### **ISO Geodetic Registry**

Item class Transformation

NAD83(CSRS) v2 to CGVD2013(CGG2013a)

epoch 1997 [v1]

Item statusVALIDIdentifier971

Information source

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

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/gpsh.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

Data source ISO Geodetic Registry

Remarks Grid transformation from NAD83(CSRS) v2 ellipsoidal heights at epoch

1997.0 to CGVD2013(CGG2013a) orthometric heights at epoch 1997.0 using the CGG2013a geoid model upon which CGVD2013(CGG2013a) is defined. 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) v2 - LatLonEHt

Target CRS CGVD2013(CGG2013a) epoch 1997 - OHt

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 North-bound latitude East-bound longitude South-bound latitude South-bound latitude 40.04

#### Operation parameter values

| Geoid (height correction) model file | CGG2013an83.byn |  |
|--------------------------------------|-----------------|--|
|--------------------------------------|-----------------|--|

## 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