Reservoir Engineering
T I P S

Volume 4, Issue 4 June 2009 Printable Version

This Month

Artificial Lift and Pump Selection

Finding the Right Lift Solution for Each Situation

"Choice and design of pumps must be made with careful consideration"

Norman Mohr

Choice and design of pumps in regards to artificial lift applications must be made with careful consideration in regards to oil production rates, oil type, Gas-Oil-Ratio (GOR) and sand production. Proven Reserves has the ability and experience to determine the best artificial lift design for client needs.

Types of artificial lift available include rod pumps, progressive cavity pumps (PCP) and electronic submersible pumps (ESP).

Rod pumps (pumpjacks) are probably the most well known and utilized form of artificial lift. Rod pumps are suitable for light or heavy oil wells and can support economically reasonable flow rates. Rod pumps are not suitable for wells which produce large quantities of gas, as the gas limits the effectiveness of downhole pump components. A tail pipe or a gas anchor may be installed to reduce the gas entering the pump if necessary. As well, large amounts of sand production will wear out downhole pump components.

PCP's can be used for heavy oils and can tolerate some sand production better than rod pumps. A PCP uses an electric motor connected to a rotor and stator mechanism that drives fluids upwards in a screw like motion. However, they are not suitable for light oils or in high temperature and H_2S environments. PCP's have high volumetric efficiencies and the small motor needed results in less operating costs.

If higher flow rates are desired, electronic submersible pumps(ESP) pumps are best. ESP's are downhole centrifugal pumps operated by an electric motor. They are able to handle high flow rates and are able to produce large amounts of lift. ESP's require a low GOR and sand production is detrimental to pump operation. High viscosity fluids will also reduce pump performance.

In terms of energy efficiency, PCP's are the best, followed by the rod pump, and then the ESP which has overall poor energy efficiency.

Proven Reserves at GO EXPO 2009

The Gas & Oil Exposition (or "GO-EXPO") is one of North America's largest petroleum trade shows, and is held every two years on the Stampede Grounds of Calgary, Alberta.

Proven Reserves will be exhibiting for our 4th year in a row, and are excited to be announcing and demonstrating a new service to further add value to our clients!

We cordially invite you to stop by for a visit at booth #1278 in the Roundup Centre to see our new service for yourself, play a round of mini-golf, or just come to chat.

The GO-EXPO will run from Tuesday, June 9 to Thursday, June 11.

MetroPetro

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Upcoming Events

GO EXPO 2009
June 9-11, 2009
Calgary, Alberta
www.petroleumshow.com

Technical Luncheon
Reservoir & Fracturing Technology Issues in Tight Gas Development
June 17, 2009
Calgary, Alberta
www.speca.ca

2009 SPE Annual Golf Tournament
June 11, 2009
Calgary, Alberta
www.speca.ca

Company News

Business Development Engineering and Travel

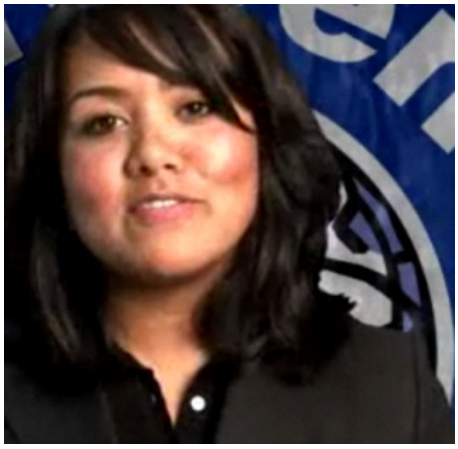
Sue-Rose Slade is one of Proven Reserves' Business Development Engineers, and an important part of our technical sales team.

Sue-Rose studied image log processing and interpretation in petrophysics, and graduated in chemical engineering from the University of Calgary.

Besides her engineering abilities, Sue-Rose is also bilingual in French, and is currently studying Spanish as well.

Sue-Rose is well-traveled, having visited locations in South Africa and (most recently) Mexico, and hopes to see Asia, Australia, and the Antarctic.

Her goals are to excel in Business Development Engineering by "adding value and identifying new opportunities to increase NPV, especially in the market we face today for our current and future clients."



Thanks, Sue-Rose!