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TANADA

PETRO-CANADA'S 2005 - 2006 REPORT TO THE COMMUNITY



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# **KEN GLASGOW**

Instrumentation Technician Terra Nova Newfoundland and Labrador East Coast Oil "I've worked at Terra Nova for three and a half years on instrumentation and controls. I like Petro-Canada because it offers employees like me the opportunity to grow and learn new technologies."

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terra nova

17-5

# We exist

to develop and deliver energy to consumers.

# We know

there are benefits and consequences to this task.

# We understand

that our decisions of today impact the world of tomorrow.

# **WE BELIEVE** in responsibly developing energy resources and providing petroleum products and services.

Petro-Canada is one of Canada's largest oil and gas companies, operating in both the upstream<sup>1</sup> and the downstream<sup>2</sup> sectors of the industry in Canada and internationally. We create value by responsibly developing energy resources and providing world class petroleum products and services. Our shares trade on the Toronto Stock Exchange (TSX) under the symbol PCA and on the New York Stock Exchange (NYSE) under the symbol PCZ.

#### LEGAL NOTICE - FORWARD-LOOKING INFORMATION

This Report to the Community contains forward-looking statements. Such statements are generally identifiable by the terminology used, such as "plan," "anticipate," "intend," "expect," "estimate," "budget" or other similar wording. Forward-looking statements include, but are not limited to, references to: business strategies and goals; changes in technology; management systems and processes; human resources matters; government, stakeholder, community and public relations programs and strategies; refining methods; future capital and other expenditures; drilling plans; construction and project development plans, activities and schedules; refinery turnarounds; refining margins, oil and gas production levels and the sources of growth thereof; results of exploration activities and dates by which certain areas may be developed or may come on-stream; future emission levels; and environmental, health and safety matters and programs. By their very nature, these forward-looking statements require Petro-Canada to make assumptions that may not materialize or that may not be accurate. These forward-looking statements are subject to known and unknown risks and uncertainties, and other factors which may cause actual results, levels of activity and achievements to differ materially from those expressed or implied by such statements. Such factors include, but are not limited to: imprecision of emission estimates; effectiveness of environmental protection strategies and programs; effectiveness of management information systems; imprecision of reserves estimates of recoverable quantities of oil, natural gas and liquids from resource plays and other sources not currently classified as reserves; general economic, market and business conditions; industry capacity; complicitive action by other companies; fluctuations in oil and gas prices, refining and marketis; the ebility to produce and transport crude oil and natural gas to market; the effects of weather and climate conditions; the results of exploration and developmen

Specifically, production may be affected by such factors as exploration success, startup timing and success, facility reliability, planned and unplanned gas plant and other facilities shutdowns and turnarounds, success of restarts following turnarounds, reservoir performance and natural decline rates, water handling and production from coal bed methane wells and drilling progress. Capital expenditures may be affected by cost pressures associated with new capital projects, including labor and material supply, project management, drilling rig rates and availability, and seismic costs. Statements concerning production settimates in this Report to the Community may be deemed to be forward-looking statements as they involve the implied assessment that the resources described can be profitably produced in the future.

resources described can be profitably produced in the future. Readers are cautioned that the foregoing list of important factors affecting forward-looking statements is not exhaustive. Furthermore, the forward-looking statements contained in this Report to the Community are made as of July 6, 2006 and, except as required by applicable law, Petro-Canada does not undertake any obligation to update publicly or to revise any of the included forward-looking statements, whether as a result of new information, future events or otherwise. The forward-looking statements contained in this Report to the Community are expressly qualified by this cautionary statement.

Where the term barrel of oil equivalent (boe) is used in this Report to the Community, it may be misleading, particularly if used in isolation. A boe conversion ratio of six thousand cubic feet (Mcf): one barrel (bbl) is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.

### (on the cover)

HOLLY SPENCER, Area Reliability Engineer, Syncrude Units, Edmonton Refinery, Downstream

"Petro-Canada has developed strong strategies for growth, but in doing so has not lost sight of the community we live in. An example of this is the implementation of the ISO 14001 environmental management system to reduce the refinery's impact on the environment."

- 1 Upstream is the sector of the petroleum industry in which companies explore for and produce oil and gas.
- 2 Downstream is the sector of the petroleum industry that includes refineries, petrochemical and lubricants companies, natural gas distribution utilities, refined oil product wholesalers and retail sites.

Note to readers: Quantitative data in this Report to the Community is as at year-end 2005, unless otherwise stated. Qualitative information tends to cover from mid-2005 to mid-2006.

# Our priorities are:

- to operate with the highest standards of safety
- to reduce the environmental impacts of our operations
- to retain and attract employees who will support our business plans
- to engage those impacted by our operations to ensure understanding and shared benefits

Stated in millions of Canadian dollars, unless otherwise indicated	2005	2004	2003
Financial and operating performance			
Operating earnings from continuing operations <sup>3</sup>	2,148	1,829	1,267
Operating return on capital employed (%)	19.8	18.8	16.1
Total upstream production before royalties (barrels of oil equivalent/day – boe/d) <sup>4</sup>	425,000	451,000	465,000
Petroleum product sales (thousands of cubic metres/day – m³/d)	53,000	57,000	57,000
Number of employees (at year end - prior years restated to reflect more accurate data)	4,816	4,795	4,514
Environment, health and safety performance			
Greenhouse gas (GHG) emissions⁵			
(kilotonnes of carbon dioxide equivalent per year - prior years restated to reflect more accurate data)	7,359	7,624	7,520
Primary air pollutant emissions (kilotonnes) <sup>6</sup>	53.4	57.3	57.2
Production carbon intensity (tonnes of carbon dioxide equivalent per m <sup>3</sup> of oil equivalent)			
Upstream	.19	.17	.14
Downstream	.22	.21	.21
Environmental costs (operating expense and capital)			
Upstream	166	127	114
Downstream	690	524	300
Total recordable injury frequency (number per 100 workers on site) <sup>7</sup>	1.14	1.36	1.54
Corporate donations (cash and in-kind contributions)	7.2	6.7	15.0

### CONTINUOUS IMPROVEMENT IN SUSTAINABILITY REPORTING

Petro-Canada continues to improve the accuracy and completeness of its reporting of sustainability performance to stakeholders. In 2005, we engaged PricewaterhouseCoopers LLP (PwC) to further review our processes and controls relating to the measurement, calculation, consolidation and reporting of GHG emissions, and of releases and transfers of Canadian primary air pollutants. PwC provided us with feedback and recommendations, which we have begun to evaluate. We also asked PwC to consider the consistency of selected sustainability information contained in this Report to the Community, in relation to other information provided to them, and to provide feedback to management.

PwC's services did not constitute an audit, and PwC does not express an opinion or any other form of assurance on the reported information.

- 3 Earnings from operations represent net earnings excluding gains and losses on foreign currency and on disposal of assets, and unrealized gains or losses associated with the Buzzard derivative contracts.
- 4 Where the term barrels of oil equivalent or boe is used in this document, it may be misleading to some readers, particularly if used in isolation. A boe conversion ratio of six Mcf per one bbl is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.
- 5 A wide variety of gases that include carbon dioxide, methane and nitrous oxide, and that are believed to trap heat near the earth's surface. Petro-Canada's GHG emissions are primarily the result of fossil fuel combustion.
- 6 Primary air pollutants are a group of common air pollutants that are regulated by most jurisdictions in which Petro-Canada operates. The five primary air pollutants are: total volatile organic compounds (VOCs), carbon monoxide (CO), nitrogen oxide (NOx), sulphur dioxide (SO<sub>2</sub>) and total particulate matter (TPM) under 100 microns (μm).
- 7 Total recordable injury frequency is the sum of work-related fatalities, permanent total disabilities, disabling injury cases, cases involving restriction of work or motion, and medical treatment or loss of consciousness cases. Companies calculate total recordable injury frequency from the total number of injuries and the size of the workforce. The number represents how many injuries there would be in a workforce of 100. A frequency of 1.0 means, for every 100 workers on site, one person is injured per year.

Petro-Canada's President and Chief Executive Officer



# A LETTER AND Q&A FROM RON BRENNEMAN

It's clear to us at Petro-Canada that as our business grows, our corporate responsibility strategies and action plans must evolve too. We made progress on a number of fronts in 2005, focusing on a few critical areas.

The first priority area is **to operate with the highest standards of safety**. Safety is our top priority. As a matter of fact, I don't believe any business success is worth noting unless the job is done safely. We made improving performance in this area a priority in 2005, resulting in an 18% decrease in total recordable injury frequency. I believe our Zero-Harm<sup>8</sup> goal is right. And it's possible. Our Edmonton refinery ultra-low sulphur diesel project saw nearly four million man hours without a lost-time injury. As we execute some big projects in the next five years, we'll continue to hold Zero-Harm at the top of our priority list.

Our second priority is **to reduce the environmental impacts of our operations**. Our goal is to find tangible ways to balance our role as an energy supplier with our desire to reduce the impact of our operations on land, air and water. Given business growth, this is going to be a challenge. We're taking a pragmatic approach here. First, we need well thought out strategies and excellent data on which to base our decisions and actions. To this end, we're starting to build an environmental information management system to strengthen data gathering, particularly for emissions and air contaminants. We'll also put downward pressure on emissions by using new technologies, preventing pollution and being energy efficient.

The third priority is **to retain and attract employees to support our business plans**. An older workforce and business growth means we need to increase our employee base significantly over the next decade. Development of oil sands resources is by far the biggest driver. We're thankful for a robust market to provide individuals with such rich prospects to grow and learn. At the same time, we're not the only company facing the shortage of skilled labour. As a result, our long-term human resources strategy is to improve workforce planning and build recruiting capabilities.

Our fourth priority is **to engage those people we impact in the course of our operations**. Our approach is to seek out stakeholders and hear what their sensitivities are to our projects. In most cases, we successfully reduce our impact and look for upside opportunities. As our business grows, we realize that this approach has to be formalized across businesses, geographies and functions. Last year, we pulled together all the employees who work extensively with external stakeholders. We're working to introduce formalized training and build information management systems to track our contact with stakeholders. This work is continuing in 2006.

These priority areas reflect our stakeholders' expectations of us and our business goals. What gives me confidence in our ability to succeed in these areas is something very simple. I believe that Petro-Canada employees want to act responsibly and with ethics. This is so important. Now we can build on this culture with more mature management systems and information. In closing, I would like to thank all our employees and the stakeholders we work with who believe in "doing the right thing."

### How do you work with neighbours, landowners and fishing communities before you begin your projects?

Our approach is to evaluate, in the early stages, the social and environment impacts of projects over the life of the facility. We seek out stakeholders in this process to get their input and hear what concerns and interests they may have with our projects. Then, with these concerns in mind, we try to reduce the impacts and look for upside opportunities. It's a pretty basic approach, one that recognizes our ability to operate relies on working well with others. We do this whether or not there is a regulatory requirement.

### What is Petro-Canada's approach to water use?

Water use, availability and quality are areas of legitimate concern around the world and we're doing a number of things to mitigate our impact. Our Edmonton refinery will use five million litres of recycled water per day from the municipal waste water treatment plant instead of drawing fresh water out of the nearby river. We recycle more than 90% of the water we use at our MacKay River in situ<sup>9</sup> plant. As well, our U.S. Rockies group uses some creative approaches for water production and handling at our coal bed methane<sup>10</sup> operations. This year, we'll identify our "best practices" for water management for application at all our current operations and future developments.

### Could Fort Hills be developed without disturbing the McLelland Lake wetlands?

It's true that the McLelland Lake wetlands are a pretty special place, so we're going to work hard to minimize our footprint. Of the 100 environmental compliance conditions set out by the regulators for the Fort Hills project, about 70 of them pertain to protecting and maintaining the characteristics of the unmined portion of the fen<sup>11</sup> and McLelland Lake wetland, which is about half the area. So far, we've been busy transplanting plants and monitoring waterflows at the fen. We'll also continue to work with a multi-stakeholder committee that is tasked with ensuring environmental "best practices" and cutting-edge reclamation standards.

### What is your commitment to reducing emissions?

This issue is a real tug of war between consumers wanting more oil and gas supply, while at the same time seeking emission reductions from the industry. Technology is a big part of the equation, either using the best available technology for projects or developing new technologies. An example here is our work to develop technology which will reduce the steam to oil ratio in steam assisted gravity drainage (SAGD)<sup>12</sup>. Equally important is that we keep improving the energy efficiency of our existing operations. We were already motivated to do this from an environmental perspective, but with today's commodity prices, reducing energy consumption has a bottom-line impact too.

### How will you compete for new employees when the labour market is so tight?

It's a question all companies are asking lately. We need good people, including those working at Petro-Canada today, as well as many more to help us grow. We recognized this was a big issue for us in 2005, so we dedicated a vice-president full-time to this human resources (HR) challenge. We're currently in the process of evaluating recruitment, leadership and succession planning, and beefing up this part of our Company so we have top notch HR execution. I also think when you read some of the employee quotes and stories in this report and our financial report, you'll see that generally employees like our culture, have lots of room to grow and think the business has a positive future. These are all key to retaining and attracting new employees.

<sup>9</sup> In the context of oil, in situ means lying in the original deposits. Petro-Canada uses leading edge steam assisted gravity drainage (SAGD)

*in situ* technology to recover oil too deep to be recovered by mining. 10 Coal bed methane is natural gas trapped inside and produced from coal seams.

<sup>12</sup> A leading edge in situ production process by which steam is injected to stimulate production.

### With such high levels of activity, are you seeing an increase in events that lead to workplace injuries?

I believe strongly in Zero-Harm, so despite more activity in all our businesses, we've managed to have fewer injuries. Last year, we made this a priority and Company safety will continue to be priority number one in 2006. It's a culture instilled at the very top. As a matter of fact, when we have our monthly executive review, we don't start with financial or operating highlights. We start with a safety report. There's always work to be done, so we're continuing to run training, increase communication and look at events to gain knowledge on how they can be avoided in the future. Interestingly, a lot of the safety events happen in routine activities not during unusual or new activities; we know we can work safely, we just need to keep it top of mind.

### Does Petro-Canada have a strategy to work with Aboriginal communities?

Yes. In Canada, where our operations impact their way of life, we want to partner with Aboriginal communities and come up with solutions. Sometimes this means providing educational support and developing employment or business opportunities. Sometimes it means helping them with community infrastructure. We've also had preliminary discussions with Native Americans near our U.S. Rockies operations. Basically, we respect the Aboriginal community's unique culture and way of life.

### Has Petro-Canada thought through the implications of operating in countries outside of North America and Europe?

Yes we have and our thinking is pretty straightforward. When we take a look at an opportunity, we talk with potential partners about our business principles and conduct before entering into significant, binding agreements. If we can't reach an agreement consistent with our principles and international standards, we don't proceed. We also encourage transparent transactions and operating agreements with provisions which respect local laws and include environment standards and working conditions in line with international practices.

### Do you have plans to be more than a pure oil and gas company, broadening out to renewable energy?

Because of our relatively small size, we have to choose where we can get the most leverage for our money and effort. For example, we chose to put the seed capital into Iogen Energy Canada, a company which is pursuing a proprietary technology to convert biomass (cellulose) waste into ethanol. Since oil and gas is our core business and will be the predominant fuel source for sometime, we focus on producing cleaner burning fuels and developing environmentally friendly lubricants products.

### Why do you believe in corporate responsibility and Petro-Canada?

I'm going to repeat the same answer I gave in our annual report, which asked, "Why do you believe in Petro-Canada?" I think the answer is basically the same. This is what I said there:

For me, a company you can believe in is like a trustworthy person. You need a solid foundation, and I think Petro-Canada has this with the integrated business model and great assets from which to grow. A trustworthy person often has a clear plan, and I think we have a focused and defined strategy to help us grow. And third, a trustworthy person needs to have principles, skills and commitment. I know this about Petro-Canada employees... not to mention thousands of contractors working on our behalf. They are why I believe in Petro-Canada.

# **OUR BUSINESSES**<sup>13</sup>



Gord Broderick is a gas plant operator at the Wildcat Hills gas plant in the Foothills of Alberta.

# North American Natural Gas

### We explore for and produce natural gas, crude oil and natural gas liquids (NGL) in Western Canada and the U.S. Rockies.

In 2005, we produced 668 million cubic feet per day (MMcf/d) of natural gas (111,000 boe/d) and 14,700 barrels per day (b/d) of crude oil and NGL.

We are positioning this part of our business for the long term. First, North American Natural Gas is shifting to unconventional production, targeting 50% of production from unconventional sources by 2010. Second, we are advancing long-term supply opportunities, including an increased focus on exploration and building land positions in Alaska and the Mackenzie Delta/Corridor in advance of pipeline developments. Third, Petro-Canada is developing plans for a liquefied natural gas (LNG)17 re-gasification18 plant in Quebec, jointly with TransCanada PipeLines Limited. This project links to efforts in our International business unit to establish LNG supply arrangements in Russia.



Darlene Lewis is an offshore scheduler on the Terra Nova installation off the coast of Newfoundland and Labrador.

# East Coast Oil

# Petro-Canada participates in every major oil project off Canada's East Coast.

We operate and hold the largest interest (34%) in Terra Nova. We also hold a 20% interest in nearby Hibernia and a 27.5% interest in White Rose. Terra Nova and White Rose oil flows from wells on the seabed into Floating Production Storage and Offloading vessels (FPSOs)<sup>19</sup>. Hibernia produces oil from a concrete gravity base structure. East Coast Oil production averaged 75,300 boe/d in 2005.

The East Coast Oil business strategy is to sustain profitable production above current levels into the next decade. It is anticipated that this will be achieved by adding production from reservoir extensions and satellite tie-ins.



- headquartered in Calgary, Alberta, with almost 5,000 employees around the world;
- upstream production of 425,000 boe/d<sup>14</sup> in 2005 with forecasted production estimated to range from 365,000 boe/d to 390,000 boe/d<sup>15,16</sup> in 2006; and
- refined petroleum product sales of 52,800 m<sup>3</sup>/d in 2005.



To learn more about Petro-Canada, visit www.petro-canada.ca

- 13 All production is stated before royalties, unless otherwise indicated.
- 14 Includes production from mature Syrian producing assets which contributed 70,100 boe/d in 2005. These assets were sold in January 2006.
- 15 Updated production forecasts are expected to be available in Petro-Canada's second quarter 2006 earnings release, which was not publicly available at the time this report was printed.
- 16 Adjusted to reflect the sale of Syrian producing assets.
- 17 Liquefied natural gas (LNG) is created when natural gas is cooled to a temperature of -160 C and transforms into liquid form, significantly reducing its volume.
- 18 Re-gasification is a simple reheating process usually conducted at LNG terminals to convert the -160 C liquid gas back into gaseous form, before sending it into a natural gas shipping pipeline.
- 19 A floating production storage and offloading vessel is a ship-shaped production platform where oil can be offloaded to shuttle tankers. Petro-Canada's Terra Nova project is the first in North America to use an FPSO to produce and offload oil in the harsh environment offshore Newfoundland and Labrador.



Directly operated





Tshitende Kasongo is a senior process engineer at the MacKay River *in situ* plant in northern Alberta.

# **Oil Sands**

### We have extensive mining and *in situ* oil sands holdings, several of which are expected to be integrated with our Edmonton refinery in the future.

Our 12% interest in the Syncrude mining operation delivered production of 25,700 b/d in 2005. We also are a 55% owner and operator of the Fort Hills Oil Sands mining and upgrading project, which has regulatory approval to produce 190,000 b/d of bitumen.

MacKay River is our 100% owned and operated *in situ* project, which produced 21,300 b/d in 2005 and is expected to reach plateau production of 27,000 b/d to 30,000 b/d by year-end 2006. A MacKay River *in situ* expansion project is being evaluated, with potential for first production by the end of the decade and peak production of an additional 40,000 b/d to follow.

We are converting the conventional crude oil train at our Edmonton refinery to upgrade and refine oil sands feedstock from northern Alberta by 2008. With our Fort Hills partners, we also plan to build an upgrader near Edmonton to process Fort Hills bitumen into light synthetic crude oil.



Directly operate
 New exercise

Non-operated



Olga Mazurova is the public relations specialist in the Moscow business development office.

# International

The International business unit is focused on new growth opportunities and on production in three main regions:

- Northwest Europe We produced 44,600 boe/d from the United Kingdom (U.K.) and the Netherlands sectors of the North Sea. We anticipate our 29.9% interest in the Buzzard field in the U.K. North Sea will add plateau production of about 60,000 boe/d in late 2007.
- North Africa/Near East Petro-Canada produced about 119,900 boe/d in Syria and Libya in 2005 (49,800 b/d without Syria). While the Company sold its mature producing interests in Syria in January 2006, we are pursuing other opportunities in Syria.
- Northern Latin America We have a 17% interest in the North Coast Marine Area 1 natural gas development in Trinidad and Tobago, which produced about 72 MMcf/d (12,000 boe/d) in 2005. We are also pursuing exploration in our operated Trinidad and Tobago acreage and the development of the La Ceiba oil project in Venezuela.



Petro-Canada International offices



Dale McDougall is the owner/operator at a PETRO-PASS station in Edmonton, Alberta.

# Downstream

Petro-Canada is Canada's second largest downstream company with refining and supply operations, retail and marketing networks, and a specialty lubricants business.

We have refineries in Edmonton, Alberta and Montreal, Quebec. In 2005, these refineries accounted for 13% of Canada's refining capacity. In 2006, we expect to advance the conversion of our Edmonton refinery to process oil sands feedstocks and are considering the potential for a new coker at Montreal.

We are "Canada's Gas Station," with a network of more than 1,500 retail and wholesale outlets across Canada. In 2005, we sold about 16% of all petroleum products sold in Canada.

At our Mississauga, Ontario lubricants plant, we produce pure lubricating oil-based stocks and other specialized products. In 2005, 73% of production went into higher-margin product segments. Our goal in 2006 is to sell 75% of our volumes into more profitable, specialized segments.



Petro-Canada lubricants plant

# **OUR PERFORMANCE SCORECARD**

	2005 PROGRESS	
BUSINESS CONDUCT	<ul> <li>revised the Policy for Prevention of Improper Payments and completed employee training on the policy;</li> <li>conducted six Total Loss Management (TLM)<sup>20</sup> audits and began implementation of TLM standards in the Sh</li> <li>responded to concerns from consumers about higher gasoline pricing with external communications; and</li> <li>came second in the oil and gas sector according to the Globe and Mail corporate social responsibility ranking was recognized for meeting the criteria of the Jantzi Social Index.</li> </ul>	nared Services units; ng index and
COMMUNITY	<ul> <li>raised more than \$515,000 for disaster relief efforts around the world and donated more than \$2.6 million to United Way campaigns in North America;</li> <li>provided 421 grants of \$500 each to non-profit organizations supported by employees and retirees who do a (more than \$1.5 million since 1992);</li> <li>received the British Columbia Collaborative Relationships Award, as nominated by local Aboriginal communi</li> <li>held a company-wide stakeholder relations workshop to strengthen capability, share "best practices" and plan</li> </ul>	community work ity leaders; and n for 2006 improvements.
WORKING CONDITIONS AND HUMAN RIGHTS	<ul> <li>reduced total recordable injury frequency (including employees and contractors) by 18% compared with 2004. Employee recordable injury frequency (per 200,000 person hours) was 0.79 in 2005, compared with 0.65 in 2004 due to more injuries in North American upstream operations. Contractor recordable injury frequency was 1.33 in 2005, compared with 1.97 in 2004 due to better performance at refineries and manufacturing facilities;</li> <li>held a safety forum to strengthen contractor engagement in our Zero-Harm initiative and engaged 670 leaders in workshops to outline leaders' roles in creating a Zero-Harm culture;</li> <li>conducted nine emergency response exercises to ensure the Company has resources to support on-site emergencies and to work with impacted external stakeholders; and</li> <li>implemented corporate-wide Guidelines for Security and the Protection of Human Rights.</li> </ul>	Doug Fletcher Calgary, North American Natural Gas
ENVIRONMENT	<ul> <li>reduced total GHG emission levels by 3% compared with 2004 levels primarily due to the closure of the Oakville refinery;</li> <li>invested \$856 million in environmental programs, including \$526 million to complete low-sulphur diesel projects in our Downstream operations;</li> <li>reduced environmental exceedances<sup>21</sup> by 38%, down from 45 in 2004 to 28 in 2005;</li> <li>reduced flaring significantly in each business unit in 2005 compared with 2004; and</li> <li>submitted environmental and social impact assessments in support of the MacKay River expansion project, the Cacouna Energy Project and international seismic activities.</li> </ul>	Barbara Scott           Northern Alberta, Oil Sands
	Total Recordable Injury Total Disabling II	njury





- 20 TLM is a systematic set of standards that enables Petro-Canada to identify management systems and processes required to control risk in all of our businesses. (See page 14 for more information).
- 21 Environmental exceedances are defined by Petro-Canada as any event or occurrence resulting in an exceedance of an authorized level outlined in a regulation or operating licence. This may include, but is not limited to, incinerator stack-top temperatures migrating outside specified limits or excess levels of prescribed substances in measured air, water or land emissions.
- 22 The sum of work-related fatalities, permanent total disabilities, disabling injury cases, cases involving restriction of work or motion, and medical treatment or loss of consciousness cases. Companies calculate TRIF from the total number of injuries and the size of the workforce. The number represents how many injuries there would be if a workforce was 100 people in total. A frequency of 1.0 means, for every 100 workers on site, one person is injured per year.
- 23 The sum of permanent total disabilities and disabiling injury cases. Companies calculate TDIF from the total number of disabling injuries and the size of the workforce. The number represents how many disabling injuries there would be if a workforce was 100 people in total. A frequency of 1.0 means, for every 100 workers on site, one person is injured per year.

2006 GOALS	OUR PRINCIPLES
<ul> <li>conduct additional business integrity training related to anticorruption, antitrust and privacy laws, as well as our Code of Business Conduct;</li> <li>strengthen employee, contractor and supplier understanding of Code of Business Conduct expectations; and</li> <li>conduct third-party review of the TLM audit program and continue TLM audits.</li> </ul>	<ul> <li>comply with all applicable laws and regulations;</li> <li>apply our Code of Business Conduct wherever we operate; and</li> <li>seek contractors, suppliers and agents whose practices are consistent with our principles.</li> </ul>
<ul> <li>advance stakeholder relations processes and capability across the organization;</li> <li>implement a strategy to develop marketable skills among Aboriginal communities and find opportunities for employment; and</li> <li>complete a strategic review of our community partnership program for greater focus and impact.</li> </ul>	<ul> <li>strive within our sphere of influence to ensure a fair share of benefits to stakeholders impacted by our activities;</li> <li>conduct meaningful and transparent consultation with all stakeholders; and</li> <li>endeavour to integrate our activities with, and participate in, local communities as good corporate citizens.</li> </ul>
<ul> <li>maintain our focus on injury reduction;</li> <li>implement recommendations from our partnership forum with contractors to improve safety performance;</li> <li>develop new TLM performance indicators;</li> <li>strengthen processes to transfer and implement lessons learned from environment, health and safety events;</li> <li>improve workforce planning, build recruiting capabilities and retain existing employees;</li> <li>implement a President's Award to recognize outstanding safety performance achievements; and</li> <li>adapt business continuity plans to respond to a pandemic influenza scenario.</li> </ul>	<ul> <li>provide a healthy, safe and secure work environment;</li> <li>honour internationally accepted standards prohibiting child labour, forced labour and discrimination in employment;</li> <li>respect freedom of association and expression in the workplace;</li> <li>not be complicit in human rights abuses; and</li> <li>support and respect the protection of human rights within our sphere of influence.</li> </ul>
<ul> <li>strengthen internal controls and data management practices for GHG emissions and primary air pollutants;</li> <li>begin to develop an environmental information management strategy;</li> <li>broaden the application of Life-Cycle Value Assessment<sup>24</sup> tools;</li> <li>develop a corporate water strategy; and</li> <li>conduct an environmental and social impact assessment in support of the Fort Hills upgrader, and drilling programs in Trinidad and Tobago.</li> </ul>	<ul> <li>conduct our activities in a manner consistent with sound environmental management and conservation practices;</li> <li>strive to minimize the environmental impact of our operations;</li> <li>work diligently to prevent any risk to community health and safety from our operations or our products; and</li> <li>seek opportunities to transfer our expertise in environmental protection to host communities.</li> </ul>



24 A business analysis and decision-making methodology that helps the Company identify, examine and balance the social, environmental and financial implications of projects and product purchases. (See page 15 for more information).



# HERMAN VAN DRIEL

Formerly, Member of the Management Committee Tripoli, Libya Now, Country Manager, Nor International "What I like most about Petro-Canada is the hands-on, solution-focused business approach. The teams I have been part of always offer a dynamic and motivating work environment. Guided by strong business ethics, I have no doubt we will deliver on our strategies."

## We operate

globally and know that, no matter where we are, ethical business standards are critical.

# We understand

that trusting relationships with shareholders, communities, employees and partners are built over time.

# We recognize

that clear policies and a positive culture encourage people to "do the right thing."

# WE BELIEVE in conducting business

in a way which reflects how we would want to be treated.

We care about the way our business is conducted around the world. A good example is in Libya, where Petro-Canada has a 49% interest in Veba Oil Operations (VOO), a joint venture with the National Oil Company of Libya (NOC). We're making progress to support the operating, health, safety and environment standards there. This began formally with our work on the management committee. Over time, our relationship has grown and VOO's management have requested more support, which Petro-Canada has been pleased to provide. In 2005, for example, Petro-Canada employees were seconded to work directly with VOO in drilling and safety. This work is progressing well and VOO has requested that in 2006 we continue to provide employees who can help with technical and sustainability improvements. This partnership has also grown beyond the day-to-day operations. We sponsored and participated in a sustainability conference in Tripoli, and two NOC employees came to our contractor safety forum in Calgary. Our leadership hosted a Libyan delegation in Canada, showing them our operations and explaining our business practices. A good part of this progress is due to Petro-Canada's people, who can provide and receive feedback in a respectful way, allowing progress to be made for everyone's benefit.

# **BUSINESS CONDUCT**

# Leadership and Internal Controls

# RECEIVING GUIDANCE FROM THE EXECUTIVE CORPORATE RESPONSIBILITY STEERING COMMITTEE

Petro-Canada has an Executive Corporate Responsibility Steering Committee (ECRSC), which is made of up of senior executives from all of our businesses and Shared Services units. The ECRSC meets four to five times each year to provide strategic direction and align resources to achieve and report on commitments as outlined in our Principles for Responsible Investment and Operation.

In 2005, the ECRSC authorized the Company's climate change strategy, initiated a process to further evolve stakeholder engagement practices and finalized corporate-wide Guidelines for Security and the Protection of Human Rights.

In 2006, we will strengthen our non-financial governance assurance processes. The Company will also enhance strategies and make improvements to the areas of stakeholder relations, Aboriginal human resources and our environmental information management system.



To view our Principles for Responsible Investment and Operation, and Guidelines for Security and the Protection of Human Rights, visit our website.

## ENSURING COMPLIANCE WITH OUR CODE OF BUSINESS CONDUCT

Petro-Canada's Code of Business Conduct (the Code) guides all directors, employees and contractors in the Company's standards of ethical behaviour. Each is required to review, understand and agree to comply with the Code.

Training programs in 2005 included continuation of Petro-Canada's The Way We Do Business; A Workshop on Business Integrity. Through the year, more than 120 employees joined more than 380 employees who completed the course in 2004. Work is underway to strengthen training in a way that ensures a thorough understanding of the obligations and expectations set out in the Code. Training also makes certain the lines of communication



Steel plates for the De Ruyter project are cut at Zwijndrecht in the Netherlands. Suppliers were selected not only for their competitiveness, but also for their health, safety and environmental track records.

are clear. For example, if people are unsure of the appropriateness of a particular decision or behaviour, they know the courses of action available, such as openly discussing situations with their supervisors, human resources or environment, health and safety leaders, or Petro-Canada's Chief Compliance Officer.

Petro-Canada has had a Chief Compliance Officer since November 2003. This officer is responsible for advising employees on how to work without violating provisions of global legislation that deal with corruption and on the broader expectations outlined in the Code. The role of the Chief Compliance Officer was held by Alf Peneycad, Petro-Canada's Vice-President, General Counsel until his retirement. In early 2006, the National Post and ZSA Legal Recruitment named Mr. Peneycad Canada's General Counsel of the Year. Effective July 1, 2006, Rusty Miller became Vice-President and General Counsel of the Company, while Hugh Hooker became Chief Compliance Officer.

When discussion causes discomfort, employees are advised to report business conduct situations through Petro-Canada's confidential ethics hotline, which is available worldwide 24 hours a day, seven days a week. This hotline, introduced in 2004, is operated by an independent firm. Calls and concerns are reported monthly to Petro-Canada's senior

officers. This process is key to preventing non-compliance issues from arising. Petro-Canada has a low volume of hotline calls. We attribute this to the Company's open and honest culture, and the fact that the Chief Compliance Officer and other senior leaders routinely receive direct requests from employees seeking guidance on ethical decision making and principled actions. We continually review our processes to ensure they work well and consider if new practices could make them work better.

On an annual basis, the Chief Compliance Officer reports to Petro-Canada's Corporate Governance and Nominating Committee (the Governance Committee) on the Company's Corporate Standards and Conduct, and obtains certificates from named officers verifying that each such individual adheres to the Code. Annual certifications are also provided by Petro-Canada's senior financial officers in accordance with the Company's Code of Ethics for Financial Officers.

In 2005, Petro-Canada revised the Policy for the Prevention of Improper Payments (PPIP), which provides mandatory guidelines on certain activities and conduct to meet internal ethical standards, and which may fall under the scope of international legislation relating to anti-bribery and corruption including, for example, the U.S. Foreign Corrupt Practices Act and the Organization for Economic Co-operation and Development's Anti-Bribery Convention. Throughout 2004 and 2005, the Company's Chief Compliance Officer implemented individual and group seminars relating to PPIP and similar legislation. In 2005, more than 300 additional employees completed an online course that outlines their obligations related to the U.S. Foreign Corrupt Practices Act and PPIP. An online training course related to compliance with U.S. antitrust laws was developed and is being piloted for training of designated employees during 2006.

To read the Company's Code of Business Conduct, Code of Ethics for Financial Officers and Policy for the Prevention of Improper Payments, visit our website.

# ADHERING TO "BEST PRACTICE" CORPORATE GOVERNANCE STANDARDS

The Board of Directors (the Board) and management of Petro-Canada are committed to adhering to superior corporate governance standards and have adopted a "best practices" approach in all of their corporate governance initiatives. In accordance with the rules of the Canadian Securities Administrators and the TSX, the Board has developed sound corporate governance policies and procedures, which are monitored and reviewed on a continuous basis. Overall, the Company's corporate governance practices do not differ significantly from the NYSE Corporate Governance Standards.

The principal role of the Governance Committee is to assist the Board in:



Charlene Allen (left) and Curtis Stoyko (right) are part of a team of employees who have been working to meet the Sarbanes Oxley Act of 2002 (SOX) reporting requirements since 2004. The Company expects to be in a position to fulfill SOX 4.04 requirements by the end of 2006.

- · developing and implementing principles and procedures for the overall management of corporate governance;
- assessing the size, competencies and skills of the existing Board and proposing qualified candidates as nominees for election to the Board and its Committees (Petro-Canada has five standing Committees);
- · conducting Board, Committee and individual Director evaluations; and
- overseeing the orientation, education and development of members of the Board.

The Governance Committee undertook a review of the Company's governance practices in 2005 and, in particular, considered the Corporate Governance Handbook. Following this review, the Governance Committee approved revisions to the Board mandate and position descriptions for the Board Chair, Chief Executive Officer, Corporate Secretary and Committee chairs. In addition, the remaining Board Committees approved revised versions of their mandates upon recommendation from the Governance Committee. In accordance with National Instrument 58-101 (NI 58-101), a copy of the Board mandate is published as Appendix 1 of the Company's Management Proxy Circular dated March 7, 2006 (the Management Proxy Circular).

During 2005, an unapproved French language version of the second quarter financial statements was inadvertently released early by the Company's newswire service provider, resulting in Petro-Canada breaching its public disclosure standards. Petro-Canada issued a fully approved release in both official languages within hours of the errant release. The incident prompted a full review of processes to improve the security of our disclosure. The company used the TapRooT<sup>®</sup> root cause analysis system to review the issue. This is the same process used to review operational events.



Details of the Company's alignment with the NYSE Standards, SOX and NI 58-101 can be found on our website. A copy of our Management Proxy Circular and corporate governance practices is also available on our website.



In 2005, the Institute of Corporate Directors (ICD) recognized Petro-Canada's chairman, Brian MacNeill, with a Fellowship Award. The ICD is the only membership association in Canada solely representing the profession of directors. The Fellowship Award recognizes directors who have distinguished themselves for bringing sound governance leadership to Canadian boardrooms. Mr. MacNeill was also appointed as a member of the Order of Canada in 2005.

## **Management Systems**

### LEVERAGING OUR TOTAL LOSS MANAGEMENT FRAMEWORK

Total Loss Management (TLM) is a management system that helps guide our business. Petro-Canada's TLM framework provides a systematic approach to manage risks related to the environment, employee and contractor health and safety, security, stakeholder relations and asset integrity.

The 10 TLM elements are:

- 1. leadership
- 2. health and safety
- 3. physical asset system integrity and reliability
- 4. contractor management
- 5. environmental management systems

In 2005, the three-year process of revising the TLM standards was completed. Revisions to the final three of the 10 TLM elements were approved by the executive leadership team in October 2005. The three elements updated in 2005 were audits and inspections, security management and emergency preparedness, and event management. The Company developed online tools to help employees affected by changes to the TLM standards understand their roles and responsibilities.

In addition to updating elements of TLM, in 2005, Shared Services, the International business unit and U.S. Rockies operations also made significant progress in implementing the TLM system.

- 6. employee work practices, capability and performance
- 7. audits and inspections
- 8. stakeholder relations
- 9. security management and emergency preparedness
- 10. event management



A TLM audit of the Hanlan Robb gas plant was conducted in 2005. The plant received high scores in the areas of health and safety, audits and inspections, and environmental management systems. Areas for improvement included physical asset system integrity and reliability, and contractor management.

Annual TLM self-assessments continue to be conducted by all parts of the organization, with improvement opportunities identified and incorporated into yearly work plans. In 2005, six TLM audits were completed. Audits were completed for the Edmonton refinery ultra-low sulphur diesel project, the Downstream retail network, central Alberta natural gas facilities, North American Natural Gas seismic activities and facilities engineering activities, and the United Kingdom (U.K.) continental shelf upstream operations. The audit results indicated strong health and safety processes, increased alignment of contractor practices with the TLM system, adoption of the project delivery model and maturity of stakeholder relations processes. Areas for improvement include strengthening change management processes and a better understanding and application of risk assessment criteria.

In early 2006, we initiated a comprehensive third-party assessment of our TLM audit program. Recommendations will be reviewed with the executive leadership team and the Environment, Health and Safety Committee of the Board of Directors by the third quarter of 2006. Any improvements will be implemented by 2007.

Y To read our TLM policy visit our website.

# MAKING DECISIONS BASED ON LIFE-CYCLE VALUE ASSESSMENT

Life-Cycle Value Assessment (LCVA) is a business analysis and decision-making methodology that helps employees, project teams and business units identify, examine and balance the social, environmental and financial implications of projects and product purchases. The tool is based on the premise that good information enables better decisions. LCVA covers the full life-cycle of a new or existing project, from upfront planning and material and equipment selection, through to final decommissioning and reclamation. Through the process, new ideas and opportunities emerge to improve technical designs, to reduce environmental pollutants and other impacts, and to increase efficiencies.



Life-Cycle Value Assessment This tool helps Petro-Canada identify, examine and balance critical implications of proposed projects.

Petro-Canada adopted the LCVA planning methodology in 1997 in consultation with the Pembina Institute for Appropriate Development (Pembina). The Company continues to work with Pembina in the development of the LCVA process, tools and training programs to fit Petro-Canada's broad base of assets.

LCVA was integrated into the project delivery model in 2003 and incorporated into our TLM standards in 2004. In addition, in the last few years LCVA methodology has been updated to better fit Petro-Canada's diverse assets and projects. The level of LCVA analysis is guided by consideration of both the number of potential social and environmental issues and the dollar value of the decision. Petro-Canada has increased the number, scope and scale of projects assessed because the process is so flexible. In 2005, assessments ranged from the Fort Hills upgrader location selection to service station activities, and from solutions for waste disposal to water use.

Increased use of LCVA requires increased employee understanding and awareness of the methodology and tools. In 2005, training sessions were held and courses were introduced for employees in the Downstream business. The LCVA process was also incorporated into the Downstream economic evaluation guidelines. In 2006, an LCVA overview will be added to the upstream economic evaluation guidelines, LCVA "train the trainer" courses (designed by Pembina) will be held and more Petro-Canada personnel will be made aware of the benefits to projects and decisions.

🔥 A presentation on Petro-Canada's LCVA, as well as a link to Pembina's site, can be found on our website.

## **Corporate Reputation**

### CONDUCTING GASOLINE BUYER RESEARCH

In 2002, 2004 and 2005, Petro-Canada conducted telephone surveys with gasoline buyers in areas where Petro-Canada has significant upstream production and in key downstream markets. The surveys were designed to measure the Company's corporate reputation. The key measure is the corporate reputation index (CRI), which is made up of the percentage of survey respondents providing high scores on three measures: overall reputation today, overall rating of the Company and trust of Petro-Canada.

The 2005 research indicated a weakened position for Petro-Canada among Canadian national downstream companies, although there were declines across all companies. In the Canadian upstream market of Fort McMurray, Petro-Canada's CRI lagged behind two peer companies, but was ahead of one other company. In St. John's, Petro-Canada not only had the leading CRI, but was also the only company to improve its CRI from 2004. Within our peer group in Canada, Petro-Canada is still viewed as a social responsibility leader and as the company most likely to do what is best for society.

The main factor driving the decline in the CRI ranking was higher gasoline prices. This was a key factor given that the survey was conducted weeks after North American hurricanes impacted refinery capacity and drove up gasoline pricing. Nevertheless, we are concerned with the declining CRI because a strong corporate reputation is essential to ongoing business success. We are currently in the process of developing an action plan.

### RECEIVING EXTERNAL AWARDS AND RECOGNITION

Petro-Canada received formal recognition of its high standards for corporate governance practices and disclosure in 2005. The Globe and Mail's Report on Business Corporate Governance Awards ranked Petro-Canada's corporate governance practices in the top 6% of the more than 200 evaluated companies. Our rating has consistently improved over the last three years. The Globe and Mail also conducts a survey of corporate social responsibility practices, in which Petro-Canada was ranked second in the Canadian oil and gas sector in 2005. This survey is based on the Jantzi Social Index, which evaluates corporation's environmental, social and governance performance.

In 2005, Ethical Funds, a company promoting socially responsible investing, included Petro-Canada in its "50 Best Corporate Citizens" publication, based on various factors such as Board independence and diversity. Covalence, a Geneva-based monitoring organization, acknowledged Petro-Canada's strong ethical practices.



For the third year in a row, Petro-Canada ranked as one of the 25 most respected corporations in Canada. Compiled by polling firm Ipsos-Reid, the survey asked 250 Canadian Chief Executive Officers to grade organizations in eight categories. Petro-Canada ranked 24th overall this year, compared with 15th in 2004 and 25th in 2003.



Both in 2005 and again in 2006, our investor relations website was ranked fourth out of 38 large cap energy sector companies in the world for its completeness, transparency, service attitude and ease of use.



A list of all our awards and recognitions can be found on our website.

### IMPROVING CANADA RETAIL SITE CUSTOMER SATISFACTION

In 2005, more than 300,000 Canadian retail service station customers completed a service survey on the telephone or on the web. Eighty-seven per cent "agreed," "somewhat agreed" or "strongly agreed" that they would recommend Petro-Canada stations to their family and friends. Our goal is to ensure Petro-Canada gasoline stations are perceived as having the highest service rankings among the major gasoline retailers in Canada. To this end, Petro-Canada is improving frontline service delivery to customers with a focus on high service standards and quick resolution of complaints. A measurement system has been developed to track progress toward this goal.

To learn more about our retail service offerings in Canada, visit our retail website.

### COMMUNICATING ABOUT GASOLINE PRICING

Petro-Canada recognizes that the price of gasoline in Canada is a concern for our customers.

Excluding taxes, two-thirds of the price of gasoline is driven by the price of crude oil, which, in 2005, had the highest recorded price in the history of the oil market. One contributor to high prices is a tight supply/demand balance around the world. Petro-Canada understands its responsibility to the market, investing a substantial portion of its cash flow over the past five years into bringing on additional oil supply.

Consumers are also asking for increased refinery capacity as part of the solution. Although there are half as many refineries in Canada today as there were in 1970, they have collectively increased the supply of product by 50%. Along with being efficient, refineries produce more environmentally friendly products with fewer plant emissions. Petro-Canada (which operates two of 17 refineries in Canada) spent \$1.6 billion over the last three years to meet regulatory low-sulphur specifications.

At a retail level, there is fierce competition. Over the past five years, Petro-Canada's profit on gasoline sales was between 1% and 2% despite being the leader in urban market share and throughput per site in these markets.



In 2005, Certigard (Petro-Canada's car repair network) was named the industry leader in automotive service according to the J.D. Power and Associates 2005 Canadian Customer Commitment Study. The study measured the service satisfaction and loyalty of 14,608 owners of two to 12-year-old vehicles during December 2004 and April 2005. Certigard specifically set out to improve customer handling processes beginning in 2002.



In 2005, Petro-Canada and Citibank launched the Citi Petro-Points MasterCard. The card uses radio frequency identification so consumers just tap their card against the in-store PayPass reader and the payment is instantly processed for speed and convenience. Petro-Canada and Citibank were the first in Canada to launch this technology to the public. It was introduced in Ontario late in 2005 and will be available across Canada in the fall of 2006.



In addition, Canadian governments have conducted more than two dozen studies, inquiries and probes into gasoline pricing over the last 20 years. All reached the same conclusion: it's a highly efficient industry that is significantly impacted by world events.

Petro-Canada will continue to provide consumer communication on gasoline pricing. The Company will also continue to invest in upstream supply, ensure refinery efficiency and provide fair pricing at the pumps.

More information about gasoline pricing can be found on our website.



# JOCELYN OULTON

Administrative Assistant / Community Investment Field Co-ordinator Regional Office Fort McMurray Oil Sands "I like the fact that Petro-Canada takes a genuine interest in the community and is willing to invest their dollars locally. Petro-Canada is a recognized and respected competitor in the oil sands industry and we're really starting to make our mark here in Fort McMurray."

# We understand

our responsibility to be a good neighbour, employer and corporate citizen.

# We recognize

that diversity of perspective, when respected, helps to build success.

# We care

about the safety and sustainability of the communities in which we are privileged to operate.

**WE BELIEVE** our presence can bring socio-economic benefits and opportunities to the areas where we work.

Developing oil sands resources in northern Alberta is one of the keys to our business growth. With other energy companies also developing in the area, community needs are significantly increasing. We want to do our part. Our approach is to work with our neighbours to choose lasting initiatives where we can really make a difference. In Fort McMurray, we have a great partnership with our friends at Keyano College. We're helping them build a new sports and recreation facility (the first since the early 1980s). This state-of-the-art, 150,000-square-foot centre is expected to be ready for the community to enjoy in 2007. We're also a significant contributor to trades and technologies scholarships at the College, something which benefits both recipients and our need for skilled labour. Health is another area where we can make a lasting difference. In co-operation with the regional health foundation, we've helped train health care professionals on the use of new MRI equipment and built a play-therapy centre at the hospital. In Fort McKay, we worked with other companies in the area to build a community daycare for children and elders, a way to improve their quality of life and create employment. Whether in northern Alberta or around the world, Petro-Canada wants to be a positive factor in the communities where we live and work.

# COMMUNITY

# **Stakeholder Engagement**

Stakeholder engagement takes time, transparency, two-way communication and a willingness to listen. Petro-Canada continues to seek input from stakeholders through open house events, face-to-face meetings, workshops, presentations, community newsletters, website information and participation in local and regional initiatives.

Last year, the Company's senior leaders identified stakeholder relations as critical to supporting the execution of Petro-Canada's business strategy. In the summer of 2005, Kathy Sendall, Senior Vice-President of the North American Natural Gas business, spoke to The Economist magazine's oil and gas roundtable conference in Houston, Texas on stakeholder relations. In her remarks, she said, "As natural gas supply becomes more constrained and companies like Petro-Canada move into new and more challenging areas to secure supply for North American markets, good stakeholder relations become even more important for our business. I will go so far as to say that excellence in stakeholder relations can be a true competitive advantage."

Petro-Canada considers stakeholder relations to be a strength within the Company; however, with organizational growth and increasing competition for talent, this area will face increasing pressure. To ensure Petro-Canada can continue to be a strong performer in stakeholder engagement, a 2005 workshop among internal stakeholder relations experts reviewed the way Petro-Canada manages its relationships. As a result, the Company is developing a strategy to align and enhance stakeholder relations processes and leverage strengths to support business strategies.

As part of this strategy development, Petro-Canada intends to:

- engage targeted external stakeholders to determine our strengths and weaknesses, and assess their expectations of us;
- · review our organizational structure for engaging stakeholders;
- · develop guidelines to encourage a consistent approach and good data management;
- · strengthen internal training and capability development; and
- embed stakeholder engagement processes into project execution, as well as ongoing business.

A copy of Ms Sendall's speech can be found on our website.

# RECEIVING COMMUNITY SUPPORT FOR THE CACOUNA ENERGY PROJECT

Petro-Canada and TransCanada Pipelines Limited are in the process of developing a project for a liquefied natural gas (LNG) re-gasification facility, named Cacouna Energy, in Quebec. It is expected that the proposed facility would be capable of receiving, storing, and regasifying imported LNG. In 2005, the project gained majority support from the citizens of the Gros-Cacouna village and of the region of Riviere-du-Loup, due in large part to the project preconsultation process. Several workshops and information sessions allowed for open discussion about our consultation practices, socio-economic impacts to the community, and safety and environmental concerns.



Andrew Pelletier (left), Communications Director for the Cacouna Energy project, joins Huguette Guerette (right), who led positive support of the LNG project in a public referendum in Gros-Cacouna.

🔄 To learn more about this project visit the Cacouna Energy website at www.energiecacouna.ca.

### TURNING OPPOSITION INTO "BEST PRACTICES" AT THE WILD TURKEY PROJECT

In September 1999, Petro-Canada filed a Plan of Development (POD) with the U.S. Bureau of Land Management (BLM) to develop 164 coal bed natural gas wells in the Powder River Basin area of northeast Wyoming. The project was met with opposition from the BLM, as well as landowners and environmental groups, because it was considered to be in an environmentally sensitive area. Petro-Canada undertook extensive consultation and listened to concerns.

The Company's efforts to mitigate concerns were acknowledged in January 2005, as evidenced by these BLM comments: "BLM found the work exceptional and appreciates the extra effort Petro-Canada Resources (USA) Inc. put forth in following the conditions of approval, engineer designs, visual resources concerns and most importantly, minimizing the footprint of disturbance. BLM will use the Wild Turkey Phase 1 POD as an example of proper development in the Powder River Basin for future projects from Petro-Canada, as well as other operators."

### WORKING WITH THE FISHING COMMUNITY IN TRINIDAD AND TOBAGO

Petro-Canada signed three new exploration licences in Trinidad and Tobago in July 2005. In anticipation of the finalization of the licences, preparations had already started for shooting two 3D seismic surveys. Although not required by local legislation, environmental impact assessments were carried out for both survey areas. They clearly identified the importance of fishing activity to the local communities and the surveys' potential to impact their operations. A clear strategy was developed to ensure that the fishing communities understood how the survey vessel would operate, especially the safety implications, and to keep them informed as to where the vessel would be working. A basis for compensation was also agreed upon with the relevant authorities in the event Petro-Canada asked fishermen to move, damaged their equipment or prevented them from fishing. Extended members of the fishing community, such as vendors and processors, were included in the compensation scheme. The process kicked off with town hall meetings in fishing communities. An onshore fishing liaison officer was appointed

for each survey area to maintain dialogue with the communities, provide daily information on where the survey vessel was working and be the first point of contact for any compensation queries. Offshore fishing liaison officers, employed from the local community, led any interaction with fishing vessels at sea.

Trinidad and Tobago is well known for its populations of sea turtles and marine mammals. A "soft start" was used in both surveys to gently encourage them away from the survey equipment. The seismic crew was also trained to identify and record sea turtles and marine mammals encountered in the vicinity of the survey. Petro-Canada took the opportunity to produce a poster guide of sea turtles and marine mammals for distribution to the community.



Representatives of fishing communities in the Gulf of Paria, Trinidad, attended public meetings before the start of Petro-Canada's 3D seismic surveys in Blocks 1a and 1b.

A copy of our poster showing marine life in Trinidad and Tobago is found on our website.

### **Advancing Sustainable Development With Others**

Petro-Canada is a member and active participant in several key organizations that advance business leadership in sustainable development.

The Company is a member of the World Business Council for Sustainable Development (WBCSD). This Geneva-based organization brings together more than 190 international companies in a shared commitment to sustainable development through economic growth, ecological balance and social progress. Through participation in WBCSD, Petro-Canada better understands the business value of sustainable development and benefits from the "best practices" shared by member companies. We are also a member of the Canadian Business for Social Responsibility organization, a non-profit, business-led group whose goal is to improve social, environmental and financial performance.

Petro-Canada is a signatory to the United Nations Global Compact (the Compact). Members of this international initiative include hundreds of companies around the world, as well as international labour and civil society organizations. The Compact's mission is to advance 10 universal principles in the areas of human rights, labour, the environment and anticorruption.

The Company is also a founding member of the Business Leaders' Network at the Boston College Center for Corporate Citizenship. This membership-based research organization works with global corporations to help them define, plan and put into operation corporate citizenship policies and processes. The Network also provides Petro-Canada with an open forum to exchange "best practices" and benchmark our efforts against our peers.

In addition, Petro-Canada participates in industry associations and stakeholder groups. We are an active member of the Canadian Association of Petroleum Producers (CAPP)<sup>25</sup>. CAPP members work with governments, communities and stakeholders to analyze key oil and gas issues. The group also strives to achieve consensus on industry codes of practice and operating guidelines that meet or exceed government standards. Members work together with CAPP resources to enhance the economic well-being and sustainability of the Canadian upstream petroleum industry in a socially, environmentally and technically responsible manner. In March 2006, CAPP elected Kathy Sendall, Petro-Canada's Senior Vice-President, North American Natural Gas, as Chair of its Board of Governors.

As a refiner, distributor and marketer of refined products, Petro-Canada is an active member of the Canadian Petroleum Products Institute (CPPI)<sup>26</sup>. This industry association represents the views of its membership on business, environmental, and health and safety issues.

Petro-Canada is also active in the International Association of Oil & Gas Producers (OGP) based in the United Kingdom, which encompasses most of the world's leading publicly-traded, private and state-owned oil and gas companies and associations, and major upstream service companies.





Links to these organizations can be found on our website.

# **Aboriginal Relations**

To date, Petro-Canada's Aboriginal relations activities have been focused primarily on Canadian operations. Over time, we expect to broaden our practices to include all local communities and indigenous peoples with whom we interact. We recently had preliminary discussions with Native Americans near our U.S. Rockies operations.

In Canada, Petro-Canada's goal is to establish and foster open and mutually beneficial relationships with Aboriginal peoples where we operate and in the broader context. We do this by building relationships, providing employment opportunities, focusing on education and training, developing business opportunities and creating community partnerships.

Petro-Canada supports training programs that meet the specialized employment requirements of Aboriginal peoples. Our support of Aboriginal scholarships began in 1985. This commitment continues through our long-term partnership with the National Aboriginal Achievement Foundation (NAAF). In 2006, Petro-Canada's cumulative contributions to NAAF for education awards will surpass \$1 million. The Company also partners with educational institutions such as the University of Northern British Columbia, the University of Calgary and the Southern Alberta Institute of Technology.

We continue to sponsor a Stay in School program which was piloted two years ago in northeast British Columbia by Petro-Canada and four other companies. The program identifies the challenges of status-quo policies in addressing the educational needs of Aboriginal youth and provides a blue print of ideas and strategies that work to improve Aboriginal education and labour outcomes. The program expanded from seven communities and 254 recipients in 2004 to nine communities and 505 recipients in 2005.

In 2005, we created an Aboriginal human resources strategy that commits to providing equal access to employment, and helps management and staff understand the cultural diversity of Aboriginal peoples within the Company's operations. It also encourages Aboriginal students to graduate from high school and continue with post-secondary education, and supports the development of educational programs that enable Aboriginals to meet Petro-Canada's employment and business requirements.

The number of employees and contractors Petro-Canada hires is constantly growing. Over the last few years, Aboriginals represented about 1% of our employees, but we expect that Aboriginals will represent a growing number of the employee and contractor workforce engaged by Petro-Canada in various projects, particularly as we develop our Fort Hills oil sands project.

<sup>25</sup> CAPP is an organization that represents 150 member companies who explore for, develop and produce more than 98% of Canada's natural gas, crude oil, oil sands and elemental sulphur.

<sup>26</sup> CPPI is the professional association for Canadian companies involved in the refining, distribution and/or marketing of petroleum products.

### **DEVELOPING ABORIGINAL BUSINESS OPPORTUNITIES**

Petro-Canada actively supports business development to increase local capabilities, particularly in areas where the Company has long-term operational commitments. As an example, First Nations entrepreneurs are encouraged to open Petro-Canada retail stations. To date, five stations have successfully opened and there are plans to open more in 2006. Two of these sites have been recognized for their success by the Federation of Saskatchewan Indian Nations' First Nations Business awards. Another example is the development of Petro-Nor in northern Quebec, where Petro-Canada worked with regional James Bay Cree communities to build a successful fuel distribution business that serves the entire James Bay territory. In northern British Columbia, we supported an MBA student who completed a business case for the Halfway River First Nation to develop an on-reserve gravel resource. This will bring employment and economic benefits into the community, and provide Petro-Canada and other companies in the area with a source of gravel. The overall result is positive for Aboriginal business and employment, and positive for business at Petro-Canada.

### IMPROVING OUR CO-OPERATION WITH THE FORT NELSON FIRST NATION

An issue arose in 2005 when Petro-Canada inadvertently trespassed on reserve land near Fort Nelson, British Columbia. When this violation was discovered, Petro-Canada suspended the operations in order to resolve the matter. Using an established co-operation protocol, Petro-Canada worked with the community to undertake a root cause analysis to determine how the situation had occurred. Petro-Canada takes full responsibility for this unfortunate event. As a result of the Company's prompt attention to this situation, the relationship with the First Nations people was strengthened and all approvals were issued.

# ACCEPTING THE INAUGURAL COLLABORATIVE RELATIONSHIPS AWARD

In October 2005, the Halfway River First Nation and Petro-Canada jointly accepted the inaugural Development of Collaborative Relationships Award from the Oil and Gas Commission of British Columbia. This award indicates just how far relations between the community and Petro-Canada have come. Four years ago, the band imposed a lengthy blockage of an access road on its land, concerned that the construction of a Petro-Canada pipeline would mar traditional hunting grounds. The award was the result of several years of building and sustaining a co-operation protocol between the Company and the community.

For more information on our Aboriginal policy, Aboriginal awards and who to contact, please see our website.



As part of Petro-Canada's Aboriginal community partnership program, the Company donated \$100,000 to the Petro-Canada Kah Naa Tah Pii (All Peoples) Cultural Hall in 2005. This facility will be used by Hull Child and Family Services for spiritual ceremonies, training sessions and programs, and other community activities. Here, John Young, Manager, Aboriginal Affairs, attends the opening of the hall.

# **Community Partnership Program**

Our community partnership program supports our five businesses and geographically diverse operations. With a focus on our stakeholders, the program facilitates Petro-Canada's ability to "be a good neighbour," making an impact with our funding and our employee involvement.

In 2005, Petro-Canada invested more than \$7 million globally in cash and in-kind contributions.

Petro-Canada is one of a group of national Disaster Services Partners with the Canadian Red Cross. We commit \$50,000 annually to the Red Cross to assist with disaster relief efforts around the world. This proactive yearly pledge allows the Red Cross quick access to needed dollars as emergencies arise. We draw down on this funding commitment to match employee disaster relief donations throughout the year. Any residual monies not used for matching donations are issued at year end to the Red Cross. In years with multiple disasters, we can well exceed this \$50,000 commitment. Employees and retirees highly value this program and have been extremely generous, raising more than \$450,000 between 1997 and 2004 for disaster relief efforts around the world. The year 2005 was unfortunately a year with a sharp

increase in disasters. Employee donations and Company matching totalled more than \$515,000 for disaster relief efforts, including recovery support for those affected by the Asian tsunami, southern Alberta flooding and hurricanes in the U.S.

Petro-Canada is also a strong supporter of United Way campaigns in North America. Employees and the Company achieved a record contribution of nearly \$2.6 million in 2005. Individual employee giving accounted for more than \$1.6 million, a 14% increase over 2004. Due to the Company's formula of matching employees' year-over-year increases, Petro-Canada's corporate donations

ividual employee giving accounted lion, a 14% increase over 2004. formula of matching employees' Petro-Canada's corporate donations

rose to \$918,400, with an additional \$40,000 contributed toward the cost to run our employee campaigns. Along with raising funds, the campaigns also increase awareness of community needs through events and volunteer opportunities. Hundreds of employees took part in Days of Caring events, which included helping out at local food banks or shelters.

New to the program in 2005 was the community of St. John's, Newfoundland and Labrador.

Petro-Canada recently completed a strategic review of its community investment program to better align with its plans for future growth. Petro-Canada's new "community partnership program" will focus on education and the skills shortage, as well as the environment, with a focus on water. In supporting causes important to local communities where our employees live and work, funding and resources will be directed to community infrastructure, youth programs and cancer prevention. The United Way will continue to be the backbone of the Company's social services support. The Volunteer Energy Program will be enhanced to better support the efforts of employees and retirees in the community.

Petro-Canada will shift its focus from supporting a broad range of non-profit organizations to larger investments in fewer organizations. Discontinuing support to worthy causes is never easy, but we believe changes to our program will lead to a higher level of community contribution, with more positive and measurable impacts than in the past.



**Annual Community Investment** 

(\$ millions)

Cash contributions

In-kind contributions

Petro-Canada employees in Calgary help kick off the United Way campaign during a march downtown.



The spring of 2005 marked the largest number of Petro-Points donated to the Canadian Cancer Society over the past five years. At nearly 52 million points, the 2005 campaign saw a 112% increase from 2004 donations. Donated Petro-Points help the organization offer cancer information services, telephone-based peer support and a volunteer transportation program.

An important element of community partnership success is measurement. Petro-Canada is one of 10 founding members of the London Benchmarking Group Canada (LBG Canada). The LBG model is internationally recognized as the most comprehensive management framework used to manage, value, measure and benchmark corporate community involvement programs.

### PROMOTING VOLUNTEERISM AMONG EMPLOYEES AND RETIREES

Petro-Canada encourages employees and retirees to contribute to and get involved with non-profit organizations. The Volunteer Energy Program provides many options, including:

- an alumni grant program for employees and retirees who make contributions to public post-secondary institutions;
- Teams For Charity, which supports employees, retirees, and their families and friends who raise pledges and participate in charity runs or other such fundraising activities;
- a volunteer grant for employees and retirees who volunteer a minimum of four hours per month on an annual basis with a registered charity or registered non-profit organization. In 2005, Petro-Canada provided 421 grants of \$500 each to non-profit organizations supported by employees and retirees who do community work more than \$1.5 million since 1992; and
- the United Way's annual fall campaign and the year round Days of Caring program, where employee teams volunteer at a local charitable organization.

As a result of feedback from employees and retirees, the Volunteer Energy Program will be enhanced in 2006.

### MAKING MUSIC AT THE PETRO-CANADA HALL IN ST. JOHN'S

The Petro-Canada Hall at the Memorial University School of Music in St. John's, Newfoundland and Labrador was opened in March 2005. Constructed with a \$1.2 million donation by Petro-Canada (one of the largest donations in our history), the facility is used for teaching, research and performances, in addition to being available for local community groups. The hall allows the School of Music to expand its performance and conference capabilities.

# TURNING SURPLUS LAND INTO A PARK IN NORTHERN BRITISH COLUMBIA

In early 2005, Petro-Canada sold land it owned beside the Charlie Lake Provincial Park to the Province of British Columbia. Total appraised value of the land was \$325,000. The Province invested \$216,000 to acquire it, with Petro-Canada donating the remaining \$109,000 worth of value. Petro-Canada donated the \$216,000 proceeds of the sale back to the Province for site cleanup, trail creation and construction of a viewing platform. The money will also fund a second year of the Education and Training Initiative, which supports oil and gas training programs in British Columbia, and capital for the Oil and Gas Centre of Excellence at the Northern Lights college in Fort St. John.



As a result of Petro-Canada's donation, the Charlie Lake park will expand by 77.3 hectares.

### FUNDING A LIBYAN HIV/AIDS CENTRE FOR CHILDREN

In late 2004, the HIV Action Plan for Benghazi was launched by the European Union to support children and mothers in the region infected with HIV/AIDS. The purpose was to provide policy advice and technical support to the Libyan health authorities and upgrade to international standards the capacity of the Benghazi Centre for Infectious Diseases and Immunology. Petro-Canada helped fund the visit of two Canadian HIV physicians to the Benghazi clinic to consult on many of the complex cases. In 2005, Petro-Canada purchased tele-medicine equipment for the clinic. The equipment gives the 12 on-site physicians instant access to the latest research, treatment and care of HIV/AIDS patients and allows them to consult with their international colleagues.



Children in western Venezuela enjoy lunch in a refurbished school dining room thanks to our contributions. ExxonMobil and Petro-Canada are helping provide health care and education facilities to residents of La Ceiba and Santa Apolonia. Six schools and five health clinics were renovated and equipped, including two care centres to accommodate the elderly. The contributions also are resulting in health checks and screenings twice a year for hepatitis, dengue and yellow fever.



Seven-year-old, Qweci Minto plants flowers during Kidvestment Day at the Canadian National Institute for the Blind in Calgary. Kidvestment encourages adults to spend more time with the children in their lives, while providing an opportunity to teach youth the rewards of volunteering.

### **ECONOMIC CONTRIBUTION TO COMMUNITIES**

Petro-Canada's financial performance is an indication of how well we develop and deliver energy products and services. In the process, we also create jobs, support suppliers, pay taxes and royalties to governments, and provide investment value to shareholders.

\$ million Cdn unless otherwise stated, unaudited	2005	2004 20	
For governments			
Taxes			
Canadian federal and provincial	897	680	659
Property and other	62	72	64
Foreign	1,146	744	579
Total taxes	2,105	1,496	1,302
Taxes collected minus value-added credits <sup>27</sup>	2,837	2,929	2,825
Royalties			
Canada	672	525	501
United States	28	11	0
International	1,285	1,071	995
Total royalties	1,985	1,607	1,496
For shareholders			
Dividends	181	159	106
Share buy backs <sup>28</sup> (number of shares)	8,333,400	13,736,164	0
Share price (Toronto Stock Exchange)			
At year end (\$)	46.65	30.59	31.96
Range during the year (\$)	29.51-50.80	27.93-34.75	23.42-32.06
For employees			
Total payroll	570.8	561.4	547.2

27 Petro-Canada collects and pays a variety of indirect taxes in jurisdictions in which the Company operates. Indirect taxes include value-added taxes, retail sales taxes, fuel taxes, environmental levies and property taxes. The table details approximate indirect taxes collected or directly paid by the Company and its affiliates, excluding International business unit operations and domestic retail sales taxes paid directly to vendors, from significant operations.

28 Quoted on a post stock-dividend basis.

# Supporting the Olympics and Paralympics

A highlight of 2005 was when the Vancouver Organizing Committee for the 2010 Olympic and Paralympic Winter Games (VANOC) announced Petro-Canada as its National Partner in the oil and gas category. The eight-year agreement provides us with sponsorship rights for the 2010 Olympic and Paralympic Winter Games and for the Canadian Olympic Team at the Torino 2006, Beijing 2008, Vancouver 2010 and 2012 Olympic Games.

Petro-Canada's commitment is valued at \$62.0 million. It includes an investment of \$35.5 million in products, services and marketing support (including fuel and fuel-related products) to be used by VANOC, \$17.5 million in cash and potential glassware royalties to VANOC and \$9 million in athlete support through numerous programs.

Even before becoming a national partner, Petro-Canada had a long history with the Olympic movement going back to the Torch Relay leading to the Calgary Olympic Games in 1988. Some examples of our efforts include:

- our funding of the Torch Scholarship Fund (since 1988, we have awarded more than 2,000 scholarships to Canadian athletes and coaches);
- our role as a contributing partner to Own the Podium, a fund designed to help Canada become the number one nation in terms of medals won at the 2010 Olympic Winter Games in Vancouver;
- our creation of the James Worrall Flag Bearer Award, where we recognize opening and closing ceremony Canadian flag bearers in the Olympic and Paralympic Games;
- our support to coaches by sponsoring the Coaching Association of Canada, recognizing coaches at events during the Olympic Games and developing the Coaching Excellence Awards;
- our launch of the Paralympic Equipment Fund in November 2005, an initiative to increase the availability of high-performance Paralympic sports equipment;
- our partnership with the Canadian Paralympic Committee to sponsor It's the Real Deal, a web-based program to help young students learn more about people with disabilities, the Paralympic Games and Paralympic sports; and
- our efforts to co-ordinate donation of Petro-Points from our employees and customers (more than 22 million this year) to help support Canadian Olympic and Paralympic Athletes and coaches.

Our efforts are at the grassroots level - helping young Canadians in our communities achieve their dreams.

More information on our Olympic and Paralympic support is available on our website.



Boris Jackman (left), Executive Vice-President, Downstream, presents the James Worrall Flag Bearer Award to Olympic speedskater, Cindy Klassen. This Petro-Canada award applauds the role of Canadian flag bearers in leading the Canadian teams into the Olympic and Paralympic stadiums.



Vancouver Olympic Committee Chief Executive Officer, John Furlong (right) congratulates Ron Brenneman on Petro-Canada's successful Olympic sponsorship bid.

### **COLLEEN STEVENSON**

Leader, Environment, Health and Safety Processes and Loss Management Systems Oakville Downstream

1

"I am proud to be an employee of Petro-Canada for many reasons, but two stand out clearly. First, the values, ethics and principles that come with being a responsible organization align with my own. Second, it's the people. Working with and providing services to such dedicated and capable people in the organization is truly rewarding."

## We encourage

employees to be results-focused, decisive, trustworthy, professional and respectful.

## We support

the protection of human rights within our sphere of influence.

### We honour

internationally accepted standards prohibiting child labour, forced labour and discrimination in employment.

# **WE BELIEVE** in providing those working on our behalf with a healthy, safe and secure environment.

Part of providing a respectful work place is being cognizant of how you treat people, not just when the business expands and grows, but also when operations are modified or closed. In 2003, Petro-Canada decided to close the refining operations at Oakville and asphalt operations at its Mississauga facility. Given environmental concerns, growing competition and the need to invest in fuel quality standards, we chose to consolidate our Eastern Canada refinery operations in Montreal. This decision impacted 375 employees, including 125 contract positions. We committed to support these employees through the transition. Our efforts included looking for redeployment opportunities within Petro-Canada and assisting individuals transition to new opportunities or retirement. We provided access to job fairs, resume assistance and our Employee Assistance Program. By May 2005, many employees had transitioned to opportunities at our Mississauga, Edmonton, Montreal and Calgary-based operations, while others, with our re-employment and transition support, found new opportunities or opted to retire. As Petro-Canada continues to evolve, we will continue to support employees who are impacted by business decisions. Given the tremendous growth forecasted for the Company over the next decade, in most cases this will mean additional opportunity and learning. But when facilities are closed down, like in Oakville, we'll be there too.

# WORKING CONDITIONS AND HUMAN RIGHTS

# Zero-Harm

Zero-Harm is based on the belief that injuries and illnesses are foreseeable and preventable – both on and off the job. It reflects our value for people. It states the principle that occupational injury or illness is unacceptable, and as such, will not be considered an unavoidable business risk. This philosophy is reinforced in Petro-Canada's Total Loss Management (TLM) performance standards, with one of the goals being to provide a safe and healthy workplace where there is Zero-Harm to people. It is also a commitment to reduce risk to as low as reasonably practicable in order to prevent harm to people.

In 2005, Petro-Canada began including contractor injuries in its recordable injury frequency measurements to ensure that every person's safety in the workplace, not just employees, was considered important. Petro-Canada's overall total recordable injury frequency (the number of employees and contractors injured on the job per 100 people) decreased by 18% compared with 2004. This frequency of 1.14 is 60% lower than in 1999 and continues to decline steadily. We also continued to make significant headway in reducing the frequency of contractor recordable injuries from 1.97 in 2004 to 1.33 in 2005. An excellent example of safety in 2005 was the Edmonton refinery ultra-low sulphur diesel project which surpassed four million hours of work without a lost-time injury.

### **REINFORCING THE IMPORTANCE OF SAFETY THROUGH MANAGEMENT**

To continue to reinforce the importance of safety in 2005, a full-day interactive training session entitled The Leader's Role in Creating a Zero-Harm Culture was designed and delivered to 670 Petro-Canada leaders at more than 50 sessions throughout Canada and the United Kingdom (U.K.). This training module is now an integral part of Petro-Canada's leadership development program. An aggressive Zero-Harm communication plan was also launched, including a Zero-Harm intranet site with resources for employees and contractors. With more than 13,000 "hits" to date, this site is proving to be a valuable source of information for building a stronger health and safety culture.

Another way Petro-Canada management demonstrates the importance of safety is by regularly participating in "safety standdowns," specific occasions where senior management attends field sites and facilities to talk with employees about health, safety and wellness issues. This leadership visibility provides front line workers with an opportunity to meet leaders and discuss issues of concern at the site level. Leaders in turn are provided with valuable insight on the issues of the day and on how their guidance and direction support a healthy and safe workplace.

In early 2006, 22 senior leaders participated in safety standdowns at varying locations among our Canadian and U.S. operations. Seven Vice-Presidents attended safety standdowns by visiting facilities in Venezuela, Holland, the U.K. and Netherland sectors of the North Sea, Wyoming, Alberta and Ontario.

In 2006, Petro-Canada will also introduce a President's Award to recognize outstanding Zero-Harm achievements through innovation, technology and workforce engagement.

### ENCOURAGING OPEN DIALOGUE WITH CONTRACTORS AT SAFETY FORUMS

Following a successful forum in late 2003, a second Zero-Harm forum was held in the fall of 2005. The forum included front line and management levels of the organization in every business unit. One of the most valuable aspects of this forum was the open discussion with contractors, who represented 50% of the attendees. The feedback focused on the importance of consistent Zero-Harm messaging and leadership; the role of line management in safety, capability orientation and training; and the alignment of "best practices." As a result of this forum, during 2006 we will:

- work to align "best practices" in contractor selection and service agreements;
- · deliver focused communications on Zero-Harm to employees and to contractors; and
- · design processes to help build TLM capability within contract supervisor roles.









As a part of a safety standdown, senior Petro-Canada leaders visited a seismic shoot south of Fort Nelson, British Columbia in February 2006.

Additional data on our injury frequency can be found on our website.

# **Occupational Health and Hygiene**

### ENSURING AN INTEGRATED APPROACH TO DISABILITY MANAGEMENT

In support of Zero-Harm and the prevention of illnesses and injuries, Petro-Canada identifies workplace health hazards and monitors the working environment and health of employees and contractors. Health assessments are recommended to employees who are at risk of exposure to potential health hazards. This is coupled with ongoing industrial hygiene sampling to measure workplace exposures. We work with contractors to promote health hazard identification, assessments and monitoring of their employees. In addition, we have programs to manage occupational and non-occupational injuries and illnesses both within and outside of the workplace.

Petro-Canada's integrated disability management program involves early intervention to positively alter the course of medical absence due to an illness or injury. The process is overseen by a cross-functional group of professionals, including occupational health professionals, human resources, benefits and the Employee Assistance Program (EAP) consultants. This group works together to facilitate early, safe and productive returns to work.

### IMPLEMENTING A WELLNESS PROGRAM IN NORTH AMERICAN NATURAL GAS

The North American Natural Gas business has a wellness program to promote positive and healthy lifestyle changes among its employees. The program is championed by nine employees in Calgary and 15 employees in the field. One part of the program is wellness screenings, which provide employees with information about their current state of health. To date, 363 or 40% of eligible employees have participated in the screening. As well, between July 2005 and June 2006,

special funding was awarded to three different sites for specific wellness initiatives. These included:

- purchase of an elliptical trainer for the control room at the Hanlan Robb gas plant to give plant operators the opportunity to get some exercise as work conditions permit;
- funds to build a path around the perimeter of the Ferrier plant so employees could walk or run the 1.5 kilometre route (employee volunteers built the trail); and
- construction of a hockey rink in Jedney (employees supplied the nets and equipment and volunteered their time to work on this project).

# LAUNCHING GOCARE OCCUPATIONAL HEALTH PROGRAM IN INTERNATIONAL



Weronica Isaksson, an employee at the Hanlan gas plant, uses the elliptical trainer to keep fit.

In early 2006, the International business launched it's GoCare Occupational Health program in conjunction with International SOS, a global health care service provider. One part of the program includes wellness screenings to help employees gain a better understanding of their health care risks and how to improve their health and lifestyle.

### **EMPLOYEE ASSISTANCE PROGRAM**

Petro-Canada's employees and their families can access the EAP at any time. This comprehensive program provides confidential, professional assistance to help employees and their families resolve problems that affect their personal lives and, in some cases, their professional lives. While this program has been part of North American operations for some time, it was set up for International employees and their families in 2005. We are relaunching this program in 2006 to increase employee awareness.

# **Employee Engagement**

Petro-Canada's success is largely due to the expertise and efforts of its workforce. Effective two-way communication is key. The Company makes every effort to provide useful information and to listen to the ideas and concerns put forth by employees.

In 2005, an upgraded intranet was launched to provide tools for enhanced business communications. The intranet provides a vehicle for the effective distribution of news and information about the industry, and specifically about the Company's businesses. It also provides an effective means through which feedback and suggestions can be solicited from employees.

After the release of each quarterly report, presentations and speaking points are provided to Company leaders to assist them in communicating business priorities, plans and



Early in 2006, Ron Brenneman, Petro-Canada's President and Chief Executive Officer, hosted a town hall meeting for more than 400 employees in Calgary. Special guest, Canadian Olympic women's hockey player, Danielle Goyette, spoke to employees about her experience being chosen as the Canadian flag bearer at the Olympic Games in Torino.

results to employees. A survey in 2005 confirmed that the majority of managers find this a valuable process for delivering consistent information.

In the Downstream business and in some Shared Service units, communication with employees uses a balanced scorecard approach to understand the business, its priorities and the contribution each employee can make to its success.

The Company uses a variety of tools to invite input from employees. A series of issue-specific surveys will be conducted in 2006 to delve into business-related issues and concerns. The year 2006 will also see the launch of a communication training program developed especially for leaders.

# Strategies to Address Current Labour Shortage

Petro-Canada's turnover rate is low compared with its industry peers and the Company continually works to keep it that way. Planned business growth, coupled with the expected retirement of many long-time employees, presents a significant recruiting challenge for Petro-Canada. While recruitment challenges are present for every occupation and business unit, we expect the growth of our Oil Sands business to present the biggest challenge in a highly competitive marketplace.

Petro-Canada's overarching human resource strategy is to provide the right people with the right capabilities and values at the right place for the right time at best total value. In the short- to medium-term, the focus is on three key priorities.

- The first priority is to better develop workforce planning processes, which involves identifying the skills and capabilities
  that will be required across the Company in coming years. Workforce planning will position us to strategically recruit a
  balance of mid-career hires, who can contribute immediately, and new graduates, whose ability to contribute will develop
  and mature as the Company grows.
- The second priority is to build "best in class" recruiting capability. The Company is consolidating its recruiting capability and adding new resources to ensure it can find and attract the talent to deliver on business plans.
- Our third priority is the retention of existing talent. Petro-Canada recognizes that employees are more likely to commit themselves to an organization if they see opportunities for career development, if they work for good leaders, if the organization's culture is a fit and if they are fairly compensated. We are active in assessing and improving our competitiveness on all fronts.

### **DEVELOPING FUTURE LEADERS**

As a result of Petro-Canada's growth, a number of leaders are either new to Petro-Canada or new to leadership responsibilities. To help them become as effective as possible, as quickly as possible, the Company has developed a dedicated orientation program for new leaders.

A special development focus is placed on leaders who are expected to rise rapidly through the organization. The Richard Ivey School of Business at the University of Western Ontario works with Petro-Canada in the development and execution of a Q1 (first quartile) leadership program. This program brings together senior, high potential employees from across Petro-Canada to study business strategy and leadership in a casework format and to learn more about Petro-Canada's game plan.

Research shows "top talent" is also a valuable corporate resource. Petro-Canada assesses and identifies staff with high potential early in their careers with us so that they are developed in a structured way to assume leadership positions in the Company.

# **Organized Labour**

We respect the right of our employee groups to choose to be represented by a bargaining agent. Where employee groups have made that election, Petro-Canada bargains in good faith to reach a collective agreement that balances the needs of the business and leadership with a responsible package of wages and working conditions.

As of November 2005, approximately 24% of Petro-Canada employees were covered by collective bargaining agreements. Approximately 91% of the Company's unionized employees are members of the Communications, Energy and Paperworkers Union (CEP) which represents refinery, marketing, gas plant and offshore production workers. Three-year collective bargaining agreements with most CEP locals will expire January 31, 2007. Negotiations to reach a first agreement with employees on the Terra Nova FPSO were concluded in September 2005. This agreement is the first North American offshore agreement of its kind.

# **Employee Total Compensation Programs**

Petro-Canada recognizes the strong link between pay and recognition, and performance and retention. We design our total compensation packages to be competitive within our industry. To verify that our compensation packages attract and keep top quality employees, we actively benchmark both within our industry and the general marketplace.

Employee benefits are an important compensation factor. We provide benefits that are comprehensive, tax effective and affordable. In Canada, many of our plans are 100% company-paid, including defined contribution and defined benefit pension options; health and dental benefit plans; short-term disability; and basic life and accident insurance plans. Flexible benefits include a savings plan with a health-care spending account and a share purchase program option. These benefits, when combined with elective employee-paid plans, provide employees with a flexible way to meet their individual needs.

Petro-Canada further supports employees by providing access to educational resources, counseling programs, financial and retirement planning, child and elder care programs and, where possible, work arrangements that provide flexibility for employees to attend to life's many demands.

As of December 31, 2005, Petro-Canada and its wholly owned subsidiaries had 4,816 employees, compared with 4,795 employees as of December 31, 2004.

To learn more about careers available at Petro-Canada visit our website.



# **Emergency Preparedness**

Petro-Canada employees and contractors regularly conduct exercises and drills to reinforce and verify our emergency response capabilities. Practice ensures we are prepared for crisis situations. Response teams are structured into three tiers according to the complexity of potential incidents, with Tier I requiring a more local response, Tier II including more senior support and regional response, and Tier III (crisis management) needing executive support and action.

Tier I hands-on emergency drills are held throughout the year to test the ability of operational employees to respond to local emergency situations. In 2005, we staged six regional Tier II response management exercises and one Tier III exercise. In addition, a Tier II team was activated as a precaution when some planned offshore work risked releasing oil pollution. Departments in the Calgary head office continued to improve emergency response plans for business process continuity and held a full-day exercise in 2005. This included establishing an off-site command centre and creating work links from employees' homes. Plans for 2006 include six major exercises, one of which will be the largest attempted to date.

### PREPARING FOR A POTENTIAL PANDEMIC

Petro-Canada is monitoring the threat of an avian influenza pandemic. Our efforts over the past three years to develop emergency response plans to ensure continuity of critical business processes provide a solid foundation to respond to the pandemic threat. Our approach is to integrate pandemic planning with existing emergency response and business continuity planning, and to continue to refine processes. To this end, a working team was formed in 2005 to develop a mechanism to assess the evolving threat, identify needed improvements to our emergency preparedness processes and provide guidance to implement these improvements. In 2006, revised emergency response plans will be formally tested



At a major emergency training exercise in London, Petro-Canada employees participated in an exercise to test response to an operating scenario in North Africa. Employees in Tunis participated live via the telephone.

against localized and widespread health emergencies. Processes are in place to monitor international developments, and government and industry response plans.

# Retail Site Safety – Canada

Petro-Canada is proactive in ensuring protection of retail staff. Sites are well-lit and designed for easy access, optimum traffic flow and safety. Gas bars are equipped with intercoms to allow for communication between customers and service attendants.

Most convenience stores are equipped with the latest in digital video recorders to deter robberies, and provide accurate and easy images to local police, if needed. Other safety precautions include:

- video monitors that let customers see they are being monitored;
- signage advising that the premises are being observed by video surveillance equipment;
- electric door locks at most convenience stores for night security;
- transaction drawers at high-risk sites to allow service without entry into the store;
- time delay safes, allowing minimum cash in the drawer;
- emergency shutdown devices instantly ceasing fuelling transactions in the event of an unsafe situation; and
- dispensers that are equipped with spill containment sumps, and fire and impact valves that shut the flow of fuel off in the rare event they are hit by a motor vehicle.

In late 2005, a priority list of Zero-Harm projects was identified for retail sites. The \$1.2 million project will result in safety and security upgrades throughout 2006 to protect site operating staff at more than 200 retail sites. A similar effort is occurring within Petro-Canada's wholesale network, where \$0.4 million is set aside for Zero-Harm projects.



An Ontario retail site employee uses the CompuSafe electronic unit to enhance security.

# **Security and Human Rights**

In 2005, Petro-Canada implemented corporate-wide Guidelines for Security and the Protection of Human Rights based on the Voluntary Principles of Human Rights and Security (U.S./U.K. 2001). The guidelines are applied across the Company for the use of public or private security services, in either existing operations or entry into new countries. The guidelines are incorporated into the security management and emergency preparedness element of the company's TLM standards.

Our intention is to ensure that we have systems in place to safeguard human rights in local communities where we require security services to protect our employees and contractors. An important part of these guidelines is the definition of Petro-Canada's sphere of influence, given the Company's relative size. We define this sphere of influence as where we participate as a major interest holder or a co-venturer in a project, or manage interests as an operator for the benefit of others. We can more directly influence operations and decision-making by communicating security and human rights expectations to co-venturers. Where Petro-Canada holds a minority interest, as an investor or participant in a project, our influence is less direct. In either situation, Petro-Canada's expectation for human rights and security are clearly established.

In 2006, Petro-Canada will continue to integrate the security guidelines into risk assessments and stakeholder engagement processes, and develop a monitoring and reporting mechanism for human rights. We will also strengthen human rights protection by reviewing community, Aboriginal/indigenous peoples, and labour and employment policies, and by formally incorporating social dimensions into existing risk assessment tools.

🔚 To view our Guidelines for Security and the Protection of Human Rights, visit our website.

# JOEL ROBINSON

Pumper Powder River Basin Wyoming, United States North American Natural Gas "It's a pleasure to work with people who care and who find answers if there are questions. Petro-Canada always has a plan to address environmental issues. This is an outstanding company, full of people who take pride in what they do."

# We respect

the fact that the earth's resources are limited and its ecosystems interdependent.

# We know

that developing and providing energy to consumers has an impact.

# We encourage

tangible solutions among industry, governments and consumers to reduce the environmental footprint.

# **WE BELIEVE** in creating a sustainable future, both through the work that we do and the way that we undertake it.

Petro-Canada recognizes water as an irreplaceable resource. We took an innovative approach to water production and handling in our coal bed methane (CBM) operations in the Powder River basin in the U.S. Rockies. We started to build a reverse osmosis plant at our Wild Turkey CBM project last fall. Here water is pumped from coal seams, reducing the pressure and allowing the methane to be released from the coal. This produced water typically has high levels of sodium and other inorganic salts making it unfit for human consumption. The plant captures water and filters it through special membranes at high pressure. Dissolved salts from the inlet stream, including sodium ions, cannot pass through the membrane. The treated water, now at a sodium level allowed by regulators, is safely released back to the environment. The remaining saltier water is sent to an evaporation pond where evaporators and natural evaporation further concentrate the sodium before it is safely disposed. By May 2006, around 52,000 b/d of water flowed through the plant. This capacity will increase to 110,000 b/d over time. As far as we're aware, this is the only full scale reverse osmosis plant in the CBM industry; evidence of our commitment to keep coming up with innovative environmental solutions.

# **ENVIRONMENT**

Readers are cautioned that the following environmental information for Petro-Canada's operations is presented as of July 6, 2006 and is based on the best information, knowledge and belief of the Company. In 2004 and 2005, Petro-Canada engaged PricewaterhouseCoopers (PwC) to assess the internal controls and current management practices of our environmental data collection and processing for the purpose of improving these processes to provide a comprehensive and rigorous reporting system for anticipated future regulatory compliance. It is expected that PwC's recommendations will be included in an environmental information management system proposed for development in 2006 and anticipated to be implemented before 2008.

Readers should be aware that some prior years data has been restated in this report, and, as the environmental information management system is modified, the environmental performance information presented in this report may also change, and as such, be restated in future reports.

As well, air pollutant data presented in this report may differ from data reported to regulatory agencies. This is due to the fact that the numbers were rounded to one decimal place. For unrounded data, please consult the appropriate regulatory agency.

# Air

Petro-Canada ensures its facilities meet stringent air quality and emissions regulations and implements "best practice" industry standards. We continue to apply emission reduction strategies and adhere to established codes of practice. We report pollutants (see below) and greenhouse gas (GHG) emissions (see page 41) to local, provincial/state and national governments.

Petro-Canada reports the quantity of releases of identified substances. We refer to these as primary air pollutants and they include total volatile organic compounds (VOCs), carbon monoxide (CO), nitrogen oxide (NOx), sulphur dioxide (SO<sub>2</sub>) and total particulate matter (TPM) under 100 microns ( $\mu$ m). The numbers in this report represent total emissions for Petro-Canada operations and not just those amounts that are reportable under regulatory requirements. As such, the numbers here may not coincide with the total of all of our reportable emissions.

While releases of these pollutants are reported for air, land and water, approximately 95% of our pollutant releases are those made into the air. In 2005, the total volume of the five primary air pollutants was 53.4 kilotonnes, compared with a total volume of 57.3 kilotonnes in 2004. The primary reason for the overall decrease in 2005 was the closure of our refinery in Oakville, Ontario.

Increases in our pollutant releases for the upstream business were due to the acquisition of the Dover *in situ* facility and the increased gas compression that is required as the Western Canada sedimentary basin matures. Petro-Canada reports all known primary pollutant releases from our International operations. Though these emission amounts are small relative to the Company's Canadian total, we believe it is important that they are measured and monitored.

The table below briefly outlines the make up, percentages and sources of our primary air pollutants:

Sulphur dioxide (SO₂)	<ul> <li>SO<sub>2</sub> is a natural byproduct formed during the processing and combustion of fossil fuels. It is stripped out at refineries and gas plants to deliver clean products to consumers. Almost all of Petro-Canada's SO<sub>2</sub> is recovered, but some is released into the air from refineries, gas plants and offshore installations.</li> <li>SO<sub>2</sub> emissions were 20.0 kilotonnes in 2005, compared with 24.1 kilotonnes in 2004, due primarily to the closure of our Oakville refinery.</li> </ul>
Nitrogen oxide (NO <sub>3</sub> )	<ul> <li>NO<sub>x</sub> is released from refineries, gas plants, offshore installations, our oil sands <i>in situ</i> plant and field compression equipment.</li> <li>NO<sub>x</sub> emissions were 17.8 kilotonnes in 2005, compared with 15.3 kilotonnes in 2004. Lower emissions from the closure of our Oakville refinery were more than offset by the acquisition of our Dover <i>in situ</i> facility and increased field compression being brought online.</li> </ul>
Total volatile organic compounds (VOCs)	<ul> <li>VOCs are released from our refineries, gas plants, offshore installations, oil sands <i>in situ</i> operations, field compression equipment and terminal operations in Canada. They are typically defined as products that react with sunlight to form ground level ozone, which is considered harmful in excessive quantities. In Canada, carbonyl sulphide and carbon disulphide are included in the definition of VOCs.</li> <li>VOC releases were 5.6 kilotonnes in 2005, compared with 6.0 kilotonnes in 2004, due primarily to the closure of our Oakville refinery. Upstream emissions remained relatively constant.</li> </ul>
Carbon monoxide (CO)	<ul> <li>CO is released into the air as a result of combustion. This combustion occurs at all our primary operating facilities from heaters, boilers, large combustion engines, flares and other sources.</li> <li>CO releases were 9.0 kilotonnes in 2005, compared with 10.4 kilotonnes in 2004, primarily as a result of the closure of our Oakville refinery and turnaround activity at some of our upstream facilities.</li> </ul>
Total particulate matter (TPM) under 100 µm	<ul> <li>Any source of combustion may emit some TPM. TPM emissions vary widely for fuel-oil combustion sources, depending on fuel grade and composition, combustor type and size, and load. TPM emissions from natural gas sources are assumed to be less than one micron.</li> <li>TPM release was 1.0 kilotonne in 2005, compared with 1.5 kilotonnes in 2004, due primarily to the closure of our Oakville refinery.</li> </ul>

# TOTAL PRIMARY AIR POLLUTANTS

Total primary air pollutants	53.4	57.3	57.2
Total particulate matter (TPM)	1.0	1.5	1.8
Carbon monoxide (CO)	9.0	10.4	10.0
Volatile organic compounds (VOCs)	5.6	6.0	6.0
Nitrogen oxides (NOx)	17.8	15.3	15.5
Sulphur dioxide (SO2)	20.0	24.1	23.9
(in kilotonnes)	2005	2004	2003



### ACHIEVING LOWER FLARING VOLUMES

Natural gas is sometimes burned or flared as an important safety procedure to prevent the accumulation of gases, especially at facilities that handle sour gas. Flaring is done in compliance with government air quality standards. Petro-Canada is committed to reducing flaring, as it wastes a valuable resource and emits GHGs. In 2005, Petro-Canada reduced flaring by 31% compared with 2004. This was due to increased emission awareness, more testing in-line (down pipelines) and the type of wells that were completed over the year. As well, total venting from well testing in Western Canada declined 50% in 2005 compared with 2004. At Hanze, the reduction in flaring was reached through more reliable production facilities and less downtime of gas export facilities.

TOTAL FLARING			
(thousand cubic metres - m³)	2005	2004	% change
North American Natural Gas	32,850.0	37,284.0	↓ 12
Downstream	37,937.0	53,590.0	$\downarrow$ 29
Terra Nova in East Coast Oil	117,468.0	176,956.0	$\downarrow$ 34
MacKay River in situ plant in Oil Sands	1,738.0	4,376.0	$\downarrow$ 60
Hanze platform in North Sea International operations	1,493.0	3,497.0	$\downarrow$ 57

🔚 To learn more about efforts to reduce flaring at our MacKay River in situ plant, visit our website.

# REDUCING BENZENE AND VOCS (VOLATILE ORGANIC COMPOUNDS) EMISSIONS AT MONTREAL

Benzene is a part of crude oil and some petroleum products. Emissions of benzene occur during processing and along the storage, distribution and delivery chain. At our Montreal refinery, one of the marketable products is benzene, which we sell as a feedstock to specialty customers for use in producing other goods. Benzene emissions at our Montreal refinery decreased to 18.5 tonnes in 2005, compared with 21 tonnes in 2004. However, in 2003, emissions were 10.6 tonnes, indicating an overall upward trend in benzene emissions. This trend can be attributed to higher volumes of benzene



An aerial shot of Petro-Canada's Montreal dock.

sales and the subsequent increase in emissions from the loading of ships. The release of benzene emissions at the refinery resulted in changes to operating processes and practices.

Working with the City of Montreal's Environmental Department, Petro-Canada initiated technical studies to further control VOC emissions, which include benzene, at the waste water treatment plant at our Montreal refinery and vapour recovery during loading of benzene at the dock. We expect to implement the VOC controls as part of a detailed project plan in late 2008 and the vapour recovery at the marine loading dock in late 2009.

### UPGRADING THE THUNDER BAY TERMINAL

In October 2005, a gasoline storage tank at the Thunder Bay terminal came back into service after a year of upgrading. As much as 90% of the gasoline passing through the Thunder Bay terminal passes through this tank. Part of the upgrade included Petro-Canada reducing emissions by voluntarily installing a floating roof inside a fixed-roof gasoline storage tank. A floating roof literally floats on the surface of the stored gasoline, preventing it from evaporating and being emitted to the atmosphere. The Canadian Council of Ministers of the Environment Code of Practice dictates which facilities must have floating roofs; those guidelines did not apply to this situation. Nevertheless, Petro-Canada installed the roof and anticipates the annual emissions of VOCs will decline by as much as 130 tonnes, or approximately 34% of VOCs released at this terminal. This figure was based on calculations using the U.S. Environmental Protection Agency's TANKS (storage tank emissions calculation) emission software.



The only Petro-Canada operated offshore platform in Northwest Europe is the Hanze platform in the Netherlands sector of the North Sea. The F2-A-Hanze platform has been categorized by the Dutch authorities as "best in class" in terms of energy efficiency. In 2005, Hanze emitted less  $CO_2$  than its permitted allocation. For both our Hanze platform and our new development (De Ruyter), energy efficiency plans are in place. For example, both platforms have waste heat recovery units and turbines with the best available technology for energy efficiency.

### CONDUCTING PROACTIVE LEAK DETECTION AND REPAIRS

Petro-Canada uses a number of tools to control and detect emissions at its facilities. We manage vapour leaks, or fugitive emissions, to ensure a safer and healthier workplace, prevent environmental harm and avoid the costly loss of products and subsequent shutdowns. Our leak detection and repair technology includes tools such as the HAWK camera (an infrared camera that can visually detect gas leaks) and gas chromatography (a process whereby light is passed through gas to determine which gas it is). These tools permit Petro-Canada to detect leaks earlier and more effectively, and allow us to do some maintenance to reduce or eliminate the emissions without shutting down operations.

# **Energy Use**

### FURTHERING OUR CLIMATE CHANGE STRATEGY

Energy efficiency is a key focus of a climate change strategy Petro-Canada updated in 2005. As part of the strategy, a corporate-wide energy efficiency team was established in 2005 to help reduce operating expenses, increase reliability and encourage innovation. The team consists of energy efficiency engineers from each of the respective business units. This team meets three times a year and is a key driver in setting up energy efficiency forums for field operators. Communication activities with field operators are designed to engage employees in building a culture of energy efficiency and sustainability.

Our climate change strategy proactively positions us to leverage the value of our climate change activities and potentially participate in the CO<sub>2</sub> credit market as a bridge to longer term solutions. The strategy will also guide our investigation and investment in technology initiatives.

Petro-Canada continues to work with and support the Canadian Association of Petroleum Producers (CAPP), Canadian Petroleum Producers Institute (CPPI) and the International Association of Oil and Gas Producers (OGP), as each works with regulatory bodies to develop GHG emission target-setting and compliance tools.

In 2004 and 2005, Petro-Canada engaged PwC to assess the internal controls and current management practices of our GHG data collection. The initial report from PwC indicated there were some controls in place to verify the completeness, accuracy and validity of Petro-Canada's GHG information; however, the current GHG data management system is not sufficient for handling the large amounts of data that will be required for anticipated year-2008 Canadian government reporting.

To address this issue, PwC's recommendations will be considered in an environmental information management system proposed for development in 2006 and implementation before 2008. This information management system is expected to provide broader benefits through the tracking of additional environmental data.

Petro-Canada participated again this year in the Carbon Disclosure Project (CDP). The CDP represents institutional investors worldwide, with over \$31 trillion funds under management. The survey, examining the potential risks and opportunities relating to climate change, and the responses, is expected to be available on the CDP website in the fall of 2006 at www.cdproject.net.

### MANAGING GREENHOUSE GAS EMISSIONS

Petro-Canada's focus on energy efficiency has resulted in improvements in the effective use of energy at our facilities. Managing GHG emissions will be a significant challenge for the Company in the years ahead, primarily due to growth in the Oil Sands and the maturing of conventional reserves in Western Canada. In 2005, Petro-Canada made strategic decisions which influenced total emissions.

- In the North American Natural Gas business, additional compressor stations increased emissions, however overall emissions
  were lower than in 2000 because of a shift in asset mix. Maturation of the Western Canadian Sedimentary Basin will create
  the need for more compression in future years. Implementation of energy efficiency projects is expected to provide some
  emissions reductions and increased energy savings.
- At Terra Nova, we increased our focus on flaring reductions, enabling a 34% decrease compared with 2004 and consequently lowering GHG emissions.
- In the Downstream business, the overall reduction in absolute GHG emissions was due to the Oakville refinery closure.
- In Oil Sands, emissions rose in 2005 compared with 2004 due to higher production and increased use of the cogeneration<sup>29</sup> facility, as well as the acquisition of the Dover facility. Petro-Canada is evaluating methods to best measure cogeneration emissions, as the natural gas used in the cogeneration facility to produce steam for our MacKay River plant also provides electricity to the Alberta power grid. Due to mandatory government reporting, Petro-Canada does not include cogeneration emissions in its regulatory reporting; instead, our project partner and operator, TransCanada Energy, reports them. However, all energy inputs are included in our production carbon intensity figures to ensure consistent reporting.
- In the International business unit, Petro-Canada is currently working on methods to normalize data because we are required to report drilling emissions from the U.K. sector of the North Sea, as well as from our operated facilities, such as Hanze in the Netherlands sector of the North Sea.

Additional GHG emissions data is available on our website.

<sup>29</sup> Cogeneration is the simultaneous production of electrical energy and another form of useful thermal energy, such as steam or heat, that would otherwise be wasted, from the same source.

### ENVIRONMENT

KILOTONNES OF CARBON DIOXIDE EQUIVALENT (CO2e)	2005	2004	2003	2002	2001
Downstream	3,668	4,143	4,222	4,131	3,872
North American Natural Gas	1,956	1,848	1,887	1,980	1,968
East Coast Oil	721	882	962	1,534	0
Oil Sands	957	669	359	83	0
Non-Canadian operated assets	57	82	90	0	0



Production carbon intensity (PCI) is an indicator of GHG emissions intensity. It is a measure of the amount of GHGs emitted when a cubic metre of oil equivalent product is produced. The PCI data shown above includes indirect emissions, such as those produced by a third party during energy production on our behalf, including electrical power. By including indirect emissions, PCI values are comparable across years and more accurately reflect the overall intensity.

During 2005, Petro-Canada's upstream had the following PCI highlights:

- the PCI for North American Natural Gas operations increased slightly due to maturing assets requiring increased compression in the Western Canada Sedimentary Basin;
- Terra Nova operations' PCI improved due to decreased flaring and a focus on maintaining stable operations; and
- an increase in the Oil Sands PCI was due in part to the addition of the Dover asset near our MacKay River plant. This
  plant ran as a pilot with a higher steam to oil ratio. MacKay River had a 60% decrease in flaring in 2005 compared with 2004.

Petro-Canada's aggregate upstream PCI is calculated using a weighted average for all of our operated upstream assets in the North American Natural Gas, Oil Sands, East Coast Oil and International business units.

The Downstream PCI represents the weighted average of Petro-Canada's four major facilities: three refineries and our lubricants plant. The higher PCI was due in part to an increase in the energy required to implement the regulated reduction in sulphur in gasoline and diesel, as well as a significant decrease in production from the Oakville refinery, as decommissioning began.

Petro-Canada's planned expansion at MacKay River and the development of the Fort Hills mine site and upgrader will add significantly to the challenge of reducing our PCI and GHG emissions. In 2006, and in the years to come, Petro-Canada will continue to focus on improving energy efficiency (which is a direct indicator of carbon intensity) by implementing technologies and enhancing reliability, therefore reducing GHG emissions intensity.

### IMPROVING DOWNTIME AT MACKAY RIVER

Two significant improvements were made at Petro-Canada's MacKay River *in situ* plant in 2005: one to the vapour recovery unit and one to the boiler feed water specifications. The vapour recovery unit, which compresses gas from on-site storage tanks into fuel gas, only ran 59% of the time before an exchanger cleaning program was implemented in 2005. Since then, the unit has been online 90% of the time. Cogeneration is used to create steam for the SAGD process that brings the *in situ* oil to the surface. In 2004, the unit was on-stream 66% of the time. On-stream time increased to 83% in 2005 due to a focus on training Petro-Canada's operations and technical services staff in water treatment, better maintenance and focused management. These decreases in downtime led to less excess gas being burnt off, thus reducing GHG emissions.

# LEARNING FROM THE PAST AT LUBRICANTS

In 2003, Petro-Canada's lubricants centre suffered a loss of containment incident when corrosion in operating equipment caused a high pressure hydrogen leak to the atmosphere. The lubricants centre took steps to understand and prevent the recurrence of corrosion in equipment operating at high pressure. Over two years, the central cause of the corrosion was investigated, a remediation plan was developed and findings were shared with other refiners. In 2005, process changes, material upgrades and application of new industry "best practices" were implemented. Design changes improved reliability and reduced energy consumption. This included recovering a waste water stream, which is now treated and recycled back into the refinery's steam system. Engineering and process changes reduced corrosion and lowered natural gas consumption, costs and emissions.



Petro-Canada helped fund the Alberta Ecotrust Ecohome – a house that is very energy efficient and employs the latest environmentally friendly systems. The house boasts an EnerGuide rating of 85, making it one of the most energy efficient homes in Canada (a typical new home has a rating of between 68 and 82).



Petro-Canada sponsored McMaster's Solar Car in an 11-day cross North America solar car challenge. The vehicle featured an aerodynamic shell, a three-wheel chassis system for road resistance and a solar array with 479 solar cells.



Petro-Canada is a founding and platinum sponsor of a web-based education tool developed by the Pembina Institute for Appropriate Development called Green Learning Online. Students and teachers in Alberta are provided with accurate and engaging environmental information, resources and support. The topics range from climate change to energy to ecosystems. With rising numbers of users and website visitors, the program may expand nationally and even bilingually. Visit the site at www.greenlearning.ca.

Additional graphs and data related to upstream energy efficiency (production energy intensity) and Downstream energy efficiency (Solomon Energy Intensity Index) is available on our website.

# Water

Petro-Canada recognizes that conservation, protection and recycling of water is critical to the communities where we work and to our business. Petro-Canada manages water resources through specific initiatives. In 2006, Petro-Canada is developing a corporate water strategy to guide our actions for water conservation, protection and recycling. This strategy is expected to be communicated in 2007.

# CONSERVING WATER IN THE NORTH SASKATCHEWAN RIVER

Petro-Canada completed a project in Edmonton that provides water for the Company's Strathcona County refinery using recycled water from the City of Edmonton's Gold Bar waste water treatment plant. By doing this, Petro-Canada will reuse five million litres of recycled water per day, avoiding the need to draw as much fresh water from the North Saskatchewan River.

This project, including the 5.5-kilometre pipeline, is the first of its kind in Canada and sets a new standard for environmental "best practices." This award-winning project meets Petro-Canada's water needs for new processes and



Lynell Crone was the Project Engineer responsible for the design and construction of the water line from the Gold Bar waste water facility to the Edmonton refinery.

provides surplus water for other users along the river valley. The public-private partnership between the City of Edmonton, Petro-Canada and Strathcona County was funded by Petro-Canada for approximately \$25 million. Acknowledgment of these efforts includes:

- recognition from the Alberta Government for going beyond expectations in protecting water resources and exemplifying the province's *Water for Life* strategy;
- the CAPP 2006 Steward of Excellence President's Award, which recognizes one project each year that stands out over all other submissions;
- the Fred Heal Conservation Award from the Partners for the Saskatchewan River Basin;
- the Association of Petroleum Engineers, Geologists and Geophysicists of Alberta Summit Award;
- an Award of Excellence and Award of Merit from the Consulting Engineers of Alberta; and
- · nomination for an Emerald Award for Environmental Excellence by the Alberta Emerald Foundation.

### INTRODUCING INNOVATIVE WATER MANAGEMENT TECHNIQUES IN WILD HORSE CREEK

An innovative approach to water management at Wild Horse Creek, Wyoming began with stakeholder consultation and resulted in changes to regulations.

Petro-Canada's surface discharge permits, with respect to produced water for the area, required that any discharges be contained in reservoirs for treatment or evaporation prior to release into Wild Horse Creek. The permits met the Department of Environmental Quality (DEQ) default limits to protect downstream irrigation.

A DEQ study, in which Petro-Canada participated, showed that the irrigated lands contained soils and crops amenable to higher limits of dissolved salts, particularly sodium, without appreciable degradation. As a result of the study, the DEQ changed its policy and Petro-Canada's end-of-pipe discharge limits were revised. Now, more water is being put back into the environment at a faster rate and in a sustainable manner, and Petro-Canada requires fewer reservoirs and therefore has a smaller physical footprint within the watershed.

Other water management initiatives at Wild Horse Creek include the Petro-Canada-designed gypsum water treatment plants, which remove barium while keeping other salts within acceptable limits. Gypsum is preferred over other more hazardous chemical treatments, such as sulphuric acid. The use of this technology helped the Company bring on production from coal seams in a more timely manner.

### SUPPORTING CLEANER DRINKING WATER WORLDWIDE

Petro-Canada supports the Centre for Affordable Water and Sanitation Technology (CAWST) and its Water for Life program – an initiative started in 2001 to provide clean drinking water to the poorest of the poor through a combination of education and inexpensive, simple technology options built from local materials. At year-end 2005, CAWST had provided clean drinking water to more than half a million people in 36 countries.

Petro-Canada created a partnership between CAWST and Calgary's Mount Royal College, and supported the development of training material for CAWST's water and sanitation curriculum. The partnership between CAWST and Petro-Canada evolved to include sponsorship of



During a training workshop in Haiti, two women learn how to properly install a CAWST filter and fill it up with water. The training is supported by Petro-Canada.

CAWST's Youth Summit, leadership of a fund development program and a five-year financial commitment of \$250,000 for operational growth. As a result, the partners received an honourable mention at the Imagine Canada New Spirit of Community Partnership Awards held in Toronto in 2005. Petro-Canada Vice-President, Environment, Health, Safety and Corporate Responsibility, Greta Raymond, is an active member of the CAWST Board of Directors.

More information on CAWST can be found at www.cawst.org

# Managing our Footprint on the Land

### WORKING TO REDUCE SPILLS

Petro-Canada tracks all spills, including crude oil, refined products, produced salt water and chemicals. Spill events are thoroughly investigated, such that the cause is determined and actions are implemented to minimize risk and the chance of recurrence. At Petro-Canada, most spill events occur within contained areas of a facility. There are systems in place to inspect and audit facilities that are used to transport and store oil and other products. Emergency response plans are in place at all Company locations, including upstream onshore or offshore facilities, Downstream refineries, distribution terminals and the network of service stations. As well as being a member of mandatory response groups, Petro-Canada is also a voluntary member of Oil Spill Response Limited and the Eastern Canada Response Corporation. This ensures Petro-Canada is prepared in case of a spill event.

We have a strong culture of reporting any loss event, however growth and the increasing complexity of Petro-Canada's operations mean that we must continue to improve reporting practices, strengthen mitigation efforts and minimize the number and volume of spills.

In 2005, initiatives to reduce spills at Petro-Canada's MacKay River plant included engineering work, training programs and enhanced procedures. Improvements were made to in-house inspections and to maintenance programs related to hydraulic oil spills.

In our International business unit, we have a proactive process integrity program on our Hanze production platform in the Netherlands sector of the North Sea. This program allows operators and technicians to investigate parts of the plant on a rotating basis to identify potential sources of leaks or spills. From these investigations, corrective measures are developed and implemented.

Petro-Canada's North American Natural Gas business actively promotes a philosophy titled "Nothing Hits the Ground." As a result, improvements were made in internal reporting and investigations, and spill assessments were included in pre-job safety assessment meetings.

Following an oily water discharge incident in our East Coast Oil operations in 2004, an environmental awareness program was developed and delivered to all personnel, including contractors, both onshore and offshore. Petro-Canada sponsors a dedicated seabird rehabilitation centre to help birds impacted by any offshore incident.











In 2005, there were no spills greater than one cubic metre in our International business unit.

### CONTINUING TO IMPROVE WASTE MANAGEMENT

At Petro-Canada, waste of all kinds is tightly managed to ensure that its production, control and disposal complies with all regulatory requirements. Regulations, including those regarding waste management, continue to evolve to include public input and industry advances.

Petro-Canada's North American Natural Gas and Oil Sands businesses use Waste Tracker, a program that records waste shipments and permits all waste to be defined and tracked according to provincial or federal criteria. Reports are customized based on stewardship and regulatory needs.

In our Downstream business, Petro-Canada participates in several recycling initiatives, such as refinery catalyst and waste materials recycling programs. The business is also part



For two years, employees from Petro-Canada's lubricants plant have held a waste management drive. The public can drop off household waste, old tires and used electronics. Damaged recycling boxes were exchanged for new ones, food bank donations were exchanged with free compost and composters, water efficiency kits and rain barrels were available for purchase.

of an industry-sponsored effort to improve the collection and recycling of used motor oil from automobiles and commercial sources. We have created a long-term partnership with a waste management company at our lubricants manufacturing facility. A contractor is embedded in our lubricants plant to provide information and support for waste management at our facility. This contractor provides information on source identification, reduction, separation, recycling and disposal techniques. The contractor also has access to speciality contractors dealing with waste management in the areas of polychlorinated biphenyls (PCBs), batteries and fluorescent lamps.

Petro-Canada's refining and marketing waste management efforts include the establishment of bioremediation soil recycling centres at our refinery sites in Canada. Contaminated soil from our marketing sites removed during renovations is bioremediated at our recycling centres. The soil is then used as fill at various Petro-Canada construction and renovation sites. By using our soil recycling centres and reusing the remediated soil, we avoid shipping it to municipal landfills.

Spent materials that usually contain highly complex mixtures of precious metals (usually catalysts in the refining process) are normally regenerated and recycled in the refinery production unit for a certain period of time. When it is no longer possible to regenerate them, the spent catalyst is sent to specialty recyclers for metal reclamation.

Non-hazardous solid waste from Petro-Canada's blending, packaging and distribution operations is recycled and reused. In 2005, the Company purchased reusable pallets and bailers to bind corrugated cardboard packages using low-density polyethylene shrink wraps. In addition, empty steel drums (used for shipping additives and other raw materials) are returned to suppliers for reuse. Drums that cannot be reused are cleaned for recycling. Bottles are returned to suppliers for regrinding and recycling.

### **REMEDIATING CANADIAN RETAIL SITES**

In 2005, Petro-Canada undertook active remediation at more than 900 sales and marketing sites across Canada. Remediation was done in conjunction with upgrades to facilities and tanks, at existing operations and at sites slated for closure. Slightly more than half of the sites undergoing remediation are in operation, with the other half of the sites constituting surplus properties. In 2005, remediation was finalized at 34 surplus sites, which were then sold for other productive commercial or residential uses.

### SAVING OLIVE TREES IN TUNISIA

Consultation with local landowners and residents was conducted in advance of exploration activities planned in Djerba, Tunisia, a popular tourist island in the southern portion of the country. Key issues that were identified included the potential impact of ambient noise, access to land, waste management and the need to remove olive trees. These trees take a long time to mature and are highly valued locally.

A comprehensive waste management plan was developed to recycle plastics, glass and metals, contain treatment of drilling mud and remove oil for safe disposal at an authorized facility.



A health, safety and environment advisor meets with a local resident in Tunisia.

In order to help sustain the livelihood of locals, olive trees (some which were more than 100 years old) were relocated from the well pad site to a nearby area and alternative access routes were developed to bypass certain olive groves. Petro-Canada also hired a specialist to prune and maintain the olive trees adjacent to the area on which it was working.

At the completion of its drilling program, Petro-Canada undertook a full-scale site restoration program. The operation was discussed with local landlords and as a result of the restoration, the site was brought back close to the state it was in prior to drilling. This was largely due to the removal and storage of top soil and the ability to replace it once the physical presence of Petro-Canada's operation was removed.

### INVOLVING LOCAL GOVERNMENT AND FARMERS IN SYRIAN SEISMIC WORK

Petro-Canada's efforts to obtain seismic data in Block II in the Al Hassakeh Province of Syria disrupted area farmers who depend on wheat and barley fields and irrigation systems. To ensure their losses were addressed, a compensation system was developed with input from local government representatives and the head of the farmers union.

Throughout the process, effective communication between Petro-Canada and the local community was critical. Petro-Canada dedicated staff to co-ordinate all community and government interaction. With Petro-Canada supervision, the seismic contractor ensured that seismic crews understood and respected the resources and cultural beliefs of the local communities.

To reduce the footprint of the operation, line clearance was minimized and existing pathways were used as much as possible, including implementation of a "no shortcuts" policy. Seismic crews were careful to prevent the creation of ruts. Where possible, driving on lines was avoided after heavy rains. Periodic diversions were built to prevent the route from becoming a new drainage path. Following the seismic surveys, the routes were abandoned in a manner that discourages their ongoing use, for example blocking them where appropriate, and all evidence of the camp footprint was removed. Logs of archeological areas were also passed to appropriate authorities for their information.

### MINIMIZING OUR NORTH AMERICAN FOOTPRINT

Petro-Canada developed a landscape modeling and management framework called the integrated landscape management program. It was piloted at a well in the southern foothills of Alberta in 2005. New laser (light) landscape modeling<sup>30</sup> was used to determine the soil mass balance for an existing lease and the visual impact to the public. In the pilot trial, the model showed that a new location would result in less soil removal and visual impact, providing justification to build a new lease. We believe this approach was "a first" in our industry. The result was a new location that better suited stakeholders, required less movement of material and provided savings to the Company.

For more information on this project, visit www.innovationalberta.com.

# **Focusing on Biodiversity**

### **DEVELOPING FORT HILLS RESPONSIBLY**

In 2005, Petro-Canada acquired a 55% interest in the northern Alberta Fort Hills mine and upgrading project, which has regulatory approval for 190,000 b/d. Part of developing this project includes careful management of our impact on biodiversity within the region. We participate in the newly formed McLelland Lake Wetland Complex (MLWC) Sustainability Committee, with representatives from government, First Nations and the environmental community. The MLWC is mandated by the Province of Alberta to ensure that the Fort Hills mine adheres to environmental "best practices" and cutting-edge reclamation standards. We have committed to more than 100 environmental compliance conditions set forth by Alberta Environment and the Energy and Utilities Board for the Fort Hills project.

Development of our Fort Hills oil sands interests will impact the fish in Fort Creek. A lake will be constructed to compensate for the fish habitat, as per the Department of Fisheries and Oceans "no net loss" policy. The lake will be approximately 15 hectares in size and exceed all habitat compensation requirements. Fish being relocated include northern pike, yellow perch, white sucker, longnose sucker, brook stickleback, lake chub, pearl dace, fathead minnow and slimy sculpin. In addition to those species, stakeholders have expressed a desire to have lake whitefish and burbot included. Discussions with regulators and stakeholders about the lake construction and monitoring activities are underway.

V Our Fort Hills regulatory filings can be found on our website.

### **EXAMINING BOREAL FOREST USE AND** THE IMPACT ON CARIBOU

Much of the oil and gas production in Canada takes place in boreal forest areas, with seismic activity, roads, well sites and pipelines creating a notable footprint - one that Petro-Canada works diligently to reduce. Petro-Canada led an industry initiative, sponsored through CAPP, which examined the boreal forest use and the impact on caribou herds. As a result, a management plan was developed to address caribou population decline due to industrial disturbance. Recovery solutions include planting pine and spruce trees to make it more difficult for wolves to travel along cut lines and prey on caribou. Companies participating in the initiative are also working with the University of Alberta to establish ways to monitor wolf tracks found on cut lines. "Best practices" to reduce industry impact on the area were established, including low-impact seismic lines, road planning around environmentally sensitive areas and use of winter conditions to travel to sites (frozen ground minimizes the potential for environmental disturbance from vehicles and equipment).

A copy of this study can be found at www.innovationalberta.com.



The patterned fen at Fort Hills consists of unusual peat-forming wetlands. Over thousands of years, the alternating peat ridges and pools have formed a "fish scale" pattern on the land's surface. Water slowly drains from one end of the fen to the other. Petro-Canada, as part of its regulatory compliance, must protect and maintain the characteristics of the unmined portion of the fen and McLelland Lake wetland.



The pitcher plant (Sarracenia purpurea L.), a beautiful solitary flower, has been found at a number of locations on the Fort Hills leases. It is an insectivorous plant. The inner surface of a pitcher is covered with downward pointing hairs at the top and a smooth, slippery base. As a result, insects are trapped within the pitchers and drown. The insects are then digested by acids and enzymes secreted by the plant. This insectivorous ability allows the pitcher plant to grow in fens, which are low in nutrients. Last fall, Petro-Canada transplanted a number of these plants in the mine area to the eastern part of McLelland fen, which is protected.



Three steller sea lions became neighbours to our Burrard products terminal in Port Moody, British Columbia. The largest of five species of sea lions in the world, they are listed as endangered. We helped transport the sea lions on our spill response boat to a floating pen where they are being studied as part of the Open Water Research Program. We have continued to help in this work

## PROTECTING MARINE BIOLOGY AND BIRDS WHEN CONDUCTING DRILLING OFFSHORE TUNISIA

In the fall of 2005, Petro-Canada drilled an offshore exploration well in the Mellita exploration Block located in the Gulf of Gabes, Tunisia. The activity also impacted some onshore areas on Djerba Island. The biological diversity of the well location presented a unique challenge to Petro-Canada. The Gulf of Gabes is one of the most biologically productive areas in the western Mediterranean. It is a breeding area for a number of marine species, including some rare and protected species of marine flora, invertebrates such as sponges, and reptiles such as marine turtles. In addition, several sites in the area are staging points for bird migration and the Gulf is Tunisia's most important sea fishing area.

Based on a thorough assessment of the environmental impacts and the technological and logistical risks, Petro-Canada decided to use an environmentally benign water-based mud for the Amira well drilling program in place of the typical oil-based mud. We were the first operator in Tunisia to use this approach. Even though water-based mud cuttings pose little risk to the off-shore environment, Petro-Canada implemented a full "skip-toship<sup>31</sup>" transfer of all cuttings to the shore. The decision to use water-based mud significantly decreased the potential impact of spillages with no technical disadvantage to drilling the well, which was completed ahead of schedule.



Petro-Canada is helping to protect the prairie rattlesnake, which was impacted by operations in southern Alberta. The Company funded research done by a University of Calgary student and equipped vehicles in the area with "snake tongs" to safely remove the reptiles from roads and worksites.



When an Atlantic puffin got caught in a supply vessel engine container aboard the Terra Nova FPSO, Petro-Canada transported the bird to a company-sponsored bird-treatment facility in St. John's where it was cleaned, waterproofed, monitored and then released.

# **Environmental Impact Assessments**

Environmental impact assessments (EIAs) are an integral part of all of Petro-Canada's major projects. The process involves listening to stakeholder concerns and finding collaborative solutions. EIAs also help us to be proactive in our work to minimize our environmental impact. On completion of an EIA, Petro-Canada develops plans to translate the requirements, such as environmental management plans or waste management plans, to the contractors executing the work. Documentation of our EIAs is also provided to regulatory authorities.

We conduct EIAs for all activities internationally, regardless of whether they are required for regulatory submissions. In 2005, International EIAs included:

- two EIAs in Trinidad and Tobago for offshore seismic activities, both of which were not required by the regulator. This approach was commended by the environmental authorities;
- an EIA for our onshore seismic acquisition project in Syria, resulting in implementation of an interactive archaeological tool;
- an EIA for Zotti onshore drilling and seismic projects in Algeria;
- an EIA for Midoun onshore and Almira offshore wells in Tunisia, resulting in use of an oil spill management tool for the offshore well; and
- an EIA for the De Ruyter development project in the Netherlands sector of the North Sea, resulting in the environmental permit being granted in August 2005.

In North America, Petro-Canada conducted two EIAs in 2005.

Expansion of Petro-Canada's MacKay River *in situ* operations is in the regulatory review phase of the project, which includes responding to supplemental information requests from regulatory and stakeholder groups. As part of the review, items specific to air, land and groundwater are being examined. Petro-Canada is also actively engaged with the

Aboriginal community to ensure their input is received and considered. This is part of the socio-economic impact assessment which is an integral part of the EIA process.

The Cacouna Energy LNG terminal environmental assessment review began in March 2006, led by a joint panel composed of the Bureau des Audiences Publiques du Québec and the Canadian Environmental Assessment Agency. In mid-May, the first part of the public hearing began. Project information was provided to the public and project partners. Petro-Canada and TransCanada PipeLines answered panel questions regarding the socio-economic and environmental impacts, construction details and project timelines.



An EIA was carried out prior to the start of our onshore seismic acquisition project in Syria.

No read our Oil Sands EIA approvals, please visit our website.

# **Environmental Exceedances**

Petro-Canada carefully tracks all operational upsets that may lead to environmental licence or permit exceedances. In 2005, there were 24 instances when regulated limits were exceeded, compared with 38 instances in 2004. Of the 2005 events, four had multiple exceedances<sup>32</sup> while in 2004, seven had multiple exceedances. The total number of exceedance reports submitted was 30 in 2005, compared with 45 in 2004. Petro-Canada's upstream businesses accounted for 17 of these 2005 exceedances, while Downstream accounted for 13 exceedances.

Exceedances from operational upsets in 2005 included excessive chemical content in effluent water, high SO<sub>2</sub> content in flare or flue emissions, low incinerator stack top temperatures and offensive odours. In most cases, reports are followed up with a letter to regulators indicating the cause and the corrective actions undertaken to mitigate future occurrences. Petro-Canada tracks corrective actions within its event tracking database through to closure.

### **ENVIRONMENTAL CHARGES AND CONVICTIONS**

Petro-Canada respects all environmental legislation affecting our operations. When an event occurs, the Company immediately reports the incident to the appropriate government agency and proactively seeks to remedy the situation and to implement corrective actions to prevent further occurrences.

Petro-Canada representatives appeared in provincial court in St. John's, Newfoundland and Labrador on May 3, 2006 to respond to a charge arising from an oily water discharge from the Terra Nova FPSO vessel that occurred in November 2004. To address the legal issues in a responsible manner and to express its remorse for this incident, Petro-Canada entered a guilty plea to the improper discharge of oil on the basis of a statement of facts jointly agreed to by the Provincial Crown Counsel. Under the terms of a sentencing agreement that was designed to restore the benefits back to the environment, \$120,000 of the penalty will be allocated to the federally administered Environmental Damages Fund, which is applied to a variety of environmental projects including restoration, remediation, research and education. Petro-Canada requested that the funds be used in Newfoundland and Labrador. A further \$100,000 will be used to fund environmental science merit scholarships at Memorial University and its Sir Wilfred Grenfell College campus. A fine of \$70,000 will also be paid as part of the decision. Other than this, we are not aware of any convictions or enforcement actions for events that occurred in 2005 relating to Petro-Canada's upstream operations.

Petro-Canada received two environmental enforcement convictions in 2003 for alleged violations of the Ontario Water Resources Act at our Peterborough, Ontario operations. In 2005, these convictions were successfully appealed by Petro-Canada and our previous fine of \$44,000 was reimbursed.

In our sales and marketing business, there were two charges laid against the Company in 2005. In Brampton, Ontario, Petro-Canada was charged under the Ontario Water Resources Act. The Company's motion for a non-suit was granted and the charges were dismissed. In Newmarket, Ontario, Petro-Canada was charged under the Ontario Water Resources Act. This matter is at an early stage and the Crown has yet to disclose information at the time this report was printed.

32 Multiple exceedances are noted when an exceedance continues over a certain period of time and must be reported multiple times to regulators, or when a particular event has more than one exceedance outcome.

## Products

Petro-Canada's lubricants facility in Mississauga offers next generation, pro-environment product choices.

- Bio 40 Hydraulic Fluid is a combination of canola oil and performance additives designed for year-round use in environmentally sensitive hydraulic systems. Environ\* AW Hydraulic Fluid is another non toxic, recyclable and biodegradable product.
- Independent Cornell University studies confirmed the PURESPRAY\* line of horticultural spray oils performed



Petro-Canada's Lubricants business was the first North American lubricants manufacturer to be ISO 9001 certified in 1993. Ten years later, Lubricants not only earned its ISO 14001 environment registration, but also the distinction of being the first lubricants manufacturer in the world to be ISO / TS 16949 certified. Other Petro-Canada business units are actively and independently pursuing their own ISO registrations.

- 44% better than some competitive spray oils, reduced pest damage by 95% and yielded more sizeable crops for the grower.
- For the growing importance of oil sands mining, Petro-Canada's open gear lubricants for large mining shovels, excavators and draglines are produced from a solvent-free formulation that will not harm the environment.

We also support the ongoing development of renewable power sources by offering lowest total cost solutions with Harnex Wind Turbine Gear Oils, Luminol Electrical Insulating Fluid, Sentron\* Natural Gas Engine Oils and Turboflo\* Premium Turbine Fluids.

Petro-Canada continues to support Iogen Energy Canada (Iogen) in Ottawa, which is pursuing a proprietary process to convert biomass (cellulose) waste into ethanol. Petro-Canada maintains an investor relationship with Iogen and contributes towards the funding of long-term research and development.

🔥 To learn more about our lubricants products, please visit our website.

### **ENSURING PRODUCT SAFETY**

Petro-Canada's focus on safety also extends to the products we purchase and produce. Purchased chemical products must be approved by representatives of our environment, health and safety team prior to use. For the controlled products Petro-Canada produces, product safety specialists generate material safety data sheets (MSDSs) with additional technical input from process engineers, chemists, industrial hygienists and health advisors. MSDSs for Petro-Canada controlled products are authored, stored and retrieved using a commercially available MSDS management system. This system allows MSDSs to be produced in different languages or legal formats to meet the requirements of international customers. MSDSs for employee and customer use are retrieved from websites.

In Canada, where the majority of our products are developed and manufactured, we adhere to the Workplace Hazardous Materials Information System (WHMIS) legislation. Equivalent systems guide the development and distribution of MSDSs where we operate and sell our products worldwide.

To retrieve the MSDSs, visit our website.

# **Environmental Investments**

Petro-Canada continues to direct a significant portion of our capital program to environmental projects. In 2005, \$856 million was directed to such initiatives, compared with \$651.3 million in 2004, \$414.4 million in 2003 and \$318.0 million in 2002. Sixty per cent of our 2005 investment went to produce cleaner burning transportation fuels at our Edmonton and Montreal refineries. This was part of our preparations to meet new federal limits for sulphur in gasoline and diesel fuel by January 1, 2005 and June 1, 2006, respectively. These projects were completed on time.



Over the past four years, Petro-Canada has invested more than \$1.1 billion into converting the Edmonton refinery to produce cleaner burning fuels.

# **IN SUMMARY**

Our corporate responsibility priorities are:

- · to operate with the highest standards of safety
- · to reduce the environmental impacts of our operations
- · to retain and attract employees who will support our business plans
- to engage those impacted by our operations to ensure understanding and shared benefits

	OUR GOALS IN 2006 ARE:
IN THE AREA OF BUSINESS CONDUCT TO	<ul> <li>conduct additional business integrity training related to anticorruption, antitrust and privacy laws, as well as our Code of Business Conduct;</li> <li>strengthen employee, contractor and supplier understanding of Code of Business Conduct expectations; and</li> <li>conduct third-party review of the TLM audit program and continue TLM audits.</li> </ul>
IN THE AREA OF COMMUNITY TO	<ul> <li>advance stakeholder relations processes and capability across the organization;</li> <li>implement a strategy to develop marketable skills among Aboriginal communities and find opportunities for employment; and</li> <li>complete a strategic review of the community partnership program for greater focus and impact.</li> </ul>
IN THE AREAS OF WORKING CONDITIONS AND HUMAN RIGHTS TO	<ul> <li>maintain our focus on injury reduction;</li> <li>implement recommendations from our partnership forum with contractors to improve safety performance;</li> <li>develop new TLM performance indicators;</li> <li>strengthen processes to transfer and implement lessons learned from environment, health and safety events;</li> <li>improve workforce planning, build recruiting capabilities and retain existing employees;</li> <li>implement a President's Award to recognize outstanding safety performance achievements; and</li> <li>adapt business continuity plans to respond to a pandemic influenza scenario.</li> </ul>
IN THE AREA OF ENVIRONMENT TO	<ul> <li>strengthen internal controls and data management practices for GHG emissions and primary air pollutants;</li> <li>develop an environmental information management strategy;</li> <li>broaden the application of Life-Cycle Value Assessment tools;</li> <li>develop a corporate water strategy; and</li> <li>conduct an environmental and social impact assessment in support of the Fort Hills upgrader, and drilling programs in Trinidad and Tobago.</li> </ul>

### HOW TO CONTACT US

We welcome your questions and comments about this report. Please contact:

### **Corporate Communications**

Petro-Canada P.O. Box 2844 Calgary, Alberta, Canada T2P 3E3 e-mail: corpcomm@petro-canada.ca

### **BRAD PALMER**

Retail Business Manager Sales, Service and Operations Kamloops, British Columbia Downstream "As a new grad with the Company, I'm in a rotational program that gives me exposure to many areas of the business in a short period of time. This makes the work very fast paced and exciting. Right now, I'm responsible for a territory of retail sites. I help operators build their businesses, follow our safety policies and provide the best customer service experience possible."

Design: Bhandari & Plater Inc. Printing: Transcontinental Printing

Photography courtesy of James LaBounty, Trudie Lee, Joëlle Opelik, Ian McIntosh, Sita Persad, Colin Way, Klaas Slot, Peter Boman and Mike Sturk

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 Volatile organic compounds associated with printing were reduced by 50% to 75% from the levels produced using traditional inks and processes.



# WE BELIEVE

- In our strategy
- In our people
- In our capacity
- In our principles
- In our future