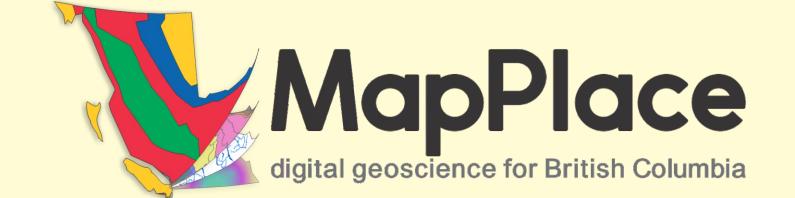


Ministry of Energy and Mines





Introduction

The British Columbia Geological Survey (BCGS) creates, delivers, and archives geoscience data to help industry, research agencies, and the general public make decisions related to the Earth sciences.

Since 1995, MapPlace has provided important web map services to help clients browse, visualize, and analyze an array of geoscience and mineral resource data, such as geology, mineral occurrences, regional geochemical survey, assessment reports, surficial geology, geophysical survey, and mineral tenures.

BCGS has recently developed MapPlace 2 to revamp our web map services, with a new design and using emerging geospatial technology. A beta version of MapPlace 2 is available on the BCGS website for the public to test and use (Figure 1).

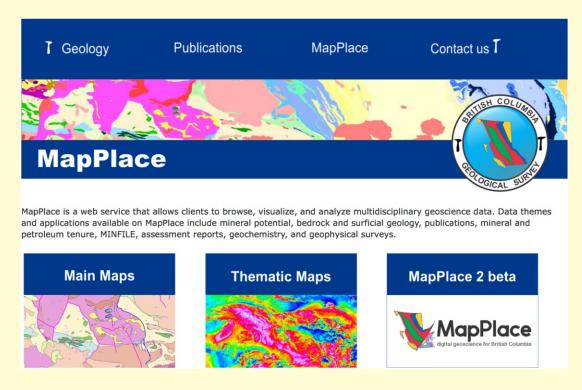


Figure 1. MapPlace 2 beta available or BCGS website, along with the current MapPlace.

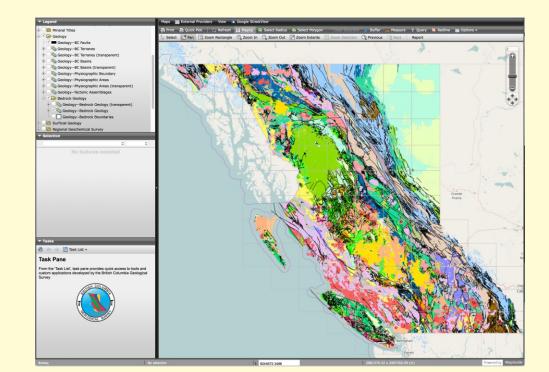


Figure 2. MapPlace 2 user interface with bedrock geology display at provincial extent.

Geoscience Data

MapPlace 2 allows users to browse, visualize, search by spatial and non-spatial queries, summarize, report, and download geoscience data (Figure 3) from:

- the provincial bedrock geology digital compilation
- MINFILE, a mineral inventory documenting more than 14,600 metallic, industrial mineral, and coal occurrences in British Columbia
- geochemical surveys with multi-element analyses from samples of rock, till, stream sediment, moss, and water
- the provincial surficial geology and index to publication
- the provincial ice-flow indicator compilation map
- the British Columbia Geological Survey publication catalogue
- ARIS (Assessment Report Indexing System), a collection of over 35,000 assessment reports
- COALFILE, a collection of close to 1,000 coal assessment reports
- Property File, a collection of over 60,000 government, university, and industry documents
- geophysical data, including multisensor, airborne geophysical surveys of targeted areas
- Mineral Titles Online (MTO), the public record of mineral, placer mineral, and coal tenures in the province

What is MapPlace 2?

MapPlace 2 is the interface that allows anyone with an Internet connection to access and use provincial public geoscience databases.

MapPlace 2 differs from the current MapPlace. It

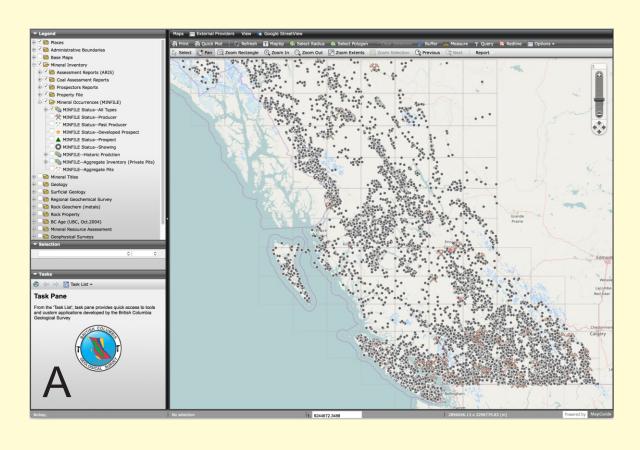
- has a simpler, more intuitive interface that is easy to use (Figure 2) requires no plug-ins and works in most web browsers
- enables custom map making
- Microsoft Bing Maps, and OpenStreetMap
- displays data at a province-wide level, with improved performance • accesses third-party base maps and imagery, such as Google Maps,

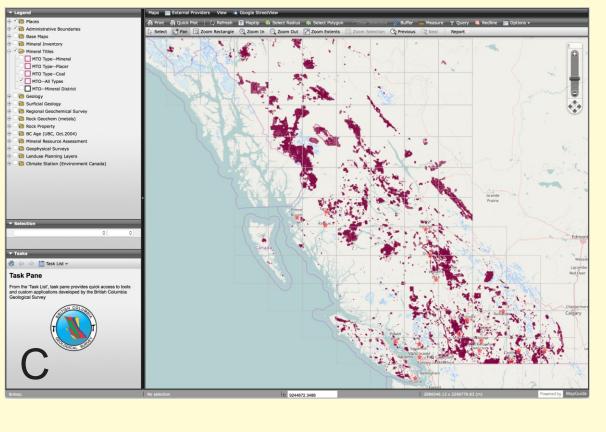
improved applications and additional features. It

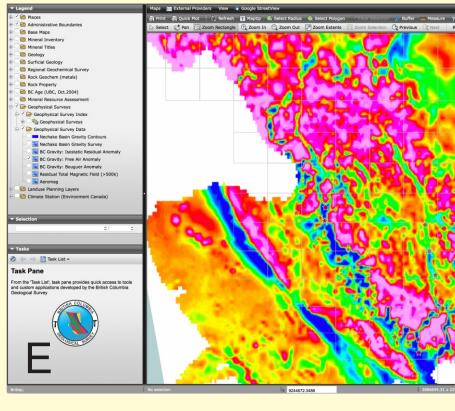
- is capable of rapidly querying and retrieving large volumes of data
- contains custom applications to search, analyze, report, and download data has a web enabled interface linking BCGS geoscience databases
- integrates StreetView, Photo Sphere and 'See inside' from Google maps to view outcrops and mines in the context of other geoscience data uses databases that are continuously updated

MapPlace 2 provides many spatial and non-spatial analysis tools similar to typical GIS software, but processing volumes of data that typical desktop GIS software can't match.

MapPlace 2 continues to evolve with improvements to functions and access to more databases. We welcome, and actively solicit, comments from the public on how to make MapPlace 2 better.

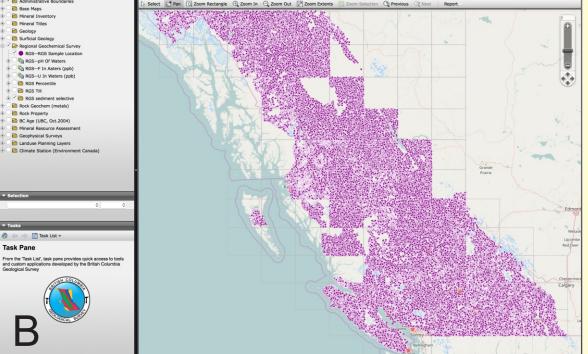


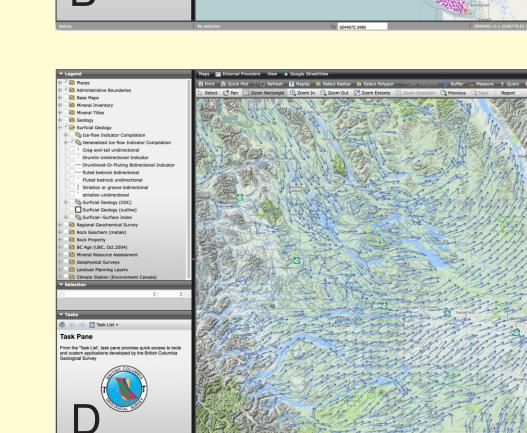




Up to Speed on MapPlace 2 Yao Cui, Steven Zhao, Larry Jones, Gabe Fortin and Sarah Meredith-Jones British Columbia Geological Survey, GeoFile 2017-3

- In contrast to other web services, MapPlace 2 goes beyond simply displaying maps. MapPlace 2 retains the functionality of the current MapPlace, but with





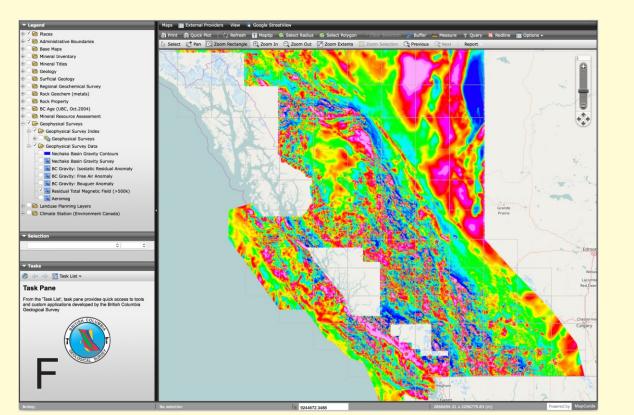


Figure 3. Examples of the geoscience data shown on MapPlace 2: A) MINFILE, B) RGS, C) MTO, D) Ice-flow, E) Gravity, and F) Residual total magnetic.

MapPlace 2 Functions and Applications Highlight

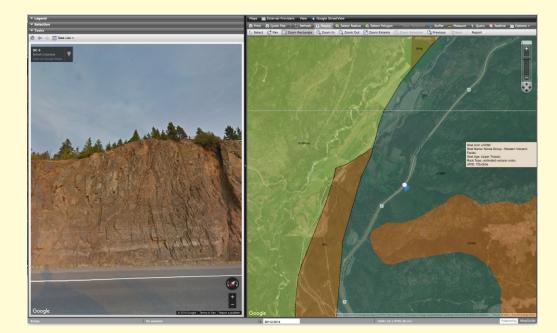
Visualization

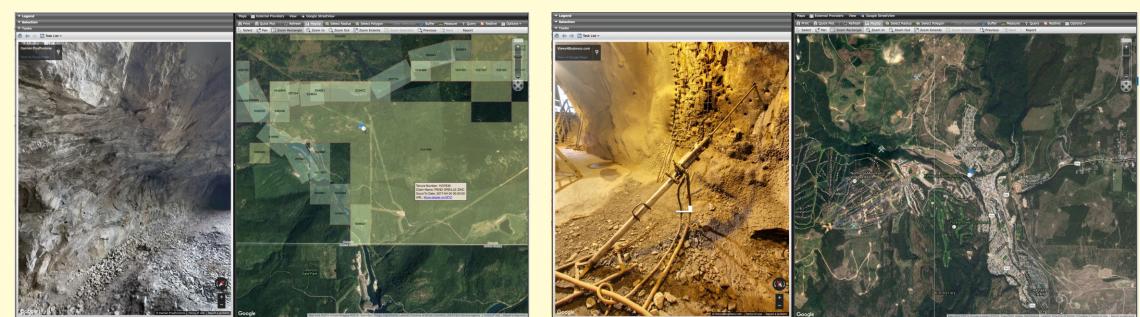
MapPlace 2 has a modernized user interface and supports third party base maps and imagery, including Google Maps, Microsoft Bing Maps, and OpenStreetMap (Figure 4, 5, and 6). Google StreetView, Photo Sphere, and 'See inside' are also available to view outcrops, mine site and faces (Figure 7).

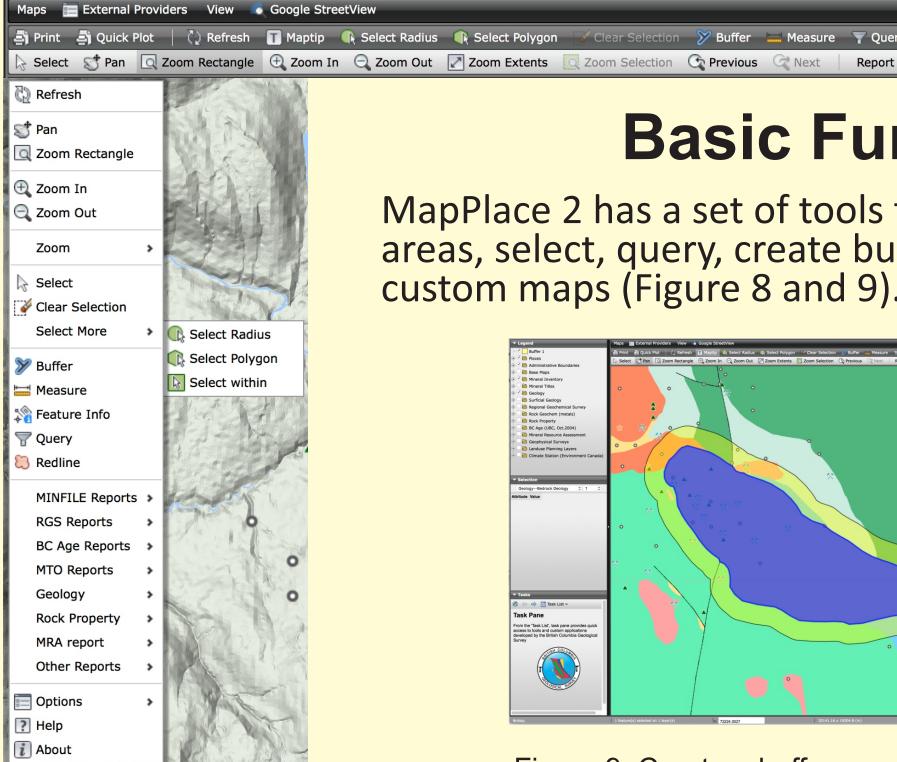
Performance has been improved for the visualization and presentation of geoscience data. For instance, it takes less than one second to display geoscience at Figure 4. Choices of different third party basemaps full provincial extent, with colours and styles.



Figure 5. Same area but different resolutions of imagery from different external data sources.







Basic Functions and Tools

MapPlace 2 has a set of tools to navigate, measure distance and size of areas, select, query, create buffers for selected features, and create custom maps (Figure 8 and 9).

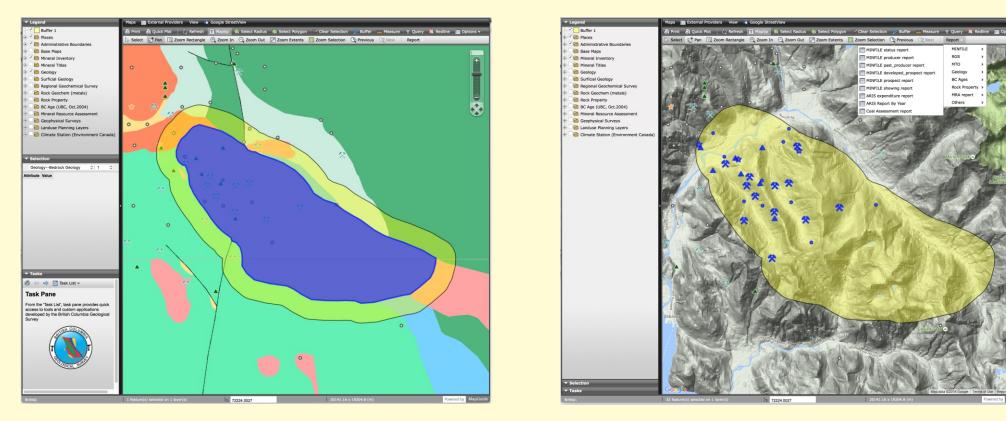


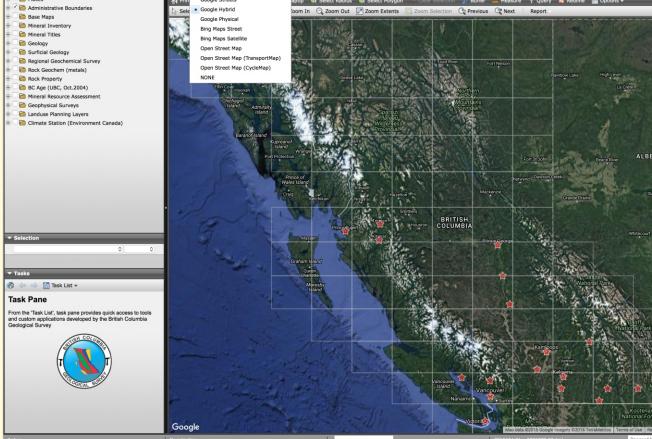
Figure 8. MapPlace 2 basic tools.

Figure 9. Create a buffer on selected bedrock units, and use the buffer to select mineral occurrences within the area (using Select within).

Custom Map Making

Custom maps can be created by adding labels, points, lines, and polygons with Redline. The maps can be printed or saved as PDF files with essential cartographic features such as map title, legend, scale bar, north arrow, and coordinates (Figure 10) to meet the requirements for submitting assessment reports.







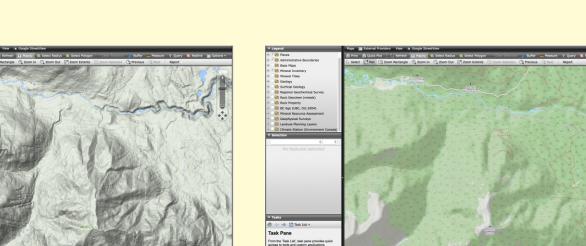
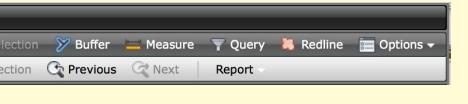


Figure 6. Different in topographic features, hillshades, and cartographic styles.

Figure 7. Google StreetView, Photo Sphere and 'See inside' available from Google Maps.



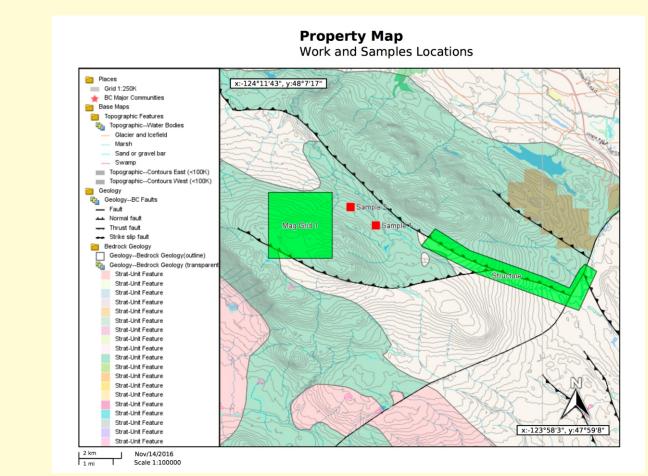


Figure 10. A cutom map can be generated from MapPlace 2.

Custom Query Tools

Applications have been developed to query, summarize, report, and download geoscience data.

Custom query tools are available to search bedrock geology, ARIS, MINFILE, Mineral Potential, and mineral tenures. Query results contain links to more details in other databases and can be downloaded as Excel.

General search finds named places, streets, rivers, lakes, and points of interests in BC.

Tool is also available to search the BCGS Publications

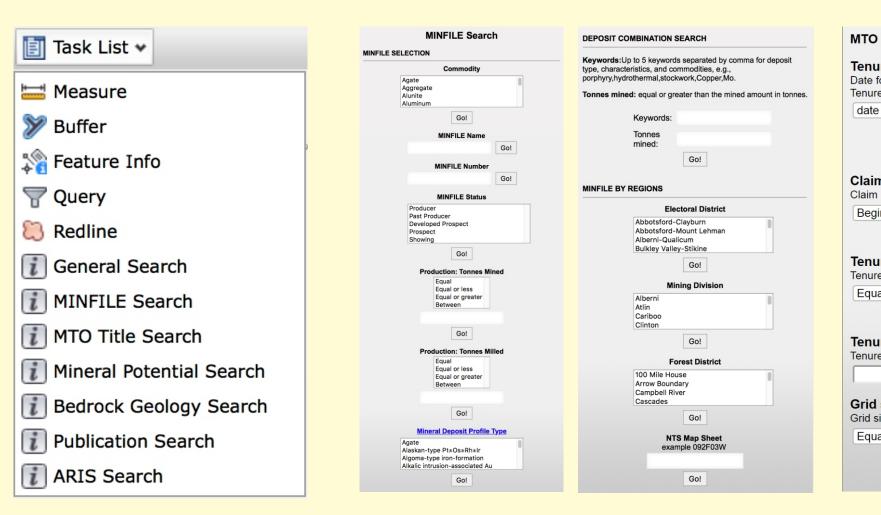
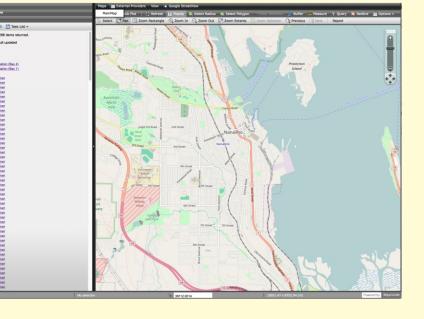


Figure 11. A list of custom query tools and examples of query interfaces for MINFILE Search and MTO Search.



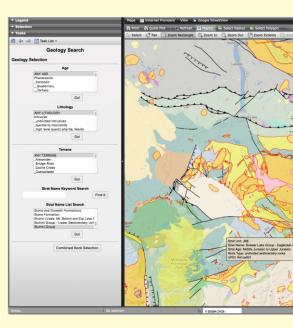


Figure 12. General Search fo places and points of interest.

Figure 13. Geology Search on bedrock units.

Custom Reports

Custom report applications have been developed for bedrock geology, MINFILE, ARIS, RGS, MTO, mineral potential, rock properties, and geochron age database. Reports can be generated as web pages, download as Excel or KML files, from interactive queries, spatial overlay, or using buffers.

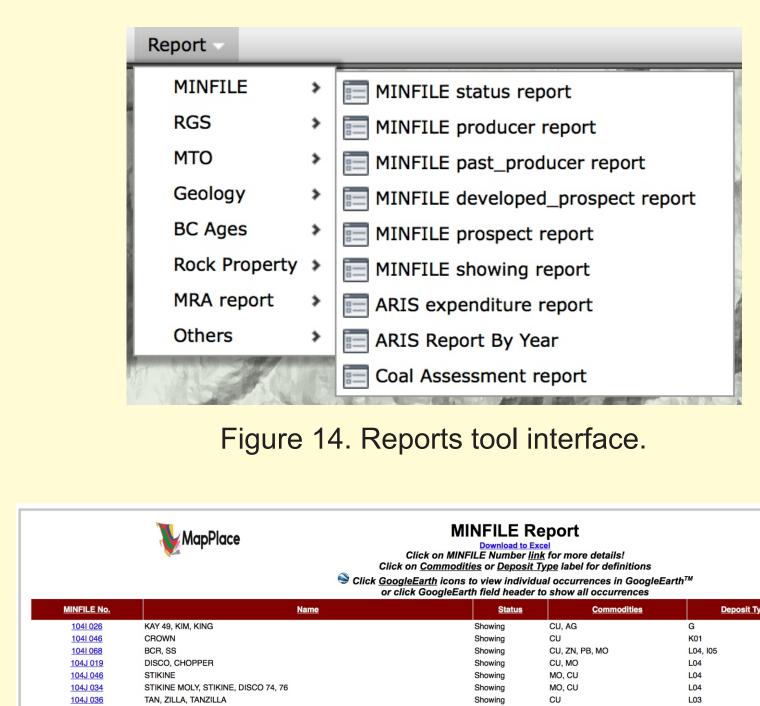


Figure 15. MINFILE report results as a web page, with links to more details in the MINFILE database, and options to download the data an Excel file, or display the results on Google Earth.

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For More Information (250) 952 - 0440Yao.Cui@gov.bc.ca

What's in it for you?

MapPlace 2 is designed for use by anyone interested in British Columbia geoscience, including the mineral industry, resource planners, public safety agencies, communities, First Nations groups, government, and research organizations.

MapPlace 2 provides an efficient way to access public geoscience databases. It can save you time and effort in geoscience data mining, visualization, and analysis.

How is MapPlace 2 developed?

MapPlace 2 is developed by following the proven MapPlace system and development processes, with a new system architecture (Figure 16):

- Driven by clients with first-hand experience and real use cases
- Designed and developed by BCGS staff members with in-house expertise
- Managed with the Agile principles to evolve and progress
- Encouraged to be innovative with minimal IT support • Adopting new and emerging technology
- Stacked with a complete suite of Free and Open Source Software: MapGuide Open Source, OpenLayers, GeoServer, and PostgreSQL/PostGIS

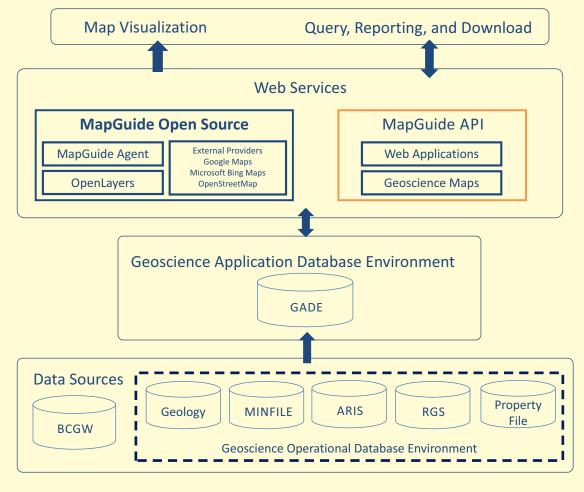


Figure 16. MapPlace 2 System Overview.

Summary

The British Columbia Geological Survey developed MapPlace 2 to modernize delivering its geoscience data. With a completely new interface and much improved performance and functionality, this beta version is available to anyone with an Internet connection.

MapPlace 2 is designed for use by anyone interested in British Columbia geoscience, including the mineral industry, resource planners, public safety agencies, communities, First Nations groups, government, and research organizations.

MapPlace 2 differs from other web services: it allows visualizing and querying province-wide geoscience data at exceptional speed, and provides spatial and non-spatial custom queries to search, summarize, report, and download these data. The power of MapPlace 2 derives from databases that talk to each other, enabling users to conduct queries and generate custom results by connecting to many data sources. MapPlace 2 embraces the most appropriate open-source software for rendering maps, integrating application databases, and developing web services.

The British Columbia Geological Survey will continue to improve MapPlace 2 with advanced applications and access to more databases.



Tenure owner ID query Grid size query (in hectare)



