SWC Insider - 2009

Monday, August 24, 2009

Welcome to the SWC Insider. If you have comments, information or suggestions you would like to share, please feel free to contact us at swc@ems.psu.edu

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Enjoy your visit!

SWC Projects Identified

The Executive Council recommended five projects for co-funding totaling $649,996 at the 2009 Summer Meeting. The funding cycle for these projects will be October 1, 2009 to September 30, 2010.

- **Cyclone Production Pump**, Cyclone Production Tools
- **Novel Wind Turbine Power for Oilfield Pumping Units**, Impact Technologies
- **Solar Powered Pump Jack for Stripper Wells, Expanded Proposal**, R&A Moore, Inc.
- **Convergence of Efficiencies: Can DownStroke, Slow Stroke & PV/Wind Hybrid Give, New Green Life to Off-grid Strippers?**, Skillman Downstroke
- **Chemical Stimulation of a Fluid Blocked Gas Production Stripper Well**, Trueblood Resources

SWC 2009 Summer Meeting Recap

Thirty people attended the 2009 Summer Meeting for the Stripper Well Consortium on June 30-July 1, 2009 at the Grouse Mountain Lodge, Whitefish, Montana. The twelve proposals submitted in response to the request for proposals were heard along with presentations from five current proposals. At the close of the general meeting, the Executive Council met and suggested five projects for co-funding.

Industry Tidbits:

Throughout the year, we receive many inquiries asking for suggestions on who is doing what and where they can go for answers to various questions. This section of the SWC Insider is dedicated to exchanging information and news from our industry members. It is simply to let you know what your peers are thinking and doing. It is open to all SWC members whether they have a SWC co-funded project or not. The views and opinions of the authors expressed herein do not necessarily state or reflect those of the SWC or our sponsor, the U.S. Department of Energy, National Energy Technology Laboratory.

Project News

Validation of Incremental Oil Productions via Single Well and Reservoir Field Trials Involving in situ Stimulation of Indigenous Microorganisms Project Update

Microbial enhanced oil recovery (Microbial EOR) is the focus of Ram Biochemicals? 2008 SWC project.

Whether you know it or not, if you produce oil, you may already be engaged in microbial oil recovery. This is because microbes exist in virtually every oil-bearing formation world-wide. But their activity can either help or hinder oil production. The questions are; do these microbes work efficiently in your behalf and can their beneficial work be enhanced, or if they are not helpful, can their bad behavior be suppressed?

According to the Principal Investigator, Sidney Nelson, the project uses a specially prepared nutrient medium (Wel-Prep) developed to nourish microbes already present in the oil-bearing formation. They, in turn, produce bio-chemicals and gases that help release trapped oil. For the full update download the: RAM_Article_August_2009.pdf . Contact: Project Coordinator Phillip Launt <pdlaunt@nc.rr.com>

Can a Simple Control Make More Oil?

The 2008 project, Can a Simple Control Make More Oil? by Tom Karg, Oil Well Sentry reports great success in field operations. John Ahrens, manager and pumper for Lynx Oil and Gas says, ?Tom, you really don?t know how valuable your devises are! Yesterday I was taking inventory of the stock tanks, and one of the tanks was two inches low from where it should be. I started checking the 10 wells that empty into that stock tank. It only takes me about 20 seconds to open the door of the ?Sentry? and check the hour meter for the past 24 hour?s production. The third well I came to, the hour meter only read .1 hours instead of the usual three something hours. Bingo! I found my problem well in less than ten minutes. Try doing that on any other lease without pump-off?s.

With your devices I know exactly what each well is doing, no guessing. Over the past three weeks I?ve noticed two wells (out of 61) have increased their run time. At the same time, the volume of brine in the water tanks had increased. Now I know exactly which wells have problems! Also I know which wells need to be treated and which wells are still okay. I couldn?t manage the lease and do all the work I do without the knowledge of each well that the ?Sentry? gives me.? Contact Tom Karg

A New Stimulation Technique to Improve Low Permeable Well-Bore Zone Characteristics

The first commercial application of an in situ gas generation technology (ISGGT) in North America has been conducted as part of the 2008 SWC project, A New Stimulation Technique to Improve Low Permeable Well-Bore Zone Characteristics at the LPD Energy Company, Muskogee County, OK. This project is being done by Dr. Sayavur Bakhtiyarov (New Mexico Tech) with the
cooperation of associates from Russia and Azerbaijan. Sayavur Bakhtiyarov

Very Low Cost Stripper Well Booster Compressor

Combined Heat and Power has purchased all parts for the field test units for the 2007 project, Very Low Cost Stripper Well Booster Compressor. Ewan Choroszylow, Principal Investigator, reports CHP is in the process of scaling up the design of the Polyvane to a size that would be more commercially acceptable. What this means is that the original prototype was too small, in his opinion, to provide a commercially acceptable booster compressor at the price level they hope to achieve. The new design will be approximately 23" in diameter, rather than the 16" of the previous design. CHP also plans on using

aluminum rotors rather than plastic ones since machined plastic cannot provide the level of leakage control needed. When CHP moves into hard tooling for injection molding, a return to plastics will occur. Other parts will remain plastic. Ewan Choroszylow

Member News

Oklahoma Oil and Gas Trade Expo, October 8, 2009

The Oklahoma Commission on Marginally Producing Oil and Gas Wells is sponsoring the Oklahoma Oil and Gas Trade Expo on October 8th, 2009 at the Cox Pavilion Building on the Oklahoma State Fairgrounds in Oklahoma City, Oklahoma. Don't miss this opportunity to interact with oil, gas, and related industry business owners from across the United States. For more information visit www.marginalwells.com.

The Environmentally Friendly Drilling Project (EFD) Launches the University/National Laboratories Alliance

The Houston Advanced Research Center (HARC) and Texas A&M University?s Petroleum Engineering Department have announced the creation of a new research alliance to promote advanced technology for oil and gas drilling operations in environmentally sensitive areas. The program known as the University/National Laboratories Alliance is being established within the Environmentally Friendly Drilling (EFD) Forum to promote low-impact technology nation-wide in areas of the country experiencing development of unconventional natural gas resources.

The goal of the University National Laboratories Alliance is to develop critical new technology and accelerate development of domestic reserves in a safe and environmentally friendly manner. The Alliance founders include seven top tier Universities and two National Laboratories with additional pending members.

The Alliance aims are similar to the Stripper Well Consortium, to facilitate the adoption of more cost effective and environmentally friendly new technology for upstream O&G operations. Initially funded by DOE?s NETL through funding to Texas A&M and their partners, the EFD program is entering into a new phase funded by RPSEA and targeting unconventional resources development, including gas shales: Barnett Shale, Fayetteville Shale and the Marcellus Shale. Contact: Dave Burnett Texas A&M University, burnett@pe.tamu.edu 979 845 2274 and http://sites.google.com/a/pe.tamu.edu/efd-alliance/

Newell Energy Corp. News

SWC member Newell Energy Corp. announces they have found bypassed oil zones from an abandoned oil well using CR-4 technology. Newell is seeking cooperators willing to help oil/gas companies to find bypassed oil/gas zones from old wells. Contact: Yuanwei Deng

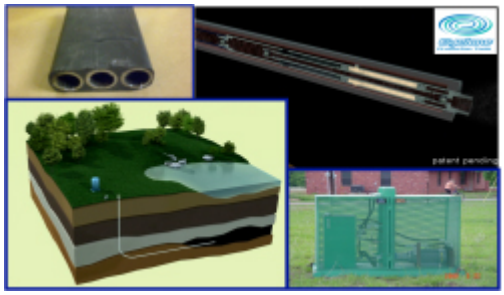
Getting Crude from Crud

Enhanced Well Flow, Sulphur, LA is processing petroleum coke and resid oils in house and removing over 82% of the left behind refinery process oils. Anyone wishing to expand the procedure or questions can contact Don Ford

Weatherford Artificial Lift

Weatherford offers seven major methods of Artificial Lift with sales and service locations in the Northeast include Pittsburgh, PA; Punxsutawney, PA; Charleston, WV; Elkview, WV, as well as Rod Pump locations in Williamstown, WV and Grayville, IL that support the distribution of Reciprocating Rod Lift products through the numerous supply stores in the area. Artificial Lift
Systems: -Reciprocating Rod Lift (Pumping Units, Sucker Rods, & Rod Pumps) -Plunger Lift -Hydraulic Jet Pumps (Frac Fluid Recovery) -Gas Lift -Progressing Cavity Pumps -Capillary Technologies -Electric Submersible Pumping -Controls and Automation. Contact Darwin Trahern

Hydraulic Pump Solution for Deviated, S Shaped and Horizontal Wells



In an effort to replenish our nation?s energy supply, more complex drilling techniques are being applied which often result in highly deviated and horizontal well bores. Once initial rates and pressures have declined, these wells become a challenge to operate. Thus, new pumping methods must also be designed to overcome these challenges, while also providing reduced operating costs, improved energy efficiencies, and even more importantly in today?s environment, must enhance public perception of the industry with environmental and neighborhood friendly solutions.

Cyclone ^{TM} Production Tools of Oklahoma has created the Perry Pump as a simple solution that addresses these complex challenges. The Perry Pump is a positive displacement pump, (not unlike a rod pump, but without the rods) conveyed via FLATPAK ^{TM} triple coiled tubing string, and is hydraulically driven from surface with a low energy natural gas, propane or electric power unit. This unique system allows for rigless installation, eliminates rod parts and tubing wear, offers reduced energy consumption, uses water based power fluid, and has a small footprint that is quiet and safe. These combined attributes make the Cyclone^{TM} Perry Pump system desirable for neighborhoods and even public park applications, where again, improved aesthetic qualities are a must. <http://www.cycloneproductiontools.com ***New Rod Pumping System ?***

The ECO_2 rod pumping lift system is the first of its kind ? cost effective and ECO-friendly. It is designed specifically for low production wells, less than 20Bpd, depths to 8,500ft. This is highly energy efficient, utilizing fiberglass rods. Systems are SOLAR ADAPTABLE ? 1/2hp to 3hp motors, 5-6 strokes per minute ? long strokes 96? to 32?. Quiet operation and field service with standard oilfield service unit ? NO special tools. 100% field serviceable! This system is better for the environment with no emissions with solar power. Contact: Morningstar Sales: morningstarsales@hotmail.com or phone 740-599-1502.

To learn more about the SWC, please contact:
Mr. Joel Morrison (814) 865-4802 or e-mail at swc@ems.psu.edu.

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