

PROGRAM INFORMATION

Wednesday, May 12, 2010

8:00 am to 4:00 pm

Exhibits Open

Room # 1

8:00 a.m. - 8:10 a.m.

Karen Ortega, Chairman, 2010 Four Corners Oil and Gas Conference, Welcome

8:10 a.m. - 8:30 a.m.

Honor Guard, Pledge of Allegiance, Introduction of

Keynote Speaker

8:30 a.m. - 9:30 a.m.

Rayola Dougher, API Economic Advisor

“The State of the Oil and Natural Gas Industry”

10:00 a.m. - 10:45 a.m.

Room # 1

Regulatory Updates from BLM, New Mexico, and Colorado
BLM Cooperative Excellence Award

11:00 a.m. - 11:45 a.m.

Room # 1

When Does Solar Electric and Utility Back-up Make Sense?
By Charlie Bachman, Sunwize Technologies

Room # 2

USDOT Pipeline Gathering Rules
By Tom Finch, USDOT Office of Pipeline Safety

Room # 3

Corrosion and Cathodic Protection of Well Casings
By Ron Kygar, Corrpro

11:30 a.m. - 1:00 p.m.

Lunch and Exhibits

1:00 p.m. - 1:45 p.m.

Room # 1

Applying Plunger Lift Technology to San Juan Basin Wells
By Lynn Rowlan, ECHO Meter

Room # 2

Wireless Instrumentation Makes Difficult Measurements and Automation Possible

By Greg Ochs, Accutech Wireless

Room # 3

External Corrosion Direct Assessment (ECDA) Indirect Inspection Surveys

By Larry Rankin, Corrpro

2:00 p.m. - 2:45 p.m.

- Room # 1** Horizontal and Multilateral Drilling for Fruitland Coal Development
By Thomas Billings, Pathfinder Energy Services
- Room # 2** Ozone Non-attainment
By Mary Uhl, NMED Air Quality Bureau
- Room # 3** Wireless Communication to a Plunger Lift Well
By Dan Steel, Freewave Technologies

3:00 p.m. - 3:45 p.m.

- Room # 1** Identifying Unconventional Pay in Mature Basins
By Mike Mullen, Halliburton
- Room # 2** Comparing the Rio Arriba and Santa Fe County Oil and Gas Ordinances
By Myke Lane, Williams and Ocean Munds-Dry, Holland and Hart
- Room # 3** Update on NM Oil and Gas Safety Performance
By Carol Walker and Butch Tongate, NM OHSA

5:30 p.m. - 8:30 p.m.

Reception
At the Courtyard by Marriott
560 Scott Avenue, Farmington

Thursday, May 13, 2010

8:00 am to 2:00 pm

Exhibits Open

8:00 a.m. - 8:45 a.m.

- Room # 1** Safety Motivation
By Jeff "Odie" Espenship

9:00 a.m. - 9:45 a.m.

- Room # 1** Using API's Amigo Produced Water Release Decision Tools
By Randy Hicks, Randy Hicks Associates
- Room # 2** Energy Makes America Great
By Marita Noon, CARE
- Room # 3** Climate Change Update for the Four Corners
By Sandra Ely, NMED

10:00 a.m. - 10:45 a.m.

- Room # 1** Coal Bed Methane Update
By Kumar Ramurthy, Halliburton
- Room # 2** Shielding vs. Non-shielding Coatings
By Richard Norsworthy, Polyguard Products
- Room # 3** Bringing it Together - Hybrid Wireless Systems can be Leveraged to Your Advantage
By Dan Steele, Freewave Technologies

11:00 a.m. - 12:00 p.m.

- Room # 1** Is the Bloom Off the Rose? The Oil and Gas Industry in New Mexico
By Bob Armstrong, IPANM President

11:30 - 1:00 p.m. Lunch

Exhibits Open until 2:00 p.m.

Rayola Dougher – Keynote Speaker

Rayola Dougher is a senior economic advisor in API's Office of the Chief Economist. She currently is one of API's principal spokespersons. Her efforts focus on informing policymakers, the news media, and the public on energy market issues and trends.

As a senior economic advisor, Dougher analyses information, manages projects and develops briefing materials on energy markets and oil industry policy issues. She authors and co-authors economic research studies covering a diverse range of topics including crude oil and petroleum product markets, gasoline taxes, energy conservation, and competition in retail markets. In addition to testifying before federal and state legislators, she has participated in numerous newspaper, radio and television interviews on a wide range of issues affecting the oil industry, including crude oil and gasoline prices, industry taxes and earnings, exploration and production, and refining and marketing topics.



Prior to joining API, Dougher worked at the Institute for Energy Analysis where her research focused on carbon dioxide related issues and international energy demand and supply forecasts.

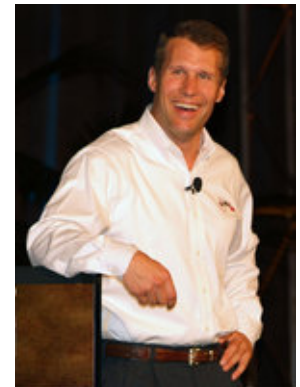
Dougher holds a master's degree in economic development and East Asian studies from American University and a bachelor's degree in history and political science from the State University of New York at Brockport.

Title: The State of the Oil and Gas Industry

Jeff "Odie" Espenship – Keynote Speaker

Jeff "Odie" Espenship is the owner and CEO of Target Leadership, a company that directly targets leaders and employee groups to take safety and operational excellence to a higher altitude!

Credibility is key! As a former USAF fighter pilot, Combat Search and Rescue pilot, flight leader, air show pilot, and international airline pilot, Odie knows how to lead others and operate safely in a high risk and often dangerous work environment. He looks at each of you as corporate fighter pilots. You are the ones out there every day getting the job done! Consequently, you have the most to lose if something goes wrong. Odie compares your supervisors to squadron commanders. They set the tone and the expectations for the work that is done each day. The individual fighter pilots will work within the norms of the culture that supervisors create.



By learning from those who have gone before us, some paying the ultimate price, Odie uses both industrial and personal examples of triumph and loss. Whether one flies a high performance fighter or operates a heavy piece of equipment, failures in human performance cause over 90% of workplace incidents and accidents.

His entertaining, inspirational leadership-safety message consistently ranks among one of "the best safety keynotes seen to date" by numerous Fortune 500 companies like John Deere, ExxonMobil, The Southern Companies, Progress Energy, Entergy and Russo Corporation.

Odie has written safety articles and worked with Incident Prevention-Hands on Safety. He's written and narrated a Public Safety Video for CLECO Corporation for the citizens of Louisiana.

Odie employs an entire team of current and former fighter pilots, each with a unique, inspirational teamwork-leadership-safety message to deliver on time, on target, anywhere, anytime!

Bob Armstrong Wrap-up Speaker

Title: Is the Bloom Off the Rose? The Oil and Gas Industry in New Mexico

Charlie Bachman

Title: When Does Solar Electric and Utility and Back-up Make Sense?

Charlie Bachman has been working in the solar energy industry since 1988. As sales manager at SunWize, he manages all sales for the oil and gas industry in the US and Canada. His expertise includes a deep understanding of remote site power issues such as sizing and specifying, installing and maintaining solar electric systems for industrial applications in gas well automation, cathodic protection, telecommunications, and general instrumentation. He has sold approximately two megawatts of solar electric systems into this market.

Charlie has presented papers on solar power technology at ENTELEC and other regional industry conferences. He also conducts training classes at customer locations. He has a B.S. in Resource Management from the University of Idaho and an A.S. in Applied Science Electronics Technology, Community College of Denver.

Abstract: Does Solar Electric and Utility and Back-up Make Sense?

Solar Electric Power is an effective technology that provides continuous, reliable and cost effective power solutions when used in proper applications. There are fundamental questions to consider when sizing and specifying solar for a remote application. Understanding and considering these questions will insure maximum benefits for the application.

Main Points to cover:

- Technology review
- Questions to consider
- Precise load information – what we need to know
- Standard product line solutions

Presentation Overview:

Applications and benefits of solar electric power

- Solar electric power technology definitions (PV)
- Basic solar system configurations and how they work
- Questions to consider when deciding on the appropriate use of solar for an industrial application (see below)
- Review of specific examples of the effective use of solar in the oil and gas industry integrated throughout presentation
- Basic sizing calculations
- Standard product line solutions

Thomas Billings

Title: Horizontal and Multilateral Drilling for Fruitland Coal Development

Thomas Billings Graduated from ITT Technical institute - Austin, TX in Feb 1997. He was among the top 5% of his graduating class, earning his degree in Electrical Engineering Technologies. While completing his senior term, Thomas was recruited by Schlumberger -Anadrill and upon graduation moved to Houston, TX, where he began his oilfield career. With Anadrill, most of his initial experience was in Austin chalk multi-lateral horizontals, but quickly expanded with complex horizontal projects in Texas and Louisiana.

In March 2000, Thomas was given an opportunity with Pathfinder Energy to expand his career path.

Through the next several years, he rose to the highest level field rating in the company, which consisted of Quad-Combo, Rotary Steerable, Payzone-Steering, Imaging Density and Advanced Pore Pressure analysis. Thomas started working in the San Juan Basin in early 2007, running multi-lateral, extended reach CBM horizontals with various clients in the four corners area. Before Thomas exited the field, he was accredited with several of the longest CBM horizontals and 30+ CBM horizontal wells.

Thomas continued to expand his career path and experience by accepting the position of Technical Sales / Payzone-Steering Operations Specialist in Farmington, in August 2009. He continues this work today, utilizing his knowledge to assist clients in the technical side of tool and BHA selections, geo-steering daily operations and field research for advancing technologies.

Abstract: Horizontal and Multilateral Drilling for Fruitland Coal Development

The technological advancements in the fields of Logging While Drilling and production techniques has enabled several operators to successfully drill single and dual Horizontal wells throughout the 4 Corners area for the last 3-5 yrs. These newer technologies, which several 3rd party contractors provide, have increased the ability to successfully drill single and multi-lateral wells within the high undulating coal environment. As a general statement, the cost expenditures are roughly 2-4 times as much as a vertical well, depending on the number of laterals. The peak rates of horizontal wells are 4 times more than an offset conventional vertical well. These high peak rates of horizontal wells can be reached years before vertical wells in the same area due to minimal-to-no dewatering time associated with horizontal wells. The high initial production rates make horizontal FC wells highly economical. Unconventional horizontal drilling throughout the San Juan Basin will see an increase in activity similar that being observed in other formations throughout the US, such as Bakken, Marcellus, and Haynesville. This is due, in part, to the current political structures in acquiring new surface locations, environmental impacts, newer L.W.D. technologies and the extended timeframes of allocating lease permits. Several factors should be considered before a horizontal well is planned, such as lateral length, coal undulations, single or multi-lateral wells in respects to coal thickness, re-entering an existing wellbore, and the need for Motherbore applications.

Ocean Munds-Dry

Title: Comparing the Rio Arriba and Santa Fe County Oil and Gas Ordinances

Sandra Ely:

Title: Climate Change Update

Sandra has served as the Environment and Energy Policy Coordinator for the New Mexico Environment Department since 2005. In this position she coordinates many of New Mexico's climate change initiatives and represents New Mexico in the Western Climate Initiative. Previous to her current position Sandra served as New Mexico's Air Quality Bureau Chief for six years. She holds a B.S. in Conservation and Resource Sciences from the University of California at Berkeley, a B.S. in Nursing from Creighton University and a M.S. degree in Environmental Studies from the University of Oregon. Sandra is a 2009 EPA Climate Protection Award winner.

Tom Finch

Title: USDOT Pipeline Gathering Rules

Tom Finch joined the Pipeline and Hazardous Safety Administration's Office of Pipeline Safety (OPS) in October 1999. He is the State Liaison Representative (SLR) for the Western Region which is located in Lakewood, CO. His role in the OPS focuses on enhancing communications with and evaluating the Western Region States Pipeline Safety Programs. Mr. Finch attended the Colorado School of Mines from 1964-1968 majoring in Petroleum Engineering. He has over 35 years of experience in the oil and gas industry, formerly employed by Cathodic Protection Services, working mainly in the cathodic protection of well casings and pipelines. Mr. Finch has completed the NACE Level 1 thru Level 3 Courses.

Abstract:USDOT Pipeline Gathering Rules

This presentation covers where gas production ends and where jurisdictional gas gathering begins.

Also it covers where gas gathering ends and where gas transmission begins. Applying the guidelines in API RP 80, regulatory interpretations vary based on the styles and types of production operations. This presents problems for anyone involved with the construction and operation of gathering type pipelines. Operators constantly face challenges in this arena. This presentation covers code compliance review to ensure the proper operation, maintenance, and inspection testing required to meet USDOT/PHMSA requirements.

Randy Hicks

Title: Using API's Amigo Produced Water Release Decision Tool

Randy Hicks the principal of R. T. Hicks Consultants, Ltd. in Albuquerque, NM. He has over 35 years experience in hydrogeology, geochemistry, remedial action management, and site characterization. He has served as an expert witness and project manager in numerous environmental and natural resource matters, ranging from remedial design for Superfund sites to resolving environmental issues associated with produced water releases. He holds a bachelors degree in geology from Beloit College and a Masters of Science in geology from the University of New Mexico.

Abstract: Using API's Amigo Produced Water Release Decision Tool

API's AMIGO Decision Tool allows operators, regulators and landowners to assess the threat to ground water and soil posed by a produced water (chloride) release. This tool is customized for use in the Permian Basin and can help stakeholders develop a remedial response. Amigo uses a library of HYDRUS-1D unsaturated flow model results from southeastern New Mexico and a simple ground water mixing model to estimate chloride concentrations in the root zone of soil and in an underlying water table aquifer. After reading the manual and 30-minutes of practice, a user with a reasonable knowledge of fluid flow can effectively use the tool. Output from the Amigo tool agrees with sampling data from spill sites and computer simulations presented by NMOCD in regulatory hearings.

Ronald D. Kygar

Title: Corrosion & Cathodic Protection of Well Casings

- Ron Kygar has more than 30 years of experience in corrosion control by cathodic protection.
- Certified member of NACE since 1976.
- Oklahoma State University Associate Degree in Electronics.
- Oklahoma University, Advisory Committee Member since 2000.
- Presented publications and lectures on Cathodic Protection of Well Casings, Oil Field Vessels, Close Interval Surveys, DOT Regulations of Pipelines, Secondary Containment of Tank Bottoms, and various other topics.
- Operations Manager for Corpro Companies Inc. Houston, TX – Nov. 2004 - Present
- Operations Manager for CP Masters, Inc Oct. 2000 – Sept. 2004
- Houston District Manager – Corpro Companies Inc. 1997 - 2000
- Vice President Operations – Cathodic Protection Services Co. 1990 – 1997
- Vice President, Regional & District Manager – Cathodic Protection Services 1979 – 1990
- Sr. Cathodic Protection Specialist – Sun Oil Company Midland, Texas 1972 – 1990

Abstract: Corrosion & Cathodic Protection of Well Casings

- General Corrosion Process and a Corrosion Cell
 - Galvanic Series
- Cathodic Protection of Well Casings
 - What causes well casings to corrode?
 - How to determine if corrosion exists
 - Testing Methods
 - Casing Potential Profile
 - E Log I

- Surface Casing Potentials
- Designing Cathodic Protection Systems for Well Casings
 - Impressed Current – Shallow Anode Beds
 - Impressed Current – Deep Anode Ground Beds
 - Anode Material Selection

Myke Lane

Title: Comparing the Rio Arriba and Santa Fe County Oil and Gas Ordinances

Mike Mullen

Title: Identifying Unconventional Pay in Mature Basins

Mike, the Technical Professional Manager of the Denver Tech Team, leads a multi-disciplinary group that is responsible for conducting reservoir studies which integrate reservoir characterization, stimulation and production metrics throughout the Rocky Mountain Region. The results of these studies are used to demonstrate the completion technologies and new products or services that improve production and reduce costs. He began his career as a wireline logging engineer in Hobbs, NM in 1976 and he has spent the past 33 years developing analysis methods for evaluating tight gas, CBM, and Shale Gas with a specific focus toward stimulation petrophysics.

Mike holds a Bachelor of Science degree in Electrical Engineering from the University of Missouri – Rolla. He is also a registered professional engineer in NM and CO.

Abstract: Identifying Unconventional Pay in Mature Basins

The best place to look for unconventional oil and gas opportunities is in mature oil and gas areas that already have an infrastructure to produce these hydrocarbons. Unconventional resource plays in the San Juan Basin have a hard time being economic as standalone targets when burdened with these infrastructure costs. But they can be a great pay add target as the parent well shows its age with declining in production. The systematic approach recommended here to identify and quantify the post stimulation production results of these resources will help minimize the uncertainty and maximize the economic success of the project.

The evaluation process can be summarized in a four step process called STIM-S: Survey, Intervene, Model and Stimulate. Survey – review existing data available, logs, mud logs, offsets, and possibly re-evaluation logging. Intervene – Conduct a small volume diagnostic fracture injection test for reservoir properties like permeability, pore pressure, natural fractures and Process Zone Stress. Model – both the hydraulic fracture stimulation needs modeling as well as a simple reservoir production simulation of the vertical and a potential horizontal well. Stimulate – the field application of the optimal fracture stimulation treatment only if the modeling results meet the economic criteria. Following this systematic workflow leads to reduced capital risk and a more secure return of your stimulation dollar investment.

Marita Noon

Title: Energy Makes America Great

Marita Noon provides a powerful voice for America's energy situation. She has served as Executive Director for CARE—which stands for Citizens Alliance for Responsible Energy—since January 2007. Marita has moved CARE toward specifically advocating for oil, gas, nuclear and coal and has pushed CARE onto a national platform. Since joining CARE, Marita has come to see that everything we hold dear in America is under attack and energy is at the center of the battle. Coming from a background in speaking and writing, Marita effectively uses her skills to share the complete energy picture with audiences through both the spoken and written word. She has had articles and op-eds published in newspapers throughout New Mexico—where CARE is based—and nationally in industry publications and internet commentary sites. CARE's electronic newsletter, which is sent out each month, has nearly 600 subscribers.

Abstract: Energy Makes America Great!

Have you thought about it? So many of the things that make our life what it is, the things that make life easy, that allow us to travel, that make information available at our finger tips (just to name a few)—all of these things depend on energy. In short, energy makes America great!

Sadly, our administration believes in an energy policy, our speaker, Marita Noon, likes to call "Hope and Change"—they hope that the change they are forcing on America will actually work.

Wouldn't it be great if Washington understood the role that energy--and the extractive industries--plays in America to create true wealth and provide real jobs? The combined energy industry in America employs more than 10 million people. The big-3 auto industry: 2.5 -3 million (according to the NY Times). However, taxpayers have bailed out the auto industry in effort to save less than 3 million jobs while the industry that employs more than 10 million people is taxed and punished. This does not make economic—or even common—sense.

Using lines from the Jefferson Airplane's song "Volunteers of America," Marita Noon from CARE (Citizens' Alliance for Responsible Energy) will encourage us by showing how energy policy in America is at a tipping point with citizens standing up, showing up and speaking up; by reviewing where various energy policies are at the moment; and offering suggestions for easy involvement in turning the tide. Now that healthcare has passed, cap and trade will move back to a front burner making involvement more imperative. Become a volunteer of America! Save your job, save the industry, save America—after all, energy makes America great! (Actual presentation will reflect these values but may have different content based on the energy news of the day.)

Richard Norsworthy

Title: Shielding vs. Non-shielding Coatings

Richard Norsworthy is a Technical Advisor and Sales Representative for Polyguard Products, Inc. Mr. Norsworthy received his BS in mathematics & education in 1968. He has been involved in corrosion control and related fields since 1980. In 1990 Mr. Norsworthy became a NACE Cathodic Protection and Corrosion Specialist. He has been active in the Dallas / Fort Worth NACE Section where serving as the Trustee is presently. He is an instructor for NACE International instructing courses respectively identified as; CP Tester, CP Technician, Basic Corrosion, and Coatings Used in Conjunction with CP. Mr. Norsworthy maintains an active role on several NACE committees and has written several papers about coatings used in conjunction with CP (cathodic protection).

Abstract: Shielding vs. Non-Shielding Coatings

When using cathodic protection on coated pipelines, end users must consider the problems that exist if the coating disbonds (loses adhesion). Many in the pipeline industry assume cathodic protection will solve their external corrosion problems without truly understanding the relationship between the coating and cathodic protection. Cathodic protection (CP) current is very effective when it actually has a path to the pipe metal. Most external corrosion on pipelines is caused by disbonded coatings that shield CP, not lack of CP. When disbondment or blistering occurs, most coating types divert current from its intended path, therefore, CP current cannot adequately protect the external surfaces of a pipe. These are called "shielding" pipeline coatings. There are certain types of pipeline coatings that will allow the CP current to effectively protect the pipe if disbondment occurs and water penetrates between the coating and the pipe. These are called "nonshielding" pipeline coatings. This paper will discuss the differences in the two types of coating systems and how CP works with these coatings.

Greg Ochs

Abstract: Wireless Instrumentation Makes Difficult Measurements and Automation Possible

Advances in digital technology are now making large-scale installations of wireless instrumentation practical. With wireless instrumentation, the cost of deploying an instrument communication network is minimal. Reliability of wireless instrumentation brings wireless reliability to a level higher than what can be delivered by any type of single communication link, wired or wireless. Wireless instrumentation

provide improved communication reliability and why a more reliable network for wireless instrumentation supports the coexistence initiative that is being proposed by the wireless instrumentation standards groups such as those of the ISA and IEEE organizations.

Accutech will discuss the characteristics of industrial wireless instrumentation that have been successfully installed in oil field and industrial applications; compare the wireless protocols used in successful applications and explain how and why these wireless protocols meet the needs for monitoring real-world industrial process variables.

Muthukumarappan “Kumar” Ramurthy

Title: Coal Bed Methane Update

Muthukumarappan “Kumar” Ramurthy is a Technical Professional Manager with Halliburton’s Tech Team in Denver. He received his Bachelor of Engineering in Mechanical Engineering from India and a M. S in Petroleum Engineering from Mississippi State University. He has more than 10 years of conventional and unconventional gas reservoir and stimulation engineering experience with Halliburton. He has authored several SPE papers and is a co-author of “Coalbed Methane-Principles and Practices” a CBM book that was just published in 2008. Also as co-author, he taught the course “Unconventional Reservoir Stimulation: CBM and Gas Shales” to the oil and gas industry in the USA, Canada and Australia.

He has served in several SPE technical committees and co-chaired the 2007 CBM-ATW in Durango. He is currently the Community Outreach Chairman for the SPE Denver Section and is also a member of the Unconventional Gas Resources core team within Halliburton.

Abstract: Coal Bed Methane Update

The economic success of a CBM project depends upon net pay, gas content, pore pressure, permeability and spacing. Once the reservoir parameters are found to be sufficient then establishing good communication between the wellbore and coalseam is very essential for producing the wellbore. Depending upon the reservoir characteristics and the economics involved, the coalseams can be completed either openhole or they can be cased and perforated (or slotted). This talk will summarize the suitable conditions for open-hole and cased-hole completions and their advantages and disadvantages. Horizontal wellbore completion methodology will also be discussed.

Stimulation is often necessary to dewater the coals and produce the gas at economical rates. It can either be high rate injection (water enhancement) in high permeability coals or hydraulic fracturing in low and medium permeability coals. This talk will review the advantages and disadvantages of the following in coals: i) water enhancements, ii) slickwater fracs, iii) hybrid fracs iv) gelled fluid fracs and v) foam fracs. Accessing the coal zone effectively has been found to be very important in the successful placement of a stimulation treatment.

The evolution of hybrid fracs in coals will be discussed along with examples. The growth of frac models have opened up a new way of optimizing frac treatments instead of the standard 5000 lbs per net foot of coal design. The use of Diagnostic Fracture Injection Test (DFIT) in this optimization process is very critical. Use of frac fluid additives and their effects will also be covered.

Larry Rankin

Title: ECDA Indirect Inspection Surveys

Larry Rankin is Director of Pipeline Integrity for Corpro Companies in its Houston, Texas, office. He has over 30 years of experience in the pipeline and corrosion control industries. His Pipeline Integrity experience includes integrity management, operational reliability assessment, rehabilitation and service conversions, inline inspection, and External, Internal and Stress Corrosion Cracking Direct Assessment. His corrosion control experience includes cathodic protection, electrical interference, internal corrosion, corrosion coatings, regulatory compliance requirements, and operations and maintenance procedures. Larry has a Bachelor of Science Electrical Engineering degree from

Louisiana Tech University. He has performed work worldwide and he has been an active member of NACE since 1976.

Abstract: ECDA Indirect Inspection Surveys

External Corrosion Direct Assessment (ECDA) is a technique now being widely used by hazardous liquid and gas pipeline operators to assess the condition of pipelines with respect to external coating damage and corrosion. This presentation highlights Indirect Inspection, the 2nd step of the 4-step ECDA process. Indirect Inspection involves performing coating and cathodic protection surveys, processing, integrating and evaluating the survey data, and identifying and selecting Indirect Inspection indications for pipe excavation and inspection. Surveys that are specifically addressed in the presentation include AC Current Attenuation, DC and AC Voltage Gradient, and Close Interval Potential surveys. Integrated survey data and corresponding pipe and coating conditions will be presented.

Lynn Rowlan

Applying Plunger Lift Technology to San Juan Basin Wells

O. L. Rowlan education includes a Bachelor and Masters of Science degree in Civil Engineering graduating in 1976 from Oklahoma State University in Stillwater Oklahoma. Mr. Rowlan was the recipient of the 2000 J.C. Slonneger Award bestowed by the Southwestern Petroleum Short Course Association, Inc. He has authored numerous papers for the Southwestern Petroleum Short Course, the Canadian Petroleum Society, and the Society of Petroleum Engineers. Mr. Rowlan works as an Engineer for Echometer Company in Wichita Falls, Texas. His primary interest is to advance the technology of using the Echometer Portable Well Analyzer to analyze and optimize the operation of all artificial lift production systems. He provides training and consultation in performing well analysis to increase oil and gas production and reduce operating cost. He gives numerous seminars and talks on the efficient operation, optimization, and trouble shooting oil and gas wells.

Abstract: Applying Plunger Lift Technology to San Juan Basin Wells"

An operator can produce a plunger lift well more efficiently if the plunger fall rate, plunger location, and time the plunger takes to fall to the liquid and bottom of tubing are determined. A portable acoustic fluid level instrument can accurately measuring the plunger fall velocity and depth to the liquid level; then the minimum shut-in time for the plunger lift installation can be determined. The plunger fall measurements will ensure that the plunger will reach the bottom of the tubing by the end of the shut-in period.

A few simple rules-of-thumb are frequently used in the initial configuration of the plunger lift installation. These rules-of-thumb have been translated into mathematical algorithms to allow the operator to estimate the rise velocity of the plunger, the liquid slug size per cycle and time period intervals for the plunger cycle. Algorithms are used to calculate timings for events during the plunger lift cycle, and the times are compared to key events determined from measurements acquired at the well. Using the measured tubing and casing pressures and plunger location during the cycle along with other well parameters, the operator can verify the plunger lift system is operating as desired. Both measured plunger lift performance data and calculations from the algorithms guide the operator to effectively analyze, adjust and optimize the plunger lift installation. Acquired data from various plunger lifted wells are used to validate the algorithms presented.

Dan Steele

Title: Wireless Communication to a Plunger Lift Well

Hybrid Wireless Systems Can Be Leveraged to Your Advantage

Daniel G. Steele is a business development executive at FreeWave Technologies, Inc. Steele has more than 25 years experience selling SCADA networks for the water and waste water, oil and gas, electric utilities, railroad, traffic and process control instrumentation markets. Some of Dan's previous experience includes working as a system integrator; as a branch manager for Water Works Equipment; as a regional sales manager for Rockwell Automation; as a regional area manager for Microwave Data Systems; and, as a senior vice president of sales for Bluewave Antenna Systems.

Abstract: Wireless Communication to a Plunger Lift Well

Traditionally, an operator was required to manually shut in the well to create pressure downhole in wells that suffered from heavy fluid loads. Artificial lift is a method used to build enough downhole pressure to lift or produce the liquid from the well. With options for communicating plunger lift data to the RTU being wired or wireless, producers have a decision to consider. This presentation is intended to enable that decision with valuable information.

To support producers plunger lift control objectives, automation electronics manufacturers have been focusing a great deal of their development efforts on the plunger lift control applications. Again, these technologies can be supported at the site with either wired or wireless solutions.

Wireless solutions and tools have advanced along with the electronics technologies. Today, wireless tools are proven to be viable, reliable and robust. In most cases, wireless is also a savings in wired solutions when it comes to installation and other variables.

This presentation discusses wireless as an alternative to wired solutions. It presents some of the capabilities of wireless that are on par with wired and some that are superior. Also presented is a simple set of economic inputs that can be used as guidelines for making the choice between wired and wireless options.

In other words, this paper will help producers be better able to evaluate wired versus wireless solutions and, if they chose wireless, some important characteristics to evaluate in choosing among wireless providers.

Abstract: Hybrid Wireless Systems Can Be Leveraged to Your Advantage

Companies with large geographically dispersed remote networks, such as those in the oil and gas industry, can select one technology, one source, one vendor to collect, retrieve and report data to assess the health of the network. Sometimes, this type of approach makes sense. However, other times integrating other types of technologies offer significant benefits that can easily and more cost-effectively be incorporated into one cohesive network.

In fact, the days of building large, unmanageable networks are behind us. Building large, elaborate radio networks is a way a company might demonstrate its vast expertise and deep knowledge base. However, there are options that allow us to consider better manageability, expandability, cost and speed. Hybrid networks, for example, can include ground, satellite or cell phone-based technologies.

If you are collecting data from multiple locations and delivering it to offices over a widespread area, no one system will be able to accomplish this. However, by combining technologies, the user can create a seamless data stream from several locations and share data over a LAN or WAN with multiple users. The end result is more effective and efficient management of their network, increased reliability through reduced downtime – all at a much more affordable price.

This presentation will provide attendees with specific ways they can set up and deploy hybrid networks to drive maintenance/monthly costs down – directly impacting their bottom line; decrease polling cycle times; reduce the time needed to identify and rectify problems within the network; and, eliminate system “pinch points” – or single points of failure.

Butch Tongate and Carol Walker

Title: Update on NM Oil and Gas Safety Performance

Butch Tongate grew up on a small cotton farm in West Texas, received a bachelor of science degree in mathematics from the U.S. Naval Academy and a master of science degree in systems management from the University of Southern California. Over the past forty-plus years he has worked in a variety of jobs, industries, avocations, and “establishments”, including: farm worker, cotton gin, fruit picker, pool hall, racetrack, dishwasher, recycler, landscaper, U.S. Marine Corps, aerospace, football official, law firm, film industry, solid waste, and health and safety. Of those, his three all-time favorite jobs are pool hall attendant, Marine, and bureau chief of the New Mexico Occupational Health and Safety Bureau (where he has served since December 2004).

Abstract: Update on NM Oil and Gas Safety Performance

- New Mexico OSHA’s activities related to the state’s oil and gas industry, including compliance, compliance assistance, and cooperative program activities;
- Our perception of the major health and safety issues in the industry;
- Current and future initiatives of New Mexico OSHA and federal OSHA that will affect the industry, including standards and emphasis programs; and
- Any questions or concerns from the audience.

Mary Uhl

Title: Ozone Non-attainment

Mary Uhl is currently the Bureau Chief for the New Mexico Environment Department’s Air Quality Bureau. She has been with the Air Quality Bureau since 1992, starting as an air dispersion modeling expert completing computer-based air dispersion modeling in support of permit issuance, regulation development and enforcement actions. She later served as manager of the modeling section and subsequently was promoted to manage the Planning and Policy Section of the Bureau. During her tenure with the Bureau, Mary has completed over 800 dispersion modeling analyses for air pollution facilities in the state, developed a comprehensive New Mexico Air Dispersion Modeling Guideline, performed modeling for streamline and general permit development and other regulations, testified as an expert witness in the area of air dispersion modeling in several court cases and at many public hearings, and has published technical articles in the area of the chemical conversion of oxides of nitrogen to nitrogen dioxide and air toxics analyses. She served as co-chair of the WESTAR Technical Committee and co-chaired the Western Regional Air Partnership’s Modeling Forum for several years. Mary is currently a member of the National Association of Clean Air Agencies (NACAA) Board of Directors and the co-chair of the Western Regional Air Partnership. She has worked with Gaussian models and Eulerian grid models, meteorological models and emissions processing models. She worked with other states and USEPA to form the Four Corners Air Quality Task Force to analyze options for air quality improvement in that region. She was the project manager for the Corrales Air Toxics Study, as well.

Mary received her B.S. with a math and chemistry major from Purdue University in 1987. In 1989, Mary completed her M.S. degree in Atmospheric Sciences at Purdue University. Her topic of research was the development of a model to diagnose explosive development of extra-tropical cyclones, commonly known as “bombs”. The work focused on the boundary layer physics of cyclogenesis. Upon completion of her degree, Mary worked as a research associate at Purdue, continuing research in the development of models under funding from NASA. The development and testing of the model was performed on one of the largest super-computers in the world at that time, a CYBER 205. Mary left Purdue University in 1992 to join the Air Quality Bureau in Santa Fe.

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Ozone (O₃) is an unstable gaseous air pollutant composed of three oxygen atoms. In the earth's lower atmosphere, ground-level ozone adversely affects public health, flora and fauna. Ozone is not usually emitted directly into the air, but at ground-level is created by a chemical reaction between oxides of nitrogen (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. Sunlight and hot weather cause ground-level ozone to form in harmful concentrations in the air. The USEPA sets national standards for air pollutants to protect public health and the environment. The Clean Air Act requires USEPA to analyze air quality standards periodically. A new national standard for ozone has been proposed by the USEPA and will be finalized later in the summer. The new standard will be set within a range suggested public health scientists. Ozone concentrations measured in San Juan County have historically been near the federal standards. The New Mexico Environment Department has modeled current and future predicted emissions to determine what ozone concentrations might be measured in the future. Modeling also indicates the contribution of transport and background to local ozone measurements. The state, federal, local, tribal and county governments will need to work collaboratively to address air pollution issues in the region.

Carol Walker and Butch Tongate

Title: Update on NM Oil and Gas Safety Performance

Abstract: Update on NM Oil and Gas Safety Performance

- New Mexico OSHA's activities related to the state's oil and gas industry, including compliance, compliance assistance, and cooperative program activities;
- Our perception of the major health and safety issues in the industry;
- Current and future initiatives of New Mexico OSHA and federal OSHA that will affect the industry, including standards and emphasis programs; and
- Any questions or concerns from the audience.