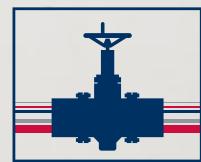




**PLAINS MIDSTREAM CANADA**  
REPORT TO STAKEHOLDERS AND COMMUNITIES



**PLAINS**  
**MIDSTREAM**  
C A N A D A

# ABOUT PMC

Plains Midstream Canada ULC (PMC) specializes in transportation, processing, storage and marketing solutions for crude oil, natural gas and natural gas liquids (NGL). We link petroleum producers with refiners and other customers via pipeline, truck and rail transportation. PMC also operates strategically located facilities for crude oil and NGL storage, the separation of NGL from natural gas as well as the fractionation of NGL into specification products. With our expertise in logistics and marketing services, PMC is positioned to provide our customers with flexible, value-added services.

PMC is headquartered in Calgary, Alberta. Our facilities are located in four provinces and 14 states. We conduct business in eight provinces and 45 states.

Plains Midstream Canada ULC is an indirect subsidiary of Plains All American Pipeline, L.P. Plains All American is a publicly traded master limited partnership headquartered in Houston, Texas. Its common units are traded on the New York Stock Exchange under the symbol "PAA."

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*On the cover: An NGL storage tank at our facility in Shafter, CA.*

*A fleet of more than 750 PMC trailers move crude oil, condensate and NGL.*

## OUR BEGINNINGS

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Plains Midstream Canada ULC (PMC) began operations in 2001 when Plains All American (PAA) saw an opportunity to enter the Canadian market. PAA merged Murphy Oil Company Ltd.'s crude oil pipeline, storage and terminal assets with the marketing knowledge of CANPET Energy Group Inc., a privately held, Calgary-based Canadian crude oil and NGL midstream company.

CANPET Energy Group Inc. was established in 1985 after crude oil was deregulated in Canada. Small crude oil producers were looking for marketing expertise that they could not build within their own companies, and CANPET provided this expertise. As the industry changed, it became necessary to own infrastructure, including pipelines, terminals, storage and other transportation assets.

PMC has grown substantially since 2001, completing more than 34 acquisitions, including the Rangeland Pipeline Company in 2006 and the Rainbow Pipe Line Company Ltd. in 2008, both in Alberta. The largest single acquisition occurred in 2012, when PMC purchased BP Canada's natural gas liquids business. Assets included NGL extraction plants, pipeline gathering systems, fractionation plants, and storage and distribution facilities.

In the early years, PMC grew by acquiring assets from large companies wanting to divest midstream infrastructure outside of their core business and from independent operators who could not maximize the value of their assets on their own without the strength and flexibility of PMC behind them. In many cases we have invested substantial amounts to bring these new assets above industry standards. We currently have a large asset footprint with a substantial portfolio of project opportunities and have changed our focus from acquisitions to organic growth.





When PMC began operations in 2001, we embarked on a path of dynamic and focused growth. We started as a small operation with only 130 employees, and now have a team of more than 1,250 dedicated personnel working in four provinces and 14 states. We have expanded our oil and natural gas liquids business to create an organization that plays a pivotal role in Canada's midstream oil and gas industry.

PMC is a young company, but our strategic growth has resulted in the planned expansion of our facilities and services and the purchase of key assets that support our long-term vision. We have completed more than 34 acquisitions since 2001, including our largest: the 2012 purchase of BP Canada's natural gas liquids business. Throughout this period of substantial growth, we worked continuously to protect the environment, the public, our employees and contractors.

Despite our best efforts, we encountered major challenges from two pipeline failures and product releases. We sincerely apologize for these pipeline failures and recognize the negative impact they had on individuals and local communities where we operate.

We are accountable for what happened, and in June 2014, we pleaded guilty to the charges resulting from these events. While it's fortunate that there were no injuries or any lasting environmental damage from either pipeline failure, we take these matters seriously and have redoubled our efforts to avoid such occurrences in the future.

Companies, like people, are measured not only by their success but by how they respond to adversity. We have expanded our senior management team to provide focused oversight in key departments, engaged third party experts to assist our efforts, and recruited specialists to strengthen our organization. Since 2012, we have added four operationally dedicated executives and 57 new positions focused on Asset Integrity; Health, Safety and Environment; Regulatory and Permitting; Control Centre; and Emergency Response Planning.

We also accelerated our change process with the development of a new Operations Management System to allow us to enhance and standardize programs and processes across our organization, particularly in such critical areas as safety and asset integrity.

# FROM OUR PRESIDENT

*President David Duckett  
and members of the  
Executive Team.*



A recent company-wide safety survey helped all employees and contractors to recognize safety risks in all aspects of our business. In addition, the survey established baseline practices and identified areas where we could improve. Several new initiatives have been implemented to enhance safety and consistency across our operations.

We are integrating programs proactively across PMC that provide a more comprehensive approach to asset integrity. We have made substantial investments in in-line inspection and integrity dig programs, while collaborating with the Pipeline Integrity Working Group of the Canadian Energy Pipeline Association to further improve the capabilities of in-line inspections. We've enhanced our watercourse crossing management program, using industry-leading risk assessment software to predict pipeline exposure risk. As the industry has evolved, we continue to invest in new technologies for pipeline monitoring and leak detection in an effort to achieve enhanced safety and reliability.

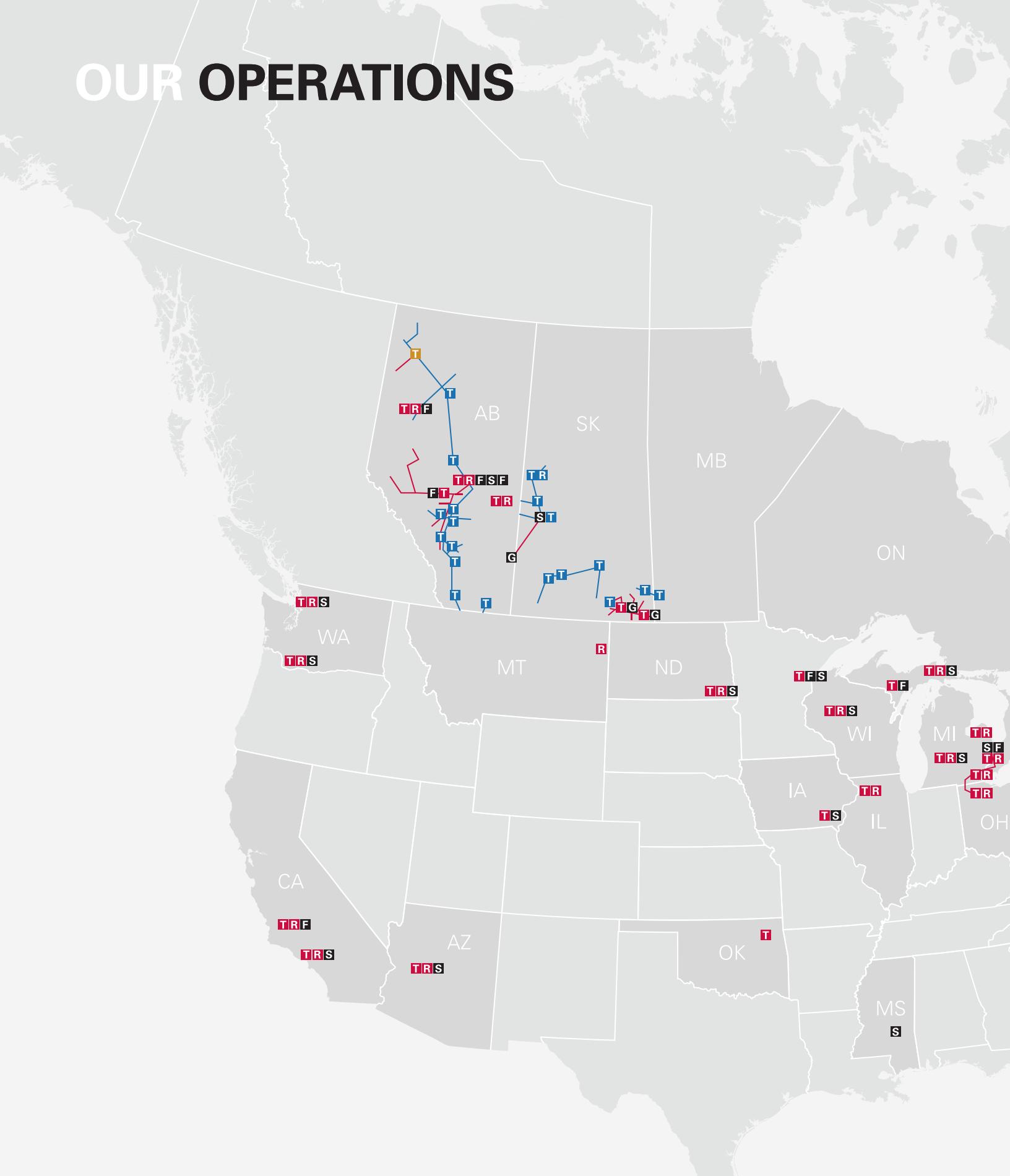
As a result of these actions, we believe PMC is now well positioned to continue to improve our performance, and we are moving forward with a clearly defined vision of our future success.

At PMC, we are excited about the changes underway and the progress we have made. We strive to be responsive to our stakeholders in a manner that is transparent and credible. In order to achieve that objective, we are committed to producing an annual Report to Stakeholders and Communities to share information on our initiatives and how we believe they will improve our performance in key business areas.

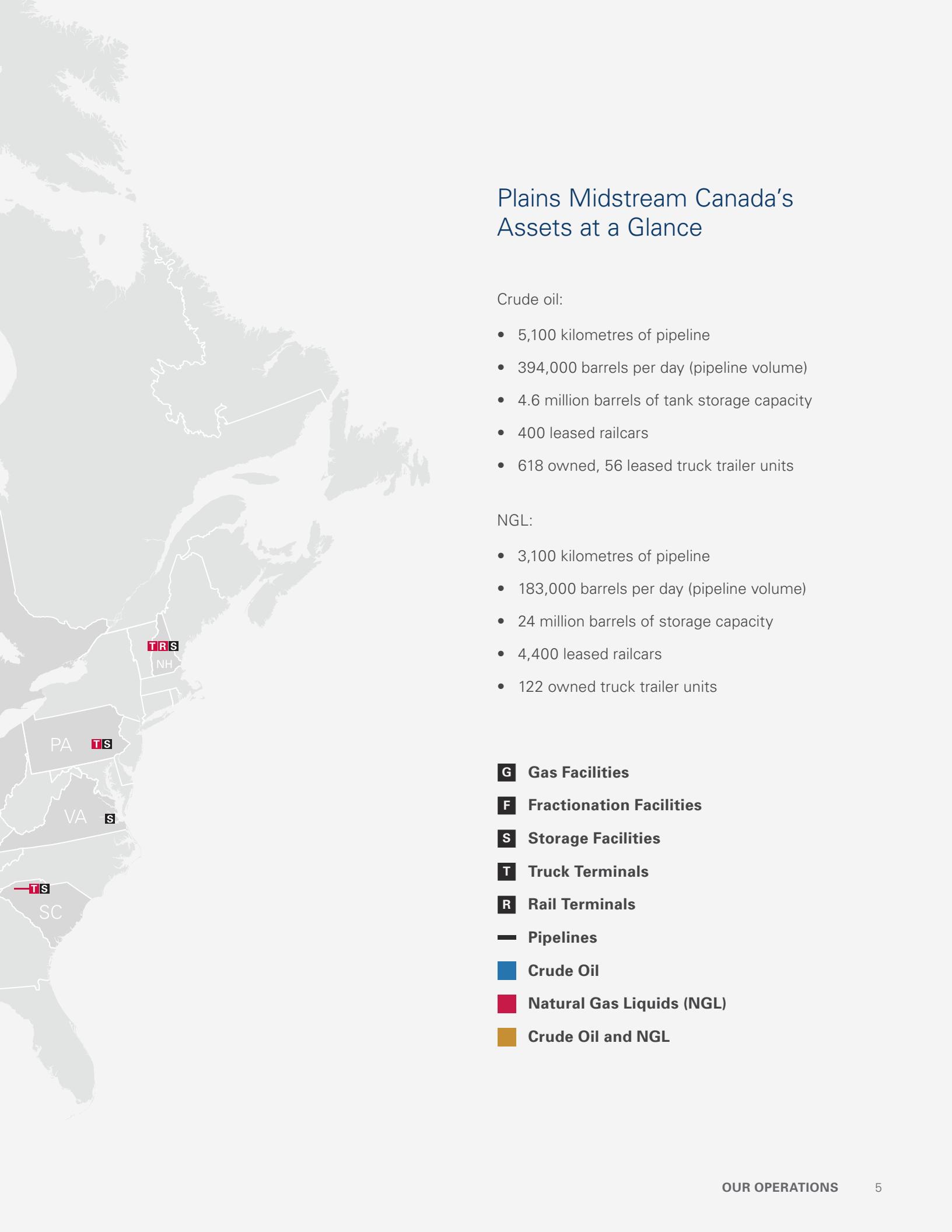
Thank you for taking the time to review our first report. We respect and welcome your feedback and encourage you to complete the comment card at the back of this report. Alternatively, send us an email to let us know how you believe we can further improve.

**W. David Duckett**  
**President**  
Plains Midstream Canada ULC

# OUR OPERATIONS



\*Plains Midstream Canada's Assets as of September 30, 2014.  
For more details, please visit our website: [plainsmidstream.com](http://plainsmidstream.com)



## Plains Midstream Canada's Assets at a Glance

Crude oil:

- 5,100 kilometres of pipeline
- 394,000 barrels per day (pipeline volume)
- 4.6 million barrels of tank storage capacity
- 400 leased railcars
- 618 owned, 56 leased truck trailer units

NGL:

- 3,100 kilometres of pipeline
- 183,000 barrels per day (pipeline volume)
- 24 million barrels of storage capacity
- 4,400 leased railcars
- 122 owned truck trailer units

**G** Gas Facilities

**F** Fractionation Facilities

**S** Storage Facilities

**T** Truck Terminals

**R** Rail Terminals

— Pipelines

■ Crude Oil

■ Natural Gas Liquids (NGL)

■ Crude Oil and NGL

# PMC owns, operates, acquires and develops a diversified portfolio of complementary midstream energy assets.

## Our Midstream Services

PMC's network of pipelines and fleets of truck trailers and railcars provide oil and gas producers with flexibility for transporting crude oil and NGL. When a pipeline system reaches capacity or must be shut-in for safety or maintenance reasons, PMC can move product to market or storage through our pipelines, trucks or railcars. Or when a well first starts producing oil and there is not enough product to warrant building a pipeline connection, the product can be transported by truck or rail to nearby pipelines. Since PMC can add trucks or railcars quickly, we are able to provide timely transportation solutions.

Other PMC facilities are typically located at or near our pipeline systems. These facilities include terminals for loading and unloading product from trucks and railcars, as well as crude oil and NGL storage facilities.

Our NGL storage facilities allow producers and their customers to solve supply and demand imbalances. We provide storage when market demands for propane or butane products are low, allowing our customers to respond quickly when market demands increase due to seasonality and other factors.

## Pipelines

PMC owns 8,200 kilometres (km) of pipeline for transporting crude oil, diluent and NGL. Crude oil and diluent are transported along 5,100 km of pipeline, divided into four main systems: Rainbow and Rangeland in Alberta, and Manito and South Saskatchewan in Saskatchewan.

NGL are transported in 3,100 km of pipeline. Most of our NGL pipelines are short gathering networks of lines that deliver product to processing facilities. Our largest single NGL pipeline is the Co-Ed NGL system, a 1,200-km pipeline located in Alberta.

Provincial bodies in Alberta, Saskatchewan, Manitoba and Ontario regulate pipelines operating within their provinces. The National Energy Board (NEB) regulates pipelines that cross provincial or international borders.

## ABOUT PRODUCTS

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Crude oil can be either conventional or unconventional. Conventional oil can range from light to heavy oil. Heavy refers to oil with a thick consistency that does not flow easily. Oil sands production is considered unconventional oil, and is derived from separating sand and clay particles from bitumen. Bitumen is oil that is too heavy or thick to flow or be pumped without being diluted or heated. At 10 C (50 F), bitumen is as hard as a hockey puck. In order to transport bitumen, it is mixed with a diluent to make it flow through pipelines.

Condensate, a mixture of hydrocarbon liquids similar to light crude oil, is recovered from natural gas reservoirs. Condensate is also known as diluent because it is commonly used to dilute conventional heavy oil and bitumen recovered from the oil sands, allowing the thick bitumen to flow through pipelines.

NGL are ethane, propane, butane and pentanes (natural gasoline) found in natural gas. NGL are separated so the natural gas (methane) meets specifications for pipeline transportation. NGL have a higher market value than natural gas and are used as petrochemical feedstock (ethane) in residential, commercial and auto gas applications (propane), and for gasoline blending (butane).

## ABOUT OUR MAJOR PIPELINES

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Manito (Saskatchewan) is a dual pipeline system comprised of the Manito pipeline, the North Sask pipeline and the Bodo/Cactus Lake pipeline. Each system consists of a blended crude oil line and a parallel line that delivers condensate to upstream locations for blending with heavy crude oil.

Rainbow (Alberta) is made up of two pipelines, Rainbow I and Rainbow II. Rainbow I carries sweet and heavy crude oil while Rainbow II transports condensate.

Rangeland (Alberta) consists of a mainline and gathering pipelines that transport NGL, butane, condensate, light sweet crude and light sour crude.

South Saskatchewan (Saskatchewan) includes a mainline and gathering system that transports heavy crude oil.

Co-Ed NGL (Alberta) gathers NGL from 35 field gas processing plants, including the Cochrane Straddle Plant (owned by a third party).

*Our rail loading facility in Shafter, CA.*

## Truck Transportation

PMC owns approximately 750 trailers that move crude oil, condensate and NGL throughout five provinces and three states. Since PMC owns the trailers, lease operators are contracted to provide and operate the trucks required to pull the trailers. All drivers must achieve specific safety and first aid training standards.

In addition to standard trailers for transporting crude oil and condensate, we also have a fleet of pressurized trailers for carrying NGL like propane and butane. Other units are constructed with an insulated layer to contain heat and prevent heavy oil from solidifying during transport.

Transport Canada, U.S. Department of Transportation and individual jurisdictions in North America regulate the truck transportation industry. Both countries require an annual Commercial Vehicle Inspection Certificate on all National Safety Code vehicles registered over 4,500 kilograms (kg).

## Rail Transportation

PMC leases 4,800 railcars throughout North America and has numerous terminals. We are expanding our capacity for transporting crude oil by rail and are in the process of building new terminals for loading product and increasing our fleet of leased railcars.

All PMC terminals will include an on-site laboratory to test the chemical composition of crude oil being loaded into a railcar. Although this is not yet a regulatory requirement, PMC wants to ensure the highest standards are met for public safety and environmental protection.

## NGL Separation Facilities

PMC owns a number of facilities that remove NGL from natural gas and separate the remaining NGL into products such as propane, butane and condensate. NGL have a higher market value than natural gas and are used as petrochemical feedstock, in residential heating and other applications. We own or have joint ventures in eight fractionation facilities, four gas straddle plants and two gas processing plants.

## Storage Facilities

Storage facilities are associated with almost all our NGL separation facilities and truck or rail terminals. Storage includes large underground caverns and above ground tanks. Caverns are generally hollowed-out underground salt formations, and in one case, a mined granite deposit. The caverns hold NGL products such as propane, butane or condensate. Above ground tanks can hold crude oil, condensate or NGL products. We have more than 30 active storage facilities across Canada and the United States including tanks and caverns. PMC's total storage capacity is 4.6 million barrels for crude oil and 24 million barrels for NGL.

## Collaborative Efforts and Associations

PMC staff work with our peers through associations to share learnings and best practices. Our president sits on the Board of Directors of the Canadian Energy Pipeline Association (CEPA). Plains representatives also participate in the following CEPA initiatives: Aboriginal Affairs, Community and Stakeholder Relations, Executive Operations Standing Committee, Damage Prevention, Emergency Security, Environment and Health & Safety, Integrity First, Land Working Group, Regulatory Policy Group, Pipeline Abandonment, Pipeline Integrity and Property Tax. We also support and participate in a number of mutual aid and synergy groups.

## ABOUT OUR NGL FACILITIES

Straddle plants are located on natural gas transmission lines to extract NGL from natural gas that is being transported by pipeline. The pure natural gas is then reinjected into the pipeline and transported to market.

Fractionation facilities are large plants that separate NGL into products such as ethane, propane, butane and pentanes.

Natural gas processing facilities remove hydrocarbons and water from natural gas so it meets specifications for pipeline transportation.



## OUR MAJOR NGL FACILITIES

PMC has the following NGL facilities strategically located in Canada and the United States:

- Empress (Alberta) includes four straddle plants.
- Fort Saskatchewan (Alberta) facility, which receives, stores, fractionates and delivers NGL.
- Sarnia (Ontario) NGL fractionation, storage and shipping facility.
- Windsor (Ontario) pipeline hub and underground storage facility for NGL.
- Shafter (California) NGL fractionation and distribution hub with storage and rail delivery systems.
- St. Clair (Michigan) underground storage caverns with truck and rail delivery systems.
- Superior (Wisconsin) NGL fractionation facility with storage and truck loading capabilities.

# Our Rainbow and Rangeland Pipeline Incidents

In June 2014, PMC agreed to enter a guilty plea to charges arising out of the Rainbow and Rangeland pipeline failures and product releases that occurred in 2011 and 2012, respectively. On the Rainbow pipeline incident, PMC pleaded guilty to violating the provincial Environmental Protection and Enhancement Act by failing to take steps to stop the pipeline release. Regarding the Rangeland pipeline failure, PMC pleaded guilty to a breach of provincial environmental law by failing to report the release, and to a breach of the federal Fisheries Act. This resulted in fines of \$450,000 for the Rainbow release and \$850,000 for the Rangeland release.

During the proceedings, Judge J.A. Hunter stated: *"I believe that Plains has stepped up to the plate because they want to be good corporate citizens ...."* The judge referenced the significant amount that PMC invested in cleanup efforts and improvements, stating they had been done in an exemplary manner, *"... well above industry standard certainly in this province at this point in time."*

*"I also accept that there may have been due diligence arguments there, but Plains has put those aside, and they have stepped up and they have taken responsibility and absolute responsibility for these actions. There was significant damage in both areas and harm to the environment. Fortunately it appears that, that harm has been ameliorated to a great extent and in large measure probably due to Plains' actions and the steps that they have taken, which I accept."*

Since the two incidents, PMC has spent \$110 million to fulfill our commitment to clean up the releases and mitigate impacts. The majority of remediation and reclamation work was completed in the summer of 2012 for the Rainbow incident and the fall of 2012 for Rangeland. We have accelerated changes to improve the safety and integrity of our pipelines and incorporated lessons learned from these incidents.

These include:

- Increased staff and investment for integrity and preventative maintenance programs to ensure we meet or exceed regulatory standards.
- Invested \$4 million to enhance the system used in the automated monitoring of our pipelines.
- Implemented an industry-leading watercourse management program.
- Improved our pipeline repair procedures.
- Increased aerial monitoring of our pipelines.
- Implemented a more robust and responsive emergency management program.

We acknowledge the incidents caused concern for our neighbours, stakeholders and communities, and we will continue to work with those directly affected.

## What Happened

The first incident occurred April 29, 2011, when approximately 28,000 barrels of crude oil were released from the Rainbow pipeline in Northern Sunrise County, about 100 km northeast of Peace River, Alberta. The crude oil release affected 8.3 hectares (20.5 acres) in a remote area. The third party engineering report and PMC's comprehensive analysis concluded that the instantaneous pipeline failure was caused by a crack in the weld of a repair sleeve that fully encircled the pipeline and an unusually large external force acting on the crack.

While we were working on incorporating learnings from this incident, a second failure occurred June 7, 2012, on a section of the Rangeland pipeline that crosses underneath the Red Deer River. About 2,910 barrels of crude oil were released into a highly populated area, affecting 40 km along the shoreline of the Red Deer River in central Alberta.

A third party engineering company with specific expertise in watercourse crossings concluded the pipeline failure was caused by high streamflow conditions on the Red Deer River that washed away the cover over the pipeline, leaving the pipeline

exposed and free spanning. That means water was flowing rapidly around the entire circumference of the exposed portion of the pipeline in the river channel. The high rate of flow combined with the free-spanning pipeline caused vibration, which ultimately led to the pipeline failure.

Typically, the June high flow rate of the Red Deer River is 75 cubic metres per second. According to Environment Canada's Wateroffice website, which provides real-time data, the flow rate of the Red Deer River, below Timber Creek, was 900 cubic metres per second at the time of the break.\* That's approximately 12 times the ordinary high flow rate in June.

### Improved Watercourse Inspection Program

Following the 2012 failure of the Rangeland pipeline that crosses under the Red Deer River, PMC undertook a major review of all programs and processes surrounding pipeline watercourse crossings. PMC has taken a proactive approach to our watercourse inspection program. We've collaborated with peers and used recent advancements in technology to build an industry-leading program. PMC incorporated risk assessment software to identify pipeline exposure and the potential for pipeline failure, and developed enhanced monitoring programs to increase our understanding of the effects of high streamflows on pipelines crossing underneath rivers and streams.

In early 2013, PMC enlisted the services of geotechnical and water resource specialist BGC Engineering to inspect and assess more than 1,500 locations where our pipelines cross underneath watercourses, which were then ranked according to a series of risk elements. Inspection frequency was set for each watercourse crossing, and processes were established to shut-in and isolate these pipelines based on high streamflow advisories issued by regulators.

Enhancements to our monitoring program in May 2013 allowed PMC to begin using real-time streamflow gauge readings from Environment Canada to determine the risk of high streamflows in Canada.

The program, developed in conjunction with two engineering firms, measures the flow of water in real time and models the risks to the integrity of our pipelines associated with the intensity of flow rates.

### Reclamation Work

In December 2011, PMC completed remediation of the area along our pipeline right-of-way affected by the April 2011 release from our Rainbow pipeline. In spring and summer 2012, vegetation cover was re-establishing and providing habitat for wildlife. Reclamation work continues, and monitoring is now in its third year, with no indication the area has experienced long-term damage.

A second remediation effort took place following the June 2012 release of crude oil from our Rangeland pipeline into the Red Deer River. Shoreline cleanup was successfully completed by the fall of 2012 and confirmed by regulatory inspections in September 2012 and July 2013. Access routes used during response activities were reclaimed in 2012 and inspected in 2013 for weeds and vegetation, and to confirm adequate progress with reclamation. Inspections were favourable, although Alberta's 2013 floods altered many of the access routes restored in 2012.

### Monitoring Results

Monitoring of the Red Deer River was undertaken in 2012 and 2013. This included analyzing samples of water sediment, algae, and benthic invertebrates, which are organisms that live on the bottom of rivers and are sensitive to environmental changes. A Sport Fish Program was also completed. Results indicated there was no measurable impact on the fish population due to the Rangeland release, and that sediment and water quality results showed no issues of concern. In 2014, PMC completed inspections of the entire affected shoreline by boat and accessible shoreline by foot. There was no evidence of long-term damage. Water monitoring studies are continuing, with reports provided to the Department of Fisheries and Oceans, Alberta Health, and Alberta Environment and Sustainable Resource Development.

\*[http://wateroffice.ec.gc.ca/search/searchResult\\_e.html](http://wateroffice.ec.gc.ca/search/searchResult_e.html)

# OUR PEOPLE AND SAFETY



A safety meeting at our  
Fort Saskatchewan facility.



# At PMC, we value our employees and work to ensure they are operating in a healthy and safe environment.

## Code of Business Conduct

To nurture a culture that is consistent with our values of safety, ethics and integrity, accountability, respect and fairness, an updated Code of Business Conduct was developed and rolled out to all employees in April 2014. We believe this code is key to our long-term success and sustainability as a company. To ensure understanding of the code, employees are required to read the code and sign an agreement that they will abide by PMC's standards, principles and values.

### **SAFETY**

We conduct our operations and business in a manner that is safe for our employees, contractors and the environment.

### **ETHICS AND INTEGRITY**

In our dealings within and outside of the company, we do the right thing, obey the law and act with the highest levels of honesty, ethics and integrity.

### **ACCOUNTABILITY**

In conducting our business, we are accountable to each other, our unitholders, our customers and our other stakeholders, including the communities where we live and work.

### **RESPECT AND FAIRNESS**

We treat each other and our stakeholders fairly and with respect.

## Health and Safety

Health and safety is a primary focus for PMC and we have consistently pursued high safety standards since our inception in 2001. PMC's Canadian employee Total Recordable Injury Rate (TRIR\*) of 0.17 is lower than the Canadian Energy Pipeline Association Industry Average Rate of 1.06 (2012). To continue to address the safety needs of all employees and ensure standardized practices throughout our business, our Environment Health and Safety Management System is being transitioned to our new Operations Management System (OMS). The OMS will be pilot tested in 2015 and will ensure continued consistency of safety practices and procedures throughout our organization. PMC supports a three-tiered system of audits that includes third party audits, independent internal audits through PAA and self audits. Our commitment to safety is also supported by a variety of safety initiatives and programs, and our regular audits help reaffirm this commitment.

### Life Rules

Life Rules is a set of 10 rules every employee and contractor needs to know and follow to continue to work safely. In 2013, PMC rolled out this program, providing every employee and contractor with a book and wallet card containing the Life Rules. Educational exercises, employee engagement and follow-up surveys were conducted to ensure the rules are understood and followed. An essential cornerstone of Life Rules is the Stop Work Authority.

\*TRIR = Total recordable number of injuries \*200,000/ hours worked.

*Green hats are part of  
PMC's Green Hand Program  
for new employees.*



## Stop Work Authority

At PMC, every employee or contractor is responsible for, and authorized to stop, any work that does not comply with Life Rules, safety policies or procedures. PMC's president personally commits that there will be no repercussions against an employee or contractor who stops unsafe work.

## Green Hand Program

The oil and gas industry recognizes that employees are most vulnerable or at risk in the first six months on the job. PMC provides all new employees, including students, with safety orientation and training as well as a personal safety mentor. They are then given a green hard hat so experienced workers can identify and mentor these less experienced employees. Green hard hats are worn for at least six months.

## Visitor Program

All visitors undergo a safety orientation on arrival at any PMC site. Visitors to PMC sites wear a yellow hard hat and yellow reflective vest so they are easily identified in case of any safety or emergency procedures. This allows PMC employees to quickly lead them to safety in the event of an unsafe situation or emergency. The Visitor Program was rolled out in 2013.

## Management Walk-Around

To emphasize our management's commitment to safety process, performance and culture, senior executives and managers take part in "walk-arounds." These are visits to field sites to observe, identify, understand and discuss opportunities for safety improvement. For a set number of times a year, senior staff walk through sites and encourage employees to bring forward any issues or concerns, which are then tracked, investigated and addressed.

## Contractor Oversight

ISNetworld (ISN) is an online resource that connects clients with safe and reliable contractors. ISN tracks contractor eligibility, insurances, Workers' Compensation Board coverage, safety management programs and other essentials to ensure we are hiring contractors who are aligned with PMC's safety objectives and industry standards.

## Incident Management Tool

In 2013, PMC replaced its incident tracking processes with an online incident management tool that puts ownership and accountability in the hands of all employees. The tool allows risk and cause analysis and includes an audit and inspection function. It allows us to ensure root causes of incidents have been addressed.

# OUR PROCESSES AND PROGRAMS





A PMC employee at the facility in Sundre, AB.

PMC continues to develop and implement enhanced systems and processes throughout our organization. This work will establish the consistent, standardized programs needed to improve our overall performance.

## Asset Integrity

Asset integrity is about keeping people safe, protecting the environment and ensuring the longevity of PMC's assets by containing liquids or gases in pipelines, processing facilities or storage containment areas such as tanks and caverns. Asset integrity programs are a regulatory requirement, and PMC's asset integrity governance is designed to exceed these requirements. Details of our asset integrity approach are contained in our Pipeline Integrity Management Program, as well as our Facility/Storage Integrity Program.

PMC supports a three-tiered system of audits that includes third party audits, independent internal audits through PAA, and self-audits. PMC's audits are completed regularly and evaluate the effectiveness of our programs. PMC is committed to the integrity of our company assets, and our regular audits help reaffirm this commitment.

### Pipeline Inspections

PMC conducts in-line inspections of pipelines that allow us to understand, track and monitor the conditions of steel from inside the pipeline. This involves a sophisticated tool that travels through

the pipeline and uses magnetic fields to detect potential corrosion and pitting, which helps pinpoint potential areas of weakness in the walls of the pipeline. In addition to regulatory requirements, the frequency of in-line inspections is also determined by other variables such as history, age and condition of the pipeline.

### Integrity Digs

PMC spends \$30 million to \$45 million per year conducting 400 to 750 integrity digs along our 8,200 km of pipeline. A dig is undertaken when our monitoring and inspection program determines there is a need for a visual inspection.

An integrity dig involves removing the earth above a section of pipeline to expose and inspect the line. If a defect or corrosion is found, we use a common industry repair method where a metal sleeve is installed over the damaged feature before the pipeline segment is recoated and buried once again. In some cases we may cut out the old section of the pipe and replace it with a new section.

A PMC environmental specialist collects groundwater samples for laboratory analysis.



## Block Valves

Pipeline block valves stop the flow of product within a pipeline and are the first line of defence to stop crude oil or NGL from flowing if we suspect there is an operating issue or a leak is detected in a pipe. Stopping the flow of product in a pipeline can quickly limit or eliminate any accidental release of product. Automated block valves can be closed in approximately three minutes by our centralized Olds Control Centre. Manual block valves can also be closed quickly, but may take up to three hours to close, depending on where they are located and how soon personnel can get to them.

Our block valve optimization study commissioned in 2010 resulted in the automation of approximately 20 block valves from 2012 to 2013. The remaining 20 block valves identified for automation were installed in 2014. A second block valve optimization study was commissioned in 2014.

## Pre-Emptive Shut-Ins During Alberta's 2013 Flooding

During some of the worst flooding in Alberta's history in May/June 2013, PMC pre-emptively shut-in four pipelines in southern Alberta based on Alberta Environment's streamflow advisories. Once the flood waters rose, we continued to shut-in, and purge with nitrogen, every pipeline south of Red Deer and west of Highway 2 to ensure no pipeline integrity incidents occurred as a result of flooding.

## Watercourse Crossing Methods

PMC uses horizontal directional drilling, which involves boring a hole in the bedrock underneath rivers, to install new pipelines or to remediate a high-risk watercourse crossing. This eliminates the potential of water washing away the ground cover over a pipe.

Over the past two years, we have completed six horizontal drilling projects in key areas. This included three under the Red Deer River near Sundre, Alberta, and one under the Moose Jaw River, Saskatchewan, in 2013. Two additional horizontal drilling projects were completed in 2014, under the North Saskatchewan River and the Red Deer River. As part of our watercourse management program, PMC continually monitors all our watercourse crossings to determine if existing pipe needs to be safely reburied using methods such as horizontal directional drilling.

*The facility in Sundre, AB.*



## ABOUT PURGING PIPELINES

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Pipelines are shut-in and purged when PMC believes there is a high risk of failure due to mechanical or environmental conditions such as flooding, or when transportation demand is low. To shut-in and purge a pipeline, valves are closed to isolate the section. Nitrogen is typically used to push crude oil through the line and into storage tanks. A mechanism that travels through the line, called a "pig," removes any remaining oil. Finally, the pipeline is filled with nitrogen to maintain integrity. The amount of time needed to shut-in and purge a line can vary from a few hours to a few days, depending on how long the line is, the flow rate and how much volume is displaced. The regulator is notified of any line shut-ins and the licence is amended to indicate the line is not operational.



## Operations Management System

To apply an integrated and consistent management system to our operations, PMC began developing a company-wide Operations Management System in 2013. The OMS, which will be piloted in 2015, is a framework used by leading organizations that supports the adoption of standardized programs and processes throughout their businesses. The OMS will replace all existing management systems used by the assets we have acquired. Implementing this OMS across PMC allows us to proactively address safety, risk management and regulatory compliance while taking a structured approach to identifying areas for further improvement.

The OMS will help PMC to:

- Better manage risk and build standardized, reliable operations.
- Enable implementation of structured continuous improvement practices.
- Accelerate the integration of our business units.
- Support continued growth of our business.
- Improve the quality of information used in decision making.
- Ensure knowledge of processes and procedures is documented by our company, and communicated to stakeholders as needed.

## Olds Control Centre

A state-of-the-art system of satellites, transmitters and centralized computers at our Olds Control Centre monitors our 8,200-km crude oil and NGL pipeline network 24 hours a day, 365 days a year. The Olds Control Centre, located an hour north of Calgary in Olds, Alberta, contains eight consoles, each one dedicated to PMC's pipelines operating in a particular area. PMC also has other control centres in Empress, Alberta; Fort Saskatchewan, Alberta; Steelman, Saskatchewan; and Sarnia, Ontario, that monitor operations on a 24-hour basis for NGL pipelines and facilities.

### SCADA

The Olds Control Centre employs a Supervisory Control and Data Acquisition (SCADA) system to collect information transmitted from the pipeline communication system. SCADA tracks the pressure, flow, quality and temperature of product in the pipeline as well as other critical operating data. This data is received from transmitters located along the pipeline as well as at pumping stations that move product through the pipeline. In 2014, PMC undertook a \$4-million update of the SCADA system, which has been in use since 2008. SCADA systems are routinely upgraded to provide the best monitoring technology available.

### Leak Detection Systems

Two different leak detection systems are used by the Olds Control Centre. The first system uses temperature, product quality and pressure to fully model the pipeline flow and identify discrepancies that could indicate a leak or malfunction. The second leak detection tool measures and compares the volume of product that comes into and leaves the pipeline. Discrepancies in either of these two measurements create an alarm event that is immediately investigated by Olds Control Centre personnel.



*The Olds Control Centre.*

## ABOUT INCIDENT COMMAND SYSTEM

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PMC utilizes the Incident Command System (ICS) framework for its emergency response operations. ICS is a systematic tool recognized worldwide and used for the command, control and co-ordination of emergency response efforts in the event of an incident. To ensure ICS is effectively implemented, PMC is undertaking exercises at different sites and systems across our organization. For example, we held a full-scale emergency response exercise at our Regina facility in late 2013. The exercise involved more than 80 employees, contractors and landowners, as well as personnel from rural municipalities, the City of Regina, Saskatchewan Ministry of Economy, the Health Authority, Ministry of Highways and Transportation, and the National Energy Board.



*Personnel at our  
Fort Saskatchewan facility.*

## Emergency Management Program

At PMC, our top priorities are life safety and the environment. Under our Emergency Management Program, risks/hazards are identified, and employees and management personnel receive training to ensure they are capable of responding quickly and safely to an unplanned event.

Through this overarching program, PMC co-ordinates all Emergency Response Plans (ERPs) and first responder activities for our regulated pipelines and facilities. ERPs are required by regulation and must include a public awareness component to inform landowners and communities of what actions to take in the case of an emergency. PMC has federally and provincially governed ERPs and has established site-specific and tactical plans for our areas of operation deemed to be critical. These plans are practised through tabletop exercises, with a full-scale deployment exercise of regulated ERPs every third year. For all other facilities, PMC has established similar tactical response plans.

PMC is also a member of several mutual aid groups and has agreements with a number of local communities. For example, mutual aid groups include: the Canadian Energy Pipeline Association, Sundre Petroleum Operators Group, Eastern Canada Response Corporation, Chemical Valley Emergency Coordinating Organization and Northern Region Community Awareness Emergency Response.

### External Audit

In 2013, PMC engaged an external consultant to conduct an audit to identify gaps in our Emergency Management Program. We are now implementing an improvement plan, which takes a more holistic and formalized approach to emergency management. A risk-based schedule has been developed for implementing improvements to ensure changes are made first to key critical components.

To enhance PMC's Emergency Management Program, more than 300 employees, from field technicians to senior executives, have received emergency response training appropriate to their positions. Training includes some of the following industry-recognized programs: ICS levels 100 to 400, Emergency Operations Centre Awareness Training, and Initial Response Management.

### Security

PMC is rolling out an enhanced Security Management Program to maintain business sustainability by safeguarding PMC's operations and assets from unlawful activities. Our assets include people; our physical, intellectual and technological assets; and our company reputation.

The program is an integrated framework for keeping our company at a desired security level by assessing the risks we face, and ensuring we have proper planning in place to prevent and mitigate potential incidents that could result in adverse impacts.

Security at PMC is fundamental to the future growth and development of our company, and to prevent loss and protect the company's assets. It is vital to our operations to maintain an effective security function with security controls, policies, standards, processes and procedures.

## Regulatory and Environment

PMC takes a proactive approach to regulatory issues, involving the appropriate regulator from the start of a project or potential issue. To support this approach, our Regulatory and Environment departments have been combined to improve co-ordination between these two interrelated areas. We have also increased the level of experience and size of the team, hiring regulatory specialists and external consultants to update processes, enhance collaborative efforts and conduct a gap analysis to identify remaining areas of improvement.

With the addition of specialized employees, our reorganized Regulatory and Environment Department now works more extensively with Asset Integrity, Engineering, Commercial, and Operations during all phases of projects or operations. This has resulted in smoother operations and improved regulatory understanding at both the provincial and federal levels.

PMC supports a three-tiered system of audits that includes third party audits, independent internal audits through PAA, and self-audits. PMC's audits are completed regularly and evaluate the effectiveness of our programs. PMC is committed to the protection of the environment, and our regular audits help reaffirm this commitment.

### Regulatory Project Planning and Compliance

We have created a Regulatory Planning and Projects Team to support capital projects as well as day-to-day tasks. This team becomes involved at the beginning of a project and works with personnel from other PMC departments to identify and apply for permits and complete a regulatory analysis. The team also develops an Environmental Protection Plan to mitigate potential risks, supporting the project from regulatory planning to construction. Once a project begins operations, our Regulatory Compliance Team ensures future regulatory requirements are met.

## Environmental Program

PMC's Environment, Health and Safety Policy has been endorsed by the company president and senior management to demonstrate our commitment to environmental protection. This provides the leadership and commitment required to meet the overall objective of our Environmental Program while balancing our business objectives.

Our Environmental Program is focused on minimizing the environmental footprint of our operations and identifying, tracking and managing environmental liabilities associated with our facilities and operations. Under this program, plans are developed that promote environmental protection and comply with environmental regulatory requirements.

PMC's Regulatory and Environment Department oversees the day-to-day operation, execution and maintenance of the Environmental Program. The Operations Department is responsible for implementing the program in the field.

*Our storage facility in Kerrobert, SK.*





# OUR COMMUNITIES



*PMC is committed to developing and maintaining beneficial relationships in the communities where we work.*

PMC has assets near numerous communities across four provinces and 14 states, and our employees live and work in and around these communities. Our relationships with these stakeholders and communities along our rights-of-way and facilities are important to us.

## Public Awareness

PMC conducted an audit and gap analysis of our Public Awareness Program in 2013 that led to the development of an enhanced Public Awareness Framework and employee Ambassador Training Program for communicating information to our stakeholders and communities.

Although PMC has many pipelines and facilities regulated by a number of provincial and federal agencies, we are adopting the highest standard for public awareness requirements across the country and applying it to all PMC pipelines and facilities.

The enhanced Public Awareness Framework approach and processes were tested on two of PMC's NEB-regulated pipelines. The framework will guide public awareness plans that are being developed and customized for each PMC asset.

## Public Outreach

In 2013, PMC reached out to more than 7,000 residences, agencies and authorities. Moving forward, we will continue to communicate with landowners and communities on a rotating basis. We use a number

of communication methods including face-to-face meetings, house calls, telephone calls, emails and mail-outs.

Through our Ambassador Training Program, PMC is training company personnel who engage with external stakeholders and communities to be ambassadors. This includes field and land personnel, Aboriginal affairs representatives, emergency response and damage prevention personnel, and all consultants. Ambassadors are now equipped with a tool kit consisting of information about PMC, key messages and brochures specific to each pipeline or facility.

The public awareness team is developing a schedule and a plan for each PMC asset in order to conduct public awareness activities in 2015.

## Public Survey

A survey has been developed that will be conducted annually to assess how stakeholders and communities feel about PMC and measure their awareness level of pipeline locations and other information. Stakeholders include landowners, Aboriginal communities, emergency responders, local communities, health authorities and others. Our Public Awareness Program will evolve according to stakeholder input, stakeholder needs, measurement results and business realities.

## Aboriginal Communities

In Canada, PMC has facilities or infrastructure on reserve lands, within traditional territories or near First Nations, Métis and Aboriginal communities.

Aboriginal Peoples in Canada have unique legal rights, including treaty and Aboriginal rights.

We currently have relationships with 52 Aboriginal communities in Canada. This includes 28 First Nations in Alberta, which is approximately half of Treaty 8, half of Treaty 6 and all of Treaty 7. The depth of these relationships varies from neighbourly to legally binding agreements. In Saskatchewan, our facilities are within traditional territories or traditional use areas of 23 First Nations, and in Ontario our pipelines run through First Nation land near Sarnia.

Our approach to Aboriginal Peoples is premised on one fundamental concept: positive relationship building. PMC is committed to working with Aboriginal Peoples and communities to build long-term and

mutually beneficial relationships. Our approach to building these important relationships is embedded in our Aboriginal and Community Affairs Policy, which was signed by our president in 2013.

The policy commits PMC to a direction that includes:

- Early consultation on proposed projects to determine and address potential impacts to the community, as well as any potential interests and objectives the community may have related to our proposed developments or existing infrastructure.
- Support for Aboriginal community economic opportunities such as employment and business opportunities.
- Cross-cultural awareness and consideration of Aboriginal principles such as cultural relationships.

*PMC works with 52 Aboriginal communities in Canada.*



## Community Investment

PMC has traditionally invested in communities along our pipeline rights-of-way and near our facilities at the local level. With the growth of our company and the maturation of our processes, we are developing a more consistent and sustainable community investment strategy that works across the entire company. We are currently reviewing our approach to community investment and developing an improved community investment strategy based on our corporate value structure. We expect to roll out this strategy in 2015.

During 2013, several investments of note were made. When Calgary and southern Alberta experienced unprecedented flooding, PMC donated a total of \$363,330 to the Red Cross for immediate flood relief efforts and to the Calgary Zoo, which was particularly hard hit. PMC matched every dollar donated by our employees to the Calgary Zoo to assist in its reconstruction efforts.

We also supported initiatives in our local communities such as educational programs in local schools, as well as training for local emergency responders.

In 2014, PMC launched a new annual CARE Program. The CARE Program - Create A Real Effect, is an employee donation matching program that is designed to support those charities that are close to the hearts of our employees. The CARE Program enables employees to donate to charities of their choice, with PMC matching employee contributions up to a maximum of \$500 per employee per year. PMC employees are active members in their communities and through the CARE Program, PMC supports their efforts.

## Municipal and Regional Government Investments

In addition to discretionary community investment, PMC makes a significant economic contribution to municipal and regional governments in areas where we have infrastructure through our property tax payments.

In 2013, PMC paid more than \$21 million in property taxes to municipal and regional governments in the following Canadian provinces:

- More than \$12 million in Alberta across 61 municipal and regional governments.
- More than \$7.5 million in Saskatchewan across 62 municipal and regional governments.
- More than one-quarter million dollars in Manitoba across five municipal and regional governments.
- Almost \$1.5 million in Ontario across seven municipal and regional governments.

In the United States, PMC paid more than \$3.7 million in property taxes to 18 different counties, including the following:

- More than \$1.6 million in York County, South Carolina.
- More than \$1.2 million in Kern County, California.

## Stakeholder Relations and Community Investment

In 2013, we began work on a Stakeholder Relations Framework, developing principles to guide all employee relations with a wide range of stakeholders and communities, including landowners, municipal governments, community leaders and the public. A specific Stakeholder Relations Policy has been developed to formalize and standardize this principle-based approach to engagement.

PMC is committed to developing and maintaining mutually beneficial relationships with stakeholders, fostering engagement in our communities and responding to inquiries in an accurate and timely manner.

This Report to Stakeholders is just one of the ways in which we are engaging our stakeholders. Thank you for taking the time to read this report. Through the comment card, we invite you to share your thoughts about the report and if you would like to receive future reports.



*Our facility in Sarnia, ON.*

*The facility at Fort Saskatchewan, AB.*



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