Rob Davis, VP Engineering, Polycore
Polyethylene Lined Tubing

PRESENTATION ABSTRACT

Keeping heavy oil wells producing efficiently has some unique challenges. Some of these challenges include:

- Tubing failure due to rod wear and abrasion.
- Tubing failure due to corrosion ie: salt water disposal wells.
- Subsurface pump failure due to mechanical stress.
- Paraffin accumulation.
- Increasing power usage.

A number of innovative technologies have been developed over the years to mitigate these problems. One of these innovations is polyethylene (PE) lined tubing. Over the past 14 years PE lined tubing has been used in over 8,000 producing oil wells and water injection / disposal wells to solve corrosion, wear and abrasion problems while offering power savings. PE lined tubing has been particularly effective in eliminating tubing wear in rod and progressive cavity pumped wells.

Rob Davis's presentation will cover the following topics.

- Typical applications and benefits of polyethylene lined tubing
- The Past: Case histories: Deviating wells, Reduced operating costs.
- The Present: Dealing with temperature.
- The Future: CO_2 and H_2S impermeable liners.
- Impact on flow efficiency.
- Adjusting for the limitations (ID Restriction).
- Applications for line pipe.

Time will be made available to answer questions and discuss specific application. Attendees are encouraged to bring information regarding specific challenges they are facing today.

Please refer to http://www.polycore.ca/products/techpapers.html for other technical papers regarding PE tubing liners. These papers will be referenced during the presentation.

PRESENTER BIOGRAPHY

Rob Davis, B.S. E Chemistry

- Polycore, Vice President Engineering, 5 years.
- Tuboscope, Technology Director, 10 years.
- Core Laboratories, Research Engineer & Laboratory Manager, 3 years.
- Fincher Engineering, Laboratory Technician, 7 years.
- 25 years of downhole oilfield corrosion control experience including:
  - inhibitor optimization studies,
  - elastomer selection for sealing assemblies,
  - sour metallurgical material selection,
  - coating selection for severely corrosive and abrasive conditions.
- An extensive knowledge of thermoplastics, thermo-set plastics, metals, elastomers, and chemicals including oxygen scavengers, biocides, and filming inhibitors has created a proven ability to select optimal downhole materials in a wide range of down hole conditions including highly sour, high temperature, and high pressure wells.
- Author on three material patents, and designer of two new liners for Polycore.
- Currently developing a thermoplastic liner designed to stop permeation of small linear acid gases (CO_2 and H_2S).