### ISO Geodetic Registry

Item class Transformation

NAD83(CSRS) v4 to CGVD28 [v1]

Item statusVALIDIdentifier968

Information source Title Referencing and Time Tagging Heights in

Canada

Author M. Veronneau

Publisher Geodetic Survey Division, Natural Resources

Canada, Government of Canada

Publication date 2018

Series/Journal name Internal Report
Title Geoid Models

Information source Title Geoid Models

Author Canadian Geodetic Survey

Publisher Geodetic Survey Division, Natural Resources

Canada, Government of Canada

Revision date 2021-12-07

Other citation details Website. https://webapp.geod.nrcan.gc.ca/geod/

data-donnees/geoid.php?locale=en (accessed

2022-01-21).

Information source Title GPS-H

Author Canadian Geodetic Survey

Publisher Geodetic Survey Division, Natural Resources

Canada, Government of Canada

Revision date 2021-03-15

Other citation details Website: https://webapp.geod.nrcan.gc.ca/geod/

tools-outils/qpsh.php

Information source Title Height Transformation version 2.0 (HTv2.0),

Epochs 2002.0 and 2010.0

Author M. Veronneau

Publisher Geodetic Survey Division, Natural Resources

Canada, Government of Canada

Publication date 2019

Series/Journal name Internal Report

Information source Title The GPS Height Transformation (v2.0): An

Ellipsoidal-CGVD28 Height Transformation for

Use With GPS in Canada

Author M. Veronneau, A. Mainville, M. Craymer
Publisher Geodetic Survey Division, Natural Resources

Canada, Government of Canada

Publication date 2001

Series/Journal name Internal Report

Data source ISO Geodetic Registry

Remarks Grid transformation from NAD83(CSRS) v4 ellipsoidal heights at

epoch 2002.0 to CGVD28 normal orthometric heights. Derived from the NAD83(CSRS) v3 to CGVD28 transformation by applying the NAD83(CSRS) v7 velocity model to incorporate the propagation of heights from epoch 1997.0 to 2002.0. Bi-linear interpolation of the grid

file will give results agreeing to within 1cm 99.97% of the time.

Operation version v1

Scope Spatial referencing.

Operation accuracy 0.05 m

Source CRS NAD83(CSRS) v4 - LatLonEHt

Target CRS CGVD28 - NOHt

Operation method Geographic3D to Gravity Related Height (Canada)

#### Extent

Description	Canada - onshore and offshore - Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Quebec, Saskatchewan, Yukon.	
Geographic Bounding Box	West-bound longitude	-141.01
	North-bound latitude	90.0
	East-bound longitude	-47.74
	South-bound latitude	40.04

## Operation parameter values

Geoid (height correction) model file	HT2_2002v70.byn	
Geola (Height correction) Hoder me	1112_2002V70.by11	

# ISO Geodetic Registry

Item class OperationMethod

Name Geographic3D to Gravity Related Height

(Canada)

Item status VALID Identifier 89

Data source ISO Geodetic Registry

Remarks For consistency with earlier geoid models in Canada, reference

software for CGG2013 and CGG2013a uses bi-quadratic interpolation over nine grid nodes. The bi-linear interpolation is sufficient for most uses as the newer models have a higher spatial resolution. See

information source for file format documentation.

Formula The GPS Height Transformation (v2.0): An Ellipsoidal-CGVD28 Height

Transformation for Use With GPS in Canada

#### Operation parameters

Geoid (height correction) model file