Questions and Responses

Posted December 10, 2019

Q:
Is it possible to extend the Tectonics RFP submission date beyond January 2020 to give more time for academic participants to coordinate collaboration? Will preference be given to collaborators with Canadian status?

A:
Competitors considering bids for the current RFP (i.e., targeting a relatively short duration, state-of-the-art update of what is known today) are herein made aware of a related RFP (i.e., targeting innovative advances towards a new state-of-the-art understanding over a 2 year period) to be issued early in the New Year. Although documentation for the second RFP will not be ready for a few more weeks, an advance description is provided here to help potential respondents decide if their capabilities or responses are best suited for the first or second competition.

The first, current RFP targets a state-of-the-art understanding of what is presently known or inferred about the tectonic and paleogeographic setting of Nova Scotia's syn-rift and early post-rift source rock potential. The purpose of this RFP is to obtain a prompt review of recent hydrocarbon exploration results and future prospects in their regional geological context. Proposals will be evaluated solely on their technical aspects.

The second, forthcoming RFP will target innovative advances towards a new understanding of the tectonic and paleogeographic setting of Nova Scotia's offshore Mesozoic basins and petroleum potential. It is expected that more than one project may be funded, which may target different aspects of this broad subject (e.g., source rock presence and preservation, crustal architecture, ocean connectivity, sediment-salt interactions, geological variation both along-strike and across conjugate margins, etc.). The second RFP will allow for longer duration projects, starting by September, 2020 and finishing by September, 2022. The competition will be open to consultants, academics, or collaborations. However, the proposed timelines are designed to allow for possible opportunities for graduate and post-doctorate researchers to be involved. Ideally, the second RFP process will begin in early January, 2020 and close in March, 2020 to permit the development of robust proposals and allow successful proponents to advertise student opportunities to start in September, 2020 as applicable.

Posted December 9, 2019

1. **Can you provide more details on the format of the plate model that you require. Specifically, would you want:**

    a. **Rigid terrane polygons and rotation parameters**

    b. **The above, plus dynamic polyline plate boundaries**

    c. **A deformable solution, likely comprising deforming, topological networks**

    d. **Would you prefer the model to be delivered in GPlates format (not an essential question, but note that option c could only be delivered in GPlates format)**

The priority for this RFP are proposals that will deliver critical insight for the presence, preservation, and depositional environment of candidate source rocks offshore Nova Scotia and neighbouring regions in a cost-competitive, fixed price proposal within the time-frame required. We have not put out this RFP with the intent to require reconstruction methods that are necessarily compatible with the GPlates software, while recognizing at the same time that some proposals may target this platform. If necessary, proposals should clarify cost advantages (or premiums) and software format advantages (or limitations) for a proposed delivery of the model that includes both: (i) the disclosure to and use by the client of model elements (e.g., rotation parameters, reconstructed elements, etc.), and (ii) the level-of-implementation-sophistication differences (e.g., topological networks > dynamic polylines > rigid-only).

As guidance, the proposal and model delivery will be weighted as follows:

(A) Ability to support the reconstruction, visualization and understanding of critical source rock context and insights for offshore Nova Scotia (70%)*

(B) Ability to deliver the model on a standard platform (e.g., GPlates, ESRI-based) and to disclose model elements in an accessible format for further use (20%)**.

*A winning proposal will not include extra levels of sophistication at extra cost, if there is not a related uplift anticipated in evaluating candidate source rock context.

**A winning proposal could be based on a non-standard platform and format and could exclude the disclosure of model elements, as long as the technical advantages of the non-standard approach are explained and compelling.

2. Do you require depositional environments etc for all time slices in the Jurassic or would you want to focus on specific intervals related to source rocks. If so, which time slices and how many?

The base reconstruction model should span the syn-rift to early post-rift evolution of the region (e.g., ca. 240-140 Ma) with a step resolution of 1-5 Ma or whatever is justified by successive changes in the main tectonics stages (when changes in rotation or deformation parameters are interpreted). Focused work on depositional environments can be restricted to those time slices relevant for evaluating the presence and preservation of candidate source rocks. For example, understanding the regional extent of predicted anoxic conditions at given time slices is highly relevant, as is understanding the regional impact of erosion or salt migration on removing or restricting the deposition of source rocks. However, we do not want to define up front in the RFP the specific time slices that should be addressed. Identifying, reconstructing, and visualizing the key time slices is the main purpose of the project itself: What are the candidate syn-rift and early post-drift source rock intervals and why? What are the key events, salt motions, or erosional events that have affected distribution and preservation?

Service providers are welcome to submit a recommended list of focused time slices that should be included in the project, if that helps to provide cost certainty. Confirming the targeted set of intervals will be facilitated during project startup which is when the regional source rock compilation by Dr. Bishop and the Nova Scotia-Morocco palinspastic project results can be integrated.

3. Is the project cost estimate to be based on Time & Materials or Fixed Cost?

This is a fixed cost project however we recognize that some post-proposal discussions will be required to fix the final scope of work. Given this, final costs may not be identical to those presented in the proposal.

4. Risk maps – we assume these should delivered digitally – do you use ArcGIS or ArcGIS Pro?

Risk maps can be delivered as ArcGIS map projects with preset stylesheets.

5. Do we need to submit the RFP Response in hard copy as well as uploading it to the portal?

The digital version alone is sufficient.