

3rd

WATER MANAGEMENT FOR SHALE PLAYS

October 29-31, 2012 | Doubletree Pittsburgh Downtown | Pittsburgh, PA

THE TUTORIAL AGENDA

Tuesday, October 30, 2012

7:00 – 8:00 *Registration & Networking Breakfast*

8:00 – 8:15 *Opening Remarks by Tutorial Chair*

8:15 – 8:45 *Keynote Presentation:*

WATER TREATMENT OPTIONS: STARTUPS, STRATEGIES AND LONG-TERM PROSPECTS

The huge publicity surrounding hydrofracking has attracted large numbers of water treatment companies, many with innovative technologies. We will do direct comparisons between technologies with respect to treatment strategy. We will also look at the hydrofracking's potential for growth worldwide with respect to water issues in markets like Argentina and China, and examine which strategies are likely to win there.

Brent Giles, *Senior Analyst, Water Intelligence*, LUX RESEARCH INC.

8:45 – 10:00 *Keynote Panel:*

STRATEGIES FOR MINIMIZING THE AMOUNT OF WATER NEEDED ON-SITE FOR FRACKING

- Factors for determining the most feasible source of freshwater for fracking
- What are the challenges associated with water sourcing and how are they most cost-effectively overcome?
- How to evaluate whether the water needs any treatment before use – and if so, how much treatment is needed
- What kind of regulatory limits are there on access to fresh water and what's required to get the volumes needed for fracking? A look at the landscape in Pennsylvania, West Virginia and Texas

Moderator:

Ivan S. DeVoren, *Partner*, BURLESON LLP

Panelists:

John T. Lucey Jr., PE, *Executive Vice President, Business Development and Engineering*, HECKMANN CORPORATION

Bob McGinnis, P.E., SPEC, *President*, BEAR CREEK ENGINEERING

Chance Richie, *Founder*, SHALEWATER SOLUTIONS

10:00 – 10:45 *Keynote Case Study:*

INNOVATIVE WATER MANAGEMENT STRATEGIES FOR FUTURE MARCELLUS DEVELOPMENT

Increasing regulatory and infrastructure costs will continue to burden the profitable extraction of Marcellus Shale gas extraction. Water acquisition and the remediation of water used in the hydrofracturing process is a concern not just for the operator but also is an issue for communities and political authorities on a local, state and federal level.

Co-Presenters:

John A. Owsiany, *Director, Water Systems & Operations*, CONSOL ENERGY, INC.

Ron Pettengill, *EVP Oil, Gas & Coal*, EPIPHANY SOLAR WATER SYSTEMS

10:45– 11:15 *Networking Break*

11:15 – 11:45 *Presentations:*

HOW TO ASSESS, SELECT AND DEVELOP THE OPTIMAL WATER MANAGEMENT SYSTEM

- What are the critical factors that must be considered at the outset?
- Factoring corporate objects and constraints on resources into a successful management system
- How can you access and use local water recycling technologies and systems?
- Which technology works best with which water management system?

Frank Zamora, *V.P. Engineering & Technology*, TRICAN WELL SERVICE

11:45– 12:15 *Presentation:*

USING MOBILE WATER TREATMENT SYSTEMS TO PROCESS FRACK WATER

- What are the pros and cons of using centralized mobile water treatment systems?
- What to consider when co-locating advanced treatment technologies with gas production infrastructure
- When do the economics of using such systems make sense?

Joseph Tinto, *Commercial Developer*, GE WATER & PROCESS TECHNOLOGIES

12:15 – 12:45 *Presentation:*

STORING WATER ON-SITE TO REDUCE TRANSPORTATION COSTS AND MAXIMIZE EFFICIENCIES

- Integrating storage considerations into your water logistics
- What storage option fits best? Tanks? Impoundments?
- What are the different considerations that must be taken into account depending on whether the storage is for fresh water or flowback water?
- What are the risks of storage and how can they be addressed?

Jonathan D. Hoopes, *President and Chief Operating Officer*, GREENHUNTER ENERGY, INC.

12:45 – 2:15 *Group Luncheon*

2:15 – 3:15 *Presentation Series:*

INNOVATIVE TECHNOLOGIES FOR TREATING SHALE WATER FOR RE-USE

This series of technical presentations will focus on the new technologies, including fracking formulations that are being advanced in the treatment of shale water for re-use.

Presenters:

Matthew Bruff, *Chief Development Officer*, ALTELA, INC.

Robbie Cathey, *CEO of Energy Services Division*, ECOSPHERE TECH

3:15 – 3:45 *Networking Break*

3:45 – 4:15 *Presentation:*

THE APPLICATION OF CHLORINE DIOXIDE IN FRAC WATER TREATMENT USING MULTI STREAM RE-USE WATER

The discussion will focus on the chemistry and application of chlorine dioxide in oil field re-use water. Specific focus will be on microbiological control to reduce reservoir biological contamination, as well as, environmental attributes during Frac on the Fly operation using single and multi-stream water sources.

Sam Eltom, *Vice President of Technology*, SABRE ENERGY

4:15 – 4:45 *Presentation:*

DEVELOPING ALTERNATIVE SOURCES OF WATER FOR USE IN FRACKING

Many companies are increasingly looking beyond freshwater supplies for use in fracking. Aside from their own recycled water, they are exploring the use of water from abandoned mines, water from storm water control basins, municipal treatment plant effluent, power plant cooling water, and other unconventional sources. In this session, get insights into what leading companies are doing to reduce freshwater withdrawals.

Matt Blauch, *Director of Product Development*, SUPERIOR WELL SERVICES (*Invited*)

5:15 *Day One of the Tutorial Adjourns*

Wednesday, October 31, 2012

7:30 – 8:30 *Registration & Breakfast*

8:30 -9:00 *Case Study:*
ESTIMATING HAZARDOUS AIR POLLUTANT (HAP) AND VOC EMISSIONS FOR A FLOWBACK/ PRODUCED WATER TREATMENT PLANT

Dean Ritts, PE, CEM, *Principal Engineer – Water/Wastewater*, WORLEYPARSONS

9:00 – 9:30 *Case Study:*
TREATMENT OF ABANDONED MINE DRAINAGE (AMD) FOR BENEFICIAL REUSE

Drainage from thousands of abandoned coal mines, has led to a unique opportunity to beneficially use these waters for hydraulic stimulation in Marcellus and Utica Shale wells in the states of Ohio, Pennsylvania, and West Virginia. Aquatech has been treating AMD for over 20 years and will present treatment approaches and a case study for beneficial reuse of AMD for the Gilberton Power plant located in Frackville, Pennsylvania.

- Provide process(es) for treatment of AMD
- Showcase benefits for mining and O&G industries
- Showcase benefits for environment and communities

Chuck J. Kozora, *Regional Business Development Manager*, AQUATECH INTERNATIONAL CORPORATION

9:30 – 10:00 *Presentation:*
Energy Sources for Shale Wastewater Treatment in the Marcellus

Edward M. Campana, *Principal and CFO*, COUNTRYSIDE VENTURES LLC

10:00 – 10:30 *Presentation:*
WATER INFRASTRUCTURE VERSUS MOBILE OPTIONS FOR TREATING AND DISPOSING FRACKING AND PRODUCED WATER

- An assessment of current trends in treatment, disposal and pipeline infrastructure and mobile solutions.
- What are the considerations when assessing the right solution and what is working?

Johan Themaat, *Vice President, Investor Relations and Business Development*, HIGH SIERRA ENERGY, LP

10:30 – 11:00 *Networking Break*

11:00 – 11:30 *Presentation:*

MAXIMIZING EFFICIENCIES – AND SAFETY – WHEN MOVING WATER

- What strategies are most effective in terms of minimizing the amount of water that must be moved?
- How can you address the key legal and regulatory issues that come into play when moving large volumes of water?
- What alternatives should be considered as alternatives to reduce transportation costs?
- What are the overall safety risks and how are they best addressed?
- What key onsite to minimize risks to safety and spill hazards?

Ryan Mastowski, *Project Engineer, EIT*, RETTEW FLOWBACK, INC.

11:30 – 12:00 *Presentation:*

DISPOSAL WELLS: AN ASSESSMENT OF AVAILABLE WELLS AND FACILITIES

- An assessment of existing disposal wells and their limitations
- What's the potential for developing new disposal wells?
- What are some of the common hurdles to acquiring a disposal well permit – and how are they being overcome?
- Comparison of use of disposal wells vs. alternative methods of disposal: What's working and what's not?

Dale Skoff, PG. CHMM, *Account Manager*, TETRA TECH

12:00 – 12:30 *Presentation:*

DEVELOPING THE INFRASTRUCTURE TO TRANSPORT AND STORE WATER FOR FRACKING

- Pipeline vs. trucking: factors to consider when doing the cost/benefit analysis
- What are the considerations when assessing whether to install permanent or temporary pipeline for transporting water?

Drew Poeckes, PE, *Director of Engineering*, WEST DAKOTA WATER LLC

12:30 *The Tutorial Adjourns*