

BACKSIGHTS & FORESIGHTS



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SDSPLS 33RD ANNUAL CONVENTION

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Property survey near Spearfish Canyon
Brandon Huppler - Interstate Engineering

PLEASE VISIT US ONLINE FOR MORE INFORMATION ON SDSPLS

www.sdspls.org

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PUBLICATION DEADLINES

Material Cutoff	Publication
January 15	February 1
April 15	May 1
July 15	August 1
October 15	November 1

Backsights and Foresights

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FROM THE PRESIDENT:

So, finally the 2015 Survey Season is winding down. Would somebody please tell the contractors that the 2015 Survey Season is winding down?!? Well, it will eventually happen, but until then I hope you are all having a good year.

The October Board meeting found your Board of Directors taking care of Society business, as well as hammering out details on the Guidelines for the Practice of Land Surveying in SD. As usual, the process went along smoothly until we reached the section on Improvement Location Exhibits – or Mortgage Surveys. Love them or hate them, they are a service that land surveyors are called on to perform. If surveyors don't do them, then the people that rely on them will invent something to fill the gap. I know that I don't want another profession to decide that they don't need a surveyor to show where a structure is located on a lot. If we as a profession refuse to perform this type of survey, then the lenders and title companies will find another way to meet their survey needs. Unfortunately, they refuse to require a boundary survey that would add more costs (as well as something of tangible value) to the purchase price, and so they seek the lowest price and lowest standard for the survey. This also means that the quality of the survey suffers, and takes the profession along with it. Any attempt to create a Standard Guideline for these surveys is met with resistance (or at least active discussion) from 1) surveyors that do them and 2) surveyors that refuse to do them. Realtors and mortgage companies will eventually have their say as well and against reason they seem to guard the bottom line with remarkable tenacity. I hope that we find middle ground that meets the needs of the people that require them to conduct their business.

The Scholarship Fund continues to grow, surpassing the \$100k mark and the expectations of many of the first participants. The Board of Directors hopes to expand the scope and benefits of our fundraising to include not only scholarships and educational grants, but special projects, surveyor crisis relief, as well as funds for the time when we may need to pursue legislation or lobbying actions to protect and promote the profession.

On another old, but familiar topic, I have been contacted about the disparate compliance with the state requirements for filing Corner Records. Randy Bacon previously gave us an excellent reminder in the form of a newsletter article which appears again in this issue. For those that file their records, keep up the good work and for those that don't, remember your professional obligations and work harder at complying with state law.

Have a great fall season and let's be careful out there!

SDSPLS 2015 President
M. Ben Lamke

33rd ANNUAL CONVENTION

Cedar Shore Resort, Chamberlain, SD
For reservations call: 1-888-697-6363

Thursday - January 7, 2016

**Latest Advancements in
GPS/GNSS Technology**
Steve Richter

**Photogrammetry & Imaging
Take Center Stage**
Steve Richter

**Terrestrial Laser Scanning
Beyond the Spec Sheet**
Greg Schneider

Scholarship/Fundraising Auction

Friday - January 8, 2016

The Education – Experience Controversy
Joseph V. R. Paiva, Ph.D, PS, PE

**LSIT Course
Lidar & Photogrammetry Basics**
Rod Breitling, PLS, Randy Deibert, PLS
& Ken Wrede CP

**Surveying The Legal Landscape -
Update & Review of SD ROW Law**
SD Attorney General Marty Jackley

Scanning the Ross Shaft at Sanford Lab
Randy Deibert, PLS & Scott Schiele

**NSPS & SDBOTP Updates
SDSPLS Annual Business Meeting
Banquet, Awards & Entertainment**

Saturday – January 9, 2016

Grid and Ground
Joseph V. R. Paiva, Ph.D., PS, PE

See enclosed flyer for registration and additional information
or contact Janelle at 605-348-1538,
janelle@fisklandsurveying.com
or visit the SDSPLS website at www.sdspls.org

SDSPLS – Board of Directors Meeting

Friday, October 23, 2015

Breakwater Room – Cedar Shores – Chamberlain, SD

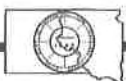
(This report subject to Board approval)

Participants: President M. Ben Lamke, Past-President Diane Aas, President Elect Louis O'Donnell, Secretary Eric Howard, Treasurer Steve Thingelstad, NSPS Governor Tom Berkland, Missouri River Chapter President Fred Leetch, Education Committee Chair Kristi Goehring, Standards Committee Chair Dean Scott, Executive Director Janelle Finck.

1. Call to order at 12:02 (central) by President Lamke.
 2. Acceptance of Agenda: Request by Dean Scott to move the Guidelines discussion to the end of the agenda. ++Motion by Berkland to approve Agenda with requested amendment, 2nd by Thingelstad. Motion approved.
 3. Secretary's Report – Eric Howard: Approval of minutes for the Friday, August 21, 2015 BOD Conference Call. ++Motion by Aas to approve minutes, 2nd by O'Donnell. Motion approved.
 4. Treasurer's Report – Steve Thingelstad: Written report submitted for review. Aas has question on the \$2500 for the CET/LSS Trust Agency. Finck clarifies that this is for the Custer Field Trip. Finck states the scholarship funds have not been transferred out in this report. ++Motion by Berkland to approve the report, 2nd by Aas. Motion approved.
 5. President's Report – Ben Lamke: No report. Lamke has had a member to push for Certified Land Corner Records. Discussion was had to place a reminder in the newsletter.
 6. Committee Reports:
 - a) Education Committee – Kristi Goehring: No report. The committee's goal is to attract incoming freshman into the Profession, possibly by adding 2 scholarships one for non-traditional, under the same approval format as now and a second for incoming freshman in an essay format. Goehring is also looking at ways to get the tuition reimbursement program out. Finck suggests placing in the newsletter. Goehring suggests sending a letter to the schools. Finck states scholarship applications are coming in and will distribute for rankings. If applications are incomplete they will be disqualified and not distributed for rankings.
 - b) Legislative Committee – Gary Andersh: No report.
 - c) DPC Report – Don Jacobson: No report.
 - d) Standards Committee – Dean Scott: Scott has an ambitious plan for today to get through all Recommended Guidelines. Scott would like to change the committee's focus on standards as a way to guide practitioners. Possibly change the name to Professionalism and Practice Committee. Leetch suggests Advisory Committee.
 - e) Public Information Committee – Mark Lippincott: No report. Finck hands out "It's Your Land:" brochure and asks if we should place on website. Scott states that a "Consumers Guide" was previously located on the website. Berkland suggests once it is placed on the website that we submit it to NSPS for a possible award.
 - f) Membership Committee – Ron Fisk: Summary submitted. Finck states we are down about 30 people. Some members have retired and we have lost some associates and sustaining members.
 - g) NSPS - Tom Berkland: Written report of the NSPS Board of Governors Fall 2015 Meeting submitted. Berkland states they are working on a certified geodetic course and certification. New ALTA / NSPS Standards will be released on February 23, 2015. Berkland also would like to see our technical schools send students to the NSPS student competitions. Read News and Views. There are rumblings again about Light Squared. There will also be updates on the progress toward their new datum scheduled for release in 2022. A model law will be developed for updating legislation in each state.
 - h) Trig Star – Dan Britton: No report. Thingelstad states the test has been completed. Dan has elected to resign as Trig Star Committee chair and asked Steve Thingelstad to take his place.
- ### 7. Chapter Reports
- a) West River Chapter – Chad Dodds: No report. Thingelstad said they had 5-6 people for the initial point visit.
 - b) Big Sioux Chapter – Wade Lunders – No report. No meeting. Goehring states they presented the final marker to Denny Thorson's wife and son.
 - c) Missouri River Chapter – Fred Leetch. No report.
- ### 8. Old Business
- b) Fund raising Allocations – Diane Aas. Goehring provided a handout showing a summary of the Auction, Scholarship, Grant Projects, etc. which shows the income and payouts from 2004-2015. Using this information to decide how to move forward with a possible project fund. Much discussion was had. Finck asks to have Trig Star added to the summary. Goehring suggest naming the "Crisis / Project Fund" to allow SDSPLS to aid in financial assistance if and emergency occurs. Application to receive funds will require a goal and a scope to be submitted to the board for approval. Possible projects the fund could support would be: door knockers, electronic records, professional consultant fees for legislation movement, attorney fees for review of "Recommended Guidelines" etc. How to fund? Discussion. If scholarship funding can be sustained by interest from the mutual fund principal, we could change our current scholarship fundraising to fund the potential project fund.
 - c) 2016 Convention Update – Janelle Finck: Finck reports the convention is set in stone and asks for any preferences on merchandise sales. Registration for the convention will be available on the website in early November.
- ### 9. New Business
- a) 2016 Election of Officers- List of past officers were provided. Start thinking of potential candidates. Discussion was had to potential change the President's

Finck will have the format updated and place on website.

Continued on Page 10



Perpetuation of Public Land Corners

By Randy D. Bacon, RLS, CFEDS

One of the most important functions we can do as Land Surveyors in South Dakota is perpetuating our public land corners.

Many of the original public land corners have been lost or obliterated since they were originally set in the 1800's. We have the responsibility to perpetuate those corners that we use in our surveys. Refer to the following statutes:

SDCL 43-20-3 Record of corner establishment or restoration – Execution and filing.

A surveyor shall complete, sign and file with the register of deeds of the county where the corner is situated, a written record of corner establishment or restoration to be known as a "corner file" for every public land survey corner and accessory to the corner which is established, reestablished, monumented, remonumented, restored, rehabilitated, perpetuated or used as control in any survey by the surveyor, and within ninety days thereafter, unless the corner and its accessories are substantially as described in an existing corner record filed in accordance with the provisions of this chapter.

SDCL 43-20-5 Survey corner required to be filed under chapter – Reconstruction of monument of corner.

In every case where a corner record of a public land survey corner is required to be filed under the provisions of the chapter, the surveyor must reconstruct or rehabilitate the monument of such corner, and accessories to such corner, so that the same shall be left by him in such physical condition that it remains as permanent a monument as is reasonably possible and so that the same may be reasonably expected to be found with facility at all times in the future.

The State of South Dakota Administration Rules (Blue Book) also reinforces the importance of Land Corner Records. Refer to the following:

20:38:22:05 Land Surveyors. A surveyor shall perform the following services:

- (1) Filing certified land corner records. On certified land corner records, a licensed surveyor shall date, sign and affix the surveyor's number and seal on 8 ½ by 14-inch sheets before presenting a certificate for filing. The certified land record form shall show by sketch and explanation a complete description of the corner monument and accessories established, stating how marked, material used, witness trees and witness object, bearing objects, and courses and distances to adjacent corners if determined in reestablishing the corner described on the certificate. The licensed surveyor shall describe evidence found of the original corner and give the original record if known. The surveyor may include other reference information such as State Plane Coordinates or other specified geodetic coordinates as evidence of the corner position. The surveyor may use the back of the certificate for additional sketches:

As Land Surveyor's, we have been given the responsibility to recover, restore, reestablish, and record our public land corners. We need to insure that the Land Surveyor's in the future can follow in our footsteps.



It Pays to Belong

How NSPS benefits members/
the profession:

Advocacy Program

- Political Action Committee (PAC)
- US Congress
- Federal Agencies
- Assistance on state specific matters (if requested)
- Other geospatial organizations
 - International Federation of Surveyors (FIG)
 - Coalition of Geospatial Organizations (COGO)

Education

- ABET-Lead Society for surveying/geomatics program evaluation for accreditation
- Scholarship Program – 15 annual awards

Licensing/Standards

- NCEES – Participating Organizations Liaisons Council (POLC)
- ALTA/ACSM Land Title Survey Requirements
- NSPS Model Standards

Outreach Opportunities

- Trig-Star
- Boys Scouts Surveying Merit Badge
- National Surveyors Week

Certification Programs

- Reduced rates for Certified Survey Technician Program
- Hydrographic Certification opportunities

Media

- NSPS News and Views weekly newsletter – Sign up by visiting <http://multibriefs.com/optin.php?nsp>
- NSPS Radio Hour on www.americaswebradio.com 11:00 am Eastern every Monday
- Like us on Facebook
- Follow us on Twitter @nspinc
- Visit our Blog at dualfrequency.blogspot.com

Member Discount Programs

Apparel

- NSPS Apparel through Lands' End – http://ocs.landsend.com/cd/frontdoor?store_name=NSPSINC&store_type=3

Insurance

- NSPS Exclusive Insurance Program – Assurance Risk Managers
- 888-454-9562
- www.arm-i.com

Other Insurance programs available

- Professional Liability
- Victor O. Schinnerer and Company
- 2 Wisconsin Circle, Chevy Chase, MD 20815-7003
- 301-951-9746
- http://www.schinnerer.com/product_info/design_firms/land-surv.html

Individual Life and Health Insurance

- Marsh Affinity Group Services
- 1255 23rd Street, NW
- Washington, DC 20037
- 800-424-9883
- www.insurancetrustsite.com/acsm/default.asp

Group Health

- Mass Marketing Insurance Consultants
- 4616 John Humphrey Drive
- Orland Park, IL 60462
- 800-349-1039
- www.mmicinsurance.com

Automotive

TireBuyer.com and NSPS have teamed up to bring you exclusive member savings on tires and wheels. TireBuyer.com is the fastest, easiest way to buy tires and rims. Save 6% instantly on any set of 4 or more tires or wheels! Here's how it works.

1. Go to www.tirebuyer.com
2. Choose your tires and/or rims
3. Use coupon code **GDNSPS14** at checkout and save 6% instantly
4. Choose one of our local professional installers – products will be delivered fast, in most cases, free to the TireBuyer installer
5. Head to the installer and have the tires/wheels installed on your vehicle

Hertz offers members special year-round discounts. Your Hertz CDP#94087 is the key. Call 1-800-654-2210 or visit the Hertz website at www.hertz.com when making your reservation.

Avis provides substantial savings to members. Your Avis AWD number is B287402. To make a reservation with your special AWD Number simply call your travel agency or AVIS at 800-331-1212 or online at www.avis.com.

www.nspis.us.com



NSPS Board of Governors

Fall, 2015
Meeting Report

Thomas Berkland, LS-PE
October 23, 2015

I attended the NSPS the Fall NSPS business meetings on Friday, October 9, at the Kalahari Resort in Sandusky, Ohio. The meeting was held in conjunction with the Professional Land Surveyors of Ohio.

My highlights of the various reports and actions is as follows:

- NSPS has been asked to join in the ongoing NCEES Model Law discussion. Our Executive Director, Curt Sumner, will be attending these meetings for NSPS.
- AAGS has developed an outline for their proposed Geodetic Certification Program which they are developing in conjunction with NSPS. Please watch for developments in this if you are interested in providing geodetic surveying services to NGS.
- SDSPLS needs to submit a response to NSPS on our interest in NSPS holding annual State Affiliate President Symposiums. The state presidents should receive a letter on this shortly.
- Look for new ALTA/NSPS Standards to be released on February 23, 2015 (celebration date of the Roman god Terminus, the god who protects boundary markers). If you perform these surveys please get a copy of the new standards and update yourself on the various changes.
- NSPS is updating its web site. We will need to make sure that access to and from this web site is updated.
- NGS will provide quarterly updates on the progress toward their new datum scheduled for release in 2022. Watch the NSPS News and Views for these updates. A model law will be developed for updating legislation in each state. NGS and NSPS will be soliciting assistance in the future to get help from the state affiliates in promoting this legislation.
- The NSPS Education Committee is sponsoring the 2016 student competition to be held on March 14 next year. This is in conjunction with our spring meeting. The title of the competition is "Large Scale Boundary/Topographic Survey." This is a highly competitive event and we should encourage our surveying students to attend.
- NSPS has a Public Relations Award presented to affiliates or members conducting public relations efforts for surveying, state affiliates, or NSPS. There is a cash award of \$200 presented to the submittal graded best on combination of target audience, surveying content, and creativity. Contact Lisa Van Horn at leslisa13@att.net.
- Regulations for Unmanned Aerial Systems (UAS) is being developed by congress. NSPS plans to vigorously pursue this legislation to do everything we can so that our future use of this important surveying tool is included in the legislation.
- NSPS is developing a booth which will be set up at state conventions to help promote our national society.

Please keep yourself updated to the national events important to surveyor and surveying. Look for NSPS News and Views in your email. There is much information in this electronic newsletter that comes out weekly. I very much enjoy reading this and I am sure that you will also find many interesting articles contained in the forum.

Respectfully Submitted,
Thomas O. Berkland
South Dakota Director to NSPS

Winter Driving Tips

Safety Committee

By: **Joe Breaux**
TSPS Safety Committee Chair

It appears that we are in for a long, cold winter. We experienced an unusually early cold spell that began before Thanksgiving and lasted well into December. Parts of our state have had freezing temperatures with snow, ice and sleet. Others had cold, sometimes near freezing temperatures along with lots of rain. But what's new about unusual weather in Texas?

We needed the moisture after several years of drought conditions, but we could certainly have done without the hazardous driving conditions that came with the wet or snowy and icy highways, roads and bridges. These conditions had vehicles sliding over frozen bridges and roadways, sometimes completely out of control and crashing into bridge walls, other vehicles, or slipping off of roads into ditches. Injuries, vehicle and property damage and even death resulted from driving during these extremely bad conditions.

So what does one do when weather and driving conditions are so dangerous? Most sources recommend that the best option is to stay home, if at all possible. Why risk your life, the lives of your family or others, or risk damage to your vehicles or the property of others? It going out worth all that risk? Staying home should be the first consideration. Safety should come first.

If you can't or won't stay in, then at least know what can increase your safety. If you must drive, then adjust your speed downward. Drive slowly. Everything takes longer in snow, icy or wet conditions. Focus all of your attention and your resources on being a safe driver. Even good drivers must watch out for others who may not be adjusting to the conditions. Speed limits are set based upon good weather so it only makes good sense to slow down on icy, snowy or wet roads.

Also, increasing following distance by two or more times the amount used in good conditions is highly recommended. That means increasing the normal 4 – 6 seconds behind the car ahead to 8 – 12 seconds. When conditions are bad, stopping distance and time for reaction must be increased. Even more distance may be appropriate depending on the conditions.

Avoid quick acceleration and hard braking or quick stops. These are the greatest contributors to skidding in wet or especially in icy, snowy conditions. Traction is greatly reduced by bad conditions and hard braking can easily cause skidding. Even anti-lock brakes that come on newer model vehicles and which are designed to

pulse, not lock up, may still not avoid a skid. Brake slowly and smoothly.

Other tips for winter's snowy, icy or wet weather driving from the American Automobile Association¹ (AAA or "Triple A") and the Texas Department of Transportation² (TxDOT) are:

- When icy, approach curves, turns, bridges and gray patches of road with extreme caution. Sliding often occurs when turning, on a curve or on frozen bridges. Gray patches of road are often "black ice" that is caused by melting and re-freezing. These areas are especially dangerous.
- Don't stop if possible. Try driving a slower, constant speed to match the cycle of traffic lights, if possible. Less energy is required once you are moving than when starting from a complete stop. This does not mean running red lights of stop signs though.
- Don't stop on a hill. You may not be able to re-start your climb or may only slide downhill or off of the road due to the slick conditions. Regaining that lost momentum may not be possible in ice or snow.
- Don't "give it the gas" going up hills. Extra acceleration can break your traction.
- Don't set cruise control on snowy, icy or wet roads. Cruise control is designed to maintain a constant speed on dry pavement. On slippery roads this could cause loss of control of the vehicle.
- Use caution even when a snow or icy road has been rocked or sanded. On state roads, TxDOT uses a variety of materials across the state, depending on availability. But even this only helps to increase traction. It does not eliminate the danger of slippage caused by the bad conditions.
- Keep your vehicle maintained.
- Make sure tires are in good shape, have ample tread and are properly inflated to maximize traction.
- Check wiper blades, replace them if necessary to ensure good visibility.
- Check battery and ignition systems. Cold weather starting is hard on batteries.
- Make sure radiator fluid is at the proper level and has the proper amount of anti-freeze. A frozen cooling system can damage the radiator coils, even crack an engine block. The results could be an expensive fix.

When traveling in remote areas of the state or on long trips during wet, icy or snowy road conditions, take extra precautions. Even cell phone coverage can be limited in parts of the state. Cell phone systems may even be

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Common Research Mistakes Surveyors Make

(Easements)

by
Knud E. Hermansen†
P.L.S., P.E., Ph.D., Esq.

In previous articles I have explained three of the five common mistakes made by surveyors in researching the records. In the first article I discussed mistakes made in determining senior title often required when assessing the boundaries involving an overlap. In the second article I explained the deficiency that may exist when a forward search is omitted. In the third of five common mistakes I explained the necessity for researching the road records. In this article, I will explain the fourth deficiency – researching and identifying easements.

The failure to identify and locate easement records is a major source of liability for surveyors. There are numerous reasons for research difficulties associated with easements. Because some easements are public easements they suffer from the same difficulties associated with locating road records.

Other problems arise by the legal nature of the easement itself. An easement appurtenant to property that was created in, for example, 1823 by recorded grant need not be mentioned in any property records thereafter yet will still effectively burden property and benefit another property (appurtenant property).

The law presumes that an appurtenant easement is a part of the appurtenant property and passes with the conveyance of the appurtenant property even though the easement is not mentioned in subsequent records for the appurtenant property. For example, it is not unreasonable for a surveyor to stop the search of property records long before reaching the ancient property records where the deed for the easement was recorded - especially if all the boundaries to the property being surveyed were created subsequent in time to when the easement was created.

Another problem is that easements often arise from records that are not deeds. The sale of a lot by reference to a subdivision plan may give the lot owner an appurtenant easement in every road or other benefit shown on the plan (such as a park). Also, the call for a private road as a boundary, owned by the grantor at the time of the conveyance, may give an easement to the grantee in the grantor's private road. Unless the surveyor is aware of the law regarding implied easements, the surveyor may fail to research, locate, and mention the implied easement.

Finally, many easements that are evidenced by a deed are so poorly described that it is virtually impossible to locate or fix the width of the easement. These easements are often categorized as "blanket easements."

I hereby convey to William Surry an easement to install and maintain a water pipe across my property.

Where the surveyor has stopped research prior to a grant from the government, the surveyor would be wise to inform the client of a caveat regarding the presence of easements that may not have been discovered and shown on the surveyor's plat.

† Knud is a professor in the surveying engineering technology program at the University of Maine. He offers consulting services in the area of boundary litigation, title, easements, land development, and alternate dispute resolution.

Winter Driving Tips – continued from Page 8

affected during these times, too. Getting stranded could mean an unexpected stop overnight in dangerous conditions. Keeping a Safety Kit in a vehicle is recommended. This could include items such as a flashlight, extra batteries, snacks, water, blanket or extra cold weather clothing, road map, GPS, ice scraper, flares, matches, sand or cat litter for extra traction, first aid kit, chain or tow strap, booster cables, and more.

Stay alert and advised. Check road conditions before a long trip or driving into remote areas. For 24 hour updates of road conditions from SD DOT, call 511.

Please remember to be safe, stay advised and drive with extra care during times when driving conditions are hazardous.

¹ <http://exchange.aaa.com/safety/roadway-safety/winter-driving-tips/>

² www.TxDOT.gov Keyword: Winter Weather

As seen in The Texas Surveyor, January 2014

In SD call 511 for Road Conditions

Abraham Lincoln's Notes for a Law Lecture; Written about July 1, 1850

I am not an accomplished lawyer. I find quite as much material for a lecture in those points wherein I have failed, as in those wherein I have been moderately successful. The leading rule for the lawyer, as for the man of every other calling, is diligence. Leave nothing for to-morrow which can be done to-day. Never let your correspondence fall behind. Whatever piece of business you have in hand, before stopping, do all the labor pertaining to it which can then be done. When you bring a common-law suit, if you have the facts for doing so, write the declaration at once. If a law point be involved, examine the books, and note the authority you rely on upon the declaration itself, where you are sure to find it when wanted. The same of defenses and pleas. In business not likely to be litigated, -- ordinary collection cases, foreclosures, partitions, and the like, -- make all examinations of titles, and note them, and even draft orders and decrees in advance. The course has a triple advantage; it avoids omissions and neglect, saves your labor when once done, performs the labor out of court when you have leisure, rather than in court when you have not. Extemporaneous speaking should be practiced and cultivated. It is the lawyer's avenue to the public. However able and faithful he may be in other respects, people are slow to bring him business if he cannot make a speech. And yet there is not a more fatal error to young lawyers than relying too much on speech-making. If any one, upon his rare powers of speaking, shall claim an exemption from the drudgery of the law, his case is a failure in advance.

Discourage litigation. Persuade your neighbors to compromise whenever you can. Point out to them how the nominal winner is often a real loser -- in fees, expenses, and waste of time. As a peacemaker the lawyer has a superior opportunity of being a good man. There will still be business enough.

Never stir up litigation. A worse man can scarcely be found than one who does this. Who can be more nearly a fiend than he who habitually overhauls the register of deeds in search of defects in titles, whereon to stir up strife, and put money in his pocket? A moral tone ought to be infused into the profession which should drive such men out of it.

The matter of fees is important, far beyond the mere question of bread and butter involved. Properly attended to, fuller justice is done to both lawyer and client. An exorbitant fee should never be claimed. As a general rule never take your whole fee in advance, nor any more than a small retainer. When fully paid beforehand, you are more than a common mortal if you can feel the same interest in the case, as if something was still in prospect

for you, as well as for your client. And when you lack interest in the case the job will very likely lack skill and diligence in the performance. Settle the amount of fee and take a note in advance. Then you will feel that you are working for something, and you are sure to do your work faithfully and well. Never sell a fee note -- at least not before the consideration service is performed. It leads to negligence and dishonesty -- negligence by losing interest in the case, and dishonesty in refusing to refund when you have allowed the consideration to fail.

There is a vague popular belief that lawyers are necessarily dishonest. I say vague, because when we consider to what extent confidence and honors are reposed in and conferred upon lawyers by people, it appears improbably that their impression of dishonesty is very distinct and vivid. Yet the impression is common, almost universal. Let no young man choosing the law for a calling for a moment yield to the popular belief -- resolve to be honest at all events; and if in your own judgment you cannot be an honest lawyer, resolve to be honest without being a lawyer. Choose some other occupation, rather than one in the choosing of which you do, in advance, consent to be a knave.

Comment: Although this is an address that Lincoln prepared for attorneys, I believe much of the sentiment is relevant to all technical consultants. I like to believe that Lincoln's experience as a surveyor must have had some influence on the content of this essay Ed Rogers

By: David Mann, LS (Reprinted from The Cornerpost, Vermont, March 2012)

BOD 10-25-15 Meeting Minutes -- Continued from Page 4

- term to 2 years. Give consideration to the awards this year.
8. Old Business
 - a) Recommended Guidelines -- Dean Scott:

This item was discussed lastly in the meeting. It was a page by page review of the Guidelines addressing membership comments and clean-up of language. The mortgage survey portion of this document was tabled due to lack of agreement on how this section should be set forth.
 10. Next meeting: 9:00 am January 7, 2016 Cedar Shore Resort, Chamberlain, SD
 11. Adjourn at 4:52 pm (central)

Respectfully Submitted
Eric Howard
SDSPLS Secretary





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“Change Is In The Air” Unmanned Aerial System Symposium Wrap-Up

By Jolene Hoffman

UNMANNED AERIAL SYSTEMS (UAS) SYMPOSIUM REPORT

“Change is in the air” couldn’t have been a more perfect theme for the ASPRS UAS Technical Demonstration and Symposium held in Reno, Nevada in late October. Even after a five hour drive to arrive at 8 a.m., the tangible buzz in the exhibit hall woke me right up. The room was packed with all sizes of fixed wing model airplanes, multiple rotor helicopters and 3D models of everything from family photos to surface mining operations generating on any given computer screen, tablet and phone. Everyone but the FAA was there.

Armed with strong coffee and a sugar filled snack I entered the presentation room with the hope of learning how to carve out my share of the fortunes to be made with it all ... and I was not disappointed. The next three days were filled with more innovative information than one brain could possibly process. A summary of the key points I took from the event are best presented in a work-flow format to be considered by a business looking to implement the up and coming technologies and processes.

DEFINE THE CLIENT AND PROJECT

The primary target markets demanding Unmanned Aerial Systems (UAS’S) as defined by the presenters in current order of high demand are as follows. Farming and forestry are first in line capitalizing on the near-infrared imaging through which farmers can determine plant health variations over a large crop and adjust fertilizers and water, thus decreasing costs and increasing results. Forestry as well, can determine plant health over a large area and focus maintenance where it is needed.

Running a close second in market demand is Emergency Response – wild land fires, floods and natural disasters. The presentation by the US Forest Service brought to light the speed that photogrammetry technology can now provide an end product. While in flight, software is processing imagery in real time and can produce an area map to the Incident Commander of a fire in as little as four minutes post flight. The exponential increase in safety created by using unmanned vehicles for reconnaissance is obvious. Add to the plane, the ability to attach a communication repeater, to relay cell and radio signal to remote areas, and it becomes mission critical.

Volume monitoring in construction and mining ranks third in the race to implement UA Systems. Equipment and software developers promote the ease and speed by which management teams can receive updates on stockpile volumes. Accuracies have been compared to manually walking the same stockpiles with GPS and scanning, resulting in errors of less than one percent. Again these industries are looking at the safety increase keeping boots off the often dangerous terrain.

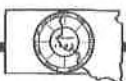
The fourth area of demand is Physical Infrastructure Management, i.e. bridges, dams, etc. Obviously the primary perk of using UAS’s here is safety. Secondly, imaging of these structures can be obtained on short notice and with little to no disruption of traffic or daily activities.

Of course, there are a myriad of reasons and methods to implement an Unmanned Aerial System once you let the creative juices flow. In South Africa, a group of concerned citizens implements such a system to catch rhinoceros poachers. In the process, a program was developed to literally control the UAS from a smart phone. Thus providing a segue into the next block to consider in the flow-chart of your million dollar plan.

DETERMINE YOUR CLIENTS’ NEEDS

Although flying a model plane or helicopter from your phone is a fun concept and may be all the reason you need, however if you are looking to increase your company’s bottom line other necessary factors need to be considered, such as software and data storage. Numerous companies have and are developing software both for pre-mission planning (flight path efficiency) and post processing. Flight path is created in response to the area or structure a client wants an image of. Wind direction, weather and equipment play a part in the plan also. The final deliverable product to the client will further define post processing needs, such as time schedules, precision and accuracy and geospatial location, for example. Several software companies presented on their methods of meeting these needs. As I am not technically inclined in this area, it was interesting to learn that some companies design and develop “in house”, keeping the process closed and controlled, while other companies exercise an “open source” style of development. Open-source software (OSS) is computer software with its source code made available with a license in which to copyright holder provides the rights to study, change and distribute the software to anyone and for any purpose. This method of development saves the end users a significant amount of money.

Data storage is also a hot topic when processing potentially billions of pixels of imagery data. Through the use of “cloud” technology (don’t ask me to explain that one) a private company can store as much data as you



collect and give you only what your client needs. Massive data storage and processing capacity has been a sticking point for many smaller businesses wanting to adopt some form of digital imaging because a whole separate computer would need to be designated for this undertaking. Now the task can be outsourced so the business person doesn't have to get an IT degree to run their equipment.

Now for the fun part, choosing the toy you want to fly! Divided into two categories, (with a developmental hybrid in the works) UAV innovation is nearing the ability to custom design a vehicle for individual business needs limited only by consumer demand to finance research and development.

CHOOSE THE BEST VEHICLE AND SENSOR(S) FOR THE PROJECT

Coverage area seems to be the initial determinant in vehicle choice. One hundred acres was frequently quoted as a measurand. "Fixed-wing" vehicles (essentially a model air plane) are promoted for horizontal distance, whereas the helicopters facilitate vertical missions and higher resolution.

Depending on the job, either vehicle can be fitted with one or more sensors, multi-spectral, lidar, infrared, ultra-violet, photographic, etc. A pipeline survey may best fit with a fixed wing vehicle for horizontal distance combined with a gas leak sensor. However, a bridge inspection would be better suited for a quad-copter, geared to slow vertical flights carrying a 3D imaging sensor. The combinations are almost endless.

LEGAL ASPECTS

As we know, flying UAV's with image recording devices for commercial purposes is not yet permitted legally. Currently in an evolutionary state, none of the presenters attempted to predict future legal compliance status. What is known so far is the FAA (Federal Aviation Administration) had suggested that a licensed pilot may be required to fly UAV's for commercial applications. Waivers have already been granted to specific projects for the DOT (Department of Transportation) and, not surprisingly, to the movie making industry for filming. No specific details were given at this conference but an underlying mutual message spoke to the evidence that the laws limiting UAV's for mapping and other commercial uses are evolving to industry's favor. An additional plus to legislative changes will be reduced rates and increased availability of insurance policies to implement these systems. As it stands now, insurance is expensive and hard to find.

SAFETY

Finally, the last block to fill in on your work-flow chart is safety. Multifaceted as this concept has become in

every industry, safety is the principle by which insurance rates are set. We have already reviewed how Unmanned Aerial Systems can increase safety for our present and future clients. Next on the list is to consider the integration of this relatively foreign concept, process and tool to our know industries.

Collisions will happen, with structures, plants, animals and people without thorough assessment of the area, project and flight plans. The advice from an engineer and software developer at Geo CUE wisely recommended to buy the least expensive equipment and systems you can get away with in the beginning as there will surely be "wrecks" while learning to navigate the aircraft. Additionally, the increasing interest and popularity has fueled technological advances in UAS's in quantum leaps at every stage so something new and better will be available the day after you buy one.

Akin to the "dot com" revolution, concepts and companies are being born in garages around the globe in response to the vision. The UAS Mapping event is one of several efforts to encourage all levels of UAS development to communicate and focus on compatibility of hardware, software and process. At this stage, designing an UA System is still something of a piece meal method.

Even though the average mapping related industries are not yet free to implement UAS technology on a grand scale, the UAS Mapping Symposium drew an eclectic and inspired crowd. The past, present and future presidents of ASPRS attended along with college students from fields such as Land Surveying, Geomatics, GIS and photogrammetry. The array of vendors involved in equipment, software and business development held the interest of every attendee at some level. On the way to this event, I got lost on a casino floor (it happens) and was followed by a random bystander to the conference door where he confessed that he just wanted to crash the event to see what it was all about as he was a model aircraft hobbyist. Before I even entered the doors, I had no doubt I should be there.

Jolene Hoffman has an AS degree in Electronic Systems Technology, Community College of the Air Force, a BS in Business Management and Marketing, California State University Bakersfield, a BS in Land Surveying/Geomatics, Great Basin College, Elko, Nevada, and is employed with the US Forest Service as a Land Surveyor.

As seen in The Nevada Traverse, Vol. 41, No. 4, 2014

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The Land Surveyor's Guide to the Supreme Court of South Dakota

Part 12 – 1911 to 1913

This article represents the twelfth in a series of excerpts from a book prepared by South Dakota licensee Brian Portwood. The complete book is available for review in PDF form on the SDSPLS website and covers 120 years of historic South Dakota cases, answering fundamental land rights questions of potential interest to land surveyors, which are being presented in chronological order here in Backsights & Foresights.

Can a resurvey disregard original survey evidence?

Mills v Lehmann (1911)

This case represents a continuation of the Court's efforts to mandate consistent respect for all of the boundaries that were established through the work of the original GLO surveyors, and it presents the same basic scenario, involving contention over the location of a particular section line, that produced several comparable decisions that we have already reviewed, such as those rendered by the Court in the 1902 McGray case and the 1910 Wentzel case. At this point in time, direct physical evidence of the earliest GLO surveys was already beginning to become scarce, as the pits and mounds that had been established as corner monuments decades before had been largely wiped out in developed areas, primarily by the construction of roads and the cultivation of fields, but enough original physical corner evidence still remained intact in some areas to identify the original GLO corner locations, and that was the case in this controversy. The contrast between the way this case was treated by the trial court and the way the Wentzel case was treated at the trial court level, less than 2 years earlier, shows that the Court's message concerning the importance of original survey evidence was finally reaching the trial judges and sinking in, which would have the effect of minimizing the number of boundary cases that would come to the Court in the future, since the trial courts were finally starting to understand how to properly handle PLSS boundary disputes. Here at last we mark the end of the errant career of Van Antwerp, whose legacy is clearly an unfortunate one, yet like all such lamentable episodes, his body of work provides valuable material from which important lessons can be learned, that may save future surveyors from sharing his fate. Although he was evidently unable to comprehend that the Court would never approve his methodology, Van Antwerp

no doubt believed that he was a great surveyor, performing what he saw as the necessary task of correcting all past measurement mistakes, through the application of advanced measurement science, which he had undoubtedly mastered. His principal error however, which doomed his reputation and his legacy, was simply failing to recognize that the sole objective of PLSS boundary retracement is historical preservation, and not numerical perfection. The fatal flaw in his thinking was that he wanted to be an original surveyor, but he was born too late, and instead of realizing that he could not function as an original surveyor, creating new section lines where he thought they should be, without damaging the land rights of innocent people, he chose to gratify his own desires, rather than respecting the land rights of the citizens, making it necessary for the Court to strike down his work, in order to protect the land rights of innocent entrymen and their successors. Although we are obviously now much farther removed from the time of the original GLO surveys, this same vital principle concerning all resurveys still holds true today, every PLSS retracement surveyor must always remain mindful of the fact that his or her only goal is to recover and perpetuate historic evidence, and not to establish new boundaries by means of precise measurements, in order to avoid finding themselves standing in the shoes of Van Antwerp.

Prior to 1911 - Mills became the owner of the southeast quarter of Section 13 in a certain township, apparently consisting of cropland in Aurora County, and Lehmann became the owner of the north half of Section 24 in that same township. No details relating to how or when either of these two men acquired their respective lands are known, but they were presumably either original entrymen themselves, or they were descendants of original settlers, who were the patentees of their portions of these sections, and there was never any dispute that each man held good title to the described portion of his section. Exactly when the original GLO survey subdividing this township was done is also unknown, but it was certainly several decades in the past by the time the controversy between these two farmers arose. The township in question presumably developed in the normal manner over the passing decades, until it was fully occupied by entrymen, or their descendants, as each generation accepted the existing boundaries that had been handed down to them by their predecessors. At an unspecified date however, within a few years prior to the litigation between Mills and Lehmann, a resurvey of an unspecified portion of this township was executed by Van Antwerp, and one result of this resurvey was the relocation of the section line between the properties of Mills and

Continued on page 16

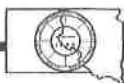
Lehmann, which this resurvey placed about 130 feet to the north of its previously accepted location. Whether or not either Mills or Lehmann had any involvement in requesting this resurvey is unknown, but once it was completed, and its potential impact on their land was seen by these men, they both quite predictably took up opposing views as to its validity. Whether or not Lehmann ever actually took any action, in an effort to take possession of the several acres located directly on his side of the resurveyed line is unknown, but he apparently expressed his belief that the area between the old and new section lines belonged to him, so Mills filed an action against Lehmann, seeking to prevent him from treating the relocated section line as his new northerly boundary, and to have the resurvey declared invalid.

Mills simply made the very same argument that we have already seen successfully made in numerous prior cases, which is that the controlling nature of original surveys is absolute, and no resurvey, such as the one in question here, which deviates from an original survey in any respect, can have any controlling value, so Lehmann had no valid basis upon which to claim any land lying north of the long established section line dividing their lands. Lehmann argued that the manner in which the resurvey had been conducted was correct and appropriate, and the methodology employed in performing the resurvey was technically sound, so the resurvey should control, regardless of whether or not it happened to coincide with any existing boundaries, because the resurvey had resulted in a more equal division of the land within the township, through measurements that were superior in quality to the those made during the original survey. The trial court, following the existing body of case law, which had been established through the adjudication of the comparable cases that we have already reviewed, held that the resurvey had been improperly executed and could not control, confirming the originally established section line as the boundary between the litigants.

As will be readily noted, this dispute was so similar in character to those that we have seen resolved by the Court in a number of earlier cases involving PLSS principles that one might well wonder what made Lehmann think he had any chance of prevailing, and in fact he had none, but the opportunity to gain land proved to be too tempting for him to resist, so he set out on the Quixotic mission of attempting to justify an unjustifiable resurvey. In the view of the situation proposed by Lehmann and his legal team, Mills should bear the burden of proving that the established section line location was legitimate, since a resurvey had been done, which had shown that location to be incorrect, by means of

precise measurements, so the resurvey should be presumed to be correct. If Lehmann had been able to convince the Court to shift the burden of proof to Mills in this manner, Lehmann could have prevailed, since Mills could show no definitive evidence that the long honored section corner locations were genuine originals, and the retracement surveyor had in fact rejected them, but the Court was unwilling to grant the work of this particular retracement surveyor the presumption of correctness. Given its prior experience with this surveyor, previously documented herein, its not surprising that the Court was disinclined to favor his work, and here he had in fact once again disregarded valid boundary evidence, even more flagrantly than he had previously done. This time, as his work was described by the Court, Van Antwerp had not only rejected all of the existing corner locations inside the township boundaries, he had accepted only the four township corners, rejecting and relocating all of the other monuments along the outer boundaries of the township, in an apparent effort to rectify the township boundaries, and he had then created entirely new section lines inside the township, based solely upon his own proportioned section corner locations along the township boundaries. Observing the exceedingly disruptive and harmful potential of this scenario, the Court was unswayed by Lehmann's assertion that the resurveyed corner and line locations should be presumed to be correct, on the basis that no survey which deliberately bypasses original survey evidence can support any such presumption. The Court thus established an important precedent, by rejecting the use of proportionate measurement, where physical evidence of the original GLO survey exists, representing a logical extension of the larger principle that measurement evidence alone is not sufficient to overturn the presumption that long established and accepted section corner and quarter corner locations have a valid origin, ultimately resting upon original survey evidence. Reiterating the relevant portion of the instructions given by the trial judge to the jury, which Lehmann had found to be objectionable, for the purpose of silencing his objection, the Court approved and applauded both the knowledge of the trial judge and his application of the law to the circumstances at hand, as he had very plainly and thoroughly outlined the controversy:

"Now, when the government has made these surveys ... they make a plat ... while it is supposed that every quarter section of land will have just 160 acres in it, it is a matter of common knowledge that very often it does not ... if the boundary to any quarter section of land, as indicated by that plat ... can be ascertained, it will govern ... the boundary lines ... must always and for all time govern, and no man or no state has any right to change it or alter it in any manner ... the difficulty arises in the fact that very often the landmarks ... become obliterated ... it is a matter



of common knowledge that these pits are not always made just as perfect as is expected by the Land Department ... Those mounds must govern ... whether they were right or wrong; they are the marks that must control ... no matter how incorrect the survey is, no matter how crooked the line may be, no matter how far off from the proper place in the field notes the landmarks may be placed, those must control ... a zigzag line ... must absolutely control; and no surveyor and no law has any business or any right to change it ... a surveyor who is called out to resurvey a township or a part of it, his purpose is not to establish new corners. His business and object is to find the old corners ... It is none of his business to make new corners. His business and object is to find the old ones as near as he possibly can. That is the idea of these resurveys."

The Court found itself in complete agreement with the trial court's position, and went on to declare that this message "embodies a very clear statement of the law" emphasizing that any deviant "resurvey could not be considered", expressing its appreciation of the fact that the trial judge had properly followed the same PLSS principles that the Court itself had adopted and upheld in deciding comparable conflicts. Its important to note as well that the position approved here by the Court also rejects the concept, apparently practiced by some surveyors of this time period, such as Van Antwerp, that errors in an original survey can be corrected if they exceed a certain tolerance or limit, which can be arbitrarily defined at the discretion of the retracement surveyor. The view of the value of original surveys taken on this occasion by the Court is quite to the contrary of this notion however, and with very good reason, because under the law the absence of precision in an original survey cannot operate to revoke the right of the entrymen and their successors to rely fully upon all original monuments, wherever they were originally placed, and it is this principle that forms the foundation of all land rights acquired under the PLSS. Original surveys, the Court recognized, are indeed absolute, as against subsequent surveys, although they are not necessarily absolute in every land rights controversy, being subject to the various principles of equity that can have an impact on boundary locations, potentially making the record location of a given line moot and irrelevant, when in conflict with other elements of the law relating to land rights. Nevertheless, Lehmann's opportunistic attempt to take advantage of the Van Antwerp resurvey, since it happened to operate to his benefit, proved to be completely unconvincing to the Court, which fully upheld the lower court decision against him, as he might have expected, had he been aware of Van Antwerp's poor judicial track record. In defense of Van Antwerp, it does appear that he set out sincerely, to fulfill his own vision of what a superior surveyor should be, unwilling to accept anything less than perfect

precision, but as a result of this mindset, he was never able to derive any benefit from any of the admonitions regarding his work that were delivered by the Court, which in his view rendered him nothing more than a slave to the original survey, bound to repeat all of its deficiencies, and left him unauthorized to improve upon it in any way. Unfortunately for him, his desire to perform all of his work with complete independence made the role of the retracement surveyor an unsuitable one for him, since he failed to see any value in protecting established boundaries, although that is in fact the only proper role of the retracement surveyor, and perhaps most ironically, any wise and experienced boundary surveyor today would be thrilled to discover and embrace the very same evidence that he so routinely rejected as unacceptable, under his personal standard. In the end, Van Antwerp's incessant desire to achieve perfection by correcting every previous survey only served to make his own work utterly unreliable in the eyes of the Court, which of course are always focused upon justice rather than precision, negating the value of all of his work and wasting his own outstanding measurement skills, with the ultimate result that the judicial record pertaining to his work has sealed his reputation for posterity.

Can a fence corner represent valid PLSS evidence?

Coulter v Gudehus (1913)

Having established most of the fundamental principles applicable to PLSS boundary evidence and boundary resolution over the two previous decades, such as the principle of monument control, and the presumption that all existing physical evidence of PLSS boundaries has a legitimate origin, being based upon the original GLO surveys, the Court here moved on to address some of the judicial issues involved in the litigation of boundary disputes, such as the burden of proof and the appropriate standard of proof. Here again, just as in the Mills case, which we have just reviewed, the burden of proof turns out to be a key issue requiring the Court's attention, to correct an erroneous view held by a trial judge in this instance, illustrating how this critical factor often controls the outcome of controversies over boundaries. Contrary to popular belief, litigants never enter a courtroom as equals, one side always has at least one essential presumption at law, such as the presumption of innocence for example, operating in their favor, and the opposing side shoulders the corresponding burden of presenting adequate proof, to overcome the effect of any such legal presumption. In the context of PLSS boundaries, the relevant presumption at law pertains to whether the corner or corners in dispute exist or are lost, since only when a corner is lost can it

Continued on Page 18

be properly restored using measurements of record. As was particularly well evidenced in the Mills case, the Court has always been strongly inclined to accept and approve all physical boundary evidence that has been the subject of long and justifiable reliance by land owners, and that position is reaffirmed by the Court in this case, as the Court once again holds that any resurvey attempting to restore a corner that was originally monumented by the GLO, in defiance of physical boundary evidence, on the basis of measurements, cannot control. In fact, perhaps the most important lesson for land surveyors to derive from decisions of the Court such as this one is the concept that PLSS corners are never presumed to be lost, the burden of proving that any given corner is truly and conclusively lost always falls upon the party asserting that the corner location can be restored only through the use of evidence of record, such as measurements. In addition, the Court here very admirably demonstrates that by this point in time it had already acquired both superior knowledge and wisdom relating to proper boundary determination, by adopting the appropriate standard of proof, suitable to conflicts over the validity of boundary evidence, rejecting an artificially elevated standard, that would have the effect of nullifying a vast amount of highly cogent and relevant evidence. One other noteworthy element of this case, which distinguishes it from most of the PLSS cases that we have reviewed previously, is that it does not appear to involve intentional disregard for original survey evidence, although it does of course stand as another example of poor decision making, and inadequate recognition of the value of physical boundary evidence, on the part of the surveyor whose work is negated here by the Court.

Prior to 1913 - Coulter became the owner of the northwest quarter of Section 13 in an unspecified township in Brookings County, and Gudehus became the owner of the southwest quarter of Section 12 in that same township. No details relating to how or when either of these two men acquired their respective lands are known, but they were presumably either original entrymen themselves, or they were descendants of original settlers, who had become the patentees of their portions of these sections, and there was never any dispute that each man held good title to the described portion of his section. This township was evidently subdivided and platted by the GLO prior to 1880, because by that time settlement of the township was already well underway, and the two quarters owned by these two men were already occupied, either by them or by their predecessors. The location of the quarter corner between Sections 12 & 13 was evidently not in dispute during the early years of settlement, when

the original monument marking that corner was still in existence, and fences running to it from unspecified directions were built, at an unspecified point in time, in reliance upon that original monument, leaving it at least partially obliterated, but effectively perpetuated by the fence corner itself, and by the knowledge of the surrounding land owners. At an unspecified date, a resurvey was done, during which some remaining evidence of the original monument marking this quarter corner was found, and it was accepted as a genuine original corner, at an unspecified later date however, during another resurvey, performed by a different surveyor, the fence corner location was either ignored or rejected, and a new quarter corner was set, about 100 feet south of the fence corner at which the GLO monument had once stood. The locations of the two section corners marking the ends of the line between Sections 12 & 13 were never in dispute, and this new quarter corner was set during the second resurvey on a straight line between those accepted section corners, in accord with the GLO plat and field notes. Whether or not either of these resurveys had been done at the request of either Coulter or Gudehus is unknown, but once the second resurvey was completed, making the location of their common quarter corner a matter of open controversy, the two men quite understandably took opposing views as to which resurvey was correct. Whether or not any action was ever taken by anyone based on the second resurvey, such as removing or relocating any of the fences running to the obliterated quarter corner monument, is unknown, but Gudehus apparently made it clear to Coulter that Gudehus believed that he owned the land south of the fence corner, extending southward to the section line that had been marked during the second resurvey. Coulter therefore filed an action against Gudehus, seeking to have the validity of the original quarter corner location confirmed, and to have the second resurvey struck down as invalid.

Coulter argued that the long standing quarter corner location, which had been accepted by all of the original settlers and the subsequent occupants of the area as a genuine original corner for many years, was the true quarter corner location, and that the monument marking that location was actually still in existence, although it had been partially obliterated by the construction of fences leading to it, and thus it had never become lost. Therefore, he maintained, the first resurvey had correctly adopted and confirmed the original quarter corner location, and the second resurvey had incorrectly treated the original monument as lost, and improperly relocated the quarter corner to a point where it had never been, on

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the line running directly between the existing section corners. Gudehus argued simply that the quarter corner in question had in fact become lost, and it had correctly been located on the line running directly between the existing section corners during the second resurvey, so all of the land north of that line was part of his quarter. The trial judge instructed the jury that Coulter, as the plaintiff, bore the burden of proving that the location contended for by him was the true original quarter corner location, by proving beyond a reasonable doubt that the evidence remaining in that location was in fact the original monument, and that the corner in question should otherwise be considered lost. Following this instruction, the jury found that the corner in question was indeed lost, and that it had been placed in its correct position during the second resurvey, and the trial court accordingly ruled in favor of Gudehus.

This case stands as a classic example of a pure contest between two varying retracement surveys, resulting from the differing judgment exercised by two different surveyors, who were both confronted with essentially the same boundary evidence, but came to different conclusions as to the meaning and significance of the evidence that was available to them. Although the length of time that passed between these two resurveys is unknown, there is no indication that the conditions on the ground in the vicinity of the quarter corner in question ever changed materially, so these two surveyors had substantially the same evidence at their disposal, yet they produced very different results, because they took diverging approaches to the critical task of evaluating boundary evidence. There is no evidence of whether these two surveyors knew each other, or ever communicated with each other, but their work was in fundamental disagreement, because one chose to take all of the evidence that was available into consideration, and base his decision upon the best available evidence, while the other either deliberately chose not to do so, or simply neglected to do so, resorting to measurements instead, as the basis for his results. The Court recognized that the sole source of this dispute was the controversy over one particular quarter corner location, and the Court fully understood that quarter corners are rarely found directly on line between section corners. The core issue, the Court stated, was whether the original quarter corner monument was lost or merely obliterated, but the court also realized that the conflict over the status of the original monument brought into play a highly important subsequent issue, and that was the matter of which party bore the burden of proof. The trial judge, when instructing the jury, had placed the crucial burden of proof on Coulter, by indicating that the corner location in question should be treated as

uncertain or doubtful, and therefore as having been lost, leaving it subject to relocation based on proportionate measurement, unless Coulter could show the contrary, since the validity of Coulter's corner location had been called into question, and since it had not been accepted during the second resurvey. Observing the clear injustice in this jury instruction, and pointing out that the instructions given to the jury by the trial judge were mutually conflicting, the Court took the position that the alleged uncertainty relating to the corner location in question, that had been raised by Gudehus, was not sufficient to justify the conclusion that the corner was lost. Noting that several witnesses were in agreement that the fences had been built to the original monument location, and cognizant that the surveyor who had performed the first resurvey of the section line in dispute had done a thorough job of seeking out testimonial evidence of the original corner location, while the second retracement surveyor may have never even considered the possibility that the quarter corner had been seen by any surviving settlers, the Court decided that the evidence was indicative of an obliterated corner. Speaking with reference to the contested jury instructions, the Court found that the trial judge had improperly characterized the applicable law, and he had thereby misguided the jury:

"It must be borne in mind in this case that appellant was contending, and his evidence tended to show, that the corner was not only not lost, but not even entirely obliterated ... Under such instruction, it was necessary that the mound claimed by appellant as the government mound should be unquestioned or unchallenged before such mound would control over courses and distances ... There is absolutely nothing in ... our statute that will support an instruction such as the one complained of ... all the surrounding visible evidences, such as improvements, may be considered in determining the existence of a government mound ... each and every thing that may fairly tend to aid the jury in determining whether the original mound is still in existence. Then, weighing all such competent evidence, the jury should determine, from a fair preponderance thereof, whether or not the mound contended for is the government mound ... the location of a disputed corner is an open question, to be determined from all the evidence, and when determined, it controls. There is no hint that from the mere fact that a certain corner is questioned it becomes an uncertain, doubtful or lost corner, and that the government field notes will control in determining the location of it ... where the location of a government corner is established by clear and satisfactory evidence, such location must control over the field notes, or over ... where the corner should have been located ... the instruction ... was clearly incorrect, and it was prejudicial."



As will be readily noted, the Court here adopted the highly flexible and subjective phrase "clear and satisfactory" as the most appropriate expression of the applicable standard of proof, to be employed when evaluating boundary evidence, such as possible original monument locations. Moreover, the Court was entirely comfortable with the use of a broad range of factors as boundary evidence, particularly evidence such as physical improvements, dating from a time when original monumentation was likely to still be in distinctly recognizable condition, and testimonial evidence as well, emanating from parties with specific knowledge, through personal observation, of original monument locations. Also worthy of note is the Court's wise decision to require only "a fair preponderance" of evidence, for the purpose of supporting obliterated original monument locations, rather than mandating strict adherence to the unduly harsh "beyond reasonable doubt" standard, the application of which, the Court was well aware, would often lead to the rejection of legitimate original monument locations that were actually just obliterated, and should therefore be protected. The action of the Court in taking this stance, regarding the standard of proof applicable to boundary evidence, was especially bold and progressive, as well as replete with wisdom, in view of the fact that the published GLO standard at this time expressly called for "beyond reasonable doubt", and that standard was destined to remain technically in effect at the federal level for nearly another century, although only rarely put into practice during that time, until finally being officially retired by the BLM, with the publication of the 2009 Manual. In addition, on this occasion, the Court very wisely treated the existing statutory language, making reference to "doubtful evidences or appearances of monuments" as being inapplicable to situations such as the one presented by this controversy, since there is no indication that this statutory language was ever intended to negate the value of any legitimate boundary evidence. Having determined that the second resurvey could not be upheld as correct, and that neither the jury verdict nor the lower court ruling against Coulter could be allowed to stand, the Court reversed the lower court decision, very astutely leaving the boundary in question where it had always been, and thereby upholding the concept that where any valid boundary evidence exists, the corners and lines of the original survey are merely obliterated, and not lost. In so holding, the Court had clarified that both testimonial and physical evidence can control PLSS boundaries, and confirmed that the presence of such evidence can render it unjustifiable to treat a given corner as lost, making the use of proportionate measurement inappropriate, barring a complete absence of acceptable physical boundary evidence. Interestingly, Coulter had also attempted to present a case for adverse possession, which had been properly denied by the trial court, the Court indicated, because the color of title element of adverse

possession could not be proven in a boundary dispute, revealing that at this point in time the Court was still disinclined to allow adverse possession claims to have any impact on boundary locations, a position which would soon be swept into history however, as we will observe.

The same position that the Court had taken in the Coulter case, regarding the burden of proof relating to PLSS monuments and corners, was set forth by the Court again in 1914, in the case of *Byrne v McKeachie*, which took place in Yankton County, as a consequence of yet another complete township resurvey that had been erroneously performed in the manner of an independent resurvey. In that case, the battle was over the location of one particular interior section corner that bounded the properties of both litigants, with Byrne supporting the resurveyed corner location and McKeachie defending the original corner location, based on long standing improvements, including roads, fences and tree lines. The Court reversed a lower court judgment in favor of Byrne, stating that the lower court had wrongly adopted the resurvey as legitimate and controlling, and in so holding the Court also reiterated that all physical evidence bearing in any way upon the location of any given PLSS corner must be "absolutely lost" before any resurvey can control the location of that corner. The resurvey in question had relocated the section corner at issue by approximately 500 feet from that corner's original location, as indicated by the many relevant improvements that had been made by various parties in the area, leading the Court to declare that no measurement discrepancy of any magnitude, however great or small, can justify ignoring or bypassing presumptively valid evidence of original GLO corners or lines. In addition, the Court concluded by observing that an original PLSS corner, evidenced by accepted improvements of historic origin, "needs no survey" to validate its position, which stands as a poignant reminder that only resurveys which honor all legitimate boundary evidence can hold any controlling value. Also in 1914, in *Mason v Braught*, which was actually a conflict over the ownership of an entire quarter section, resulting from an allegedly severely skewed range line, leaving the township at issue potentially distorted by up to half a mile in width, rather than a boundary dispute, the Court upheld a lower court ruling that the township was about half a mile short along its north boundary, based on evidence pertaining to the location of a particular township corner that had become a source of controversy. In doing so, the Court reminded the parties that a resurvey executed by a county surveyor holds no more controlling value than any other retracement survey, and again emphasized that with respect to original PLSS monuments "lost means ...

Continued on Page 22

completely lost", and also reiterated that no PLSS corners can be legitimately replaced through the use of proportionate measurement unless such corners have first been conclusively proven to be genuinely lost. Interestingly, the Mason case stands as the second most frequently cited case centered upon PLSS evidence in South Dakota history, yet it still ranks far behind the landmark 1893 Randall case, which has been favorably cited nearly as often as all other South Dakota boundary cases combined. All of these outstanding early decisions of the Court nonetheless collectively serve as a stern warning of the potential judicial consequences of failing to honor openly apparent boundary evidence, or rejecting such evidence on the mere basis that it does not reflect modern standards of precision, or does not conform to locations arrived at by means of modern measurements.

**Gratitude turns
what we have into plenty.**

- unknown -

The following information is taken from the **July 24, 2015** meeting minutes of the **South Dakota Board of Technical Professions** complete meeting minutes can be found at: <http://dlr.sd.gov/btp>

Approve the examinee who passed the Fundamentals of Surveying (FS) Exam:

Chadwick Martinson (Certificate # S-11908)

Approve the following examinees to take the Fundamentals of Surveying (FS) Exam:

Kristopher Kenneth Anderson
Tyler Loren Bjerke

Approve the examinee to take the Principles of Surveying (PS) Exam:

Brandon James Huppler

Denial of the examinee to take the Principles of Surveying (PS) Exam (lack of qualifying experience):

Dustin Matthew Ross

Approve the following Land Surveyor (LS) Comity Application:

John Steven Parrish (LS #12581) ND

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