

Cartographic Services Quality Control Checklist

Version 3.0

MAP NUMBER _____

CARTO NUMBER _____

NAME _____

DATE _____

This document **MUST** be completed and stored in each QAE file

Material and information

Cartographer supplied

- QAE file
 - Design layout (signed)
 - Hard copy of any symbol set that were altered from the master GSC Symbol set
 - Any correspondence with client, editorial, etc.
- Entire digital workspace (including the following up to date files)
 - Meta Data (readme<ws#>.txt)
 - History or progress (history<ws#>.txt)
 - Filtering Report generated by GEMS (report<ws#>.txt)
- On-demand paper plot
- NTS topographic base
- Previously checked plots and/or client comments
- One "scaled" on-demand paper plot for each offset printed colour (if applicable)

Client supplied

- Permission to Publish Form, completed and signed
- Map Production Information Form from Division, completed and signed
- NTS topographic base (if applicable)
 - Author highlighted topographical names to appear on map
- Digital or traditional manuscripts (map compilations, previously related Open Files, etc.)
- Digital files and/or hard copies of legend, references, and descriptive notes
- Mockup of adjoining sheet information (if part of project area)
- Adjoining map sheets (if available)
- Special instructions from client
- Contact information if client is in the field

Editorial supplied

(A-series and Pocket Figures only)

- Memorandum for Production of Maps, completed and signed
- Hard copy of editorial changes
- Edited digital files and/or hard copy of legend, references, and descriptive notes
- Translated text (if applicable)

Hardcopy

Topographic information

(use printed NTS topographic base as reference)

- Topographic features on digital base match those on NTS topographic base for accuracy and completeness
- Spelling of all topographic names match with those on NTS topographic map
- Additional topographic names supplied by author exist within CPCGN (Geonames database)
- Pan-Canadian names are properly represented (if applicable)
- Special credit note exists indicating client has added local names to the map
- Symbology and fonts adhere to GSC Symbol sets as per NTS topographic base
- Elevation unit of measure on map and in credit note match
- Edge ties for each topographic feature match with any adjoining maps or composite sheets (if applicable)

Map border

- Border adheres to Cartographic Design Specifications
- Subdivisions are correct for scale of map
- Border line work does not contain any deficiencies (e.g. Spikes or breaks)

Geological information

Polygons

- Each geological unit on map has colour fill
- Each geological unit on map appears in legend
- Colour variations between geological units are easily identified and match those indicated on legend
- Patterns are easily distinguished and match those indicated on legend
- Colour fill does not appear in areas of open water (oceans, lakes, double line rivers, etc.)
- Plotting inconsistencies do not exist (missing colour component, broken dither pattern, etc.)

Lines

- Geological contacts are complete and accurately represented (e.g. defined, approximate, assumed)
- Geological contacts do not extend over map neatline or areas of open water
- Edge ties for each geological linear feature match with any adjoining maps or composite sheets (if applicable)
- Geological linear symbology match those indicated on legend
- Geological linear features are plotted last for legibility

Points

- Orientations of lithological symbols match those on client's manuscript
 - Strike position can be slightly altered for legibility
- All marker symbols on map face are accurate and legible (no symbols on symbols or symbols on text)
- Modifiers appearing as points on lines are positioned over land (when possible)
- Geological point symbology match those indicated on legend
- Geological point features are plotted last for legibility

Annotation

- Dip numbers are complete, accurate and adhere to Cartographic Design Specifications
- All annotation on map face is accurate and legible (no text on feature of same colour or text on text)
- Each geological unit on map is correctly labeled
- GSC special font is properly used to represent age on unit designators (if applicable)
- Annotation for unit designators is parallel with lines of latitude for latitudes below 80° N
- Annotation for unit designators is parallel with base line for latitudes above 80° N
- Size of annotation for unit designators is relative to size of area it represents (6pt – 14pt)
- Position of annotation for unit designators is clearly identifies area it represents
- Position of annotation for unit designators is not in conflict with other geological or topographical features
 - Avoid leaders unless absolutely necessary
- Size and placement of unit designators match those on any adjoining maps or composite sheets (if applicable)
- Each occurrence of multiple units with same colour are labeled on map

Surround information

Legend

- All geological units, unit designators, colours, and symbology stated in legend appear on map (see digital copy of Filter Report to verify)
- Special note exists for multiple map sheets (if applicable)
- Common legends are identical and a special note exists for common legend (if applicable)
- Special note exists for symbology and geological units not appearing on map (if applicable)
- Terminology for geological time terms are properly sequenced, placed, and indented
- Headings for groups, formations, etc. are properly placed and identify inclusive units
- Alignment of correlating units in multiple column legend is correct
- Format of legend adheres to Cartographic Design Specifications
- Unit designator annotation adheres to Cartographic Design Specifications
- GSC special font is properly used to represent age on unit designators (if applicable)
- Spelling and completeness of legend matches manuscripts or compilation notes
- Size and shape of symbology in legend matches symbology on map
- Position of legend adheres to Cartographic Design Specifications or design layout

Credit notes

- Credit notes are complete and in correct sequence as outlined in the Cartographic Design Specifications
- Base credit note is the appropriate choice from the Cartographic Design Specifications
 - Variations may occur to properly describe source and reference
- Magnetic declination note is properly used as per scale and proximity to the North Magnetic Pole
- Elevation unit of measure stated in credit note matches that on the map
- Elevation unit of measure stated in credit note was removed because contours do not exist on map
- Years for fieldwork and compilation are correct
- Affiliations of authors, GSC personnel, or outside agencies are correct
- Spelling of author's names in credit notes and recommended citation match
- ISO credit note is present

Location map

- Position and appearance of location map adheres to Cartographic Design Specifications
- Geographic position of map is properly represented on location map (red dot or shaded red block)
- Black dot or shaded black block is used for single colour maps
- Language representation is correct (Unilingual or bilingual)

Title block & recommended citation

- Spelling in title block and recommended citation is correct
- Language representation for title block and recommended citation is correct
 - Bilingual, English first or French first
- Title block and recommended citation have identical wording
- Title block and recommended citation have identical map numbers
- Title block does not exceed 8 inches in length
- Fonts and position of title block and recommended citation adhere to Cartographic Design Specifications
- Thematic caption and geographic caption in title block are correct and adhere to Cartographic Design Specifications
- Pocket figure title and folding title adhere to Cartographic Design Specifications
- Pocket figure title and folding title are correctly spelled and relate to the information being shown
- Scale of the map is accurate and language representation is correct (English first or French first)
- Projection note correctly states the projection, NAD and relevant information
- Projection note adheres to Cartographic Design Specifications
- Copyright note is included underneath the projection note
- Publishing date and recommended citation date match
- Recommended citation is aligned with bottom edge of Canada word mark and right edge of legend
- Recommended citation does not exceed 3.5 inches in length
- Recommended citation adheres to Cartographic Design Specifications
- Special note for common legend or multiple sheets exists in recommended citation (if applicable)
- En dash is properly used to depict a range of values

Descriptive Notes & References

- Position of descriptive notes and references adhere to Cartographic Design Specifications or design layout
- Fonts and sizes adhere to Cartographic Design Specifications
- Spelling is correct throughout descriptive notes and references
- GSC special font is properly used to represent age on unit designators (if applicable)
- All unit designators mentioned in descriptive notes also appear in legend
- All unit designators mentioned in descriptive notes are bracketed with the word *unit* or *units*
- All topographic names mentioned in descriptive notes and references also appear on map
- The words *in* and *also* are italicized in references when referring to a publication
- En dash is properly used to depict a range of values

NTS Index map

- Special note for adjoining map sheets exists (if applicable)
- Language representation is correct (Unilingual or bilingual)
- Position and appearance of NTS index map adheres to Cartographic Design Specifications
- NTS sheet numbers are correct and adhere to Cartographic Design Specifications
 - A dash exists before letters I and O
 - A space exists after numbers
- Map numbers for map and adjoining sheets are correct and adhere to Cartographic Design Specifications
- Project area title correct (if applicable)
- Drainage properly represented for large bodies of water (if applicable)

GSC crest

- Position of GSC crest adheres to Cartographic Design Specifications
- Language representation is correct (English first or French first)
- Size of GSC crest is proportionate to the size of map (e.g. 0.7 inches for 28" x 40" maps)
- Colour GSC crest used for Open Files or On-demand A-Series
- Black & white GSC crest used for single colour maps

Canada word mark & NRCan logo

- Positions and sizes of Canada word mark and NRCan logo adhere to Cartographic Design Specifications
- Language representation is correct (Bilingual, English first or French first)
- Colour of flags for Canada word mark and NRCan logo is properly represented

Copies Of Note

- Position and font size adheres to Cartographic Design Specifications
- Appropriate sales offices are mentioned in note for A-series maps
- Note does not appear on Open File maps
- Publishing date and recommended citation date match
- Note parallel to base line when extreme curvature of border exists (> 80° N latitude)

Logos and Open File stamp

- Release date (Year) is correct
- Open File numbers in Open File stamp, recommended citation, and title block match
- Sheet numbers are correct (if applicable)
- Position of other logos adhere to Cartographic Design Specifications or design layout
 - Provincial, NATMAP, and Polar Continental Shelf logos

Cross-sections

- Cross-sections agree with caption and location lines on map
- Geological units appear in map legend
- Scale of cross-section matches scale of map
- All geological linework adhere to Cartographic Design Specifications
- Horizontal and vertical scales are present (if applicable)
- The word *diagrammatic* is present in title when no scales are indicated
- Language representation is correct
- Drainage names on cross-section match in colour and style to those on the map
- Drainage names match NTS topographic base
- Cross-section lines are properly labeled and drawn on map and cross-section figure

Digital

Metadata

- Check all metadata fields
- Compare fields against recommended citation on PDF/hardcopy. You may want to run citation command at ArcPlot prompt.
- Compilation and field work years must be 4-digits or keyword "unknown" can be used.
- Run MIRP program with publication year (not current year) and compare with magnetic declination in metadata
- Text in surround\credits<map#>.txt file should match magnetic declination information.
- District field should include "District of..."
- Geographic names should only include official names (see topographic map)
- Check contacts are set for "My Office/Division"
- Check version information, latest CDS version should be used.

Attribute Data

- Check existing filter report for observations.
- Run new filter report to cross check.
- Check item structure for each feature class. (Check Items)

Cover Features

- Perform frequencies on multiple items, check for consistent symbol values and codes.
- Make sure CODE values are assigned proper -TYPE values
- Check limit of mapping is correct and without gaps (logically select limit_mapping, put to temporary cover, turn on dangles and pseudo nodes)
- Marker symbols 33 (default label) and 65 (default tic) should not be used to symbolize point features (BAS, PNT covers)
- Check for sliver arcs from processing geology (should not have CODE = ARBITRARY and GEO-SURF = LAND). To find out where these are, here's a trick. Select these arcs with a logical expression and put them to a temporary cover. Set this temporary cover to the back environment turning on only the dangles. If they are all on land, you will have to edit and update the items CODE, and GEO-SYM with correct value. Items GEO-SURF, and GEO-TYPE should already be LAND and CON respectively. To resolve, these slivers can be deleted, and the resulting gap can be closed by snapping dangles to nodes.
- Make sure GEO, LIN, PNT and GEP covers have been processed by comparing <cover># and -LINK items in .AAT and >PAT. They should match.
- Check for unique CODE values against legend.
- Compare annotation in TXT cover with -ANNO values in cover features. Perform frequency on TXT cover using items TXT-CLASS and if needed TEXT. Check for valid subclasses.
- Also check for linear features that have direction are correctly oriented and do not use any symbols with arrowheads.
- Ensure duplicate points are snapped to each other with same station number (i.e. cross-striae, radiocarbon points, mineral occurrences)

External Tables

- Required for chronology boxes. Each field should be a separate item.
- Meltwater channels where barb indicates upslope side. Should have extra item called SLOPE with values of either LEFT or RIGHT, or use a unique code value for differentiating slopeside.
- Any changes noted to external tables must also be made in external table info file.

Info Files

- Check legend info file:
 - Make sure order value is correct.
 - Check for spelling mistakes in description. Including dashes, periods, commas, capital letters, etc...
 - Replacement string for special characters (i.e. Ar for Archean symbol)
 - Formation names should not be stored as a level, but repeated in each description.
 - Check for younger and older events.
 - Check set descriptions for STRUCTURAL, ARBITRARY and LIMIT_MAPPING according to Upgrading Document. (The description for code ARBITRARY should be "Arcs used to close geological polygons"; the description for code STRUCTURAL should be "An arc used to close a geological polygon along a linear feature".)
- Check level info file:
 - Check for spelling mistakes in description. Including dashes, periods, commas, capital letters, etc...
 - Ranges should not appear as part of level.
- Check external table info file:
 - If corrections/additions to above external tables are made, updates are required to external table info file.
- Check symbol info file:
 - Codes for polygons have CMY values other than black.
 - Codes for linear and point features are black unless otherwise specified in legend.

Files

- Check for all required files.
- The PDFs must have a security password to prevent editing the file. None is required for opening the PDFs. Also, each PDF must be non-printable. Check for key on bottom of Arcobat reader screen.
- Check for symbols that are not required. Use cleanup_sym.aml, which will remove any symbols from a custom symbolset that are not used in any of the standard CDS covers. It does not take into consideration any required symbols that are used in plotting AMLs. This AML should not be used if the map is part of a series with a common legend.
- Symbols 33 and 65 should exist in the custom markerset.
- Make note that the Readme file will have to be updated to reflect metadata changes.
- Check spelling in credits<map#>.txt file.
- If required for old projects that have been upgraded, tell cartographer to make a note in the Readme file that existing plotting AML and menu file will not work as it does not incorporate changes made to coverage names and attributes as part of the upgrade procedure to CDS 3.2.

Digital Release

- Check data structure on CD-ROM
- Readme and Lisez moi text files correspond with the map title
- Ensure ArcExplorer file contains proper themes loaded from SHP files
 - Arcs and Polygons from HYD cover
 - Arcs and Points from BAS cover
 - Arcs and Polygons from BAP cover
 - Arcs and Polygons from GEO cover
 - Arcs and Polygons from GEP cover
 - Arcs from LIN cover
 - Points from PNT cover
 - Arcs from NTL cover
- Title and notes on Jewel case Cover, Booklet, and CD label are correct

Offset Printing

Colour separation plots

- Each separate accurately represents the colour compared to the composite plot
- Magenta separate contains
 - Red flags for NRCan logo and Canada word mark
 - Dot or shaded block for location map
 - Shaded area for NTS index map
- Yellow separate contains
 - Red flags for NRCan logo and Canada word mark
 - Dot for location map
- Cyan separate contains
 - Water fill for location map
- Drainage blue separate contains
 - Drainage linework for NTS index map (if applicable)
 - Drainage text
- Contour brown separate contains
 - Contour linework and text
 - Culture linework and text
- Black separate contains
 - Title block, index map, legend, references, descriptive notes, credit notes, etc.
- Figures and insets are properly separated
- Colour fills for legend boxes align with black outline
- Registration targets and colour bars exist

Final negatives

- Screen form in QAE file is properly filled out for colours and percentages
 - Screen angles are correct (no tolerance)
 - Screen percentages are correct ($\pm 2\%$ tolerance)
- Scratches, dust and dirt spots are properly duffed on the non-emulsion side
- Dot image or sharpness of text is correct (2400 dpi)
- Image is right reading emulsion down
- Negatives are properly gripped to press guide
- Grips are centered on and parallel to work limits
- No "wows" or "twists" exist in grips due to improper taping
- Registration targets are outside paper trim limits
- All registration targets on each negative match the registration targets on the black negative
- Colour negatives properly register to geological contacts, drainage, legend blocks, borders, indexes, etc.
- Magenta negative contains
 - Red flags for NRCan logo and Canada word mark
 - Dot or shaded block for location map
 - Shaded area for NTS index map
- Yellow negative contains
 - Red flags for NRCan logo and Canada word mark
 - Dot for location map
- Cyan negative contains
 - Water fill for location map
- Drainage blue negative contains

- Drainage linework for NTS index map (if applicable)
- Drainage text
- Contour brown negative contains
 - Contour linework and text
 - Culture linework and text
- Black negative contains
 - Title block, index map, legend, references, descriptive notes, credit notes, etc.
- Negatives are clean and free of fingerprints, smudges, etc.
- Colour bars are present and not overlapping
- All negatives are labeled in the right corner of grip specifying negative number, colour code, and map number
- All negative numbers correspond with those listed on plating card
- Plating card on negative envelope is properly filled out and affixed to envelope
- All negatives have a slip-sheet attached

Colour proof

- Corrections indicated on colour proof have been made on the negative separates
- Proof of corrections being made has been written on colour proof
- Colour chips (with codes) from the GSC colour chart are attached to colour proof (when possible)
 - Positioned beside corresponding colour in legend boxes
- Colour proof label has been added and signed by production coordinator
- Scratches, dust, and dirt spots are properly duffed on the non-emulsion side of negatives

Press approval

- All colour components are shown on final printed copy
- Registration is acceptable
- All surround information shown on proof appears on final printed copy
- Colour matches against any adjoining sheets (if applicable)
- Colours on map matches those on legend
- Overall printing quality (text, linework, area colours) is acceptable
- Press release form has been signed off