



GeoEXPLORE (2011-13)

Geoscience R&D in support of mineral and
petroleum exploration and development

Research & Development Corporation (RDC)

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Industry-led R&D, Technology Development and Demonstration

The Research & Development Corporation (RDC) is a provincial Crown corporation mandated to improve the focus, quantity, quality and relevance of research and development (R&D) for the long-term economic benefit of Newfoundland and Labrador. Our success hinges on leveraging opportunities, enhancing collaboration and building new capacity as a R&D performer through strategic investments in people, research and infrastructure.

Program Overview

GeoEXPLORE (2011-13) is a RDC-directed research program, which is an internationally recognized program framework for accelerating R&D in priority areas, often characterized as:

- *thematic* – target areas with significant potential to impact one’s economy and/or society;
- *problem solving* – R&D solutions to industry needs and technical challenges;
- *capacity building* – investments that build capacity as a R&D performer; and
- *collaborative* – fostering local, national and international collaboration among researchers.

Geoscience R&D is a prerequisite to mineral and petroleum exploration and development that provides significant potential to not only reduce exploration risk and costs, but also enhance exploration success and resource-development opportunities throughout Newfoundland and Labrador.

Newfoundland and Labrador is characterized by diverse geological provinces that contain a great variety of rock types, geological ages, tectonic structures and depositional environments. Having that complex, geological legacy enhances the potential for hosting a variety of mineral deposits, including iron ore, uranium, gold, copper, nickel, rare earth elements, industrial minerals and others. Equally, the province’s oil and gas potential includes exploration and development opportunities in the older rocks of the onshore/offshore of western Newfoundland (including unconventional shale gas plays) and in the younger rocks of the

offshore continental shelf (including unconventional gas hydrates). Together, these two geological resources represent significant wealth-generating possibilities for the province.

Recognizing the exploration and development potential of Newfoundland and Labrador's mining and petroleum industries, RDC is investing in geoscience R&D projects that are relevant to industry and provide potential for significant economic impact in the province. RDC's Senior Geoscience Advisor will champion this program and work with industry, academia and government to identify R&D opportunities that align with the program objectives.

Objectives

Enhance geoscience R&D capacity, collaboration and industry innovation in support of mineral and petroleum exploration and development in Newfoundland and Labrador.

Support industry-led geoscience R&D projects in the mining or petroleum sectors to reduce exploration risk, increase discovery success, and support innovation through to resource development.

Support R&D projects related to mineral and petroleum production and processing, and the reduction of environmental impact of these resource-development activities.

Eligibility

Industry-led R&D projects require one or more companies in the mineral or petroleum industries to initiate and co-fund the project. Eligible projects may range from the identification of vectoring indicators in host rocks to the development of new exploration technologies. New methods or technologies for enhancing recovery and processing of mineral or petroleum resources will also be considered. This could include meeting initial development challenges and reducing environmental impacts. These projects may be funded at any time, as opportunities are identified. Multi-year projects of up to three years are eligible.

Level of Support

A RDC financial contribution rate of up to 50% of total eligible project costs will be considered for R&D projects undertaken by major companies and up to 75% of total eligible project costs

for juniors and small mining companies. The RDC contribution rate will vary based on a number of factors including the scale of the project, the level of scientific or technical risk being undertaken, the financial capacity of the company or companies involved, and the ultimate assessment of the potential scientific and economic benefits of the project. Any project size can be considered, with a typical range for small projects of \$50,000 to \$500,000, mid-range projects of \$500,000 to \$1 million, and large projects greater than \$1 million. Companies are encouraged to develop projects that are appropriate in scale and scope to meet their individual R&D requirements. GeoEXPLORE has an initial program budget of \$3 million but RDC is prepared to increase the amount available if warranted by demand.

Eligible Costs

Eligible costs include incremental, out-of-pocket costs specific to the research project, including: field- and lab-based research costs (such as transportation, mapping, sampling, analyses, materials and related consumables); salaries for new scientists, researchers and other technical personnel; specialized research tools and equipment (such as software, field instruments, analytical lab equipment, and other hardware required in support of geoscience R&D); intellectual property and patent protection; contracted specialist services; academic-research partnership costs; innovative digital compilations and interrogations; R&D-related operating costs; access to test facilities and equipment; and minor renovations (maximum 20% of the contribution).

Ineligible costs include: land acquisition, new buildings, marketing activities, existing salaries and administrative overheads, proposal preparation costs, and other costs unrelated to the specified R&D activities. Costs incurred prior to receipt of application by RDC are also ineligible.

Application Process

Project proponents are asked to contact RDC prior to application to ensure alignment with the program objectives and criteria. A completed RDC application form must be submitted for consideration, along with confirmation of partner contributions. Such confirmation will be required prior to notification of RDC project funding. While GeoEXPLORE targets geoscience research specifically, applicants are encouraged to review RDC's full suite of programs as there may be other opportunities that complement each company's R&D project plans.

Evaluation Process

Alignment of research outcomes with industry needs, development opportunities, and potential for economic impact will be key considerations in evaluating and ranking GeoEXPLORE proposals. Proposals will be evaluated on a competitive basis, based on the following evaluation criteria:

Selection criteria	Criteria weighting (%)
Alignment with program objectives (including contribution to the company's and/or industry's geoscience R&D capacity in the province)	20
Technical merits of the R&D activities: level of geoscientific and technological innovation; a detailed research plan; level of collaboration between researchers; research team expertise and track record	40
Business case: financial leveraging; impact on company's success (e.g., reduced exploration risk, potential for resource discovery, solution to identified technical challenge, improved cost competitiveness, and increased productivity); economic benefits to the company and the province (increased efficacy in resource exploration and discovery, R&D contribution to industrial innovation, positive impact on resource-development opportunities, increased resource-development revenue)	40

Proposals that meet the minimum non-technical criteria may be subject to technical review. RDC will only provide proposals for external review on a confidential basis. No proposal will be disclosed to a technical reviewer or potential funding partner for that purpose without the permission of the applicant.

All commercial information will be considered strictly confidential. Any required confidentiality, intellectual property and other obligations of the parties involved will be determined as part of the evaluation, prior to any R&D funding decision.

RDC funding must not displace funding available from other sources. Other considerations may include: project readiness, engagement of academic or government geoscience research facilities and researchers, and alignment with provincial resource-development opportunities.

Disbursement

RDC will be responsible for the disbursement of funds as milestones are achieved.

Prior to the project commencing, the project proponent must confirm that the balance of funds are in place to complete the project.



For More Information:

Prior to developing a proposal, stakeholders should contact RDC to discuss geoscience R&D funding opportunities.

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