>Quebec</p> <p>Ontario</p> <p>Manitoba</p> <p>Saskatchewan</p> <p>Alberta</p> <p>British Columbia</p> <p>Yukon</p> <p>Northwest Territories</p> <p>Nunavut</p> <p>Undersea Features</p> <p>International Waters</p>
Cardinality	1..1
Value type	« CodeList » CL_RegionName

Name	language
Definition	Language used to assign a geographical name to a geographical feature when the feature has more than one name. It is null unless there is another name in another language for the same feature. The attribute Language allows retrieval of, or identification of, the French name, English name, or Aboriginal language name. It also allows an application to automatically display the French name, the English name, or the Aboriginal language name, depending on the context. The only keywords accepted in the "Language" field are the three letter codes shown in the list of language codes for ISO-639-3. Those encountered in Canada are listed in Appendix G. If the field is empty (null), the feature doesn't have another official name in another language. If the field is not null, then the feature has at least one other official name in another language.
Cardinality	1..1
Value type	« CodeList » CL_Language

Feature type:

Type name	CGN_Point
Definition	The geographical location of a CGN feature. It is the approximate latitude and longitude of the feature, either (i) the centroid of the polygon associated with the toponym within the region of adoption; (ii) the centroid of the important core of the feature within the region of adoption; (iii) the centroid of the mouth of a river or the point at which the river flows out of a region; (iv) the closest point to the centroid within the polygon, when the actual centroid falls outside the polygon depicting the feature. CGN_Point is stored and provided in degrees with decimals, delivered in the attribute Point.
isAbstract	false

Attributes:

Name	point
Definition	Point location of a CGN point feature in Latitude and Longitude
Cardinality	1..1
Value type	GM_Point

Name	coordinateAccuracy
Definition	Planimetric accuracy of data in meters. When point coordinates of the centroid of the feature or of the river mouth are identified, provided, and loaded in the database to the nearest arc second, an accuracy of 30 metres is assigned. When point coordinates are loaded to the nearest arc minute, an accuracy of 2000 metres is assigned. Some very large features such as oceans have the value 9999 for non-applicable.
Cardinality	1..1
Value type	Integer

Feature type:

Type name	UUID
Definition	Universal unique identifier
isAbstract	false

Attributes:

Name	uuid
Definition	A national unique Identifier
Value type	CharacterString

9.3.2.2 Code Lists**CL_ConciseTerm**

See Appendix D.

CL_GenericTerm

See Appendix E.

CL_RegionName

See Appendix F.

CL_Language

See Appendix G.

10 Reference systems**10.1 Spatial reference system**

Spatial data are expressed in latitude (ϕ) and longitude (λ) geographic coordinates in reference to the NAD83CSRS. The longitude is delivered as a negative number to represent a position west of the prime meridian (0°). The coordinates measuring unit is the degree expressed as a 7-decimal real value.

Note: The epoch of the CRS is 1998.

10.1.1 Authority**10.1.1.1 Title**

Geodetic Survey Division, Natural Resources Canada is the authority for the NAD83CSRS.

Geodetic Parameter Dataset

10.1.1.2 Date

Reference date:

2007-02-08

10.1.1.3 Date type code

Date type according to ISO 19115 and CAN/CGSB - 171.100-2009:

002 – publication

10.1.1.4 Responsible party

Geodetic Survey Division
Natural Resources Canada
615 Booth Street, Room 440
Ottawa, Ontario
Canada
K1A 0E9

Phone: 613-995-4410 (Monday - Friday, 07:00 - 16:00 EST)

Fax: 613-995-3215

Email: information@geod.nrcan.gc.ca

<http://www.geod.nrcan.gc.ca/>

Note: An equivalent code for NAD83CSRS is also available at OGP - International Organisation of Oil and Gas Producers as OPG/EPSP code 4617. URL: <http://www.ogp.org.uk/> or <http://www.epsg-registry.org/>

10.1.2 Code

NAD83CSRS (The CGN Level 1 dataset delivers the code NAD83.)

10.1.3 Code Space

Geodetic Survey Division, Natural Resources Canada

10.2 Reference to specification scope

Global (See 7.2)

11 Data quality

11.1 Background

The forerunner of the CGNDB (the National Toponymic Data Base) was developed in 1978 as a replacement for a growing card-index registry, which had been maintained since the creation of the original Geographic Board of Canada in 1897. It was designed to increase the efficiency of gazetteer production and National Topographic System (NTS) names compilations. In 1987, and again in 1999, the digital data base was remodelled into its current relational data base form. Today, the CGNDB is managed with a Relational Database Management System (RDBMS). The use of character set ISO-8859-1 ensures the inclusion of accented characters used in Canada's French-language geographical names. Diacritics and syllabics found in some Canadian Aboriginal language names are presently represented in the CGNDB by numerical substitutions. Now that the Unicode international standard (ISO 10646) has been accepted and is being more widely implemented, there are plans to migrate the CGNDB records and the aboriginal numerical substitutions from ISO-8859-1 to Unicode UTF-8

Until 1961, naming decisions were made by the federal government, with the advice and assistance of the provinces and territories. At that time, the provinces assumed responsibility for naming, except where federal lands, such as Indian reserves or national parks, are concerned. In 1984, Yukon Territory and the Northwest Territories assumed responsibility for the names in their own jurisdictions. This responsibility was extended to Nunavut when the new territory was created in 1999.

Each province or territory processes proposals for new names and name changes within their jurisdictions, in accordance with the Principles and Procedures for Geographical Naming, published by the GNBC. In addition, they may also undertake field work or research to gather or verify general geographical names information.

11.2 Completeness

Details of the decisions to adopt, change, or reject geographical names are sent to the GNBC Secretariat to maintain the national registry. Names records are then entered into the CGNDB, and office records are amended to reflect these name decisions as well as their delineations.

Updates to geographical names information are provided in different ways by different jurisdictions. Some provinces provide paper listings of name decisions, others provide digital files, or a combination of the two. Procedures have been established to deal with naming authorities to ensure timely and accurate updating of the CGNDB.

The subset of the CGNDB records provided to GeoBase is approximately two-thirds of all the records. The fields provided for each record is approximately half of the fields available in the CGNDB. All the fields of the CGN Level 1 dataset are populated. The field NTS_MAP is the least accurate field. There has been no process to specifically identify all the maps touched by a feature. However, the NTS_MAP field is updated on request.

11.2.1 Commission

Not Applicable

11.2.2 Omission

Not Applicable

11.3 Logical consistency

The logical consistency of the CGN Level 1 dataset is fully attained. Logical consistency for each record in the CGNDB is dependent on the data providers and in-house requirements. Data provided through GeoBase has a higher degree of consistency because of the limited fields provided.

11.3.1 Conceptual consistency

The conceptual consistency of the CGN Level 1 dataset is fully attained. Conceptual consistency for each record in the CGNDB is dependent on the data providers and in-house requirements. Data provided through GeoBase has a higher degree of consistency because of the limited fields provided.

11.3.2 Domain consistency

The attributes values are validated using authoritative lists of values defined in the section "Feature catalogue" above.

11.3.3 Format consistency

Fully attained.

11.3.4 Topological consistency

Not Applicable

11.4 Positional accuracy

11.4.1 Absolute external positional accuracy

The absolute accuracy of spatial objects is represented by the difference between the position of these objects in the data set and their actual positions on the ground measured relative to the reference coordinates. The accuracy can vary from one object to another. This is provided as attribute to each instance of entity and is expressed in meters.

Accuracy varies depending on the source of the data, date collected, and extent of the feature related to the toponym. When point coordinates of the centroid of the feature or of the river mouth are identified, provided and loaded in the database to the nearest arc second, an accuracy of 30 metres is assigned. When point coordinates are loaded to the nearest arc minute, an accuracy of 2000 metres is assigned. The latitudes and longitudes are stored to the nearest arc second for 70% (soon for 90%) of the records, otherwise to the nearest arc minutes. Some features are so large that accuracy to the nearest arc minute is sufficient.

11.4.2 Topological consistency

Not Applicable

11.4.3 Gridded data positional accuracy

Not Applicable

11.5 Temporal accuracy

Not Applicable

11.5.1 Accuracy of a time measurement

Not Applicable

11.5.2 Temporal consistency

Not Applicable

11.5.3 Temporal validity

Not Applicable

11.6 Thematic accuracy

11.6.1 Thematic classification correctness

Not Applicable

11.6.2 Non quantitative attribute accuracy

All fields provided in the CGN Level 1 dataset are highly reliable. Accuracy varies depending on the source of the data and date collected. The information is as reported by GNBC members and validated by Geographical Names Section of NRCan. Nonetheless, no systematic validation of the accuracy of non-quantitative attributes is performed. Problems relating to the non quantitative attributes are fixed when they are identified or reported.

11.6.3 Quantitative attribute accuracy

Not Applicable

11.7 Reference to specification scope

Global (See 7.2)

12 Data capture**12.1 Description**

Data is provided by approximately sixteen GNBC members, including federal departments, provinces and territories. They do the field work and quality checks, and provide a copy of the data to the GNBC Secretariat for inclusion in the CGNDB. The GeoBase portal takes data from the CGNS Web service offered by the CGNDB.

Quality checks during data processing and data entry ensure validity of the name. Coordinates and the list of NTS maps have varying accuracy. The records in the CGNDB contain various dates associated with the approval of official names, and system-generated creation and update dates. Quality checks during data processing and data entry ensure validity of the approval dates. Creation and update dates are generated automatically when a new record or update is committed to the data base.

12.2 Reference to the specification scope

Global (See 7.2)

13 Data maintenance**13.1 Description**

The CGN Level 1 data are data queried through the Internet to the CGNDB database. Updating the CGNDB records is conducted on a regular basis by the GNBC Secretariat at NRCan following the change requested or obtained from the different members of the GNBC. Internal procedures are used to process requests for changes and to provide timely and accurate CGNDB and CGN1 data. Updates on CGNDB and thus CGN1 are published on a daily basis. The fields CGNDB_KEY and Feature_ID are important codes to uniquely identify single record in the databases of the members of the GNBC to ease data management.

Data is originally updated and maintained by approximately sixteen GNBC members, including federal departments, provinces and territories. A copy of the updated data is provided to the GNBC Secretariat at NRCan for the updating of the CGNDB. Quality checks during data processing and data entry ensure validity of the name. Coordinates and the list of NTS maps have varying accuracy. The records in the CGNDB contain various dates associated with the approval of official names, and system-generated creation and update dates. Quality checks during data processing and data entry ensure validity of the approval and meeting dates. Creation and update dates are generated automatically when a new record or update is committed to the CGNDB data base.

13.2 Reference to specification scope

Global (See 7.2)

14 Data product delivery

The National Standard only addresses the information content of the product specification and multiple encodings and product delivery mechanisms for the data are permitted. The GML encoding is the neutral encoding used in delivering CGN Level 1 dataset. The attributes used in GML and SHAPE formats are given in Appendix H.

14.1 Delivery format information GML 2.1.2

14.1.1 Format name

GML – Geography Markup Language Version 2.1.2.

14.1.2 Version

2.1.2

14.1.3 Specification

OGC⁵ Geography Markup Language (GML) Implementation Specification, version 2.1.2, OGC Implementation Specification, 17 September 2002, OpenGIS Project Document Number 02-069, (available at <http://www.opengeospatial.org/standards/gml>)

14.1.4 File structure

CGN Level 1 GML Schema

14.1.5 Language

eng–English

fra–French

14.1.6 Character set

The ISO 8859-1 ASCII standard doesn't allow the display of some non-standard characters used in some Aboriginal language names. Thus, the database stores and delivers a number between curly brackets such as {1}, for each of these special Aboriginal language characters. (See Appendix I for a list of substitutions for each special character.) This number {N} is a link to an image file called charN.gif or charN.jpg which displays an image of an Aboriginal language character. The image files are used by web applications to display the names containing special characters by replacing the curly bracketed number sequences with image files.

The image files are available at <http://gnss.nrcan.gc.ca/gnss-srt/gifs/aboriginalCharacters/char1.gif>.

The creation of the image file requires having Pigiarniq, Aboriginal language or UTF-8 fonts installed to enable a word editor to display a character. A viewer, such as IrfanView, then creates the image file called charN.gif.

Note: Implementation of a database that uses UTF-8 of ISO 10646 which supports Aboriginal characters is planned in the near future.

⁵ Note: GML 2.1.2 is a specification of the Open Geospatial Consortium GIS®.

14.2 Delivery format information GML 3.2.1

14.2.1 Format name

GML - Geography Markup Language Version 3.2.1.

14.2.2 Version

3.2.1.

14.2.3 Specification

ISO19136:2007 – Geographic information — Geography Markup Language (GML)⁶

14.2.4 File structure

CGN Level 1 GML Schema

14.2.5 Language

eng–English

fra–French

14.2.6 Character set

See 14.1.6

14.3 Delivery medium information FTP

14.3.1 Units of delivery

Tiles of the National Topographic System at the scale of 1:250 000

14.3.2 Transfer Size

0.3 megabytes on average

14.3.3 Medium name

FTP

14.3.4 Reference to specification scope

Global (See 7.2)

⁶ Note: OpenGIS® Geography Markup Language (GML) Encoding Standard, version 3.2.1, OpenGIS standard, OGC 07-036 (available at <http://www.opengeospatial.org/standards/gml>) is identical to ISO19136:2007

15 Metadata

The National Standard makes use of the North American Profile for Geographic Information Metadata and is based on the US FGDC metadata. The Metadata of the CGN Level 1 dataset complies with the FGDC CSDGM Metadata and the NAP – Metadata Standard and may be provided in both forms.

15.1 Reference to specification scope

Global (See 7.2)

Withdrawn/Retirée

Appendix A

(Normative)

Abstract test suite

A.1 Data product specification sections

The attributes Concise Term, Generic Term and Region Name shall be validated against the lists defined in section 9.3.2.1 or in Appendices D, E, and F, respectively.

The attribute Language shall be validated against the list of codes defined by the ISO639-3, see Appendix G.

The validation of the attributes NTS Map, Generic Term and Concise Term is possible on the Web using the cgnsServices, by entering the appropriate values as shown in the examples of the URI shown below:

<http://cgns.nrcan.gc.ca/cgnsServices/services?request=validateMap&mapNumber=011P16>

<http://cgns.nrcan.gc.ca/cgnsServices/services?request=validateMap&mapNumber=011P00>

<http://cgns.nrcan.gc.ca/cgnsServices/services?request=validateMap&mapNumber=C.1511>

<http://cgns.nrcan.gc.ca/cgnsServices/services?request=validateGenericCode&code=111>

<http://cgns.nrcan.gc.ca/cgnsServices/services?request=validateConciseCode&code=RIV>

The description of the cgnsServices mentioned in the above URI is available at:

http://gnss.nrcan.gc.ca/gnss-srt/docs/GNSS_Users_Guide.pdf

The attribute Feature Id shall satisfy the definition and application described in the document found in Appendix C.

Appendix B

(Informative)

Example of CGN Level 1 Dataset in GML Format

From GeoBase output:

```
<?xml version="1.0" encoding="UTF-8"?>
<CGN1:FeatureCollection xmlns:CGN1="http://www.geobase.ca/CGN1" xmlns:gml="http://www.opengis.net/gml"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.geobase.ca/CGN1
021G13_1134574381010.xsd">
<gml:boundedBy>
<gml:Box srsName=""><gml:coordinates>-67.7994631202483,45.2667749245497 -
66.0661228504891,46.3333451902611</gml:coordinates></gml:Box>
</gml:boundedBy>
<gml:featureMember>
<CGN1:PlaceName>
<CGN1:geographicalName>Aarons Brook</CGN1:geographicalName>
<CGN1:cgndbKey>DACZW</CGN1:cgndbKey>
<CGN1:genericTerm>Brook</CGN1:genericTerm>
<CGN1:conciseTerm>River</CGN1:conciseTerm>
<CGN1:latitude>45° 55' North</CGN1:latitude>
<CGN1:longitude>67° 37' West</CGN1:longitude>
<CGN1:datum>NAD83</CGN1:datum>
<CGN1:coordinateAccuracy>2000</CGN1: coordinateAccuracy >
<CGN1:ntsMap>021G13</CGN1:ntsMap>
<CGN1:regionName>New Brunswick</CGN1:regionName>
<CGN1:featureId>0c79b8ef849c20c3ac7d837b97a8769c</CGN1:featureId>
<gml:pointProperty>
<gml:Point srsName=""><gml:coordinates>-
67.6161580105303,45.9167532109799</gml:coordinates></gml:Point>
</gml:pointProperty>
</CGN1:PlaceName>
</gml:featureMember></CGN1:FeatureCollection>
```

From CGNS-GNSS-API raw output and CGNS-WFS output:

```
<gml:featureMember>
<GEONAMES gml:id="CWFID.GEONAMES.0.193133.B0448702B7296ED9201F020000">
<GEONAMES.GEOMETRY>
<gml:Point srsName="EPSG:4269">
<gml:pos>45.40055555437 -75.671388889023</gml:pos>
</gml:Point>
</GEONAMES.GEOMETRY>
<GEONAMES.CGNDDB_KEY>FEOLW</GEONAMES.CGNDDB_KEY>
<GEONAMES.CONCISE_CODE>UNP</GEONAMES.CONCISE_CODE>
<GEONAMES.COORDINATE_ACCURACY>30</GEONAMES.COORDINATE_ACCURACY>
<GEONAMES.DECISION_DATE>2001-01-01</GEONAMES.DECISION_DATE>
<GEONAMES.FEATURE_ID>5997e90fc6ce11d892e2080020a0f4c9</GEONAMES.FEATURE_ID>
<GEONAMES.GENERIC_CODE>121</GEONAMES.GENERIC_CODE>
<GEONAMES.GEONAME>Ottawa</GEONAMES.GEONAME>
<GEONAMES.LOCATION>Carleton</GEONAMES.LOCATION>
<GEONAMES.NTS_MAP>031G05,031G00,032L00</GEONAMES.NTS_MAP>
<GEONAMES.ORIGINAL_APPROVAL_DATE>1855-01-01</GEONAMES.ORIGINAL_APPROVAL_DATE>
<GEONAMES.REGION_CODE>35</GEONAMES.REGION_CODE>
<GEONAMES.RELEVANCE_AT_SCALE>42000000</GEONAMES.RELEVANCE_AT_SCALE>
```

```
<GEONAMES.RS_VALUE>42000000</GEONAMES.RS_VALUE>  
<GEONAMES.STATUS_CODE>A4</GEONAMES.STATUS_CODE>  
</GEONAMES>  
</gml:featureMember>
```

From CGNS-GNSS-API xml output:

```
<PlaceName>  
<geoname>Ottaway Islet</geoname>  
<status_term>Official</status_term>  
<latitude>48° 58' North</latitude>  
<longitude>125° 23' West</longitude>  
<latdec>48.9666999</latdec>  
<londec>-125.3833000</londec>  
<coord_acc_m>2000</coord_acc_m>  
<concise_term>Island</concise_term>  
<concise_code>ISL</concise_code>  
<generic_term>Islet</generic_term>  
<generic_code>2307</generic_code>  
<region_name>British Columbia</region_name>  
<location>Barclay Land District</location>  
<nts_map>092C14,C.3627</nts_map>  
<datum>NAD83</datum>  
<cgndb_key>JCRWV</cgndb_key>  
<feature_id>0ca9ba71849c20c32db9b5798fa25db0</feature_id>  
<relevance_at_scale>50000</relevance_at_scale>  
</PlaceName>
```

Appendix C
(Normative)
Feature Identifier Assigning Procedure

The definition of the Feature Identifier and the procedure to assign the Feature Identifier is given in the document "Feature ID Assigning Procedure" available at

http://gnss.nrcan.gc.ca/gnss-srt/docs/FID_assigning_procedure_v6.pdf

Withdrawn/Retirée

Appendix D

(Normative)

Code List of Concise Terms

The following is a list of the Concise Term attribute accepted in the CGN Level 1 data model.

Definition: The Concise Term is used to regroup the Generic Terms (see Appendix E), according to the type of feature.

CONCISE_ORDER	CONCISE_CODE	CONCISE_CODE_FRENCH	CONCISE_TERM	CONCISE_TERM_FRENCH
Attribute value	Attribute value (en)	Attribute value (fr)	Attribute term (en)	Attribute term (fr)
Int(3)	String(4)	String(4)	String(60)	String(60)
400	AIR	AIR	Air navigation feature	Entité de navigation aérienne
220	BAY	BAIE	Bay	Baie
240	BCH	PLAG	Beach	Plage
450	CAMP	CAMP	Miscellaneous campsite	Camp - divers
230	CAPE	CAP	Cape	Cap
310	CAVE	CAV	Cave	Caverne
200	CHAN	CHEN	Channel	Chenal
10	CITY	VIL1	City	Ville
270	CLF	ESC	Cliff	Escarpeement
320	CRAT	CRAT	Crater	Cratère
45	DMUN	DMUN	District municipality	District municipal
140	FALL	CHUT	Falls	Chute
340	FOR	FOR	Forest	Forêt
100	GEOG	GÉOG	Geographical area	Zone géographique
330	GLAC	GLAC	Glacier	Glacier
40	HAM	HAM	Hamlet	Hameau
420	HYDR	HYDR	Hydraulic construction	Construction hydraulique
90	IR	RI	Indian Reserve	Réserve indienne
260	ISL	ÎLE	Island	Île
150	LAKE	LAC	Lake	Lac
410	MAR	MAR	Marine navigation feature	Entité de navigation maritime
115	MIL	MIL	Military area	Réserve militaire
370	MISC	DIV	Miscellaneous	Divers
280	MTN	MNT	Mountain	Mont
50	MUN1	AZM1	Other municipal/district area - major agglomeration	Autre zone municipale / de district - agglomérations majeures
60	MUN2	AZM2	Other municipal/district area	Autre zone municipale / de district -

CONCISE_ORDER	CONCISE_CODE	CONCISE_CODE_FRENCH	CONCISE_TERM	CONCISE_TERM_FRENCH
			- miscellaneous	divers
110	PARK	PARC	Conservation area	Zone de préservation
300	PLN	PLNE	Plain	Plaine
5	PROV	PROV	Province	Province
380	RAIL	FERR	Railway feature	Entité ferroviaire
210	RAP	RAP	Rapids	Rapide
430	RECR	RECR	Recreational site	Site récréatif
440	RES	RES	Natural resources site	Site de ressources naturelles
120	RIV	CDE	River	Cours d'eau
130	RIVF	EFLV	River feature	Entité fluviale
390	ROAD	ROUT	Road feature	Entité routière
170	SEA	MER	Sea	Mer
180	SEAF	EMAR	Sea feature	Entité maritime
190	SEAU	SMER	Undersea feature	Entité sous-marine
250	SHL	H-FD	Shoal	Haut-fond
460	SITE	SITE	Miscellaneous site	Site - divers
160	SPRG	SRCE	Spring	Source
7	TERR	TERR	Territory	Territoire
20	TOWN	VIL2	Town	Ville
80	UNP	LNO	Unincorporated area	Lieu non organisé
290	VALL	VALL	Valley	Vallée
350	VEGL	VÉGB	Low vegetation	Végétation basse
30	VILG	VILG	Village	Village

The current official list is available at:

http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=cgns_codes&request=getFeature&filter=<Filter><PropertyIsEqualTo><PropertyName>COLUMN_NAME</PropertyName><Literal>CONCISE_CODE</Literal></PropertyIsEqualTo></Filter>

The regrouping of Generic Terms by Concise Code is available at:

http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=generic_codes&request=getFeature

Appendix E

(Normative)

Code List of Generic Terms

The following is the attribute domain and the corresponding term for the generic_term attribute of the CGN Level 1 data model.

Definition: The Generic Term indicates the type of natural geographical feature, place or administrative limit being identified. The generic term is often found in the name itself. There are currently more than 1200 generic terms in use, and this number is growing. A sample of the values accepted in this field is shown below and the complete current list is available on the Web, see below.

Attribute Value for GENERIC_CODE Int(4)	Attribute Value for GENERIC_TERM String(60)
1	City
2	Town
3	Village (1)
4	Metropolitan Municipality
6	Community (1)
441	Specialized Municipality
9	Separated Town
11	Hamlet (1)
12	Summer Village
14	Municipalité
15	Cité
16	Resort Municipality
17	Organized Hamlet
18	Resort Village
19	Northern Hamlet
20	Northern Settlement
21	Northern Village
23	Ville (2)
24	Urban Community (1)
27	Municipalité de canton
28	Municipalité de cantons unis
29	Municipalité de paroisse
30	Municipalité de village
100	Hamlet (2)
101	Village (2)
102	Police Village
103	Rural Village

104	Settlement (1)
105	Compact Rural Community
108	Locality
109	Lieu-dit
110	Railway Junction
111	Railway Point
112	Station
113	Post Office
114	Landing (1)
115	Siding
120	Fort
121	Community (2)
122	Dispersed Rural Community
123	Hameau
124	Localité
125	Bureau de poste
126	Ville (1)
127	Jonction
129	Gare
130	Bureau de poste militaire
131	Centre de villégiature
132	Weather Station
141	Customs Point
145	Metis Settlement
148	Northern Community
149	Unincorporated Village District
151	Centre de ski
154	Vacated or Seasonal Settlement
158	Former Locality
159	Former Post Office
Etc...up to 1200 and more.	

The complete current official list is available at:

http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=cgns_codes&request=getFeature&filter=<Filter><PropertyIsEqualTo><PropertyName>COLUMN_NAME</PropertyName><Literal>GENERIC_CODE</Literal></PropertyIsEqualTo></Filter>

The definition of each Generic Term is available at:

<http://cgns.nrcan.gc.ca/cgnsServices/services?request=getGenericCodeDescription&code=1&language=en>

The regrouping of Generic Terms by Concise Code is available at:

http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=generic_codes&request=getFeature

Appendix F

(Normative)

Code List of Region Names

The following is a list of the region_name attribute values accepted in the CGN Level 1 data model.

The Region Name, together with the Feature Id, (see Section 9.3.1 and 9.3.2) is used to identify all the provinces and territories within which a natural feature, place, or administrative limit is located. The Region Name is used to identify the province or territory within which the record is located. A record may not have more than one Region Name. If a feature lies on or crosses a provincial or territorial boundary, it is therefore approved by all jurisdictions involved, and it has a separate record and a different Region Name for the part of the feature within each province or territory. The Feature Id links all the records related to one feature.

Attribute Value for REGION_CODE Int(2)	Attribute Value for REGION_NAME (en) String(30)	Attribute Value for REGION_NAME (fr) String(30)
10	Prince Edward Island	Île-du-Prince-Édouard
11	Newfoundland and Labrador	Terre-Neuve-et-Labrador
12	Nova Scotia	Nouvelle-Écosse
13	New Brunswick	Nouveau-Brunswick
24	Quebec	Québec
35	Ontario	Ontario
46	Manitoba	Manitoba
47	Saskatchewan	Saskatchewan
48	Alberta	Alberta
59	British Columbia	Colombie-Britannique
60	Yukon	Yukon
61	Northwest Territories	Territoires du Nord-Ouest
62	Nunavut	Nunavut
72	Undersea Features	Entités sous-marines
73	International Waters	Eaux internationales

The current official list is available at

http://cgns.nrcan.gc.ca/wfs/cubeserv.cgi?service=wfs&datastore=cgns&typename=cgns_codes&request=getFeature&filter=<Filter><PropertyIsEqualTo><PropertyName>COLUMN_NAME</PropertyName><Literal>REGION_CODE</Literal></PropertyIsEqualTo></Filter>

Appendix G

(Normative)

Code List of Language Codes and Definitions

The following is the attribute domain and the corresponding definitions for the Language attribute accepted in the CGN Level 1 data model.

Definition: Three letter International codes from the ISO-639-3 identifying languages.

Source: Coding is from ISO639-3.

See http://www.sil.org/ISO639-3/codes.asp?order=639_3&letter=e

Which also refers to Ethnologue.com, 2009 at http://www.ethnologue.com/show_country.asp?name=CA

Attribute Value for Language String(3)	Definition (en)	Definition (fr)
	National Languages	Langages nationaux
eng	English	Anglais
fra	French	Français
	Algonquian Family	Famille algonquienne
crm	Cree, Moose	Cri, Moose
crk	Cree, Plains	Cri des plaines
csw	Cree, Swampy	Cri des marécages
cwd	Cree, Woods	Cri des bois
crl	East Cree, Northern	Cri de l'est, dialecte du nord
crj	East Cree, Southern	Cri de l'est, dialecte du sud
ojc	Ojibway, Central	Ojibway du centre
ojg	Ojibway, Eastern	Ojibway de l'est
ojb	Ojibway, Northwestern	Ojibway du nord-ouest
ojw	Ojibway, Western	Ojibway de l'ouest
moe	Montagnais	Montagnais
nsk	Naskapi	Naskapi
mic	Micmac	Micmac
ojs	Oji-Cree	Oji-Cri
abe	Abnaki, Western	Abenaki de l'ouest
atj	Attikamekw	Attikamekw
bla	Blackfoot	Pied-noir
alq	Algonquin	Algonquin
pqm	Malecite	Malécite
crg	Michif	Michif

umu	Munsee	Munsee
otw	Ottawa	Ottawa
pot	Potawatomi	Potawatomi
	Inuktitut Family	Famille inuktitut
ike	Inuktitut, Eastern Canadian	Inuktitut de l'est du Canada
ikt	Inuktitut, Western Canadian (Inuvialuktun)	Inuktitut de l'ouest du Canada (Inuvialuktun)
	Athapaskan Family	Famille athapascane
chp	Dene (Chipewyan)	Déné (Chipewyan)
xsl	South Slave	Esclave du Sud
dgr	Dogrib	Flanc-de-chien
crx	Carrier	Porteur
clc	Chilcotin	Chilcotin
gwi	Kutchin-Gwich'in (Loucheux)	Kutchin-Gwich'in (Loucheux)
scs	North Slave (Hare)	Esclave du Nord (peau-de-lièvre)
ttm	Northern Tutchone	Tutchone du nord
tce	Southern Tutchone	Tutchone du sud
kkz	Kaska	Kaska
tau	Upper Tanana	Haut tanana
tgx	Tagish	Tagish
sek	Sekani	Sekani
bcr	Babine	Babine
bea	Beaver	Castor
srs	Sarcee (Tsúu T'ina)	Sarcee (Tsúu T'ina)
tht	Tahltan	Tahltan
haa	Hän	Hän
	Sioux Family	Famille Sioux
asb	Assiniboine	Assiniboine
dak	Dakota	Dakota
lkt	Lakota	Lakota
sto	Stoney	Stoney
	Salish Family	Famille salishenne
blc	Bella Coola	Bella Coola
coo	Comox	Comox
hur	Halkomelem	Halkomelem
lil	Lillooet	Lillooet

oka	Okanagan	Okanagan
str	Salish	Salish
sec	Sechelt	Sechelt
shs	Shuswap	Shuswap
squ	Squamish	Squamish
thp	Thompson	Thompson
	Tsimshian Family	Famille tsimshienne
git	Gitksan	Gitksan
ncg	Nishga	Nishga
tsi	Tsimshian	Tsimshian
	Wakashan Family	Famille wakashane
has	Haisla	Haisla
hei	Heiltsuk	Heiltsuk
kwk	Kwakiutl	Kwakiutl
noo	Nootka	Nootka
	Iroquoian Family	Famille iroquoise
cay	Cayuga	Cayuga
moh	Mohawk	Mohawk
one	Oneida	Oneida
ono	Onondaga	Onondaga
see	Seneca	Seneca
tus	Tuscarora	Tuscarora
	Haida Family	Famille haïda
hdn	Haida, Northern	Haïda du nord
hax	Haida, Southern	Haïda du sud
	Tlingit Family	Famille tlingit
tli	Tlingit	Tlingit
	Kutenai Family	Famille Kutenai
kut	Kutenai	Kutenai

Appendix H

(Normative)

Attributes in GML and in SHAPE Formats

CGN1 Attribute Name	GML ⁷ Attribute Name	SHAPE Attribute Name	SHAPE Data Type
GEONAME	geographicName	GEONAME	char(100)
CGNDB_KEY	cgndbKey	CGNDBKEY	char(10)
GENERIC_TERM	genericTerm	GENERIC	char(240)
CONCISE_TERM	conciseTerm	CONCISE	char(240)
latitude	latitude	latitude	char(25)
longitude	longitude	longitude	char(25)
COORDINATE_ACCURACY	coordinateAccuracy	ACCURACY	char(25)
DATUM	datum	DATUM	char(10)
NTS_MAP	ntsMap	NTSMAP	char(255) ⁸
REGION_NAME	regionName	REGIONNAME	char(240)
LANGUAGE	language	LANGUAGE	char(10)
Feature_id	featureId	FEATUREID	char(40)

⁷ For GML format data type is always TEXT (STRING).

⁸ Field length truncated from 4000 to 255 characters.

Appendix I

(Normative)

Specially constructed characters for some Aboriginal names while awaiting UTF-8 implementation

When delivering some Aboriginal names which contain special Aboriginal language characters, the attribute "Geoname" contains some special coding {1}, {2}, {3}, ...{35}. This special coding represents the characters shown below. The up-to-date list of the Aboriginal characters is available at http://gnss.nrcan.gc.ca/gnss-srt/abor_chars_v1.pdf. The image file of each character is available at <http://gnss.nrcan.gc.ca/gnss-srt/gifs/aboriginalCharacters/char35.gif> where 35 may be changed for 1-35. The database is being modified to allow the storage and distribution of the Aboriginal characters using UTF-8 encoding forms, thus removing the need for the special coding.

Aboriginal characters and their CGNS Code / Caractères autochtones et leur code dans le STC

Table 1 - Numerical order / Ordre numérique

{1}	Ł	{8}	ǧ	{15}	ō	{22}	ī	{29}	ē
{2}	ł	{9}	ǧ	{16}	ō	{23}	ā	{30}	ā
{3}	X	{10}	ı	{17}	â	{24}	ē	{31}	ä
{4}	x	{11}	ō	{18}	ī	{25}	ō	{32}	ē
{5}	K	{12}	ē	{19}	à	{26}	š	{33}	ı
{6}	k	{13}	ū	{20}	ą	{27}	γ	{34}	ų
{7}	C	{14}	ā	{21}	ī	{28}	ä	{35}	ò

Table 2 - Alphabetical order / Ordre alphabétique

{14} ā	{17} â	{21} ī	{1} Ł	{26} ś
{23} ā	{12} ē	{22} ī	{2} ł	{13} ū
{30} ā	{24} ē	{10} ĭ	{11} ō	{34} ú
{28} â	{32} e	{33} ĭ	{25} ō	{3} <u>x</u>
{31} â	{29} é	{18} ĭ	{15} ō	{4} <u>x</u>
{20} ą	{7} <u>Ĉ</u>	{5} <u>K</u>	{16} ȯ	{9} &
{19} à	{8} q	{6} k	{35} ô	{27} ʔ

Appendix J

(Informative)

Bibliography

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Withdrawn/Retirée