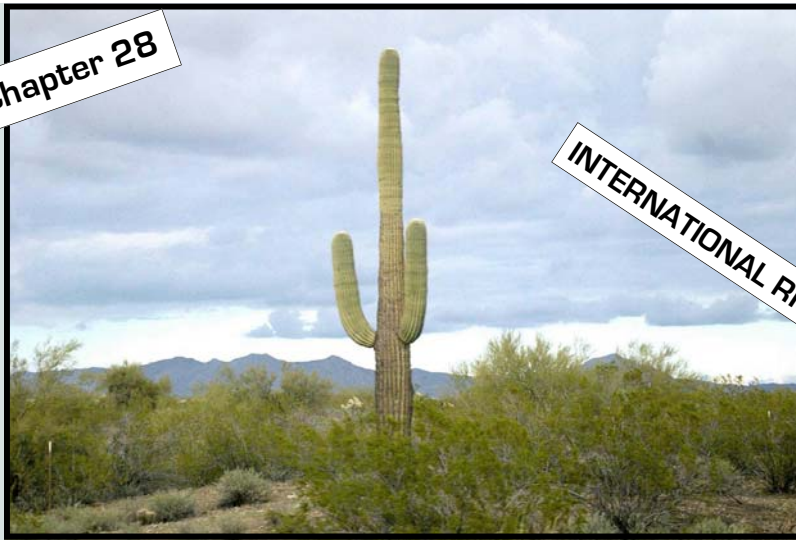
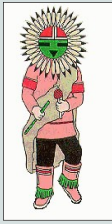


Kachina Chapter 28



INTERNATIONAL RIGHT OF WAY ASSOCIATION

Newsletter

MARCH, 2008

www.irwaaz.com

**2008 Kachina Chapter Executive Board**

**President**

Doug Estes, MAI  
480.345.4111  
dougest@hotmail.com

**President Elect**

Kathie Sholly, SR/WA  
623.930.3652  
ksholly@glendaleaz.com

**Secretary**

Karen Williams, SR/WA  
602.542.8857  
karen.williams@azag.gov

**Treasurer**

Mary Smith  
602.682.0000 X14  
msmith@tierra-row.com

**International Director**

Caroline Tillman, SR/WA, R/W-RAC  
602.234.1000  
carolinet@acqsl.com

**PDC Chair**

Ray Warriner, SR/WA  
602.542.2146  
rlw2@azstateparks.gov

**Newsletter / Job Bank / Website**

Cate Chamberlain  
602.367.9322  
cate@irwaaz.com

**March Board Meeting**



Wednesday, March 5, 2008



4:45pm



ASL Offices / 2020 West Indian School Road / Bldg C / Phoenix

Confirm your attendance with Doug at  
dougest@hotmail.com



Are you ready to ride?

**APRIL CHAPTER MEETING**

**DATE:** Tuesday, April 8, 2008

**TIME:** 11:30am to 1:00pm

**PLACE:** PERA Club / 1 East Continental Drive / Tempe, Arizona 85023 / 602.236.5782

**MENU & COST:** TBA

**RSVP DEADLINE:** Thursday, April 3, 2008 @ 5:00pm (No reservations will be taken after this date and time)

**SPEAKER:** Bob Sullivan, President of the Arizona Super Bowl Host Committee. Bob spoke to the membership at our annual Seminar in September 2007 about what we hoped the Super Bowl would do for us as a community. He will return to our April luncheon to give us a "how did it go?" presentation.

Bob Sullivan's bio can be found at the bottom of page 2.

## **PRESIDENT'S MESSAGE**

**Doug Estes, MAI, Chapter President**

I recently read Dennis Stork's final message as the IRWA Executive Vice President in the January/February copy of Right of Way Magazine. In the last paragraph of his message he wrote: "IRWA, like almost every association or not-for-profit organization in North America, has seen the pool of volunteers dwindle even as our membership ranks increase. It is time for more men and women to enter the arena in support of IRWA's worthy cause. Our need goes beyond paying your annual dues. We need your time, your talent and your enthusiasm."

As I read this article, I thought about how fortunate we are in Kachina Chapter 28 to have so many people that have been and continue to be so willing to serve. Since I have been involved in the chapter leadership since 2004, I have seen many members make significant contributions of time, talent and resources to ensure the success of our chapter, including luncheons, seminars, newsletters, classes, etc. Those of you who have contributed know who you are and know the personal rewards that come from being involved. We greatly appreciate your contribution.

For those of you who have not been involved, I extend an invitation for you to become involved. On the chapter level, we have numerous committees in which we can use your help. If you wish to become involved, contact me or any other member of the executive board.

For those of you who are already serving on committees but have been less involved, I encourage you to renew your commitment. If you are uncertain what your responsibilities are, the IRWA website is a potentially good resource. On the website, under Leadership Resources, The IRWA Leadership Guide, Committee Chairs and Vice Chairs, the website explains the mission and responsibility of each of the committees at the international level. Because the chapter committees mirror the international committees, those serving on the industry committees (asset management, environmental, local public agency, pipeline, relocation, surveying, transportation, utilities and valuation) will find useful information there. If you are still uncertain, ask me or another member of the board, and we can provide direction. At the very least, I encourage you to attend our monthly board meetings and contribute interesting articles for the newsletter.

This year, we are alternating the location of our monthly board meetings between Acquisition Sciences, Ltd. and SRP. In January we met at Acquisition Sciences, Ltd., in February we met at SRP and in March we will be back at Acquisition Sciences, Ltd. I hope that at least one of these locations will be convenient for your attendance. I look forward to seeing you there.

---

### **BOB SULLIVAN'S BIO**

Arizona Super Bowl Host Committee president Bob Sullivan has compiled more than 26 years of senior management experience. He oversees the daily operations and business management functions of the Host Committee as it prepares for Super Bowl XLII, to be held in Glendale, Arizona, on Feb. 3, 2008.

Sullivan's executive management and consulting expertise has stretched across the country. He served as Vice President of Gannett Television, President and General Manager for W\*USA TV in Washington, D.C. and Vice President and General Manager for The Broadcast Image Group in San Antonio, Texas. Sullivan's Arizona experience includes senior station and news management positions for two Phoenix television stations, KPNX TV (NBC) Channel 12 and most recently, KNXV TV (ABC) Channel 15. His Valley-based company, Sullivan & Associates Consulting, provides strategic content development, branding and talent coaching for media outlets around the country. Sullivan's clients include local television, print and national cable networks, including FOX Sports, The Discovery Channel and The Learning Channel. Sullivan & Associates also provides media and presentational skills training for a variety of non-media organizations in the pharmaceutical, health care and life insurance industries. He is a 1979 graduate of Wisconsin's Carroll College with a B.A. in communications management.

# Real Estate and Appraisal Credits Update

Mark Keller, SR/WA, Educational Credits Chair

Over the past few months, I have been working closely with the Arizona Department of Real Estate and the Arizona Appraisal Board. The following IRWA courses have been approved:

## ADRE

Course 100	2-28-2010
Course 103	1-31-2012
Course 104	3-31-2009
Course 200	1-31-2009
Course 403	8-31-2009
Course 502	1-31-2012
Course 505	in process
Course 506	1-31-2012
Course 603	9-30-2008
Course 800	2-29-2012
Course 900	1-31-2009
Course 902	1-31-2009
Uniform Relocation assistance	2-28-2012

ADRE does not charge a fee for course approval

## Arizona Appraisal Board

Course 403	8-31-2008
Course 410	1-31-2009

Note that the Arizona Appraisal Board charges a \$100.00 fee for course approval on an annual basis.

Our instructors are in process of updating their instructor qualifications at the ADRE. Please feel free to notify Kaye Bockmann or me for ADRE and Appraisal board course approvals.

---

## Bill to Eliminate the Arizona Board of Appraisal

Submitted by Mark Keller, SR/WA, ASA

**Arizona House Bill 2774 would eliminate the Arizona Board of Appraisal and place appraiser regulation under the Department of Real Estate.** Board consolidations were proposed by the Governor as a means to save money.

Contact your legislator to express your opinion. **Your communication should be factual, polite, concise and professional. Include the bill number and that you are a constituent in the subject line.**

**Key points** that you may want to include and expand upon are:

- HB 2774 **risks appraiser independence** and possible conflict of interest; why this is important, even more so today.
- The Arizona Board of Appraisal is a 90/10 agency; assuring the professional fees are used for regulation and enforcement while also contributing to the state general fund.

To find your state representatives go to <http://www.votesmart.org/>, enter your zip code, and then scroll down to State Legislative. There are two representatives for each legislative district.

Legislators get hundreds of e-mail daily on many bills. You can also call your legislator and ask his or her assistant to make note of your position on the bill.

## EDUCATION UPDATE

### **Course 100 APRIL 7-10, 2008**

**DATES:** April 7th - April 10th, 2008

**TIME:** 8-5 Daily

**COST:** Member: \$750 ( \$850 after 3.08.08); Non-Member: \$950 (\$1050 after 3.08.08)

**LOCATION:** Development & Community Services Building / Point of View Room / 9875 North 85th Avenue / Peoria AZ 85345

**ACCOMMODATIONS:** Comfort Suites Peoria Sports Complex / 8473 W Paradise Lane / Peoria AZ 85382

**FACILITATOR:** Beverly J. Francy, SR/WA

**COURSE COORDINATOR:** Vicki Chamberlin / City of Phoenix / 251 W Washington, 8th Floor / Phoenix AZ 85345 / P: 602.262.6739 / F: 602.261.8919 / E: [vicki.chamberlin@phoenix.gov](mailto:vicki.chamberlin@phoenix.gov)

Registration Form is available at: [http://www.irwaaz.com/education\\_classes.asp](http://www.irwaaz.com/education_classes.asp)

---

### **IRWA Courses coming to Region I**

- 201 Communications in R.E. Acquisition 03.03.08 Alhambra, CA
- 801 U.S. Land Titles 03.05.08 Reno, NV
- 501 Residential Relocation Assistance TENTATIVE 03.06.08 Huntington Beach, CA
- 902 Property Descriptions 03.07.08 Reno, NV
- 703 Real Property Asset Management 03.14.08 Las Vegas, NV
- 401 The Appraisal of Partial Acquisitions 03.17.08 Sacramento, CA
- 400 Principles of Real Estate Appraisal 03.31.08 Martinez, CA
- 100 Principles of Land Acquisition 04.07.08 Peoria, AZ
- 203 Alternative Dispute Resolution 04.10.08 Downey, CA
- 207 Practical Negotiations for US Funded Land Acquisition 04.17.08 Reno, NV
- 703 Real Property Asset Management 04.23.08 San Diego, CA
- 501 Residential Relocation Assistance 04.24.08 Las Vegas, NV
- 200 Principles of R. E. Negotiation 05.05.08 Martinez, CA
- 502 Business Relocation 05.22.08 San Diego, CA
- 100 Principles of Land Acquisition 06.09.08 San Diego, CA
- 103 Ethics and the Right of Way Profession 07.14.08 Phoenix, AZ
- 600 Introduction To Environmental Issues 07.15.08 Phoenix, AZ
- 602 Project Development & the Environmental Process TENTATIVE 07.16.08 Phoenix, AZ

## What Bust? Bush Wants to Unload Some Real Estate

Submitted by Mark Keller, SR/WA, ASA

By Stephen Barr

Friday, February 8, 2008; Page D04

Uncle Sam hopes to start selling off more of his unneeded real estate.

The president's fiscal 2009 budget would create a "real property disposal pilot" to expedite sales of deteriorating buildings and other property that is no longer needed.

The pilot project would move unneeded properties directly to sale and provide an incentive for agencies -- they would keep 20 percent of the net proceeds, with 80 percent going into the U.S. Treasury.

During the last four years, at the urging of the White House and the Government Accountability Office, federal agencies have been pulling together an inventory of what Uncle Sam owns and leases. A report last year identified more than 20,000 properties, some vacant, that federal agencies do not use but pay more than \$130 million a year to maintain.

The budget proposal would permit agencies to try to get these properties, valued at more than \$17 billion, "off of our books," said Daniel I. Werfel, acting controller at the Office of Management and Budget.

The government controls more than \$374 billion worth of property worldwide, and many buildings are more than 50 years old and difficult to maintain. And obviously, many were never designed to accommodate computers and other technology.

It can take more than a year to sell surplus property because of laws and rules that require 13 different reviews. The reviews, for example, determine if buildings and warehouses should be demolished, offered to state and local governments or turned over to community groups that help the homeless.

President Bush's budget proposal asks Congress to allow the government to streamline the process, in hopes of getting some of the surplus property on the market in 30 to 90 days.

The pilot project would run for five years, selling property for cash at not less than fair market value, according to the proposal.

Under a 2004 presidential initiative, the government has already disposed of more than \$7 billion in unneeded assets, Werfel said.

The idea has some support in Congress. The Senate Homeland Security and Governmental Affairs Committee last year approved a bill to create a similar pilot project that was sponsored by Sen. Thomas R. Carper (D-Del.). In the House, Rep. John J. "Jimmy" Duncan Jr. (R-Tenn.) introduced a similar bill last year.

## Landowners Unite

(from Energy Biz Insider—January 16, 2008)

submitted by Caroline Tillman, SR/WA, R/W-RAC

Several landowners in Wisconsin are suing ONEOK Partners, saying that the natural gas storage and pipeline developer is violating their rights and abusing eminent domain laws that seek to get public works projects built on private property.

While the intent of such laws is to prevent a few people from holding up vital infrastructure development that could benefit an entire community, individual rights groups say that the authority has been misused. They say that many of the projects are unnecessarily intrusive and that the laws don't give pipeline companies the right to profit at their expense -- a proposition that oftentimes gives them inadequate compensation for their troubles.

Like any permitting process, natural gas companies must economically justify their projects to regulators before lining up customers who would buy space on their lines or in their storage facilities. If it is a pipeline, they then must meet with neighboring communities and property owners to iron out any dissension. State regulators can grant eminent domain rights but if they do not, federal regulators have backstop permitting authority. However, 90 percent of all cases are resolved before it gets to that level.

It is rarely a smooth process. Landowners have come together in many of these cases to argue that they are poorly compensated given that many pipelines actually devalue their properties. While no utility wants to exercise their right to eminent domain, they will. And so landowners are then forced to enter into such negotiations not as a means to prevent these kinds of projects but rather, to maximize their payments and to steer the direction of the lines.

According to the Institute for Justice that defends property owners' rights, 34 states in recent years have rewritten their laws to the advantage of private citizens. It says that eminent domain laws need to be narrowly defined to prevent private entities - with the exception of public utilities -- from benefitting at the expense of other citizens.

"For half a century, unrestrained local and state governments have taken private property not for 'public uses' -- such as for bridges or public buildings -- as permitted by the Constitution, but for private businesses in the name of 'economic development,'" says Jennifer Zeigler, staff attorney for the institute. "Private homes and businesses have been bulldozed, replaced by newer businesses and homes owned not by the public, but by private, politically powerful individuals and corporations."

On the flip side, the wealth and well-being of entire communities may be dependent on not just the proposed infrastructure but also on the use of the minerals below the earth's surface. If energy producers are denied affordable access to optimal areas, it could impede economic growth in certain areas and particularly ones that are trying to harvest resources and transport them to where they are needed.

It comes atop a 2005 U.S. Supreme Court ruling involving a Connecticut case called *Kelo versus City of New London* in which the High Court decided that the government could condemn private property for the public good and even if it involved private development such as hotels and shopping centers. That diverged from previous interpretations of the law, which said that eminent domain rights could be exercised if such things as roads, schools and hospitals were built.

In the ONEOK case, WE Energies and Wisconsin Public Service Corp. say that they need the pipeline to meet rising energy demand in their respective territories. ONEOK says that it is responding to that demand, noting that it has the option to choose between federal or state eminent domain laws. It has therefore picked a federal venue because it says that the pipeline crosses state boundaries, from Illinois into Wisconsin. The company also denies it uses strong-arm tactics to force landowners into settlements, saying its negotiators are professional, courteous and accessible.

Property owners disagree, saying that ONEOK is bypassing state regulations to avoid paying for a second land appraisal. Wisconsin law requires that step whereas federal law does not. While an earlier battle attempted to derail the pipeline altogether, current efforts now involve about 145 landowners along the 119-mile route to try and increase their compensation from ONEOK.

In a similar case, the Federal Energy Regulatory Commission is taking comments to decide whether to grant permission to build a portion of a pipeline that would stretch about 1,000 miles in all from the Rockies into Ohio. Property owners in eastern Ohio realize that if they do not negotiate with Kinder Morgan and Sempra, they would face eminent domain hearings. As a result, talks now center on the line's route and the level of pay for landowners.

Federal regulators will make their ultimate determination in March, although they will allow a 30-day appeal period. The pipeline companies must meet 149 conditions if they are to move ahead with the project, something they expect to do. As a result, pipe has begun arriving in the state even before the review process has been completed -- all to meet a target date to have the entire line operational by 2010.

It takes place in the context of meeting the expected future need for energy and to prevent the possibility of future blackouts. The representatives of gas pipeline developers say that unless thousands of miles of pipe are laid in North America, reliability will be placed in question. FERC is sympathetic to that position, although it emphasizes that outreach programs must begin before it will get involved.

"Eminent domain exists because services such as electricity, natural gas, sewer and water are considered necessities," says Mike Enoch, general manager of the Chester County Natural Gas Authority in South Carolina, which is considering adding a 42-mile gas pipeline. "They are essential services upon which lives and livelihoods depend."

All eminent domain debates are contentious. But the prevailing mood of both the U.S. Supreme Court and of federal regulators is to give public projects -- and particularly energy related ones - the nod over personal freedoms.

## Mark Rieck Appointed as IRWA Executive Vice President

Submitted by Chris Banks, SR/WA

IRWA has appointed Mark A. Rieck, as its Executive Vice President effective February 11, 2008. Mark brings more than 20 years of progressive experience in the not-for-profit management to the chief staff officer position at IRWA's headquarters in Torrance, CA.

Prior to joining IRWA, Mark served as the Executive Director of the Greater Los Angeles Chapter of the Juvenile Diabetes Research Foundation (JDRF) and was employed for more than two decades at various executive positions within the American Heart Association organization in California, Washington, Texas and Iowa.

In announcing the appointment, IRWA President Jim Struble, SR/WA, stated "We are delighted that Mark will be leading our headquarters staff. His demonstrated ability to organize and motivate volunteers and experience in creating effective marketing programs will help to further expand IRWA's reach and enable us to continue the significant strides we have made as an organization in the recent past. Mark's experience in managing the financial and administrative responsibilities of similarly sized organizations will help us continue building the solid financial foundation that the Association currently enjoys."

In accepting the position, Mark stated "I am excited to join the team at IRWA, partnering with volunteer and staff leadership as we work toward growing membership, increasing revenue and enhancing the value we bring to our constituents. I am particularly enthusiastic about IRWA's focus on becoming a 24/7 association, as we expand our web presence and complete the implementation of IRWA's comprehensive educational summit strategies."

Mark earned a bachelor in science in sociology from Illinois State University and has taken graduate level courses at Central Michigan University in voluntary agency management as well as completed the Not-For-Profit Institute of the Graduate School of Business at Columbia University in New York. He and his family reside in Valencia, CA.

Mark was selected after an extensive executive search conducted by Tyron and Heideman, a recruiting firm specializing in the not-for-profit sector. He will succeed Dennis Stork who has served as IRWA executive vice president since March 2003. Dennis will be moving to Rancho Mirage, CA in March 2008 after completing the transition process with Mark.



Gregg Tuttle, Manager  
SRP Land Department  
Surveys Division



## Surveyor's Corner

Gregg, I enjoyed last month's article about the similarities and differences between the Canadian Dominion Surveys and the US/PLSS.

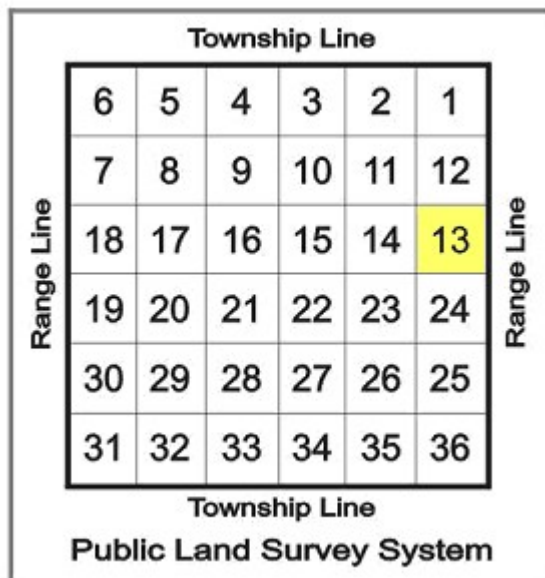
In the original Public Land Survey System, (PLSS), the work was performed under contract to the U.S. General Land Office (GLO) back in the last quarter of the 19<sup>th</sup> Century and the first decade of the 20<sup>th</sup> Century. How many miles would the survey crew have had to traverse, (i.e., walk), in performing a complete interior township subdivision survey?

Well, let's first make some presumptions:

Generally, when surveying the INTERIOR of a US/PLSS GLO township, the EXTERIOR corner monuments, (the section and the quarter-section corner monuments on the township lines), were usually already established by surveying the township boundary lines.

Also for our discussion here we will declare that ALL section lines are exactly one-mile, (it has never happened, but we are simplifying to a certain extent.)

**(NOTE:** to follow the discussion below, it is advised that you may wish to have a "sample PLSS township" diagram to visualize methodology being so described.)



The GLO Manual of Instructions for Surveys of the Public Lands of the United States, ("The Manual") from the second half of the 1800's, stated that the surveyors should always start at the southwest corner of Section 36, on the southerly township line, and proceed northerly to establish the northwest corner of said section, (a distance of one mile)

Then the surveyor was instructed to proceed easterly, *on a random line*, to the northeast corner monument of Section 36, (which was previously set on the township's exterior boundary), a distance of one-mile. Along the at the half-mile point, the surveyors sets a temporary quarter-section corner.

Continued on next page....

## Surveyor's Corner continued

The surveyor then determines his - (it was always a "he" back then) - corrections, and from the existing corner monument, and then he runs a "true" line back towards the northwest corner, correcting, as necessary, the "temporary" north quarter-section corner position as previously established on the random, easterly running, all of which means that yet another mile was surveyed.

So, now the survey crew members are back to the northwest corner of Section 36, but they have already walked three miles!

Now, from the NW of S-36, the aforementioned pattern, (north a mile, easterly random mile, returning west on "true" line back to the starting point), is repeated at each section corner location going northerly along the section lines that are one mile westerly of the township's eastern boundary line, accumulating 3-miles at each section corner, including the northerly most interior section corner, common to sections 1, 2, 11, and 12. Then the surveyors survey along the section line common to sections 1 and 2, to the already existing exterior monument at the NW corner of Section 1.

The total mileage traversed, in surveying the first tier of the eastern most sections, is 16-miles.

After completing a tier of sections the surveyors are required to return to the south line of the township and repeat the pattern on the next western tier of sections. To walk back from the NW corner of Section 1 to the SW corner of Section 35, the surveyors will walk another SEVEN miles!

No surveying, just walking, seeing the sites. So, from the NW-S-1 (16-miles) to start surveying again on the southerly township boundary, they will have already walked a total of 23-Miles!!

The pattern of "up and over and back" repeats along each tier, until the surveyors reach the SW corner of Section 32, (at which point, \*IF\* strictly following the MANUAL procedures, the surveyors will have walked 93-Miles.)

At the SW-32, a NEW pattern emerges.

The line is run easterly as before on a random and then the "true" line back, BUT, before proceeding northerly the line is now run westerly to the western township boundary line, again on a random and then back again easterly on a "true" line.

So, one mile northerly, one mile easterly (random), one mile westerly ("true"), then one mile westerly (random), then one mile easterly ("true") for a total of FIVE miles for each row.

The survey ends with a "check" on the line between Sections 5 & 6 by "tying" into the existing corner monument at the NW corner of Section 5.

All totaled, the surveyors have surveyed, traversed, and walked at least One Hundred and Eighteen MILES (118 !!!) to completely subdivide the interior of our perfectly average township, (\*IF\* they strictly conformed to the procedural requirements as documented in the MANUAL of Surveying Instructions.)

In so doing, they have established at least 85 original township interior section and/or quarter-section corner monuments.

*(Presuming all Exterior township corner monuments were already existent, then that is, at least, an additional 49 monuments at the township, section, and quarter-corners along the township's four boundaries.)*

For our discussion here we will ignore "atypical" townships that might contain such oddities as "fractional" and/or "irregular" sections, or, townships that were projected or protracted, or, townships with non-trivial, significant "excesses" or "deficiencies" in overall areas, (please revisit prior "The SURVEYOR'S CORNER" articles, such as 2007-01, "Small Sections"; and, 2007-02, "Typical Regular Sections").

Continued on next page....

## Surveyor's Corner continued

The “rationale” of the GLO – MANUAL for such process procedures for the subdivision of the interiors of townships, (as greatly over-simplified above), was so that all of the discovered “excesses” and/or “deficiencies” found would end up being (should have been) forced into the last half-mile of each tier surveyed, AND, also in the last half mile of the western rows of section lines surveyed.

So, the northern half of Sections 1 through 6, AND, the western half of Sections 6, 7, 18, 19, 30, and 31 were, by design, to receive all of the excesses and/or deficiencies in the distances as measured and surveyed on the ground following the MANUAL.

Now, for a casual moment or two, let's contemplate the “realities” of government funded, contracted field surveying in the second of the 1800s, (and, the first decade of the 1900, until 1910 and the end of the contract system.)

Like all good government contracts these were awarded NOT to the Best Qualified, but, quite the contrary, to the LOWEST BIDDERS!!

Many contracts were awarded for just a few DOLLARS PER MILE surveyed.

Remember those “double” run east/west section lines?

Those “random” and “true”? The government did NOT pay for both, only for ONE mile “surveyed”.

There were THIRTY (30) Miles of those types of east/west lines to be walked in the township.

But the real throat-choking, crawl-sticker for the contracted surveyors HAD to be each of those SEVEN MILE “*non-productive*” miles, which were (should have been) walked, back from the northern township line to the southern township line, as necessitated by the requirements to be surveying from south to north along the tiers of section lines. That is an additional 28 Miles of “extra” traversing that was NOT compensated or reimbursed under the government (GLO) theory of “surveyed-miles”.

$30 + 28 = 58$  miles, out of  $118 = 49\%$ .

After realizing that: (a) the project was WAY UNDER bid; and, (b) that in the vast majority of cases NO of what we would now call “QA/QC” was ever performed to check and/or verify the results “on-the-ground” – well it was only a matter of time before a non-trivial, significant minority (majority?) of the those contracted surveyors were rationalizing as to the “Quality” of surveying relative to a strict interpretation of the MANUAL requirements.

*“It's only worthless desert land; who's going to care?”*

The temptation or pressure to “cut-corners” (pun intended), to save \$\$ and/or “increase productivity” has resulted in a myriad of quality variations in the thousands upon thousands of townships surveyed in the “WEST” between 1867 (after the civil war) through 1909 and the end of the contracted system.

Some townships were completely (and accurately) surveyed according to all procedures.

Some townships were partially surveyed “correctly”, and were combined with *just a few shortcuts, here & there*, such as setting the east/west  $\frac{1}{4}$ -corners on the initial random run, and NOT readjusting the position initially established during the required westerly “true” running of the east/west section lines.

Some townships were completed by surveying North on the first (odd number) tier of section lines, and then by surveying SOUTH on the intervening (even number) tier of section lines.

Some townships were run by random TRAVERSE from the southeast quadrant to the northwest quadrant of the township will all, (or sometimes just some), of the interior section and  $\frac{1}{4}$ -section corner monuments “stubbed-out” by a combination of pre-calculations and “best-guess” approximations.

Continued on next page....

## Surveyor's Corner continued

And, finally, some townships were NEVER surveyed on the ground, and, as such, with NO interior monuments ever being established.

In ALL cases, the GLO paid based on the surveyor's submitted FIELD-NOTES of the survey of the interior of the township.

ALL contracted surveying firms knew of the government requirements as to form as to how the field notes *should look*, and no matter how the contracted field surveyors actually ran the survey and established - (if they even did) - the physical monuments on the ground, the notes would read as if the work had been performed *according to the MANUAL requirements*.

There were many honest contracted surveyors, who performed diligent, correct, accurate, and complete field surveys, according to the MANUAL requirements.

Probably a number of these honest souls went bankrupt but still performed honorably.

Some started out trying to be "by-the-book" (MANUAL) but later deteriorated "to stay competitive" with the sub-standard competitors; others easily became corrupted by "cutting-corners" (pun intended.)

Unfortunately, it has been estimated that at least 40%+ of ALL contracted GLO-PLSS surveys, performed in the 1880s, were either partially or completely fraudulently and/or fictitiously performed.

(Please see the "The *SURVEYOR'S CORNER*" articles of 2007-03 & -04, "The FICTITIOUS FRAUDULENT SURVEYS", for more details.)

So, because of the lack of resources (and/or the will) to perform adequate (or even minimal) QA/QC verification surveys during the 1880s and 1890s, we in the Western States have been left with a unknown, countless number of townships, all varying in quality from fair to totally fictitious as to what is to be discovered on the ground as to "original" monuments of the initial GLO (contracted) PLSS survey.

Many such townships with mixed quality and quantity of monumentation exist today as ARIZONA State Land holdings! What do you think we will discover in the "Superstition Vistas" area?

Stay Tuned!

**Well, that's it for this issue of "The Surveyor's Corner."**

If anyone has feedback or comments, please feel free to share them.

As always, I am interested in the opinions from, the readers of the Kachina Chapter 28 Newsletter.

Please keep sending in those questions.

*Until next time, Thanks for reading about land surveying & land surveyors.*