

Artificial Lift

Bench Scale Testing of Lift Systems

ESP is now testing with oil at 120, 150, 180 degrees C. Expect test complete by mid to late January 2005.

Gear pump test to follow.

The twin screw pump may not be tested at C-FER. The JIP is investigating whether the vendor bench test system can duplicate the C-FER test criteria to compare directly to the tests at C-FER. Suncor may consider whether one of its twin screw pump pumps could be available for a C-FER test.

Low Pressure SAGD Wellbore Architecture

Preliminary final report has been issued. CFER is now waiting on feedback. A final review meeting was held January 27, 2005.

Suncor Low Pressure Artificial Lift Proposal

Suncor has received expression of interest from Petro-Canada, Total and ConocoPhillips.

Suncor has revised its proposal with a new cost for participation at \$300,000. Final arrangements will be worked out in January 2005. A meeting with potential participants was held January 18, 2005.

First pump will be installed in January 2005. Second pump installed after approximately one month of operating first pump.

Fluid Injection Technology

Paramount GRIPE Pilot

ConocoPhillips has instrumented one of its 3 piezo pressure monitoring wells.

EnCana Flue Gas Re-pressuring Pilot

Air injection has started. Ignition should occur in January 2005.

Lateral and Vertical Pressure Communication

Surmont Shut-in Data Analysis

Nothing new to report.

Low Pressure SAGD Performance

Deer Creek LP SAGD Field Testing

Deer Creek plans on installing an ESP January 18, 2005. Next technical meeting planned for February 11, 2005.

ConocoPhillips LP SAGD E-Lift Field Testing Proposal

The November 2004 study results are final. The group expects to present the study results at the September 2005 SPE workshop or joint SPE/CIM/CHOA November 2005 conference.

Reservoir Lab Testing

MacKay bitumen sample is now saturated with methane and will now undergo viscosity testing. With the extra funding from new participants the scope may add the high temperature test. Cleaning of Christina Lake sample has been difficult.

Executive Steering Committee

IETP

EnCana Christina Lake Re-pressuring and EnCAID Methane Displacement projects were reviewed by the technical sub committee on January 13, 2005.

The February 2005 Steering Committee meeting will review and prioritize new GOB projects expected to file for IETP funding.

Artificial Lift

Artificial Lift Simulator

RFP was issued and things are moving forward. Held information review meetings with Fractical Solutions, C-FER, and CMG. ConocoPhillips, Nexen, Paramount, Petro-Canada, and Suncor have participated in these meetings.

Noetic and IHS have declined to respond.

RFP has been sent to EPS Weatherford, ETI, Petro-study and Schlumberger for further consideration.

Bench Scale Testing of Lift Systems

The ESP test will continue as there are enough funds to complete the ESP and gear pump tests. The ESP test is expected to be complete by February 4, 2005.

Gear pump may be en-route to C-FER.

The twin screw pump may not be tested at C-FER. The JIP is investigating whether the vendor bench test system can duplicate the C-FER test criteria to compare directly to the tests at C-FER. Suncor may consider whether one of its twin screw pumps could be available for a C-FER test.

Low Pressure SAGD Wellbore Architecture

Final review meeting was held January 27, 2005. There are some favorable and interesting conclusions. This includes an economic model which evaluates the impact of changes in down hole configurations. C-FER will make a presentation to the sub committee March 1, 2005 to consider a potential Phase 3 study.

Suncor Low Pressure Artificial Lift Proposal

Participation Agreement was issued to potential parties February 10, 2005. Signed agreement and cheque for \$300,000 is expected by March 4, 2005.

First twin screw pump has been run in the hole and has been operating at approximately 500 m³/d.

ConocoPhillips, Devon, Nexen, Petro-Canada, and Total have expressed an interest.

Fluid Injection Technology

Paramount GRIPE Pilot

Nothing new to report.

EnCana Flue Gas Re-pressuring Pilot

Nothing new to report.

Lateral and Vertical Pressure Communication

Surmont Shut-in Data Analysis

Nothing new to report.

Low Pressure SAGD Performance

Deer Creek LP SAGD Field Testing

Nothing new to report.

ConocoPhillips LP SAGD E-Lift Field Testing Proposal

Nothing new to report.

Reservoir Lab Testing

Nothing new to report.

Executive Steering Committee

IETP

The technical sub committee reviewed and prioritized 4 new projects on February 1, 2005, and the Steering Committee reviewed the projects on February 3, 2005. The group determined whether the project had a low or high impact, and whether the impact was short term or long term.

Suncor Firebag LP SAGD Pilot was endorsed as it is testing the reservoir response at the lowest absolute operating pressure at 1000 kPa, is testing the impact of low sub cool's, and is testing the first down hole multi phase pump at low sub cools. The project was given a priority of 1. As a result of this discussion, the priority of Deer Creek LP SAGD test was moved from 2 to 1.

ConocoPhillips SAGD pilot was endorsed as it is testing the performance of LP SAGD when in contact with a low pressure water and gas zone. The project was given a priority of 1. As a result of this discussion, the ConocoPhillips LP SAGD mother of all pilots was changed to the mother of all pilots, as another operator may take over sponsorship. ConocoPhillips remains as sponsor.

EnCana Christina Lake re-pressuring test was previously endorsed. However, EnCana has expanded the test to include re-pressuring in a larger pool. This project is the only field test of re-pressuring technology, and is testing in a small and a large pool that is in contact with a bitumen zone that will undergo SAGD. The re-pressuring is required as the bitumen zone is in contact with low pressure top gas, and bottom water. The system needs to have a balanced pressure system to allow the operation of SAGD. The project was given a priority of 1.

EnCana EnCAID methane displacement pilot was endorsed. The test is similar to the Paramount GRIPE methane displacement project. However, this test is the opportunity to gather another data point in the deposit and in the Wabiskaw vs the

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McMurray. This project is also testing the injection of air with down hole combustion for removal of the oxygen. The project was given a priority of 2.

Nexen Long Lake Balanced ES SAGD Artificial Lift Pilot was new and was also endorsed. This is the first proposal to test ES SAGD at low pressures and is consistent with the need to test this technology that was identified in the future testing category. ES SAGD testing will help compare the performance of LP SAGD and ES SAGD at the same pressure and understand the difference in CDOR and CSOR of both processes. Additionally, there is potential for ES SAGD to utilize conventional readily available artificial lift equipment. The project was given a priority of 2.

The Steering Committee review included an assessment as to whether the project could be largely funded from the gas, in situ oil sands, or GOB areas of IETP funding.

Artificial Lift

Artificial Lift Simulator

Proposals have been received by C-FER, Fractical Solutions, Neotec, and Petro-Study.

Working group will review proposals and make recommendations to technical sub committee.

Bench Scale Testing of Lift Systems

C-FER is currently waiting on delivery of the gear pump system. Main pump is undergoing material changes before delivery for testing.

A metal/metal PCP system is available for testing by April 15. Participants agree to testing contingent on IETP funding. The vendor is in the process of signing agreements with CFER.

Low Pressure SAGD Wellbore Architecture

CFER reviewed Phase A and B results which identifies two concepts that have technical and economic merit. Phase C scope addresses the key technical questions of a near term concept and a longer term concept. The near term concept may be advanced by the current Phase B participants (ConocoPhillips, Husky, Petro-Canada, and AERI). If 4 other parties participate, the longer term concepts may also be advanced. Phase A participants, Suncor and Nexen, may consider participation. Non Phase A participant EnCana may also consider participation. Phase C may be launched in early April.

Suncor Low Pressure Artificial Lift Proposal

The twin screw pump has been in the hole for about a month. A second pump will be installed in a second well in early May.

March 4 due date for agreements has been extended to allow for changes resulting from feedback of potential participants.

Fluid Injection Technology

Paramount GRIPE Pilot

3 ConocoPhillips Piezo wells are now in place.

EnCana Flue Gas Re-pressuring Pilot

Air injection has been shut-in to observe progress to date. Ignition will commence early summer.

Lateral and Vertical Pressure Communication

Surmont Shut-in Data Analysis

ETI final report is still in progress. Waiting on documentation and supporting work for changes to the report.

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Low Pressure SAGD Performance**Deer Creek LP SAGD Field Testing**

Schlumberger Hotline ESP has been in the hole for about a month. Operations have been interrupted due to water disposal issues and installation of the MSAR field test. Currently recovering steam chamber pressure from about 900 kPa to 1300 kPa.

LP SAGD Field Testing Proposal

Working group is preparing LP SAGD Scope and Objectives and will provide the following:

A list of issues and data requirements that need to be considered,

A review of existing JIP's and projects to determine if the appropriate data is being captured to allow understanding of the issues,

To determine if recommendations to change models or history matching is required to better understand the instabilities in the reservoir models, and

To recommend the need for a new pilot or to continue to capture learning's from existing JIP's and field operations.

Reservoir Lab Testing

AERI has executed the agreement. As a result, the full scope of work will be pursued. Nexen expects to sign which would expand the scope of work.

Difficulties calibrating the viscometer have slowed progress. Expect calibration to be complete soon and testing on the MacKay River bitumen to start March 7, 2005.

Executive Steering Committee**IETP**

GOB steering committee has accepted the sub committee recommendations. These were passed on to the Executive Steering Committee early in March.

Artificial Lift

Thermal Wellbore Simulator

Successful bidder is Petro Study at a cost of \$120,000. Kick off meeting planned for late April to finalize scope, deliverables, and schedule.

ConocoPhillips, Nexen, Paramount, Petro-Canada, and Total have committed to participate. Others are still considering participation.

Bench Scale Testing of Lift Systems

ConocoPhillips is planning a down hole field test of a gear pump later this year. ConocoPhillips will investigate level of data sharing with the sub committee.

The metal/metal PCP pump was delivered and the test commenced April 30, 2005. The JIP budget is expected to be exhausted after the PCP test.

Low Pressure SAGD Wellbore Architecture

Phase B participants are still considering whether to proceed with Phase C. Other participants are unlikely.

Suncor Low Pressure Artificial Lift Proposal

ConocoPhillips, Deer Creek, and Total have signed the agreement. EnCana, Nexen, and Petro-Canada are considering participation.

The first well pair has had the first pump pulled for inspection after shut down in March. The second pump has been installed and is now operating.

The second well pair will commence an 8 week warm up period prior to pump installation.

Fluid Injection Technology

Paramount GRIPE Pilot

Facility commissioning commenced with start up of compressor and coolers last week. Metallurgy on second stage was not corrosive service and is being corrected. Project management is re-auditing all material specifications and construction. Expect start of flue gas injection by April 30, 2005.

Piezometer wells are now gathering data.

EnCana Air Re-pressuring Pilot

11-16 air injection continues with out combustion. A static gradient was conducted to investigate any presence of low pressure oxidation. None appears to be occurring.

Section 15 project with combustion has received draft EUB approval and is waiting on OIC.

EnCAID project EUB application has not yet been submitted as EnCana is waiting on IETP funding approval.

Lateral and Vertical Pressure Communication

Surmont Shut-in Data Analysis

The ETI final report is in place. The project was under budget but very late. January 1, 2005 is start of 24 month confidentiality period.

Low Pressure SAGD Performance

Deer Creek LP SAGD Field Testing

The project has been dealing with plant upsets due to start up of MSAR field equipment.

The steam chamber is currently operating at 1400 kPa, producing 40 to 50 m³/d, and ISOR of 3.0.

The production well is currently operating at a sub cool of 20 degrees C at the heel in order to offset high vapor to liquid ratios and allow ESP to operate efficiently.

LP SAGD Field Testing Proposal

Work group met April 7, 2005 to advance the March 1 deliverables. Waiting on report to the technical sub committee.

Reservoir Lab Testing

Nexen has executed the agreement. As a result, the expanded scope of work will be pursued. A new agreement with the expanded scope is now being circulated to all participants.

Two additional temperatures, 70 and 125 C, will be run over the full pressure range. One additional measurement at 250 C and 4000 kPa will also be conducted.

Executive Steering Committee

IETP

Eleven applications have been endorsed by the GOB Executive Steering Committee and submitted for funding:

ConocoPhillips Surmont SAGD Pilot	EnCana EnCAID Methane Displacement
ConocoPhillips GRIPE Pressure Monitoring	Paramount Surmont ETI Pressure Analysis
ConocoPhillips Wellbore Architecture	Paramount GRIPE
Deer Creek Joslyn LP SAGD Pilot	Paramount Bitumen De-methanization
EnCana Bench Scale AL Test	Suncor Firebag LP SAGD AL Pilot
EnCana Christina Lake Re-Pressuring	

The Nexen Long Lake ES SAGD Pilot was endorsed by the GOB Executive Steering Committee, but was deferred to the October 31, 2005 filing date.

Three projects were filed under the in situ oil sands funding; Petro-Canada MacKay Section 16 pilot test, Petro-Canada MacKay heat recovery injector, and Paramount MSAR field test.

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Artificial Lift

Thermal Wellbore Simulator

Agreements are now in place with project kickoff on November 1, 2005. Participants are ConocoPhillips, Husky, Nexen, Paramount Resources, Petro-Canada, Suncor, and Total. Participants are providing a generic well bore data set to the project.

Bench Scale Testing of Lift Systems

The interim report is being reviewed.

There is \$338,000 available for additional testing and/or upgrading the test unit to higher temperature testing, now that Chevron and Petrobras have joined and IETP funding is approved. Participants are considering next steps.

General operating conditions for a second screw pump have been prepared.

ConocoPhillips has declined the JIP participants request for ConocoPhillips sharing gear pump field test data, or having the pump tested at C-FER.

Suncor Low Pressure Artificial Lift Proposal

First well pair continues to operate with ESP.

Second well pair planned for Can-K completion January 2006.

Fluid Injection Technology

Paramount GRIPE Pilot

After trouble shooting corrosion and flue gas water removal issues, flue gas is being injected and methane is being produced.

Data reporting to the EUB is evolving as EUB systems are not currently designed for this type of project

EnCana Air Re-pressuring Pilots

The confidentiality with EUB has expired.

The down hole pressure of 1200 to 1500 kPa was too low to keep the burner operational.

Air injection ended September 2005. Reservoir pressure has dropped from 2400 kPa to 2200 kPa since shut-in. Suspect a leak along a wellbore rather than a geological leak. Will continue to monitor.

Expect to commence air injection in Section 15 in June 2006.

EnCana forecasts commercial application to cost \$1/Mscf including capex and opex.

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Low Pressure SAGD Performance

Deer Creek LP SAGD Field Testing

October technical committee meeting was held.

Mechanical issues are impacting reservoir performance. Suspect a sand plug. A work over is planned.

Currently operating steam chamber at 1000 kPa. Geoscout data for September 2005; CDOR of 220 bopd, ISOR of 4.1, and CSOR of 5.3

LP SAGD Field Testing Proposal

Nothing new to report.

Reservoir Lab Testing

All tests below 200 C are complete.

MacKay and Christina Lake testing above 200 C to be complete this month.

Final report to be issued in December.

Other Business

IETP

IL announced December 31, 2005 extension for second round of applications.

Paramount Energy Trust is expecting to apply for IETP funding for its simulation work entered at the GB2003-28 hearing. A presentation will be made to the technical sub committee on December 16.

Expanded Funding

The participants are committed to advancing technical solutions through the steering committee and technical sub committees. The contract extension continues to be advanced.

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Artificial Lift

Thermal Wellbore Simulator

Nothing new to report.

Bench Scale Testing of Lift Systems

Nothing new to report.

Suncor Low Pressure Artificial Lift Proposal

Nothing new to report.

Fluid Injection Technology

Paramount GRIPE Pilot

Flue gas injection $VRR > 1.0$ has been ongoing since October 28. Nitrogen has not yet been detected at the production wells.

Expect to conduct static gradient surveys on injection and production wells in Q1 2006.

ConocoPhillips is down loading peizo pressure data from observation wells.

EnCana Air Re-pressuring Pilots

Christina Lake Section 15 air injection has commenced.

Section 16 continues to be shut-in. Pressure is approximately 2100 kPa. Large pool EUB applications will commence preparation Q1 2006.

EnCaid monitoring wells design is complete. Petro-Canada concerns are resolved.

Low Pressure SAGD Performance

Deer Creek LP SAGD Field Testing

Nothing new to report.

LP SAGD Field Testing Proposal

Nothing new to report.

Reservoir Lab Testing

Discussions are on going. Devon is interested in purchasing the report and extending the scope to include low temperature measurements. North American has decided not to participate due to funding constraints.

Past cold sample testing will be investigated to determine if results are useful, can be shared, or can help better define further studies.

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Other Business

IETP

Paramount Energy Trust IETP application was not endorsed by technical sub committee.

Approximately \$28 million of the \$40 million GOB amounts were allocated during the first round of applications. This leaves \$12 million available for the second round.

ADOE is looking for industry input to the format of annual IETP reports.

Expanded Funding

The contract extension and industry letter agreement are expected to be signed early January.