THE LONE STAR PIPELINE

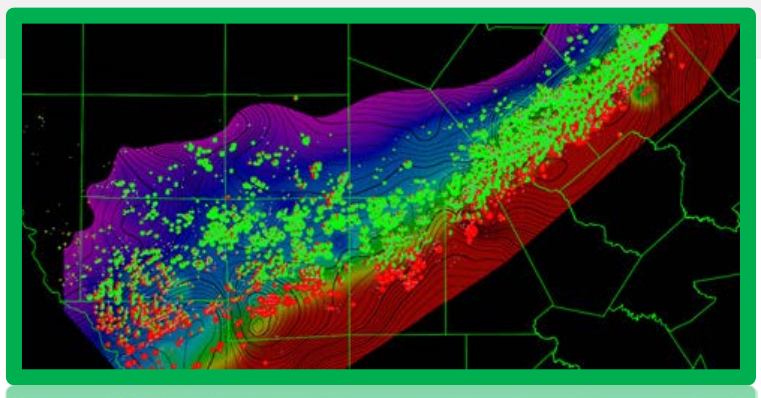
In this Issue

Our Purpose

The Association of Desk and Derrick Clubs (ADDC) is a non-profit, international organization whose purpose is to promote the education and professional development of individuals employed in or affiliated with the petroleum, energy, and allied industries and to educate the general public about these industries.

Our Mission

Our mission is to enhance and foster a positive image to the global community by promoting the contribution of the petroleum, energy, and allied industries through education by using all resources available.



Holding Stuff Together

July 1, 2017 by Bailey LeRoux
https://pboilandgasmagazine.com/holding-stuff-together/

Welding is one of those trades necessary for the operation of today's petroleum industry. It is hard to imagine almost any type of oilfield equipment that does not involve welding in one way or another, either in its fabrication or its repair. Although the ability to weld metal dates back thousands of years, it was not developed for large-scale commercial use until the early 20th Century and not commonly used in the oil patch until the late 1920s and early 1930s. Before that, in those earliest days of the Texas petroleum industry, the joining together of metal materials was accomplished through the use of various mechanical fasteners, including riveting, bolting, or strapping techniques.

For example, when the discovery of oil in Texas in the first days of the 20th Century brought the need for large metal storage vessels to the state, two 37,000-barrel riveted tanks were built in Southeast Texas. Those vessels were constructed of metal plates fastened together by rivets. The plates had holes punched on 2-inch centers near their edges. During construction the sheets were overlapped, the holes aligned, and temporarily fastened together by bolts placed in alternating holes. During the riveting process as each rivet was completed the next bolt in line was removed and another rivet started. That process kept the steel aligned and the sheets tight against one another until the rivets were driven in tightly.

The actual riveting process required a four-man crew. The rivets were a bolt-like device with a rounded head and a smooth shaft. One member of the crew heated the rivets to a red hot stage in a portable forge and with a pair of tongs tossed them to the "placer" who caught the rivet in a bucket. The placer then placed the hot rivet in its hole in the metal sheet. At that point a worker called a "bucker" held a small concave anvil over the head of the rivet. Then the "riveter," using a concave headed hammer, beat the shaft of the rivet into a rounded head similar in shape to the one being bucked until the rivet pulled the two metal sheets tightly together. Finally the placer removed the next alignment bolt and the process was repeated. That was the technique used to rivet metal vessels and structural steel until the 1920s, when pneumatic riveting hammers replaced the traditional hand-held hammers. Even using the pneumatic hammer, with the bucker and the riveter trading off positions every few rivets, the work was a slow, backbreaking, and labor-intensive job.

Once the vessels were riveted together they were caulked to assure that they would not leak. The caulkers used a chisel like device with a slightly bent cutting edge. The caulking device was inserted between the overlapping edges of the steel and driven in until it created a protruding strip of metal. Then the tool was reversed and driven in again, causing the protruding strip to be forced against the opposite sheet of metal, creating a tight fit almost like a weld. At that point the vessel was supposed to be leak proof.

All oil storage vessels greater than those in the 10,000-barrel range were of riveted construction until the 1930s, when electric arc welding became common. After that riveted tank construction in the oil patch began to disappear until by the 1950s they were a thing of the past. However, a host of those vessels are still in service across the nation today as a testament to the longevity of their solid construction.

Smaller field tanks in the 100-to-10,000-barrel range were never riveted. In the very earliest days they were of wooden construction, with the staves held together with metal bands. Within ten years of those first oil discoveries, steel-bolted tanks began to replace wood and they continued to be used almost exclusively until the late 1950s. In the mid-1950s, welded field tanks up to about the 1,000-barrel size began to be constructed in fabrication plants and transported to the field by trucks. By the 1970s, bolted tanks were almost obsolete as the more efficient and longer-lived welded tanks began to replace them

Continued from Pg 1.

The pipelining trade experienced a similar evolution from mechanical to welding much like that of the tank building trade. Large-diameter pipelines extending for hundreds of miles are the safest and most inexpensive means of transporting petroleum products. Thus, pipelining was a colorful process utilizing hundreds of workers on each job in those earliest days of the industry, when threaded pipe was the only material available. The last major threaded-type pipeline constructed was in 1927, when the Gulf Oil Corporation laid a 546-mile combination eight- and ten-inch line from Crane in the Permian Basin to Lufkin in Southeast Texas.

Before the Crane-to-Lufkin job was even completed, welding was making inroads into oil patch pipelines in the form of oxy-acetylene welding to join the pipe together. In 1925, the Magnolia Gas Company completed its first major pipeline using that technique. The job was a combination 14-, 16-, and 18-inch pipeline that ran 217 miles from Northeast Texas to Beaumont on the Gulf Coast. Welding soon proved itself an important improvement in the gas pipeline industry, where utilizing traditional threaded pipe had allowed major leakage and pressure control problems. Over the next several years large numbers of oxy-acetylene welded pipelines were laid, especially in the Texas Panhandle. By the early 1930s, that welding process gave way to the newly improved shielded electric arc welding. Arc welding was to remain the mainstay of the industry for the remainder of the century until the present time.

Thus, during the first half of the 20th Century, evolving welding technology, as exemplified by the examples of the tank building and pipelining trades, made major changes in the way things were done in the oil patch. Just how and where this unique way of binding metal objects together arose is a fascinating story. The truth of the matter is that it actually has a very ancient beginning, one whose story has also evolved with time.

The first recorded welding process, known as forge welding, dates from the Bronze and Iron Ages in Europe. It is a blacksmithing technique that involves heating two metals and hammering them together in a process that is repeated over and over until they merge as one cohesive metal. Until the end of the 1800s that was the only practical welding process available, although numerous experimental projects utilizing electricity and a variety of gases were underway.
In 1903 two French engineers developed a suitable torch that utilized both oxygen and acetylene to be mixed and used to heat concentrated areas of metal so that the metal could be either cut or welded. For the cutting process the concentrated flame heats the metal until it becomes molten and with an extra blast of oxygen oxidizes the molten metal to cause it to evaporate, thereby cutting the metal. The same torch is used to join or weld two metals. In that process the metals to be welded are butted up against each other and heated. When the metals became molten a filler metal is inserted so that the gap is filled, causing the metals to become fused or welded into a single entity. This oxy-acetylene method of welding was to remain the mainstay of welding in the oil patch until the 1930s and remains the primary method of cutting steel in today's oilfield.

The welding process most familiar to today's oilfield workers is a manual arc welding process known as shielded metal arc welding or simply arc welding or sometimes even stick welding. It utilizes either a direct or alternating electrical current to form an electrical arc between an electrode and the metals to be joined. The principle behind of the process, like that of the oxyacetylene process, was fairly well known throughout most of the 19th Century, but developing a practical way of implementing it did not come about until the beginning of the 20th Century. And it was to be another 20 or 30 years before a practical portable method of utilizing it in the field developed.

In the arc welding process when the electrode touches the metals to be joined they melt and fuse to create a molten weld puddle which when it cools is the weld joint. In the earliest years of this practice it was discovered that atmospheric gases contaminated the puddle, causing a brittle joint. That problem was eliminated by developing a flux that protected the puddle from contamination. Eventually an electrode, generally called a welding rod, was developed with a flux coating that protected the weld puddle to solve that problem. Once the weld cools, the oxidized flux remains as a slag coating, which has to be chipped away before the welding process is complete. It was not until 1927 that an inexpensive method of coating the electrodes (welding rods) was developed, allowing for the process to be utilized in the field.
Another problem associated with arc welding in the field was the lack of an electrical generator portable enough and with enough power to operate efficiently in the field. That problem was also solved late in the 1920s, so that a relatively inexpensive welding process appeared that achieved a higher quality and more efficient way of welding. Since then there have been numerous improvements in the equipment and processes of welding in the oil patch, although the basic equipment has remained the same
So the next time you are out on a job and you see a welding rig pass by with its oxygen and acetylene bottles strapped to the headache and that ubiquitous welding machine sitting on the bed, don't take it for granted. Stop for just a minute and give some thought to the magic of how a little gas and some electricity has come to supply the ability to cut and shape metal into just about any configuration you might desire. Then meditate on how difficult it would be to accomplish the same thing with a hammer and a chisel. Makes you appreciate progress, doesn't it?

MEETING INFORMATION

- Our meetings are generally held the second Thursday of each month at 6:00PM at the Brookhaven Country Club. (3333 Golfing Green Dr | Farmers Branch, TX 75234)
- The cost of dinner is $30, cash or checks made payable to Lone Star Desk and Derrick Club of Dallas | RSVPs must be made by the second Tuesday at 10:00AM unless otherwise stated.
- Prior to the meeting, there will be a Social Hour from 5:00-6:00PM with a cash bar.

Dates and News

MONTHLY MEMBERSHIP MEETINGS

June Board Meeting — June 26th

July Board Meeting — July 24th

August Meeting — August 17th

- Carla Adams - 7/6
- Janet Beavers - 7/8
- John Ezell - 6/2
- Jennifer Fenner - 6/12
- Rebecca Edwards - 6/26

Glossary "X-Y"

X-axis:
1.
The horizontal axis of a two-dimensional cartesian coordinate system.
2.
One of three axes in a three-dimensional cartesian coordinate system.

Yield Value
The yield value (commonly called "yield point") is the resistance to initial flow, or represents the stress required to start fluid movement.
This resistance is due to electrical charges located on or near the surfaces of the particles.
The values of the yield point and thixotropy, respectively, are measurements of the same fluid properties under dynamic and static states.
The bingham yield value, reported in lb/100 square feet, is determined by the direct-indicating viscometer by subtracting the plastic viscosity from the 300-rpm reading.

Yield
A term used to define the quality of a clay by describing the number of barrels of a given centipoise slurry that can be made from a ton of clay.
Based on the yield, clays are classified as bentonite, high yield, low yield, etc., types of clays.
Not related to yield value below.
See api rp 13b for procedures.

Yield Point
In drilling-fluid terminology, yield point means yield value (which see).
Of the two terms, yield point is more common.

COMMODITY PRICES

Energy Futures

Symbol	Price		Change	%Change	Volume
*OIL	49.31	▼	-0.08	-0.16%	613905
*BRENT	52.30	▼	-0.07	-0.13%	178784
*NAT GAS	2.82	▲	0.019	0.68%	68626

	July 2017			Month Variance	June 2017			July 2016		
	Land	Offshore	Total		Land	Offshore	Total	Land	Offshore	Total
Latin America	159	37	196	4	158	34	192	153	33	186
Europe	50	32	82	-9	59	32	91	52	42	94
Africa	75	14	89	3	72	14	86	70	12	82
Middle East	352	45	397	0	355	42	397	339	51	390
Asia Pacific	119	76	195	1	119	75	194	98	88	186
International	**755**	**204**	**959**	**-1**	**763**	**197**	**960**	**712**	**226**	**938**
United States	931	22	953	22	909	22	931	429	20	449
Canada	197	1	198	48	148	2	150	92	2	94
North America	**1,128**	**23**	**1,151**	**70**	**1,057**	**24**	**1,081**	**521**	**22**	**543**
Worldwide	**1,883**	**227**	**2,110**	**69**	**1,820**	**221**	**2,041**	**1,233**	**248**	**1,481**

ADDC President's Letter

Maggi Franks
President

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July 2017,

Friends and fellow members,

It's July! How did that happen? It seems like yesterday when I told Diane McKee of the former West Penn Club that I'd run for RD. I turn around, and I'm half way through my year as President. I just want time to stop, so I can catch my breath. Regional meetings were so educational, and informative that I want time to digest all the notes I've accumulated.

One thing I heard over and over again at each region, was how does the board plan on cutting costs. One way we are considering is reducing the number of regions in the Association. When we had over 2500 members it made sense to have 7 regions, but now with just over 1400 members does it still make sense? The Board and I don't have the answer to this question. So we have formed and Ad-Hoc committee comprised of a member form each region and chaired by Jonathan Slay from Region VI. They will research how best to realign the regions, how many regions we need, and even look at whether or not we still need regions. They will have their recommendations to the Board by the end of July, and we will present their findings at Convention.

This is just one idea, I'm sure there are many more out there. There are only 13 members on the Board, but with over 1400 members, we should be able to come up with an abundance of cost cutting ideas. So I encourage you, send your suggestions to the Board. No idea is too small, or too farfetched. We will listen to all of your ideas and do what is best for the Association.

Cost cutting isn't the only answer. We need to bring our numbers back up. Last month I asked you to ask your spouses about becoming members. I hope some of you did just that. What about some of your associates from church? Maybe you can put a notice about your next meeting in your church bulletin. What about your local paper? We all have local shopper's papers; you can put an ad in that. How about contact your community college? You can promote the networking opportunities to college students. There are so many ways to spread the word about how ADDC can improve your career and professional life. Again I challenge each of you to bring just one more person to a meeting. The possibilities are endless if we put our heads together.

When I next write to you I hope to have fantastic news on the growth of our Association.

Until next month,

Maggi Franks

Region IV Director's Newsletter

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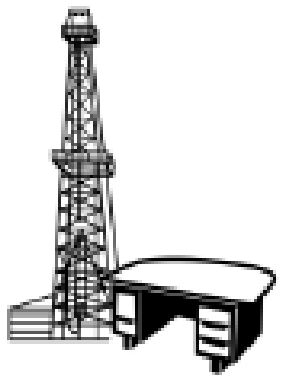

July 2017

We are half-way through 2017! Can you believe that it is only two and one-half short months until the 66th Annual ADDC Convention will be held in San Antonio, Texas. Have ***you*** mailed in your Registration Form yet? Don't wait too long because I just want you to know - one (1) of the Field Trips is ***FULL***!

There are many wonderful field trips and seminars available to Members and Guest. Don't forget the two (2) **FREE** seminars that are being offered to you by the Association. Please make note of the following important information - the time for the FREE *Leadership Training Seminar* has changed – it will be held a little earlier than posted in the Registration Packet on Thursday – it will now begin at 1:00 pm until 2:45 pm. There was an overlap in two seminars and now, with this change you can attend both the Leadership Training Seminar AND the Team Building – Painting with a Twist!

Members of Region IV – Remember that this 2017 Convention is a ***Region IV*** undertaking. Your President will be contacted in the very near future asking for your help with various tasks during the Convention. Are you going on a Field Trip? Maybe you would serve as the Host/Hostess for the Trip. Or are you attending a Seminar – how about introducing the speaker and taking care of items during the seminar! If you have any questions, don't hesitate to contact me.

There is still plenty of time this year to put the *3-R's* into action. ***Rejuvenate*** your members – ask them to attend Convention! ***Retain*** your members – get them excited about Convention. Talk about the educational opportunities at Convention – you may just ***Recruit*** a new member!

It is with a very heavy heart that I report to you, that Region IV lost a wonderful long-standing member this past month. Pat Alarie, our 2003 Region IV Director passed away on June 4th after courageous battling several illnesses over the past several months. Pat joined Desk and Derrick in 1991 and served as the Fort Worth Club President for three (3) different years. Please keep her family in your thoughts. Each of us who had the opportunity and pleasure to know Pat will miss her very much.

Hugs to all,

Evelyn

"May your walls know joy, may every room hold laughter,
and every window open to great possibilities"
Mary Anne Radmacher

Miscellaneous

Sadly, Region IV has lost another long-standing member. On July 17th, our beautiful friend Ruth Ann Spears passed away. Ruth Ann joined the Desk and Derrick Club of Dallas in 1958 and in 1974 she served as the Region IV Director. In May she fell and broke her hip and was recuperating well; but unfortunately she fell again and had to have a second hip replacement. Regrettably, her kidneys began to fail, and she wasn't able to recover. Please keep her family in your thoughts. Ruth Ann will be sadly missed by all who knew her.

Lonestar D&D Board

PRESIDENT	FIRST VP	SECOND VP	SECRETARY	TREASURER
Carla Adams	Pat Blanford	John Ezell	Ann Hallam	Peggy Loyd
DIR. OF EDUCATION	**DIR. OF LEADERSHIP**	**DIR. OF PR**	**DIR. OF RULES**	**IMD. PAST PRESIDENT**
Shar Fields	Polly Marek	Ian Stageman	Rebecca Edwards	Renee Durham

MAILING ADDRESS
The Lone Star D&D Club of Dallas
P. O. Box 600416
Dallas, Texas 75360-0416

ONLINE RESOURCES
Club Website:
www.lonestardandd.org
Facebook: Click Here
Public Calendar: Click Here
ADDC Website: www.addc.org
Club Email:
info@lonestardandd.org
Texas Energy Council Website:
www.texasenergycouncil.org

Upcoming Events

ADDC Convention Registration:
https://www.addc.org/site/assets/files/1083/addc_convention_registration_form_2017.pdf

SAVE THE DATE

FOURTH ANNUAL LONE STAR SHOOT OUT

FRIDAY, SEPTEMBER 8, 2017 | 11:00 AM - 4:30 PM
DALLAS GUN CLUB | 3601 STEMMONS FREEWAY | LEWISVILLE, TX 75067

ABOUT THE EVENT

- Open to **ALL**
- First-come, first-serve basis
- Breakfast and Lunch sponsorship opportunities available
- $750 per four-man team (includes cart and event shirt) or $200 per individual (team TBD)
- Shooters provide ammo, eye and ear protection

SCHEDULE OF EVENTS

- *Registration:* 11:00 am – 12:00 pm
- *Lunch:* 11:30 am - 12:30 pm
- *Shoot:* 12:30 - 3:00 pm
- *Ceremony:* 3:00 - 4:30 pm

Awards, gun raffles, and extensive door prizes.

SPONSORSHIP OPPORTUNTIES

- $7,000 – Title Sponsor (3 teams)
- $5,000 – Shirt Sponsor (2 teams) **or**
- $2,500 – Shirt Sponsor (1 team)
- $2,500 – Cart Sponsor (1 team)
- $2,500 – Cap Sponsor (1 team)
- $1,500 – Beverage Sponsor
- $300 – Station Sponsor
- $200 – Door Prize Sponsor
- $$ - Gun Sponsor

EVENT CONTACT

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OR BY MAIL

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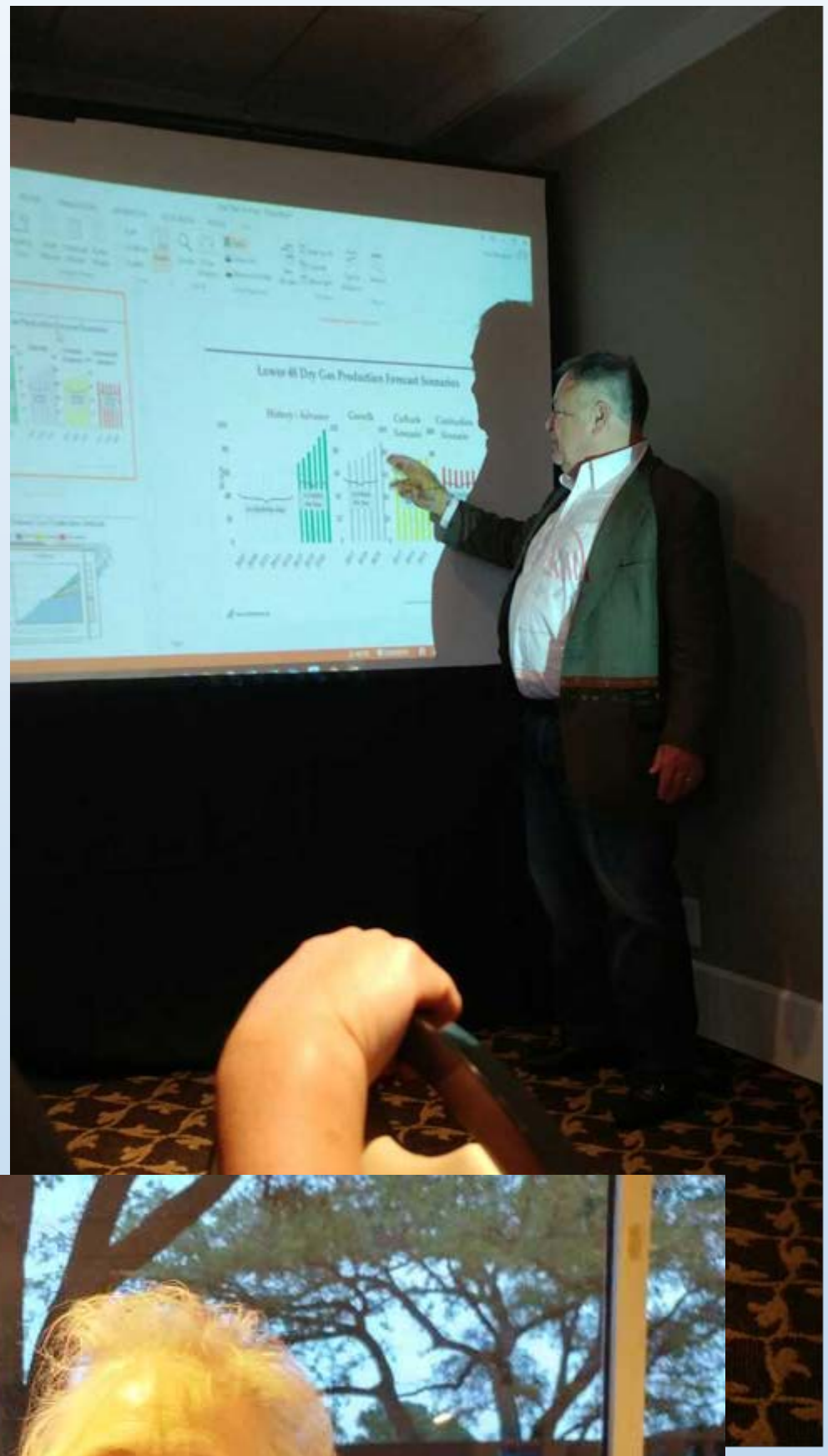
Lone Star Desk and Derrick Club of Dallas is a member of The Association of Desk and Derrick Clubs and is a non-profit educational organization. We are a 501 (c)(6) educational organization: Tax ID #35-2511125

May 2017 Meeting Photos



May 2017 Meeting Photos

Region IV Conference

Region IV Conference

June 2017 Meeting

June 2017 Meeting

July Bowling Event