

GSD LONG Report

12/01/2012 12:34:43 EST

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Natural Resources Canada
Geodetic Survey Division
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Horizontal Datum: NAD83CSRS

Vertical Datum: CGVD28

Note: Users of Geodetic Survey Division markers must obtain permission from the landowner before entering private property.

Selection Criteria : **Radial Search**

5 km 51 58 26.75 114 00 09.13

Data Type Requested : **Any Horizontal or Vertical stations (NAD83CSRS/CGVD28)**

Number of Stations Retrieved : 6

Definition of Reference Systems**NAD83(CSRS) :**

North American Datum 1983 (Canadian Spatial Reference System). The updated three-dimensional realization of the NAD83 reference system, still based on the GRS80 reference ellipsoid. In agreement with the US, this realization is defined in terms of a common procedure for transforming from recent versions of the International Terrestrial Reference Frame (ITRF). This realization is based on a 7-parameter transformation from ITRF96 (7 parameters were computed but the scale set to zero in order to adopt the scale of ITRF). Incremental transformations between ITRF96 and other ITRF realizations are used to update the transformation to any version of ITRF. NAD83(CSRS) is consequently a more accurate and stable

realization of NAD83 that can be accurately referenced to other global and regional reference frames. The absolute accuracy of NAD83(CSRS) is of the order of a couple of cm or better, the accuracy of recent versions of the ITRF.

It is important to realize that NAD83(Original) and NAD83(CSRS) are based on the same fundamental NAD83 reference system. They are merely different realizations or adjustments with different levels of error. Taking into account these errors, NAD83(Original) and NAD83(CSRS) are completely compatible with one another.

NAD83(Original) : North American Datum 1983 (Original). The near-geocentric three dimensional reference system for the U.S., Canada and Central America, based on the Geodetic Reference System 1980 (GRS80) reference ellipsoid. Although originally intended to be geocentric, it is now known to be offset from the true geocenter by about 2 m due to the limited accuracy of absolute positioning at the time.

NAD83(Original) adjustments were based on a set of VLBI constraints from the first NAD83 adjustment. This set of constraint coordinates was used as the definition of NAD83(Original) until the last federal horizontal control adjustment in 1993. Note that these adjustments were 2D horizontal (latitude and longitude) solutions only. Some provinces still use these solutions for their horizontal networks but most have or are moving to the NAD83(CSRS) realization of the NAD83 reference system. The absolute accuracy of NAD83(Original) varies from several cm to over a couple of meters, with an average of about 0.3 meters. However, these errors are locally fairly coherent so that the relative accuracy can be much better.

NAD27 : North American Datum 1927. A non-geocentric horizontal control datum for the U.S., Canada and Mexico, defined by a coordinate and azimuth with origin at Meades Ranch, on the Clarke 1866 reference ellipsoid.

CGVD28 : The Canadian Geodetic Vertical Datum 1928 (CGVD28): Official height reference system in Canada The reference frame for the CGVD28 is the mean sea level at six tide gauges in dates of 1928. These tide gauges were located on both the Pacific and Atlantic

Oceans as well as on the St-Lawrence River. The datum is propagated across Canada (mostly southern Canada) by a first-order levelling network and is accessible to users through some 80,000 federal benchmarks.

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Station 1 of 6

SITE IDENTIFICATION

Unique Number : 75X112

Name : 760+04-13

Established by : Alta. Dept. Of Energy And Natural Resources (Alberta Bureau

Province : AB

Prov. Identifier : 280701

NTS Map No : 082P13

STATION COORDINATES

Horizontal Datum : NAD83

Method : Values should be checked with your provincial agency before use.

Latitude : N51° 59' 55.69407"

Longitude : W113° 58' 03.11358"

Agency : Geodetic Survey Division - Nrcan

Adjustment Net : MA90500

UTM : Zone = 12 Scale Factor = 1.0001 N = 5765063.742 m E = 296293.895 m

VERTICAL DATA

Vertical Datum : CGVD28

Elevation : 932.071 m

Order : First Order

Method : Differential

Adjustment Line : VA2A78

Published Year : 1978

STATION MARKER INFORMATION AND LOCATION

Marker Type : Brass/Bronze Tablet Or Cap

Inspected in : 1975

Status : Good

Inspection Comments : None

INNISFAIL

STEEL PIPE WITH BRASS CAP IN MEDIAN OF HIGHWAY NO. 2, AT INTERSECTION WITH NORTH BOUNDARY OF SECTION 8-35-28, 9 M SOUTHEAST OF CENTRE LINE OF SOUTHBOUND LANE, 8 M NORTHWEST OF CENTRE LINE OF NORTHBOUND LANE, 1.5 M SOUTH OF SOUTH EDGE OF PAVEMENT OF EAST-WEST CROSSING. ESTABLISHED BY ALBERTA SURVEY CONTROL.

HISTORICAL COORDINATES NOTE: Coordinates listed below are no longer maintained by GSD and should be verified with your provincial agency before use.

Horizontal Datum : NAD83

Method : Multiple Methods

Latitude : N51° 59' 55.69407"

Longitude : W113° 58' 03.11358"

UTM : Zone = 12 Scale Factor = 1.0001 N = 5765063.742 m E = 296293.895 m

PROJECTS IDENTIFIERS:

51113 VA2A78 JUNE90

Station 2 of 6

SITE IDENTIFICATION

Unique Number : 78A151
Name : 78A151
Established by : Geodetic Survey Division - Nrcan
Province : AB
Prov. Identifier : None
NTS Map No : 082P13

STATION COORDINATES

Method : Scaled
Latitude : N51° 59' 28"
Longitude : W113° 58' 34"
Agency : Geodetic Survey Division - NRCan
UTM : Zone = 12 Scale Factor = 1.0001 N = 5764220 m E = 295677 m

VERTICAL DATA

Vertical Datum : CGVD28
Elevation : 930.248 m
Order : First Order
Method : Differential
Adjustment Line : VA2A78
Published Year : 1978

STATION MARKER INFORMATION AND LOCATION

Marker Type : Others (Explained In Description)
Inspected in : 1978
Status : Good
Inspection Comments : None

INNISFAIL

CONCRETE CULVERT UNDER WEST SIDE OF SOUTHBOUND LANE OF HIGHWAY NO. 2, 3.2 KM SOUTHWEST OF JUNCTION WITH HIGHWAY NO. 54, 34 M NORTH OF CENTRE LINE OF APPROACH TO SERVICE ROAD, 6.7 M WEST OF WEST GUARD RAIL, 2.1 M FROM SOUTHWEST CORNER, 2.1 M FROM NORTHEAST CORNER, 5 CM FROM NORTHWEST EDGE.

HISTORICAL COORDINATES **NOTE:** Coordinates listed below are no longer maintained by GSD and should be verified with your provincial agency before use.

None

PROJECTS IDENTIFIERS:

51113 VA2A78

Station 3 of 6

SITE IDENTIFICATION

Unique Number : 78A152

Name : 78A152

Established by : Geodetic Survey Division - Nrcan

Province : AB

Prov. Identifier : None

NTS Map No : 082P13

STATION COORDINATES

Method : Scaled

Latitude : N51° 58' 48"

Longitude : W113° 59' 28"

Agency : Geodetic Survey Division - NRCan

UTM : Zone = 12 Scale Factor = 1.0001 N = 5763039 m E = 294597 m

VERTICAL DATA

Vertical Datum : CGVD28

Elevation : 945.753 m

Order : First Order

Method : Differential

Adjustment Line : VA2A78

Published Year : 1978

STATION MARKER INFORMATION AND LOCATION

Marker Type : Permanent Agency Marker

Inspected in : 1978

Status : Good

Inspection Comments : None

INNISFAIL

DEEP BENCH MARK IN MANHOLE ON RCMP DOG TRAINING SECTION GROUNDS, ALONG HIGHWAY NO. 2, 4.8 KM SOUTHWEST OF JUNCTION WITH HIGHWAY NO. 54, 22.7 M NORTHWEST OF SOUTHWEST CORNER OF MAIN BUILDING, 19 M EAST OF SERVICE ROAD CENTRE LINE, 4 M SOUTHEAST OF FLAGPOLE, 3.3 M SOUTH OF SIDEWALK, 1 M WEST OF CURB.

HISTORICAL COORDINATES NOTE: Coordinates listed below are no longer maintained by GSD and should be verified with your provincial agency before use.

None

PROJECTS IDENTIFIERS:

51113 VA2A78

Station 4 of 6

SITE IDENTIFICATION

Unique Number : 78A153

Name : 78A153

Established by : Geodetic Survey Division - Nrcan

Province : AB

Prov. Identifier : None
NTS Map No : 082O16

STATION COORDINATES

Method : Scaled
Latitude : N51° 58' 12"
Longitude : W114° 00' 11"
Agency : Geodetic Survey Division - NRCan
UTM : Zone = 11 Scale Factor = 1.0001 N = 5761944 m E = 705861 m

VERTICAL DATA

Vertical Datum : CGVD28
Elevation : 948.804 m
Order : First Order
Method : Differential
Adjustment Line : VA2A78
Published Year : 1978

STATION MARKER INFORMATION AND LOCATION

Marker Type : Permanent Agency Marker
Inspected in : 1978
Status : Good
Inspection Comments : None

BOWDEN

IRON PIPE WITH BRASS CAP AT SOUTHEAST CORNER OF BOWDEN CORRECTIONAL INSTITUTE PROPERTY, ALONG HIGHWAY NO. 2, 4.2 KM NORTHEAST OF WATER TOWER, 80 M NORTHWEST OF SOUTHBOUND LANE CENTRE LINE, 22 M SOUTHEAST OF SERVICE ROAD CENTRE LINE, 10 M SOUTH OF SECTION ROAD CENTRE LINE, 93 CM WEST OF POWER POLE, AT ROAD LEVEL.

HISTORICAL COORDINATES **NOTE:** Coordinates listed below are no longer maintained by GSD and should be verified with your provincial agency before use.

None

PROJECTS IDENTIFIERS:

51114 VA2A78

Station 5 of 6

SITE IDENTIFICATION

Unique Number : 78A154

Name : 78A154

Established by : Geodetic Survey Division - Nrcan

Province : AB

Prov. Identifier : None

NTS Map No : 082O16

STATION COORDINATES

Method : Scaled

Latitude : N51° 57' 22"

Longitude : W114° 00' 54"

Agency : Geodetic Survey Division - NRCan

UTM : Zone = 11 Scale Factor = 1.0001 N = 5760354 m E = 705100 m

VERTICAL DATA

Vertical Datum : CGVD28

Elevation : 961.835 m

Order : First Order

Method : Differential

Adjustment Line : VA2A78

Published Year : 1978

STATION MARKER INFORMATION AND LOCATION

Marker Type : Permanent Agency Marker

Inspected in : 1978

Status : Good

Inspection Comments : None

BOWDEN

C.P.R., CONCRETE CULVERT UNDER TRACKS, 2.5 KM NORTHEAST OF WATER TOWER, IN LINE WITH NORTH BOUNDARY OF SHELL OIL PROPERTY, TABLET IN TOP, 22 CM FROM SOUTH END, 20 CM FROM EAST EDGE, 5 M BELOW TRACKS.

HISTORICAL COORDINATES NOTE: Coordinates listed below are no longer maintained by GSD and should be verified with your provincial agency before use.

None

PROJECTS IDENTIFIERS:

51114 VA2A78

Station 6 of 6

SITE IDENTIFICATION

Unique Number : 78A155

Name : 78A155

Established by : Geodetic Survey Division - Nrcan

Province : AB

Prov. Identifier : None

NTS Map No : 082016

STATION COORDINATES

Method : Scaled
Latitude : N51° 56' 24"
Longitude : W114° 01' 30"
Agency : Geodetic Survey Division - NRCan
UTM : Zone = 11 Scale Factor = 1.0001 N = 5758547 m E = 704486 m

VERTICAL DATA

Vertical Datum : CGVD28
Elevation : 1001.418 m
Order : First Order
Method : Differential
Adjustment Line : VA2A78
Published Year : 1978

STATION MARKER INFORMATION AND LOCATION

Marker Type : Permanent Agency Marker
Inspected in : 1978
Status : Good
Inspection Comments : None

BOWDEN

HIGHWAY NO. 587 UNDERPASS UNDER HIGHWAY NO. 2, 0.7 KM NORTH OF WATER TOWER, TABLET IN TOP OF WEST END, 1.20 M FROM SOUTHWEST CORNER, 25 CM FROM WEST EDGE.

HISTORICAL COORDINATES **NOTE:** Coordinates listed below are no longer maintained by GSD and should be verified with your provincial agency before use.

None

PROJECTS IDENTIFIERS:

51114 VA2A78

Number of Stations Retrieved : 6