

Well Servicing

The Voice of the Oil & Gas Service Industry



WRITING HISTORY

WRITING HISTORY

MEMBER PROFILE

MARK GJOVIG

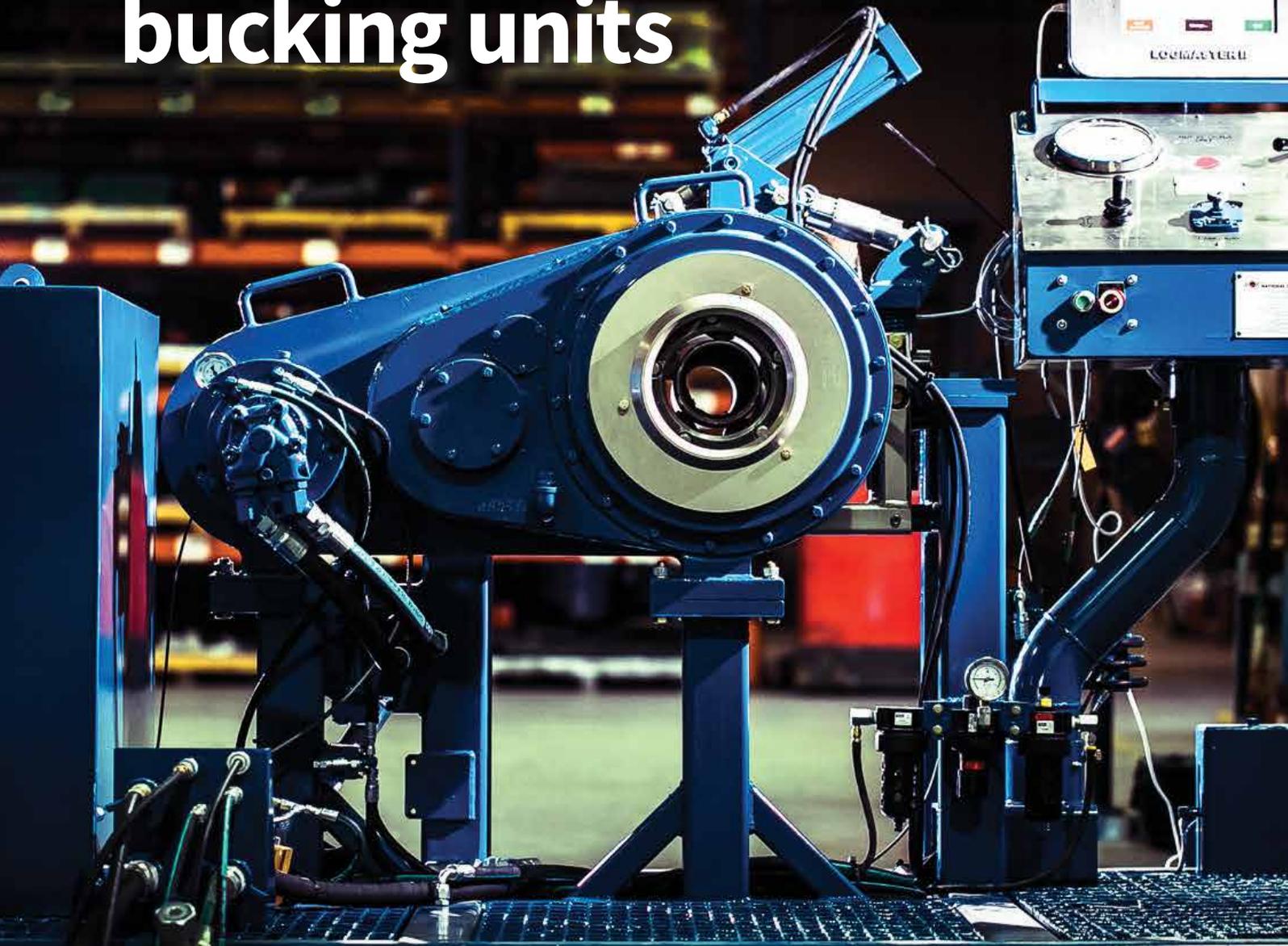
WAITING AND
WAITING IN THE
OILPATCH

THE WEALTH
OF NATIONS

ORPHANED OIL
AND GAS WELLS
ON THE RISE

SEPTEMBER/OCTOBER 2019

Gill and Peck-O-Matic bucking units



NOV Gill Services models 500, 600, and 700, along with our Peck-O-Matic™ series bucking units, are world renowned for their durability and reliability in providing continuous turn make and break operations. These units are built for speed, efficiency, and are relied upon to perform in the most demanding conditions.

Peck-O-Matic bucking units cover the entire range of pipe and couplings from 1 $\frac{5}{16}$ to 23 in. OD. All units feature an efficient closed head design, a contamination-free oil bath lubrication system and precise torque control. Standard units are available in either skid or frame mounted varieties, and come complete with a hydraulic power unit and control console enabling safe and efficient operation by one person.

- Hydraulic load cell to register torque applied to pipe
- Air shift for high and low operation
- Air shift for back-up to engage jaws
- Wide Jaw Floating back-up on Models 500 and 600

Contact bob.smith@nov.com for more information.



WELLSERVICING MAGAZINE

Volume 61, Number 5
September / October 2019

OFFICIAL PUBLICATION OF THE ASSOCIATION OF ENERGY SERVICE COMPANIES

Executive Director: Kenny Jordan
kjordan@aesc.net; (713) 781-0758

Editor: Brian Blake, B2design
B2_OKC@yahoo.com

Production & Design: Astrea Creative
kristen@astreacreative.com; (405) 219-4397

Contributing Writers: Mark Crawford,
Andy Maslowski, Al Pickett, Chip Minty

AESC: www.aesc.net

Oilfield Theft: www.stopoilfieldtheft.com

Unless expressly stated otherwise, all editorial and advertising material published is the opinion of the respective authors and/or companies involved and should not be construed as official action by or approved by Publisher or the Association. No part of this publication may be reproduced in any form without the express written consent of the publisher.

If available, extra copies of current issue \$4.00 and back issues \$8.00. All prices for U.S.A. © 2016 all rights reserved.

Foreign Subscriptions: Canada and Mexico \$100/year, all other non-U.S. addresses \$200/year.

CHANGE OF ADDRESS: Please send copy of mailing label with new address to *Well Servicing*, 121 E. Magnolia, Suite 103, Friendswood, TX 77546

Official publication of the Association of Energy Service Companies. Editorial, business and advertising offices: 121 E. Magnolia, Suite 103, Friendswood, TX 77546; (713) 781-0758 or (800) 692-0771; Fax (713) 781-7542

Well Servicing (USPS 537-670)

(ISSN 0043-2393) is published bimonthly by Workover/Well Servicing Publications, Inc., 121 E. Magnolia, Suite 103, Friendswood, TX 77546.

A wholly owned subsidiary of the Association of Energy Service Companies. Periodicals postage paid at Houston, Texas and additional mailing offices.

POSTMASTER: Send address changes to *Well Servicing*, 121 E. Magnolia, Suite 103, Friendswood, TX 77546

FEATURES



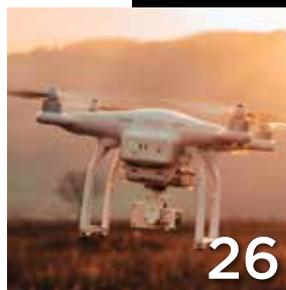
WRITING
HISTORY

13



WAITING AND
WAITING IN
THE OILPATCH

15



TECHNOLOGY
REVOLUTION

26



ORPHANED OIL
AND GAS WELLS
ON THE RISE

34



*Howard Supply Company
Your Complete Supplier and Service Center Since 1937*

BUY TOOLS. GET PAID.



Get \$2,500 On Us

Want to get paid for buying your tools this year?

If you switch \$10,000 to Apex Tool Group within the next year, we'll give you 5% back, if you switch \$25,000, we'll give you 10% back.

This is not a contract and there are no penalties for not making your goal.

Contact your nearest HSC Store to determine eligibility and for complete details.

*Conversion rules apply

Bakersfield, CA	661-324-9721	Hobbs, NM	575-393-9927
Greeley, CO	970-353-1207	Odessa, TX	432-367-8116
Casper, WY	307-235-1569	Pampa, TX	806-665-0089
Gillette, WY	307-682-8990	Perryton, TX	806-434-0070
Rock Springs, WY	307-382-7131	Oklahoma City, OK	405-265-3110
Williston, ND	701-774-8361	HQ: Fort Worth, TX	817-529-9950
Vernal, UT	435-789-1525		
Farmington, NM	505-325-0291		





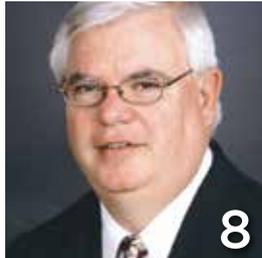
WELLSERVICING MAGAZINE

Volume 61, Number 5
September / October 2019

CONTENTS



6



8



10

ABOUT THE COVER
Incoming president of the AESC,
Mark Gjovig from GO Wireline.

**WELL SERVICING EDITORIAL,
BUSINESS AND ADVERTISING
OFFICES**
121 E. Magnolia, Suite 103,
Friendswood, TX 77546
(713) 781-0758 or (800) 692-0771



PRINTED ON
RECYCLED PAPER




11



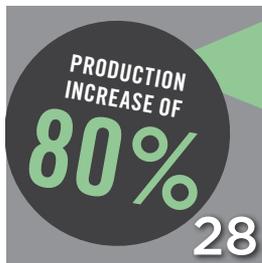
18



20



36



28



24

6 PRESIDENT'S OUTLOOK

8 EXECUTIVE DIRECTOR'S
CORNER

10 WELL SERVICE RIG COUNT

11 SAFETY CORNER

18 INCOMING PRESIDENT

Mark Gjovig

20 MARKET REPORT

- Wind, Solar Challenge Fossil Fuels with Lower Costs, Improved Batteries
- E&Ps Raise Salaries in 2019 as Service Sector Cuts Jobs
- Youngest Generation of Workers Moving Away from Oil and Gas
- Falling U.S. Oil Production Prompts Another Round of Peak Oil Talk

24 CONGRESSIONAL
SPOTLIGHT

Rep. Buddy Carter
(R-GA)

28 THE WEALTH
OF NATIONS

36 SUMMER MEETING

38 NEW MEMBERS/
ADVERTISER'S INDEX



PRESIDENT'S OUTLOOK

I'm honored to be the 63rd president of the AESC.

It's humbling to serve behind legends in the well service industry, Frank Pool, Nick Petronio, and Charlie Moncla. People like Kenny Jordan, Joyce Ryel, Jacky Williamson, Joe Freeman, Sam Tolley and Dick Schremmer have each played a significant role in my development as an officer in the AESC.

That list also includes Gay Wathen, a second-generation member who will follow me next year and become the first president from the Associates Membership. I think this is an exciting step for the AESC and recognizes the contributions of our Associate Members.

The AESC has a tremendous staff. This organization functions extremely well under Kenny Jordan's leadership. Roni and Susan work hard every day to meet our needs and keep this association running smoothly. They will all be important to my success this year.

My entire career in the oil and gas industry has been in the Wireline business. Since 1978, it has been my passion in this industry. I came to the association when the Well Logging Association merged with the AESC. Since then, I have served as a member and as chair of the Wireline committee. That led to a position on the board of directors and later as a member of the executive committee. I have had the privilege to serve with and learn from this current generation of leaders.

We had another very successful summer conference in Coeur d'Alene, ID. I came away from the meeting with new friendships and updates on old friends. The presentations about Human Resources/Employees, Insurance, Safety, and Taxes are always invaluable to small businesses like GO Wireline.

We heard an update and refresher on the new tax codes. My main takeaway for businesses was the 100% depreciation credit on old and new equipment and the information about "Opportunity Zones". Some of the most important presentations were about the state of the industry going into 2020. Over the years, these state of the industry presentations have helped me shape our budget and spending for the coming year. It is an intangible value I cannot begin to put a price on. Finally, Chapter Caucus reports were dominated by reports of difficulty finding good employees and a weaker market for services.

The most critical element to the health of the AESC is our annual budget and maintaining our rainy day fund. The rainy day fund is the backstop that protects us from the downturns in our industry. Membership dues and various fundraising activities support the budget. Our members are the lifeblood of our organization. We exist to serve them and our oil and gas industry. I am committed to meeting and growing our membership during my presidency. It is my goal to attend a function or meeting for every chapter and add 50 members in the next 12 months. Please join me in this endeavor. We must have new members to sustain the AESC mission.

Please stay safe out in the field and on the road.
God Bless you and your family!
God Bless America!



Mark Givira

2019-2020 AESC PRESIDENT

GO Wireline

Willison, North Dakota



Perkins



L & W DIESEL SERVICE, INC.

DIESEL ENGINE REBUILDERS

2600 W. 43rd St • P.O. Box 4635
Odessa, Texas 79760
Email: lserv73203@texol.net

Office: 432.367.2747
Fax: 432.367.0709

OKLAHOMA CITY, OK
405-789-7125

LIBERAL, KS
620-624-5303

Horizon Cable Service, Inc.

- MOBILE SANDLINE & WIRELINE SPOOLING/SPLICING SERVICE •
- FULL SERVICE WIRELINE SHOP •
- WIREROPE, CHAIN & NYLON RIGGING SHOP •
- EM CABLE & WIRE ROPE SALES •

ODESSA, TX
432-563-3331

LONGVIEW, TX
903-234-1558

CASPER, WY
307-472-9100



**SAME GREAT
SERVICE**

**ONE
SUPERIOR BRAND**



Well Services

SPN Well Services provides a complementary suite of drilling, completion and production-related services. Offering both individual and packaged solutions with an extensive U.S. basin footprint, we support all phases of your well's lifecycle while helping you reduce costs and enhance production. We also offer local leadership, basin-level experience and innovative application of technologies.

>> SPNWS.COM

A SUPERIOR ENERGY SERVICES COMPANY



EXECUTIVE DIRECTOR CORNER

EMPLOYING THE FUTURE WELL SERVICING GENERATION

Well Servicing companies in the upstream oil and gas industry have historically experienced extremely high turnover rates for their field workers. Some companies are reporting 75-100% turnover within a one year period of time. The difficulty lies with attracting, and then retaining, field workers. If you speak to job recruiters, the reasons vary greatly: working conditions (outdoor, weather dependent, potentially "dirty jobs"), working hours, uncertainty of schedules, entry level employees not accustomed to working conditions, and the list goes on. In this industry, when a company secures an employee, they either "love it or leave it". The employees may also not feel committed to their companies, as they typically will depart quickly for perceived "greener pastures" with another company when enticed.

Where is the next generation of workers going to come? Historically, the well servicing industry has been a fairly low-tech industry that requires a more mechanical aptitude than technological skills. But we seem to have lost the source for mechanically skilled employees coming out of high school programs. Many of the older generations had "shop" classes available in high school - programs that taught different forms of mechanical skills (welding, auto shop, woodworking, etc.). Unfortunately, those skills have faded from the high school scene as many of the counselors have tried to channel students directly into higher education pathways (4 year college or 2 year associate degrees) and skip the vocational trade options altogether. This practice has left a critical shortage of these types of mechanical skills that are utilized in upstream well servicing jobs.

Years ago, the emphasis was to try to recruit or employ high school students who came from farms or ranches, where they learned these types of vocational skills growing up. With the consolidation of farms, larger scale technical oriented farms, and the small farmers being squeezed out of business, even these sources of entry level employees has "dried up".

One important source of employees that members of our association are pursuing, is veterans coming out of the military, and, specifically, those were released from active duty with an honorable discharge. These veterans have both hard and soft skills we can use. Many of them have skills taught in the military that are transferrable to well servicing types jobs.

The association has formed a task force to explore solutions to fill open jobs with veterans. Our research is telling us we must do a better job in educating and informing the public about the jobs and career paths available in the upstream oil and gas industry. By working with the military to identify areas where both groups share common work skills and practices, we could potentially have jobs for our veterans. The military services begin transitioning service women and men at 180 days out from their release from active duty. Cities across America have the reserve and guard service members living in their communities. We have good paying jobs to support their families and contribute to the energy industry. A committee has been formed and they are currently working with all branches of the military to identify how we can help each other. We have the jobs, and the military has people... so how do we match the two?

There are individual companies that have already made efforts to recruit veterans. As an association, we want to give veterans some insight to the industry and what we have to offer. We will work with veterans who are already employed in the industry to offer testimonials, and then actively work with the different branches of the military to see where we can best work together. If you have an interest in volunteering to work with this committee, please reach out to us by contacting Kenny Jordan, AESC Executive Director, at kjordan@aesc.net.



Kenny Jordan
AESC EXECUTIVE DIRECTOR



405-672-6303
1320 SE 25th St, OKC, OK 73129
sales@peco-okc.com
www.peco-okc.com



BOPS & PARTS
PLUG VALVES & PARTS
FLOAT VALVES & PARTS
HANDLING TOOLS - NEW & REBUILT
STRIPPER HEADS & RUBBERS
JET LUBE LUBRICANTS & MORE...



B & H RIG AND TONG SALES
Specializing in all types of Well Service Rig
and Related Equipment Repair & Sales



Office 307-265-5566
Cell 307-262-4452
Cell 307-267-1697
Cell 307-262-8375
Fax 307-265-1155
www.bhrig.com

Bill Hodgden - President
Brad Corkill - Manager
Doug Franklin - Sales
1300 N. Queen Street
Casper WY 82604

ONLY ONE ENGINE CAN CUT YOUR DIESEL BILL BY 85%

Introducing a game-changer for the well service industry: the Cat® 3512E with Dynamic Gas Blending™. It's the first DGB engine to meet Tier 4 Final emission standards and the only one capable of displacing up to 85% diesel. You save big on fuel without giving up Cat diesel power, performance, reliability and ease of maintenance. And you can run it on the industry's widest range of fuels, including CNG, LNG, pipeline gas and associated field gas from 850-1250 LHV.

No other DGB engine on the market can match the Cat 3512E Tier 4 Final. Talk to your Cat dealer to see how much it could save you.

LET'S DO THE WORK.™



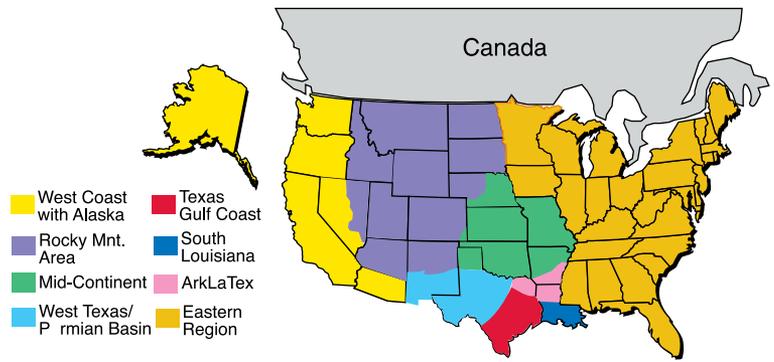
cat.com/oilandgas

© 2019 Caterpillar. All Rights Reserved. CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Yellow", the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.



WELL SERVICE RIG COUNT

Welcome to the Association of Energy Service Companies (AESC) Service Rig Count. This service is being provided by the AESC and is published in each issue of *Well Servicing* magazine and now may be accessed directly on the AESC website (www.aesc.net). Click the three lines in the top left-hand corner to expand the menu, then click AESC Rig Counts in the menu.



Area	J U N E 2 0 1 9					12 months ago		Year on year change in active rig count
	Active Rigs	Available Rigs	Idle Rigs	Stacked Rigs	Active % of total	Active Rigs	% Utilization	
Texas Gulf Coast	175	34	56	100	48%	178	50%	-3
Arklatex	39	16	44	51	26%	56	29%	-17
Eastern U.S.A.	32	16	17	7	44%	37	29%	-5
South Louisiana	16	1	3	2	73%	18	56%	-2
Mid-Continent	128	42	77	117	35%	135	36%	-7
West Texas / Permian	467	73	225	226	47%	475	57%	-8
Rocky Mountain	280	41	113	93	53%	263	51%	17
West Coast / Alaska	160	12	110	118	40%	159	38%	1
TOTAL U.S.	1,297	235	645	714	45%	1,321	47%	-24

Area	J U L Y 2 0 1 9					12 months ago		Year on year change in active rig count
	Active Rigs	Available Rigs	Idle Rigs	Stacked Rigs	Active % of total	Active Rigs	% Utilization	
Texas Gulf Coast	174	33	54	97	49%	178	49%	-4
Arklatex	39	17	35	51	27%	52	38%	-13
Eastern U.S.A.	38	14	21	7	48%	33	38%	5
South Louisiana	16	1	3	2	73%	17	53%	-1
Mid-Continent	125	43	71	116	35%	136	49%	-11
West Texas / Permian	465	64	227	235	47%	486	57%	-21
Rocky Mountain	277	41	116	96	52%	267	53%	10
West Coast / Alaska	163	11	120	114	40%	154	37%	9
TOTAL U.S.	1,297	235	645	714	45%	1,323	47%	-26

Canadian rig count was provided by Topco Oilsite Products, but effective for the June 2016 Rig Count, they are no longer providing that service so it has been removed from the count.

Active Rig The rig is active if, on average, it is crewed and worked every day during the month.

Available Rig The rig is available if a rig has a crew and is ready to work, but is not working.

Idle Rig The rig is idle if the rig is capable of being put to work in less than 48 hours and does not require spending in excess of \$50,000 to activate it, and does not have a crew currently assigned.

Stacked Rig The rig is stacked if the rig does not have a crew assigned and could not be put to work without significant investment in repairs and additional equipment in excess of \$50,000.

SAFETY CORNER

HOW TECHNOLOGY IMPROVES SAFETY

by Joyce Ryel

The oil and gas industry continues to evolve, and with the ever-changing climate, unstable markets, and acquisitions and mergers taking place, the focus on safety and efficiency has never been more important. Companies must learn to do more with less. Understanding and investing in technology, specifically in the area of health and safety compliance, becomes critically important, not only for the strength of the organization, but, more importantly, for the health and safety of the employees. Although health and safety is a core value for most companies, and an obligation of every employer, it takes involvement from every employee to create a safety culture. In order for employers to meet and maintain this obligation, a common solution has become the implementation of an effective and easy-to-use safety software system.

Safety software can provide a platform to manage a fully integrated safety system. New technology provides companies with the ability to manage reporting, track and complete training, and keep up with equipment inspections and asset management, all in a systematic and paperless way. Simplicity becomes a key factor. When a software program is easy to use, employers can keep up with obligations and employees become more engaged, which positively impacts the safety culture of an organization.

There has been a shift in the oil and gas industry in regard to how data is collected and used. Several studies have identified that workplace inspections and a quality observation reporting culture are the most influential indicators of a healthy safety program. Technology is a springboard for these programs. Information is no longer words on paper, rather a real-time awareness to the details and observations of the front-line worker.

For incident prevention, a key strategy is to focus on leading indicators, which can identify and determine opportunities for improvement. Collecting and analyzing leading indicator data is a proactive strategy to recognize potential problems and make necessary changes in order to prevent an incident from occurring. Lagging indicator data can also be collected, but it tells us what has already happened. When an incident does occur, it is critical to collect information to determine the cause or causes. Timely communication to every employee through safety software is critical in disseminating the information to those who need to be aware. Using safety software to report the details of an event expedites the communication of an event to those who need the information.

Inspections in the field are a part of a safety program and include rig inspections, yard and shop audits, and equipment inspections. When inspections are performed with software, photos or video clips can be included, which provide more detail and understanding. If necessary, corrective actions can also be assigned and tracked to ensure they are properly resolved and documented.

Additional benefits include the reduction or elimination of data entry, as well as other administrative duties. Information sharing is improved and risks are reduced for employees in the field through the speed of knowledge transfer. Many customers prefer digitally generated reports for the clean format and the quick turnaround when requested. As the oil and gas industry continues to change and evolve, it is clearly an advantage to utilize unlimited electronic storage of historical data instead of paper records.

A workforce that is widely distributed in numerous states and working long hitches in very remote locations, can be challenging. Allowing mobile access to safety programs through the use of a device in an app environment becomes a game changer. One example of a remote challenge is the need to keep

up with necessary training requirements. If workers are unable to attend a classroom session, training can be pushed out to each employee digitally through an app or computer. The training can include a quiz to ensure understanding of the topic, as well as track the amount of time spent and the employee's performance on the quiz. Paperless rosters, training reminders, and real-time training status reports all become tangible with safety software.

Asset management extends beyond trucks and trailers to include safety related assets such as fire extinguishers and fall protection equipment, which is important to ensure compliance. Managing these assets and keeping up with required inspections can be difficult. Software can help manage important details regarding equipment, schedule inspections, send tasks and reminder notifications, and can quickly provide status reports.

Access to safety information is another impactful component of a program. Health and safety policies, operational procedures, safety data sheets, and many more resources can easily be accessed and properly controlled. Safety software can ensure employees have access to the safety information they need, confirm the most recent version is utilized, and remain accessible at all times.

As with any change, challenges present themselves. Challenges with the implementation of a software program vary with each company. Some expected obstacles include training time, technology or hardware challenges, and changing the mindset of the experienced, generational worker. Strategies to overcome these challenges also vary, and might include a form of employee participation awards. However, it doesn't take long for employees to experience the ease and convenience of performing required safety programs and procedures within a software program.

A steady growth in the use of the technology safety program utilized at my company has helped to improve our safety performance. The impact of focusing on the leading indicators is evident in the 75% reduction in the total recordable incident rate we experienced over the last eight months. On average, I review 850 reports each month, including JSA's, observations, and inspections as they are completed in the field. An employee will choose to use a tool that is user-friendly with proven results of increased safety. By utilizing this technology, which provides instant visibility of all safety processes, in addition to the full cooperation and contribution of all employees, our company's safety performance will only continue to improve.



Left: Blu Hulsey, Continental Resources, outgoing NDPC Board Chairman, Kjersti Armstrong, MBI Energy Services, NDPC Board Member, Kathy Neset, NESET, incoming NDPC Board Chairman

Fortis Energy Services is the proud recipient of the prestigious **2019 Excellence in Safety Award**. The award was presented at the North Dakota Petroleum Council annual meeting today, September 18, 2019 in Watford City ND.

The award for Excellence in Safety recognizes a company that has gone above and beyond to create a culture of safety in the workplace through new technologies or other initiatives. Fortis Energy Services implemented safety software to provide a platform to manage a fully integrated safety system to improve reporting, capture better observations of potential hazards and ensure more timely notification and management of incidents. The technology initiative has helped us to address safety challenges while improving efficient operations.



BITCO INSURANCE COMPANIES



Insurance contracts are underwritten and issued by one or more of the following: BITCO General Insurance Corporation and BITCO National Insurance Company, rated A+ (Superior) by A.M. Best, A2 Stable by Moody's, and A+ Strong by Standard and Poor's.

What YOU do is what WE protect.

BITCO knows oil and gas.

When times get tough, BITCO has been there. Since 1917, BITCO has been offering high quality insurance protection and services to industries at the core of the American economy- with the stability you need and deserve.

If you're looking for broad insurance protection for your business at competitive rates, look no further than BITCO. We understand your business, and we tailor insurance packages specifically for today's energy companies.

1-800-475-4477
www.BITCO.com



OLD REPUBLIC INSURANCE GROUP

WRITING HISTORY

The Revision of API RP 54

by Joyce Ryel

Many great leaders from the oil and gas industry, including the AESC, have participated in the significant revision process of the API RP 54 document. The focus of the revised document places a priority on performing a risk assessment before any operations on the well site, which should be one of the first steps to protect workers. The driving concern behind the revision of API standards is the safety of employees and the community, while providing guidance to companies with limited resources.

API standards have long been a resource embraced by the oil and gas industry as the means to share common industry operations and practices. API standards are developed through an accredited process so they are recognized for their technical correctness while being accepted by state, federal, and international regulators.

After 3 years in the revision process, the American Petroleum Institute released the fourth edition of Recommended Practice 54 (RP 54), Occupational Safety and Health for Oil and Gas Well Drilling and Servicing Operations. This document provides procedures for promoting and maintaining safe and healthy working conditions for personnel in drilling and well servicing operations in February 2019.

The document applies to rotary drilling rigs, well servicing rigs, and special services as they relate to operations on location. First published in 1981, significant revisions in this edition of Recommended Practice 54 include a new section on flowback operations (which is key for safe well testing), revised requirements for facility and site process hazard assessment and mitigation, and introduction of formal risk assessments, as well as expanded provisions for offshore operations.

A task group of industry experts, including oil and gas service and production companies, manufacturers and suppliers, consultants and representatives of

government agencies, and academia worked together to revise RP 54. The task group representatives were each materially affected by the document and expressed their passion for the project at the monthly meetings. The group identified the fact that the RP 54 document was out of date in some areas, and clearly needed more focus on assessing and evaluating risks before a job is started.

The reasoning and discussion on changes, or proposed changes, was often interesting and sometimes controversial. At one point, the task group spent six hours discussing a single definition. No decision made in the document was done without great thought, discussion, and a consensus decision before any change was made. Input from several recognized federal regulators was an invaluable part of the process. Often, industry experts were able to clarify real world operating practices to the regulators. In turn, regulators were able to share information regarding where people were being hurt or killed so those specific situations could be addressed in regard to an industry best practice. The result is a straightforward guideline to safe work practices, developed for industry, by industry.

A section on flowback operations is a prime example of an update that was needed in the document. We can all agree that the oil and gas industry has changed dramatically over the past decade, and certain processes in place now were not commonly used ten years ago. Experiences shared on international operations from each segment of industry experts gave the group new insight into simplifying the document while making it applicable to worldwide operations.

The existence of API RP 54 eliminates the need for regulatory agencies to issue detailed regulations that could have a detrimental impact on our industry. The regulators came to the table, discussed their views on each topic of discussion, and then listened as industry

API RP 54 Committee - Final Day!!!



experts expressed their views. The RP 54 is written in the language of the oil and gas workers since it was written by people who have practiced all aspects of the jobs. Capturing the best practices of an entire industry, and presenting those best practices in a user-friendly document, will enable the oil and gas industry to continue to improve its safety performance.

Purchasing numerous safety related documents has long put a burden on smaller companies in the oil and gas industry. The task group that developed the revision of RP 54 wanted the document to be available to everyone. API generously agreed that the document will be available online at no cost to the user. And even more impressive, the document will be available in Spanish to reach even more of the workers in the industry. The revised API RP 54 document can be found at: www.api.org/-/media/Files/Publications/RP-54_e4.pdf

The benefits of being part of the revision process were invaluable. The interaction between the best minds in the industry and the opportunity to make important industry contacts was an unexpected benefit of participation in the process. At the revision table, all came as equals with strong and passionate opinions about how to make our industry safer. It was a unique sharing opportunity for industry experts from large and small companies to come together with a common goal: How do we keep our people safe? Being part of a small change in history, the revision of one of the most important documents our industry uses as a safety resource, was life changing!

THE LAST MEETING WAS A CAUSE FOR CELEBRATION!!!

AFTER

- 2 YEARS**
- 98,400+ OPERATING HOURS**
- 45 UNITS**

THE RESULTS ARE IN!

EVERCORE ISI
Energy | Oilfield Services, Equipment & Drilling
May 29, 2018

RIGLOCK™ GENERATES AN ADDITIONAL 1+ STAGE PER DAY

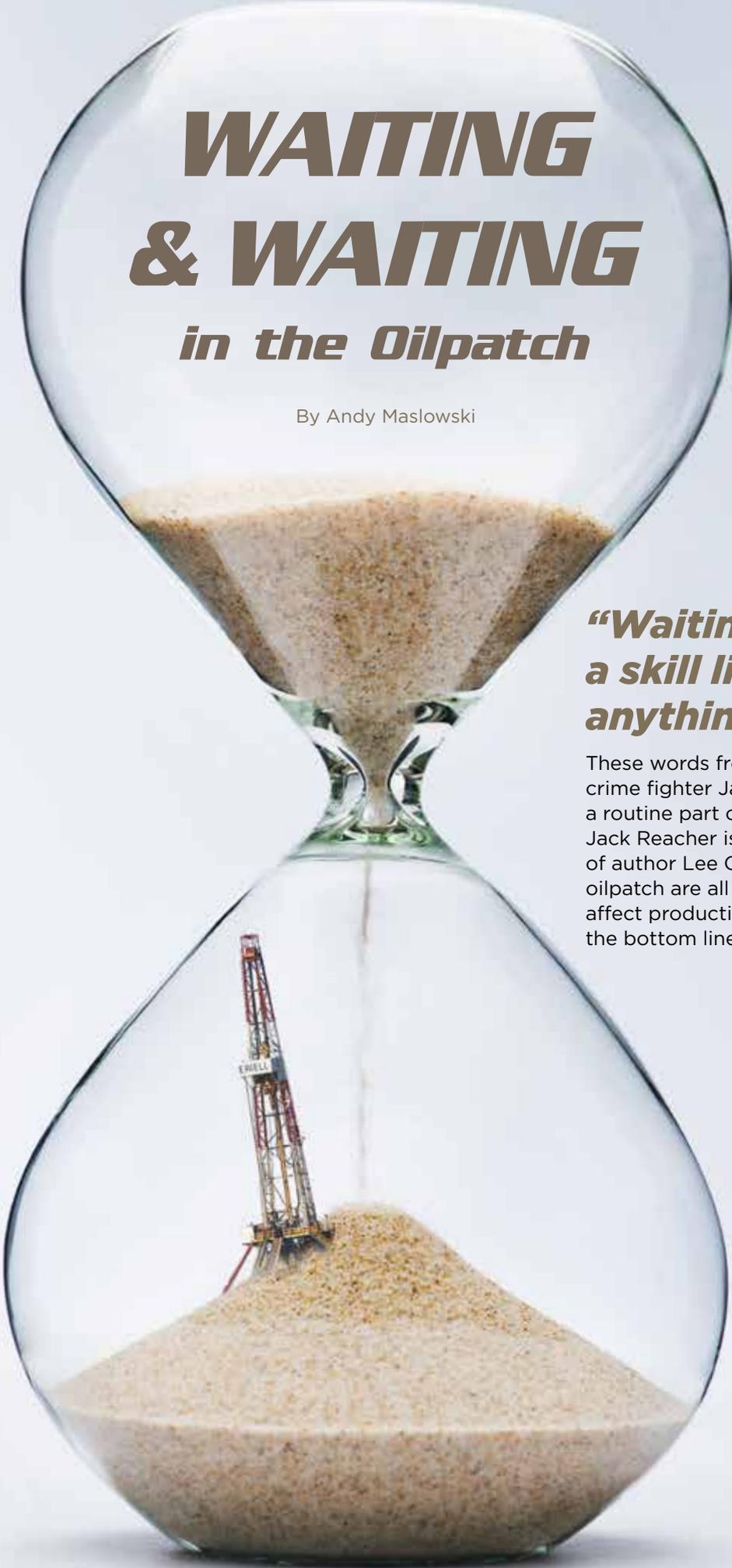
1+ STAGE PER DAY RESULTS IN 13% INCREASE IN EBITDA

ANNUALIZED EBITDA PER SPREAD INCREASE \$4-5 MILLION

Source: EVERCORE ISI Energy Oilfield Services Report, Equipment & Drilling, May 29, 2018

RENEGADE SERVICES

Read the full report at riglockrenegade.com



WAITING & WAITING in the Oilpatch

By Andy Maslowski

***“Waiting is
a skill like
anything else.”***

These words from tough guy and crime fighter Jack Reacher describe a routine part of his lifestyle, but Jack Reacher is a fictional character of author Lee Child. Delays in the oilpatch are all too real and can affect productivity and, ultimately, the bottom line.

INFRASTRUCTURE

Everyone in the industry has to wait for something. Operators have to wait to get a drilling permit, or a host of other permits from the appropriate regulatory agency. A drilling contractor might need new pipe or another drill bit while a servicing company could use an extra shipment of rods to complete a job. At some point, working crews will need spare fuel, replacement parts, or even an extra hand because someone did not show up to work.

Daily logs or completion reports sometimes chronicle these delays with statements such as “waiting on casing cement” or “stuck in hole” or “shut down because of a weather delay.” Rig equipment and motor vehicles can break down for any subtitle of Murphy’s Law: “If something can go wrong, it will.”

Virtually everything on a wellsite location arrives via truck (or a marine vessel for our offshore friends). This chosen method of transport is the easiest way to bring goods and services to isolated land locations, but trucks can be delayed due to scheduling problems, traffic congestion, accidents, flooded roads, etc. So, waiting for someone to arrive to perform a special service or to make a necessary delivery are probable reasons for many wellsite slowdowns.

There are regular exchanges of oilfield personnel and goods between domestic and even international locations. In the U.S., deliveries of equipment or tools flow between Texas, Oklahoma, Louisiana, North Dakota, Pennsylvania, and other oil and gas hot spots. The same is true for crews as well as individual workers. This means trucks with out-of-state license plates are commonly seen from the Bakken areas of North Dakota to the Marcellus Shale territory in Pennsylvania to the Utica Shale drilling prospects of Eastern Ohio and beyond.

Reportedly, some operators and energy service companies have experienced occasional delays with deliveries of frac sand and certain tubular goods. For example, some of the best sand used for fracturing operations (sometimes called “northern white sand”) comes from Wisconsin. Shipments from quarries there are hundreds of miles away from wellsite locations in Texas or Pennsylvania and are transported via the interstate highways or over the nation’s rail system. While making shipments over these relatively long distances, oilfield industry delays are sometimes experienced because of defects in the nation’s transportation system.

President Trump and Democratic congressional leaders have agreed upon infrastructure legislation to the tune of some \$2 trillion, but it’s become a political football, tossed around the hallowed halls of the U.S. Congress and the Office of the President.

“Over the last two years, our economy has responded very positively to the president’s policies, generating a historically strong labor market for Americans and widespread private sector investment,” explained Elaine Chao, U.S. Secretary of Transportation, earlier this year. “This success is enabled by America’s transportation sector. Shipping and freight industries are moving goods at an all-time high and new, cutting-edge mobility options are improving the way people travel. These gains, however, are threatened by infrastructure that is increasingly congested, in need of repair, and unable to keep pace with technological change.”

To keep pace with the needs of a growing economy, Chao is calling upon Congress to pass legislation that delivers new and important infrastructure investments to clear up the backlog of required repairs that would reduce traffic congestion, improve road conditions, and boost commerce across the nation. Traffic congestion is responsible for millions of dollars of delays, and doing nothing about it will only worsen the problem in the future.

DELAYS

In the field, drilling crews, servicing crews, and truck drivers often have to wait. How and where they spend the time can be challenging.

For instance, if a crew has to halt drilling for an unforeseen stoppage, they may decide to lift the bit off the bottom of the hole and circulate drilling mud to keep the hole conditioned. Likewise, sometimes drilling is extremely slow, taking as much as 30 minutes or longer to drill one foot. Depending upon the type of rock or the condition of the bit, faster drilling might cut through one foot of rock in one minute or less. Keeping a crew busy during slow periods is when toolpushers or supervisors earn their money. They may ask the crew to perform maintenance on equipment, or do some painting, cleaning, or extra chores... whatever needs to be done.

Tripping in or out of the hole to replace a drill bit or to set casing or production pipe, can take from several hours to several days, depending on the total measured depth of the hole and new problems developing. While a drilling crew is working overtime, other people on location (such as company men and women, mud engineers,

geologists or mudloggers) step back or even get some time off.

Truckers and other crews may have to park off-location while they wait, and it's not always easy to park a heavy-duty truck weighing up to 40 tons. Some drivers find parking spots at highway rest stops, service stations or restaurants with big parking lots. However, one must be careful. State troopers, county sheriffs, and other law enforcement officers are often on the lookout for trucks that are illegally parked, exceeding weight limits, depositing mud on roads (even if it is unintended), as well as other violations.

All kinds of problems can stop drilling or servicing operations. Examples of delays include: bad weather, rig fires or explosions, work crew injuries, pipe getting stuck in the hole, running out of water or frac sand, and the list goes on. Often times, operators and production companies have to pay for many of the delays occurring in the field. The liability, however, depends upon the service contract. As usual, the devil is in the details.

Once a well is drilled, it may be placed on a waiting list before it is completed. Even after a well is fracked and tested, more delays in production are possible. Or, oil production will start, but a pipeline hookup is needed to produce any natural gas from the well.

Some wells sit idle for a number of years after being set with production pipe. This means operators do not collect revenue from flush production where most wells come in strong (if they are going to be big producers). With most horizontal wells costing between \$5-10 million to drill and complete, steady cash flow is always the desired business model. Potentially thousands of barrels of crude oil or millions of cubic feet of natural gas are at stake. With product prices hovering around \$50/barrel or \$3/Mcfg, there is a great deal on the line. Production delays and waiting for the return on investment requires the most patience in the industry.

In Texas, the state leading in production and drilling, the effects from production delays are mind-boggling. The future production is money in the bank, but idle wells produce no cash at all.

Last year, in a report containing data through August 31, 2018, the Railroad Commission of Texas (RRC) estimated there were 314,936 producing wells in the Lone Star State, plus 120,349 inactive wells. Of the inactive wells, approximately 28 percent had been shut-in for less than 12 months. Many of these were new wells. Just think of the production they could have generated.

Many of these of wells (77,182, which is 64 percent) had been shut-in for more than one year, but were in compliance with the RRC's operating rules in regard to active status or financial assurance, but might have other issues concerning ownership or production, and cannot produce. The remaining wells (13,710 or roughly 11 percent of the inactive wells in the state) were in violation of the RRC's plugging rules, stemming from an active and/or delinquent Form P-5 on record (the P-5 is an organization report for operators of inactive wells).

The RRC has stated numerous times that monitoring the productive status of wells in Texas is one of "the most important ways the Commission achieves its mission of protecting the environment and natural resources of this state."

The RRC also said that once a well starts to produce, a completion report is due within 90 days after the completion of a well, or within 150 days after the drilling operation is completed, whichever is earlier. Likewise, the initial royalty payment to the holder of the mineral rights must be made within 120 days after the end of the month of the first sale of crude oil or natural gas. Everyone has to wait for payments, even the royalty owners. Hopefully, the check will be in the mail... Soon!



Houston Specialty Products Co.
Serving the Oil Field Industry for Over 20 Years!

Expendable Rubber Products

Leon Horner
Marketing Manager

Phone 936-931-525E
Fax 936-931-990E
leon@houston specialtyproducts.com
www.houston specialtyproducts.com



Hadco International
APPRAISALS & CONSULTING SERVICES

For 35 years, Hadco has continuously been recognized for expert testimony and detailed unbiased valuations. Our highly designated State Certified General Appraisers can assist with complex valuations including onshore, offshore and well service rigs, oilfield production equipment, refineries, and transportation assets.

For a confidential consult, contact us at:
Office: (936)760-1220 | **Email:** dukecoon@hadcointernational.com
www.hadcointernational.com



INCOMING PRESIDENT

MARK GJOVIG

By Mark Crawford, contributing writer

Long-time member and first vice president Mark Gjovig is the new president of AESC. He officially took over the duties of exiting president Sam Tolley, of Alliance Well Services, on August 1 during the 2019 AESC Annual Summer Meeting at Coeur d'Alene Resort in Coeur d'Alene, ID.

After graduating from high school in northwestern North Dakota, Gjovig spent four years in the U.S. Army, the last two as a tank commander in Germany during the Cold War. He returned to North Dakota and took his first job in the oilfields as an operator on a wireline truck. He moved up through the company ranks, serving in positions such as field engineer and operations manager.

Today, Gjovig is the treasurer/compliance officer for GO Wireline in Willison, ND. He joined the Wireline Association in the 1990s, which later merged with the AESC, and has served in multiple leadership roles over the years. He is currently the first vice president on the executive committee.

Gjovig learned early on that success in the wireline industry depends on preparation, proper maintenance, and being ready for the unexpected—principles that have served him well over four decades in the oil and gas industry, and will continue to guide him as president.

Serving as first vice president was a tremendous experience for Gjovig. Being on the executive committee provided many opportunities to learn about key topics and provide direct input into the direction of the organization. “I became keenly aware of current events and the challenges the executive committee has to manage,” he said. “Having the structure of moving into the first vice president position after serving as second vice president gave me enough time to prepare for that role and be ready for those responsibilities.”

As president, the biggest change for Gjovig will be the increased travel and new responsibilities. “I will be the lead voice for our organization,” he said. “I view my role as the caretaker of the AESC. My job is to protect the legacy and reputation of the association and hopefully leave a positive footprint on its history.”

READY FOR ACTION

Parting words from ex-president Sam Tolley were to “Pay attention to everything happening at meetings and conferences, so I will have a better understanding about my role as president,” says Gjovig.

Gjovig is eager to increase the membership and encourages members to invite others to join so they can enjoy the many benefits of membership in the AESC. His goal is to add 50 new members during his term as president. “I also want to stress to our membership the importance of being active in their communities and industry,” he added. “You can’t accomplish positive change if you sit on the sidelines!”

As president, a top priority for Gjovig is to be a “strong voice at the table” regarding issues related to regulatory and environmental compliance as well as safety, in the industry as well as the state and federal government levels. He plans to have workable alternatives and solutions ready to offer to should discussions or negotiations stall.



STRENGTH THROUGH COLLABORATION

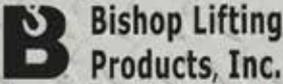
Gjovig also wants members to better understand and appreciate the amount of time and effort it takes to be an AESC leader, especially at the executive levels. "Those who are actively engaged and work to bring positive change are truly committed to our industry and the association," he said.

He has witnessed board members who have spent hundreds of hours gathering industry data and participating in countless meetings that have involved travel and conference calls. "None of our decisions are made by just one person," Gjovig says. "It is always a collective effort that brings the best solution forward. The greater that collective force is, the greater the AESC's strength and influence become."

Although he faces a significant increase in time and travel commitments, Gjovig is excited to get started as president. "I look forward to meeting members at national and chapter events, listen to their ideas and concerns, and do the best job I can representing the AESC in government and industry forums."



TJM
Distribution, Inc.
Used Oilfield Equipment Specialist
Tim Maples Cell: (661) 979-0665
Phone: (661) 869-1597
P.O. Box 81086, Bakersfield, California 93380
4947 Standard St., Bakersfield, CA 93308
Fax: (661) 869-1496
Email: tim@unitedoilequipment.com



B Bishop Lifting
Products, Inc.
www.Lifting.com
Odessa, TX (432) 563-5955
Tulsa, OK (918) 582-1807
Wichita, KS (316) 942-2453
Houston, TX (713) 674-2266
Hurst, TX (817) 590-8366
Grand Junction, CO (970) 242-1144
Broussard, LA (337) 837-2713
Tested and Certified Guy Wires & Rigging

INSIDE LOOK WITH MARK GJOVIG

WHAT IS THE MOST REWARDING PART OF BEING PRESIDENT?

Having the opportunity to serve our membership and industry, and to meet new people.

HOW DO YOU PLAN TO CONNECT WITH THE AESC MEMBERSHIP?

Attending national and chapter events. There will be more travel and, therefore, more opportunities to discuss the benefits of membership. It is important for the voice of our organization to be heard in government and industry arenas.

WHAT DOES IT TAKE TO BE A GOOD AESC LEADER?

The AESC is like a large ship. You can't make a change of direction quickly. To make good decisions, one must consider the long-term implications, both to the members and to the industry. I think a good leader is someone who understands the big picture, but is also aware of issues that are important to different segments of our membership.

WHAT'S BEEN THE BIGGEST SURPRISE TO YOU REGARDING YOUR LEADERSHIP ROLES IN AESC?

I'm surprised by how many members aren't active and don't attend meetings. There is so much good information shared during the presentations at meetings. Kenny Jordan works on multiple issues that affect well service, wireline, trucking, and

general oil and gas service companies. When you attend the meetings, you have a better understanding of the important challenges we all face in this industry.

WHAT HAVE YOU ENJOYED MOST ABOUT BEING A MEMBER OF THE AESC?

I've met a lot of great people! There are so many fantastic networking opportunities. The information received at the annual meetings and safety conference is incredibly valuable.

WHAT SHOULD AESC MEMBERS KNOW ABOUT THE AESC THAT PERHAPS THEY DON'T?

Kenny Jordan is nationally recognized as an expert on a variety of matters that affect our membership, including Source Security, OSHA, and IME. His value to this group is unparalleled. The AESC has a strong voice, and many regulatory agencies reach out to us because of Kenny's reputation and candor on issues.

Our lobby group in Washington is also extremely strong and gives us a seat at the table where important issues are discussed.

WHY SHOULD MEMBERS GET INVOLVED IN THE AESC?

An often-used statement in Washington is, "If you're not at the table, you're on the menu." That has never been more true than today, especially in regard to the regulatory process.

WIND, SOLAR CHALLENGE FOSSIL FUELS WITH LOWER COSTS, IMPROVED BATTERIES

By Chip Minty

For U.S. power generation, natural gas is king of the hill, having taken over supremacy from coal years ago. It's still looking down on renewables, but shifting technological winds suggest change is on the horizon.

According to a recent U.S. Energy Information Administration (EIA) forecast, wind and solar will be the fastest-growing sources of U.S. electricity generation over the next two years, posting capacity increases of between 10 and 17 percent through 2020. The rapid growth in generating capacity and new developments in battery technology are leading some to wonder how much longer natural gas will serve as a bridge to the future.

While the EIA expects electricity generation from natural gas to continue to grow, the agency says the rate of increase will be slower, going from 35 percent of U.S. electricity generation in 2018 to 37 percent by 2020.

Industry watchers say the cost of wind and solar generation is falling, and lithium-ion battery storage technology is improving faster than expected. In fact, onshore wind and solar generation costs are projected to fall below the generation costs of fossil fuel generation by 2020, according to a report from Reuters.

A recent report by Bloomberg New Energy Finance indicates new solar and wind plants are now significantly cheaper than coal power plants, and the cost of batteries has been declining so rapidly that renewables plus battery storage are now cheaper than some natural gas power plants.

"While it is far too early to say that we've reached the end of the natural gas bridge, we can perhaps say that the end has come into sight," commentator David Roberts wrote for Vox. "It's somewhat hazy, but you can see it if you squint just right."

Robert Rapier, senior contributor for *Forbes*, says rapid change in the U.S. electricity generation mix is likely to continue through the next decade as coal keeps losing ground and renewables continue to gain momentum.

"The U.S. is probably looking at natural gas as an important bridge fuel for at least two more decades," he says.

While batteries are improving, the technology is still a long way from compensating for the intermittent availability of wind and solar power. Currently, natural gas is the most widely accepted source of

"firm" power to provide electrical generation when the wind does not blow, and the sun does not shine.

"Cost effective battery technology isn't quite ready to assume this role on a massive scale," Rapier says.

Companies have plugged lithium-ion batteries into the grid and have found those installations are only capable of supplying electricity for a matter hours.

That's not adequate, former U.S. Energy Secretary Ernest Moniz told Bloomberg. That kind of short-term energy storage won't help integrate large amounts of renewable power said Moniz, who has co-written a report calling for more research investment.

Meanwhile, there's a wave of new lithium-ion factories being built within the next five years, according to Bloomberg energy columnist David Baker.

"The batteries pouring in from new factories in China, the U.S., Thailand, and elsewhere will further drive down prices, which have already plunged 85 percent since 2010. And the billions spent on factories will create a powerful incentive for the industry to keep tweaking lithium-ion technology," he says.

MATEX
A BRANCH LIFTING COMPANY

Kilgore, TX (903) 984-9691
Shreveport, LA (318) 221-5801
Pleasanton, TX (830) 569-2700
Alice, TX (361) 664-7424
Midland, TX (800) 262-2099

Spooling - Splicing - EM Cable - Sheaves

TPP
TEXAS PETROLEUM
PRODUCTS, INC.

Kenny Reneau / Jeff Inman
1014 Gatecrest • Houston, TX 77032
Phone: (281) 741-4494 • Fax: (281) 442-0508
E-Mail: sales@texaspetroleumproducts.com

Well Servicing Equipment & Supplies

E&Ps RAISE SALARIES IN 2019 AS SERVICE SECTOR CUTS JOBS

By Chip Minty

Despite world-leading oil and natural gas production, labor demand in the energy industry is showing signs of weakness in some sectors as shale drillers slow activity amid pressure from Wall Street and lower oil prices.

But there seems to be a dichotomy in the oil patch this time around. While Halliburton and Schlumberger are among companies reducing crews and cutting back activity in the U.S., many E&Ps are ramping up salaries for engineers and technical people.

After repeated cycles of booms, busts, layoffs, and hiring frenzies, it's not as easy as it used to be for E&Ps to find people to fill technical positions. The problem has been developing for years as Baby Boomers continue to retire. To make matters worse, national surveys consistently show young people are turning away from oil and gas in favor of careers in technology industries.

Younger generations see oil and gas industry careers as unstable, blue-collar, difficult, dangerous, and harmful to society, according to a 2017 Ernst & Young survey of 16 to 19-year-olds.

While some companies are cutting staff amid 2019's drilling slowdown, E&Ps appear to be upping the ante in an increasingly competitive hiring environment.

In its 2019 Salary Report, CSI Recruiting announced an upward trend in salaries after analyzing data from more than 3,200 full-time, salaried E&P workers in the U.S.

Engineering technicians and analysts saw the biggest boost in pay, earning an average of \$108,416 annually, which is a 7.2 percent increase over 2018. Salaries for those positions are likely to continue rising amid a candidate market that remains flat, the CSI report says.

The report points out that reservoir engineers, geologists, and geoscience technicians also had higher average salaries in 2019.

As those salary increases have taken hold, many E&P's have curtailed drilling activity. They have slashed capital budgets in response to Wall Street demands for increased shareholder value amid an oil market that has seen WTI prices slump through much of this year.

Service companies are feeling pressure from the slowdown. Halliburton has announced an 8 percent workforce reduction in the U.S., while rival

Schlumberger is pulling equipment and crews from the field. One of Schlumberger's transportation subsidiaries laid off 124 workers in the Permian Basin last spring.

While Permian E&P Pioneer Natural Resources has also announced a significant workforce reduction this year, service companies appear to be suffering most. A recent survey from the Federal Reserve Bank of Dallas indicates labor conditions in the oilfield services sector have been hit particularly hard.

Meanwhile, a U.S. Energy Information Administration Short-Term Energy Outlook released in July predicts slightly higher WTI prices in 2020, and that could contribute to an increase in drilling activity as well as more jobs in the oil-field service sector.

And for those E&Ps that doubled down and increased salaries this year, perhaps they weren't so out of step after all.



12563 Oak Grove Rd. South, Burleson, TX 76028
 (937) 817-295-1161 / (817) 713-449-8531
 pmorrison@synergyp.com
 synergylwirelineequipment.com

PAUL MORRISON
President

wireline trucks, equipment, and accessories



302 Flato Road
 PO Box 4016
 Corpus Christi, TX 78469
 (361) 289-1444
 (800) 289-1445
 Fax (361) 289-7555

5600 Surrey Square St.
 Houston, TX 77017
 (713) 673-7881
 (800) 392-5510
 Fax (713) 673-2901

4202 Dividend Dr.
 San Antonio, TX 78215
 (210) 527-055E
 (877) 527-055E
 Fax (210) 527-9701

www.kwrs.com

YOUNGEST GENERATION OF WORKERS

MOVING AWAY FROM OIL AND GAS

By Chip Minty



As the Baby Boomer generation slowly filters into retirement, the petroleum industry is looking to Millennials to help fill the void, but surveys suggest oil and gas could be a tough sell.

Known for their job-hopping tendencies, their demand for flexible work hours, and their technological savvy, the largest generation in the U.S. workforce is reshaping the world of work, and nearly half of them consider oil and gas as an industry of yesteryear.

A recent "Workforce of the Future" survey, paid for by the Abu Dhabi National Oil Company, indicates the world's emerging group of young workers would rather pursue jobs in the technology sector than work in the oil and natural gas industry. Meanwhile, results show that 44 percent consider oil and gas an industry of the past while 45 percent believed it's an industry of the future.

Study participants were from the U.S., Canada, the UK, France, Russia, China, India, Japan, Saudi Arabia, and the UAE.

U.S. officials and industry watchers express similar concerns. Wayne Christian, chairman of the Texas Railroad Commission, says Millennials have been brainwashed into believing that fossil fuels are bad for the environment.

In comments published by the Texas Tribune, Christian said people don't want to go into the oil and gas industry, especially students. He cited an anti-oil-and-gas science that has led to a widespread misunderstanding of the industry.

The Workforce of the Future survey included 3,075 participants who are considered advanced in science, technology, engineering, and math. In addition to Millennials, who were born between 1980 and 1994, the study included "Post-Millennials," or Generation Z, born between 1995 and 2015. There are an estimated 95 million Millennials in the U.S., and the Post-Millennial generation is estimated at 61 million. Both groups have been heavily influenced by the rapid development of digital technology, the Internet, social media, and mobile devices.

The study showed that 44 percent expressed interest in oil and gas careers, which was on par with marketing and advertising, hospitality, and transportation. In contrast, 77 percent expressed interest in technology. Other fields scoring higher than oil and gas included life sciences, pharmaceuticals, and healthcare.

In a column published by *Forbes*, Baker Institute

contributor Kenneth Medlock said Millennials question the long-term viability of the oil and gas industry.

"There is growing concern that public attitudes toward oil and gas are deteriorating, especially amongst Millennials," Medlock wrote.

They are concerned about how long the industry will be around and they express a preference for innovative "green" energy industries, he said. It's time for the oil and gas industry to highlight its technological depth and to demonstrate that it's much different than it was in the past.

"The industry has advanced significantly over the last 100 years, and it continues to do so, largely due to technological innovation," Medlock writes. "Moreover, the challenges the industry faces today – produce greater quantities of oil and gas from more complex geologies all while increasing environmental stewardship – are technologically robust. This must be the focal point of the conversation."

Railroad Commissioner Christian agrees that the industry must do a better job of educating the public. This is why he has begun working to develop an advocacy program that teaches public school students an unbiased view of energy.



Roy Law
President / Owner

leroy@llit.us • www.llit.us
Cell (432) 352-4315 • Office (432) 332-8750
2839 Hwy 80 East Odessa, TX 79761
Mail to: PO 13023 79768

RIGPRO, INC.
Mobile Rig Parts & Supplies

BLAKE HIGHTOWER

2200 Highway 135 N
Kilgore, TX 75662
Email: blake@rigpro.com

Office: 903-983-3424
Fax: 903-988-2195
Web: www.rigpro.com

FALLING U.S. OIL PRODUCTION PROMPTS ANOTHER ROUND OF PEAK OIL TALK

By Chip Minty

Peak Oil is a term that pops up every so often from prognosticators, cynics or people with other agendas, alleging the glory days of oil are coming to an end.

For nearly half a century, industry watchers and market analysts have been trying to pinpoint the time when global oil production will reach its maximum rate, followed by a gradual decline. An accurate prediction could be worth millions of dollars to investors, putting their money down on the promise of higher prices for a dwindling commodity.

The concern first surfaced broadly following the Arab Oil Embargo in 1973, and it seems to come up virtually every decade as the world oil market ebbs and flows in response to economic changes or technological advancements.

Peak Oil was a hot topic in 2010 as the world emerged from the Great Recession. The oil market surged, and shale oil technology emerged. Nearly a decade later, Peak Oil is back in the headlines.

Within the past nine months, the industry has seen a fundamental change in oil production trends.

As recently as January, the U.S. Energy Information Administration forecast continued production growth, but months later, the agency changed course, reporting a sudden slow down.

Now, analysts are saying U.S. oil production for 2019 may actually be lower than it was in 2018, industry expert Robert Rapier said in a recent commentary published by Forbes.

A recent Oilprice.com column added to the alarm with a study from Raymond James Financial Services, which shows the U.S. decline rate for oil has doubled over the past three years, from 1.6 to 3.2 million barrels per day.

"We need over 12,000 new horizontal oil wells completed each year to hold production flat and the number of completed wells will need to go up each year," said Oilprice.com commentator Dan Steffensa, who is president of Houston-based Energy Prospectus Group.

Is that even possible? Might this mean the shale oil boom has seen its heyday and that U.S. oil production has peaked?

Don't count out the potential for a turnaround, especially after more than a decade of watching the shale oil revolution unfold.

As far as Peak Oil, the question may not revolve around resource availability. In a report released in January, the EIA said shale oil plays are just getting started. Today's falling production may be the result of persistently low market prices, industry watchers say.

In other words, companies are not inclined to push aggressive production growth strategies amid today's sagging market.

"I believe there is more upside for U.S. oil production," Steffensa said. "It just isn't going to happen unless the price of oil goes a lot higher than it is today."

Meanwhile, Rapier points out that OPEC is watching and wondering if U.S. Shale is finally on the decline so it can reestablish control of world markets.

"The resurgence of U.S. oil production over the past decade diminished OPEC's control of the global oil markets," Rapier said. "In less than eight years, U.S. oil production climbed from under 6 million barrels a day to more than 12 million BPD. This surge is arguably the only reason oil prices today aren't above \$100 per barrel."

In light of the apparent U.S. industry's shifting business strategy, perhaps the U.S. has reached peak production. But if domestic prices return to the \$90 per barrel range, which is where they were when the shale oil boom began, today's Peak Oil talk may wind up like all the rest...

Unfulfilled prophecy.



alps
ALPS WIRE ROPE CORPORATION
"The Pinnacle of Quality"

Headquarters
2530 Production Drive
St. Charles, IL 60174
phone: (630) 893-3888
fax: (630) 893-8164

Branch Locations
Whittier, CA: (626) 458-0055
Harrisburg, PA: (717) 939-5757
Houston, TX: (713) 941-2068

www.alpswire.com



C. S. R., INC.
Cable Service and Repair

DYSTATIC-SEASONING

Pre-Seasoning Openhole and Casedhole cables

www.csrusa.net
281-342-4492 keithnutt@csrusa.net



REP. BUDDY CARTER (R-GA)

By Brian Blake

Earl L. “Buddy” Carter is not your typical politician. For more than 30 years, Buddy has been a pharmacist and a businessman in Southern Georgia. In 1996, he was elected as the mayor of Pooler, GA, and later served in the Georgia General Assembly for two terms. He is now serving his third term in the United States House of Representatives where he is a member of the Committee on Energy and Commerce, as well as the Select Committee on Climate Change.

The AESC was honored to have Rep. Carter speak at the Political Luncheon during the AESC Summer Meeting in Couer d’Alene, and to expand on his thoughts for the *Well Servicing* magazine.

YOU HAVE MENTIONED AN “ALL OF THE ABOVE” APPROACH TO ENERGY. WHAT DOES THIS MEAN?

Energy independence (and its affordability and reliability) is really important. The only way to achieve this is through all of the above. This means increasing all forms of American energy production, which includes fossil fuels as well as new, clean sources of energy. I visited the National Renewable Energy Laboratory in Golden, CO, recently. They are like-minded in their approach to integrating and optimizing energy systems, including fossil fuels.

We don’t ever want to face another situation like the Middle East Energy Crisis. The United States has energy dominance in the world right now. We need to maintain this position.

AS A MEMBER OF THE ENERGY AND COMMERCE COMMITTEE, WHAT ENERGY ISSUES CONCERN YOU THE MOST?

Climate change is real, and we need to address it. However, the New Green Deal would ruin our economy. It’s a pie-in-the-sky proposal that cannot be achieved. It could have some devastating effects on our national debt and on our economy. But we’ve got to create some effective policies to tackle climate change.

In Europe, we saw their improvements in wind power and solar power. These technologies were being used to address climate change without destroying our economy. That’s what the Green New Deal would do, and nobody wants that.

I believe it will take three things: Mitigation, Adaptation, and Innovation. This means we need to lessen the impact of climate change; adapt to what the changes will be; and innovate new technologies while moving forward.

WHAT IS YOUR POSITION REGARDING THE RENEWABLE FUEL STANDARD?

The renewable fuel standard was put into place to help augment our nation’s fuel supply and to reduce energy costs. In many ways, this means that we’ve been able to support energy independence through ethanol being blended into our fuel supply.

While the RFS has helped expand and diversify the fuel blend mix, it’s also not perfect. I’ve raised some concerns with the RFS. For example,

ethanol's impact on marine engines is a big issue in coastal areas, such as the First District. This is why I've worked on expanding the fuel mix that is available to the public. As a member of the Energy & Commerce Committee, we will continue to provide oversight of the program.

WHAT ARE YOUR THOUGHTS REGARDING THE HEARING ON "BUILDING AMERICA'S CLEAN FUTURE: PATHWAYS TO DECARBONIZE THE ECONOMY"?

The hearing presented several proposals from my colleagues and that highlighted what their regional and national economic impacts would be. While I support the private sector continuing to make smart investments in their energy mix, I'm also concerned that some proposals could be very damaging to our energy sector, and the jobs they support, without providing tangible benefits to energy consumers.

The hearing also brought to light the opportunities that exist in the energy sector for investment and further expansion. For example, we discussed what gas turbines, similar to those made in my district, can mean for reducing emissions. Gas turbines being produced now are 70% cleaner when it

comes to emissions than older turbines. These 'load following' sources can help to fill the nation's needs, especially in the warmer and colder months when energy demand spikes.

We also discussed the importance of carbon capture and how it is necessary to meaningful emissions reduction goals.

IN REGARD TO THE "OPIOID EPIDEMIC" CURRENTLY PLAGUING THE COUNTRY, WHAT DO YOU THINK ABOUT THE RECENT COURT DECISION IN OKLAHOMA AGAINST JOHNSON & JOHNSON?

I'm not going to comment on an ongoing legal situation, but I've said many times that I believe everyone involved has a responsibility to address and work to combat the crisis we are facing. Ending the opioid epidemic has been a top priority for me while serving in both the Georgia General Assembly and in the United States House of Representatives. In the Georgia General Assembly, I authored the Georgia Prescription Drug Monitoring Program. In Congress, I've worked with my colleagues on the Energy and Commerce Committee to create and pass critical legislation as well as funding to fight the epidemic.



DIESEL ENGINE POWER UNITS

*Scania Tier 4 Final Engines Range from 275-770HP.
No DPF or Regen on Any Engine.*

- *Engines in stock at our Houston, Texas Facility*
- *Ready to Meet all OEM Demands*
- *Engineers on Staff*
- *In House Technical Support*
- *Field Service Technician Support*

A SIMPLER SOLUTION. IT'S ABOUT TIME.



VISIT LOFTINEQUIP.COM OR EMAIL ENGINES@LOFTINEQUIP.COM



By Chip Minty

TECHNOLOGY REVOLUTION

IS A ROUGH RIDE FOR THE OILFIELD SERVICES SECTOR



THINGS ARE CHANGING QUICKLY in the oilfield these days. Blink and you might miss something. Blink twice and whatever you missed is down the road. That's how some oilfield service companies may be feeling about the current technology revolution.

While big E&Ps are arming legions of software engineers with arsenals of technology such as artificial intelligence (AI), cloud computing, data analytics, and the Internet of Things (IoT), oilfield service companies, by and large, are limited to drones and GPS tracking systems. Technology budgets are thin, leaving service providers on the sidelines, looking on with equipment well past its prime.

"The U.S. oilfield services sector is in a rough patch, but it won't last forever," said Dan Eberhart, chief executive of Canary, one of the largest privately owned oilfield services companies in the United States.

Still recovering from the price collapse of 2014, the service sector continues to rebuild capacity, and it is struggling with older equipment at a time when clients are demanding higher-pressure fracking. Many

companies are working at or beyond their capacities, Eberhart said in a recent column he wrote for Forbes.

Since 2015, E&Ps have adhered to tight capital discipline, which means lower fees for services and lower revenues for service companies. Market volatility makes increases in debt risky, so funding for new technology is scarce.

"The less oil companies are willing to pay for drilling and other field services, the less the service sector earns in revenues. That may seem like a simple statement, but it has long-term consequences," Eberhart said. "Companies that can't afford to invest in new equipment will eventually fall behind."

Ronald Townsend, president of Automated Completion Technologies, said he sees the situation every day as he talks to firms about investing in newly developed production well completion technology his company will begin producing in 2020.

He said his company has been developing its Joint Pipe Injector system for the last five years. When

it's launched in the second quarter of next year, the equipment will feature robotics and cost-saving automation that could revolutionize snubbing and a variety of well workover operations.

While some companies have the ability to purchase the equipment designed to run pipe more smoothly, safely, and efficiently, most see the \$4 million price tag and walk away, Townsend said.

"I've been working to generate interest for six to nine months, and it's an uphill battle," he said. "They don't want to talk to you until the first one goes out. While operators and snubbers are interested, the service companies aren't because they can't afford it."

But Townsend said his company's technology can quickly pay for itself by reducing the number of people required to do a job, and it also reduces training costs and it improves safety.

Small service companies just don't have the capital available for them to invest in new technology, he said. It's beginning to seem like a crisis because E&Ps are demanding advanced capabilities.

But there is room for optimism, given the market fundamentals, Townsend and Eberhart say. Some companies have merged to bolster their budgets and enhance their competitiveness, and others are testing the waters.

Meanwhile, global demand for oil and natural gas is expected to continue expanding into the next decade, Eberhart says. According to the International Energy Agency, OPEC production capacity could also fall, leaving room for U.S. shale expansion into other oil markets. This would mean greater demand for oilfield services and more resources to fund tech advancement.

While small service companies appear reluctant to dive into high-priced automated equipment for field operations, they are using other, less expensive innovations to serve niche needs and improve safety.

Companies are using drones to accelerate the process of inspecting pipelines, as well as other production and processing facilities, according to a recent report in Forbes.

Using drones, service companies can obtain complete, up-close, and real-time visualizations of equipment and facilities for a fraction of the cost, said Renner Vaughn, a director at Cape.

"The major thing we're doing with drones is cutting down on the amount of time spent behind the wheel of the vehicle while traveling out to the site to simply place eyes on the facility," Vaughn told Forbes. "If we could do that more quickly, and in many more sites at the same time by using drone technology, then we're giving these companies an unprecedented level of visibility they previously would have struggled to achieve."

Meanwhile, many service companies are investing in GPS technology to enhance the safety and efficiency of transportation.

Additionally, In-Vehicle Monitoring Systems are allowing companies to improve speed and safety

monitoring.

Vehicular safety is a critical issue in the oil and gas industry. More than 50 percent of work-related fatalities in oil and gas result from motor vehicles. The National Institute for Occupational Safety and Health reports oil and gas is second only to transportation and warehousing in the number of motor-vehicle-related accidents.

Traffic fatalities have become endemic in the Permian Basin. A Texas Department of Transportation report released this year attributes the region's high volume of traffic accidents to the oil and gas industry. Only 2 percent of Texans live in the Permian Basin, but 11 percent of the state's traffic fatalities occurred there in 2017.

In addition to safety, GPS monitoring technology improves operational efficiency and enhances communication.

Leroy Law, president of LL Industrial Transmission, said GPS technology helps keep track of vehicles that are in the field, so he can keep customers updated on the status of service operations. In some areas of the Permian, cell phone service may be unavailable, but GPS tracking allows Law to locate vehicles when there are questions or if there is a breakdown.

There are lots of little benefits, and it costs less than \$30 per month to cover a truck, he said. The system sends a notification when a truck leaves his yard, and that, Law says, is an important measure against equipment theft.

And, in the case of a traffic accident, tracking systems even record whether a vehicle is accelerating or decelerating at the point of impact, a fact that could determine cause, responsibility, and liability in the case of multi-million lawsuits.

"Attorneys at the AESC meetings talk about those cases," Law said.

While GPS tracking and drone technology may not measure up to cloud computing, data analytics, and the Internet of Things, it is affordable technology that allows companies to seize new business opportunities and create efficiencies while they weather a stormy price environment.

Meanwhile, change is happening fast in the oilfield.

The waves of new innovations will continue to advance and companies that aren't watching out, may be swept away.



HUNTING
Hunting Titan

Right Tools. Right Location. Right Time.

Wireline Guns and Hardware Tubing Conveyed Guns and Hardware Shaped Charges and Cutters Electronic Well Logging Tools	Perforating & Instrument Division 11785 Hwy 152 W. Pampa, TX 79065 Toll Free: 800 692 4486 Phone: 806 665 3781
www.titanspecialties.com	Energetics & TCP Division Midford, TX 75670 143 HDR 4361 Toll Free: 800 320 5110 Phone: 972 493 2580

**THE WEALTH OF NATIONS
AMERICAN ENERGY,
ASIAN ECONOMIC GROWTH
AND THE GLOBAL ENVIRONMENT**

*By Wyatt Boutwell,
HBW Resources, LLC*

I had the privilege of visiting with a senior Democratic staffer in the House of Representatives in April. He is a long-time friend whose political judgment is valued by many on both

sides of the aisle. Our conversation turned to the 2020 election and to Donald Trump's chances of re-election. He believed that if Trump could get trade issues with Mexico and China resolved, there was little to prevent him from getting a second term in office. The election, in his estimate, would come down to the Administration's ability to solidify commercial relationships with trading parties. Trade would be the difference between success and failure.

There are still 14 months before the 2020 election and innumerable unexpected events may determine the election. However, the Democratic staffer made a good point. Trade and commerce, imports, and exports are the keys to success in an international system. This is particularly true of the energy sector. The United States has transformed itself from an energy importer to an energy export powerhouse. But this is only one part of the story. The global middle class has grown rapidly and brought with it the need for increases in energy resources. Coal has been the fuel of choice for most industrialized countries and many worry about its role in increased global emissions. Asian economies are now beginning to transition to natural gas, giving the U.S. new markets for its energy abundance. This convergence of abundance, increased demand, and broadening of international trade can balance developing countries right to economic development with global concerns of increased emissions and climate change.

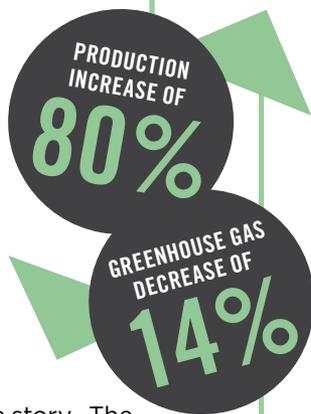
FROM ENERGY SCARCITY TO ENERGY ABUNDANCE

In July 1990, the U.S. imported just over 7 million barrels per day (MMbpd) of crude oil. At its highest point, oil imports into the United States totaled 10.7 MMbpd, or two-thirds of its total consumption. During the early 2000s, many feared that natural gas would be scarce. As a result, liquefied natural gas (LNG) terminals were planned to import resources from abroad. Fast forward to the present: the United States will be a net crude exporter next year and the same LNG facilities designed for import have been converted to export our natural gas to global markets. In just over a decade, the U.S. transformed itself from an energy importer into a net energy exporter.

How did this happen? The catalyst for this trade transformation was the production of natural gas. In

the late 2000s, natural gas was the target resource for the pairing of horizontal drilling with hydraulic fracturing in tight gas/shale plays like the Barnett Shale. When prices fell in the target gas plays, the industry began to direct attention toward condensates because these high API gas liquids had a ready market in the downstream sector. As natural gas liquids became less valuable, E&P companies experimented with tight oil plays in North Dakota and West Texas. The results were nothing short of astonishing - the U.S. went from importing 10.7 MMbpd to producing 10.0 MMbpd in 2018. The explosion of unconventional oil and gas production flooded the domestic market with light crude. Crude oil has natural gas intermingled with it. The growth of natural gas production was bolstered by the amounts of associated gas produced from the more profitable crude. Natural gas production has outpaced energy infrastructure and led to negative spreads (producers pay midstream companies to take gas away from wells) in the Permian Basin. Natural gas, the most environmentally friendly carbon based fuel, is now a bargain which has led to the growth of American manufacturing and spurred petrochemical facilities in energy producing basins throughout the United States.

Markets are global and competitive advantages in the production of petroleum in the United States accrue to the rest of the globe. In terms of environmental benefits, the U.S. is a global leader in environmental stewardship. We have increased our production of oil and natural gas by more than 80% and 51%, respectively, while driving down greenhouse gas emissions by 14%.



THE UNTOLD STORY OF THE GLOBAL MIDDLE CLASS

In a recent study released by the Brookings Institute, it was discovered that the global middle class had expanded more rapidly than previous estimates. The 2016 report calculated that the global middle class numbers about 3.2 billion people - which exceeded previous estimates by 500 million people. Moreover, for the first time in human history, a majority of the world will belong to the middle class by the end of 2020. In 2016, the global middle class spent \$35 trillion dollars. The middle class is projected to nearly double by 2030 to \$64 trillion dollars or nearly one-third of the total global economy. Unsurprisingly, the new class has an increased capacity and desire to purchase goods such as computers, phones, appliances, and automobiles. Asian economies have been the primary source of middle class growth with more than 90% of the middle class growth concentrated in the region. Africa has largely been absent from this growth, but reports indicate broader opportunities for consumption growth in the developing world exist.



Along with all these positive developments comes the more publicized issue of increased greenhouse gas emissions. The middle class growth, particularly in Asia, is increasing demand for energy. In the last 15 years, energy demand from the region has grown by 60%. According to IEA, renewables will provide a portion of Asian energy requirements (roughly 40%) while a majority will come from coal and natural gas. In the next decade, the fuel competition will be between coal and natural gas. Coal has a higher emissions profile than natural gas. The question for the emerging middle class is the ability to provide the power for the global economy with the least amount of global emissions. Renewables will have a role, but the size of the demand growth will necessitate the use of conventional energy sources.

ENERGY DEMAND INCREASE BY
60%

ECONOMIC DEVELOPMENT AND ENERGY EMISSIONS

The hope for continued economic growth for developing economies is the ability of the United States to export lower emissions. Natural gas has nearly 60% less greenhouse gas emissions than coal, and some coal displacement has already improved air quality in China. For instance, since 2013, Beijing has improved its winter air quality by 78% by converting from coal to natural gas. In 2018, IEA reports that China reduced its carbon emission 15% through its fuel-switching program. China reduced emissions through this plan by 45 megatons or the equivalent emissions of nearly 9.8 million automobiles. Asian demand for LNG is expected to grow over the next decade. In 2017, the region imported 284 MMtpa (million metric tons per annum) and experts project total demand for the region to reach 427 MMtpa. If true, the region will consume 86% of the global demand for LNG. In a conservative estimate, the U.S. is expected to produce approximately 67MMtpa of LNG in 2030. One aggressive estimate placed US LNG export capacity by 2030 at 228 MMtpa or roughly half of the Asian LNG export demand. Natural gas exports from the United States will help to change the trajectory of global energy emissions. Emissions are projected to peak in 2024 with a 20% overall reduction in emissions between 2016 and 2050 because of reduction in coal usage.

IMPROVED AIR QUALITY BY
78%

continued growth of the global middle class while offering a more favorable emissions profile. In effect, the United States is able to export lower emissions, along with economic development, to its trading partners, as well as the energy needed to continue the economic expansion of developing nations.



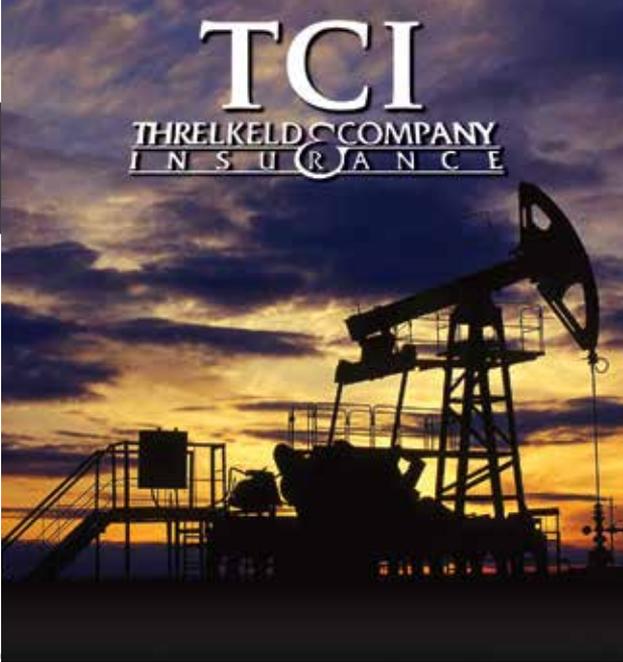
CTW
CTW Brake Rims, Inc.

Hill's Specialty

COMPLETE LINE OF RIG PARTS, TOOLS & SUPPLIES
Brake Blocks • Brake Bands • Ridgid • Lufkin • Crosby • Ratigan
Phone (432) 367-9381
1-800-284-4724 / FAX (432) 367-9749

W.R. "Bro" Hill
Steve Hill
Larry DelBosque

3511 Mankins Road
Odessa, Texas 79764



TCI
THRELKELD & COMPANY
INSURANCE

We insure your survival so you can ensure ours.

A TEXAS COMPANY SERVING TEXANS
FOR OVER THIRTY YEARS

800.256.6400 • www.threlkeld.com

CONCLUSION

In summary, the United States has been converted from an energy importer that is subject to the whims of exporters to an exporter with prolific capacity. The global middle class, particularly in Asia, is experiencing unprecedented economic prosperity which brings with it the need for additional energy resources. LNG from U.S. sources can power the

PERMIAN BASIN



2008 W. HIWAY 80
P.O. BOX 1540
MONAHANS, TX 79756

MONAHANS (432) 943-2600
TOLL FREE 1-800-DOCS(3627)



Casin Jac

The Oil Field Undertaker
BCM & ASSOCIATES, INC.
Plugging A Specialty

BEN MONTGOMERY

P.O. Box 13077 • Odessa, TX 79768
Mobile (432) 556-6867
Bus (432) 580-7161
Fax (432) 580-8554
benm@bcmassociates.com
www.bcmassociates.com

Angie Sims
General Manager



P.O. Box 1119 Off. (432) 586-2533
Kermit, TX 79745 Fax (432) 586-9636
Mbl. (432) 634-9750
bws1963@cebridge.net



Workover Rigs * Pump Trucks * Reverse Units
* BOP's * Transports * Rental Tools * Hot Oilers
* Plug & Abandonment

Bob Murray
President

Corporate Office:
PO BOX 4437
Odessa, TX 79763
www.vivawsc.com
Office: (432) 552-0800
Fax: (432) 552-0900

Yard Locations:
700 Avenue E
Odessa, TX 79763

1001 SE Mustang Dr.
Andrews, TX 79714



www.permianservices.com

Kerry Robinson
V. P. Operations

P.O. Box 2960 Office: 432.687.1610
Midland, TX 79702 Cell: 432.631.1843
kerry@permianservices.com Fax: 432.687.1620

Serving all of West Texas and Eastern New Mexico

- Vacuum Trucks - Transport Trucks - Pump Trucks - Hot Oiler - Frac Tanks - Well Services



Standard Energy Services, LLC
806.741.1080 • 806.741.1301

www.thestandardenergy.com • sales@thestandardenergy.com

Andrews • Artesia • Big Lake • Brownfield • Carlsbad • Hobbs • Jal
Lamesa • Levelland • Lubbock • Monahans • Pecos • Post • Seminole • Snyder

MICHIGAN




Bechman
Production Services, Inc.
"A Nine Energy Company"

Nine

TOM CYBULLA
Division Manager Michigan

3786 Beebe Road
P.O. Box 670
Kalkaska, MI 49646

Office: 231-258-9524
Cell: 231-620-3587

Thomas.Cybulla@nineenergyservice.com

TEXAS PANHANDLE TRI-STATE

Terrel Hardin
President

Well Servicing & Completion
Swabbing Units
Pumps & Swivels



KING
WELL SERVICE, INC.

10925 US Hwy. 60
Canadian, Texas 79014

Home (806) 323-5808
Mobile (806) 255-0585
FAX (806) 323-8906

Web Site: www.kingwell.com E-mail: thardin@kingwell.com

CALIFORNIA



EXCALIBUR

GORDON ISBELL
Vice President/General Manager

WELL SERVICES CORP.

PHONE: 661.589.5338
FAX: 661.589.1089
22034 ROSEDALE HWY, BAKERSFIELD, CALIFORNIA 93314

CELL: 661.978.1601
EMAIL: gisbell@ewscorp.net

TEXAS GULF COAST

Lease Service Crews
Dependable, Experienced
Personnel

Roustabout, Welding
SandBlasting/Painting
Excavating
Contract Pumping



Hawkins Lease Service, Inc.
General Oilfield Construction
(281) 331-CREW
www.hawkinsleaservice.com

P.O. Box 1699 • 3205 FM 2403 • Alvin, TX 77512 • (281) 331-2739
West Texas 2632 Highway 277 • Carrizo Springs, TX 78834 • (830) 876-2735
South Texas 1111 Commerce Road • Alice, TX 78832 • (361) 664-4295

Fully Insured and Committed to Safety

SOUTHEAST NEW MEXICO

Pulling Units • Swab Units • Fishing & Rental Tools • BOP's



ARIES

Hobbs, NM Midland, TX
Crane, TX

WELL SERVICE, INC.
Brad Roberts Charly Dixon

P.O. Box 784
2626 W. Marland Blvd.
Hobbs, NM 88241

575-393-RIGS (7447)

APPALACHIAN BASIN



CONSERV
INCORPORATED
WELL SERVICES GROUP

Rigs • Cementing • Wireline • Fishing

J. Scott Freshwater, BSCE, MSCE - President

Office 304-927-5033 929 Charleston Rd.
e-mail sfreshwater@csiofwv.com Spencer, WV 25276
website www.csiofwv.com

Well Plugging and Abandonment Our Specialty Since 1970

SOUTHEAST NEW MEXICO



Fishing & Rental Tools, Reverse Units,
Manual & Hydraulic BOP's
Lay-Down Trailers and Foam Units

Edward Lauer, CEO
Robert Reyes, Chief Operating Officer
Chad Taylor, Vice-President of Operations
Terry Godwin, V.P. of Operations
James "Jamie" Hathcock, Operations Manager-TX
Rick Halliburton, Asst. Operations Mgr-NM
Dale Russell, Dispatcher-NM
Juan Muniz, Dispatcher-TX

P.O. Box 520
6304 Lovington Hwy.
Hobbs, NM 88241

(575) 433-7777 Phone
(575) 433-7780 Fax

7103 Hwy 1788
Midland, TX 79707

(432) 563-9777 Phone
(432) 563-2777 Fax

INVEST IN THE BEST



FOR YOUR WELL SERVICING AND
TRUCKING NEEDS

6210 LOVINGTON HWY. • HOBBS, NM
575-392-1547

10210 HWY. 191 • MIDLAND, TX
432-563-1846

EDWARD LAUER
CEO

CHAD TAYLOR
President of Operations

FELIPE MORALES
Operations Mgr. - TX

ANTONIO DeLaFUENTA
Safety Coordinator



ROBERT REYES
COO

ARMANDO TORRES
Operations Mgr. - NM

ALONZO ARANDA
VP of Safety

DONALD RHINEHART
Rig Supervisor



Here to meet and exceed your Safety Service needs by offering:
Safety Supplies, OSHA Training, Service Equipment Inspections,
Air Trailers, Shower Trailers, Porta-Potties & Trash Trailer Combos

We can also come to your facility or locations with our on-site fire extinguisher service trailer.

P.O. Box 490 • 6210 N. Lovington Hwy • Hobbs, NM 88240
Phone - (575) 492-7777 • Fax - (575) 492-7780

Operations Manager: Jose Luis Rodriguez

P.O. Box 61810 • 10716 State Highway 191 Ste 4 • Midland, TX 79711
Phone - (432) 563-2335 • Fax - (432) 563-2337

VP of Operations: Perla Mojica

Robert Reyes: Member
Alonzo Aranda: Managing Member

FOR YOUR TRUCKING NEEDS



Kill Trucks & Frac Tanks

P.O. Box 730 Hobbs, NM

(575) 392-1547

Robert Reyes, Managing Member
Hugo Naegele, Operations Manager
Robert Cacho, Supervisor

NORTH TEXAS



TECHNICAL SOLUTIONS
FOR TODAY'S COMPLEX WELLS

State-of-the-Art Equipment
Experienced & Qualified Team



RANGER LEADS THE WAY
www.rangerenergy.com

OIL STATES INDUSTRIES

THREE LEADING BRANDS



*Providing quality well servicing products
to the oil & gas industry for over 75 years.*

WELL SERVICING EQUIPMENT
Tel +1 817 548 4200
well.servicing@oilstates.com



Well Servicing™

The Voice of the Oil & Gas Service Industry



Well Servicing magazine is the official journal of
the **Association of Energy Service Companies.**

ELECTRONIC OR HARD COPY SUBSCRIPTIONS
ARE AVAILABLE FREE OF CHARGE.

- 1** Visit AESC.net
- 2** Go to the Industry Resources drop down menu
- 3** Choose *Well Servicing* magazine,
- 4** Click **Subscribe Now** in the top box to begin receiving the magazine

ORPHANED OIL & GAS WELLS

ON THE RISE

Oil- and gas-producing states continue to tackle the ever-increasing problem of orphaned wells. So what is the official definition of an orphaned, or abandoned, well? It varies slightly from state to state.

In Louisiana, an orphaned well is a “well that has been abandoned by the operator who is not able to fulfill his responsibility to keep the well in operation or to properly plug it,” according to Gifford Briggs, president of the Louisiana Oil and Gas Association.

Abandoned wells in Texas are defined by two conditions, according to Texas Railroad Commission spokesman Ramona Nye. First, the well’s operator is in violation of the Commission’s inactive well plugging rule, and, second, the operator’s P-5 Organization report has been delinquent for more than 12 months.

“All oil and gas operators are required by Commission rules to renew their P-5 Organization reports annually,” Nye explains.

Mississippi State Oil and Gas Board executive director Jess New says his board defines an orphaned well as any oil or gas well in the state, including Class II wells, which has not been “properly plugged according to the requirements of the statutes, rules and regulations and for which a responsible party such as an owner or operator cannot be located, or for which, for whatever reason, there is no other party which can be forced to plug the well.”

New says the Mississippi board is currently in transition. From 1940 through 2016, it was a special industry-supported agency. In 2016, the legislature swept those funds into the state’s general fund. During the most recent legislative session, however, the industry successfully lobbied to have it reclassified back as a special funded agency, meaning orphan wells are now plugged using industry money

collected (fees, fines, bonds/letters of credit, etc.) and deposited into the Orphan Well Plugging Fund.

In New Mexico, an orphaned well is one in which there is “not a responsible party that is the owner or operator” because of bankruptcy or any other reason. A hearing must be held to prove there is no ownership of the well before it is declared an “orphan” and a plugging order is issued, according to Bill Clark, president of A-Plus Well Service in Farmington, N.M.

The state’s Oil Conservation Division inspected more than 42,000 oil and gas wells and facilities in New Mexico in fiscal year 2018 and declared approximately 3,700 wells inactive, meaning those wells have not produced in the past 15 months. Many of those inactive wells, however, are listed as “agreed compliance order inactive wells.” Still, there are approximately 317 wells available for the OCD to plug using industry-funded Oil Reclamation Fund monies, according to its latest report.

The OCD plugged 42 wells in fiscal year 2018, above the performance target of 30 wells. It is waiting for approximately 38 plugging cases to be brought to hearing which could add an additional 67 wells to the plugging list.

At a goal of 30 plugged wells per year and nearly 400 wells waiting to be plugged, Clark says it is obvious that “there is a real problem with the number of inactive wells that should be plugged.” A-Plus Well Service performs state-funded well plugging in the San Juan Basin in northwestern New Mexico and also has rigs operating in the Four Corners, including Colorado, as well as the Permian Basin.

No matter the definition, state regulatory agencies are plugging abandoned wells with funds contributed by the industry itself and not relying on taxpayer

dollars. But they aren't keeping up with the number of wells that need to be plugged.

"Protection of public safety and the environment is the Railroad Commission's highest priority," emphasizes Wayne Christian, who serves as Texas RRC chairman. "The majority of Texas oil and gas operators plug wells that are no longer in compliance with Commission rules. In the case of abandoned wells, the Commission protects land and water resources by using industry fees paid into the Oil and Gas Regulation & Cleanup Fund to plug these wells."

Louisiana has a similar set-up, called the Oilfield Site Restoration Fund, which began in 1993, to pay for plugging orphaned wells.

"We have a fee that operators pay per barrel or per mcf basis, and is collected by the Oilfield Site Restoration commission," says Briggs, who notes that state-managed pluggings go out for bid by the commission that oversees the expenditures of the fund.

What causes wells to be abandoned? There are a variety of reasons, of course, but number one is the overall economy, according to Briggs. When companies go bankrupt, they aren't able to plug a well. Mature fields that have been passed down from one generation to the next are also often ignored.

When oil prices collapsed in 2014, nearly 2,000 new "orphan" oil and gas wells were created in Louisiana, posing a potential environmental crisis if left unplugged. The state raised the fee that funds the state's Oilfield Site Restoration Fund to pay for plugging orphan wells, and from 2014-2017, the state plugged an average of 105 orphan wells per year.

"It varies from year to year," Briggs offered. "They tend to do the high priority wells first because they offer the greatest danger to the environment, such as off-shore wells. Some of those wells can cost up to \$100,000 to plug. Last year, the legislature changed the rule that says at least 10 percent has to go to the Caddo/Pine Island area (in northwest Louisiana), where most are shallow 3,000-foot wells. Another problem is the orphaned well fund can be tapped by the legislature for other issues."

New says the state board plugged 13 wells last year in Mississippi and has identified another 18 environmentally sensitive wells that are around fresh water sources.

"We are about to bid two bidding packages to plug those wells," he explained.

But New, who took over as executive director in March 2018, acknowledges that he still doesn't know how many orphaned wells may be in rural Mississippi.

"The number of abandoned wells (in Texas) is a dynamic number that changes daily as wells move into and out of compliance with Commission rules," Nye explains.

She said the Texas Railroad Commission monitors 438,267 oil and gas wells, as of June 28, and 6,306 met the definition of an abandoned well. In fiscal year 2018, the RRC began an aggressive effort to increase the number of abandoned wells the agency plugs each year. It used industry fees paid into the Oil and Gas Regulation & Cleanup Fund to physically plug 1,440 abandoned wells last year - an increase over the 918 wells plugged in fiscal year 2017. In fiscal year 2019, which ended Aug. 31, she claims the RRC will plug more than 1,600 wells.

"In the fiscal year 2018-2019 biennium, the RRC will plug more than 3,000 abandoned wells, exceeding the Legislative goal set for the agency to plug 1,958 over the two years," Nye pointed out.

Since the state-managed well plugging program was established in 1984, she said the RRC has plugged more than 35,000 abandoned wells across Texas, restoring land used in energy production back to a safe condition.



WELL CONTROL SCHOOL CERTIFIED CLASSES

PROVIDING THE MOST ADVANCED
WELL CONTROL TRAINING IN THE
INDUSTRY SINCE 1979

Coiled Tubing Surface
\$950.00

Drilling Surface/Subsea
\$550.00

**Workover-Completion,
Coiled Tubing, Snubbing,
Wireline Surface**
\$825.00

Follow us:   
+1.713.849.7400 wellcontrol.com





SUMMER MEETING



By popular demand, the 2019 AESC Summer Meeting was held at Coeur d'Alene Resort in northwestern Idaho. The combination of informative speakers, the camaraderie of the membership, and the beautiful setting made this an incredible conference. If you were not able to attend this year, be sure to mark your calendar for 2020 when the conference will be held in San Diego.

From a motivational humorist to kick things off, to Rep. Buddy Carter speaking at the political luncheon, to John Daniel giving the "State of the Industry", the serious side of the conference delivered on all accounts. Each chapter was represented and attendees learned a great deal about training programs, where to find quality employees, and upcoming legislation that will affect members of our industry.



Susan Dudley, Lonnie LeBleu, Roni Ashley



Scott & Amber Bourque



Mark Reed - Associates Lifetime Achievement Award Recipient



Lauren Hindes, Suzy & Joe Freeman, Christy & Billy Freeman



**Gay Wathen & Bob Chitwood
(Golden Rod Wrench Recipient)**



**Carroll Randall,
Berkley Oil and Gas**



**Jason Dugas,
PetroEd**

Of course, every AESC Summer Meeting includes fun and festivities for the entire family, and this year was no exception. In addition to all the incredible amenities available at this beautiful resort, the Opening Night Reception, Benefit Auction, President's Reception, and Dinner/Dance provided wonderful entertainment for all.

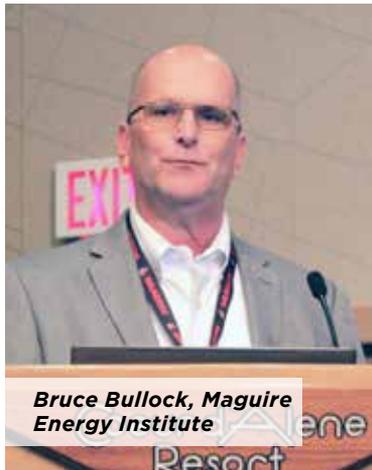
For attendees who had photos taken, you can download the digital images free of charge by going to: <https://tinyurl.com/AESC2019>



**Adam Pomichowski, Brandon Baudry,
Meghan Berg, Joyce Ryel & Nathan Conway**



**Tracie Reed, Silverstream
Energy Solutions**



**Bruce Bullock, Maguire
Energy Institute**



**Janice Schremmer, Amber Bourque,
Scott Bourque and Dick Schremmer**



Mark Gjovig, AESC President



**Kenny Jordan - AESC
& Ryan Hill - NOISH**

ADVERTISER'S INDEX

Alps Wire Rope Corporation . . . 23	Hill's Specialty Co., Inc. 29	Petroleum Equipment Company 8
Aries Well Service, Inc. 31	Horizon Cable Service, Inc 6	Ranger Energy Services. 33
B&H Rig and Tong Sales. 8	Houston Specialty Products Co. 17	Renegade Wireline. 14
BCM & Associates, Inc. 30	Howard Supply Company. 4	RigPro, Inc. 22
Beckman Production Services, Inc. 31	Hunting Titan 27	SPN Well Services 7
Bishop Lifting Products 19	Kennedy Wire Rope 21	Standard Energy Services, LLC 30
BITCO Insurance Companies . . 12	King Well Service, Inc 31	Synergy Wireline Equipment . . 21
Buster's Well Service 30	L&W Diesel Service, Inc. 6	Texas Petroleum Products, Inc 20
CAT 9	LL Industrial Transmission Inc. . 22	Threlkeld & Company Insurance 29
Cavins 40	Loftin Equipment Co 25	TJM Distribution, Inc. 19
Commerce Bank 39	Lucky Health & Safety LLC . . . 32	TRM LLC. 32
Conserv Well Services Group . 31	Lucky Rental Tool 32	VIVA Energy Services 30
C.S.R., Inc.. 23	Lucky Services Inc. 32	Well Control School 35
Doc's Reverse Units 30	Matex 20	
Excalibur Well Services Corp. . 31	NOV 2	
Hadco International 17	Oil States Industries 33	
Hawkins Lease Service, Inc.. . . 31	Permian Services Company LLC 30	

NEW MEMBERS

COMPANY	KEY CONTACT	CITY	STATE	CHAPTER
Texas Tongs, LLC	Ward Niemeier	Victoria	TX	ST
Fortis Energy Services, Inc.	Joyce Ryel	Troy	MI	MI
Battery Technologies	Tina Williams	Odessa	TX	PB
Warrior Technologies, LLC	Tripp Wommack III	Midland	TX	PB
H-E Parts International	Austin Gaddy	Odessa	TX	PB
HRH Metals, Inc.	Kevin Trimm	Moody	AL	OA
VF Workwear	Sammy Dobbs	Spring	TX	GC
Carver Darden	Sarah Stogner	Midland	TX	PB
Automated Completions Technologies Inc	Ron Townsend	Fulshear	TX	GC
Magnum Cementing Services LLC	Darren Plamondon	Denver	CO	RM
Weiser-Brown Operating Co	Nathan Caldwell	Magnolia	AR	NL
Midland Oil Tools & Services, Inc.	Jannette Urdaneta	Houston	TX	GC
Campbell & Company Insurance Agency	Bill Talbert	Magnolia	AR	NL
Neal Adams Services	Neal Adams	Jersey Village	TX	GC
Coastal Oilfield Tools	Cody Blackburn	Tomball	TX	GC
Kilmarnock Oil Company, Inc.	Mary Brown	Corsicana	TX	ET
Tulsa Rig Iron	Terry Flynn	Kiefer	OK	OK
Core Lifting Products	Bill Ray	Houston	TX	GC
iScout	Deren Boyd	Norman	OK	OK
Axio Cased Hole Services, LLC	Bill Bouziden	Victoria	TX	ST
Eagle Transportation	Stephanie Lott	Hattiesburg	MA	MS
Rhino Well Services, LLC	Mia Davis	Carthage	TX	ET
Nicolozakes Trucking & Construction, Inc.	William Nicolozakes	Cambridge	OH	OA
Fleetilla	Robert Keller	Ann Arbor	MI	OA
Liberty Mutual Insurance	John Standing	Franklin	TX	ST
Titan Energy Service, LLC	Lorilee Norby	Dickinson	ND	WB
Winches Incorporated	Joe Hillenburg	Broken Arrow	OK	OK
Box Insurance Agency	Callie Banowsky	Grapevine	TX	NT
Lone Star Well Service	Joe Samaha	Midland	TX	PB



Your job is hard. Make per diem easy.

- Easily load and unload funds as needed
- Immediately load money in emergencies
- Eliminate hassle of reimbursements
- Control spending & limit risk
- Track spending online and in our mobile app
- Issue or replace cards from your office

"Commerce Bank has made the per diem process for our company extremely easy. Their services have helped to **streamline a difficult and time consuming task!**"

- **Salvador Sanchez**
Axis Energy Services

PREPAID
Expense Card

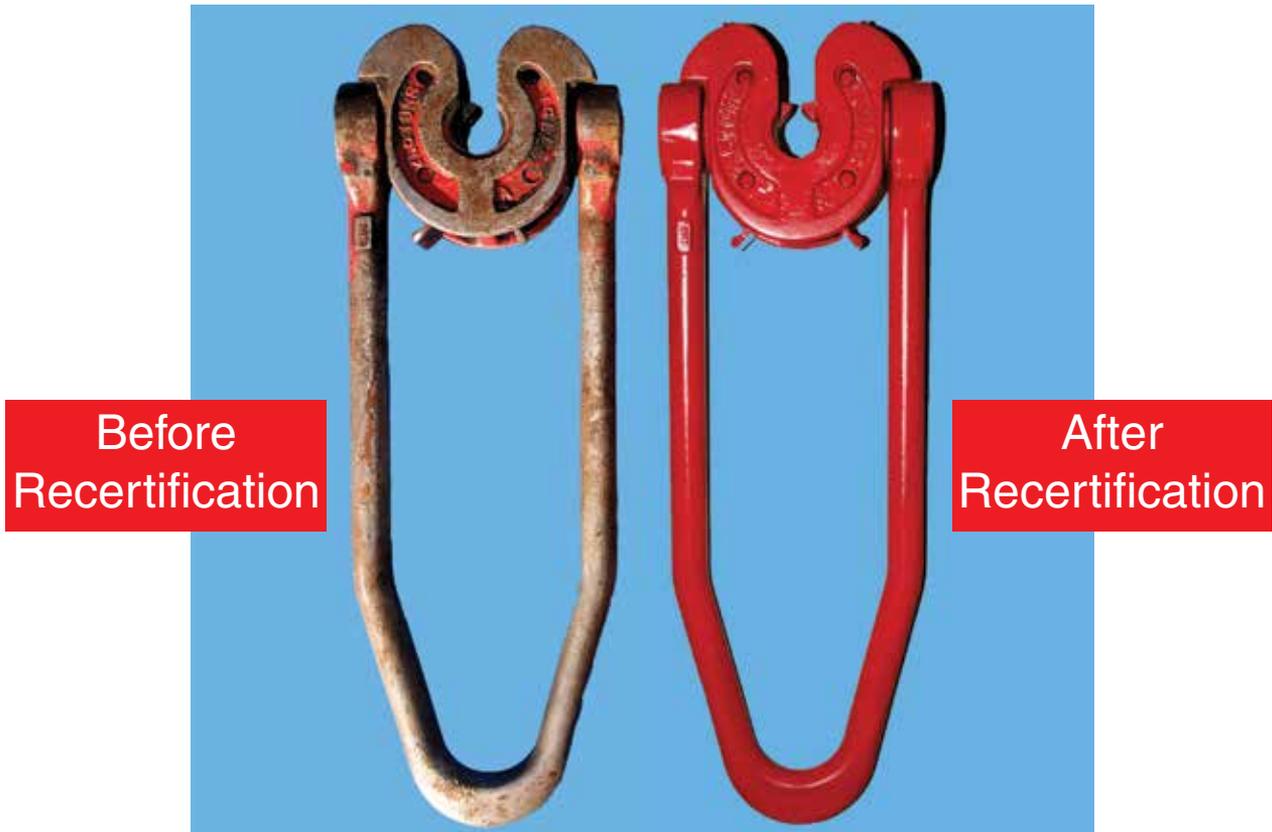
call: 866.946.3017
visit: commercebank.com/expensecard
email: prepaidexpense@commercebank.com



Commerce Bank
Member FDIC

Challenge Accepted.

Reborn in the U.S.A.



When you need to refurbish or recertify your pipe handling equipment, you want it done right and delivered to you right away. That's why Cavins has a three-acre facility wholly dedicated to doing just that. Right here in the U.S.A.

We've been in the well servicing business for 90 years designing and manufacturing the highest quality oil well tools in the industry. We know how expensive downtime can be, so we get your equipment back to you in the shortest time possible.

We follow API-Q1 and ISO9001 regulations and can load test up to 350-ton capacity. We have the

know-how and the specifications to refurbish the vast majority of pipe handling equipment in the field today.

You can count on Cavins to do the job right the first time and get your tools back to you right now so you can get up and running without delays.

Call today or Email us at repair@cavins.com

(661) 827.1200 ▲ Fax (661) 827.1300
www.cavins.com ▲ email: repair@cavins.com



OIL WELL TOOLS
A Division of DAWSON ENTERPRISES

BORN IN THE U.S.A.®



- Spiders ▲ Slips ▲ Power Tongs ▲ Sand Pumps ▲ Bailers ▲ Hose Connections ▲ Depthometers
- ▲ Oil Savers ▲ Junk Snatchers ▲ Safety Clamps ▲ Sucker Rod Elevators ▲ Tubing Elevators ▲ Cement Dumps
- ▲ Blowout Preventers and Rod Strippers ▲ Rod and Crane Hooks ▲ Elevator Links and Hooks

Baash-Ross, Foster, Hillman-Kelly, KelCo and Web Wilson are licensed trademarks of National Oilwell Varco, LLC