Ordre des géologues du Québec

Directives for Document Authentication

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Foreword

The Ordre des géologues du Québec publishes guidelines and directives in order to promote quality in the practice of the profession.

Geologists must observe these guidelines and directives to ensure that they are in line with what is defined as standard practice.

Terminology

The following terms are used in the guidelines and directives:

- The word "must" establishes a requirement to be met in order to be in compliance with the directives (*must* means "is obliged to").
- The word "should" indicates that one option among several is recommended or preferable, without mentioning or excluding others; that a certain course of action is preferred but not mandatory; or, when used in the negative, that a certain course of action is not desirable but is not prohibited (*should* means "is recommended").
- The word "may" designates that an action is permissible (*may* means "is allowed to").

This document was inspired by and adapted from the following works:

- Lignes directrices concernant les documents d'ingénierie, *Ordre des ingénieurs du Québec*;
- Guideline: Use of the Professional Engineer's Seal, *Professional Engineers Ontario*;
- Practice Standard for Authenticating Professional Documents, *Association of Professional Engineers, Geologists and Geophysicists of Alberta*.

This document was prepared by a small working group coordinated by the Secretary of the Ordre, Alain Liard, Geo. The group was composed of the following members:

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In addition, the membership of the Ordre was consulted, and more than 35 geologists sent in comments that were taken into account in the final version.

Continuing improvement

The guidelines and directives of the Ordre des géologues are meant to be useful and are therefore open to improvement. Any feedback about this document should be sent in writing to the Secretary of the Ordre des géologues du Québec at one of these addresses:

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1 Introduction

Geologists have a legal obligation to certify or authenticate any opinion or report produced in the practice of their profession. Geologists incur liability whenever they take part in the preparation, verification, approval or modification of geology documents.

Geology documents are increasingly taking the form of technology-based or electronic documents. Moreover, projects often require contributions from several geologists as well as from professionals and experts from various disciplines, to the point where it is often difficult to determine each person's contributions and responsibilities. It is therefore important, whenever a geologist contributes to any geology document, that his or her contribution be clearly indicated.

1.1 Scope

These directives set forth the rules to follow in authenticating professional documents in accordance with the *Geologists Act*, the *Professional Code* and their regulations.

Also in this document are various practical recommendations, especially with regard to team efforts and the use of information technologies and technology-based geology documents.

1.2 Purpose

The aim of these directives is to state the requirements concerning document authentication and to provide guidelines for document management.

These directives are binding for members of the *Ordre des géologues* and for persons having received special authorization from the Ordre to practice the profession in Quebec.

1.3 Definitions

The following definitions are provided for help in understanding these directives. Most of them are the standard definitions; in some cases, due to the multiplicity of terms in general use or of possible definitions, a choice was made.

Author: The geologist(s) who conceived or produced a geology document, or participated therein.

Authentication of a geology document: Attestation of the authenticity and integrity of a geology document, the identity of its author, the author's status as a geologist and the fact that the document was drawn up by a member in good standing of the Ordre des géologues du Québec.

Borehole record: Description of the geological formations encountered during the drilling. It may include data such as water levels, flow, and water quality, etc.

Digital signature: The establishment of a link, by any method, between a technology-based document and a person, thus identifying the signer and ensuring the integrity, confidentiality and non-repudiation of the document.

Document: "Information inscribed on a medium constitutes a document. The information is delimited and structured, according to the medium used, by tangible or logical features and is intelligible in the form of words, sounds or images. The information may be rendered using any type of writing, including a system of symbols that may be transcribed into words, sounds or images or another system of symbols." (*s.3, R.S.Q., c. C-1.1*)

Geology document: A document expressing the result of geological work done by a geologist.

A geology document must be considered a "document" within the meaning of the Act.

Geology software: Special software used by geologists.

Good practice: The technical knowledge and trade practices, taken as a whole, required for judicious practice of the profession. In addition, the exercise of good practice presupposes that the geologist has taken into account certain primary considerations such as public health and safety and environmental protection.

Handwritten signature: The personal mark (usually the name written by hand) that a person habitually makes on a document to acknowledge his or her consent and responsibility with regard to the document, or to authenticate it.

Imprint: A facsimile (of a seal, a signature, etc.) appearing on a document, regardless of the medium.

Integrity of a document: "The integrity of a document is ensured if it is possible to verify that the information it contains has not been altered and has been maintained in its entirety, and that the medium used provides stability and the required perenniality to the information." *(s.6, R.S.Q., c. C-1.1)*

Map: A representation, on any medium, of a more or less extensive area of the land and shorelines. A cartographical document on which the boundaries of a jobsite have been drawn.

Notice: A piece of information brought to the attention of a person regarding a subject that concerns him or her in particular.

Opinion: An opinion expressed by a person or organization that has been consulted.

Original: The document that was produced directly by the author and that is the first source of subsequent copies or reproductions. In the case of a technology-based document, the integrity of the original must be ensured and it must be possible to trace the original back to a person, whether or not it is ever transmitted.

Plan: A document containing information in a graphical form, that is, through a combination of lines and characters (letters, numbers, signs and symbols). In cartography, the term "plan" refers to a map representing an area small enough for its curvature to be omitted and the scale to be considered constant.

Seal: The geologist's official stamp. It contains the geologist's name and permit number, the word "QUÉBEC" and one of the following indications: "GÉOLOGUE" or "GÉOLOGUE- GEOLOGIST".

Technology-based document: A document existing on a medium that uses information technologies, whether electronic, magnetic, optical, wireless or other, or that uses a combination of technologies, such as a computer file.

2 Liability and legal framework

The main forms of liability are professional liability, civil liability and criminal liability.

Geologists, as professionals, must assume their responsibilities toward the public, their employers, their clients, their colleagues, themselves and the profession.

The geologist's liability resulting from the delivery of a geology document is not affected by the fact that the document is authenticated or not. A geologist can be held liable for the consequences of his or her opinions or reports, even if that geologist did not authenticate the geology documents in question.

2.1 Professional liability

Exercising the profession of geologist involves producing, for clients, opinions or reports on matters of geology for a given purpose. In so doing, the geologist brings to bear his or her knowledge and professional judgment. The resulting documents are geology documents, whether on paper or in electronic form.

Geologists have a professional responsibility to follow the requirements prescribed for the profession by the *Professional Code*, the *Geologists Act* and their regulations. Any breach of these rules is subject to disciplinary sanctions.

A geologist who has prepared geology documents, or directed and supervised their preparation by persons who are not members of the Ordre, must certify that these documents are complete and definitive for the purposes indicated therein and that they have been prepared by a member in good standing of the Ordre des géologues du Québec, in accordance with the laws, regulations and good practice applicable to the profession.

As part of professional practice, a geologist must

- authenticate the originals of all documents which he or she has prepared or contributed to;
- ensure that his or her contribution to a product is recognized and duly acknowledged;
- and ensure that the purposes of any geology document which he or she authenticates are clearly stated therein.

2.2 Civil and criminal liability

A geologist is civilly liable for any damage suffered by another person as a result of errors, negligence or omissions in the performance of professional work, to the extent that such errors, negligence or omissions constitute a fault within the meaning of civil law. Similarly, a geologist can be held liable for damage caused to another person by someone acting under the geologist's immediate instructions or supervision (a geologist-in-training, junior geologist or other person who is not a member of the Ordre).

A geologist is criminally liable if he or she violates any penal or criminal law. The judicial system imposes punishments of a pecuniary nature or involving loss of liberty, if applicable. A geologist could be found guilty of criminal negligence if the Court is convinced that his or her conduct was unreasonable, careless or reckless to the point of being criminal.

2.3 Relevant laws and regulations

The following laws and regulations are applicable to the subjects covered by this directive:

- *REGULATION RESPECTING THE INTERNAL BUSINESS OF THE ORDRE DES GÉOLOGUES DU QUÉBEC* (c. G-1.01, r.1)
- *REGULATION RESPECTING PROFESSIONAL LIABILITY INSURANCE FOR THE MEMBERS OF THE ORDRE DES GÉOLOGUES DU QUÉBEC1* (c. G-101, r.1.1)
- *REGULATION RESPECTING RECORD MAINTENANCE, CONSULTING OFFICES AND CESSATION OF PRACTICE OF MEMBERS OF THE ORDRE DES GÉOLOGUES DU QUÉBEC1* (c. C-26, r98.01)

- Code de déontologie des Géologues (code of ethics)
- *Professional Code* (R.S.Q., c. C-26)
- *Geologists Act* (R.S.Q., c. I-9)
- *An Act to establish a legal framework for information technology* (R.S.Q., c. C-1.1)
- *Civil Code of Québec* (S.Q., 1991, c. 64)
- *Patent Act* (R.S.C. (1985), c. P-4)
- *Copyright Act* (R.S.C. (1985), c. C-42)
- *Industrial Design Act* (R.S.C. (1985), c. I-9)
- *Trademarks Act* (R.S.C. (1985), c. T-13)

3 Authentication of geology documents

Traditionally, geology documents have been in written or graphical form and recorded on paper or film. The geologists who prepare these documents have an obligation to add their signatures and seals, or just their signatures. This is the authentication of geology documents. The Ordre provides members with a geologist's seal (an ink stamp or embossed seal) which can be used to manually mark these types of documents.

With the advent of information technologies, geology documents are now produced and handled entirely in electronic form such as computer files. Under certain conditions, these technology-based documents have legal value.

A technology-based document can be reproduced in such a way that the copy is nearly impossible to distinguish from the original. Unless protected, such a document could be transmitted or altered without detection. The integrity of the original document—critical in the practice of the profession—is thus called into question when a technology-based document is used without proper protection. The authentication of such documents is done by means of a digital signature.

Any person entitled to a geology document has a right to reject it if it is not authenticated.

3.1 Seal and signature

3.1.1 Seal

For the public, a seal attests that the holder is a member of the *Ordre des géologues du Québec* and therefore authorized to practice the profession of geologist in Quebec.

The holder of the seal is authorized to reproduce it by any process enabling an imprint to be made, including processes using information technologies. Whatever the means of reproduction used, the imprint must be identical in every way (except dimensions) to the original seal, so as to retain all its characteristics. The dimensions must be such that all elements of the seal are legible. If these criteria are met, the imprint has the same value as the original seal.

3.1.2 Handwritten signature

The geologist's handwritten signature is an authenticating mark that complements the seal. When both are required as authenticating marks, the seal and the handwritten signature go together: the seal must be partially superimposed on the handwritten signature without rendering the main elements (name and permit number if applicable) illegible.

The handwritten signature may be reproduced by any process enabling an imprint be made, including processes using information technologies.

3.1.3 Digital signature

For an electronic or technology-based document, a digital or electronic signature is a means of authentication that can ensure the document's integrity within the meaning of the law (*R.S.Q., c. C-1.1*). Such a signature must have the following properties:

- Authentic: It must be possible to identify the signer with no uncertainty.
- Forgery-proof: The signature cannot be counterfeited. (A person will not be able to pass as someone else.)
- Non reusable: The signature cannot be reused. It is part of the signed document and cannot be transferred to another document.
- Tamper-proof: The signed document is unalterable. Once it is signed, it can no longer be modified.
- Irrevocable: The signer cannot renounce the document.

A digital signature differs from a handwritten signature in that it is not visual but corresponds to a

series of digits. The Ordre endorses and recommends the use of public-key cryptography with a digital certificate and a unique code or "hash" computed from the document (to check integrity).

3.1.4 Security

Geologists must at all times maintain complete control over the use of their seal, reproductions of the seal, reproductions of their handwritten signature, and their digital signature, so no one can use them without the geologist's explicit consent.

To this end, geologists must keep the access codes to their digital signature strictly confidential and must control access to their computer when these codes are activated. A geologist who gives someone access to his or her digital signature could be held legally responsible for any unauthorised use of the digital signature.

In order to protect the geologist and his client in case of doubt or dispute, an original of the document should be kept so that forgery or tampering can be proven.
The geologist must be able to prove:

- that the original has not been modified;
- that adequate security measures are in place to ensure its preservation; and,
- that there is adequate documentation that the authentic document was transmitted.

3.2 Authentication procedures

3.2.1 General rules

Final geology documents (reports or opinions as well as any other documents that could be used alone without attachment to a report) must be authenticated before being sent to a client or outside authority. All copies of an authenticated geology document must be true to the original.

Authentication of the original and copies is the responsibility of the geologists who authored the document or oversaw and supervised its preparation by persons who were not members of the Ordre, in order to

- establish their identity and acknowledge their responsibility with regard to the content of the document;
- certify that the geology document was prepared by a member in good standing of the Ordre des géologues du Québec, in accordance with the laws, regulations and good practice applicable to the profession in Quebec; and
- confirm that the document is complete and definitive for the purposes indicated therein.

Authentication must be the last professional action taken with regard to the technical content of a geology document, notwithstanding the fact that modifications can be made to it subsequently.

The geologist's seal must be used to authenticate geology documents only. Any other use of the seal, such as for personal documents or advertising, is prohibited.

A geologist affixing his (her) seal or signature to a geology document that was not prepared by said geologist or under his or her direct supervision is guilty of unethical conduct.

3.2.2 Signature and seal

Authentication by **signature**[1] is done by affixing the handwritten (not digital) signature, along with the name, professional title (Geologist or P.Geo.), permit number and date of authentication. The date must be written in an unambiguous form (for example, "3 October 2009" rather than "03-10-09" or "10-03-2009").

The **seal** must appear with the signature. The two must be touching but the signature must not render any part of the seal illegible.

1 Any subsequent repetition of the expression "affixing the signature" refers to the handwritten signature with the name, permit number and date.

The seal and signature must be affixed so as to preserve the integrity and accessibility of the information contained in the authenticated document.

3.2.3 Technology-based documents

The signature and seal may be affixed to a technology-based geology document by means of processes making it possible to produce imprints. However, the authentication of a technology-based document must include the use of a digital signature. A technology-based geology document lacking such a signature must not contain any authenticating marks (signature or seal imprints) and must include a cautionary note as to the possible loss of integrity with respect to the authenticated original.

3.2.4 Types of documents

Depending on the type of document, authentication is done as follows:

Documents delivered to the client in the course of practice of the profession:

- **Opinions, notices, letters, consultations and notes**: affixing of the *signature* of the author(s).
- **Reports**: affixing of the *signature* and *seal* of the author(s). Any approvals, by geologists or other authorities, may be added under the mention "*Administrative approval*" without affixing a seal.
- **Technology-based documents** (simulations, software, databases, well logs, diagrams, etc.): indication of the name, professional title and permit number of the author(s), along with the date of authentication. Such documents must include a digital signature, failing which the appropriate cautionary note must be added in a conspicuous fashion.

Other types of documents:

- **Certificates of compliance**: Certificates of compliance and other such documents required by certain public authorities must be signed, not sealed. However, they may be signed and sealed if required by law or regulation.
- **Working notes**: Notes are geology documents and constitute important elements in the geologist's file. They must be written with care, complete and explicit, and they must indicate the authors' names. They must be authenticated like any other document in the file; generally speaking, a simple authentication consisting of signature and date is appropriate. If the notes must be sent to the client, it is preferable to authenticate them with a *handwritten signature* on the first page.

3.2.5 Plans[2]

Plans (and maps) must be authenticated by a seal and signature. In addition, all geology plans should have a reference box containing the following elements:

- The name of the organization that supplied the plan;
- Information making it possible to identify and refer to the plan (if applicable: project name, title of the plan, plan number, client name and any other pertinent information);
- Name, professional status and permit number of the original author(s) and any reviser(s) who assume responsibility for the plan, along with the authentication date and, if applicable, a space for the seal and handwritten signature (or their imprints, for technology-based documents). The geologists must be identified as "authors" or "revisers" as the case may be;
- An indication of the document purpose (for example, "For submission", "For permitting", "For authorization", "For construction");
- A space for identifying the persons who created the plan;
- A table of modifications, if applicable;
- A space for the signature of the verifying geologist, if applicable;
- A space for any approvals, by geologists or other authorities, under the mention

2 Figures included in a report do not need to be authenticated.

"Administrative approval". No seal must be affixed in this case.

3.2.6 Borehole records

Borehole records[3] must be authenticated through affixing of a signature. All borehole records containing geology information must have a reference box containing the following elements:

- The name of the organization that provided the report;
- Information making it possible to identify the borehole (project name, borehole number, client name and any other pertinent information, as applicable);
- Technical information about the borehole (shaft collar coordinates, orientation, type of borehole, drill calibre, nature of fluid, coring tools used and any other pertinent information);
- Drilling date(s);
- Name of any person(s) responsible for drill monitoring and observation;
- A space for the handwritten signature (or imprints, in the case of technology-based documents) of the report author(s);
- A space for the name and signature of the verifying geologist, if applicable;
- A space for any approvals, by geologists or other authorities, under the mention "Administrative approval". No seal must be affixed in this case;
- The number of pages in the drilling report, if applicable.

If a record consists of several pages, the second page and all subsequent pages must have an abbreviated reference box with the following information:

- Information making it possible to identify the borehole (project name, borehole number, client name and any other pertinent information, as applicable);
- A space for the initials of the report author(s);
- A space for the name of the verifying geologist, if applicable;
- Clear pagination.

3.2.7 Translations

Geologists sometimes have to deliver a geology document in a language other than their usual working language. In this case, the geologist should specify the language that takes precedence in the case of discrepancy between information provided in different languages. Nonetheless, where the situation (client or legislation) requires that all the texts have equal status, the geologist must ensure that the meaning in all texts is the same.

A geologist may authenticate documents in more than one language if he or she is fluent in those languages. When several geologists collaborate on a project, each may authenticate the document in the language in which he or she is fluent. Alternatively, it is possible to use the services of a professional translator who is familiar with the subject and who can certify that the translated text is faithful to the original. Failing a professional or certified translator, the translation must be certified by a notary. The geologist may authenticate the original and any translation thus certified. If a client provides a translation of a document produced by the geologist, the geologist must ask the client to provide certification that the translation is faithful to the original document.

3.3 Revision of documents

Revision of a geology document constitutes a professional act that must be indicated and that is strictly reserved for geologists. Revisers are professionally liable for any parts of a geology product impacted directly or indirectly by their modifications.

The reviser must authenticate the geology documents to which he or she has made modifications. It is important that the purpose and scope of any modification be clearly indicated so as to avoid

3 It is generally worth keeping on file the drilling log containing information about drilling operations prepared by the drilling crew, but it does not have to be authenticated by the geologist.

any confusion in the attribution of responsibility, especially if there are several revisers or several sets of modifications of the same document.

Any modification to an authenticated geology document must be made so as to preserve its integrity.

The geology document must not contain any authenticating mark (seal or signature) when it is being revised.

The procedure used to revise a geology document must be appropriate to the nature of the document medium. It should be similar to the process used to produce the original. Changes must be clearly indicated. In the case of a document containing information in a graphical form, the indication must be made by means of a symbol.

The reviser must authenticate the revised document according to the method appropriate for the type of document. In addition, the following information must be clearly indicated in a revision log attached to the document:

- Name and permit number of reviser;
- Purpose of modification;
- Nature of modification;
- Date of modification;
- Reference to the element or information modified (using a symbol, for example);
- The process or method used, where different from that of the source document.

Where there are several revisers, the document must include a table summarizing the elements of the revision log for each reviser.

4 Management of geology documents

4.1 Document approval

4.1.1 Interim documents

The production of geology documents often involves one or several rounds of comments, feedback or approval before production of the final document. Authentication must not be given to any of the draft documents. Draft documents must be identified as such through annotations such as "draft", "preliminary", "for comment", etc. Such annotations can be added as a watermark, a margin note or by any other means that clearly indicates the purpose of the document.

Geologists who provide comments on a draft do not have to authenticate the final document, which remains the responsibility of the author. The contributions of these geologists may however be acknowledged if applicable.

4.1.2 Administrative approval

It is common practice that authenticated geology documents are signed by other geologists (or other qualified parties) as they go up the ladder of approval. This is a strictly administrative procedure that has nothing to do with exclusive professional practice. The Ordre is not opposed to such practices; however, to avoid any confusion with the document author, geologists who affix their signature as a part of such an administrative approval process must ensure that this is clearly indicated, and must not place their seal on the document.

4.2 *Transmission of geology documents*

When a geology document is transmitted, the geologist must take the necessary measures to prevent counterfeiting or improper use.

4.2.1 Documents on physical media

While counterfeiting of a paper document is always possible, it is relatively easy to detect. The geologist should assess the risk of counterfeiting of the documents he or she originates and take steps to limit the risk. The steps to consider include, where applicable:

- Controlling copies by restricting their number and identifying them;
- Using special paper or reproduction processes.

A geologist often has little control over the use of his (her) work. To prevent his (her) work from being used for purposes other than that for which it was produced, a geologist should ensure that each report, opinion or other final geology document he or she has produced always includes a clear statement of the purpose for which the work was done and of any related restrictions, along with a cautionary note against other uses.

4.2.2 Technology-based documents

Technology-based documents have the same legal value as paper documents. However, they are easier to alter, copy, disassemble, destroy, extract or otherwise manipulate. Moreover, in a context where teamwork requires many transmissions of documents, it is always possible that an error may be introduced or that the wrong version of a document may be produced by mistake.
To ensure the integrity and authenticity of technology-based documents, and to minimize the risk of error, geologists and the organizations who employ them should set up methods and tools for the creation, distribution and safeguarding of technology-based documents. Such methods should

1. protect and control the imprints of the seal and the signature;
2. guarantee document integrity (authenticated documents must be tamper-proof); and
3. enable verification of the authors' identity.

A technology-based geology document may be transmitted if the following conditions are fulfilled:

- if it includes one or more authenticating marks (imprint of seal or of signature, or both), it must also be authenticated with the digital signature of the geologist;
- If the document does carry the geologist's digital signature, any imprints of the seal or

handwritten signature must be removed from it;
- A technology-based document that is unauthenticated must contain a cautionary note to that effect. The Ordre suggests the following wording: "The original of this electronic document was produced and authenticated by (author's name) on (date of authentication) and may be consulted at (location). This copy must not be considered an authenticated document and may not be used for stated purposes."

A technology-based geology document that is not authenticated may be sent with no digital signature or special protection. However, it should always contain the name of the author and it must contain a cautionary note specifying that it is being sent solely for purposes of information or coordination.

A digital signature is the best form of security for an electronic document.

Before distributing an electronic document, the geologist should evaluate the risks in order to choose the appropriate precautions. The following factors should be considered:
- Is the recipient reliable?
- How will the recipient use the document?
- Does the recipient have a system for ensuring document integrity and confidentiality?
- Is there a risk of alterations to the document?
- Is there a risk of unauthorized copying or use of the seal and signature?
- Might the recipient use the document for purposes other than those for which the geologist accepts professional responsibility?

If document integrity or security cannot be ensured, the geologist should not send the authenticated document electronically. Instead, he or she may send an unauthenticated document with the appropriate cautionary note as to use of the document.

4.3 Safeguarding of documents

From the moment a geology document is authenticated, it must be kept in a way that will preserve and ensure its integrity. Technology-based geology documents, whether authenticated or not, must be stored in a way that will ensure their integrity.

Integrity of the document must be maintained throughout its life cycle, whether it is authenticated, consulted, examined, verified, split, copied, transferred, transmitted, conserved, archived, destroyed, recovered, reconstituted or manipulated in any way.

The integrity of authenticated geology documents is vital to security, both legal and professional. When documents are on paper or film, their integrity is not called into question. Indeed, it would be difficult to alter the original or copies of such documents without leaving a trace, and errors in their handling are unlikely to alter their content and hence their integrity.

The documents in the geologist's file, whether authenticated or not, must be archived by the geologist or by the geologist's employer for at least ten years from the date of the last service provided or from the end of the project.

A technology-based geology document must not contain a geologist's seal or signature imprint unless the preservation of integrity can be guaranteed in the document's storage.

If access to a saved document requires the use of certain hardware, tools or systems, these must be conserved and kept in good operating condition for the same duration as that prescribed for safeguarding of the document.

The original of a geology document must be easy to find. In the absence of a system designed for this purpose, the copies must contain a note indicating the location of the original.

5 Other considerations

5.1 Use of documents

Opinions and reports on geology can be produced at various stages of a project for different purposes. For purposes of information, the following list (not exhaustive) presents some common uses of geology documents, with examples:

- Characterization: maps and reports produced from work designed to document the characteristics of an area for specific use , such as:
  - Mineral exploration (mapping the geology of the bedrock over a given area);
  - Planning for a major project (investigation for a dam foundation);
  - Study on land use possibilities (characterization of contamination);
  - Characterization of geological material (determining whether aggregate characteristics meet certain standards).
- Quantitative evaluation: documents prepared on the basis of geological data processed for quantification of a resource or risk, such as:
  - Evaluation of potential yield of an aquifer (digital modeling based on pumping tests, water quality measurements and knowledge of area geology);
  - Estimate of mineral resources (use of digital tools for geostatistical evaluation, taking into account drilling data, assay results, ore processing tests to estimate potential recovery, and evaluations of mining methods;
  - Evaluation of risks resulting from the presence of natural or synthetic substances in soil or an aquifer.
- Certification: documents prepared for regulatory purposes or to meet regulatory requirements. While the work of a geologist can be highly varied, a geology document may have the following attachments:
  - Certificate accompanying a geology document in accordance with Regulation 43-101.
  - Certification as required in the *Regulation on Land Protection and Rehabilitation*.
- Project plans: plans drawn up for siting of planned activities, for example:
  - Delimitation of a mineral zone to be mined
  - Delimitation of a zone to be decontaminated
  - Siting of a drilling operation for a given purpose (water well, borehole, etc.)

The planned use must be clearly indicated on the geology documents (e.g. “For approval”, “For submission”, “For permitting”). Documents to be used for more than one project must be marked “MODEL DOCUMENT” and must be authenticated by their authors.

5.2 Copyright

Unless otherwise specified, it is the author of the geology document who holds the copyright, except if the author is an employee acting within the framework of his or her employment, in which case the copyright is held by the employer. If the author of a geology document is not an employee in the legal sense of the word but a consulting geologist or independently employed, he or she holds the copyright barring an agreement specifying otherwise, even if the document was entirely paid for by the client.

If a client requests the original of an authenticated geology document during execution of the mandate, the Ordre recommends that the geologist deliver an authenticated copy and keep the original. In the case of a technology-based document, a copy duly authenticated by means of digital signature may be provided. The client does not hold the copyright and must not use the document for any purpose other than that for which it was drawn up.