

November 4, 2005

Revised

Projects will advance the development of province's energy resources

Pilot and demonstration projects will use innovative technologies

Edmonton... Thirteen pilot and demonstration projects that will advance technology to aid in the development of existing and new oil, natural gas and in-situ reserves were announced under round one of Alberta Energy's *Innovative Energy Technologies Program (IETP)*.

"Technology and innovation targeted at recovering resources that might otherwise be stranded underground will help ensure the energy sector continues to provide economic and social benefits for Albertans well into the future," says Alberta Energy Minister Greg Melchin. "The Innovative Energy Technologies Program is as much about people as it is about numbers. It means more high quality jobs for Albertans and continuing royalties to support health, education and other important Government of Alberta programs and services into the future."

Pilot and demonstration projects that use new or innovative technologies can lead to commercialization of environmentally sound recoveries of existing reserves. The IETP represents a \$200 million commitment over five years by Alberta Energy to provide royalty adjustments to pilot and demonstration projects that use innovative technologies to increase recoveries from existing reserves and encourage responsible, development of oil and gas reserves. The IETP is also designed to assist industry in finding commercial and technical solutions to gas-over-bitumen reserves that will allow efficient and orderly production of both resources. The program provides royalty adjustments of up to 30 per cent of eligible project costs, to a maximum of \$10 million per project.

Approved projects were submitted by:

- Canadian Natural Resources Limited
- MGV Energy Inc.
- ConocoPhillips
- Paramount Resources
- Deer Creek Energy
- Paramount Resources and ConocoPhillips
- EnCana Corporation
- Suncor Energy
- Husky Energy

Following the first round deadline for applications in March 2005, an evaluation committee from Alberta Energy and the Alberta Energy Research Institute (AERI) reviewed the applications and advised on the merits of the projects in the context of the project selection criteria. The second round application deadline is December 31, 2005.

For more information on the IETP and successful projects, see attached backgrounder or visit

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Revised:

This news release was amended on November 8, 2005.

Media enquiries may be directed to:

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Background

Innovative Energy Technologies Program Successful Round One Projects and Applicant Contacts

Canadian Natural Resources Limited (CNRL).
Project Title: Brintnell Field Horsetail Polymer Flood Pilot
Location: Brintnell - 25km NE of Wabasca-Desmarais - TWP 81 RNG 22 W4M
Amount Approved under IETP: \$1,084,200

Project Summary:

This pilot is designed to evaluate the feasibility, both technical and economic, of polymer flooding in the Wabiskaw zone of the Brintnell Field within the Pelican Lake area. Polymer flooding is an enhanced oil recovery process in which polymer is added to injection water in what would otherwise be a conventional water flood. The polymer increases the viscosity of the injection water, making it closer to that of the oil, reducing the tendency for water to move preferentially through the reservoir. The net effect of this viscosity adjustment is a more even restoration of pressure throughout the reservoir, and improved efficiency of the displacement of oil towards producing wells, with minimal opportunity for fingering of water through the reservoir.

Contact:

Phone: 403-514-7777

Corey Bieber, Canadian Natural Resources Limited

ConocoPhillips Canada Resources Corp.

Project Title:

Surmont SAGD Pilot
Location: Surmont Area 24 TWP 83 RGE 7 W4M
Amount Approved under IETP: \$10,000,000

Project Summary:

The Surmont pilot will illustrate that Steam Assisted Gravity Drainage can be technically and commercially

feasible in areas where natural gas deposits and bitumen are in contact with one another, and to demonstrate the application of multi-screw pumps. The trial will monitor well productivity, steam chamber growth and cumulative steam-oil ratios.

Contact

Phone: 403-233-3562

: Deepa Thomas, ConocoPhillips Canada Resources Corp.

Deer Creek Energy Limited

Project Title:

Deer Creek Josylyn Low Pressure SAGD Project Phase I
Location: 75km North of Ft. McMurray - TWP 95 RGE 12 W4
Amount Approved under IETP: \$5,708,570

Project Summary:

A significant portion of the bitumen resources deposited in the McMurray formation of the Athabasca Oil Sands require low pressure operations due to either relatively shallow true vertical depth of the deposit or due to low pressure boundaries such as depleted gas caps. A low pressure SAGD process may be an efficient and economical method to recover these resources. This pilot will help demonstrate the commercial application and performance of pumping low steam chamber pressures systems in SAGD conditions. Low Pressure SAGD operations will potentially reduce greenhouse gas emissions, water usage, and energy consumption due to lower steam oil ratios.

Contact

Phone: 403-538-4597

: Gerry Hampshire, Deer Creek Energy Limited

EnCana Oil and Gas Partnership

Project Title:

Vapor Extraction Recovery (Vapex) at the Suffield Upper Mannville A Pool
Location: Suffield Upper Mannville A Pool - TWP 19, RGE 7 W4
Amount Approved under IETP: \$1,368,000

Project Summary:

Traditional conventional oil recovery methods, primary and water floods generally leave much of the original oil behind in the ground. The VAPEX process targets heavy viscous crude oil and bitumen through a process of dissolving a solvent (usually a blend of hydrocarbon gases such as methane, ethane, propane and/or other gas) into the heavy oil deposit, resulting in reduced viscosity and improving its ability to flow into a producing well.

EnCana Oil and Gas Partnership

Project Title:

EnCAID - EnCana's Air Injection & Displacement Project for Gas-over-Bitumen Gas
Location: Cold Lake Air Weapons Range - TWP 73 RGE 6 W4M
Amount Approved under IETP: \$4,170,000

Project Summary:

The EnCAID process involves injection and ignition of air to strip out the oxygen and use the nitrogen and combustion products to displace the native methane-based formation gas. The goal is to prove that

companies can effectively recover the remaining gas in place while safely replacing it with nitrogen, carbon dioxide and combustion products.

EnCana Oil and Gas Partnership

Project Title:

Low Pressure Steam Assisted Gravity Drainage (SAGD) Artificial Lift Bench Scale Testing Program

Location: Lab Demonstration- Edmonton

Amount Approved under IETP: \$152,703

Project Summary:

This project is one of several technology programs aimed at resolving the gas-over-bitumen issue. Efficient and reliable artificial lift systems play a key role in the implementation of low-pressure SAGD technologies. The objective of this project to test a number of down hole pumping systems, at low pump intake pressures and low pump intake temperatures. At lower operating pressures, a favourable steam-oil ratio is achieved, reducing the natural gas consumption and carbon dioxide emissions and other green house gasses during steam generation.

Contact:

Phone: 403-645-4747

Alan Boras, EnCana Oil & Gas Partnership

Husky Oil Operations Limited

Project Title:

Taber S Mannville B Alkaline-Surfactant-Polymer (Warner ASP) Flood

Location: Taber South Mannville B Pool - TWP 7 RGE 16 W4

Amount Approved under IETP: \$10,000,000

Project Summary:

This project by Husky calls for injection of a slug of Alkaline/Surfactant-Polymer (Warner ASP) followed by a Polymer slug. In typical water flood operations, water contacts the formation, displacing the mobile oil. However a portion of the oil which water from a water flood can not displace remains in the reservoir requiring either a miscible agent to displace it or as in this case a chemical agent to reduce the interfacial tension and thus allow the oil to become mobile in the reservoir. Success of this pilot project will result in an estimated 5.7 million barrels of oil from this project.

Contact:

Phone: 403-750-4938

Colin Luciuk, Husky Oil Operations Limited

Applicant: MGV Energy Inc.

Project Title:

Mannville Horizontal Natural Gas From Coal (NGC) Project

Location: Bittern Lake/Wood River (roughly SE of Leduc 12- 30 miles)

Amount Approved under IETP: \$7,000,000

Project Summary:

MGV plans on developing horizontal drilling, as opposed to vertical drilling, and production expertise applicable to the extraction of natural gas in Mannville coals. MGV will be working with vendors to develop a drilling mud that will assist in maintaining hole integrity during the drilling operations.

Successful deployment of horizontal drilling would have less of an environmental impact than vertical drilling as there would be a reduced need for surface land. Success of this pilot project could result in an estimated 17 million cubic feet of natural gas production

Applicant: MGV Energy Inc.

Project Title:

MGV Horizontal Natural Gas From Shale (NGS) Project

Location: TBA

Amount Approved under IETP: \$6,750,000

Project Summary:

MGV proposes to identify well locations within its existing land base for the testing of horizontal NGS wells, as opposed to vertical drilling. MGV believes that the commercial development of unconventional natural gas shales in Alberta will likely require successful deployment of horizontal drilling and production schemes. It is anticipated that horizontal drilling into the many types of shales would require an individualized approach to drilling program design in terms of bit selection, rate, rate of build, etc. Of key significance is the build angle entering the shale and the efforts to maintain hole integrity over the horizontal length. Success of this pilot project could result in an estimated 32 million cubic feet of natural gas production

Contact:

Phone: 403-538-5545

Chris Mundy, MGV Energy Inc.

Paramount Resources Ltd. and ConocoPhillips Canada Resources Corp.

Project Title:

Surmount Gas Re-Injection & Production Experiment (GRIPE) Pilot

Location: Chard McMurray "AAA" and "X" pools - TWP 81 RGE 5 and 6 W4M

Amount Approved under IETP: \$3,594,000

Project Summary:

With a goal of resolving the gas-over-bitumen issue the GRIPE pilot project aims to demonstrate the technical and commercial feasibility of gas production and displacement in the Surmount area through pressure maintenance. The innovation is to field demonstrate the performance of flue gas displacement of natural gas and pool pressure maintenance which, if successful, could return some approximately 20 to 35 BCF of Surmount shut-in gas reserves to production.

Paramount Resources Limited

Project Title:

Surmount Wabiskaw-McMurray Gas Pool Production and Shut-in Pressure Data Analysis

Location: Surmount - TWP 80 RGE 5 to TWP 84 RGE 8 W4M

Amount Approved under IETP: \$38,400

Project Summary:

This project is one of several technology programs aimed at resolving the gas-over-bitumen issue. The study will provide a comprehensive analysis of the shut-in pressure data providing a framework for interpreting the relationship of the gas pools, water zones, and bitumen within the Surmount area. The ultimate outcome is the ability of each resource owner to develop its resource cooperatively and to manage the impact on the other resource owner.

Paramount Resources Limited

Project Title:

Bitumen De-methanization Lab Demonstration Project

Location: Lab Demonstration

Amount Approved under IETP: \$48,000

Project Summary:

The results of this study will provide an understanding of the impacts to the properties of bitumen through de-methanization. When either heat is added or pressure reduced in oil or bitumen, solution gas evolves. This reduction in dissolved gas marginally increases viscosity. This project will determine whether the increases due to pressure reduction under gas production, or heat addition through SAGD, contribute to enhanced in-situ recovery.

Contact:

Phone: 403-206-3832

Gary Bunio, Paramount Resources Ltd.

Suncor Energy Inc.**Project Title:**

Low Pressure SAGD Artificial Lift Pilot

Location: Firebag East, TWP 95 RGE 6 W4M

Amount Approved under IETP: \$4,500,000

Project Summary:

The Suncor Low Pressure SAGD Artificial Lift Pilot aims to demonstrate the commercial application and performance of SAGD operations at low steam chamber pressures using electric-motored, multi-phase down hole pumps. Suncor will operate at reserve depths of approximately 300 m to determine recovery rates at lower pressure. If successful, the Low Pressure SAGD Artificial Lift Pilot will demonstrate SAGD operations at lower pressures. The technology offers the potential to reduce SAGD water and natural gas consumption while lowering green house gas emissions and improving the economics of SAGD in marginal reserves.

Contact

Phone: 403-205-6876

t: Dave Cuthiell, Suncor Energy Inc.

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