# ANNUAL 2020-2021 REPORT

## MOVING TOWARDS A NET-ZERO FUTURE

ptrc
Petroleum Technology Research Centre

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# Letter from the Chair

**KRISTAL ALLEN**

**CHAIR OF THE PTRC**

MLT Aikins

***I AM DELIGHTED TO BE LEADING THE BOARD OF SUCH AN INNOVATIVE COMPANY THAT IS WILLING TO ADAPT, AND WILLING TO CHANGE TO MEET GLOBAL EXPECTATIONS RELATED TO ENERGY AND CLIMATE.***

This is my first year as Chair of the PTRC's Board of Directors, having taken over from my colleague at MLT Aikins, Randy Brunet, who skippered the organization through three years that saw significant change, both in the direction of the company and its leadership. I'd like to thank Randy, personally, for his work, and for leaving PTRC is such an advantageous position.

Growth is certainly a term that carries with it both positive and negative impacts. Growth, in the case of the PTRC, relates to the breadth and implications of its new vision and mission, developed by CEO Dan MacLean and his senior management over the course of the past year. In a period where climate change and a need to reduce greenhouse gas emissions has dominated the global and national discourse, research focused on petroleum industry activities has had to change.

PTRC has always had a two-sided focus – on the one hand, the development of new technologies and processes that improve the energy efficiency of oil production; on the other, reducing emissions across the energy industry. With the introduction early in its existence (way back in the year 2000) of $CO_2$ storage and utilization research, PTRC has had a particular interest in reducing greenhouse gases well before it was on the radar of many energy companies.

This year PTRC made that commitment even more explicit, with its new vision to "be a leader in research and innovation to develop sustainable and environmentally responsible energy", and its new mission to "be the incubator, accelerator and developer of research and innovation to reduce the carbon footprint and increase the production of subsurface energy". PTRC is now moving into the realms of other kinds of deep subsurface energy production, from possible lithium extraction to geothermal energy production using $CO_2$ as a carrier of heat/energy. It is also maintaining its commitment to its energy industry partners, helping develop new extraction technologies that move those operators towards a Net-Zero future by 2050.

I am delighted to be leading the Board of such an innovative company that is willing to adapt, and willing to change to meet global expectations related to energy and climate. In this annual report you will discover a breadth of funded projects and programs that address the main challenges facing energy from the earth. I commend Dan, his committed staff, and body of research organizations, for their commitment to a more environmentally focused energy sector.

Kristal Allen
MLT Aikins
Chair of the PTRC

# Letter from the CEO

**DAN MACLEAN**

**CEO & PRESIDENT**

2017 - 2021

***I BELIEVE THE PTRC CAN CONTRIBUTE SIGNIFICANTLY TOWARDS NET-ZERO BY 2050, AND OUR NEW VISION AND MISSION DEMONSTRATE WHY.***

One full year of working at home.

I know. For most businesses in Canada – in particular ones based on research, commerce, science or other forms of management – this became the norm in 2020-21, and the PTRC was no exception. We ramped up our virtual presence as the year went on, subscribing to Zoom for staff meetings, employing Zoom Webinars for our media events, contributing to different journals, and making forays into interactive forums we've only previously skimmed.

Our presence on the internet and interactions with other CCS research and development programs took off as more companies and organizations switched to on-line communications. PTRC hosted no fewer than five webinars this fiscal year, on topics ranging from $CO_2$ containment in the subsurface, to the use of artificial intelligence (AI) in oil and gas. These are featured in this annual report. Some webinars saw upwards of 250 people attending.

That's not to say the direct in-person work of research and field trials in our two biggest programs – Aquistore and the Heavy Oil Research Network (HORNET) – didn't continue apace. And as part of our overall commitment to safety during this pandemic, we worked to establish protocols with our partners at SRC and U of R, and with SaskPower at the Aquistore field site, to assure in-person work was safe for everyone and just as impactful as before.

HORNET continues to focus largely on cyclic solvent injection (CSI). CSI offers the twin benefits of increased recovery efficiency while reducing emissions during production by reducing the use of heat. Our two industry sponsors – Cenovus and CNRL – are particularly excited about our findings in this field, where reducing costs and environmental impacts have become critical to attaining Net-Zero goals.

Aquistore continued its field work, with ongoing public assurance monitoring like passive seismic, ground water, and soil gas sampling demonstrating the complete safety of the Deadwood storage unit 3.2 km underground. Total $CO_2$ stored went up by over 100,000 tonnes in 2020-21, from 270 kT to 370 kT. The project is planning to complete another full 4D seismic once storage totals hit 500 kT.

PTRC was also commissioned by SaskPower to conduct two additional studies outside of the usual measurement and monitoring work we conduct for the company. Those two projects – one looking at potential EOR markets for $CO_2$ in Saskatchewan, and a second examining the possible placement and drilling of an additional injection well near the current Aquistore site – will be completed in fiscal year 2021-22.

PTRC also developed a new vision and mission for the company, which see us evolving to meet the global challenges presented by climate change. I believe the PTRC can contribute significantly towards Net-Zero by 2050, and our new vision and mission (see our company description page in this annual report) demonstrate why.

Once again, I want to thank the dedicated researchers and sponsors affiliated with our program for their ongoing excellence, and my small but dedicated management team for their hard work during this most challenging of years. PTRC continues to have an impact far beyond its size, and will continue to do so as we move into the post-pandemic world.

Dan MacLean
CEO and President

# About Us

The Petroleum Technology Research Centre (PTRC) is a not-for-profit corporation founded in 1998 to facilitate research, development and demonstration projects to reduce the carbon footprint and increase the production of subsurface energy. PTRC seeks to support industry, governments and research providers to realize their environmental, social and governance needs.

In 2020-2021, the PTRC re-imagined its R&D presence by focusing its vision and mission on not just supporting the ESG goals of its partners, but on helping Canada and the world reach Net-Zero targets by 2050.



## VISION

Be the leader in research and innovation to develop sustainable and environmentally responsible energy.

## MISSION

Be the incubator, accelerator and developer of research and innovation to reduce the carbon footprint and increase the production of subsurface energy.

## STRATEGY

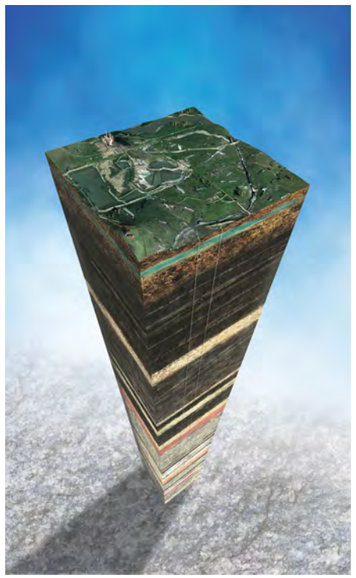
To build on our experience in $CO_2$ EOR and storage by supporting additional CCUS initiatives and by collaborating with other research organizations, governments and industry to support environmental, social and governance (ESG) needs.

# Aquistore

## AQUISTORE CONTINUES TO EXPAND ITS REACH AND INTERNATIONAL REPUTATION

2020-2021 saw $CO_2$ storage totals at the Aquistore site surpass 370,000 tonnes – up from the 270,000 tonnes in January 2020, when the last seismic imaging run was completed. The project is planning to do an additional seismic shoot once totals in the reservoir surpass 500,000 tonnes.

The project has had an even greater presence on the international stage than usual, with the expansion and PTRC's webinar series (see Communications section of this annual report). Queries were fielded from around the world about Aquistore's findings, data acquisition, and current results. Aquistore remains one of a few operating CCS facilities globally injecting into a deep saline aquifer, which positions it very well to collaborate with new projects that are beginning to start around the world.



Traditionally, the Aquistore Annual General Meeting (AGM) involves members sharing information in a physical location, but due to the COVID-19 pandemic and directives from the government, the AGM was held virtually on November 3rd, 2020. Scientists met from all around the globe, either involved with the project or interested in joining the research consortium. Presentations of recent results included:

- Monitoring for $CO_2$ leakage via examination of groundwater and soil gas; none has been detected indicating the storage complex is safe.
- Salt precipitation studies carried out by University of Melbourne looked at the potential of formation damage related to scaling in the injection well; results were presented.
- Analysis from the fourth time lapse 3D seismic survey is completed and $CO_2$ plume expansion based on the seismic results was shared with the attendees.
- A new robust bubble tube system in the observation well, 150 meters away from the injection well, is actively monitoring the pressure regime away from the injection zone.
- A camera was deployed down the injection well to inspect the state of the wellbore, check for erosion and pitting around the collars, examine the perforations and obtain images to see if solid precipitants still exist in the well.
- University of Alberta researchers built a high resolution model to predict whether $CO_2$ circulation at the Aquistore site is possible. This modelling will inform the possibility of circulating stored $CO_2$ for extracting geothermal energy.

PTRC is looking into the possibility of a third well at the Aquistore site. This study for SaskPower is examining wellsite location selection and will provide a road map of the regulatory and application processes. The study will examine specifications and design of the new well including its commissioning, operations, and the monitoring technologies required for its operation.

# HORNET

## 2020-2021 PROJECTS

The PTRC's Heavy Oil Research NETwork is committed to research that improves recovery from heavy oil reservoirs in the Lloydminster area of Saskatchewan and Alberta, while also improving the energy efficiency and environmental impact of operations. Most recently, the companies operating in the region have been interested in cyclic solvent injection (CSI) – variations in configurations that reduce or eliminate steam used in recovery in favour of different solvents (thus reducing $CO_2$ emissions during extraction). A main solvent under study for CSI is captured $CO_2$ from operations in the region. The suite of projects funded in 2020 look extensively at CSI, but also at geomechanics of reservoirs, wormhole creation, and the characteristics of foamy oil. Read about just a few of our ongoing projects in these summaries.



### JOINT UofS AND UofA

**Scaled Physical Modeling of Geomechanical Implications of Wormholes during $CO_2$-based CSI in CHOPS Reservoirs. Part A: Centrifuge Testing of 3D Printed Specimens**

*Rick Chalaturnyk, University of Alberta*
*Chris Hawkes, University of Saskatchewan*
*Alireza Rangriz Shokri, University of Alberta*
*Gonzalo Zambrano, University of Alberta*

This experimental project aims to gain a better understanding of the driving mechanisms during CSI operation at post-CHOPS reservoir conditions. Despite extensive research, the mechanics of wormholes and injected solvent during CSI at reservoir boundary conditions is still poorly understood due to its complexity. By using superior experimental design and the integration of monitoring instruments, this research will delve into the manufacturing of 3D printed rocks (some containing wormholes and shale caprock layer) to explore the multi-scale, multi-physics process of sampling, flow, and deformation issues observed in CHOPS reservoirs.

### PERM INC.

**Polymer-Enhanced Foam for CSI in Post-CHOPS Systems**

*Apostolos Kantzas*
*Jonathan Bryan*
*SRC (collaboration and support)*

This project will investigate foamy CSI in high and low permeability systems, and further advance the potential for utilizing chemicals to block off connections in multi-well systems. Primarily, the focus will explore foams in high and low permeability systems. The other half of the project explores CSI oil recovery in a dual permeability core. The test program will measure the effectiveness of foam injection as part of CSI for partial plugging of the high permeability zone, as compared to previous data from 2018-2019, which was generated in a single permeability system. The objective of this research is to gain an understanding of minimum chemical requirements (maximum foam quality) that can still generate reduced gas mobility in high/low permeability media, and whether foams can be utilized in connected systems to partially block "thief zones" caused by connected wormholes, and allow for CSI to be considered even in connected well systems.

## CSI Stimulation in Non-Wormhole Regions Stage 4

*Muhammad Imran, SRC*
*Zhiguo Wang, SRC*
*Bart Schnell, SRC*

This project builds on three years of previous laboratory experiments using extra heavy oil to further understand the recovery mechanism of cyclic solvent injection processes. Previous work concluded that $CO_2$ could generate foamy oil, and gravity helped to improve incremental recovery to the level comparable to primary recovery. Also observed was that the soaking time (gravity segregation) could have a positive impact on the CSI cycle performance; this needs further investigation. The primary focus of this project is to conduct various experiments on vertical cores to quantify the impact of soaking time on oil recovery during the CSI process. We will analyze the experimental data and compare it to previous results. The depletion rates during the primary production and pressure depletion will be finalized after discussion with HORNET industrial members.

## Cyclic Solvent Recharge – Stage 2 and Pressure Depletion Rate Impact on CSI Performance

*Muhammad Imran, SRC*
*Zhiguo Wang, SRC*
*Bart Schnell, SRC*

This project adds a tremendous value to previous work that was designed to understand the fluid dynamics in the near wormhole and far wormhole regions. A previous study proved that oil can migrate towards the wormholes from non-wormholed regions, however, the rate of oil migration is very low and the visual appearance of the produced oil does not show presence of dissolved gas in the produced oil. This project will help determine what impact gravity will have in migration rates of the oil towards the wormholes from regions far away, and the impact of pressure depletion rate on the foamy oil generation during CSI cycles. The proposed project and previous years' learnings will help in our understanding of CSI process mechanisms, which will give us a better handle in designing the optimized field operations with better chances of success.

## Foamy Oil Stabilizers

*Ralph Jonasson, SRC*
*Muhammad Imran, SRC*

Improving the recovery of heavy oil from wells that have undergone primary production is a high priority. SAGD is one option being pursued by Husky in Lloydminster; however, not all oil companies have this option and not all oil fields are conducive to exploitation by SAGD. Cyclic solvent injection has been proposed and studied as a cheap alternative. However, one of the problems is efficient restoration of reservoir energy because of poor gas/oil mixing. This research will study the cyclic expansion and contraction of petroleum foam using a pressure gradient in the formation as a way of improving this recharge, especially for partially depleted formations, and formations opened by wormholes where penetration of gas into the formation is facilitated. Consideration will be given to how these strategies could be implemented in the field, and how the success of the trial might be measured.





## Investigation of Water-in-Oil Emulsion on CSI Solvent Dissolution and Ex-solution Performance for Heavy Oil

*Na Jia, University of Regina*
*Amin Badamchi Zadeh, Canadian Natural Resources Limited*

The main purpose of this project is to describe and provide an understanding of the phase behavior of foamy oil systems at a low temperatures and different depressurization rates in the presence of water-in-oil emulsion. The study will focus on the non-equilibrium phase behavior in terms of the discrepancies between solvent-stock tank heavy oil systems and solvent-water in oil emulsion systems with different water contents. The effect of water content variance in the heavy oil on solvent dissolution and ex-solution performance will be thoroughly studied. The results of this study can benefit industry in decision-making of post-CHOPS/CHOPS oil recovery process.

## Foamy Oil Stability Enhancement, Residual Oil Remobilization and Flow Optimization in Wormholes for Post-CHOPS Reservoirs: A Combination of Big Data Analytics, Numerical Simulation and Microfluids (Phase 1)

*Farshid Torabi, University of Regina*

Dr. Torabi's research group has conducted a comprehensive series of experiments on non-equilibrium solvent dissolution and exsolution behavior of solvent-heavy oil systems, which indicate a true non-equilibrium phenomenon. Dr.Torabi's research group has utilized microfluidics systems in the past two years. Non-equilibrium solvent dissolution and exsolution behavior in heavy oil systems have been numerically quantified and validated, proving the high feasibility of newly established experimental and numerical methodologies. In this project, the microfluidics methodology will be applied to study the non-equilibrium solvent dissolution and exsolution behavior of various $CO_2$/CH4/heavy oil/aqueous systems, especially in homo/heterogeneous and high-permeability microfluidics patterns that mimic wormhole structures.

## Evaluation of $CO_2$ Sequestration Opportunities in Lloydminster Post-CHOPS Heavy Oil Reservoirs and Underlying Saline Formations

*Fanhua Zeng, University of Regina*
*Hairuo Qing, University of Regina*
*Saman Azadbakht, University of Regina*
*Chen Shen, University of Regina*
*Bo Wang, University of Regina*
*Jiawei Tu, University of Regina*

The potential of introducing long-tern $CO_2$ sequestration in low-depth, post-CHOPS heavy oil reservoirs located in the Lloydminster area has not been studied, while $CO_2$-based cyclic solvent injection has been approved as an effective approach for enhancing heavy oil recovery. As a common reservoir type in western Canada, these depleted heavy oil reservoirs may be utilized for $CO_2$ storage. This is a potential game changer for the Canadian oil and gas industry under current and future environmental regulations which are becoming stricter and stricter. The proposed project will verify the feasibility and predict the amount of $CO_2$ sequestration in post-CHOPS heavy oil reservoirs, to help operating companies in Lloydminster evaluate the cost and benefit of introducing storage into their current field of work, and even unleash more potential in their depleted heavy oil reservoirs to upgrade current production into $CO_2$-based EOR, such as cyclic $CO_2$ injection.

## Impact of the Host Rock Geology on the Initiation, Propagation and Geometry of Wormholes in CHOPS Reservoirs

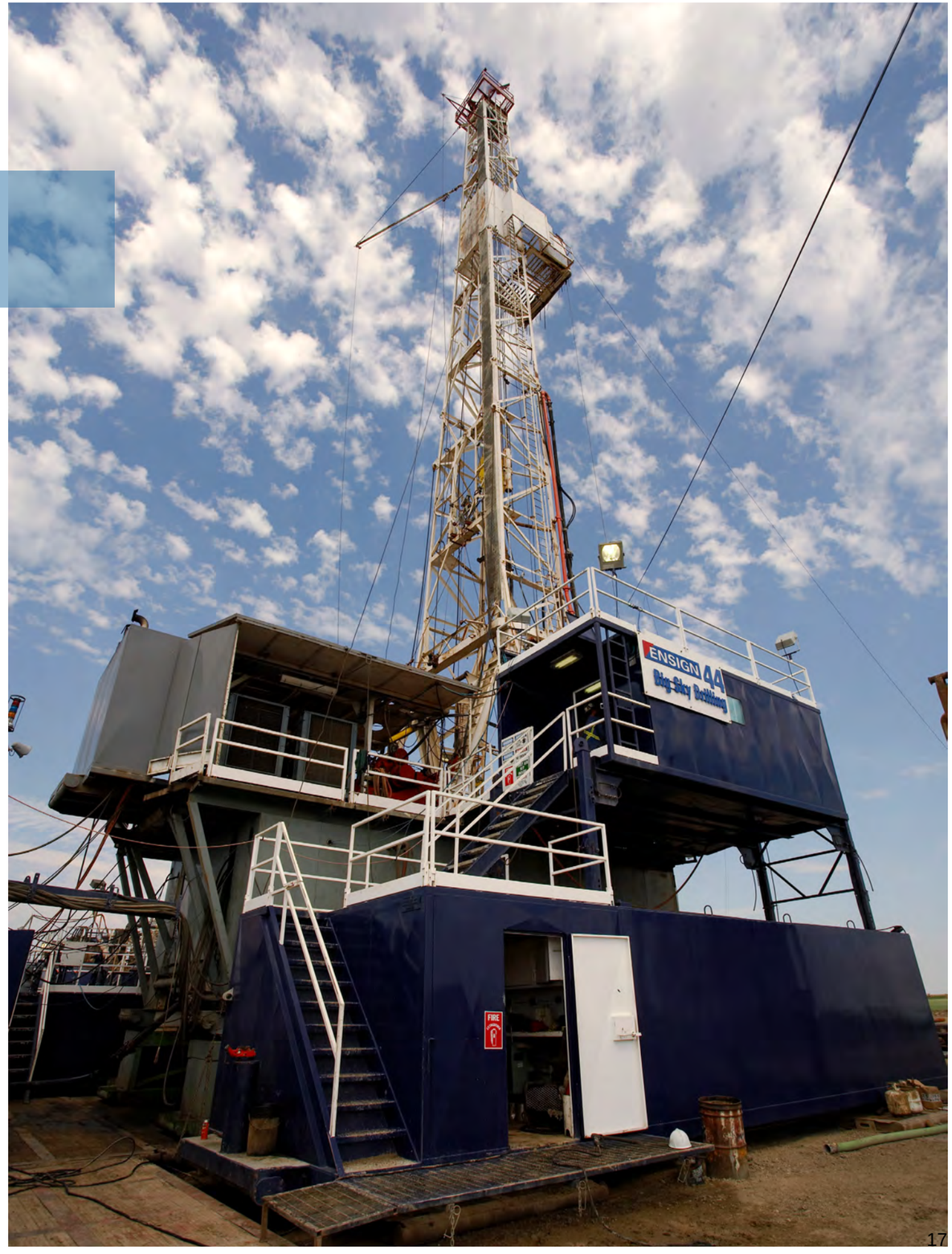
*Hairuo Qing, University of Regina*
*Yongan (Peter) Gu, University of Regina*
*Siyang Zhang, University of Regina*

The presence of wormholes is considered to be the most important factor that contributes to increased oil production in CHOPS, resulting in successful operations in the heavy oil fields in Saskatchewan and Alberta. Wormholes in the reservoirs are initiated and propagated during CHOPS, along certain layers of the pay zones, resulting in high poro-perm networks within the reservoir. The formation and propagation of the wormholes, however, are closely related to geological features. In the past, previous experimental studies and numerical simulations of the “wormholes” were generally based on, and derived from, a homogenous sandbox approach, without adequate consideration of geological characteristics in the producing CHOPS reservoirs. As a result, our current understanding of the nature of wormholes in CHOPS reservoirs was poor, limited and possibly erroneous. Operators in the Lloydminster area are, therefore, facing challenges when selecting the best reservoir zones for CHOPS, in order to optimize oil production in the field. This project aims at bridging this knowledge gap with a better understanding of the impact of host rock geology on the initiation, propagation and geometry of wormholes in CHOPS reservoirs.

## Super Hydrophilic Membrane Technology for High-Efficiency Produced Water Treatment

*Gordon Huang, University of Regina*

Produced water is a bi-product during the recovery of oil and gas. This produced water contains oil, salts and toxic substances, causing environmental pollution and health risks. Therefore, effective management of produced water is a key challenge in oil production processes. Treatment of produced water for recycling and/or reuse can significantly help mitigate the costs of water usage and waste disposal, reduce environmental risks, and support sustainable industrial development. The current technologies for produced treatment include polymer-or-ceramic-based membrane filtration, which is considered more efficient than traditional technologies (such as coagulation). However, the drawbacks of conventional polymer- or ceramic-based membrane technologies include low flux, fouling, and quick decline in efficiency due to pore plugging by oily and organic contaminants. The objectives of this project are the development of polymer-and-ceramic-based nanocomposite membranes for high-efficiency produced water treatment, and the evaluation and optimization of treatment efficiency and durability in the developed membranes under various operational settings. The investigation will be carried out on system design and cost analysis for various industrial applications. Multiple approaches will then be applied to improve treatment efficiency and reduce operational costs.



# The Future of Communications

**SOMETIMES A CRISIS PROMPTS REAL AND FUNDAMENTAL CHANGE IN THE WAYS WE DO THINGS**



In 2020 the COVID pandemic had major impacts for R&D work right across Canada, as universities and research groups faced lab closures, meeting restrictions, loss of in-person overseas graduate students, and supply chain disruptions of critical equipment and resources.

PTRC's funded research program was no different. Our projects at the University of Regina and the Saskatchewan Research Council saw significant lab restrictions put in place – indeed, for a period in mid-2020 the labs were closed completely – and numbers of researchers or technicians in each location at the same time were curtailed.

R&D carries with it an endemic need to communicate – between people working on the same project, or across disciplines within an organization, or more broadly with the wider academic and business communities.

PTRC stepped up during the past year to greatly broaden its presence on the local, national and international scenes.

First, we began to meet regularly through Zoom with chambers of commerce in the cities where our field work is being done. We have long maintained connections with the Weyburn and Estevan Chambers of Commerce because of the extensive research being conducted on the $CO_2$-EOR fields south of Weyburn, and at the Aquistore storage location near Estevan, but PTRC also recently joined the Lloydminster and Saskatchewan Chambers.

On March 4th, 2020 we hosted a Zoom informational session for the Lloydminster Chamber – including the Mayor, several

city council members, and leaders from the business community – on PTRC's ongoing research with Husky and CNRL in the region. Several follow up discussions ensued.

Nationally and internationally, PTRC promoted its work through well-attended webinars that had participation from six different continents (non-attendance from Antarctica was the only outlier). May 2020 saw members of Aquistore's Science and Engineering Research Committee present the latest research findings to an audience of 150 – the webinar recording has since been viewed over 500 times.

Similarly, three more webinars on topics as broad as $CO_2$ storage in the Lloydminster region, the basics of oil and gas for a more general audience, and a phenomenally attended webinar on our research into artificial intelligence in oil and gas (that webinar recording www.youtube.com/watch?v=-n7pdBZ-aRg has had over 1500 views on YouTube).

PTRC is planning regular webinars, now, regardless of the pandemic. We continue to push our social media presence. Our brand continues to expand.

# Financial Report

## Independent Auditor's Report

**TO THE MEMBERS,**
**PETROLEUM TECHNOLOGY RESEARCH CENTRE INC.**

*Opinion*

The summary financial statements, which comprise the summary statement of financial position as at March 31, 2021, the summary statements of operations, unrestricted net assets and cash flows for the year then ended, and related notes, are derived from the audited financial statements of Petroleum Technology Research Centre for the year ended March 31, 2021.

In our opinion, the accompanying summary financial statements are a fair summary of the audited financial statements, which were prepared in accordance with Canadian accounting standards for not-for-profit organizations.

*Summary Financial Statements*

The summary financial statements do not contain all the disclosures required by Canadian accounting standards for not-for-profit organizations. Reading the summary financial statements and the auditor's report thereon, therefore, is not a substitute for reading the audited financial statements and the auditor's report thereon.

*The Audited Financial Statements and Our Report Thereon*

We expressed an unmodified audit opinion on the audited financial statements in our report dated July 28, 2021.

*Management's Responsibility for the Summary Financial Statements*

Management is responsible for the preparation of the summary financial statements based on the audited financial statements prepared in accordance with Canadian accounting standards for not-for-profit organizations.

*Auditor's Responsibility*

Our responsibility is to express an opinion on whether the summary financial statements are a fair summary of the audited financial statements based on our procedures, which were conducted in accordance with Canadian Auditing Standard (CAS) 810, Engagements to Report on Summary Financial Statements.

July 28, 2021
Regina, Saskatchewan

VIRTUS GROUP LLP
Chartered Professional Accountants



**PETROLEUM TECHNOLOGY RESEARCH CENTRE INC.**
**SUMMARY STATEMENT OF FINANCIAL POSITION**
**FOR THE YEAR ENDED MARCH 31, 2021**

| (C$000s) | 2021 | 2020 |
|---|---|---|
| **ASSETS** | | |
| CASH | $ 1,034 | $ 1,716 |
| INVESTMENTS | 2,740 | 2,610 |
| OTHER ASSETS | 324 | 722 |
| **TOTAL ASSETS** | 4,098 | 5,048 |
| **LIABILITIES AND NET ASSETS** | | |
| DEFERRED REVENUE | $ 1,398 | $ 2,433 |
| OTHER LIABILITIES | 405 | 353 |
| **TOTAL LIABILITIES** | 1,803 | 2,786 |
| **NET ASSETS** | 2,295 | 2,262 |
| **TOTAL LIABILITIES AND NET ASSETS** | $ 4,098 | $ 5,048 |

**PETROLEUM TECHNOLOGY RESEARCH CENTRE INC.**
**SUMMARY STATEMENT OF OPERATIONS AND UNRESTRICTED NET ASSETS**
**FOR THE YEAR ENDED MARCH 31, 2021**

| (C$000s) | 2021 | 2020 |
|---|---|---|
| **REVENUE RECOGNIZED** | | |
| FUNDING REVENUE | $ 3,577 | $ 4,503 |
| GRANT REVENUE | 160 | - |
| OTHER | 140 | 248 |
| **TOTAL REVENUE RECOGNIZED** | 3,876 | 4,751 |
| **EXPENSES** | | |
| PROJECTS | $ 3,189 | $ 3,756 |
| OPERATIONS | 654 | 1,245 |
| **TOTAL EXPENSES** | 3,843 | 5,001 |
| **EXCESS OF REVENUE (EXPENSE)** | 33 | (250) |
| **UNRESTRICTED NET ASSETS, BEGINNING OF YEAR** | 2,262 | 2,512 |
| **UNRESTRICTED NET ASSETS, END OF YEAR** | $ 2,295 | $ 2,262 |

## PETROLEUM TECHNOLOGY RESEARCH CENTRE INC.
## SUMMARY STATEMENT OF CASH FLOWS
## FOR THE YEAR ENDED MARCH 31, 2021

| (C$000s) | 2021 | 2020 |
|---|---|---|
| NET CASH FROM OPERATING ACTIVITES | ($552) | ($1,703) |
| NET CASH USED IN INVESTING ACTIVITIES | (130) | (32) |
| INCREASE IN CASH | (682) | (1,735) |
| CASH, BEGINNING OF YEAR | 1,716 | 3,451 |
| CASH, END OF YEAR | $ 1,034 | $ 1,716 |

## SUMMARY FINANCIAL STATEMENTS

The summary financial statements are derived from the audited financial statements, prepared in accordance with Canadian accounting standards for not-for-profit organizations, as at March 31, 2021 and for the year then ended.

The preparation of these summary financial statements requires management to determine the information that needs to be reflected in them so that they are consistent in all material respects with, or represent a fair summary of, the audited financial statements.

Management prepared these summary financial statements using the following criteria:

(a) The summary financial statements include a statement for each statement included in the audited financial statements;

(b) Information in the summary financial statements agrees with the related information in the audited financial statements;

(c) Major subtotals, totals and comparative information from the audited financial statements are included; and

(d) The summary financial statements contain the information from the audited financial statements dealing with matters having a pervasive or otherwise significant effect on the summary financial statements.

The audited financial statements of Petroleum Technology Research Centre Inc. are available upon request by contacting the organization.

# CONTACT

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