

# Annual Report

## Fiscal Year 2018/19



The BC Oil and Gas Research and Innovation Society (BC OGRIS) is a B.C. based not-for-profit society with membership from the B.C. Oil and Gas Commission (Commission), Canadian Association of Petroleum Producers (CAPP), and The Explorers and Producers Association of Canada (EPAC).

### **Vision**

To continuously improve understanding and management of the impacts of oil and gas activities in B.C.

### **Mission**

BC OGRIS supports practical studies that develop credible and relevant information to address knowledge gaps to inform environmental, operational and health and safety policy and industry practices related to oil and gas exploration and development in B.C.

### **BC OGRIS Report**

This report documents the operational and financial achievements for the 2018/19 fiscal year (April 1, 2018 to March 31, 2019) along with an overview of plans for the 2019/20 fiscal year.

### **Contact Us**

For further information, please contact the BC OGRIS,  
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[www.bcogris.ca](http://www.bcogris.ca)

Front/Back Cover Photo: Courtesy of BC Oil and Gas Commission.

## Message from the BC OGRIS Board of Directors

We are pleased to present the BC OGRIS Annual Report for fiscal year 2018/19. This report celebrates some of our accomplishments from what has been an exciting year and outlines some of our plans for 2019/20.

In the last few years, our revenue streams have come from various government and industry stakeholders. We have adapted our funding priorities and envelopes to align with the contributions received as well as the requests of our members. Current research activities focus on addressing high priority knowledge gaps in the areas of methane, water, air and seismicity. Our funding support of indigenous engagement projects, as requested by our contributors, has been very successful and will continue through next year. Emerging studies in engineering and safety around wells, facilities and pipelines are showing our diversity and growth in matters important to our members and contributors.

In 2018/19, we completed a seven year research initiative into the state of boreal caribou populations, habitat and predators along with restoring over 60km of legacy linear corridors and verifying an additional 105 km as appropriate for natural regeneration. As a result of these learnings, the next steps include implementing on-the-ground management actions to reduce encounters between caribou and their predators and restoring habitat under a joint government-industry initiative. A short video summary of the research initiative, along with the final report can be found on our website: <http://www.bcogris.ca/boreal-caribou/extension>.

The BC OGRIS is governed by a Board of Directors consisting of three directors representing each of the members. Priorities of the Board include ensuring good governance of the Society in selecting research projects, leveraging our funding through partnerships with other organizations and conducting activities to disseminate research findings to applicable audiences. Board oversight includes minimizing administrative costs to maximize the investments available to support research projects. We aim to keep administrative expenses at three to four percent of project expenditures.

The Board of Directors met five times in 2018/19 to plan and govern activity. With a focus on flexibility and responsiveness to the requests of our members, the Board effectively used its cross industry-government team to ensure the activities supported deliver value in a timely and responsible manner. Next year, we will have two new representatives from our members joining the BC OGRIS Board of Directors. We thank our retiring Board members—Ken Paulson (Commission) and Gary Leach (EPAC)—and welcome our new team members—Ines Piccinino (Commission) and Victoria Ballance (EPAC). We look forward to the new diversity in Board composition as we deliver on our mandate—assisting the B.C. government and industry in addressing public concerns and thus retain the confidence and support of the communities in northeast B.C. for the upstream oil and gas sector.

Geoff Morrison  
Chair, BC OGRIS Board of Directors  
September 2019



## Report on the BC OGRIS (2018/19)

### Introduction

The BC OGRIS is a professional research organization delivering topical and important information to inform our stakeholders on matters related to oil and gas exploration and development in British Columbia. Research is focused on informing environmental and operational practices and health/safety policy matters.

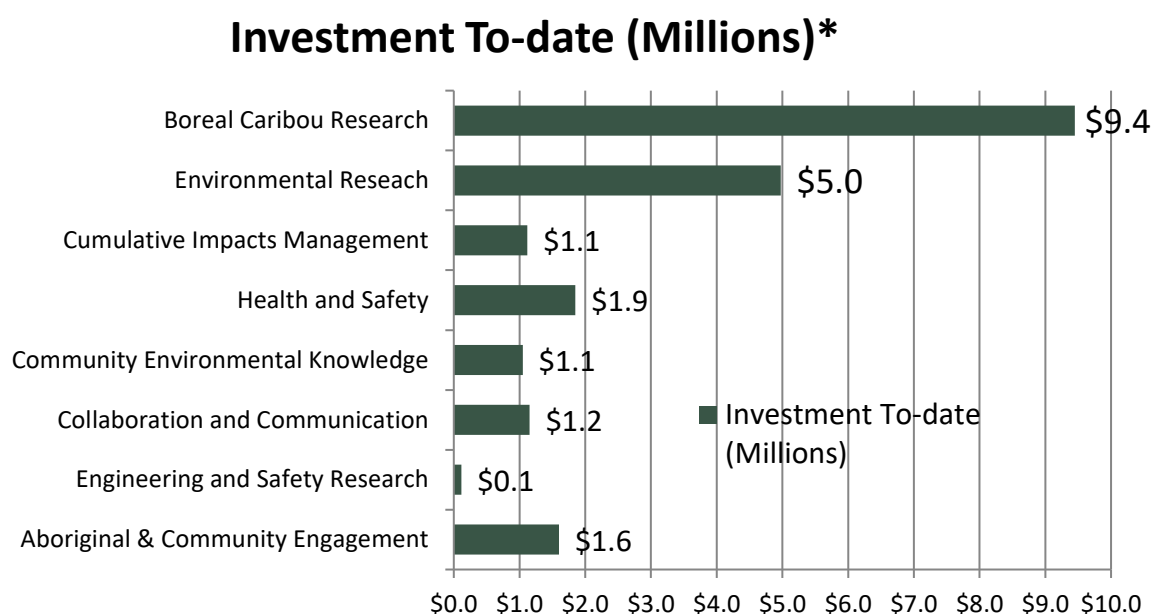
As a not-for-profit society, BC OGRIS receives investments, funds research projects and provides governance and quality assurance over projects we support.

In fiscal year 2018/19, BC OGRIS supported research in five funding areas described further in this report:

- **Project activity**—in total, 30 projects were active compared to 25 the year previously. Six new projects were approved for funding while 15 projects were completed.
- **Proposal activity**—all projects funded by BC OGRIS require a proposal. Fourteen proposals were received with six accepted and eight declined. Most of the proposals declined were outside of our funding priorities or better funded by other organizations.
- **Communication activity**—included 17 presentations at conferences and webinars and eight media releases along with posting final reports from all projects on the BC OGRIS website.

### Projects

The chart below summarizes investment since inception in 1999. The following pages summarize projects, by funding area that were undertaken in 2018/19. More information on these projects, and completed projects can be found on the website at: [www.bcogris.ca](http://www.bcogris.ca).



## Boreal Caribou Research

Collecting science-based information on boreal caribou populations and habitat.

Expenditures (2018/19) (000s)	Projects (2018/19)	Partnerships (% BC OGRIS funding)	Planned Expenditures (2019/20) (000s)
\$579	13	100%	\$4

### Sample projects (2018/19)



Images from motion-sensing cameras installed to monitor large animal use of linear features (courtesy Matrix Solutions).

#### Final Report and Video Summary

The Memorandum of Understanding (MoU) to carry out boreal caribou related research completed in 2018/19.

The final report and video summarizing the research initiative is available on the extension page of the boreal caribou section of the BC OGRIS website: <http://www.bcogris.ca/boreal-caribou/extension>. Also posted are the recording of the eight seasons of webinars describing the findings and implications of the boreal caribou research.



### Plans for 2019/20

The B.C. government and industry are discussing a new MoU to address restoration including boreal caribou habitat. This MoU will provide direction for next steps in the boreal caribou funding area.

## Environmental Research

Addressing knowledge gaps related to the impact of oil and gas activities on methane, air, water and seismicity.

Expenditures (2018/19) (000s)	Projects (2018/19)	Partnerships (% BC OGRIS funding)	Planned Expenditures (2019/20) (000s)
<b>\$177</b>	<b>9</b>	<b>20%</b>	<b>\$369</b>

### Sample projects (2018/19)



Aerial equipment mapping groundwater aquifers in the Peace Region (courtesy Geoscience BC).



Seismic Array Network project equipment—an installed seismograph station (courtesy Geoscience BC).

### Mapping of Groundwater Aquifers in Montney Area

Collecting information on the distribution, thickness and quality of water aquifers in northeast B.C. as baseline information on water quality and use from subsurface aquifers—a key part of the Northeast Water Strategy and Northeast Water Monitoring System.

### Northeast B.C. Seismic Array Network

Maintaining a network to collect and analyze data on induced seismic activity in northeast B.C. The analysis provides information to continue the safe and responsible development of B.C.'s natural gas resource—for example, supporting protocols for hydraulic fracturing, fluid disposal and completion practices.

### Performance of Enclosed Combustors

Collecting third party independent emissions and performance data on enclosed combustors used in oil and gas operations.

### Fugitive Gas Migration

Identifying and evaluating factors affecting the likelihood of gas migration to occur at wells in northeast B.C.

### Assessing the Use of Drones for Monitoring

Determining the capabilities and limitations of mid-range commercial quality drones and sensors to detect and measure methane



Assessing use of unmanned aerial vehicles for environmental monitoring—assessing emissions during a surface-controlled release  
(courtesy University of British Columbia)



Northeast Air Monitoring project equipment—an air monitoring environmental laboratory  
(courtesy B.C. Ministry of Environment).

emissions and assess the status of land disturbance, reclamation and remediation.

### **Northeast B.C. Air Monitoring Network**

Capturing and monitoring air quality data to make informed decisions regarding public health. Showing generally very low levels of common air pollutants associated with oil and gas facilities, the network is being continued as a base case for characterizing regional air quality in northeast B.C.

### **Collecting Baseline Water Quality Data**

Collecting streamflow data in watersheds where little or no information is currently available. Utilizing indigenous resources as team members, the project will provide stream flow data for use in planning oil and gas activities requiring water.



Collecting Baseline Water Quality Data  
(courtesy: BC Oil and Gas Commission)

### **Plans for 2019/20**

- Solicit proposals from qualified experts in key knowledge gaps of methane, water, seismicity and air.
- Support the funding MoU with the BC Methane Research Consortium.
- Continue funding the Northeast B.C. Seismic Array Network.
- Continue funding the Northeast B.C. Air Monitoring Network.



## Engineering and Safety Research

Addressing knowledge gaps in engineering and safety in the areas of pipelines, wells and facilities.

Expenditures (2018/19) (000s)	Projects (2018/19)	Partnerships (% BC OGRIS funding)	Planned Expenditures (2019/20) (000s)
<b>\$116</b>	<b>4</b>	<b>59%</b>	<b>\$258</b>

### Sample projects (2018/19)



Best Practices for Earth Dam Construction and Maintenance in Northeast B.C.  
(courtesy University of British Columbia)



Productivity of Agricultural Land After Pipeline Corridors are Restored  
(courtesy: University of Manitoba)

### Risk Assessment Tool for Pipelines with Corrosion and Earthquake Risks

Developing a tool to assess the risk to pipelines from the combination of corrosion and earthquakes—for consideration in managing the existing pipeline networks and new anticipated pipelines for the natural gas sector.

### Productivity of Agricultural Land After Pipeline Corridors are Restored

Collecting and analyzing data on the reclamation of pipelines on agricultural land and the long term changes in soil health and soil productivity.

### Best Practices for Earth Dam Construction and Maintenance in Northeast B.C.

Establishing best practices for the design and construction of earth dams used by the oil and gas industry in northeast B.C.

### Control Methods in Case of Well Control Incidents

Developing science based procedures for the mitigation of any accidental release of acid gas during loss of well control incidents, if such an event occurs.

### Plans for 2019/20

- Solicit proposals from qualified experts in key knowledge gaps in areas of wells and facilities (e.g., ambient noise).



## Aboriginal and Community Engagement and Consultation Projects

Building relations and common understanding by engaging indigenous peoples in the oversight of resource development and management activities.

Expenditures (2018/19) (000s)	Projects (2018/19)	Partnerships (% BC OGRIS funding)	Planned Expenditures (2019/20) (000s)
<b>\$1,623</b>	<b>2</b>	<b>100%</b>	<b>\$2,371</b>

### Sample projects (2018/19)



Knowledge Transfer Workshop--First Nations Environmental Monitor Program (courtesy: BC Oil and Gas Commission)

#### First Nations Environmental Monitor Program

Providing funding support for initiatives involving indigenous peoples carrying out stewardship and monitoring programs. This includes activities to improve collaboration and communication between industry, regulators, government agencies, and indigenous peoples.

#### First Nations Disturbance Restoration Program

Providing funding support for fostering collaboration with indigenous peoples on restoration practices and identifying opportunities to incorporate traditional knowledge and indigenous peoples in restoration activities.

### Plans for 2019/20

- Continue funding programs.

## Financial Report (2018/19)

### Results of Operations

In fiscal year 2018/19, we received contributions from the B.C. Ministry of Indigenous Relations and Reconciliation (MIRR) for specific projects in the Aboriginal and Community Engagement and Consultation funding area. Discussions continue about longer term funding as BC OGRIS supports larger and longer term projects requested by our members. Previous sources of funding includes contributions from industry and government as well as levies on production volumes and fees from well licence applications—as part of industry's commitment to responsible development and the Commission's mission to protect public safety, safeguard the environment and respect those individuals and communities who are affected.

A summary of financial activity in fiscal year 2018/19 is shown below. The activity is broken down by funding areas with the Operating Research Fund column representing all the funding areas except the Caribou Research Fund. The annual financial audit of the BC OGRIS was completed by external auditors. Copies of the audit statement and the audited financial reports are available on the BC OGRIS website at <http://www.bcogris.ca/about>.

### Statement of Financial Position (as at March 31, 2019)

	Operating Research Fund (000's)	Caribou Research Fund (000's)	Total
<b>Assets</b>			
<b>Current assets</b>			
Cash & cash equivalents	\$ 8,808	\$ 541	\$ 9,349
Accounts receivable	140	10	150
<b>Total Assets</b>	<b>\$ 8,948</b>	<b>\$ 551</b>	<b>\$ 9,499</b>
<b>Liabilities and fund balances</b>			
<b>Current liabilities</b>			
Accounts payable	\$ 1,314	\$ 13	\$ 1,327
Holdback payable	—	—	—
Deferred contributions	5,767	—	5,767
<b>Sub-total</b>	<b>\$ 7,081</b>	<b>\$ 13</b>	<b>\$ 7,094</b>
<b>Fund Balances</b>			
Caribou	—	538	538
Operating	1,867	—	1,867
<b>Sub-total</b>	<b>\$ 1,867</b>	<b>\$ 538</b>	<b>\$ 2,405</b>
<b>Total Liabilities and Net Assets</b>	<b>\$ 8,948</b>	<b>\$ 551</b>	<b>\$ 9,499</b>

**Statement of Operations and Changes in Fund Balances (for year ending March 31, 2019)**

	<b>Operating Research Fund (000's)</b>	<b>Caribou Research Fund (000's)</b>	<b>Total</b>
<b>Revenue</b>			
Interest	\$ 132	\$ 13	\$ 145
Contributions	1,922	50	1,972
	<b>\$ 2,054</b>	<b>\$ 63</b>	<b>\$ 2,117</b>
<b>Expenses</b>			
Project costs	1,921	468	2,389
Professional services	49	87	136
Management fees	19	9	28
Extension and communication	3	13	16
Other expenses	7	2	9
	<b>\$ 1,999</b>	<b>\$ 579</b>	<b>\$ 2,578</b>
<b>(Deficiency) excess of revenue over expenses</b>	<b>55</b>	<b>(516)</b>	<b>(461)</b>
<b>Fund balance, beginning of year</b>	<b>1,812</b>	<b>1,054</b>	<b>2,866</b>
<b>Fund balance, end of year</b>	<b>\$ 1,867</b>	<b>\$ 538</b>	<b>\$ 2,405</b>





BC Oil and Gas  
Research and Innovation Society

## In Closing

From our beginning in 1999—originally as the Environment Fund before changing to the Science, Community and Environmental Knowledge (SCEK) Fund and now operating as the BC OGRIS—we have supported close to 160 projects ranging in size from short studies and reports to multi-year projects involving multiple researchers and organizations. In the last seven years, our level of activity in funding research has steadily increased to reach record numbers of projects supported. Our projects are getting larger and focused on strategic alignment with priorities of the B.C. government.

We thank all our stakeholders, researchers, technical reviewers and administration team for their assistance in delivering these research projects. Your support and assistance enable us to meet our goals and deliver findings that address important knowledge gaps in environmental and social aspects of oil and gas development in B.C.

Comments and questions on this report and/or the BC OGRIS can be sent to [info@bcogris.ca](mailto:info@bcogris.ca).

