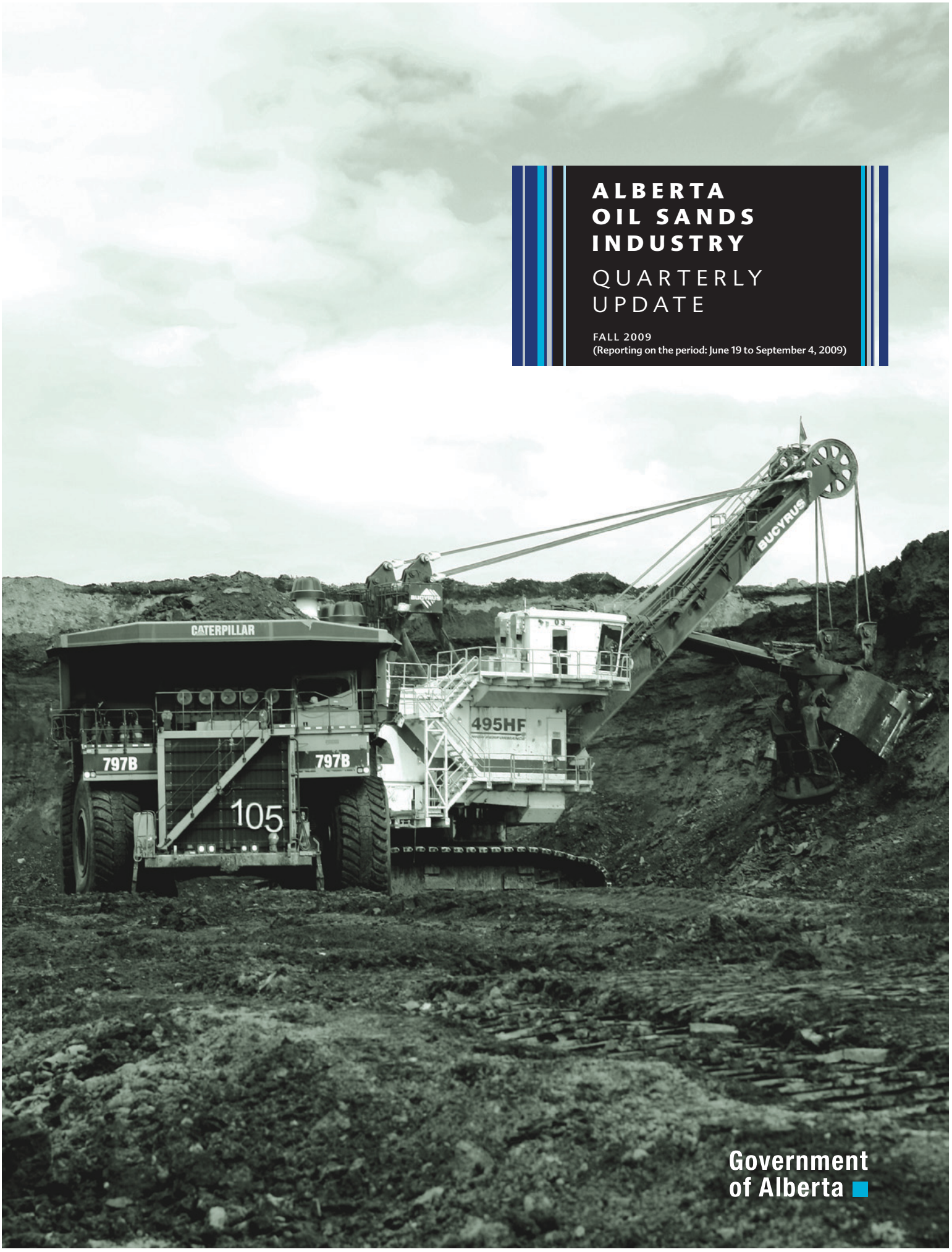
ALBERTA OIL SANDS INDUSTRY

QUARTERLY UPDATE

FALL 2009
(Reporting on the period: June 19 to September 4, 2009)



Government of Alberta

All about the oil sands

Background of an important global resource

TABLE OF CONTENTS

Alberta has the second-largest deposit of oil in the world—only Saudi Arabia can claim a larger stockpile of crude. But 170 billion of Alberta's 179 billion barrels of oil have the special quality of being bitumen, a resource that has been developed for decades but is only now coming into the forefront of the global energy industry, as conventional supplies—so-called "easy" oil—continue to be depleted. The figure of 170 billion barrels represents what is considered economically recoverable with today's technology, but with new technologies, this reserve estimate could be increased to as much as 315 billion barrels.

There are three major bitumen (or oil sands) deposits in Alberta. The largest is the Athabasca deposit, located in the province's northeast in the Regional Municipality of Wood Buffalo. The main population centre of the Athabasca deposit is the City of Fort McMurray. The second-largest oil sands deposit is referred to as Cold Lake, just south of Athabasca, with the main population centre the City of Cold Lake. The smallest oil sands deposit is known as Peace River, which is located in northwest central Alberta. A fourth deposit called Wabasca links to the Athabasca and is generally lumped in with that area.

The existence of bitumen in Alberta has been known for a long time. The first mention of it in Canadian history was in 1719, when a Cree named Wapasu brought a sample of the "gum" to a Hudson's Bay trading post. First Nations in what is now the Wood Buffalo area had traditionally used the bitumen, which seeps from outcrops along the Athabasca River, to waterproof their canoes.

Today bitumen is produced as an energy source by two means—mining and in situ. The majority of oil sands production is done by surface mining, but this will likely change in the future, as 80 per cent of Alberta's bitumen deposits are too deep underground to economically employ this technology.

Right now there are essentially two commercial methods of in situ (Latin for "in place," essentially meaning wells are used rather than trucks and shovels). In cyclic steam stimulation (CSS), high-pressure steam is injected into directional wells drilled from pads for a period of time, then the steam is left to soak in the reservoir for a period, melting the bitumen, and then the same wells are switched into production mode, bringing the bitumen to the surface.

In steam assisted gravity drainage (SAGD), parallel horizontal well pairs are drilled from well pads at the surface. One is drilled near the top of the target reservoir, while the other is drilled near its bottom. Steam is injected into the top well, a steam chamber forms, and via gravity, the melted bitumen flows into the lower well and is pumped to the surface using artificial lift.

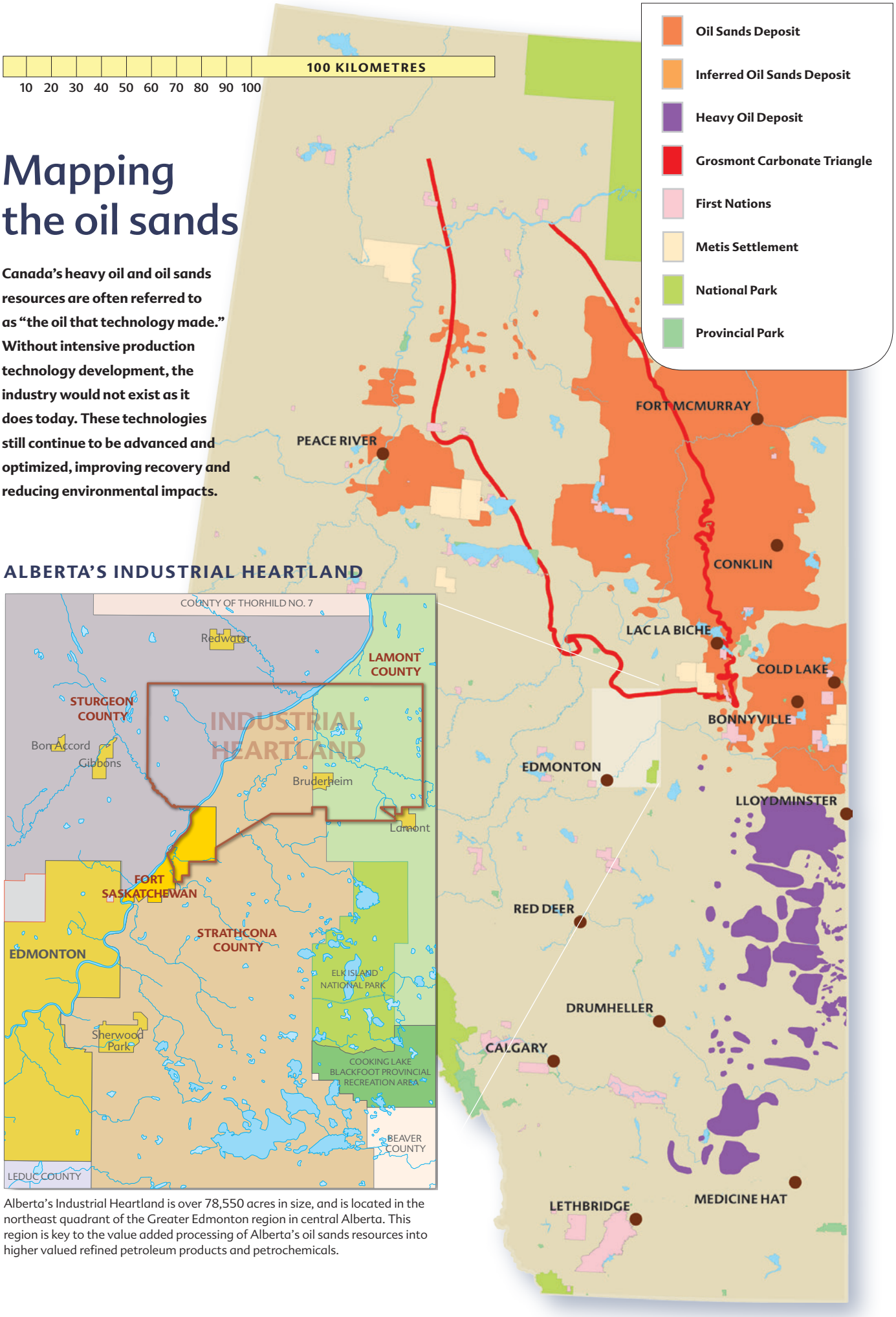
Both SAGD and CSS are used in the Cold Lake and Peace River deposits, while SAGD is the in situ technology of choice in the Athabasca deposit. The choice is based on a number of things including geology. The technologies combined currently produce just over one million barrels per day.

Research is underway on a number of other production technologies designed to optimize production and minimize water and energy use, including vapour extraction (VAPEX), and a form of in situ combustion known as toe to heel air injection (THAI).

Bitumen that has not been processed, or "upgraded," can be used directly as asphalt. It must be diluted to travel by pipeline. Adding value, some producers upgrade their product into synthetic crude oil (SCO), which is a refinery feedstock. At these refineries it can be transformed into transportation fuels and other products. •

Mapping the oil sands

Canada's heavy oil and oil sands resources are often referred to as "the oil that technology made." Without intensive production technology development, the industry would not exist as it does today. These technologies still continue to be advanced and optimized, improving recovery and reducing environmental impacts.



ALBERTA'S INDUSTRIAL HEARTLAND

Alberta's Industrial Heartland is over 78,550 acres in size, and is located in the northeast quadrant of the Greater Edmonton region in central Alberta. This region is key to the value added processing of Alberta's oil sands resources into higher valued refined petroleum products and petrochemicals.

Government update

GOVERNMENT POLICY

Bitumen Royalty-in-Kind

To enhance Alberta's value-add activities such as upgrading, refining, and petrochemical development, as well as to strengthen the provincial economy, the Government of Alberta is developing a Bitumen Royalty-in-Kind (BRIK) policy that will help encourage strategic value-add activity in the province based on the oil sands resource. As a demonstration of its commitment, the Government of Alberta released a Request for Proposals (RFP) on July 21, 2009, to procure a long-term contract to process or purchase a share of royalty volumes of bitumen.

As the resource owner, the Alberta government is entitled to take its royalty share of bitumen production-in-kind, as it does currently for conventional oil. The province intends to use a portion of its bitumen royalty volumes to supply a company on a commercial basis with an agreed-upon amount between 50,000 and 75,000 barrels per day of bitumen.

On Aug. 6, 2009, the government held a technical information session on the BRIK RFP process to provide clarification to interested parties. Parties were asked to submit their comments and suggestions for changes to the BRIK RFP by Aug. 31. On Sept. 30, 2009, the government will reissue the BRIK RFP based on the comments received and interested parties will then have until Dec. 2, 2009, to submit their proposals. The government is expected to announce the status of its RFP evaluation by March 31, 2010, and could potentially enter into an agreement in 2010. A BRIK program is expected to come into effect in 2012.

The RFP, detailed information on the BRIK process, and a list of questions and answers is available at www.energy.alberta.ca/BRIK.asp.

Clean Air Strategy

The Clean Air Strategic Alliance has submitted *Recommendations for a Clean Air Strategy for Alberta to the Government of Alberta.* The comprehensive report will help inform the development of an updated provincial clean air strategy to guide Alberta's long-term approach to air quality management.

In drafting the 14 recommendations, stakeholders established several objectives to improve Alberta's air quality. These include enhancements to regional management of air quality, better prevention and control of air pollution, and providing air-related information to all Albertans.

For more information on the recommendations of the Clean Air Strategic Alliance, visit www.casahome.org.

To learn more about air management in Alberta, visit www.environment.alberta.ca.

RESEARCH AND TECHNOLOGY

Carbon capture and storage

The Alberta government has completed its evaluation of projects applying for $2 billion in funding for the development of carbon capture and storage (CCS). As a result, government has identified a list of potential projects and is currently finalizing agreements with the most suitable proposed developments.

The first round of commercial-scale projects is expected to achieve annual CO_2 reductions by 2015 equivalent to taking approximately one million vehicles, or about one-third of all registered vehicles in the province, off the road.

A full list of projects that applied for funding is available at www.energy.alberta.ca.

The Alberta government has also released the final report of the Carbon Capture and Storage Development Council. Its recommendations are designed to be a blueprint for how the province can best implement CCS. The report can be found at www.energy.alberta.ca/Initiatives/1690.asp.

Chaired by former Syncrude president Jim Carter, the council reviewed the economic, infrastructure, and regulatory needs of CCS and how government and industry can work together now and in the future. The council included experts from industry, the research sector, and the provincial and federal governments.

The council, appointed by Premier Ed Stelmach in April of 2008, is part of the pledge made in Alberta's 2008 Climate Change Strategy, which committed to reducing projected emissions by 200 megatonnes by 2050.

For more information on the CCS program, visit www.energy.alberta.ca.

Oil sands reclamation research

The Government of Alberta has awarded $1.5 million to the School of Energy and the Environment at the University of Alberta to support oil sands reclamation research.

The recently established Oil Sands Research and Information Network (OSRIN) will use the grant to conduct comprehensive reclamation-related research. OSRIN will help provide industry with the scientific foundation for the best environmental management practices in the oil sands.

This funding builds on a previous commitment made by the Government of Alberta to establish and operate OSRIN. The School for Energy and the Environment received a $3-million grant last year through the Energy Innovation Fund to launch the network to provide a structure for allocating related Government of Alberta research funds. Research will be targeted at improving reclamation and tailings management in the oil sands industry through better information, technology, or other systems.

Other information sources of interest

Two independent studies have found direct emissions from producing, transporting, and refining oil sands crude are in the same range as those of the other crudes refined in the United States. *The Life-Cycle Analysis of North American and Imported Crude Oils* is based on two independent studies that comprise the first robust comparison of domestic, imported, and oil sands crude processes in U.S. refineries. The research, conducted over the past year by U.S.-based consulting companies Jacobs Consultancy and TIAX LLC, was funded by the Alberta Energy Research Institute (AERI).

The studies found that direct greenhouse gas (GHG) emissions from the oil sands are generally about 10 per cent higher than direct emissions from other crudes in the United States. If cogeneration is taken into consideration, oil sands crudes would be similar to conventional crudes in terms of GHG emissions.

Previous studies used a simplified model representation for calculating direct emissions from different crude oil sources. This new research shows a wide range of emissions resulting from the production, transportation, and refining of oil. The range of emissions is based on several factors including location, reservoir depth, oil characteristics, and production technology.

To review the entire studies or for more information, visit www.aeri.ab.ca.

Upcoming events

Remediation Technologies Symposium 2009—RemTech 2009
Oct. 14—16, 2009, Banff, Alta.

World Heavy Oil Congress
Nov. 3—5, 2009, Puerto La Cruz, Venezuela

Cold Climate Construction Conference and Expo
March 2—3, 2010, Edmonton, Alta.

National Buyer Seller Forum
March 23—25, 2010, Edmonton, Alta.

Water Technologies Symposium 2010—WaterTech 2010
April 21—23, 2010, Banff, Alta.

What's new in the oil sands

Key updates from fall 2009

The merger of **Suncor Energy** and **Petro-Canada** has closed, resulting in the creation of an energy giant. The "new" Suncor is now determining its next steps.

After raising new funds, **Connacher Oil and Gas** has re-activated its suspended Algar steam assisted gravity drainage (SAGD) project. Connacher said it anticipates that construction at Algar and the drilling of the 15 SAGD well pairs will take approximately 275 days from commencement of field activities, thus being completed in April 2010.

Imperial Oil, which recently announced its plans to go ahead with its $8-billion Kearl mine, is also dusting off plans for an expansion of its Cold Lake cyclic steam stimulation project and plans to apply for regulatory approval this year.

"We have just initiated public consultations in the Cold Lake area and we are advancing design of the project," said Imperial spokesman Pius Rolheiser.

Imperial first announced plans to apply for regulatory approval of the three-phase, 30,000 barrel per day expansion in 2004.

However, it delayed the plans, partially because the overheated Alberta economy was driving up construction costs. Now that construction and materials costs are down, it plans to proceed with the expansion.

Rolheiser said it will resubmit its earlier application because it has made three important design modifications to the expansion, which it calls its Nabiye project. (Nabiye is the Dene word for otter.)

"All three changes are designed to improve the environmental performance of the project," he said.

FirstEnergy Capital has released a research document outlining its thoughts on what price of oil will loosen the purse strings of oil sands producers, announcing project commitments once again. Well, it looks like that is US$60 per barrel WTI.

FirstEnergy looked at the implied after-tax internal rates of return for non-upgraded bitumen projects, both mining and in situ, using what it calls "a conservative representation on a number of fronts."

Times may be looking up for investment in the sector, at least on the production side.

"Based on the current price of oil layered together with a very weak natural gas price environment, we believe that bitumen projects are going to start coming back on the table, with the Kearl oil sands project the first to be announced," wrote analysts William Lacey and Michael Dunn. "The next project of significance that we believe will come back onto the table will be Firebag 3 [68,000 barrels per day, about $1.2 billion left to be spent] in Q4 2009, and in all likelihood will be followed by Firebag 4 [68,000 barrels per in 2010]."

Investment in upgrading capacity within Alberta is likely to remain stalled, however.

"At present, we believe it is more efficient to export bitumen to more complex refineries in the U.S. Upper Midwest and in the Gulf of Mexico," the analysts explained. "This is not to say that future upgrading investments will not occur in Alberta; however, we believe any decision to construct new upgrading capacity will more likely be driven by political decisions and/or incentives than economic ones."

A forecast slowdown in the pace of oil sands development coupled with the additional pipeline capacity expected to be on stream by the end of 2010 will result in spare crude oil pipeline capacity out of western Canada until 2019, says a new industry study.

Enbridge's Alberta Clipper and **TransCanada's Keystone** and Keystone extension projects will provide additional capacity of 1.04 million barrels per day for a total of more than 2.8 million barrels per day of oil sands production. That will meet or exceed forecast supply for nearly a decade, according to the Canadian Association of Petroleum Producers' (CAPP) annual crude oil and market forecast outlook.

Depending on the production schedule when the pipelines come on, the tolls will have to adjust to reflect that spare capacity, which will mean higher tolls for shippers in the early years, Greg Stringham, vice-president of markets and oil sands for the association, said in an interview. "It could be a significant cost to them as it goes forward."

Research that benchmarks well-to-wheels life cycle greenhouse gas (GHG) emissions has found that direct emissions from producing, transporting, and refining oil sands crude are in the same range as those of other volumes refined in the United States.

Carbon-dioxide emissions generated from oil sands activities are on average about 10 per cent higher than competing U.S. crude imports, and were approximately the same as heavy oil produced in California, says the **Alberta Energy Research Institute**.

The findings contradict some previous studies that concluded GHG emissions from oil sands were as much as 40 per cent higher than those from other sources.

Husky Energy has no intention of shutting down its Tucker steam assisted gravity drainage project, said John Lau, Husky president and chief executive officer.

Asked by analysts recently if closing Tucker was in the cards, Lau delivered a swift "no," followed by a brief pitch for the project, situated about 30 kilometres west of the town of Cold Lake, Alta.

"Tucker is one of the best projects, producing in the range of 3,000 to 5,000 barrels per day. We have no intention to push [production] up yet, because of volatility in the [oil] price, but we'll definitely keep our options open."

By year end, Husky hopes to see the project reach exit volumes of 5,000 to 6,000 barrels per day.

Officially launched in October 2006, Tucker was supposed to reach capacity of about 30,000 barrels per day within 18 to 24 months.

Further opening up Asian markets for growing oil sands production is a top strategic goal for producers, although pipelines that could support the expansion, such as proposals to Kitimat, B.C., are still a ways off, according to major pipeline operators.

Ian Anderson, president of **Kinder Morgan Canada**, told a TD Newcrest unconventional oil conference in July that the Kitimat option is on the company's radar screen.

"It's a great northern port option," he said. "We stand with [Enbridge] in recognition of the viability of Kitimat and the attractiveness of Kitimat."

He said, though, that incremental expansion south to the Port of Vancouver and increasing ship sizes over time is more in line with where the supply/demand economics will be, at least for the next decade.

Southern Pacific Resource Corp. has appointed BMO Capital Markets as its financial advisor to help evaluate the options to finance construction of the corporation's first SAGD oil sands project, pegged at approximately $400 million.

Southern Pacific recently submitted the project application for its 80 per cent owned 12,000 barrel per day STP-McKay project north of Fort McMurray, close to Petro-Canada's MacKay River project, running since 2002.

Almost exactly one year after **Enbridge** started construction on the Canadian leg of its Alberta Clipper pipeline, it has been the final go-ahead to continue the project into the United States. Alberta Clipper will have initial capacity of 450,000 barrels per day, connecting oil sands crude supplies with the U.S. Midwest by mid-2010.

In its approval, the U.S. Department of State said the pipeline will "[increase] trade with a stable and reliable ally," and is "a positive economic signal during a difficult economic period."

There has been an uproar from environmental groups, including this statement from Sierra Club executive director Carl Pope: "Importing dirty tar sands oil is not in our national interest.... At a time when concern is growing about the national security threat posed by global warming, it doesn't make sense to open our gates to one of the dirtiest fuels on Earth."

Inter Pipeline Fund says its $1.8-billion Corridor pipeline expansion project is now mechanically complete and all facilities have been successfully dry commissioned. Over 3.9 million person-hours have been invested in the project to date.

Remaining work includes minor remediation activities along the pipeline rights-of-way and wet commissioning of new facilities when oil is initially delivered into the system. This work will continue into 2010. The project connects Shell's mining operations north of Fort McMurray with its upgrader in the Edmonton region. The expansion fits into current expansions underway at both sites.

As the Canadian business unit of **Petrobank Energy and Resources** merges with **TriStar Oil and Gas** to become **PetroBakken Energy**, a dominating force in Saskatchewan's Bakken resource play, it's business as usual for the company's heavy oil business unit in Alberta and its demonstration of toe to heel air injection (THAI).

"It's steady as she goes," says Chris Bloomer, Petrobank's senior vice-president and chief operating officer, heavy oil. The company believes that with the THAI process, it is on the verge of creating a new global solution for the extraction of heavy oil.

Petrobank's three-well THAI pilot in the Athabasca oil sands has been operating since 2006, and although it has experienced its challenges, Bloomer says the company has confirmed that the process works.

Alberta Environment has issued **Osum Oil Sands** the final terms of reference for an environmental impact assessment (EIA) report on the company's proposed 35,000 barrel per day Taiga steam assisted gravity drainage project near Cold Lake, Alta.

Pending regulatory approval, it is Osum's intention to begin construction in the third quarter of 2011 with subsequent start-up expected in the second quarter of 2013 and first bitumen production in early 2014.

The final terms of reference is the regulators' list of information it requires for Taiga's EIA, which is to be followed by a formal application with Alberta's Energy Resources Conservation Board.

Another one of the world's largest oil companies is buying into the oil sands. For $1.9 billion, state-owned **PetroChina**, a subsidiary of **China National Petroleum Corporation**, will purchase 60 per cent ownership of **Athabasca Oil Sands Corp.**'s two proposed in situ projects.

The transaction is subject to federal review under foreign ownership rules.

Project listings

Updated status of oil sands projects in Alberta

As of Sept. 4, 2009.

TECHNOLOGY LEGEND

CSS	Cyclic steam stimulation
COGD	Combustion overhead garvity drainage
ET-DSP	Electro-thermal dynamic stripping process
N-SOLV	Heated solvent vapour extraction
SAGD	Steam assisted gravity drainage
THAI	Toe to heel air injection

COMPANY	CURRENT PROJECT	CAPACITY (bbl/d)	START-UP	REGULATORY STATUS	DEVELOPMENT PROGRESS	TECHNOLOGY
ATHABASCA REGION – IN SITU						
ALBERTA OILSANDS						
Clearwater	Pilot	2,000	TBD	Announced	Application to be submitted before year-end. Reports new contingent resource estimate of 182.5 million barrels from Ryder Scott.	SAGD
	Commercial Project	10,000	TBD	Announced	Company has reached an agreement with the Fort McMurray Regional Airport Commission that outlines royalties and warrants that AOS will grant the airport in exchange for confirmed access to certain lands.	SAGD
ATHABASCA OIL SANDS						
Dover	Pilot	1,000-2,000	TBD	Applied	AOSC has entered into an agreement where PetroChina will acquire 60 per cent working interest in both projects for $1.9 billion.	SAGD
MacKay River	Pilot	2,200	TBD	Applied		SAGD
	Commerical Phase 1	35,000	2014	Announced		SAGD
BLACKPEARL RESOURCES						
Blackrod	Pilot	500	2009	Application	2009 budget has been increased, assisting in further project development.	SAGD
CANADIAN NATURAL RESOURCES						
Birch Mountain	Phase 1	60,000	TBD	Announced		TBA
Gregoire Lake	Phase 1	60,000	TBD	Announced		TBA
Grouse	Phase 1	60,000	TBD	Announced		TBA
Kirby	Phase 1	45,000	TBD	Applied	Canadian Natural will decide in late 2009 or early 2010 when to proceed.	SAGD
Leismer	Phase 1	30,000	TBD	Announced		TBA
CHEVRON CANADA						
Ells River		100,000	2015	Announced	Chevron has decided to place Ells River on hold. The company does not believe the project will provide the necessary returns in the foreseeable future to compete for capital investment relative to others in its global portfolio. Project staff will remain in place until shutdown work concludes by year-end.	TBA
CONNACHER OIL AND GAS						
Great Divide	Pod 1	10,000	2007	Operating	Great Divide Pod 1 bitumen production has now surpassed 3 million barrels.	SAGD
	Pod 2 (Algar)	10,000	2010	Under construction	Construction completion expected in April 2010.	SAGD
	Expansion	24,000	2012	Disclosed	Public disclosure issued March 2009.	SAGD
CONOCOPHILLIPS CANADA						
Surmont	Phase 1	27,000	2008	Operating		SAGD
	Phase 2	83,000	2014 - 2016	Approved	Engineering underway.	SAGD
DEVON CANADA						
Jackfish	Phase 1	35,000	2008	Operating		SAGD
	Phase 2	35,000	2011	Approved	Devon reports construction is about 40 per cent complete.	SAGD
ENCANA						
Borealis	Phase 1	35,000	TBD	Applied		SAGD
	Phase 2	32,500	TBD	Announced		SAGD
	Phase 3	32,500	TBD	Announced		SAGD
Christina Lake	Phase 1A	10,000	2002	Operating		SAGD
	Phase 1B	8,800	2008	Operating		SAGD
	Phase 1C	40,000	2011	Under construction	EnCana reports Phase 1C remains on schedule and on budget. Phase 1D to be sanctioned in Q4-09.	SAGD
	Phase 1D	40,000	TBD	Approved		SAGD
	Phase 1E	40,000	TBD	Announced	Regulatory applications for 1E-1G expected in Q3-09.	SAGD
	Phase 1F	40,000	TBD	Announced		SAGD
	Phase 1G	40,000	TBD	Anounced		SAGD

COMPANY	CURRENT PROJECT	CAPACITY (bbl/d)	START-UP	REGULATORY STATUS	DEVELOPMENT PROGRESS	TECHNOLOGY
Foster Creek	Phase 1A	24,000	2001	Operating		SAGD
	Debottlenecking	6,000	2003	Operating		SAGD
	Phase 1C — Stage 1	10,000	2005	Operating		SAGD
	Phase 1C — Stage 2	20,000	2007	Operating		SAGD
	Phase 1D	30,000	2009	Operating	Commissioning nearing completion. Production ramping up.	SAGD
	Phase 1E	30,000	2009	Operating	Regulatory applications for 1E-1G expected in Q3-09.	SAGD
	Phase 1F	30,000	TBD	Announced		SAGD
	Phase 1G	30,000	TBD	Announced		SAGD
	Phase 1H	30,000	TBD	Announced		SAGD
Kirby	Phase 1	10,000	TBD	Application	Enerplus has deferred the Kirby project, but will continue resource assessment.	SAGD
	Phase 2	25,000	TBD	Announced		SAGD
E-T ENERGY						
Poplar Creek		10,000	2011	Approved	Expanded field test of ET-DSP complete.	ET-DSP
EXCELSIOR ENERGY						
Hangingstone	Phase 1	10,000	2011	Application	Application for in situ combustion technology submitted in June 2009.	COGD
GRIZZLY OIL SANDS						
Algar Lake		10,000	TBD	Announced	Grizzly is completing engineering and updating reservoir characterization to include the resource identified during the past winter's drilling program. Plan is to file a regulatory application by year-end.	SAGD
HUSKY ENERGY						
McMullen	Pilot	775	TBD	Application		SAGD
Sunrise	Phase 1	50,000	TBD	Approved	Project partners will review project sanction by the end of 2009 and move to final approvals in the first half of 2010. Work continues on the optimization of Sunrise in order to simplify the scope and take advantage of declining construction price levels.	SAGD
	Phase 2	50,000	TBD	Approved		SAGD
	Phase 3	50,000	TBD	Approved		SAGD
	Phase 4	50,000	TBD	Approved		SAGD
IVANHOE ENERGY						
Tamarack	SAGD with HTL upgrading	20,000	2013	Announced	Engineering work continues. Front-end engineering and design targeted for completion in Q4.	SAGD
JAPAN CANADA OIL SANDS						
Hangingstone	Pilot	10,000	2002	Operating		SAGD
	Phase 1	35,000	TBD	Disclosed	Preparing regulatory application and conducting environmental impact assessment.	SAGD
KOREA NATIONAL OIL CORPORATION						
BlackGold	Phase 1	10,000	TBD	Application	Approval anticipated this year. Once that is in place, will start engineering, procurement and construction.	SAGD
	Phase 2	20,000	TBD	Announced		SAGD
LARICINA ENERGY						
Germain	SAGD pilot	1,800	2012	Application	Laricina reports the pilot is "development ready."	SAGD
	Phase 1	10,000	TBD	Announced		SAGD
Saleski	Carbonate SAGD demonstration	1,800	2011	Approved	ERCB approval in hand. Alberta Environment approval expected shortly.	SAGD
	Phase 1	10,000	TBD	Announced		SAGD
MEG ENERGY						
Christina Lake	Phase 1	3,000	2008	Operating		SAGD
	Phase 2	22,000	2009	Approved	Construction nearing completion.	SAGD
	Phase 2B	35,000	TBD	Application		SAGD
	Phase 3A	75,000	TBD	Application		SAGD
	Phase 3B	75,000	TBD	Application		SAGD
NEXEN						
Long Lake	Phase 1	72,000	2007	Operating	Nexen says ramp-up is progressing and the reservoir continues to perform as expected given the amount of steam that has been injected. Steam volumes have been limited by ability to treat water. Scheduled downtime in Q3 for maintenance.	SAGD

COMPANY	CURRENT PROJECT	CAPACITY (bbl/d)	START-UP	REGULATORY STATUS	DEVELOPMENT PROGRESS	TECHNOLOGY
Long Lake *(cont'd)*	Phase 2	72,000	TBD	Announced	Sanctioning deferred until late 2009.	SAGD
	Phase 3	72,000	TBD	Announced		SAGD
	Phase 4		TBD	Announced		SAGD
Long Lake South	Phase 1	70,000	TBD	Approved		SAGD
	Phase 2	70,000	TBD	Approved		SAGD
N-SOLV						
	Pilot plant	2,000	2010	Announced		N-SOLV
PATCH INTERNATIONAL						
Ells River		10,000	TBD	Announced	Patch is in early stages of insolvency. Project is on hold until it changes hands.	SAGD
PETROBANK ENERGY AND RESOURCES						
Whitesands	Pilot	1,900	2006	Operating	Whitesands is now configured as a modified three well THAI/CAPRI (catalyst) demonstration site, allowing further new technology tests.	THAI
	Expansion	1,900	2008	Approved	Expansion on hold in favour of capitalizing on existing infrastructure.	THAI
May River	Phase 1	10,000	TBD	Applied	Application has been deemed complete by regulatory authorities. Approval anticipated by year-end.	THAI
	Subsequent Phases	90,000	TBD	Disclosed		THAI
PETRO-CANADA (SUNCOR)						
Chard	Phase 1	40,000	TBD	Announced	Merger with Suncor has closed.	SAGD
Lewis	Phase 1	40,000	TBD	Disclosed		SAGD
	Phase 2	40,000	TBD	Disclosed		SAGD
MacKay River	Phase 1	33,000	2002	Operating		SAGD
	Phase 2	40,000	2012	Approved	Sanction on hold pending Suncor decision on which projects to go forward first.	SAGD
Meadow Creek	Phase 1	40,000	TBD	Approved		SAGD
	Phase 2	40,000	TBD	Approved		SAGD
SOUTHERN PACIFIC RESOURCE						
STP McKay		10,000	TBD	Announced	New resource evaluation by McDaniel and Associates says project has 188.4 million barrels of proved-plus-probable reserves, a 50 per cent increase over the previous year. Alberta Environment has stated application is administratively complete.	SAGD
STATOILHYDRO CANADA						
Kai Kos Dehseh-Leismer	Demonstration	10,000	2009	Under construction	Construction approximately 63 per cent complete, reports on track for first steam in the latter part of 2010.	SAGD
Leismer	Commercial	20,000	TBD	Applied		SAGD
	Expansion	20,000	TBD	Applied		SAGD
Corner		40,000	TBD	Applied		SAGD
Thornbury		40,000	TBD	Applied		SAGD
Corner	Expansion	40,000	TBD	Applied		SAGD
Hangingstone		20,000	TBD	Applied		SAGD
Thornbury	Expansion	20,000	TBD	Applied		SAGD
Northwest Leismer		20,000	TBD	Applied		SAGD
South Leismer		20,000	TBD	Applied		SAGD
SUNCOR ENERGY						
Firebag	Phase 1	33,000	2004	Operating	Merger with Petro-Canada has closed.	SAGD
	Phase 2	35,000	2006	Operating		SAGD
	Cogeneration and Expansion	25,000	2007	Operating		SAGD
	Phase 3	52,500	TBD	Suspended	Project is now in "safe mode," awaiting resumption of expansion work.	SAGD
	Phase 4	62,500	TBD	Application	Construction of the Firebag sulphur plant, originally targeted for completion in Q2-09 is now scheduled to be finished in Q3-09. Delay is due to delivery schedule of modules from vendors.	SAGD
	Phase 5	62,500	TBD	Application		SAGD
	Phase 6	62,500	TBD	Application		SAGD
	Stages 3-6 Debottlenecking	23,500	TBD	Application		SAGD
SUNSHINE OIL SANDS						
Harper pilot	Production mobility test	N/Q	TBD	Announced		
Legend Lake	Phase 1	10,000	TBD	Announced		
	Phase 2 (two stages)	40,000	TBD	Announced		
West Ells	Phase 1	10,000	TBD	Announced		SAGD
	Phase 2 (two stages)	40,000	TBD	Announced		SAGD
	Phase 3	30,000	TBD	Announced		SAGD

COMPANY	CURRENT PROJECT	CAPACITY (bbl/d)	START-UP	REGULATORY STATUS	DEVELOPMENT PROGRESS	TECHNOLOGY
Thickwood	Phase 1	10,000	TBD	Announced		SAGD
	Phase 2 (two stages)	40,000	TBD	Announced		SAGD
	Phase 3	25,000	TBD	Announced		SAGD
TOTAL E&P CANADA						
Joslyn	Phase 1	2,000	2004	Suspended	Production suspended reportedly due to failure to reach target levels. Reserves debooked. Total to complete study into future options in the third quarter.	SAGD
	Phase 2	10,000	2006	Suspended		SAGD
	Phase 3A	15,000	TBD	Withdrawn		SAGD
	Phase 3B	15,000	TBD	Disclosure		SAGD
VALUE CREATION GROUP						
Terre de Grace	Pilot	10,000	TBD	Application		SAGD
	Phase 1	40,000	TBD	Applied		SAGD
	Phase 2	40,000	TBD	Announced		SAGD
ATHABASCA REGION — MINING						
ATHABASCA OIL SANDS PROJECT						
Jackpine	Phase 1A	100,000	2010/11	Under construction	Shell says the project is at peak construction, with about 10,000 workers on the combined mine and upgrader sites.	Mining
	Phase 1B	100,000	TBD	Approved		Mining
	Phase 2	100,000	TBD	Application		Mining
Muskeg River	Existing Facilities	155,000	2002	Operating		Mining
	Expansion and Debottlenecking	115,000	TBD	Approved	Final investment decision delayed.	Mining
Pierre River	Phase 1	100,000	TBD	Applied		Mining
	Phase 2	100,000	TBD	Applied		Mining
CANADIAN NATURAL RESOURCES						
Horizon	Phase 1	135,000	2008	Operating	Rates continue to fluctuate as ramp-up continues but has at times exceeded 110,000 barrel per day capacity.	Mining
	Phases 2 and 3	135,000	TBD	Approved		Mining
	Phase 4	145,000	TBD	Announced		Mining
	Phase 5	162,000	TBD	Announced		Mining
IMPERIAL OIL						
Kearl	Phase 1	100,000	TBD	Approved	Imperial's board has sanctioned Kearl. Site access clearing and muskeg drainage underway.	Mining
	Phase 2	100,000	TBD	Approved		Mining
	Phase 3	100,000	TBD	Approved		Mining
PETRO-CANADA (SUNCOR)						
Fort Hills	Phase 1	165,000	TBD	Approved	Merger with Suncor complete. Sanction on hold until commodity prices and financial markets stabilize.	Mining
	Debottlenecking	25,000	TBD	Approved		Mining
SUNCOR ENERGY						
Original operations	Millennium	294,000	1967	Operating		Mining
	Steepbank Debottleneck Phase 3	4,000	2007	Operating		Mining
	Millennium Debottlenecking	23,000	2008	Operating		Mining
	North Steepbank Extension		2010	Under construction	Cost now expected to be about $980 million as a result of labour shortages and premiums incurred to maintain project schedule.	Mining
Voyageur South	Phase 1	120,000	TBD	Applied		Mining
SYNCRUDE						
Mildred Lake and Aurora	Stages 1 and 2	290,700	1978	Operating	Major maintenance on new coker completed, mining operations reportedly on improving trend from previously constrained bitumen supply.	Mining
	Stage 3 Expansion	116,300	2006	Operating		Mining
	Stage 3 Debottleneck	46,500	TBD	Announced		Mining
	Stage 4 Expansion	139,500	TBD	Announced		Mining
TOTAL E&P CANADA						
Joslyn	Phase 1 (North)	50,000	TBD	Applied	Investment decision targeted for 2010, depending on results of regulatory process.	Mining
	Phase 2 (North)	50,000	TBD	Applied		Mining
Joslyn *(cont'd)*	Phase 3 (South)	50,000	TBD	Announced		Mining
	Phase 4 (South)	50,000	TBD	Announced		Mining
Northern Lights	Phase 1	57,250	TBD	Withdrawn	Northern Lights asset is being integrated into Total portfolio. Will reinstate after new timing is determined.	Mining
	Phase 2	57,250	TBD	Withdrawn		Mining

COMPANY	CURRENT PROJECT	CAPACITY (bbl/d)	START-UP	REGULATORY STATUS	DEVELOPMENT PROGRESS	TECHNOLOGY
UTS/TECK COMINCO						
Equinox		50,000	TBD	Public disclosure	Baseline environment and historical resource studies complete. Project evaluation will follow completion of Frontier scoping studies later in 2009.	Mining
Frontier	Phase 1	100,000	TBD	Public disclosure	UTS and Teck intend to initiate a design basis memorandum for Frontier later in 2009 with an application planned for late 2010 or early 2011. Finalization of 2010 budget expenditures planned for Q4.	Mining
	Phase 2	60,000	TBD	Public disclosure		Mining
COLD LAKE REGION – IN SITU						
BR OIL SANDS (SHELL)						
Orion	Phase 1	10,000	2008	Operating		SAGD
	Phase 2	10,000	TBD	Approved		SAGD
CANADIAN NATURAL RESOURCES						
Primrose/Wolf Lake	Wolf Lake	13,000	1985	Operating		CSS
	Wolf Lake SAGD	5,500	TBD	Application		SAGD
	Primrose South	45,000	1985	Operating		CSS
	Primrose North	30,000	2006	Operating		CSS
	Primrose East (Burnt Lake)	32,000	2009	Operating	After initial steaming in Q1, Canadian Natural identified oil seepage at the surface on one of the new multi-well pads, but believes it has identified the issue and the remedial action required. Company continues to work with regulators on resolving the issue and returning to normal operations.	CSS
	CSS Follow-up Process	25,000	TBD	Application		CSS
HUSKY ENERGY						
Caribou	Demonstration Project	10,000	TBD	Approved		SAGD
Tucker	Phase 1	30,000	2006	Operating	Husky has implemented a decrease in bitumen production in order to focus on steam chamber development.	SAGD
IMPERIAL OIL						
Cold Lake	Phases 1-10: Leming, Maskwa, Mahihkan	110,000	1985	Operating		CSS
	Phases 11-13: Mahkeses	30,000	2003	Operating		CSS
	Phases 14-16: Nabiye, Mahihkan North	30,000	TBD	Approved	Imperial will re-submit its Nabiye project after design modifications to improve environmental performance.	CSS
KOCH EXPLORATION CANADA						
Gemini	SAGD Project	10,000	TBD	Application	Permit application filed on June 15, 2009. Koch is performing detailed engineering design work and public consultation is ongoing.	SAGD
OSUM OIL SANDS						
Taiga	SAGD Project	25,000-35,000	2014	Disclosed	Alberta Environment has issued its final terms of reference for Osum's environmental impact assessment, its list of information required. EIA to be followed by an application.	SAGD
PENGROWTH ENERGY TRUST						
Lindbergh	SAGD Pilot	2,500	TBD	Application	Pengrowth says development of the pilot remains important, as commercial development is ready to move forward once prices improve.	SAGD
PEACE RIVER REGION – IN SITU						
ANDORA ENERGY (PAN ORIENT)						
Sawn Lake	SAGD Demonstration	1,400	TBD	Application	All season access to the site is currently underway, expected to be complete in 2009. Timing for equipment procurement, project drilling, and construction TBD.	SAGD
NORTH PEACE ENERGY						
Red Earth	CSS Pilot	1,001	2008	Operating	Project has been operating since the start of 2009. North Peace is not ready to make any definitive conclusions on anticipated commercial steam injectivity or production rates.	CSS
	Expansion	3,000	TBD	Announced	North Peace is re-assessing its capital budget for the second half of 2009 and exploring various alternatives for obtaining funds to progress future capital requirements.	CSS
PENN WEST ENERGY TRUST						
Seal	CSS Pilot	75	TBD	Application		CSS
SHELL CANADA						
Carmon Creek	Cadotte Lake	12,501	1986	Operating		CSS
	Phase 1	37,500	TBD	Announced	Shell has re-initiated stakeholder consultation, by way of a public information document. It is preparing an environmental impact assessment for a new application targeted for later this year.	CSS
	Phase 2	50,000	TBD	Announced		CSS
ATHABASCA REGION – UPGRADING						
CANADIAN NATURAL RESOURCES						
Horizon	Phase 1	135,000	2008	Operating	Rates continue to fluctuate as ramp-up continues but has at times exceeded 110,000 barrel per day capacity.	Upgrader
	Phases 2 and 3	135,000	TBD	Approved		Upgrader

COMPANY	CURRENT PROJECT	CAPACITY (bbl/d)	START-UP	REGULATORY STATUS	DEVELOPMENT PROGRESS	TECHNOLOGY
Horizon *(cont'd)*	Phase 4	145,000	TBD	Announced		Upgrader
	Phase 5	162,000	TBD	Announced		Upgrader
NEXEN						
Long Lake	Phase 1	72,000	2008	Operating	All major units now operational and synthesis gas has been used in SAGD operations, decreasing operating costs by not having to purchase as much natural gas. Upgrader reliability improving—on-stream factor of 46 per cent in Q2 versus 33 per cent in Q1. On average, synthetic crude has been sold at equal or above pricing for other synthetic crudes.	Upgrader
	Phase 2	72,000	TBD	Approved		Upgrader
	Phase 3	72,000	TBD	Announced		Upgrader
	Phase 4	72,000	TBD	Announced		Upgrader
	Phase 5	72,000	TBD	Announced		Upgrader
	Phase 6	72,000	TBD	Announced		Upgrader
SUNCOR ENERGY						
	Base U1 and U2	281,000	1967	Operating	Merger with Petro-Canada closed.	Upgrader
	Millennium Vacuum Unit	43,000	2005	Operating		Upgrader
	Millennium Coker Unit	116,000	2008	Operating		Upgrader
Voyageur	Phase 1	156,000	TBD	Approved	Voyageur has been wound down into "safe mode," awaiting resumption of expansion work.	Upgrader
	Phase 2	78,000	TBD	Approved		Upgrader
SYNCRUDE						
Mildred Lake	Stages 1 and 2	290,700	1978	Operating	Major maintenance on new coker completed, mining operations reportedly on improving trend from previously constrained bitumen supply.	Upgrader
	Stage 3 Expansion	116,300	2006	Operating		Upgrader
	Stage 3 Debottleneck	46,500	TBD	Announced		Upgrader
	Stage 4 Expansion	139,500	TBD	Announced		Upgrader
VALUE CREATION						
Terre de Grace Upgrader	Pilot	10,000	TBD	Application	Approval anticipated in the short term. Working on financing.	Upgrader
	Phase 1	2,000	TBD	Announced		Upgrader
	Phase 2	10,000	TBD	Announced		Upgrader
INDUSTRIAL HEARTLAND REGION — UPGRADING AND REFINING						
ATHABASCA OIL SANDS PROJECT						
Scotford Upgrader 1		155,000	2003	Operating	Shell says the project is at peak construction, with about 10,000 workers on the combined mine and upgrader sites.	Upgrader
	Expansion	90,000	2010	Under construction		Upgrader
Scotford Upgrader 2	Phase 1	100,000	TBD	Applied		Upgrader
	Phase 2	100,000	TBD	Application		Upgrader
	Phase 3	100,000	TBD	Application		
	Phase 4	100,000	TBD	Application		
BA ENERGY						
Heartland Upgrader	Phase 1	54,400	TBD	Approved	BA owner Value Creation expects the company to come out of creditor protection later this year. Encouraged by Alberta's bitumen royalty in kind program. Working to put project back into action.	Upgrader
	Phase 2	54,400	TBD	Approved		Upgrader
	Phase 3	54,400	TBD	Approved		Upgrader
NORTH WEST UPGRADING						
Upgrader	Phase 1	50,000	TBD	Approved	Site preparation complete. Focus is on commercial agreements.	Upgrader
	Phase 2	50,000	TBD	Approved	Alberta carbon trunk line CO_2 project has received funding from the Alberta government.	Upgrader
	Phase 3	50,000	TBD	Approved		Upgrader
PETRO-CANADA (SUNCOR)						
Fort Hills Upgrader	Phase 1	165,000	TBD	Approved	Construction decision on Fort Hills upgrader has been deferred.	Upgrader
	Phases 2 and 3	175,000	TBD	Approved	Merger with Suncor has closed.	Upgrader
Strathcona Refinery Conversion		135,000	2008	Operating		Upgrader
STATOILHYDRO CANADA						
StatoilHydro Upgrader	Phase 1	75,000	TBD	Withdrawn		Upgrader
	Phase 2	175,000	TBD	Withdrawn		Upgrader
TOTAL E&P CANADA						
Northern Lights Upgrader	Phase 1	56,600	TBD	Withdrawn		Upgrader
	Phase 2	56,600	TBD	Withdrawn		Upgrader
Total Upgrader	Phase 1	150,000	TBD	Application	Total is in the process of answering supplemental information requests related to its application.	Upgrader
	Phase 2	95,000	TBD	Application		Upgrader
	Debottlenecking	50,000	TBD	Application		

Glossary of oil sands terms

API

An American Petroleum Institute measure of liquid gravity. Water is 10 degrees API, and a typical light crude is from 35 to 40. Bitumen is 7.5 to 8.5.

Barrel

The traditional measurement for crude oil volumes. One barrel equals 42 US gallons (159 litres). There are 6.29 barrels in one cubic metre of oil.

Bitumen

Naturally occurring, viscous mixture of hydrocarbons that contains high levels of sulphur and nitrogen compounds. In its natural state, it is not recoverable at a commercial rate through a well because it is too thick to flow. Bitumen typically makes up about 10 per cent by weight of oilsand, but saturation varies.

Condensate

Mixture of extremely light hydrocarbons recoverable from gas reservoirs. Condensate is also referred to as a natural gas liquid, and is used as a diluent to reduce bitumen viscosity for pipeline transportation.

Cyclic steam stimulation

For several weeks, high-pressure steam is injected into the formation to soften the oilsand before being pumped to the surface for separation. The pressure created in the underground environment causes formation cracks that help move the bitumen to producing wells. After a portion of the reservoir has been saturated, the steam is turned off and the reservoir is allowed to soak for several weeks. Then the production phase brings the bitumen to the surface.

Density

The heaviness of crude oil, indicating the proportion of large, carbon-rich molecules, generally measured in kilograms per cubic metre (kg/m^3) or degrees on the American Petroleum Institute (API) gravity scale; in western Canada, oil up to 900 kg/m^3 is considered light to medium crude—oil above this density is deemed as heavy oil or bitumen.

Diluent

see Condensate

Established recoverable reserves

Reserves recoverable under current technology and present and anticipated economic conditions, plus that portion of recoverable reserves that is interpreted to exist, based on geological, geophysical, or similar information, with reasonable certainty.

Established reserves

Reserves recoverable with current technology and present and anticipated economic conditions specifically proved by drilling, testing, or production, plus the portion of contiguous recoverable reserves that are interpreted to exist from geological, geophysical, or similar information with reasonable certainty.

Extraction

A process, unique to the oil sands industry, which separates the bitumen from the oilsand using hot water, steam, and caustic soda.

Froth treatment

The means to recover bitumen from the mixture of water, bitumen, and solids "froth" produced in hot water extraction (in mining-based recovery).

Gasification

A process to partially oxidize any hydrocarbon, typically heavy residues, to a mixture of hydrogen and carbon monoxide. Can be used to produce hydrogen and various energy byproducts.

Greenhouse gases

Gases commonly believed to be connected to climate change and global warming. CO_2 is the most common, but greenhouse gases also include other light hydrocarbons (such as methane) and nitrous oxide.

Initial established reserves

Established reserves prior to the deduction of any production.

Initial volume in place

The volume calculated or interpreted to exist in a reservoir before any volume has been produced.

In situ

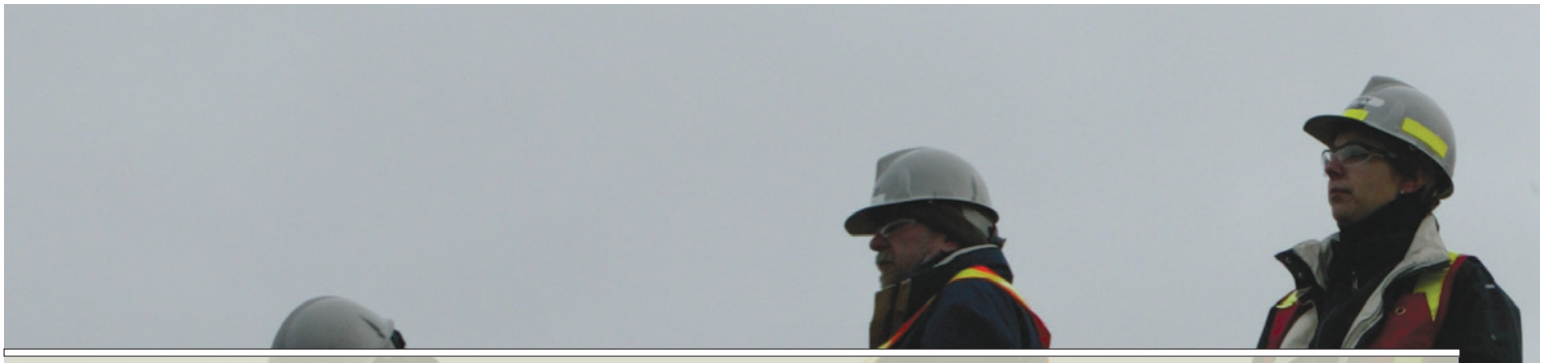
Latin for "in place." In situ recovery refers to various methods used to recover deeply buried bitumen deposits.

In situ combustion

A displacement enhanced oil recovery method. It works by generating combustion gases (primarily CO and CO_2) downhole, which then "pushes" the oil towards the recovery well.

Lease

A legal document from the province of Alberta giving an operator the right to extract bitumen from the oilsand existing within the specified lease area. The land must be reclaimed and returned to the Crown at the end of operations.



Muskeg

A water-soaked layer of decaying plant material, one to three metres thick, found on top of the overburden.

Oil Sands

Bitumen-soaked sand, located in four geographic regions of Alberta: Athabasca, Wabasca, Cold Lake, and Peace River. The Athabasca deposit is the largest, encompassing more than 42,340 square kilometres. Total deposits of bitumen in Alberta are estimated at 1.7 trillion to 2.5 trillion barrels.

Overburden

A layer of sand, gravel, and shale between the surface and the underlying oilsand. Must be removed before oil sands can be mined. Overburden underlies muskeg in many places.

Pilot plant

Small model plant for testing processes under actual production conditions.

Proven recoverable reserves

Reserves that have been proven through production or testing to be recoverable with existing technology and under present economic conditions.

Reclamation

Returning disturbed land to a stable, biologically productive state. Reclaimed property is returned to the province of Alberta at the end of operations.

Remaining established reserves

Initial reserves less cumulative production.

Royalty

The Crown's share of production or revenue. About three quarters of Canadian crude oil is produced from lands, including the oil sands, on which the Crown holds mineral rights. The lease or permit between the developer and the Crown sets out the arrangements for sharing the risks and rewards.

Steam assisted gravity drainage (SAGD)

An in situ production process using two closely spaced horizontal wells: one for steam injection and the other for production of the bitumen/water emulsion.

Synthetic crude oil

A manufactured crude oil comprised of naptha, distillate, and gas oil-boiling range material. Can range from high-quality, light sweet bottomless crude to heavy, sour blends.

Tailings

A combination of water, sand, silt, and fine clay particles that is a byproduct of removing the bitumen from the oilsand.

Tailings settling basin

The primary purpose of the tailings settling basin is to serve as a process vessel allowing time for tailings water to clarify and silt and clay particles to settle, so the water can be reused in extraction. The settling basin also acts as a thickener, preparing mature fine tails for final reclamation.

Thermal recovery

Any process by which heat energy is used to reduce the viscosity of bitumen in situ to facilitate recovery.

Toe-to-heel air injection (THAI)

An in situ combustion method for producing heavy oil and oilsand. In this technique, combustion starts from a vertical well, while the oil is produced from a horizontal well having its toe in close proximity to the vertical air-injection well. This production method is a modification of conventional fire flooding techniques in which the flame front from a vertical well pushes the oil to be produced from another vertical well.

Truck-and-shovel mining

Large electric or hydraulic shovels are used to remove the oilsand and load very large trucks. The trucks haul the oilsand to dump pockets where it is conveyed or pipelined to the extraction plant. Trucks and shovels are more economic to operate than the bucket-wheel reclaimers and draglines they have replaced at oil sands mines.

Upgrading

The process of converting heavy oil or bitumen into synthetic crude either through the removal of carbon (coking) or the addition of hydrogen (hydroconversion).

Vapour extraction (VAPEX)

VAPEX is a non-thermal recovery method that involves injecting a gaseous hydrocarbon solvent into the reservoir where it dissolves into the sludge-like oil, which becomes less viscous (or more fluid) before draining into a lower horizontal well and being extracted.

Viscosity

The ability of a liquid to flow. The lower the viscosity, the more easily the liquid will flow.

CONTACTS

Oil Sands Producers

- **Alberta Oilsands** www.aboilsands.ca
- **Albian Sands Energy** www.albiansands.ca
- **Andora Energy** www.andoraenergy.com
- **Athabasca Oil Sands** www.aosc.com
- **Baytex Energy** www.baytex.ab.ca
- **Canadian Natural Resources** www.cnrl.com
- **Chevron Canada** www.chevron.ca
- **Connacher Oil and Gas** www.connacheroil.com
- **ConocoPhillips Canada** www.conocophillips.ca
- **Devon Canada** www.dvn.com
- **EnCana** www.encana.com
- **Enerplus Resources Fund** www.enerplus.com
- **E-T Energy** www.e-tenergy.com
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- **Husky Energy** www.huskyenergy.ca
- **Imperial Oil** www.imperialoil.ca
- **Ivanhoe Energy** www.ivanhoe-energy.com
- **Japan Canada Oil Sands** www.jacos.com
- **Korea National Oil Corporation** www.knoc.co.kr
- **Laricina Energy** www.laricinaenergy.com
- **Marathon Oil** www.marathon.com
- **MEG Energy** www.megenergy.com
- **Nexen** www.nexeninc.com
- **North Peace Energy** www.northpec.com
- **North West Upgrading** www.northwestupgrading.com
- **N-Solv** www.n-solv.com
- **Occidental Petroleum Corporation** www.oxy.com
- **Oilsands Quest** www.oilsandsquest.com
- **Opti Canada** www.opticanada.com
- **OSUM Oil Sands** www.osumcorp.com
- **Patch International** www.patchenergy.com
- **Pan Orient Energy** www.panorient.ca
- **Pengrowth Energy Trust** www.pengrowth.com
- **Petro-Canada** www.petro-canada.com
- **Petrobank Energy and Resources** www.petrobank.com
- **Shell Canada** www.shell.ca
- **Southern Pacific Resource** www.shpacific.com
- **StatoilHydro Canada** www.statoilhydro.com
- **Suncor Energy** www.suncor.com
- **Sunshine Oilsands** www.sunshineoilsands.com
- **Syncrude** www.syncrude.ca
- **Talisman Energy** www.talisman-energy.com
- **Teck Cominco** www.teckcominco.com
- **Total E&P Canada** www.total-ep-canada.com
- **UTS Energy** www.uts.ca
- **Value Creation Group** www.vctek.com

Associations/Organizations

- **Alberta Building Trades Council** www.albertabuildingtrades.com
- **Alberta Chamber of Resources** www.acr-alberta.com
- **Alberta Chambers of Commerce** www.abchamber.ca
- **Alberta Energy** www.energy.gov.ab.ca
- **Alberta Energy Research Institute** www.aeri.ab.ca
- **Alberta Environment** www.environment.alberta.ca
- **Alberta Finance and Enterprise** www.finance.gov.ab.ca
- **Alberta Research Council** www.arc.ab.ca
- **Alberta's Industrial Heartland Association** www.industrialheartland.com
- **Canadian Association of Geophysical Contractors** www.cagc.ca
- **Canadian Association of Petroleum Producers** www.capp.ca
- **Canadian Heavy Oil Assocation** www.choa.ab.ca
- **Canadian Oil Sands Network for Research and Development** www.conrad.ab.ca
- **Energy Resources Conservation Board** www.ercb.ca
- **Lakeland Industry and Community Association** www.lica.ca
- **Natural Resources Conservation Board** www.nrcb.gov.ab.ca
- **Oil Sands Developers Group** www.oilsandsdevelopers.ca
- **Petroleum Technology Alliance Canada** www.ptac.org

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