

Thursday 5th November 2009

Grieve EOR Project Progress Report Further Radial Core Flood Laboratory Results

HIGHLIGHTS

- Surtek has now completed 12 out of the 16 planned radial core flood laboratory tests; results from the latest 6 samples tested indicate chemical flood oil recoveries in excess of 20% of the Original Oil in Place (OOIP) are possible.
- Based on a minimum OOIP of 71.7 MMBbls, this infers a minimum 14.3 MMBbls recoverable.
- The remaining core floods will be conducted in early November with the final report from Surtek on all the tests expected by the end of November. With the majority of the laboratory work completed this has now confirmed that the project is both technically and economically attractive.
- The Company has made its decision to proceed with Grieve Phase 1 chemical flood EOR development and is pursuing multiple alternatives for Phase 1 project funding.
- The first stage of the Phase 1 development plan for the field includes well surveys, additional engineering and design optimisation, and progressing new injector and production well approvals

BACKGROUND

The Grieve field west of Casper in Wyoming, USA, was the basis for the IPO for Elk Petroleum Limited ("Elk", the "Company"); (ASX: ELK) in 2005. Its potential for tertiary recovery was recognized from the outset particularly as there is a carbon dioxide (CO₂) pipeline approximately 3 miles from the lease boundary. The Company was unable to contract a reliable and economical supply of CO₂ from the two major sources within Wyoming. Elk engaged Surtek to undertake a detailed study of the chemical flood possibilities for the field. Surtek is one of the world's leaders in chemical flood design. The Surtek study began with an initial overview of the Grieve Muddy reservoir and its fluids. The study then progressed to laboratory testing of the Grieve fluids (crude and water) with a view to identifying chemicals which could greatly reduce the interfacial tension of the fluids. The later laboratory tests have involved Muddy reservoir core material from the Grieve#39A well drilled in July to examine the effect of various chemical combinations and their concentrations on oil recoveries from the porous sandstone. The radial core floods are miniature replications of actual and forecast production from the Grieve Muddy field. The first phase (waterflood) of the radial flood test replicates the historical production from Grieve. The second phase (chemical flood) of the radial flood forecasts incremental recovery possible using different chemical combinations and concentrations in a chemical flood enhanced oil recovery (EOR) development of the field.

RESULTS

A total of twelve radial core flood tests have now been completed by Surtek. The left hand part of the (following) plot indicates the water-flood recovery or historical phase of Grieve production. The right hand

ELK PETROLEUM LIMITED

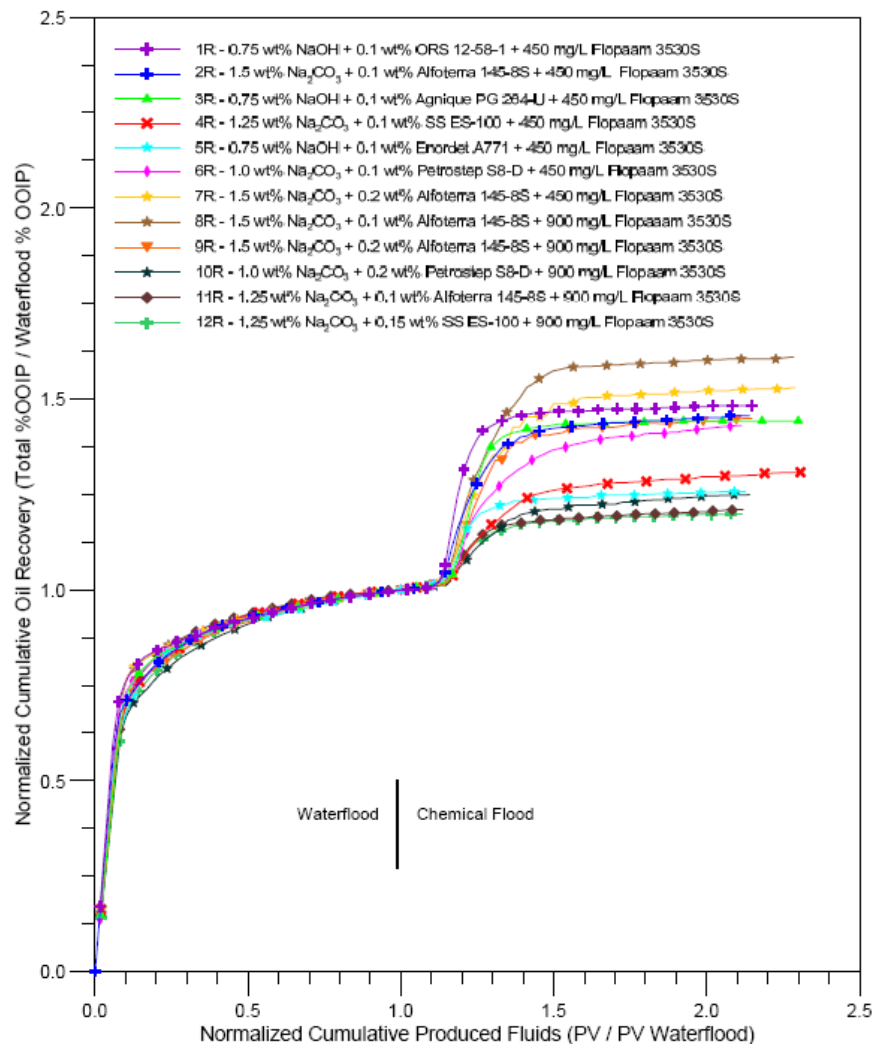
L40 Northpoint 100 Miller St North Sydney 2060
PO Box 1717 North Sydney 2059
Tel +61 2 9510 0030 Fax +61 2 9510 0003

DIRECTORS / OFFICERS

Peter Power	Andy Rigg
Tony Strasser	Bob Cook
Chris Mullen	Jo Bourke

part shows the range of incremental recoveries possible by the injection of different chemical combinations in a chemical flood of the Grieve Muddy reservoir. Test combinations with less than optimal results have been removed from further consideration on the basis that these chemical combinations would not be used in the field development. Runs 7, 8 and 9 use the same chemical combination in different concentrations and provide the expectation that chemical recoveries in excess of 20% of OOIP are possible at Grieve. The remaining 4 radial core flood runs, to be completed in early November, will finalise the selection of the most appropriate chemicals for the flood to achieve the optimum recovery from the Grieve Muddy formation.

Normalized Cumulative Oil Recovery
versus Normalized Cumulative Produced Fluids
Grieve Radial Corefloods



(Figure courtesy of Surtek)

ELK PETROLEUM LIMITED

L40 Northpoint 100 Miller St North Sydney 2060
PO Box 1717 North Sydney 2059
Tel +61 2 9510 0030 Fax +61 2 9510 0003

DIRECTORS / OFFICERS

Peter Power	Andy Rigg
Tony Strasser	Bob Cook
Chris Mullen	Jo Bourke

The results of all the twelve runs to date indicate the remaining oil in the Grieve Muddy reservoir can be expected to be greater than 57.9% of the Original Oil in Place (OOIP) and based on the 30.2 million barrels recovered to date (assumed equivalent to 42.1% core flood recovery with water); this would infer a minimum OOIP of not less than 71.7 million barrels. From the chemicals used in radial core flood runs 7, 8 and 9, the expectation is that a chemical flood of Grieve could achieve a recovery in excess of 20% of OOIP or a recovery greater than 14.3 million barrels of Grieve crude.

These calculated volumes are believed by Elk to be conservative because:

- the cumulative recovery to date is not expected to be as efficient as that achieved with the laboratory radial core floods (i.e. remaining oil is expected to be greater than 57.9%)
- the calculated volumes do not take into account by-passed oil; these zones will be identified by a computer simulation of the field, currently being performed by Surtek
- there is a suggestion that the oil-water contact may be lower than mapped based on oil recoveries from below the currently mapped contact and therefore would add volume to the OOIP
- the chemical recovery from the remaining 4 radial core flood tests may be greater than the best of the recent radial core flood tests

Following on from Surtek's early September view *"that the Grieve Field is a very good application for chemical flooding"* and their recommendation *"to proceed with developing a project for chemical flooding"*, the Company,

- has provided Fabrication Technologies Inc. ("Fab Tech") with field-specific details to enable final facilities design to proceed,
- has selected a centralised drilling pad location for the multiple deviated new injection and production wells,
- is currently planning to undertake a bottom hole well survey of the 10 existing wells in the Phase 1 development area within the next month,
- is preparing applications for permits to drill the new Phase 1 injection (10) and production wells (3),
- is progressing discussions both with potential Joint Venture participants as well as potential lenders for Phase 1 capital expenditure

The additional Surtek work on a full history match for the field and a full simulation of the field are progressing on schedule for completion by the end of 2009. The history match is required to be far more comprehensive than those previously completed for the gravity stable CO₂ EOR studies and needs to especially match water production as well as that of crude and gas and reservoir pressures from discovery to the present time. The history match using a simulated model of the reservoir is a pre-requisite to forecasting and designing the flood geometry and injection program using the model, and is a critical tool for the management of the development phase of the field.

On behalf of the Board.



Andy Rigg
Managing Director/Chief Executive Officer

ELK PETROLEUM LIMITED

L40 Northpoint 100 Miller St North Sydney 2060
PO Box 1717 North Sydney 2059
Tel +61 2 9510 0030 Fax +61 2 9510 0003

DIRECTORS / OFFICERS

Peter Power	Andy Rigg
Tony Strasser	Bob Cook
Chris Mullen	Jo Bourke