

2018 **STEWARDSHIP REPORT TO STAKEHOLDERS**



**SUSTAINABLE OPERATIONS THROUGH
INNOVATION AND CONTINUOUS IMPROVEMENT**



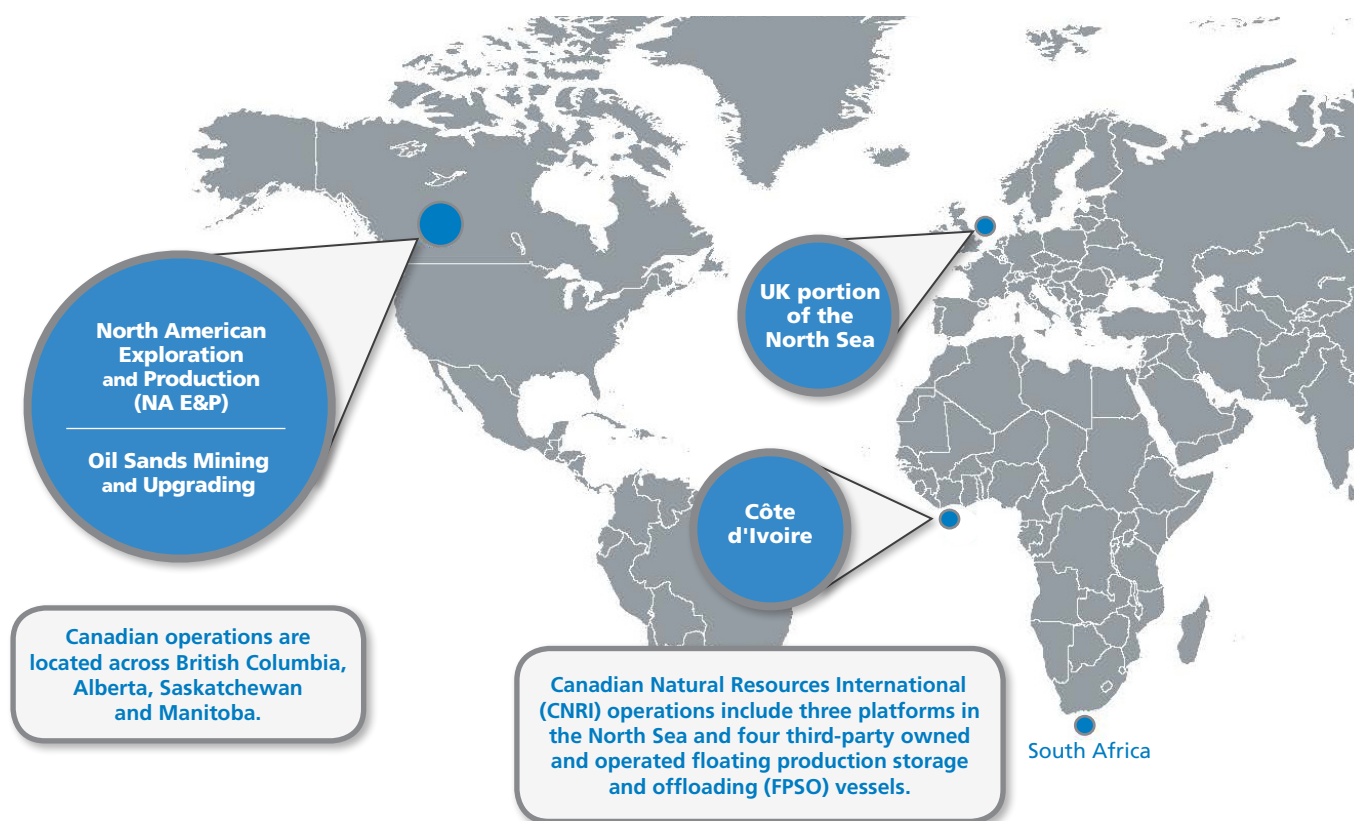
Canadian Natural

Who We Are

CANADIAN NATURAL RESOURCES LIMITED (CANADIAN NATURAL)

is a senior independent crude oil and natural gas exploration, development and production company based in Calgary, Alberta, Canada. Our strong, diversified asset base is comprised of a balanced portfolio of light, synthetic, and heavy crude oil and natural gas.

Canadian Natural operates in Canada, the United Kingdom and Offshore Africa. We are committed to a long-term presence in the communities where we operate. Our activities create value by providing employment, business development opportunities, revenues to governments that contribute to spending on goods and services, and essential resources for public services, including health, safety, education and training.



At Canadian Natural, we live our mission statement:

“To develop people to work together to create value for the Company’s shareholders by doing it right with fun and integrity.”

Many of the photographs in this report were provided by Canadian Natural staff. We would like to thank David Bushey, Kevin Fielding, Kira Gerow, Kevin Gill, Maria Gisondo, Dorian Londo and Neil Richardson for contributing pictures to this edition of the *Stewardship Report to Stakeholders*.

Cover Photo
Kirby South thermal in situ operations, Athabasca Oil Sands Region, Alberta



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Canada is uniquely positioned to deliver significant economic and environmental performance. Canada has the opportunity to be the supplier of choice to meet global demand for crude oil and natural gas. To seize this opportunity, we need market access to get full value for our products. We can deliver affordable, reliable and responsible energy with a lower environmental footprint, while contributing significantly to reducing net global greenhouse gas (GHG) emissions.

Canadian Natural is an important part of this Canadian success story. Over the last 30 years, we have grown from a Company with nine employees to over 9,000 employees. We have increased our production from approximately 400 BOE/d in 1989 to more than one million BOE/d today. With significant resources to develop, we are well positioned for long-term growth. Our growth path includes not only substantial job creation and production growth, but also a commitment to responsible development, continuous improvement, and Canadian ingenuity.

We are pleased to share with you our *2018 Stewardship Report to Stakeholders*. In the pages that follow, you will find highlights that demonstrate this commitment and our strong performance results in the areas of health and safety, asset integrity, environment, technology and innovation, and community.

We are proud of our record, including the following achievements:

- Lowest ever corporate Total Recordable Injury Frequency (TRIF) and a 19% reduction from 2017
- 36% reduction in pipeline leaks/1,000 km since 2014
- 20% reduction in corporate GHG emissions intensity since 2014
- 72% reduction in venting at Alberta primary heavy oil operations since 2014

We accomplished this by working together with 24,000 landowners, 160 municipalities and 83 Indigenous communities, awarding more than \$500 million in contracts to Indigenous businesses in 2018 alone.

These are Canadian Natural's results, and there are many other Canadian companies with similar results to share. It is important that our industry in Canada continues to make this progress, because the world needs the responsible

energy we produce. For instance, to meet the energy demands in the International Energy Agency (IEA) 2018 Sustainable Development Scenario — a scenario consistent with the objectives of the Paris Climate Agreement — the world would still have oil demand of close to 70 million bbl/d in 2040. To meet this demand, the world will need all types of energy including substantial crude oil and natural gas development for decades to come.

Responsible oil and natural gas can deliver needed energy but also reduce emissions. With the sector's continued performance improvements, Canada's lower GHG intensity products should be a major part of meeting this global demand while supporting Canada's commitments and global climate goals.

Over the last decade, Canada's crude oil and natural gas has become a premium product. Our sector has been able to leverage technology and Canadian ingenuity, delivering impressive results in lowering emissions intensity. Canada's responsibly produced crude oil and natural gas can help mitigate the impact of climate change globally. Significant improvements in environmental performance and GHG emissions would occur if other countries adopted Canada's standards.

Canadian natural gas will be crucial in reducing global emissions. Natural gas from one large liquefied natural gas (LNG) plant in British Columbia, exported to Asia, could provide enough energy to replace or displace up to 40 coal-fired power plants with cleaner burning natural gas. Global GHG emissions could be reduced by 60 to 90 million tonnes of carbon dioxide (CO₂) per year, which represents 10% of Canada's total GHG emissions.

When you consider the facts above, we believe that you will come to the same conclusion that we have — Canada can and should be a leader when it comes to managing the impacts of climate change and reducing GHG emissions. With market access, Canada will have a major role in providing responsibly produced, low GHG intensity oil and natural gas to growing economies, lifting millions of people out of poverty, while creating hundreds of thousands of high-value jobs for Canadians, and significant government revenues to fund essential services such as health care and education.

To achieve these goals while writing the next chapter of our story will take action and leadership from everyone. Thank you for your continued support and for working together.



N. MURRAY EDWARDS
Executive Chairman



STEVE W. LAUT
Executive Vice-Chairman

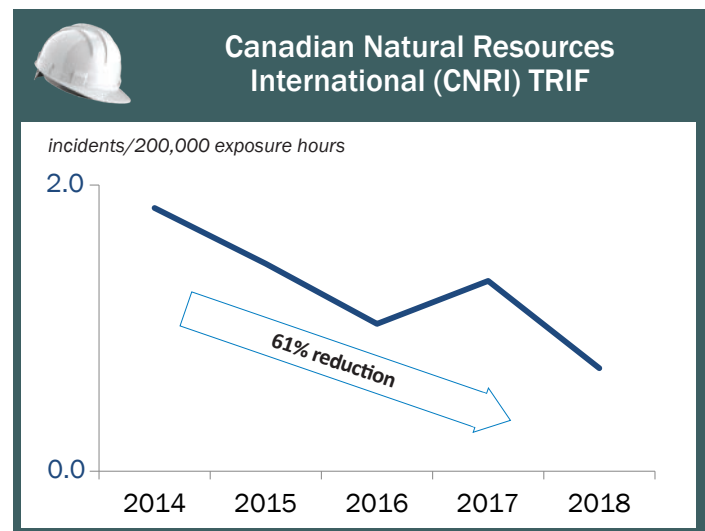
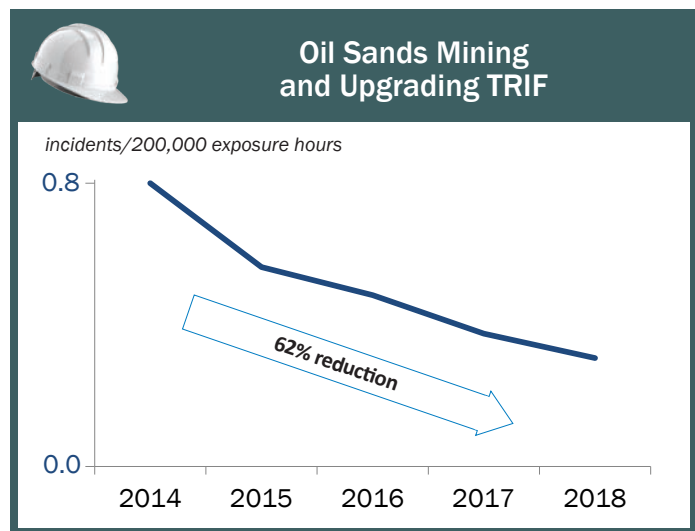
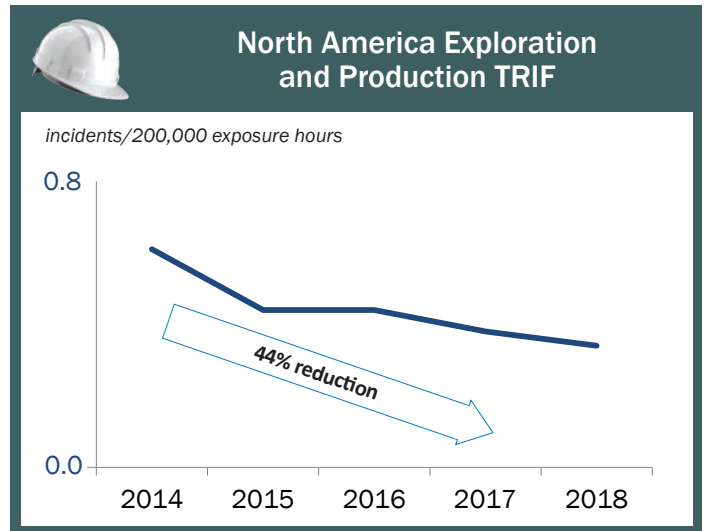
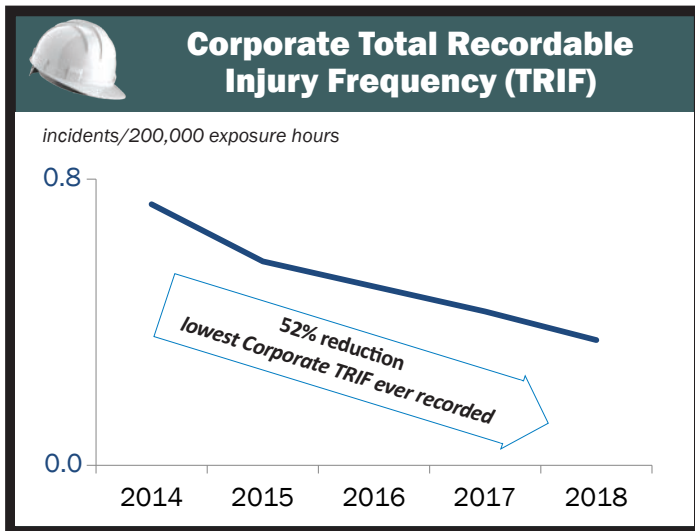


TIM S. MCKAY
President

2018 Performance Review

Health and Safety

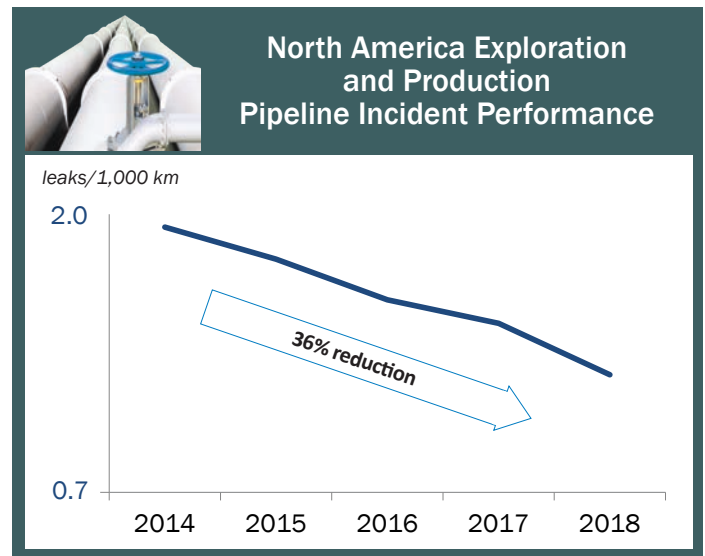
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Safety is a Core Value at Canadian Natural.

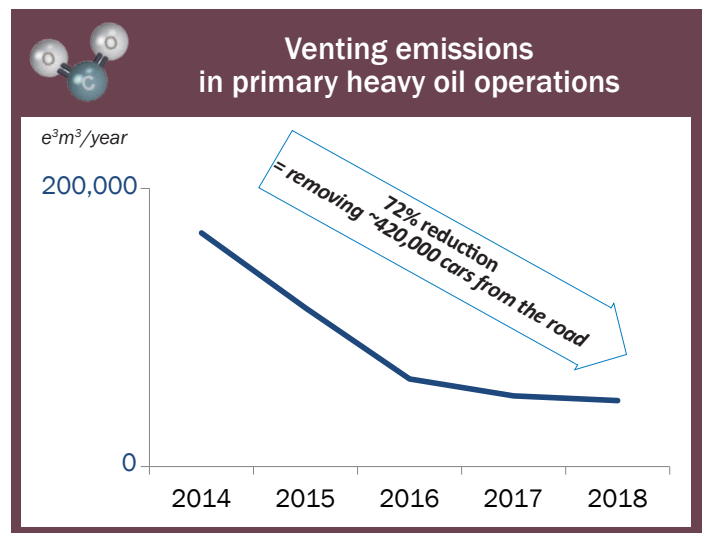
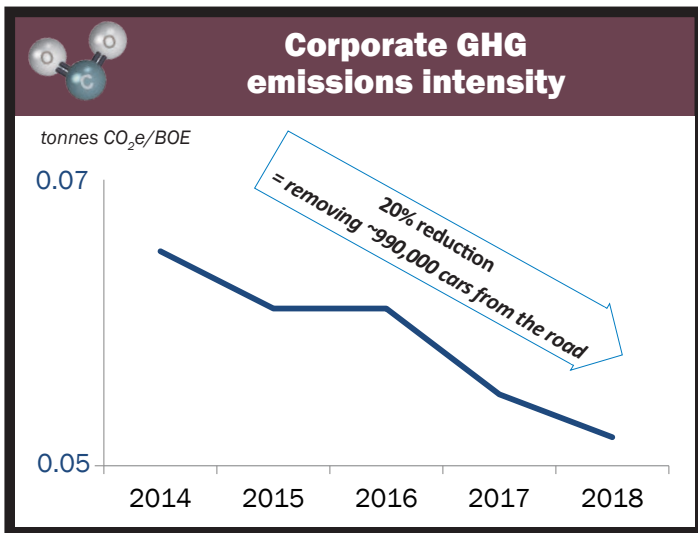
Asset Integrity

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Environment

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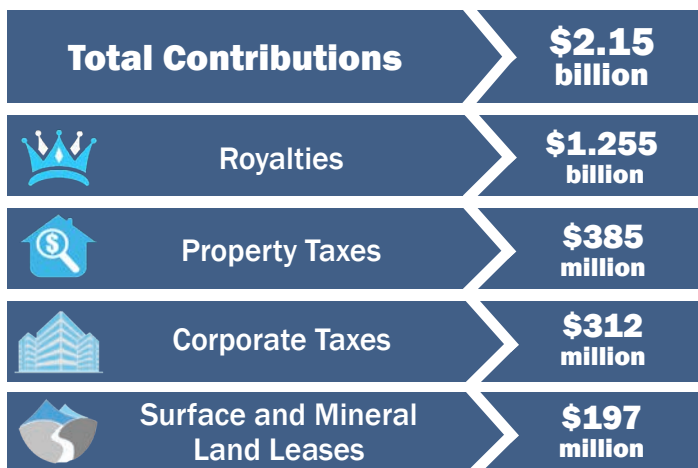
Canadian Natural is the fifth largest owner of **carbon capture storage (CCS) capacity** in the **global oil and natural gas sector**.

Community

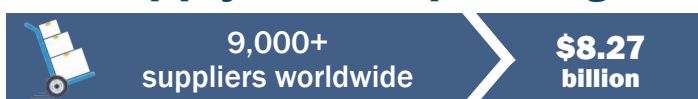
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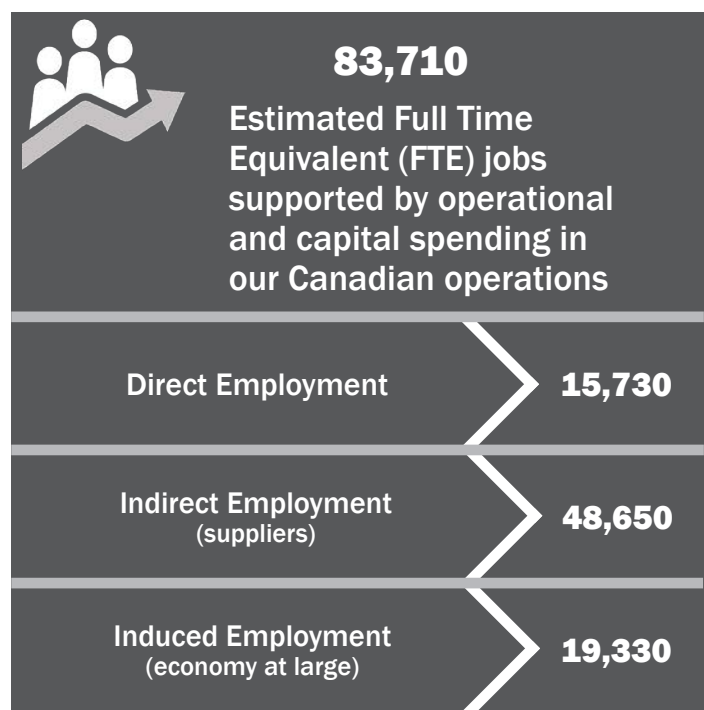
Contributions to Canadian Economy



Supply Chain Spending



Employment Creation





The world needs MORE CANADIAN ENERGY

Our crude oil and natural gas sector is responding to environmental challenges, pushing boundaries to be a leader in creating the cleanest upstream products in the world.

Canada's energy will be an important part of a global future with lower carbon emissions for decades to come.



Entrepreneurship, ingenuity and longstanding experience have allowed Canada to adapt to challenges throughout our history. We've led in the past, we're leading now, and we'll be leading in the future.

By 2040:



World population to **exceed 9 billion** (currently 7.5 billion).



Total energy demand expected to **increase by 30%**.



To meet demand, a **27% increase in affordable energy supply** is required.

Crude oil and natural gas will continue to be the **predominant energy source**.



The world will need **ALL forms of energy, including crude oil, natural gas, wind, solar, etc.** to lift people out of poverty, and give greater comfort and prosperous lifestyles.

Industry investment in technologies and research has increased more than 10 times in the last 20 years, reducing environmental footprint and costs **to be the preferred suppliers to an energy demanding world**.

“As Canadians we tend to be humble and understate our achievements. We shouldn't be. Our accomplishments as the fifth largest producer of oil and natural gas are exceptional. For over 150 years, our hydrocarbon industry has been a trailblazer in providing people with cheap, clean, safe and secure energy.

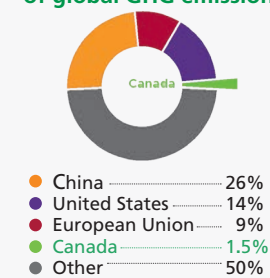
Standards and expectations for environment, safety and governance have tightened many times over the decades. They're tightening once more, as they should. We're responding to the challenges positively, again, as we always have. Innovation and adaptation are not new concepts when you've been at it for over a century-and-a-half. The world needs more Canadian energy in times of vital importance. It always has and always will.”

Peter Tertzakian, *Energy Economist*

Responsible resource development

- Canada's crude oil and natural gas industry has **been safely and responsibly developed for over a century**.
- Canada's industry is **transparent** in its operations, and complies with the **most stringent regulations in the world**.
- Industry competes globally for investment. Policies and regulations must **encourage investment, competitiveness and access to world markets**, while focusing on **innovation, and environmental and social responsibility**.

Canada accounts for 1.5% of global GHG emissions



Source: Environment and Climate Change Canada

Lowering oil sands emissions intensity

- Canada's oil sands production developed quickly over the past 20 years.
- Industry is **working hard to reduce GHG emissions intensity, reduce water use and reclaim land**, as we continue to **leverage technology and innovation**.
- Canada's industry is moving fast to be part of the solution!**



Canada should be the world energy supplier of choice in meeting global energy needs.

Canadian Natural's culture of leveraging technology and innovation is key to driving sustainable operations and long-term value.

Investment in research and development (R&D) and technologies drives continuous improvement in our performance. As a leading R&D investor with approximately \$3.4 billion invested since 2009, technologies and innovation allow us to unlock reserves, increase production, be more effective and efficient, and reduce our environmental footprint.

New technology takes time to test and commercialize, making collaboration essential when evaluating and leveraging R&D investments. Collaborative efforts, including Canada's Oil Sands Innovation Alliance (COSIA), Petroleum Technology Alliance of Canada (PTAC) and the Clean Resource Innovation Network (CRIN), are accelerating technology implementation and finding innovative solutions to industry's environmental challenges. Innovation takes place in different ways: incremental continuous improvement, and step changes.

"Industry has been collaborating for many years, achieving great results. Canada is the global leader in clean hydrocarbon production from source to end use, and we continue to work towards reducing our environmental footprint."

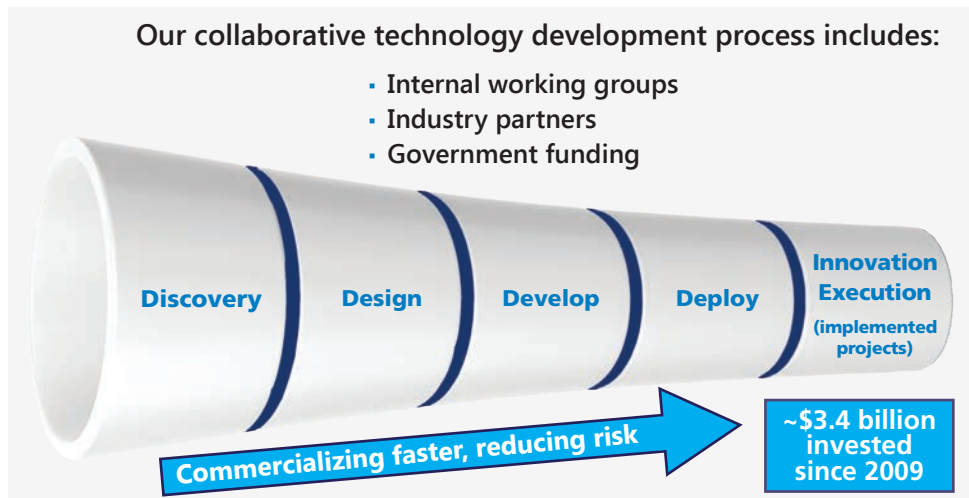
Joy Romero, Canadian Natural's Vice-President of Technology and Innovation, and Chair of CRIN.

Canadian Natural's projects span from advancing reclamation across our operations and tailings management technologies, to capturing carbon dioxide (CO₂), reducing GHG emissions, and enhancing water and steam use.

Reducing GHG Emissions

Largest Methane Research Project

The Fugitive Emissions Management Program Effectiveness Assessment



Canadian Natural accelerates innovation, reducing risk and taking technologies from lab concepts through pilots and on to commercialization.

(FEMP EA) is the world's first-of-its-kind methane leak detection, quantification and repair project. Thirty producers are building a methane emission inventory of 200 oil and natural gas facilities in Red Deer, Alberta, repeatedly measuring emissions (and repairing leaks) over a 12-month period. This detailed knowledge of methane emissions from a large number of facilities will establish the basis to evaluate detection and quantification technologies.

This research was launched in 2018 through the Alberta Upstream Petroleum Research Fund (AUPRF), a unique collaboration between the Government of Alberta, the Alberta Energy Regulator, and industry. The FEMP EA complements the area fugitive emissions measurement project, led by Canadian Natural in collaboration with COSIA and other partners.

Increasing Recovery

Applied technologies and day-to-day operational efficiencies are instrumental in our continuous improvement approach. Examples of these projects include:

- **Steam efficiencies** – Enhancing steam production helps recover more crude oil with less steam,

reducing GHG emissions and adding value in a cost-effective way. To improve our steam-assisted gravity drainage (SAGD) process at Kirby South, we are co-injecting solvent with steam, achieving a 50% reduction in steam-to-oil (SOR) ratio. Learnings from this pilot were used at Primrose/Wolf Lake (PAW) to improve steamflood performance. At Kirby South, we are also testing co-injection of produced gas (like methane) with steam into an oil sands reservoir, to help keep the pressure and increase recovery.

- **Natural gas injection** – At our Septimus natural gas plant in B.C., we are initiating a natural gas reinjection pilot. This technology has the potential to increase liquids recovery while storing natural gas in the reservoir, preserving the value of the natural gas.

More information on these and other projects is available in our [Technology and Innovation Case Studies booklet](#).

Tailings Management Technologies

Tailings management focuses on dewatering tailings, improving tailings consolidation and proactively managing

fines before they become fluid tailings (FT). The end goal is to create landforms that support wetlands and boreal forest habitat, and align with regulatory requirements and closure outcomes. To date, we have invested more than \$3.5 billion in tailings projects, including research, technologies and construction. These technologies are increasing water recycling, accelerating reclamation and reducing GHG emissions.

At Horizon, our Non-Segregating Tailings (NST) process dewateres the tailings by using cyclones to separate the coarse sand, and thickeners to remove water from the fines in the tailings stream prior to being sent to the tailings pond. CO₂ from Horizon's capture plant is injected and sequestered in the tailings.

The addition of CO₂ to NST further enhances fines capture and accelerates dewatering. The warm water recovered is then re-used in production. We are also starting a pilot to treat legacy mature fine tailings (mostly clay and silt from our previous tailings processes) together with NST.

At the Athabasca Oil Sands Project (AOSP), we combine the use of thickeners and centrifugation technologies to help separate and remove the water from the FT. In 2018, several technologies were piloted, including filter bags to dewater tailings, centrifuge optimization trials (for long-term consolidation of treated fines) and enhancements to the Atmospheric Fines Drying technology to help settle out solids in the FT.



Environmental Benefits of Tailings Technologies

Reduction in GHG emissions through CO₂ sequestration and less natural gas consumption

Increase in fines capture, reducing tailings pond size

Increase in water recycling, reducing fresh water use

New technologies transforming the oil sands

Other research projects with the potential to reduce tailings ponds are taking place at our Horizon operations. A field pilot is underway on an alternative bitumen extraction method — the **In-Pit Extraction Process (IPEP)**. This involves a relocatable, modular extraction plant that processes ore and separates bitumen right in the mine pit.

IPEP reduces materials transportation by truck, pipeline length and the energy needed to pump material, potentially reducing GHG emissions by up to 40% compared to typical oil sands processing plants. This process also produces stackable dry tailings, eliminating tailings ponds. We have been testing the effectiveness of the IPEP during the winter.

We are also working with **Titanium Corporation** to evaluate the potential deployment of their froth treatment



Stackable dry tailings will allow for a more efficient mine plan and pit design, and accelerate reclamation more cost-effectively.

tailings remediation technology to recover bitumen, solvents and minerals from the tailings stream. This technology can provide cleaner/dryer

tailings, reduce and avoid fugitive emissions from the tailings pond and produce new products such as zircon and titanium.

Reclamation Research

Advancing reclamation across our operations is a key focus at Canadian Natural.

Area-Based Reclamation

Canadian Natural's area-based program is an industry leading approach driving innovation to accelerate the pace of reclamation in cost-effective ways, advancing environmental closure obligations. In southern Alberta's native prairie, for example, we pursue alternative re-vegetation strategies, including transplanting native hay to reclaimed well sites; or using panels made from salvaged tubing to minimize cattle grazing. These activities have reduced re-vegetation timelines from three–five years to two–four years, while also adding a greater diversity of natural species on reclaimed sites.

Canadian Natural has been a strong proponent of outcome-based remediation standards as part of an effective and timely reclamation program for well sites on native prairie, working with industry and regulators through PTAC to reduce excavation and disposal, and protect biodiversity.

We have also developed a portable, internal pipeline cutter, to cut risers on inactive well sites, reducing ground disturbance during pipeline abandonment activities.

As an active participant in COSIA, we collaborate with industry to advance our understanding of reclamation processes.

Read more about our reclamation results and practices on pages 18 and 20 of the Environment section.

Treating Process-Affected Water

Canadian Natural and other oil sands producers are working with a water treatment company (H2nanO) on a demonstration pilot to assess the viability of treating oil sands process-affected water with a passive solar remediation technology (without the use of additive chemicals or absorbents). We are also testing pit lakes as another technology applied to



Vegetation panel at a native prairie reclamation site. The panels help reduce cattle grazing in specific areas, accelerating reclamation.

tailings, water and reclamation as part of oil sands mine closure plans.

Understanding Soils to Improve Re-vegetation

Across our operations, reclamation research and monitoring are conducted on a regular basis to investigate the ecological performance of reclaimed areas to enhance future reclamation efforts of industry as a whole.

Projects include: developing an effective soil mix to maximize species establishment, collaborative harvesting and banking of native boreal forest seeds, and understanding how soils may

change while they are stockpiled to better manage land reclamation activities for both mining and in situ oil sands operations.

Seismic Lines Restoration

In 2018, we were part of COSIA's Fall Field Tour at the Cold Lake Air Weapons Range. This tour included visits to remote reclamation trial sites in the oil sands and demonstrated how industry is addressing challenges in a collaborative and creative way.

This Canadian Natural reclamation trial site shows vegetation growth along a seismic line treated with excavator mounding and tree planting. We are continuously studying new methods to improve our reclamation strategies.



At Canadian Natural, safety is a core value that underlies all our activities to reach our ultimate goal of **'No harm to people; No safety incidents'**.

Keeping employees and contractors safe is a crucial part of being an effective and efficient operator. To ensure a safe workplace, we emphasize strong leadership and workforce participation. This is why, at Canadian Natural, safety is:

- **a Core Value** — reinforced from management down to each and every employee and contractor; and
- **Frontline Driven** — everyone contributes to their own safety and that of others, for a safer workplace.

No Harm to People; No Safety Incidents

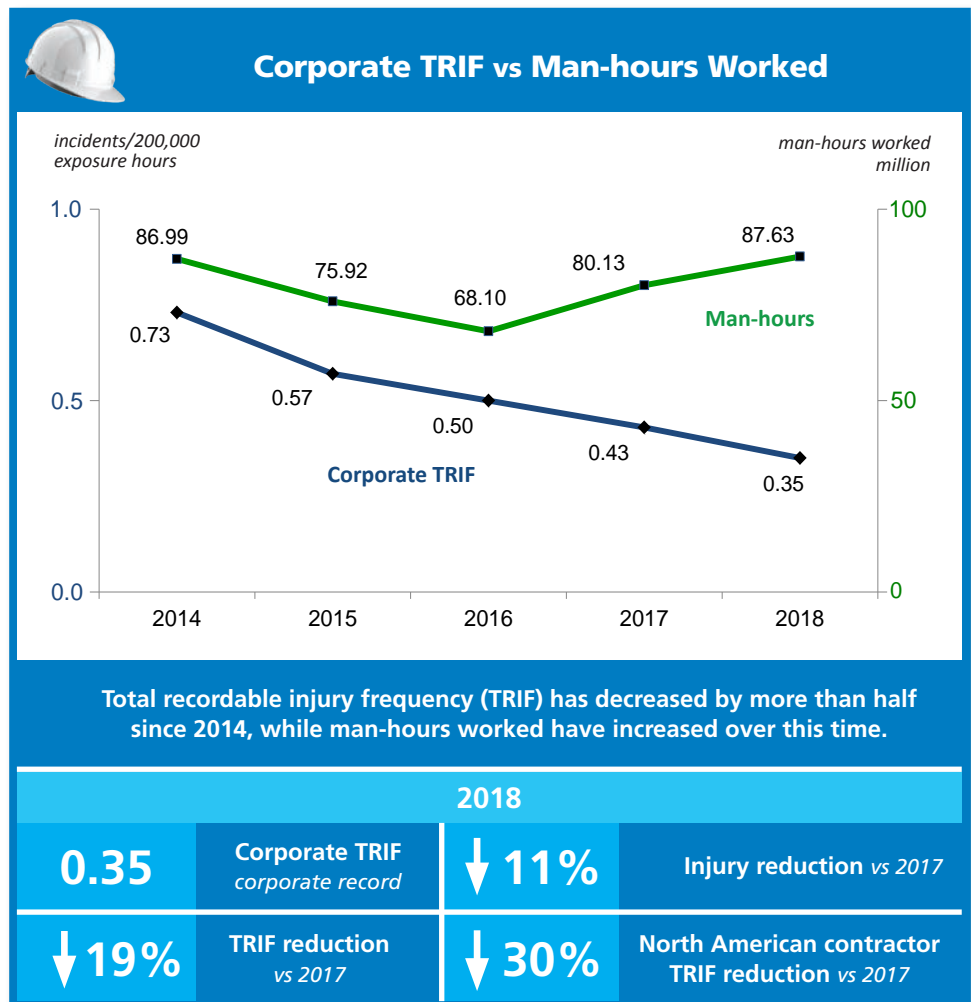
Comprehensive, integrated management systems for personal safety, process safety and asset integrity are in place to maintain safe and reliable operations. These management systems protect workers, the public, the environment and our equipment and facilities through robust, disciplined processes. Our teams work together to keep our Safety Excellence goal of **No harm to people; No safety incidents** top of mind, embedding safety in everything we do.

Lowest TRIF in Company History

In 2018, our combined employee and contractor Total Recordable Injury Frequency (TRIF) dropped to 0.35, from 0.43 in 2017. With a clear focus on incident reduction and continuous improvement, strong safety performance was achieved in all divisions (*see our Safety Performance Data on page 27*).

Frontline Driven Safety

Our safety programs reflect our frontline driven safety culture and leadership commitment to continuous improvement, promoting participation at all levels.



“Doing it right means doing it safely. Employees are more willing to accept new ideas and procedures when they’re participating and involved in the process, and our field employees respect those efforts.”

Terry Heck, Health and Safety Director, who has spent 19 years with Canadian Natural and 42 in the oil and natural gas industry.

Safety Excellence Mission Statement Meetings

These meetings reinforce our safety culture and protocols to complete tasks safely. Senior management meets with field and offshore operations staff, supervisors and contractors annually.

Contractor Safety Excellence Meetings

Every year, management from Canadian Natural and our contractors get together to identify action items and develop plans to reduce injuries. Through this work, we continued to reduce contractor TRIF for contractors with the highest incident rates.

Worksite Safety Observation (WSO) Program

This behavioral-based program uses a collaborative approach to enhance safety through positive conversations between workers, supervisors and contractors. WSOs are instrumental in reducing injuries and reinforcing our safety culture as the quality of WSOs continues to improve.

Continuous Improvement in Safety Management

Canadian Natural’s Safety Management System (SMS) is a key framework used to help achieve Safety Excellence across our operations. Throughout 2018, we continued to focus on program alignment and proven methods:

- SMS audits raise awareness and reinforce our system among supervisors, ensuring program



Members of the Canadian Natural Safety, Risk Management and Innovation team during a tour of the In Pit Extraction Process (IPEP) facility at the Horizon site.

alignment. Audits were completed across all business units, identifying opportunities to enhance SMS effectiveness and prioritizing our action plans to help make our worksites safer and ensure regulatory compliance.

- To foster an engaged safety culture, we heighten awareness of safety performance by regularly communicating incident trends across all our sites, through safety bulletins and TRIF reports.
- Further integration at our Oil Sands Mining and Upgrading operations brought together safety/hygiene staff. We developed a single competency matrix for Safety Compliance Coordinators using a common Certificate of Recognition audit, and aligned safety procedures.
- Safety training boosts accountability and leadership, supporting our injury reduction goals. This includes employee and contractor required safety and competency courses (job-related skills training that allows workers to complete assigned

tasks safely and effectively) for field operators and offshore supervisors.

Combined Safety Excellence and Mission Statement Meetings

Management and supervisors spend significant time in the field to aid in the development of our frontline driven safety culture. To drive continuous improvement, senior management combined Safety Excellence Meetings with field Mission Statement Meetings (MSMs) in 2018. MSMs help communicate targets and allow frontline personnel to provide direct input to senior management on execution excellence and improvement opportunities and challenges.

The combined meetings reinforce how closely operational effectiveness and efficiency is tied to our ability to deliver safety excellence and operational reliability. Safety and Operations senior leaders include a field day visit prior to the meeting to have safety discussions and conduct WSOs with field workers, and to ‘touch the steel’.

Priorities in 2018

Safety Management System (SMS)

- SMS action plans and audits will be created for continuous improvement within all business units.
- Coordinate 2018 Certificate of Recognition (COR) external audit for North American operations, incorporating Oil Sands Mining and Upgrading facilities.

Accomplishments in 2018

- Continued strong focus on SMS processes and program alignment, focusing on proven methods.
- All action plans were completed, including internal SMS audits, facility inspections and training sessions.
- Successfully completed all Health and Safety Executive (HSE) regulatory inspections in our International operations.
- Maintained COR with the external auditor for all North American operations and completed all improvement action items — first year including the Athabasca Oil Sands Project (AOSP) sites.

Priorities in 2019

- Prepare safety action plans and audits for continuous improvement and adherence to the SMS within all business units.
- Coordinate 2019 COR external audit across North American operations, including conventional, thermal and mining operations.

Safety Excellence

- Continue incident prevention efforts and incident trend reviews to reduce injuries.
- Continue Safety Excellence meetings.
- Incorporate 2018 Safety Stand Down theme *Step Up For Young Workers* into our frontline safety programs.

- 19% decrease in corporate TRIF compared to 2017.
- 11% reduction in injuries Company-wide compared to 2017.
- Significant injury reduction in International operations as a result of introducing *Four Pillars* and *WSOs*, engaging employees and third parties.
- 28 Safety Excellence Mission Statement Meetings with senior management and 4,528 participants.
- Supported Safety Stand Down industry initiative through training, direct supervision, coaching, hazard assessment and control, and stopping and asking questions.

- Maintain our focus on incident prevention and worker safety.
- Continue Safety Excellence Mission Statement Meetings with field day visits and active participation of management, supervisors and frontline staff.
- Support Energy Safety Canada industry initiatives in promoting worker safety through 'Safety Reconnect' program (a designated time for leadership to talk about safety issues directly with frontline supervisors and workers).
- Reinforce and complete *WSO* program implementation across International operations.

Emergency Response Management

Canadian Natural's comprehensive corporate emergency management program is based on proactive risk management, from risk identification to mitigation programs across our operations. This program includes measures to prevent failures that could potentially lead to spills or leaks. In the event of an incident, we have plans, trained personnel and immediate access to equipment for a safe and well-coordinated response.

To ensure a state of readiness and emergency response capability, we conduct hundreds of planned exercises with our teams each year.

Exercises highlight areas of good practice as well as opportunities for improvements to our emergency response procedures.

Health and Wellness

We take great care in ensuring that our people have many opportunities to improve their health and wellness. Canadian Natural's *Strive* wellness program continues to show strong participation, enhancing employee health and promoting permanent, healthy lifestyle changes.

For more information about *Strive*, read the [Healthy People in Healthy Workplaces](#) section on our website.



Oil Sands mining employees conducting a Worksite Safety Observation (WSO) at one of our shovel locations.

Priorities in 2018	Accomplishments in 2018	Priorities in 2019
Contractor Safety Management <ul style="list-style-type: none"> Continue support for Contractor Safety Excellence meetings and WSO programs to drive continuous improvements in performance. Implement Four Pillars of Safety and Worksite Safety Observation (WSO) program across our UK offshore operations, and develop implementation plan for Offshore Africa. 	<ul style="list-style-type: none"> 30% reduction in worker injury in NA E&P for contractors with higher incident rates. All improvement plans were completed, focusing on reducing injuries. Strong support for WSOs, with increased awareness and leadership training, and further implementation across AOSP sites. Implemented Four Pillars of Safety and WSO program in UK operations, and started implementation in Côte d'Ivoire. 	<ul style="list-style-type: none"> Continue support for Contractor Safety Excellence meetings and WSO program to further reduce injuries and improve worker safety.
Safety Leadership <ul style="list-style-type: none"> Maintain Canadian Natural senior leadership presence across field offices. 	<ul style="list-style-type: none"> Increased senior leadership presence in the field, focusing on teams working together to enhance operational reliability, strengthening leadership engagement and supervisors' safety responsibilities. 	<ul style="list-style-type: none"> Continue Canadian Natural senior leadership presence in the field across all operations.
Emergency Response <ul style="list-style-type: none"> Conduct Emergency Response Plan (ERP) training exercises at each division, focusing on key risk areas. 	<ul style="list-style-type: none"> Completed all scheduled ERP exercises – 463 exercises Company-wide. 	<ul style="list-style-type: none"> Conduct ERP training exercises at each Company division, focusing on key risk areas.
Wellness <ul style="list-style-type: none"> Focus on local planning and programming for each location to increase engagement. Develop targeted communications and programs to address top health risks. Conduct an employee survey to receive program feedback. 	<ul style="list-style-type: none"> Strong employee participation in the Strive wellness program and participants' benefit costs trending down. New online platform aided in launch of first Company-wide health challenges, updated health assessment tools and other localized programs. As an alternative to a survey, feedback was collected through health clinics that took place throughout the year. 	<ul style="list-style-type: none"> Continue to increase participation and program reach, as part of a broader Company focus on mental wellness. Target health and wellness priority areas based on screening clinics.

Consistent programs improve marine safety performance

As part of our efforts to align processes across the Company and enhance safety performance, we introduced our **Four Pillars of Safety** and **WSO** program into our Canadian Natural Resources International (CNRI) operations.

These tools have significantly reduced TRIF across our Canadian operations and are now contributing to incident reduction in our International division. Driven by the introduction of **WSOs**, as well as effective Contractor Safety Excellence meetings, we have reduced injuries by 30% and lost time injuries by more than 50% from 2017 in our UK operations.

Our Safety Coordinators played key roles in the success of the **WSO** implementation, ensuring effective communications were developed for employees. This included a Safety Compliance Coordinator travelling to the Ninian Central



The **Four Pillars of Safety** are the foundation of our **WSO** program. Platform to train Team Leads. **WSO** implementation in Côte d'Ivoire remains a focus during 2019.

At Canadian Natural, we are committed to high standards of asset integrity to ensure safe, reliable, effective and efficient operations.

Asset Integrity Management

Canadian Natural operates a large and diverse inventory of process equipment, including thousands of kilometres of upstream pipelines and associated processing facilities across Western Canada, major oil sands operations in northern Alberta, and offshore installations in Canadian Natural Resources International (CNRI) (see map on page 2).

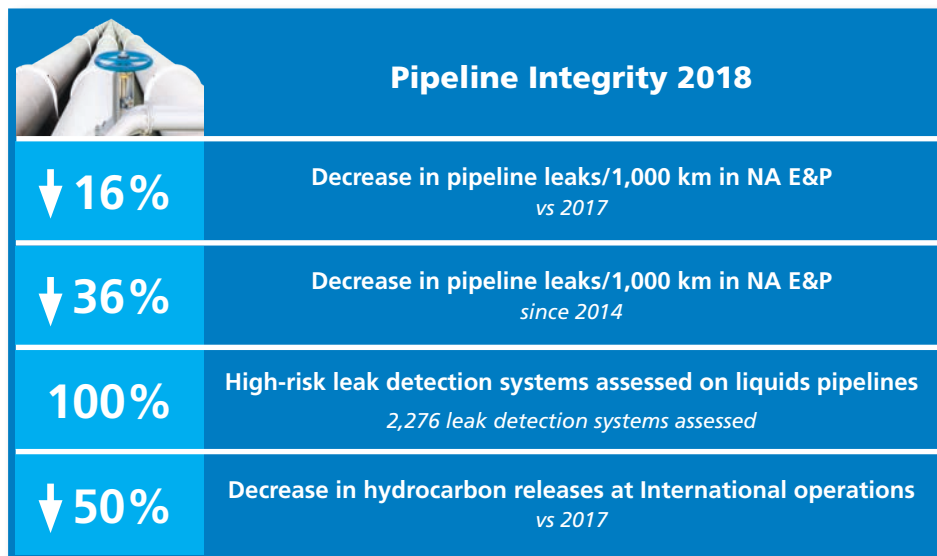
Canadian Natural has a proactive, risk-based approach in place to manage asset integrity and continuously maintain and improve the reliability of our infrastructure — including pipelines, pressure equipment and tanks.

Our Asset Integrity Management System provides the framework to help us identify, assess and manage risk to prevent incidents and accidents that could impact people's safety, the environment and the integrity of our assets. It ensures compliance with regulations and drives continuous improvement through goal setting, tracking and results measurement. Asset Integrity, Operations, Engineering, and Safety teams receive training and support to ensure that risks are proactively assessed, understood, communicated and mitigated.

Process Safety Management

At Canadian Natural, the integrity of our process equipment is an essential part of ensuring safety Company-wide.

To do this, our Process Safety Management (PSM) system provides the framework to prevent and control serious incidents, such as spills or leaks that involve hazardous materials, or other unintentional releases.



Focus on Continuous Improvement

In 2018, we had a 50% reduction in hydrocarbon releases in our offshore operations, compared to 2017 (eight in 2018 vs 16 in 2017). This improvement is the result of optimizing root cause analysis of incidents, identifying trends, and implementing focused plans to manage or remove those root causes. This approach has been used successfully both internally and with our third-party FPSO operators.

“Management has encouraged me to be bold and not be hesitant to raise any concerns I may have that could negatively impact the outcome of a process safety related incident/accident.”

Reid McPhail, Technical Safety Engineering Advisor and recipient of the 2018 PSM award from the Canadian Society for Chemical Engineering. This award honours recipients who make outstanding contributions to this field, and the prevention of major industrial incidents in Canada.

PSM Industry Recognition

One of the key teams that contributes to keeping employees safe and assets protected is Technical Safety Engineering (TSE). This team focuses on reducing the likelihood and consequences of process related incidents and improve performance through the understanding of PSM.

Pipeline Integrity

The foundation of Canadian Natural's comprehensive pipeline integrity management system is a proactive risk-based approach to prevent pipeline failures. We assess each pipeline based on the likelihood of failure and the potential consequences of that failure. This management system includes well-established risk-assessment tools, mitigation and monitoring activities, and spill and emergency response plans.

Program audits, incident investigations, and a formalized continuous improvement methodology are fundamental to our pipeline integrity management system to ensure that we remain focused on enhancing our programs.

More information is available in the [Pipeline Integrity](#) section of our corporate website.

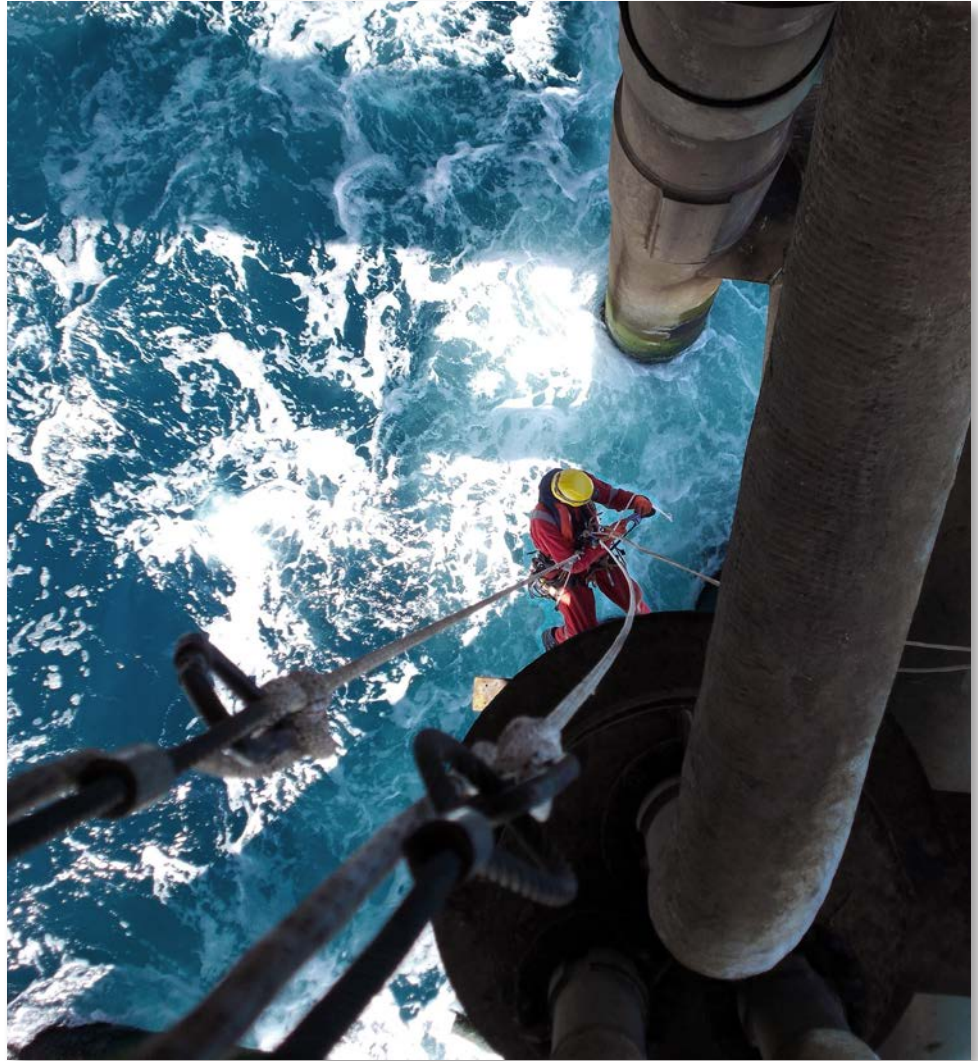
Proactive Pipeline Integrity Management

Throughout 2018, Asset Integrity and Operations teams conducted detailed reviews of all high risk pipelines, where consequence of failure could have a significant impact on the environment. The process verified our pipelines to be safe and reliable, and highlighted opportunities for proactive improvements, such as enhancing monitoring and mitigation programs, performing additional inspections to verify pipeline condition, or upgrading leak detection systems.

Near Grande Prairie, Alberta, for example, our personnel used light detection and ranging (LiDAR) technology near one of our pipelines to help see through vegetation, and identified a location with possible ground movement. Following an inspection, a pipeline defect was detected in its early stages, which allowed for immediate repair and prevention of pipeline failure with its potential environmental impacts.

In 2018, the Leak Detection group also started testing fiber optic technology at our facilities, for the purpose of detecting small leak rates.

Based on the positive results achieved, we are installing the first commercial fiber optic sensing for leak detection in the Swan Hills, Alberta area.



An employee performs an inspection at the Tiffany platform in the North Sea.

Pipeline Water Crossing Management

Canadian Natural employs a comprehensive GeoHazard Management System to monitor locations where streams, rivers or slope movement could impact pipeline integrity.

All potential hazards are housed in a database and a risk-based prioritization method is used to plan the following year's inspections. All planned site inspections were completed in 2018. We also introduced enhancements to our prioritization method to include more detailed analysis.

Pressure Equipment Integrity

It is important that our pressure equipment is maintained and operated in a safe manner to prevent incidents and safeguard people and the environment. Canadian Natural's Pressure Equipment Integrity Management Systems (PEIMS) defines how we manage each piece of regulated pressure equipment during its entire lifecycle. Our PEIMS are registered and fully compliant with the jurisdictions in which we operate. They include engineering controls, as well as inspection, monitoring, repair and alteration requirements, to ensure safe, compliant and reliable operations.

Structural Integrity

Structural Integrity programs are in place to proactively prevent significant incidents at the operational structures that support our production facilities. We do this through careful design, safe operation and proper maintenance within the facilities' lifecycles.

In 2018, we developed a model to better identify risks and enhance our Jacket Integrity Management System at CNRI. This model has helped us improve mitigation programs and manage weather uncertainty to advance subsea technology for underwater inspections and repairs.

Corrosion Under Insulation Inspections

Variable temperatures and weather conditions in our operating areas, from harsh winters in Canada to intense waves in our offshore facilities, can present significant challenges to infrastructure and operating conditions. Our robust Asset Integrity Management System ensures assets are fit for purpose over their lifetime.

To manage the threat of potential incidents due to corrosion, the Corrosion Under Insulation (CUI) inspections program includes risk-



Wellheads at Kirby North thermal in situ operations.

based inspection assessments and focuses on priority areas. In 2018, we implemented a new CUI technique at the Tiffany platform, which is allowing for more time-efficient

inspections of insulated pipework. With a target to reduce inspection time by 25% while improving efficiency, we will expand use of this technique to other operations.

Strengthening reliability with advanced technologies

One of the essential elements of an effective Asset Integrity Management System is the ability to monitor the condition of equipment using high quality Non-Destructive Testing (NDT) techniques. At our Oil Sands Mining and Upgrading operations, we have implemented technologies to improve the efficiency of our inspection processes and the accuracy of the data they acquire.

Several years ago, we started replacing manual readings with fixed ultrasonic sensors that use radio and cell communications to monitor the condition of our hydro-transport and tailings pipelines. This allowed us to

increase the frequency of readings while contributing to the prevention of failures.

More recently, we started using Phased Array Ultrasonic Testing (PAUT) technology to more rapidly acquire large volumes of highly accurate data. This data can be turned into three-dimensional representations of the pipes for a better understanding of the condition of our liners.

As we work to implement PAUT across the Athabasca Oil Sands Project (AOSP) sites, we'll continue to provide training to staff and look for new applications where it can be used.

Priorities in 2018	Progress in 2018	Priorities in 2019
Process Safety Management (PSM)		
<ul style="list-style-type: none"> Continue proactive risk-based inspection (RBI) plans for risk assessment and management. Implement process to maintain accuracy of RBI information and evaluate operational changes that could impact risk classification. Focus on reduction in hydrocarbon releases by addressing root causes and reinforcing FPSO operators' integrity programs. 	<ul style="list-style-type: none"> Completed RBI plans and piloted a process to continuously update the risk based on current conditions. Initiated project to integrate Management of Change process across all Canadian operations. 50% reduction in hydrocarbon releases at CNRI from 2017. Continued alignment work between Canadian Natural's and FPSOs' asset integrity management systems, including use of RBIs to identify and manage hazards and prevent failures. 	<ul style="list-style-type: none"> Continue to implement processes that maintain accuracy of RBI information and evaluates operational changes that could impact risk classification. Continue to peer review and audit our RBI systems. Continue focus on hydrocarbon release reduction program and reinforcing FPSO operators' integrity programs.
Pipeline Integrity		
<ul style="list-style-type: none"> Continued focus on proactive evaluations of high risk pipelines to identify opportunities for continuous improvement. 	<ul style="list-style-type: none"> Completed detailed reviews of all high risk pipelines. Proactively evaluated pipeline leak detection systems on 2,276 pipeline systems that transport liquids. Completed all planned site inspections in GeoHazard Program and implemented improvement opportunities. Developed new insulation system and leveraged technology to identify and repair pipeline cracks. Completed North Sea pipeline inspection campaign, providing integrity assurance to support life of field production expectations. 	<ul style="list-style-type: none"> Implement technical improvements identified in 2018 to ensure proactive management of high risk pipelines, including audits of leak detection systems.
Facility Integrity		
<ul style="list-style-type: none"> Alignment of Pressure Equipment Integrity Management Systems (PEIMS) across all Canadian operations. Prepare for 2018 Horizon Alberta Boiler Safety Association (ABSA) audit. Define scope for all 2018 pit stops in Oil Sands Mining and Upgrading. Conduct reviews of critical pressure equipment across our operations, and the implementation of improved Corrosion Under Insulation (CUI) inspection for offshore platforms. 	<ul style="list-style-type: none"> Completed critical pressure equipment inspections using more stringent process in our NA E&P operations, for increased assurance of ongoing safety and reliability. Completed gap analysis and began alignment of procedures to integrate PEIMS at Oil Sands Mining and Upgrading operations. Renewed ABSA approval to self-manage the Horizon PEIMS program, and completed all action items from the AOSP 2017 ABSA audit. Successfully completed pit stops at AOSP mines and turnaround at Horizon. Conducted RBIs on critical pressure systems for UK assets in order to align risk assessments and inspection programs. Implemented new CUI screening technique at Tiffany platform, reducing our stripping and inspection times. 	<ul style="list-style-type: none"> Complete pressure equipment regulatory audits in Alberta and Saskatchewan, to further enhance the effectiveness of Canadian Natural's PEIMS. Integrate PEIMS program across our Oil Sands Mining and Upgrading operations. Execute Oil Sands Mining and Upgrading pit stops/turnarounds. Continue reviews of critical pressure equipment across our operations, and the CUI inspections for offshore platforms.



Albian Oil Sands mining operations.

Environmental stewardship is embedded in all phases of our activities.

Canada's crude oil and natural gas resources are safely and responsibly developed with world-leading standards under comprehensive regulatory oversight. Our Environmental Management System provides the structure to identify and assess environmental risks, and implement appropriate mitigation strategies to minimize impacts in all phases of our projects, from planning through to design, operation and final reclamation. We focus on continuous performance improvement through comprehensive practices, investments in technology and innovation, and collaborations with different groups.

Leadership and Performance in GHG Emissions Reductions

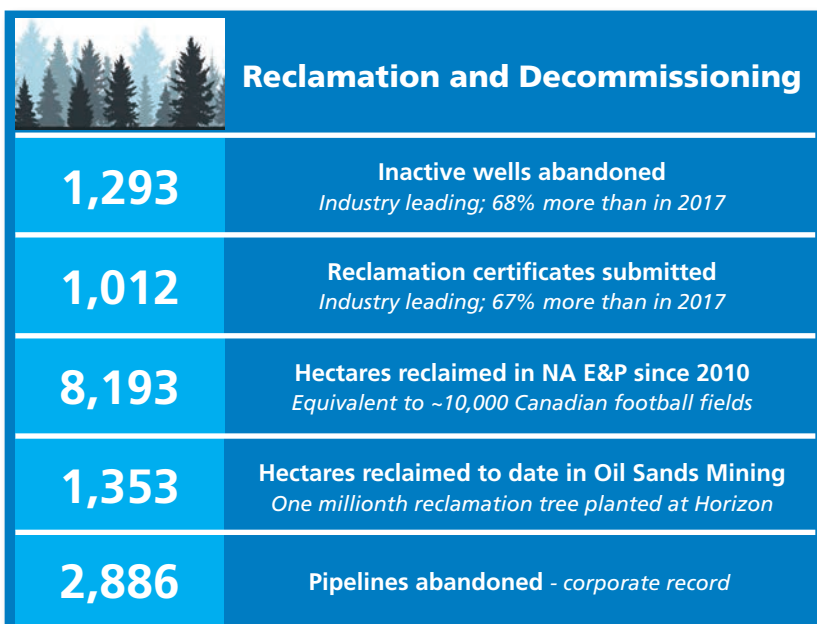
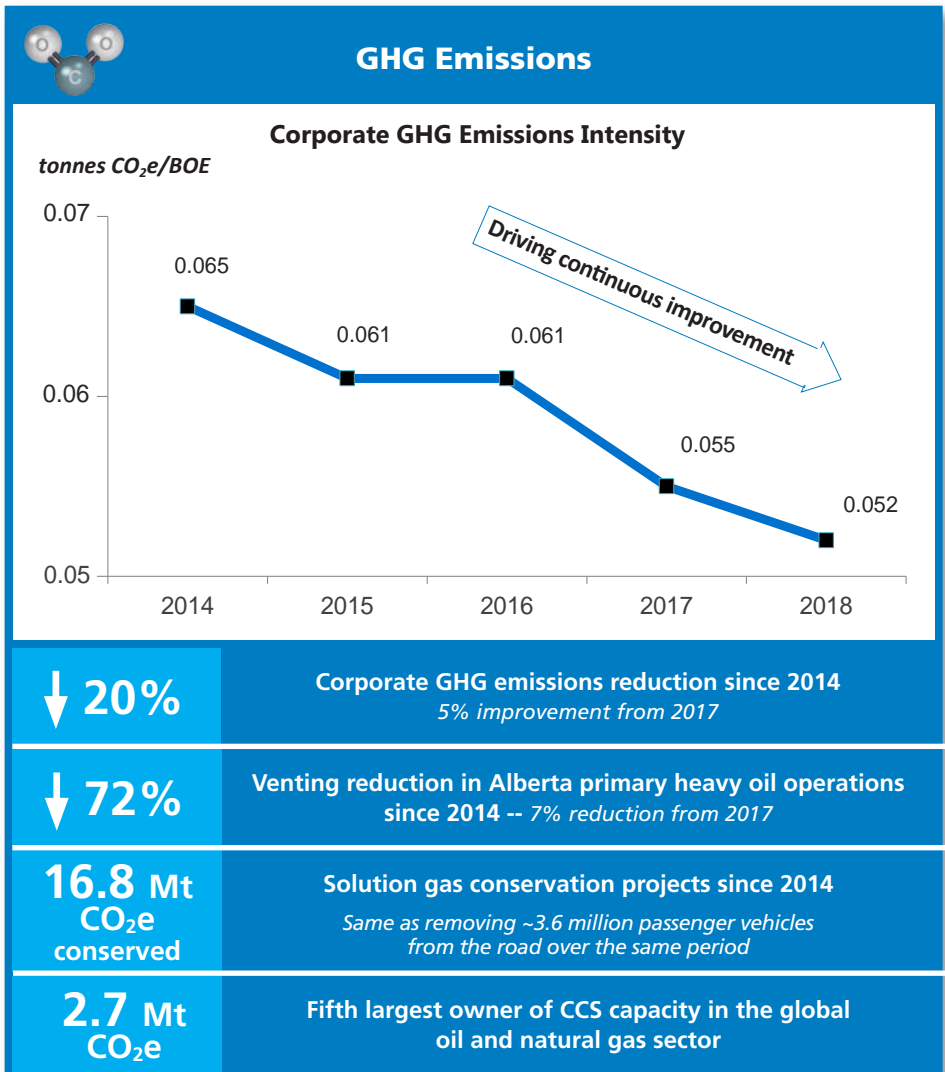
Canadian Natural recognizes the need to reduce GHG emissions. By leveraging technology and Canadian ingenuity, we have delivered significant performance improvements to date.

Our **integrated GHG emissions management strategy** focuses on incorporating emissions reduction in project planning and operations; leveraging technology; investing in R&D and supporting collaboration; continuous improvement to drive long-term reductions; leading in carbon capture and sequestration and storage (CCS) projects; engaging in climate policy and regulation, including trading capacity and emissions offsets; and considering and developing new business opportunities and trends.

Long-term Aspiration of Net Zero Emissions

Canadian Natural is strongly committed to reducing GHG emissions with a long-term aspirational target of net zero emissions in our oil sands operations. We support Canada's leadership in the Paris Agreement as a pathway to reduce GHG emissions and drive innovation.

In many cases, the GHG emissions intensity of our operations is well below the average intensity for all global crude oils. We focus on



continuous improvement in emissions reduction through further technology advancement, including the following:


- **Top tier leadership in CCS projects**
 - Our projects have the capacity to capture 2.7 million tonnes of carbon dioxide equivalent (CO₂e), same as taking ~576,000 cars off the road per year. Our CCS projects include CO₂ capture and sequestration facilities at Horizon, 70% interest in the Quest CCS facilities at Scotford, CO₂ capture at the Hays gas plant for enhanced oil recovery, and 50% interest in the North West Redwater refinery (targeted to be online in 2019).

- **Methane emissions reductions**
 - Solution gas conservation and pneumatic controller retrofit projects are part of our methane reduction plan. With 4,000 controller retrofits in 2018 and 2019, we target reductions of up to 400,000 tonnes of CO₂ equivalent/year.

- **Natural gas production as a lower emissions intensity energy source** – Canadian Natural's natural gas assets are an important part of our balanced portfolio. Natural gas is a reliable and affordable energy source for power generation, with less than half the carbon footprint of coal. Canada can help reduce net global emissions by

supplying Liquefied Natural Gas (LNG) to global markets. These emissions reductions should receive recognition domestically and internationally as contributing towards Canada's climate change commitments.

- **Technology development and execution** – We are evaluating and investing in a range of technologies at different stages of readiness, from discovery to deployment. Collectively, our robust portfolio of current and future technology projects will drive continuous improvement towards our aspiration of net zero emissions in the oil sands.

 Water Use	
↓ 64%	Fresh water use intensity reduction at Kirby South since 2014
↓ 77%	Fresh water use intensity reduction at PAW since 2008
75%	Of water used at PAW came from recycled produced water in 2018
↓ 30%	Water use intensity reduction in Oil Sands Mining since 2017

Read about our innovative projects to reduce emissions in our [Technology and Innovation Case Studies](#).

Resiliency in a Lower Carbon Emissions Future

Canadian Natural reviews external climate change scenario analyses from energy firms/agencies. These scenarios incorporate a wide range of assumptions on markets, policy, technology, efficiency and other key variables. We developed two internal scenarios to assess business risk and test resiliency: a **Reference Scenario** based on current policies, and a stricter **Constrained Scenario** of "well below 2°C".

Across the range of ambitious scenarios, it's expected that crude oil and natural gas demand will increase, and Canada is well positioned to be a global supplier of a premium, low carbon emissions intensity product for decades to come. As result of Canadian Natural's GHG management strategy, our reserves face limited risk even under more ambitious climate change scenarios.

Climate Risk Governance and Reporting

Canadian Natural's Board of Directors is responsible for overseeing and ensuring that the Management Committee has appropriate and effective measures to manage climate-related risk. Our multi-disciplinary risk management process includes climate change risks



Horizon CO₂ recovery complex.



Reclaimed wellsite near Pierson, Manitoba, where sunflowers are being grown.

and opportunities, current and potential policies and regulations. Read more about our governance and oversight of climate risk in the [Sustainability Governance and Stewardship](#) section of our website.

Canadian Natural continually assesses reporting levels to provide value to investors and stakeholders, and we align with recommendations from the Financial Stability Board (FSB) Task Force on Climate-Related Financial Disclosures (TCFD).

Land Management

Canadian Natural develops every project with a vision and plan to manage our impact on the land, to return all our worksites to a healthy ecosystem upon completion of our activities. With record high numbers of projects underway, Canadian Natural is an industry leader for abandonment and facility decommissioning in Canada and offshore UK.

“Restoring and preserving the land for future generations should be a priority for all our stakeholder partnerships. Canadian Natural continues to show their commitment on these projects year after year.”

Jim Boucher, Chairman of the Board, Fort McKay Group of Companies

In our conventional and thermal operations, we continue to optimize liability reduction by geographically grouping well and pipeline abandonments, reclamation and remediation activities, to take sites out of service in a safe and environmentally sound manner.

At our oil sands mining operations, progressive reclamation activities are advancing, working with communities and industry to monitor and improve practices. For example, over the years

we have worked with Fort McKay First Nation to improve reclamation and tailings management, to learn from and include traditional knowledge in our projects.

In our International operations, we developed new sub-sea technology that allowed us to effectively cut and remove large steel sections during our platform decommissioning projects.

CNRI is also a leader in offshore platform decommissioning and in 2018 it earned the Oil & Gas UK Award for *Excellence in Decommissioning*.

Water Use

Our water management strategies focus on reducing fresh water use and protecting water sources. We apply technologies that maximize produced water recycling and use saline water for steam generation to reduce fresh water use. Steam generation using recycled water also lowers GHG emissions and fuel consumption due to the higher

Priorities in 2018	Progress in 2018	Priorities in 2019
Environmental Management System (EMS)		
<ul style="list-style-type: none"> • Complete implementation of Oil Sands Mining and Upgrading EMS and conduct internal EMS audit. • Implement the ISO 14001:2015 Environmental Standard in our UK operations. • Analyze spills and other incidents to determine reduction measures. 	<ul style="list-style-type: none"> • Implemented the Oil Sands Mining and Upgrading EMS, assessed all environmental aspects to identify risks and implemented mitigation strategies. • Conducted internal audit of the Oil Sands Mining and Upgrading EMS to assess the status of integration and identify potential improvement areas. • Obtained ISO14001:2015 certification for our UK EMS. • Optimized spill tracking and analysis, using data to enhance prevention programs. Most spills were contained on lease causing no environmental impacts. 	<ul style="list-style-type: none"> • Continue alignment of procedures, training and increased awareness, to fully integrate the Oil Sands Mining and Upgrading EMS. • Complete corrective actions in preparation for ISO14001:2015 surveillance assessment. • Continue work with internal teams and contractors to reduce spills.
Regulatory		
<ul style="list-style-type: none"> • Continue to improve incident management system and maintain environmental compliance. 	<ul style="list-style-type: none"> • Maintained compliance performance above industry average in Alberta, and satisfactory inspection rate in B.C. • Obtained approvals for Horizon South development. 	<ul style="list-style-type: none"> • Continue to focus on incident reduction and maintain environmental compliance. • Complete action plan to improve diluent performance.
Reducing Emissions		
<ul style="list-style-type: none"> • Continue supporting Company-wide GHG reduction projects. • Improve coordination on air emissions reporting across operating areas to ensure accuracy and consistency. 	<ul style="list-style-type: none"> • 20% reduction in corporate GHG emissions intensity compared to 2014. • 18% reduction in GHG emissions intensity at our Oil Sands Mining and Upgrading operations from 2017. • Reorganized reporting processes and implemented a quality program to increase accuracy of information. • International operations joined a 'Waste to Energy' program that processes waste to generate electricity. 	<ul style="list-style-type: none"> • Continue advancing technologies and projects to reduce GHG emissions Company-wide. • Continue implementing solution gas conservation and pneumatic controllers retrofit projects to reduce methane emissions.
Water Use		
<ul style="list-style-type: none"> • Maintain high recycle rates across our thermal and Oil Sands Mining and Upgrading operations. • Outline long-term research program to address regulatory requirements for end pit lakes and continue to reduce fluid fine tailings through process improvements. 	<ul style="list-style-type: none"> • High produced recycled rates at thermal in situ operations. • Fresh water use near historic lows at Kirby South and PAW operations. • 80%+ produced water recycle rate at Oil Sands Mining and Upgrading. • 4% reduction in Athabasca River fresh water withdrawals from 2017. • Advanced research and development, and industry collaborations to enhance tailings management and post-mining solutions. 	<ul style="list-style-type: none"> • Maintain high water recycle rates across our major thermal and Oil Sands Mining and Upgrading operations. • Continue research and collaboration work to reduce fluid tailings and advance post-mining solutions.

temperature of recycled water. To protect water sources, we follow industry leading operating practices and comply with regulations for water use, fresh water withdrawals and disposal wells operation. Highlights of our water management activities include:

- **High recycle rates in thermal in situ operations** – Our average non-saline water use is near historic lows at Kirby South and Primrose/Wolf Lake (PAW).
- **Tailings reduction technologies**

as part of water management – CO₂ sequestration and tailings technologies at Horizon help maintain 80% water recycle rate and limit fresh water withdrawals from the Athabasca River to one-third of our annual licensed allocation.

Biodiversity and Wildlife

We assess our impact and incorporate long-term biodiversity and reclamation planning into our programs to maintain the regional characteristics of each

ecosystem, and reduce impacts on wildlife. Regular wildlife, biodiversity, aquatic and reclamation monitoring and research provide us with up-to-date data to improve mitigation and deterrent programs. Highlights of our activities include:

- **Caribou management** – Continued work with industry and governments on habitat restoration for boreal caribou conservation. We are also a funding partner in a First Nations-led maternal penning program in British

Priorities in 2018	Progress in 2018	Priorities in 2019
Abandonment and Reclamation <ul style="list-style-type: none"> • Advance area-based abandonment and progressive reclamation programs to reduce our footprint. • Complete abandonment activities at Ninian North to achieve hydrocarbon free status. • Complete Murchison decommissioning with abandonment of remote sub-sea well. 	<ul style="list-style-type: none"> • Record high activity level — submitted 1,012 reclamation certificates, and abandoned 1,293 wells and 2,886 pipelines. • Worked with government and regulators to implement effective and efficient liability management and area-based programs. • Doubled number of hectares reclaimed across operations since 2014. • First in situ reclamation certificate received. • Completed conductor recovery and topside cleaning at Ninian North with no environmental incidents. • Murchison abandonment activities were postponed due to weather conditions. 	<ul style="list-style-type: none"> • Continue advancing efficient area-based abandonment and reclamation programs. • Complete Murchison final decommissioning steps with the abandonment of sub-sea well. • Advance Ninian North platform decommissioning work and remove the topsides.
Biodiversity and Wildlife <ul style="list-style-type: none"> • Continue integration of reclamation, wildlife and bird deterrent management for Oil Sands Mining and Upgrading operations. 	<ul style="list-style-type: none"> • Completed integration of reclamation programs, and began alignment of wildlife procedures, practices and communications for Oil Sands Mining and Upgrading. • Ongoing optimization of bird deterrent systems and wildlife management programs. 	<ul style="list-style-type: none"> • Ongoing assessment of Oil Sands Mining and Upgrading wetlands, wildlife, fisheries and reclamation programs to minimize cumulative effects on biodiversity.
Research and Development <ul style="list-style-type: none"> • Continue biodiversity, tailings and reclamation research at Oil Sands Mining and Upgrading operations. 	<ul style="list-style-type: none"> • Completed research of wildlife use of reclaimed sites, and continued tailings and reclamation research (<i>see pages 7-9</i>). • Collaborated in research and monitoring program to improve measurement and quantification of fugitive emissions from oil sands mining operations, and help develop industry standard for year-round oil sands emissions profiles. 	<ul style="list-style-type: none"> • Complete Horizon fugitive emissions monitoring campaigns with Emissions Reduction Alberta. • Continue bird migration, reclamation and tailings planning and research.
Collaborative Work <ul style="list-style-type: none"> • Continue collaborating with COSIA to accelerate the pace of environmental performance improvement. • Work with government, regulators and peers to develop and implement policies and guidelines to enhance industry's environmental performance. 	<ul style="list-style-type: none"> • Led 13 partnered and 31 single participant projects, and participated in another 18 projects at COSIA. Research and technologies shared to date: \$46 million GHG, \$91 million tailings, \$72 million water and \$22 million reclamation. • Ongoing participation in policy and regulatory development for GHG and methane emissions reductions, tailings and caribou management. 	<ul style="list-style-type: none"> • Continue collaborating with COSIA and PTAC to accelerate the pace of environmental performance improvement. • Work with government, regulators and peers to develop and implement policies and guidelines to enhance industry's environmental performance.

Columbia to reduce predation rates and increase the caribou population.

- **Bird deterrent system** – We increased bird deterrent and radar coverage at Horizon, and trialed an Unmanned Aerial Vehicle (UAV) at the AOSP as a bird monitoring tool.
- **Canadian toad research** – As a species of conservation concern commonly found in the oil sands region, the toad's movement patterns are being measured to gain a better understanding of the species and inform future management actions.



One millionth reclamation tree planted at Horizon site with Elders from Fort McKay First Nation and Canadian Natural's senior management.

Canadian Natural works with local communities and stakeholders to build long-term relationships based on shared value and mutual respect.

As members of the community, Canadian Natural's teams continue to focus on improving the way we do business. We work with over 24,000 landowners, 160 municipalities and 83 Indigenous communities in Western Canada to identify opportunities for community investment, education and training, employment, and business development.

Engaging Stakeholders

Our teams work hard to build and maintain positive relationships and open communications with stakeholders. Our field-based stakeholder and community relations advisors and area landmen connect regularly with stakeholders to provide updates, address concerns and integrate community needs into our projects.

2018 Stakeholder Engagement Highlights

- Engaged with communities regarding more than 200 projects and development plans.
- Met regularly with local governments, rural counties and municipalities, landowners, regulators, industry and other groups, to identify and work together on community concerns, including activity levels, business opportunities, emissions management, market access, public safety, road use and compliance.
- Participated in a variety of synergy and industry groups, including Oil Sands Community Alliance (OSCA), Vulcan Areas Public and Petroleum Association (VAPPA), West Central Stakeholders (WCS), Calumet Synergy Association, Sundre Petroleum Operators Group, Wapiti Area Synergy Project (WASP), Lakeland Industry and Community Association (LICA), and Beaver River Watershed Alliance.

 Supporting Communities in 2018	
\$15.3 million	Total community investment
\$500+ million	Contracts with Indigenous businesses
777	Community activities that we supported/participated in
256	Students hired for summer/cooperative work terms
90+	Students supported through scholarship programs

Working With Indigenous Communities

We meet regularly with Indigenous Elders and community members to discuss issues that matter. 2018 highlights include:

- Tours of the AOSP with Elders and Advisory Committee members from Mikisew Cree First Nation, focusing on reclamation, and a site tour of Horizon to discuss tailings management and project updates.
- Meetings with Athabasca Chipewyan First Nation Community Advisory Committee, focusing on tailings work and operations updates.
- Horizon's Annual Tailings forum was held in Fort McMurray, Alberta with seven local Indigenous communities.
- Participated in the Annual B.C. Elders Gathering, and the Treaty 8 Historic Gathering where all Treaty 8 First Nations gathered for the first time since the signing of the treaty.
- Participated in and supported the Indigenous Award Banquet at the Lac La Biche Native Friendship Center, the Lesser Slave Lake Indian Regional

Council Eagle Awards, and the Fort Chipewyan Métis Association Métis Day, as well as many other events, including pow wows, treaty days and community events.

Investing in Communities

As part of our commitment to responsible operations, we work together with communities to prioritize projects that have a direct impact on their quality of life, and strive to help promote long-term local economic growth and prosperity.

Significant Community Investments

- \$3.2 million donated to STARS to date, as part of long-term commitments to support lifesaving care in the communities. In addition, we continue to support HALO, the only dedicated medical rescue helicopter for southern Alberta and southwest Saskatchewan.
- \$2 million over five years to the Calgary-based RESOLVE campaign to help find long-term solutions to homelessness in a collaborative way.

Working Together with Communities

- \$750,000 over five years towards a new Grande Prairie regional hospital and cancer centre, contributing to medical advancements, new programs and educational support.
- \$625,000 over five years to the Northern Lights Health Foundation to support renovations of the Regional Health Centre in Fort McMurray and the Community Clinic in Conklin. Also funded renovations of hospital in Abidjan, Côte d'Ivoire (CDI).
- Our partnership with Calgary's Fresh Start Recovery Centre has helped 81 Indigenous participants complete the recovery program to date.

Employees Making a Difference

Canadian Natural employees, supported by our management team, continued to show leadership and generosity, helping organizations and community initiatives in the areas where they live and work.

Every year, our staff provides donations and volunteer support to a wide range of organizations across many communities. These efforts are coordinated through Field Matching and Charitable Donations Committees (CDC). In 2018, these initiatives provided direct support to 40 organizations identified by our staff, including Bonnyville Health Foundation, Dr. Margaret Savage Crisis

Centre, MS Society Lloydminster, Edam Early Learning Center, Stollery Children's Hospital in western Canada, and the British Heart Foundation and Forget Me Not Club Dementia Support in the UK.

In Abidjan, CDI, we created a new CDC to coordinate employee initiatives, and assisted the local maternity hospital, a nursery, and the Red Cross' efforts to help employees and families displaced by flooding.

Supporting Education and Training


Canadian Natural supports programs designed to train and employ local

people in the oil and natural gas industry. We continued the Canadian Natural 'Building Futures Scholarship' program, as well as our scholarship commitments to Lakeland College, the Robert Gordon University and University of Aberdeen.

We also continued to support stay-in-school programs for Treaty 8 First Nations in northeast British Columbia.

2018 Highlights

- \$460,000 over five years to the APPLE Schools nutrition program, improving the lives of more than 19,000 students annually across

 Employees Making a Difference in 2018	
\$2.3 million	Donated to the United Way through employee giving and corporate matching
\$360 thousand	Raised through Field Matching and Charitable Donations Committees <i>(led by employees)</i>
1,450+	Employees who volunteered in support of community organizations
55	Employees who volunteered their time for local fire departments

CNRI scholarships support academic dreams of Abidjan students

In 2018, Canadian Natural Resources International (CNRI) launched a scholarship program in CDI providing financial support to two students for the duration of their university courses, with additional mentorship and placement opportunities in our Abidjan office. Both students have been assigned staff mentors to help support them through their studies.

To celebrate the 100 million barrels of production milestone at Baobab field, CNRI, along with its joint venture partners, donated materials, books, furniture, and Christmas gifts to two public schools west of Abidjan, attended by more than 600 children.



Brice Kotchi, CDI Operations Superintendent, and Kambire Henry Joelle, a CDI scholarship recipient who recently completed her first year of Petroleum Engineering.

northeast Alberta in the last 10 years, as well as the program expansion into northeast British Columbia.

- Sponsored Mount Royal University's Summer Science Camp for Aboriginal Youth and Kids' Camps, as well as a fieldhouse and gymnasium for Keyano College.

Supporting Trades and Employment Opportunities

Apprenticeship training is an important way to help prepare individuals for a career in the trades.

- Continued support to the Northeast Alberta Apprenticeship Initiative, in partnership with the Tribal Chiefs Employment and Training Services Association 'Tiny Homes' project, providing opportunities for trades while meeting local housing needs.

"Working together with our neighbors is crucial for our Company and our sector, and we value the strong support of the industry by many local communities across our operations."

Warren Hobart, Stakeholder Relations Advisor at Canadian Natural for more than eight years.



Mikisew Cree First Nation Elders and members with Canadian Natural staff during a tour of the AOSP sites.

- Offered internships to 47 high school students (Indigenous and non-Indigenous) across our Alberta operations between 2014 and 2018 through our partnership with Careers: the Next Generation.
- Graduated 18 apprentices from our in-house apprenticeship programs (14 heavy equipment technicians and four electricians) to date at Horizon and the AOSP. This program trains employees to fill positions on our maintenance teams.
- Supported Lakeland Catholic School

District's heavy equipment training program, and the Horse Lake First Nations Aboriginal Skills and Employment Training.

Promoting Local Business Development

Canadian Natural promotes local and regional business opportunities through the procurement of goods and services for our operations. Hiring locally is mutually beneficial for the communities and our Company, developing partnerships and building local capacity.

Building capacity and creating jobs with Indigenous partner

Canadian Natural teams work with local businesses in the areas where we operate. For more than 10 years, one of our partners in the oil sands region who shares our values of safety, developing people and supporting communities has been the Mikisew Group of Companies. Mikisew Group was formed as a way to create employment for the Mikisew Cree First Nation, starting with six employees. Since then, they've grown steadily to 350 full-time employees (with a peak winter workforce of 500 in their wholly owned companies), maintaining 40% Indigenous content from across Western Canada.

"Our partnerships with industry provided means to create additional economic development and employment opportunities for the First Nation," says Edward Courtoreille, CEO.

Mikisew Landing Limited Partnership, one of the group's majority-owned joint ventures, has been providing aerodrome services at Horizon since 2016. In early 2018, the contract scope was expanded to serve airstrips at the AOSP and Primrose. In addition, the Mikisew Group with their partner First Canada, also started providing ground transportation services across our Oil Sands Mining operations in late 2018.

Ed continues, "In working with Canadian Natural, they work hard to understand the impact on the First Nation, from building capacity to providing employment opportunities to strengthening the community — which we think is a really good practice."

Priorities in 2018	Progress in 2018	Priorities in 2019
Engaging Stakeholders		
<ul style="list-style-type: none"> Continue to strengthen relationships with local stakeholders through ongoing engagement and communications. Implement district plans together with enhanced tracking and reporting on community activities. Work with project teams to meet consultation requirements. Continue work with stakeholders to support reasonable and effective implementation of policies and regulations. 	<ul style="list-style-type: none"> Engaged regularly with stakeholders across our operating areas to identify opportunities for mutual benefit. Established and followed action plans, and tracked activities, for all operating areas to better support the communities. Launched a new activity and budget tracker to better highlight corporate and employee support in the communities. Worked with governments, municipalities, industry, local businesses and suppliers, to continue to seek support and strong policy for market access and industry competitiveness. 	<ul style="list-style-type: none"> Continue to strengthen relationships with local stakeholders through ongoing engagement. Implement community action plans, and continue to enhance tracking and reporting of activities in the communities. Support project teams to meet consultation requirements. Continue work with stakeholders to support policy and regulatory competitiveness.
Community Investment		
<ul style="list-style-type: none"> Invest in priority funding areas: education, health and wellness, sports and recreation, social and cultural programs. 	<ul style="list-style-type: none"> \$15.3 million in community investment, including corporate sponsorships and donations, employee giving, corporate matching, in-kind donations, and funding for community-based development projects. Participated in or supported 777 community activities, including Indigenous celebrations and gatherings — a 55% increase in activities compared to 2017. Strong employee fundraising and volunteering across operations (Adopt-a-Family/Senior, Christmas hampers, United Way, Donation Committees, etc.) Supported a significant number of food banks and Fire Departments across our operations. 	<ul style="list-style-type: none"> Continue to invest in priority funding areas: health and wellness, education and training, sports and recreation, social and cultural programs, and traditional practices.
Education and Training		
<ul style="list-style-type: none"> Support education and training initiatives aligned with future employment opportunities in the oil and natural gas industry. 	<ul style="list-style-type: none"> Focused on creating long-term opportunities for Canada's Indigenous peoples. Continued long-term support to trades and training programs that support employment. 90 scholarships supported through our Building Futures Scholarship and other scholarship programs in Canada, the UK and CDI. 	<ul style="list-style-type: none"> Continue to support education and training initiatives aligned with future employment opportunities in the oil and natural gas industry.
Business Development		
<ul style="list-style-type: none"> Enhance the opportunities for economic participation by Indigenous communities in our operations, building capacity among local Indigenous-owned companies and individual entrepreneurs. 	<ul style="list-style-type: none"> Over \$500 million in contracts awarded to Indigenous businesses — a 35% increase from 2017. Continued to enhance business development tracking and reporting by operating area, to increase local sourcing. 	<ul style="list-style-type: none"> Work with operations and Indigenous communities to enhance long-term opportunities for local businesses and contractors. Work with Indigenous business advisory committees to expand role of Indigenous groups in joint ventures.

We work closely with Indigenous businesses near our operations in Western Canada to assist in the pre-qualification process and identify opportunities for economic participation in oil and natural gas developments. To enhance local business development, we also participate in Indigenous

business advisory groups, such as the Northeastern Alberta Aboriginal Business Association (NAABA), the Region One Aboriginal Business Association (ROABA) and the Grande Prairie Aboriginal Circle of Services (GPACOS), and work with local chambers of commerce.

During 2018, we further integrated contractors between our operations. For example, we worked with Rimfire Solutions, a Métis Nation of Alberta company, to expand their vending machine and coffee services contract from Horizon to the AOSP sites.

North American Exploration and Production operations include the Peace River Complex, and Oil Sands Mining and Upgrading include the Athabasca Oil Sands Project (AOSP) mines (bitumen production) from June 1, 2017 onward.

EMPLOYMENT

Distribution of Canadian Natural Employees

Number of employees	2015	2016	2017	2018
North America Exploration and Production	4,513	4,210	4,496	4,395
Oil Sands Mining and Upgrading	2,651	2,667	5,097	4,948
International Exploration and Production	404	393	380	366
TOTAL	7,568	7,270	9,973	9,709

Exposure hours (millions) — based on a 12-hour shift	2015	2016	2017	2018
North America Exploration and Production	40.70	34.83	42.18	44.71
Oil Sands Mining and Upgrading	29.44	28.98	34.05	37.94
International Exploration and Production	5.78	4.29	3.90	4.98
TOTAL	75.92	68.10	80.13	87.63

SAFETY

Total Recordable Injury Frequency (TRIF) per 200,000 hours worked (employees and contractors)	2015	2016	2017	2018
North America Exploration and Production	0.44	0.44	0.38	0.34
Oil Sands Mining and Upgrading	0.57	0.49	0.38	0.31
International Exploration and Production	1.45	1.03 ¹	1.33	0.72
Corporate	0.57	0.50	0.43	0.35

1) Restated.

Lost Time Incident (LTI) ¹ frequency per 200,000 exposure hours	2015	2016	2017	2018
Corporate	0.05	0.06	0.06	0.06

1) LTI is an injury incident where a worker is unable to return to work the next scheduled day.

Fatalities (employees and contractors)	2015	2016	2017	2018
North America Exploration and Production	0	0	0	0
Oil Sands Mining and Upgrading	0	0	0	0
International Exploration and Production	0	0	0	0

Regulatory inspections compliance (% satisfactory)	2015	2016	2017	2018
Alberta	83.6	84.7	84.2	84.5
British Columbia	88.2	89.7	86.0	73.0

AIR and GHG EMISSIONS

The Company's GHG emission estimates are prepared internally using reported production volumes and generic emission factors. Direct GHG emissions reporting is based on operational control, excluding non-operated emissions. Facilities subject to third party verification for direct and indirect emissions are AOSP, Horizon, Primrose and Wolf Lake (PAW), Peace River Complex, Kirby South, Hays, Wapiti, Brintnell, all British Columbia and UK operations.

Emissions intensity

Direct GHG emissions intensity (tonnes CO ₂ e/BOE) ¹	2015	2016	2017	2018
North America Exploration and Production	0.056	0.057	0.058	0.059
Oil Sands Mining and Upgrading ²	0.080	0.079	0.045	0.037
International Exploration and Production	0.082	0.067	0.067	0.059
Corporate	0.061	0.061	0.055	0.052

1) Includes total direct emissions from combustion, flaring, formation CO₂, and other venting and fugitive leaks from equipment.

2) Combined emissions intensity of Horizon's synthetic crude oil and AOSP's bitumen production (as of June 1, 2017).

Direct GHG emissions from fuel consumption ¹ (million tonnes CO ₂ e)	2015	2016	2017	2018
North America Exploration and Production	7.44	8.70	9.43	9.40
Oil Sands Mining and Upgrading	2.31	2.16	3.38	4.35
International Exploration and Production	1.21	1.17	1.04	1.03

1) Self-generated electricity includes GHG emissions from operated cogeneration plants.

Direct GHG emissions (million tonnes CO ₂ e) ¹	2015	2016	2017	2018
North America Exploration and Production	13.75	12.84	13.30	12.99
Oil Sands Mining and Upgrading	3.92	3.91	5.94 ²	7.45 ³
International Exploration and Production	2.11	2.03	1.79	1.53

1) Includes total direct emissions from combustion, flaring, formation CO₂, and other venting and fugitive leaks from equipment.

2) Restated.

3) Increase reflects full year of AOSP operations.

Indirect GHG emissions (million tonnes CO ₂ e) ¹	2015	2016	2017	2018
North America Exploration and Production				
Electricity consumption (TWh)	2.46	2.44	2.63	2.79
Indirect GHG emissions	1.47	1.50	1.69	1.47
Oil Sands Mining and Upgrading ²				
Electricity consumption (TWh)	0.40	0.45	1.07	1.86
Electricity indirect GHG emissions	0.30	0.29	0.30	0.46
Steam imports (PJ)	-	-	11.06	19.02
Steam indirect GHG emissions	-	-	0.70	1.20
Total indirect GHG emissions	-	-	1.00	1.66

1) Purchased electricity.

2) Includes AOSP electricity, which is mostly sourced, and steam imported from a third-party cogeneration plant.

Flaring and venting

Total natural gas flared (10 ³ m ³)	2015	2016	2017	2018
North America Exploration and Production	81,947	95,217	100,504	96,209
Oil Sands Mining and Upgrading ¹	46,238	27,267	24,535	20,422
International Exploration and Production	354,775	296,339	292,458	195,233

1) Flaring at Oil Sands Mining and Upgrading operations is associated with turnaround downtimes.

Total natural gas vented (10 ³ m ³)	2015	2016	2017	2018
North America Exploration and Production	190,301	126,898	109,093	102,467

NO _x emissions (tonnes)	2015	2016	2017	2018
North America Exploration and Production	52,288	56,231	54,086	55,310
Oil Sands Mining and Upgrading	5,954	6,662	12,189	15,141
International Exploration and Production ¹	2,349	2,732	2,118	1,663

1) UK only.

SO _x emissions (tonnes)	2015	2016	2017	2018
North America Exploration and Production	5,633	5,994	6,639	6,863
Oil Sands Mining and Upgrading	3,968	3,409	2,419	2,693
International Exploration and Production ¹	210	246	149	105

1) UK only.

LAND

Facility decommissioning, North America Exploration and Production	2015	2016	2017	2018
Number of facilities removed	32	17	58	60
Number of site remediations projects completed and ready for reclamation	12	12	4	22
Number of ongoing remediation projects	172	131	217	348

Well abandonment and reclamation	2015	2016	2017	2018
North America Exploration and Production				
Number of active operated wells	52,149 ¹	50,736	53,013 ¹	52,643
Number of inactive operated wells ²	18,480	21,433	23,292	23,638
Number of wells abandoned	519	406	771	1,293
Number of reclamation certificates submitted	357	604	604	1,012
Hectares reclaimed	477	2,329	1,273	1,383
Oil Sands Mining and Upgrading				
Hectares reclaimed	68	78	769 ³	176

1) Increase in active operated wells as a result of asset acquisitions.

2) We use the Alberta Energy Regulator definition for inactive well sites.

3) Restated to include AOSP's cumulative total, reflecting consistent and integrated approach across Oil Sands Mining and Upgrading operations.

WATER

Total water withdrawal from source (m³), North America Exploration and Production	2015	2016	2017	2018
Fresh water total	6,594,280	7,786,485	8,923,149 ⁴	11,667,939
Surface water	2,531,127	3,619,139	4,368,688 ⁴	4,861,524
Ground water	4,063,153	4,167,346 ²	4,554,461	6,806,415 ³
Saline water total	8,108,546	8,574,991 ²	7,695,305	8,741,931
Produced water recycled ¹	26,863,473	28,872,346	34,755,269	32,633,555

1) For major thermal (Kirby South and PAW) and polymer flood (Pelican Lake) operations only. The calculation used is produced water minus produced water disposed.

2) 2016 increase in fresh ground and saline water volumes partly due to new reporting requirements in British Columbia.

3) Increase in fresh ground water use at Pelican Lake and Kirby North.

4) Restated.

Total water withdrawal by source (m³), Oil Sands Mining/Upgrading	2015	2016	2017	2018
Fresh water total ¹	22,762,481	17,837,887	68,940,136	68,152,639
Surface water	22,762,481	17,837,887	63,412,147	60,708,192
Ground water	-	-	5,527,989	7,444,447
Saline water total ²	1,147,240	986,002	284,965	581,636

1) 2017-2018 numbers represent water withdrawals from the Athabasca River and all other surface water sources for Horizon and AOSP mines. Numbers for previous years are Horizon water withdrawals from the Athabasca River. Fresh water withdrawals remain well below authorized withdrawal limits.

2) Includes water used in AOSP's production process, and Horizon's saline water, which is a byproduct of our mining operations and used for depressurization.

Total water discharge (tonnes), International Exploration and Production	2015	2016	2017	2018
North Sea	18,633,813	21,231,547	19,010,686	15,225,509
Offshore Africa	1,703,342	1,622,168	1,644,372	1,752,764

Oil in water content (mg/l), International Exploration and Production	2015	2016	2017	2018
North Sea ¹	15.56	16.65	16.67	16.42
Offshore Africa	11.57	14.29	11.03	11.66

1) Oil in water content remains well below regulatory requirement of <30 mg/l.

SPILLS

Reported to regulatory agencies, according to jurisdictional requirements, including oil, produced water and refined products.

Number of reportable spills	2015	2016	2017	2018
North America Exploration and Production	273	241	270	281
Oil Sands Mining and Upgrading	39	42	102 ¹	128 ²
International Exploration and Production	12	14	10	11

1) Majority of spills are from tailings lines (low risk spills, consisting of water, sand, silt and trace oil), occurred in contained areas on our sites and were immediately cleaned up without any adverse environmental impacts.

2) All spills were contained on lease.

Volume spilled (m³)	2015	2016	2017	2018
North America Exploration and Production	1,459	1,998	2,122	1,572
Oil Sands Mining and Upgrading	20,111 ¹	2,749	9,239 ²	20,613 ³
International Exploration and Production	11.78	0.79	1.29	1.04

1) One fresh water release accounted for most of the volume (18,760 m³); this release was effectively contained and pumped back into our bitumen extraction process.

2) Majority of spills are from tailings lines (low risk spills, consisting of water, sand, silt and trace oil), occurred in contained areas on our sites and were immediately cleaned up without any adverse environmental impacts.

3) All spills were contained on lease. An increase in spill volumes from the Bitumen Production area is being addressed with a modification to the pump box.

Number of spills and leaks/production (MMBOE)	2015	2016	2017	2018
North America Exploration and Production	1.10	1.06	1.18	1.29
Oil Sands Mining and Upgrading	0.85	0.92	0.86	0.69
International Exploration and Production	0.47	0.46	0.37	0.42

Volume spilled or leaked/production (m³/MMBOE)	2015	2016	2017	2018
North America Exploration and Production	5.9	8.8	9.3	7.2
Oil Sands Mining and Upgrading	440.6 ¹	60.0	77.6	111.3
International Exploration and Production	0.46	0.03	0.05	0.04

1) Includes fresh water release of 18,760 m³ that was effectively contained and pumped back into our bitumen extraction process.

Number of leaks/1,000 km pipeline	2015	2016	2017	2018
North America Exploration and Production	1.79	1.60	1.49	1.25

WASTE

Weight of waste (tonnes)	2015	2016	2017	2018
North America Exploration and Production				
Hazardous waste - Off-site disposal (third-party)	56,945	61,727	55,419	78,327
Non-hazardous waste ¹	1,759,709	1,789,526	2,367,446	2,014,071
On-site disposal (owned) ¹	812,456	1,056,017	1,644,364	1,142,440
Off-site disposal (third-party) ¹	947,253	733,509	723,082	871,631
Oil Sands Mining and Upgrading				
Hazardous waste - Off-site disposal (third-party)	165	57	153	493
Hazardous waste recycled ¹	406	1,261	6,028	8,005
Non-hazardous waste ¹	20,243	21,294	14,381	17,697
On-site disposal (owned) ¹	20,145	21,058	13,078	13,281
Off-site disposal (third-party) ¹	98	236	1,303	4,416
Non-hazardous waste recycled ¹	7,210	8,268	23,379	40,186
International Exploration and Production²				
Hazardous waste	814	55	94	173
Hazardous waste recycled	268	70	31	42
Non-hazardous waste	1,530	254	437	297
Scrap metal recycled ³	3,576	8,628	15,500	15,284
Other non-hazardous waste recycled	706	788	670	367

• Waste information focuses on oilfield waste, including fluid and solid waste based on a conversion of all volumes to tonnes.

• Oil Sands Mining and Upgrading operations data also includes domestic waste (generated by human habitation), which goes to landfills (small quantities).

• Hazardous waste includes streams such as tank clean out fluids and sludge, wastewater treatment and solids, filter cake, spent lubricating oil and filters and other substances. Non-hazardous waste includes oilfield waste such as hydrocarbon and salt impacted soils, drilling waste and produced sand.

• Waste sent to recycling facilities includes empty containers, lube oil, batteries, filters, tires, scrap metal and other miscellaneous recyclables.

1) 2015-2017 restated due to re-categorization of waste (more waste sent to recycling and adjustments to landfill totals).

2) All CNRI waste is disposed of/treated at third-party facilities. Ninian South has a dedicated drill cuttings re-injection well, therefore no drilling waste is sent to shore.

3) Includes Murchison decommissioning project from 2015-2017, and Murchison and Ninian North decommissioning projects in 2018.

Forward Looking Statements

Certain statements relating to Canadian Natural Resources Limited (the "Company") in this document or documents incorporated herein by reference constitute forward-looking statements or information (collectively referred to herein as "forward-looking statements") within the meaning of applicable securities legislation. Forward-looking statements can be identified by the words "believe", "anticipate", "expect", "plan", "estimate", "target", "continue", "could", "intend", "may", "potential", "predict", "should", "will", "objective", "project", "forecast", "goal", "guidance", "outlook", "effort", "seeks", "schedule", "proposed" or expressions of a similar nature suggesting future outcome or statements regarding an outlook. Disclosure related to expected future commodity pricing, forecast or anticipated production volumes, royalties, production expenses, capital expenditures, income tax expenses and other guidance provided throughout the Company's Management's Discussion and Analysis ("MD&A") of the financial condition and results of operations of the Company, constitute forward-looking statements. Disclosure of plans relating to and expected results of existing and future developments, including but not limited to the Horizon Oil Sands ("Horizon"), the Athabasca Oil Sands Project ("AOSP"), Primrose thermal projects, the Pelican Lake water and polymer flood project, the Kirby Thermal Oil Sands Project, the timing and future operations of the North West Redwater bitumen upgrader and refinery, construction by third parties of new or expansion of existing pipeline capacity or other means of transportation of bitumen, crude oil, natural gas, natural gas liquids ("NGLs") or synthetic crude oil ("SCO") that the Company may be reliant upon to transport its products to market, and the development and deployment of technology and technological innovations also constitute forward-looking statements. These forward-looking statements are based on annual budgets and multi-year forecasts, and are reviewed and revised throughout the year as necessary in the context of targeted financial ratios, project returns, product pricing expectations and balance in project risk and time horizons. These statements are not guarantees of future performance and are subject to certain risks. The reader should not place undue reliance on these forward-looking statements as there can be no assurances that the plans, initiatives or expectations upon which they are based will occur.

In addition, statements relating to "reserves" are deemed to be forward-looking statements as they involve the implied assessment based on certain estimates and assumptions that the reserves described can be profitably produced in the future. There are numerous uncertainties inherent in estimating quantities of proved and proved plus probable crude oil, natural gas and NGLs reserves and in projecting future rates of production and the timing of development expenditures. The total amount or timing of actual future production may vary significantly from reserves and production estimates.

The forward-looking statements are based on current expectations, estimates and projections about the Company and the industry in which the Company operates, which speak only as of the date such statements were made or as of the date of the report or document in which they are contained, and are subject to known and unknown risks and uncertainties that could cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such risks and uncertainties include, among others: general economic and business conditions which will, among other things, impact demand for and market prices of the Company's products; volatility of and assumptions regarding crude oil and natural gas prices; fluctuations in currency and interest rates; assumptions on which the Company's current guidance is based; economic conditions in the countries and regions in which the Company conducts business; political uncertainty, including actions of or against terrorists, insurgent groups or other conflict including conflict between states; industry capacity; ability of the Company to implement its business strategy, including exploration and development activities; impact of competition; the Company's defense of lawsuits; availability and cost of seismic, drilling and other equipment; ability of the Company and its subsidiaries to complete capital programs; the Company's and its subsidiaries' ability to secure adequate transportation for its products; unexpected disruptions or delays in the resumption of the mining, extracting or upgrading of the Company's bitumen products; potential delays or changes in plans with respect to exploration or development projects or capital expenditures; ability of the Company to attract the necessary labour required to build its thermal and oil sands mining projects; operating hazards and other difficulties inherent in the exploration for and production and sale of crude oil and natural gas and in mining, extracting or upgrading the Company's bitumen products; availability and cost of financing; the Company's and its subsidiaries' success of exploration and development activities and its ability to replace and expand crude oil and natural gas reserves; timing and success of integrating the business and operations of acquired companies and assets; production levels; imprecision of reserves estimates and estimates of recoverable quantities of crude oil, natural gas and NGLs not currently classified as proved; actions by governmental authorities; government regulations and the expenditures required to comply with them (especially safety and environmental laws and regulations and the impact of climate change initiatives on capital expenditures and production expenses); asset retirement obligations; the adequacy of the Company's provision for taxes; and other circumstances affecting revenues and expenses.

The Company's operations have been, and in the future may be, affected by political developments and by national, federal, provincial and local laws and regulations such as restrictions on production, changes in taxes, royalties and other amounts payable to governments or governmental agencies, price or gathering rate controls and environmental protection regulations. Should one or more of these risks or uncertainties materialize, or should any of the Company's assumptions prove incorrect, actual results may vary in material respects from those projected in the forward-looking statements. The impact of any one factor on a particular forward-looking statement is not determinable with certainty as such factors are dependent upon other factors, and the Company's course of action would depend upon its assessment of the future considering all information then available.

Readers are cautioned that the foregoing list of factors is not exhaustive. Unpredictable or unknown factors not discussed in the Company's MD&A could also have adverse effects on forward-looking statements. Although the Company believes that the expectations conveyed by the forward-looking statements are reasonable based on information available to it on the date such forward-looking statements are made, no assurances can be given as to future results, levels of activity and achievements. All subsequent forward-looking statements, whether written or oral, attributable to the Company or persons acting on its behalf are expressly qualified in their entirety by these cautionary statements. Except as required by applicable law, the Company assumes no obligation to update forward-looking statements, whether as a result of new information, future events or other factors, or the foregoing factors affecting this information, should circumstances or the Company's estimates or opinions change.

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Our 2018 Report to Stakeholders includes consolidated social, economic and environmental disclosures from the Global Reporting Initiative (GRI) Sustainability Reporting Standards and the Oil and Gas Sector Supplement. For additional GRI disclosures, a GRI content index and more information on sustainability reporting, please refer to the Corporate Responsibility section of our website.

We welcome your comments and suggestions on this report.

Canadian Natural produces a separate Annual Report, which is also available online.



Canadian Natural

Canadian Natural Resources Limited

2100, 855 - 2nd Street S.W.
Calgary, AB T2P 4J8
www.cnrl.com

T (403) 517-6700
F (403) 517-7350
E public.affairs@cnrl.com