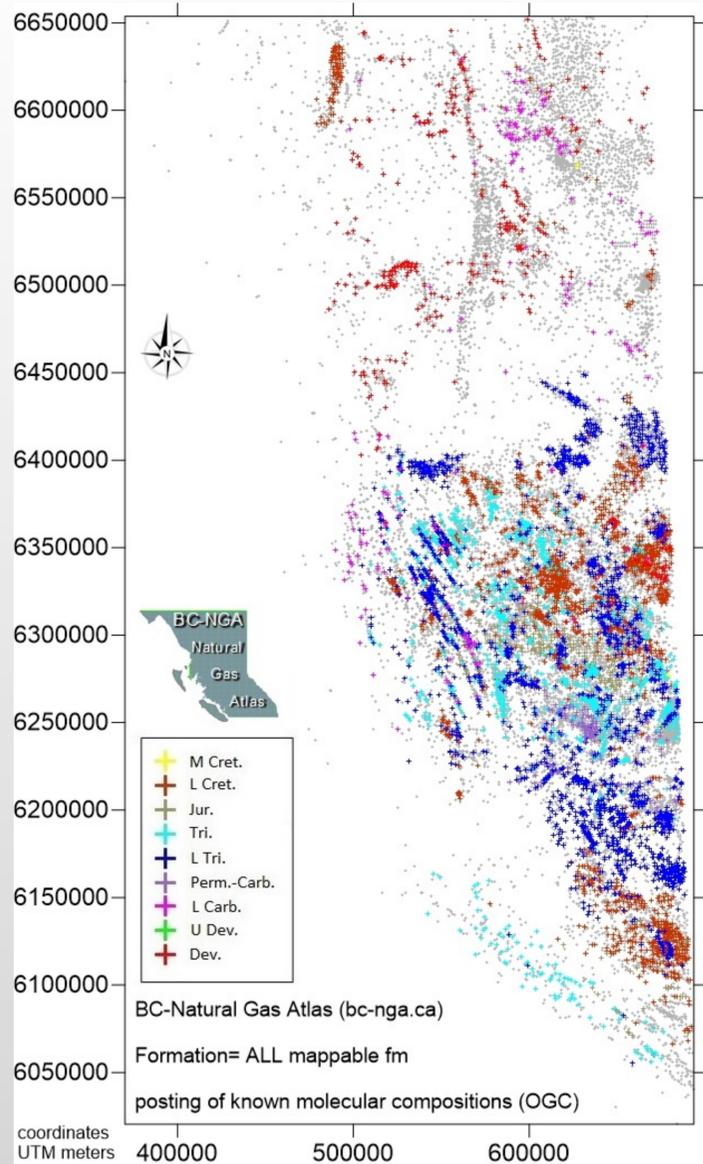


BC Natural Gas Atlas (BC-NGA)

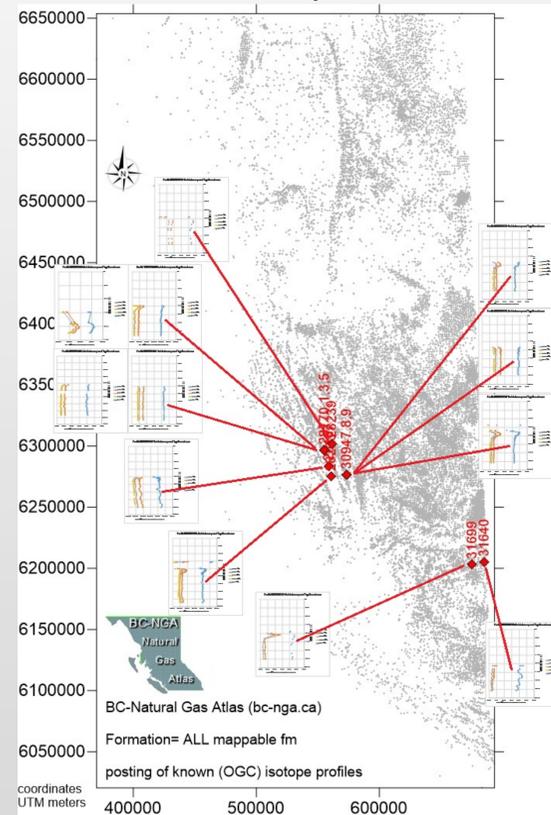
<http://bc-nga.com>

Initial Results of Gas Geochemical Mapping

Molecular composition by strata

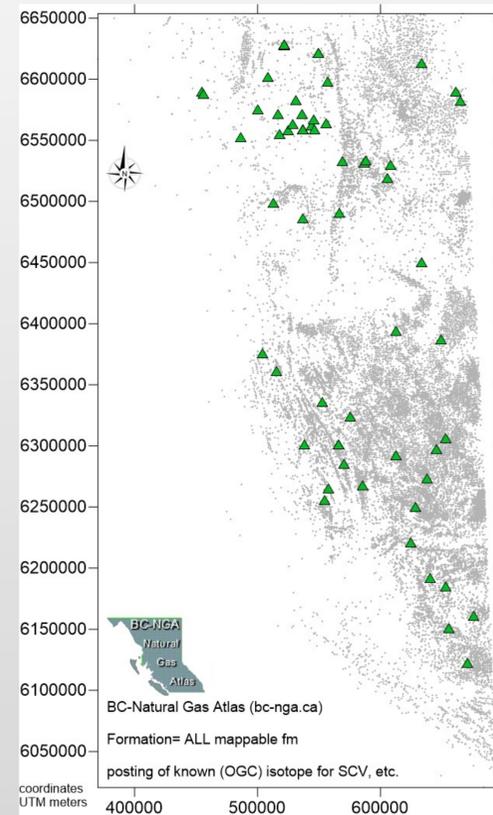


"Mudgas" isotope profiles

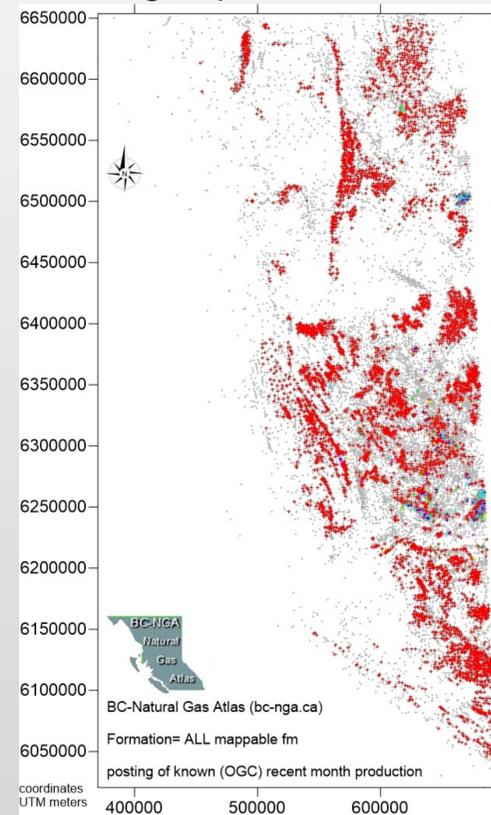


Preliminary MD-only isotopic profiles from mudgas compared with isotopes from Surface Casing Vent & other emissions samples
New data is posted (many current as of March 16 2016)
Some previous data is still being QA/QC – all formations

Surface Casing Vent (or other emission type)

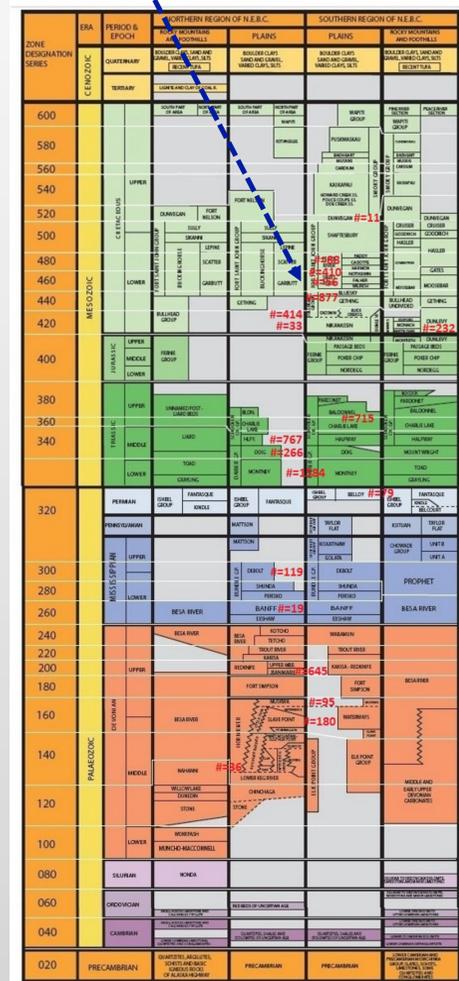


Recent monthly gas production



Wells with recent production are source of new gas samples for further analysis

Number of data points for QA/QC'd molecular composition (stratigraphic chart from BCMEM)



BRITISH COLUMBIA STRATIGRAPHIC CORRELATION CHART NORTHEASTERN BRITISH COLUMBIA
Ministry of Energy, Mines and Petroleum Resources

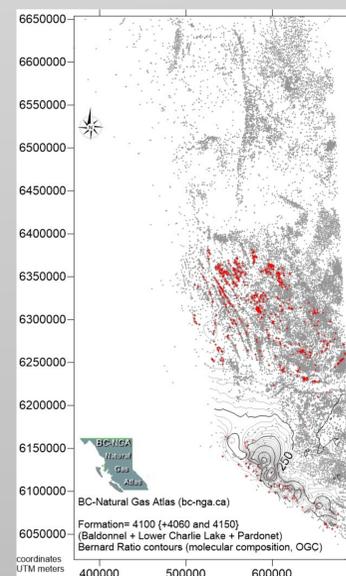
Outcomes for BC-NGA

This BC-NGA project is building an online natural gas geochemical database with maps and interpretative tools to show the gas characters and provenances in NEBC.

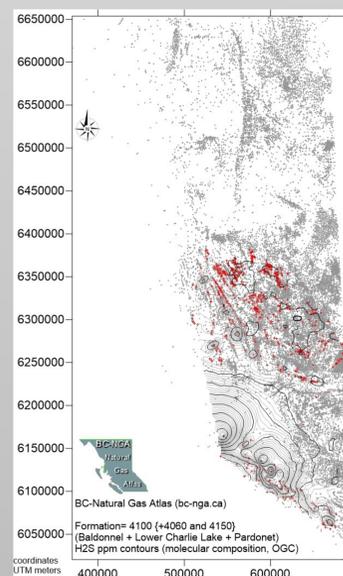
BC-NGA provides users with information on the variety and locations of gas types in NEBC.

BC-NGA will help understand the differences in gas formation and occurrences, including:

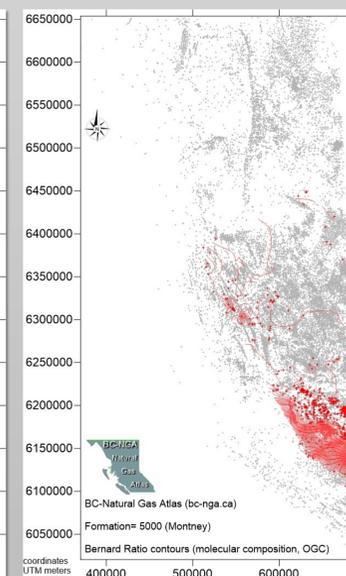
- source rock type and maturity
- secondary alteration (e.g., biodegradation)
- commingling, compartmentalization
- production variability
- assist in tracking gas migration
- fingerprinting any fugitive releases



Baldonnell and equivalent (often tested in combination some previous data is still being QA/QC).



Montney (some previous data is still being QA/QC).



Jean Marie (some previous data is still being QA/QC).

