



November 2017

BACKSIGHTS & FORESIGHTS

SDSPLS 35TH ANNUAL CONVENTION
January 10, 11 and 12, 2018
Arrowwood (Cedar Shore) Resort - Chamberlain, SD



Section Breakdown East of Sturgis, SD
Baseline Surveying

**"Acknowledging the good that you already have
in your life is the foundation for all
abundance."**
Eckhart Tolle

IN THIS ISSUE:

**Equipment Best Practices
For The Winter Surveyor**

**NCEES Developing PLSS
Depth Module(s) for PS Exam**

**What To Do In A
Medical Emergency**

**NSPS Director's
Fall Report**

**The Land Surveyor's Guide
To The Supreme Court
Part 20**

**Enclosed:
Membership Renewals
Convention Registration
Award Nominations
Website Business Listings**

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| 7 1/2" x 5" | \$50 per issue |
| 7 1/2" x 10" | \$90 per issue |

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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

Backsights and Foresights is the official publication of the South Dakota Society of Professional Land Surveyors. It is published quarterly. Material published is not copyrighted and may be reprinted without written permission as long as credit is given. All material must be submitted by the middle of the month preceding the issue date, and should be directed to: The Executive Director.

Articles and columns appearing in the publication do not necessarily reflect the viewpoint of SDSPLS but are published as a service to its members, the general public and for the betterment of the surveying profession. No responsibility is assumed for errors, misquotes or deletions.

From the President:

We have been informed that Principles and Practice of Surveying examination will in the future include a depth module related to the U.S. Public Lands Survey System. Minnesota, California, and Virginia have asked for some changes and voting members have approved and authorized development and administration of this module.

STI has held another Custer State Park field survey trip this month. I have visited with Rod this week about how things went this year. He informs me that the group is getting larger each year and there are more non-traditional students in his program each year. Some of these are men or women that have served or are serving in the military. There is an apparent difference in students demeanor. We talked about Nebraska having no survey schools, and that Iowa has been in contact with STI for a graduate from their next few classes. STI has become a new found diamond for potential surveyors coming out of the high schools not only in South Dakota.

Rod was telling me that the film that was made last year from the Custer Park Survey experience was also on the school web site and generates some interest for the SDSPLS and the school. He said that at the beginning of the year, they were bringing all of their new students in to a general gathering place for meeting and introductions and that their field trip film was run as a filler until the meeting started. He said the film was cut short and the students had become so interested that they asked for the film to continue so they could see what happened. This was a room of nearly 1,000 inquiring minds! What an opportunity and thank you Rod for advertising for SDSPLS as well as the School. I am leaving out a couple stories from this year's Custer Park activity experience for Rod to share at convention.

Rod said for a few years now his class has been relocating some old monuments that located blocks in portions of the old city section of Sioux Falls. It seems that the layout of subdivision blocks were set with one monument and it was not on the block corner, but offset some 13 feet. I am told that this project would not be possible if it were not for survey offices in Sioux Falls that have provided a couple of their experienced surveyors to work with the students. Thank you for helping the profession. Wow, on the job interviews as a student is progressing toward a life experience and education. At least that is my perspective.

I worked with Rod back when the internet was just being thought about. You said internet back then and you thought of grandma with her hair net over her new perm. A redhead was a nail with red ribbon tied to it for marking lengths as you measured property. That's why neither of us married a red head woman, we had seen too many already. Thanks Rod for the memories and

the great job path you went on to bring all those students to understanding surveying.

SDSPLS Members - there is a major decision to be made to which there are many potential answers for the BOD and the membership. The BOD stands as the body that makes many decisions for the whole of this organization, but there is much work to do before this decision can be made.

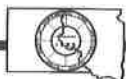
I do not think it is a big secret that Janelle has informed the Board of Directors that she would like to retire from being the Executive Director for the SDSPLS. She is giving us ample time to find a replacement which should be hired by about this time in 2018. She has offered to stand with the newly selected Executive Director through the January 2019 Convention. This is a magnificent offer from Janelle and I know you all will agree that we should continue paying her through this period.

I have looked on the internet and found there are companies that will search for an Executive Director for an organization such as ours. What I find troubling is that the expectation is to give a listing of each duty to be performed, hours expected of the position and what benefits will be offered. Also I have heard a couple BOD members say we need a committee. To this I would say the committee already exists and they are the BOD of the society. Extra face to face meetings are required for these individuals to make a plan, which may mean some sacrifice from these individuals.

SDSPLS has been more than blessed with the sacrifice that Janelle has put in to this organization. Not to mention that she, as President of Fisk Land Surveying & CE, has used her company materials, space and hardware to aid in the success of this organization. I have heard her tell the BOD when offers of more pay were made, that she does not require any additional. Those good BOD members made the addition to her pay which is still low by anyone's comparison. I think the Engineering Society pays their Executive 20 thousand dollars a year. We are three thousand below that.

I perceive that in our future will be paying much more. Just the office space and computer purchases, with salary will add upward of 30 thousand for a part time Executive Director. Hiring a firm to find us an executive director will only add to this figure and will that next Executive have ideals that are of the Surveyor in mind or just a business sense?

What are some other options? Talk with the person that is the Executive Director for the Engineers to see if taking on the Surveyors is an option. Maybe there is another Surveying firm that has an individual that would entertain doing the Executive Director position as paid extra work? Is there a member whose spouse has capabilities to become our executive director? Are the duties split out into sections and new committee



members are made to do those duties, such as BS/FS articles, convention speakers, convention planning, fund raising, meeting schedules, and the list is long from what Janelle sent to me.

You may want to see the discussion of the BOD that is printed in the meeting minutes.

As the changes for this are looming over the head of the BOD, so is the means to finance the Annual Convention. Costs rise for this also and what to do is difficult. At the time of my writing this message the estimate and belief is that a \$30 raise in convention registration should solve this problem for the immediate future. The band-aid idea of slower increases just drags out the pain while a quick action gets the pain done now.

Additionally, we need to overcome some unanticipated speaker fees and costs associated with the 2018 Convention. Earlier this year we had secured a feature speaker from our FEMA Region Office in Denver and would have had the opportunity to address many current FEMA topics and include a specialized training class – at minimal cost to SDSPLS. Unfortunately, due to the recent significant storms and wild fires, FEMA cancelled all of their immediate speaking engagements. The last minute cancellation left us scrambling to find a new feature speaker – and with additional costs that we would not have incurred with FEMA. The good news is that we will have a good speaker and timely, interesting topics, but a need to supplement our budget at the same time that we are working to increase funding for the coming change in Executive Director.

My final observation is one of term length for the BOD President. Having been on the BOD for a few years now I have observed that the President and the President-elect are installed for one year terms. Speaking from my own service as your President this year, I believe the society would be better served if the position of President was extended to 2 years. It may be harder to find a person that would commit to a 2 year term, but the additional year would allow the President a chance to evaluate decisions or ideals and more time to obtain comments from the members as wanted or needed. Even if this does not transpire in the future, the Executive Director would like to hear from any members that may have any interest in filling a position on a committee or on the Board of Directors. It is hard to think who among the many great members might be able or even wanting to provide some service.

Think about serving with and for your society members.

Fred Leetch
SDSPLS – 2018 President
October 31, 2017

35th ANNUAL CONVENTION

Arrowwood (Cedar Shore) Resort, Chamberlain, SD
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

Wednesday - January 10, 2018

South Dakota 1 Call
Larry Janes

Corners Records Update
J/ Steve Peters, PLS and Linda Foster, PLS

The Evolution of the 5th Principal Meridian
The 5th & Black Hills Meridians in the Dakotas
Don Borcharding, PE/LS

Alternate/Concurrent Session
DS World and NADCON 5 / VERTCON
David Zenk, PE/LS
(class registration is limited to 20)

LSIT Course – Lot and Block
Rod Breitling, PLS

Fundraising Auction

Thursday – January 11, 2018

Succeeding in the
National Flood Insurance Program
Wendy Lathrop, PLS, CFM

LSIT Courses –
Introduction to Astronomy & Geodesy
Horizontal & Vertical Curves
Gravity, Elevations & Leveling
Retro-Reflection Prism Errors
David Zenk, P/LS

Unmanned Aerial Systems
Mark Lippincott, PLS

SDBOTP & NSPS Updates
Annual Business Meeting
Banquet, Awards & Trivia Contest

Friday – January 12, 2018

Highways, Byways and Private Roads
Wendy Lathrop, PLS, CFM

Position Available:

Executive Director for the South Dakota Society of Professional Land Surveyors (SDSPLS)

Principal Responsibilities/Duties: Provide location and point of contact for SDSPLS Board of Directors (BOD) and members; conduct daily business activities including addressing mail, email and phone inquiries; general accounting duties (budgeting and accounts receivable/payable); maintenance and annual membership renewals for a 300 +/- member professional surveying organization; organize, produce and distribute a quarterly membership newsletter (February, May, August, November); organize and schedule quarterly Board of Director Meetings; coordinate, schedule and participate in quarterly BOD Meetings (January, April, July, October); organize and schedule Annual Convention (January – 3 days) including speakers, room arrangements, catering, events, registrations, exhibitors, entertainment, etc.; work with BOD and Committee members and general membership as needed; and develop familiarization with society bylaws. A more detailed list of responsibilities is available upon request.

Qualifications: University or Technical School education/degree preferred; general business and accounting practices required, general understanding of Surveying terms and practice will be helpful; leadership experience related to an organization or business; flexibility in working schedule (hours will vary).

Reimbursable Expenses: General office supplies, long distance and conference calling phone charges, other expenses that are directly related to newsletter publication, meeting and/or convention activities.

Executive Director Will Provide: Physical office space; general phone accessibility; hardware including computer and printer; storage of society related information and materials; transportation for up to 3 BOD meetings per year; transportation, lodging and meals for one Annual Meeting per year (3 nights).

Contract Salary: \$20,000 - \$25,000 per year DOE.

Benefits: Not included.

Estimated Hours: Hours will vary seasonally and depending on weekly/monthly responsibilities. Average hours will generally be 20/week, with as few as 5-10 hours per week required during June and July and with 40+ hours per week during November, December and January.

Start Date: October 15, 2018.

Training Period: The existing Director will spend approximately 3 months reviewing duties and requirements (October 15, 2018 through January 15, 2019).

General Contract/Service Agreement: Required and to be provided by SDSPLS.

Interested Parties: Submit a complete resume, list of qualifications, and a minimum of 2 business and 1 personal references to the SDSPLS President at the following email address: yofred@pie.midco.net Received applications will be acknowledged promptly, candidates will be screened and contacts and interviews will be made at the discretion of the SDSPLS Board of Directors.

Date of Closing: December 15, 2017



SDSPLS Board of Directors Meeting

Friday, November 3, 2017

Cedar Shore Resort, Oacoma, SD

(This report subject to Board approval)

Participants: President Fred Leetch, President-Elect Nathan Nielson, Past President Louis O'Donnell, Treasurer Travis Kropuenske, NSPS Director Beau Koopal, West River Chapter President Linda Foster, Big Sioux Chapter President Aaron Norman, Professionalism & Practice Committee Chair Dean Scott, SDBOTP Member and SDSPLS Past President J. Steve Peters, and Executive Director Janelle Finck.

1. Call to order at 11:17 am (central) by President Leetch.
2. Acceptance of Agenda: ++Motion by O'Donnell to approve the agenda as printed, 2nd by Nielson. Motion approved.
3. Secretary's Report – Eric Howard: Approval of the minutes for the July 28, 2017 BOD Conference Call. ++Motion by O'Donnell to approve the minutes as presented, 2nd by Norman. Motion approved.
4. Treasurer's Report – Travis Kropuenske: Written report submitted for review. General discussion and review of expenses. President Leetch notes that an increase in General Office Expenses can be anticipated for the coming year. ++Motion by O'Donnell to approve the Treasurer's Report as presented, 2nd by Foster. Motion approved.
5. President's Report – Fred Leetch: Leetch indicates that his written report has been provided for the newsletter and includes the subjects of extending the President's term to 2 years to allow for more effective management; the Southeast Tech fall field trip; and potential limits of terms for Committee Chairs to ensure that more members are included in Society activities. Additional items to be discussed with other agenda items.
6. Committee Reports
 - a) Education - Kristi Goehring: No report, but Finck indicates that she did provide comments relative to some of the agenda items.
 - b) Legislation – Gary Andersh: No report.
 - c) DPC Report – Don Jacobson: No report.
 - d) Professionalism & Practice – Dean Scott: Scott notes that the review and update of the Recommended Guidelines is still in progress. Scott consulted with Knud Hermansen from the University of Maine (surveyor and attorney) and that there were recommendations to review the document for consistency in language. Scott reports little or no comment at this time from other Chapters, but that several

individuals have indicated that they will be providing comment and he plans to have the revised edition ready for approval at the 2019 convention. Peters notes that the document is well written. .

- e) Public Information – Mark Lippincott: No report.
- f) Membership – Ron Fisk: Written member summary provided. Finck notes that current membership is at 285 – which is down slightly from the recent 300+ membership of the past couple years. The primary drop in membership was among the Associate and Technician.
- g) NSPS and Young Surveyors – Beau Koopal: Written report provided. Koopal attended the fall meeting in Frisco, TX. Dani Huewe also attended and participated in the NSPS Young Surveyors meetings and her written report was provided for review. Koopal is serving on the Work Force Development Committee and it was noted in his meetings that registration numbers are down in some states - MN in particular had noted a 20% drop in membership. An increase in the number and amounts of awards of NSPS scholarships was discussed as a means to increase contact and awareness. Discussion of the pending retirement of instructors from Technical and 4 year degree programs and the development of an NSPS Task Force to seek/recruit instructors. There was also discussion regarding the request for donations to the NSPS Disaster Relief Fund in light of the recent hurricanes and wildfires. There was also discussion of the need to raise NSPS dues from \$40 to \$45 per member/per year to cover increasing costs of doing business. Finck mentioned that she participated in a recent conference call among the state society Executive Directors – some of which were in attendance at the NSPS meeting. The conference calls have become very productive and informative. Finck reported on some interesting statistics from the Ontario province; WV's new Virtual Student Chapter; requests from NM University for donations to assist in securing their surveying program; and the potential for a separate Executive Directors meeting to be held in a more central location that would be more accessible and affordable. This activity could be a benefit for the incoming director.
- h) Trig Star – Steve Thingelstad: No report.

7. Chapter Reports

(Continued on Page 8)

- a) West River Chapter – Linda Foster: The Chapter held a fall seminar on September 29th. Scott summarized the event which included a program from Jerry Penry on the historical and current elevation of Black Elk (Harney) Peak, Total Station Scanning, a UAV Technology Use Update and discussions on Corner Records, Recommended Guidelines and Easements and Notes on Plats. Attendance was lower than anticipated but may increase if we can make this a regular bi-annual event.
 - b) Big Sioux Chapter – Aaron Norman: They are planning for a fall meeting. The Chapter is in receipt of the Final Point markers for Chuck Hanson and Don Larson and had prepared a special monument for Chuck Hanson. Chapter members had also participated with an STI student project in location/documentation of certain block corners in Sioux Falls. That local participation and interaction between SDSPLS members and STI is a unique and valuable opportunity to mentor students.
 - c) Missouri River Chapter – Dana Edwards: No report.
8. Old Business
- a) Corner Records: Steve Peters states that he has received complaints from some licensees in regard to compliance issues with the Corner Record requirements. There was original discussion on the options available – which included repealing the law, finding ways to enhance compliance, and/or modifying the statute to make compliance easier. This subject was discussed at the West River Chapter seminar and we are hoping to gather more input from across the state. The concept of eliminating Corner Records is not supported. Options were discussed to possibly create a database or system such that individual surveyors could download/post their record information to a central website (SDSPLS, SDBOTP, Archives, etc.) in order to centralize the location of information and provide uniformity in the means of recording and retrieving that information. Dean Scott noted that Jon Collins with the DOT reported that the DOT was working on a system for collection of their corner information. Foster reviewed the Pennington County system that they have developed which provides a graphic representation of the corner location which can be selected to retrieve the relevant Corner Record. There was much discussion about the different software options available for such a system and different hosting options. Also discussed were how the current statute could be updated to reflect the current technology used and to enhance information availability and compliance. ++Motion by Koopal to create a Task Force to continue assessment of options for centralizing this information (Linda Foster, Beau Koopal, Nate Nielson, Steve Peters and Travis Jacobsen), 2nd by O'Donnell. Motion approved.
 - b) SDBOTP – Licensure Applicant Evaluation Form: Steve Peters provided a sample evaluation form and indicated that it would be beneficial for SD to develop a similar form and provide enhanced accountability for both the applicant and the supervising surveyor. Nielson comments that a log could be developed to track and verify hours (similar to a journeyman's log). Leetch notes that a SD form would have to be customized to reflect our education and experience options. Discussion of providing access to an on-line log. Finck notes that a requirement for adoption of the log would need to be grandfathered for "in-progress" applicants. Norman mentions that both IA and ND have an interview requirement which could be adopted by SD. ++Motion by Koopal to form a Task Force to create an Evaluation Form for Licensure Application (Aaron Norman, Rod Breitling, Mark Lippincott and Eric Meyer), 2nd by Kropuenske. Motion approved.
 - c) Recommended Guidelines Update – Dean Scott: Previously discussed and revisions anticipated at the 2019 convention.
 - d) 2018 Convention
 - 1) Agenda - Review, discussion and approval of the revised agenda.
 - 2) Registration Fees – Discussion of the need for an increase in registration fees to cover the unanticipated and additional speaker costs associated with the 2018 convention; the need for increased funding for a new Executive Director and overlapping training expenses; increase in travel costs for the NSPS Young Surveyor's meeting. Finck notes that the 2017 convention average registrant expense was \$153 and the registration costs for Associate and retired members did not cover that cost. ++Motion by Nielson to increase convention registration fees by \$30 per registration classification, 2nd by Koopal. Motion approved.



- 3) Banquet Entertainment – Finck reports that she can secure a comedian from an Omaha talent organization for \$1,500 + room or that we can have a Trivia Contest for \$1,000 + room and + prizes. General discussion and agreement to try the Trivia Contest. Koopal suggests that a “Murder Mystery” could also be explored for a future event. Finck also noted that the new sound system was in and had been demonstrated and picked up. It should be an awesome addition to the convention. Finck requests 2-3 persons be available to assist with system set-up and monitoring, and tear down. Finck also suggests that it might be time for a convention poll again to evaluate the current format and requests for speakers and topics. Discussion of on-line survey and providing a form with the convention material.
- e) SW State Corner Monument Update: A flyer has been distributed for the Corner Restoration project date (June 9, 2018) and will be included with the convention information and published in the newsletter. The group is still seeking private donations for the project and the SDSPLS portion of the funding (up to \$1,000) will be assessed when all funds have been secured.
- f) Executive Director Search: Leetch reports that an announcement has been created that will be posted on the SDSPLS website and included in the November newsletter. The posting will also be emailed directly to members. Resumes and questions will be directed to President Leetch. The hope is to secure prospective candidates from within or associated with SDSPLS. Salary is to be posted at \$20,000 to \$25,000 per year and a contract will need to be prepared. Finck recommends a contract term of February 1 through January 31 of the following year. Posting on the position to close on December 15, 2018.
- g) Carl Gunderson Statue Update: Leetch reports that the Pierre Governor’s Statue group was preparing for the Carl Gunderson statue. An \$18,000 donation would cover ¼ of the statue costs, but would include very limited options to promote SDSPLS or identify Gunderson’s history as a surveyor. The donation would not secure any input on the statue. General consensus is that this would not be an effective use of SDSPLS Special Funds. Koopal mentioned that at the NSPS meeting there was an “Augmented Sandbox” that drew a lot of interest and attention and was being promoted as a great tool to generate interest in the surveying profession. A sandbox is created and with the use of an X-Box projector and manipulation of the sand the users can see development of contours and creation of a map – a great tool for career days, science fairs, Math Counts contests, Trig Star, etc.
9. New Business
- a) NSPS Disaster Relief Fund Request For Donations: SDSPLS (and all states) received a request for Donations from Joe Dolan – Chairman of the NSPS Foundation. Koopal Reports that average donations have been in the \$1,000 to \$5,000 range. ++Motion by Nielson to donate \$4,000 to the NSPS Disaster Relief Fund, 2nd by Norman. Motion approved.
- b) STI – Custer State Park Field Trip Grant: Request from STI for a grant supporting traveling expenses (vehicle rental, gas and student meals) in the amount of \$2,157.53. The field trip took place October 2 – 5, 2018. 16 students and 2 instructors participated in the event. ++Motion by O’Donnell to provide \$2,500 for the STI Grant as requested and including additional expenses that may have been incurred., 2nd by Foster. Motion approved.
- c) Tuition Reimbursement Applications: SDSPLS received 2 Tuition Reimbursement Applications from James Pond. All requirements of the Reimbursement applications were met. ++ Motion by O’Donnell to approve the \$300 reimbursement for each application, 2nd by Neilson. Motion approved.
- d) SDSPLS Board of Director Positions
- 1) Secretary
 - 2) President-Elect – General discussion on both positions and BOD members assigned to make contacts and inquiries.
- e) 2018 Budget: Discussion of the proposal to increase the 2018 Executive Director salary to \$18,000 plus an additional \$2,000 for training and to consider a salary of \$18,000 in 2019 plus an additional \$2,000 in overlap for training by Finck. This will yield an additional \$3,000 Over each of the next 2 years. Additional expenses are anticipated for the NSPS Young Surveyors representative as well (\$1,500)
10. Next Meeting Wednesday, January 10, 2018 at 9:00 am – Arrowwood (Cedar Shore) Resort.
11. Meeting Adjourned at 4:37 pm central.
- Respectfully Submitted
By Executive Director Finck on behalf of
SDSPLS Secretary Eric Howard



Equipment Best Practices for the Winter Surveyor

By: Precision Laser & Instrument, Inc.

It's a general conception that the downturn in temperature that comes with late fall means the end of the outside work season, but surveyors are different. To the contrary, surveyors frequently work year-round, and winter offers some unique benefits to other seasons, depending on where work is being done. In rural or wooded areas especially, the loss of leaf cover can have a positive impact on target visibility for conventional surveys and the quality and reliability of satellite signals needed to perform GNSS surveys. For other areas, it may offer relief for field crews from the allergies and inconsistent weather of spring and fall, or the intense heat and humidity of summer. There are, however, obvious drawbacks to the winter season that all surveyors need to take into account when they head out to perform cold-weather work. Knowing the specifications and requirements of your surveying instruments, regular maintenance, and a little common sense are key to making the most out of winter surveying.

Operating temperature is perhaps one of the most important things to consider when performing winter surveys, as just about any piece of surveying equipment that has mechanical or electronic components will have an optimal temperature range that it functions in. Extreme fluctuations in temperature, barometric pressure, and humidity can affect EDM return signals from a prism. Due to this, temperature and barometric pressure values need to be correctly entered into the data collector and user field Horizontal and Vertical collimation, tracker and compensator calibrations should be performed regularly, especially when there is a noticeable change in the environmental conditions between setups. Batteries are particularly impacted by the surrounding temperature, and will lose longevity in extreme highs or lows. Plastic becomes brittle, metal will expand and contract, and lubricants can gel when the temperature dips dramatically. Even on what would otherwise be considered a "dry" day, variations in temperature between the air outside and inside of a piece of equipment can cause condensation to form on the inside of the instrument which may temporarily disable it.

Fortunately, most surveying instruments these days have been designed with the aforementioned hazards in mind, and knowing both the operational temperature range and environmental rating can go a long way

towards avoiding some of winter's headaches. Furthermore, just as the surveyor requires time to acclimate, so too does the instrument being used. An example would be the case of condensation on internal optics, which can paralyze an instrument. In such an instance, simply letting the instrument acclimate may be all that is needed to restore its functionality. A little common-sense can increase the performance of surveying equipment as well, such as limiting its exposure to precipitation and storing it in a dry carrying case as close to room-temperature as possible. There's also no substitute for yearly preventative maintenance by a certified, professional service center to ensure operational performance and accuracy.

Preparing for winter surveying is more about equipment-familiarity and best-practices than anything. It also helps, as with any surveying instrument, to have a firm grasp of the accuracy requirements in relation to the capabilities of the instruments being used. For some surveyors, the added satellite signal strength and visual target clarity, as well as consistent weather patterns, make winter one of their favorite times to work. By far, the biggest concern is related to temperature, whether it be extreme cold that pushes past the operating limits of a surveyor's instrument or mechanical and environmental fluctuations that can affect the precision of work being done. Understanding the performance specifications of the equipment being used, routine maintenance, and a few good habits can make winter surveying your most productive time of year!

Summary of Winter Surveying Tips

1. Batteries will lose charge faster in cold weather. Have extra batteries on hand, external power, or an inverter in the survey vehicle to power chargers. Most survey gear will have the capability to use an external power source. Check the owner's manual or with your local survey equipment dealer for external power recommendations.
2. Input proper temperature and pressure for EDM measurements. It is not uncommon for temperatures to change by 40 or 50 degrees in a day and the barometric pressure to fluctuate with weather changes. These changes can cause EDM corrections of 40 parts per million (ppm) or more. That is a correction of 0.04 feet in a 1000 foot measurement.
3. Modern electronic total stations have field calibration routines for Horizontal and Vertical collimation, compensator calibrations, and may also have tracker collimation routines (for robotic instruments). These routines should be performed regularly and many manufacturers recommend the field calibration routines be



performed when the temperature changes by more than 20 degrees Fahrenheit.

4. Allow your instrument to acclimate to the environment before taking measurements. Do not take an instrument directly from a warm office or vehicle, set it up, and immediately begin taking measurements in cold weather. Allow the instrument to acclimate to the outdoor temperature.
5. Never put a cold instrument back in a sealed case and leave it overnight in a warm office without opening the case to prevent moisture and condensation from affecting the instrument.
6. Use best GNSS practices when working in tree cover. Although it is easier to obtain a GNSS solution with the leaves off, tree branches still cause multipath errors. Use appropriate occupation times and measure critical points more than once at different times of the day and check for repeatability whenever possible.
7. Dress properly and stay safe!

As seen in The Pennsylvania Surveyor, Fall 2016



Deuteronomy 27:17 Through The Ages

New International Version

Cursed is anyone who moves their neighbors boundary stone. Then all the people shall say, Amen!

New Living Translation

Cursed is anyone who steals property from a neighbor by moving a boundary marker. And all the people will reply, Amen.

English Standard Version

Cursed be anyone who moves his neighbors landmark. And all the people shall say, Amen.

King James Bible

Cursed be he that removeth his neighbours landmark. And all the people shall say, Amen.

New BLM DPPS Policy

Cursed be he that useth an incorrect datum or changeth his neighbours coordinates. And all the bureaucrats shall say, Ahem.

As seen in The Nevada Traverse, September 2017

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What To Do In A Medical Emergency

**By: Joe Breaux, RPLS –
TSPS Safety Committee Chair**

With a surveying business, a workplace emergency could happen in the office or in the field, on the job or on the way to or from a job. It is one of those types of events that should be planned for but for which we pray never happens.

What is a workplace emergency? An emergency is an unexpected occurrence (a crisis) that calls for an immediate response. In the workplace, an emergency can be harm to employees or a client, disruption of work and damage to materials, equipment or facilities. A workplace emergency could be a weather event (a severe storm, hurricane or tornado), a fire, a hazardous substance release, an intruder or active shooter situation, or a medical emergency.

September is National Preparedness Month in the USA. Sponsored by the Federal Emergency Management Agency (FEMA) of the Department of Homeland Security, National Preparedness Month encourages Americans to take steps to prepare for emergencies in their homes, businesses, schools, and communities. It is a time for employers to have in place the proper planning and training to be able to effectively respond to an emergency. Planning is an important part of emergency preparation because of the many variables that could come into the situation. Variables would include what happened – is someone injured or is the situation a medical condition of the victim? Does it involve a substance release causing damage or harm to someone? It is a fire or electrical problem? Is it an intruder or active shooter situation?

Without planning for multiple, varied situations, without communicating the plan to employees, without discussing the possible and expected reactions, and without drills and practicing, no plan can be expected to be as effective as it is intended to be.

Hurricane/storm preparedness, making a survival kit, intruder/active shooter and other emergency situations have been presented and discussed in past articles, as well as 2-hand CPT, signs of a stroke and more. So, we will confine our discussion now to possible occurrences related to medical emergencies. A medical emergency is "any medical problem that could cause permanent injury if not treated quickly."¹

Knowing how to act in a medical emergency could save a life or lives. Every company and every office location

should have an emergency plan tailored for the respective location/office. A "one size fits all" plan just might not be adequate or suit each office location. Availability of medical treatment may vary from location to location. 9-1-1 services could also vary.

Even the nomadic field crew should have a basic plan of action in the event of an on-the-job injury or a wreck situation. A first aid kit and cell phone may not be enough. If a medical emergency occurs in the field, there are obvious issues that seldom occur in the office. Issues such as snake bites, insect stings and bites, allergic reaction to bites, stings or plants and a host of other causes; over exertion, heat exhaustion, sunburn, even frost bite during the winter can be all too common. Some of these can be treated with a first aid kit, but the serious ones likely need emergency treatment and a trip to a "quick clinic" or an emergency room for treatment by skilled and knowledgeable medical personnel. If an injury or reaction is so severe of the job is so remote, especially if cell phone service is intermittent or not available, then a good plan is invaluable.

In the event of a medical emergency, most medical and emergency experts recommend these basic steps:

- Call 9-1-1 immediately. Don't wait. It is better to be safe and have trained emergency professionals on the scene quickly than to delay or not make the call. If the situation is a true emergency involving sudden illness or a life-threatening injury, time is critical and seconds may make the difference.
- Know your address and how to give instructions on how to get to your location. If you are in a large building, or on a large or remote site, be especially descriptive in your location. Or describe how to get to a main entrance and have someone waiting to guide the response team.
- Know the location of emergency equipment: first aid kits, fire extinguishers, emergency showers, eye wash stations, spill control equipment, and so on. Some locations now have defibrillators, too.
- Know how to use the emergency equipment. This likely means practice or drill with the equipment.
- Learn CPR and first aid. These skills can make the difference between life or death, both at work and at home. If a victim is not breathing, performing CPR is vital to their survival. Remember too, that 9-1-1 operators are trained to coach someone who is not trained to perform CPR. And if one is reluctant to use mouth to mouth resuscitation with CPS, 2-handed CPR is almost as effective.
- Know where to find the MSDS (Material Data Safety Sheet) for any chemical used in the workplace. These sheets provide valuable



information which you will need in case of an accidental chemical exposure or spill.

- Stay calm. It is important to remain calm and alert. Alert to the symptoms of the victim and surrounding conditions and calm so as not to create an additional situation that could cause you or others to become victims too.

In any medical emergency, it is vital to pay attention to what are called sudden symptoms of the victim before making a call for emergency services. The victim's condition and symptoms should be relayed to the 9-1-1 operator so that the response team can be fully prepared for the proper action upon their arrival at the victim's location.

One or more of these sudden symptoms are common to several very serious medical emergency conditions, namely heart attack, stroke and insulin shock. The list of common symptoms includes numbness or weakness of the face, arm or leg, difficulty in breathing, confusion or unusual behavior, slurred speech or trouble understanding, blurred or loss of vision, loss of balance or coordination, trouble walking or paralysis, severe headache with no known cause, pain or tenderness in the back or lower leg, upper abdominal pressure or pain, extreme fatigue, dizziness or fainting, nausea or vomiting, heartburn or indigestion, upper back pain or pressure, excessive sweating or clamminess, irritability, anxiety or aggression, rapid pulse or heart rate, shaking or muscle tremors, or seizure. Again, coworkers who are assisting a victim should not try to predetermine the condition or response, that is for the professionals. Be sure to communicate as much information as possible to a 9-1-1 operator and the response team.

Once a medical emergency plan is created it should be regularly reviewed by staff to ensure that information and call numbers are up to date, and to make revisions if conditions or information changes. Current and accurate information is a must. This includes the location of the nearest hospital and emergency clinic. An emergency plan should also be periodically reviewed and discussed with all staff so that everyone knows how to react in a variety of situations. Practice drills should also be conducted so that all are given a chance to put into play what the plan is designed to do.

We've all been told that we should have a plan, and a medical emergency is an extremely important reason to have a thorough, well-thought out and rehearsed emergency plan. Review, practice, discussion, and knowing how to implement the plan can save precious time and save lives if a medical emergency does occur. This goes for the work place, in the field, and at home.

¹Wake Forest Baptist Health, Lexington Medical Center (Lexington.wakehealth.edu)

As seen in The Texas Surveyor, September 2017

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

July 14, 2017

Approvals:

Approve the following examinee for passing the Principles of Surveying (PS) exam:

Dustin Ross – LS 13405

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

Cory L. Biegler
Wrangles James Grohs
Chadwick Martinson

NCEES News

NCEES member licensing boards passed a motion to authorize the development of one or more depth modules to supplement the Principles and Practice of Surveying (PS) exam. The proposed modules would relate to the US Public Land Survey System (PLSS) and/or the Metes and Bounds survey system.

The PS exam is used for licensing of professional surveyors across the United States. Currently, it has no depth modules, although most individual jurisdictions require separate state-specific exams.

"This is a long-term project to ensure that our exams continue to meet the needs of professional surveying licensure," NCEES Chief Executive Officer Jerry Carter explained. "We plan to study the structure of the PS exam in the coming year and determine the best path forward."

NCEES President Patrick Tami, PLS has commissioned a task force to work on the issue in the year ahead. The Surveying Exam Module Task Force will evaluate the PS exam specifications to determine if they sufficiently cover the proposed PLSS and Metes and Bounds related content. It will examine current methods of testing PLSS and Metes and Bounds content on state-specific exams. It will also evaluate the need for restructuring surveying licensing exams in terms of impacts on mobility and safeguarding the public as well as the exam volumes that would be required to sustain psychometric viability and economic feasibility.

As Seen in the NCEES *Licensure EXCHANGE* October 2017

November 2, 2017

SDSPLS - NSPS 2017 Fall Report

I had the privilege to attend the NSPS Fall Business Meeting in Frisco, Texas in October. What this consisted of were Committee meetings, Young Surveyor Meeting, Social Events with the Texas Society of Professional Land Surveyors and also the Board of Directors meeting. Most of my time at this event was spent helping out with the Workforce Development Committee, Young Surveyor Group, being part of the Great Lakes Directors Council meeting, including attending the Board of Directors Meeting.

Below are a few of the items discussed within Workforce Development:

1. Implement programs for High School Teachers to learn about surveying teach a very basic course on the subject.
2. It is the consensus that each State should be giving out larger/more scholarships to students in the profession. Most States have a large amount of Scholarship funds that they do not use.
3. NSPS and WD is going to task to change the definition of what a Land Surveyor is with the Department of Labor.
4. To get numbers up in Land Surveyor programs, it seems like a good way is to make In-State tuition for anyone or possibly implement on-line courses.
5. Same as last meeting, have your State Society put a booth at the Annual Conference for Guidance Counselors as they are the ones that are routing the high school students in certain directions.
6. The WD committee is possibly going to try and fund marketing items (Swag) for student career days within each State.
7. There is a PowerPoint made through NSPS for anyone that would like to give to their school counselors.
8. In order to keep and/or get instructors at their University, States should set up an endowment fund to pay extra on their student loans or salary during the year.
9. Have States implement the CST program more in the Private Companies. This program can be very beneficial in providing a career ladder for technicians. Also, it can really provide employers with a way to evaluate applicants and an opportunity to promote the quality of their technical staff. With our State only having one CST in 2016 I think this is something that should definitely be looked into.
(<http://www.learn CST.com/>)
10. A good website to search and view about what we could do within our State to promote surveying is located at (www.becomeatexaslandsurveyor.com) or (<http://surveyoklahoma.com>) .

Items that were discussed during the Great Lakes Council meeting were:

1. Delaware is finding a good solution/way to record deceased Land Surveyors records.
2. Michigan brings 24 students/teacher to perform Geomatics projects which the cost is roughly \$20,000—NCEES paid for half.
3. The GLC will be implementing a Task Force to figure out Right-of-Entry within all of the States.
4. Minnesota membership is down approximately 20%.
5. Minnesota is getting Legislation for utility locators on not marking survey tickets.

Other items that were discussed during the Board of Directors meeting were:

6. NSPS is in the final process of putting in a bid to host the 2022 FIG Conference at Disney World.
7. NSPS is in the process of implementing a new training program for a Certified Flood Plain Certificate Program.
8. The UAS committee is going to explore the possibilities of becoming a member of AUVSI.



9. The UAS committee is in the process of developing standards of practice and guidelines for UAS within the profession.
10. NSPS moved to vote on an Annual Dues change from \$40/year to \$45/year. If it is passed, it will be implemented in 2019.
11. The Idaho State University Director brought his "Augmented Sandbox" that they made to the meetings. It cost roughly \$1500 - \$2000 to make but he raves that it has been great to take to School Councilor conventions and Career Day events. Another option is to have a company build it which would cost roughly \$5000. To see what it is, go to https://www.youtube.com/watch?v=22e7_zAgGFM or <https://www.youtube.com/watch?v=CE1B7tdGCw0>.
12. New Mexico State is offering everyone In-State tuition & a 2 + 2 program to get your 4-year degree. If our local programs are ever struggling to get students, they said this was a great way to entice people to join the program.
13. February 17 -21 is the Student Competition for NSPS. I have sent Rod the information regarding this. The cost is approximately \$1000 per student/instructor.
14. The NSPS Foundation has received roughly \$3000 - \$5000 from State Societies for the Disaster Relief Fund.
15. The Government Affairs committee mentioned that Davis Bacon is possibly going away for Land Surveying.

Above are just a few of the key items discussed during these meetings. Please take the time to browse the NSPS website. There is a lot of valuable information with it. To have an up-to-date idea of what is going on Nationally, please read the NSPS "News & Views". This is a great read and you can have them email you individually on all updates.

To give you an idea of what Committees/Councils there are within NSPS and how they help local surveyors on a national level, below is a list:

- Young Surveyors Network
- CST Board
- Public Relations
- Joint Governmental Affairs
- State Executives Forum
- Private Practice/Professional Standards
- ByLaws & Resolutions/Policy & Procedures
- Workforce Development
- Foundation Board
- Western States Governors Council
- Great Lakes Regional Council
- ALTA/NSPS
- Education
- Membership
- Trig-Star
- County Surveyors
- UAS

Respectfully Submitted,



Beau Koopal
NSPS Director for South Dakota

The Land Surveyor's Guide to the Supreme Court of South Dakota Part 20 – 1931 to 1933

This article represents the twentieth in a series of excerpts from a book prepared by South Dakota licensee Brian Portwood. The complete book can be obtained in PDF form by double clicking on the link in the lower left portion of the SDSPLS Homepage. It 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 trees be privately maintained
in a public right-of-way?**

Gustafson v Gem Township (1931)

The case we are about to review constitutes a legal battle over the legitimacy of a financial compensation claim, amounting to an inverse condemnation action, in which a land owner demands payment for an alleged sacrifice of rights on his part, typically after a certain event has taken place, that has the effect of reducing or eliminating some of his rights for some public purpose, and like so many cases of that variety, land rights are at the core of this controversy. While boundaries are not in question here, location itself is nonetheless a vital issue, and the outcome here points to the significance of understanding the true nature of the land rights that exist in close proximity to section lines. The private land owner comes out a loser in this instance, although neither he nor his predecessor, who had created the problematic situation, had done anything wrong, highlighting the increasing emphasis placed by the Court on the protection of public rights, as it took judicial notice of the development of modern modes of transportation, which were revolutionizing public travel and human interaction in general at this time. Another interesting element of this case appears in spatial terms, as the Court divides and defines the private rights in question vertically as well as horizontally, thereby effectively disconnecting even objects that have grown out of the earth from the land itself, so that rights related to such items born of the earth can be legally severed from the land and subjugated to the superior rights that are legally embedded in the land itself. More than 70 years after this case was decided, a virtually identical conflict would play out similarly, in the 2002 case of Johnson v Marion Township. In that case, Johnson acquired a tract that was bounded by a section line bearing a roadway, and within his land stood 2 majestic Cottonwoods, which he naturally enjoyed and highly valued. Shortly after occupying his property however, Johnson observed some of his neighbors removing trees that were situated close to the roadway

from their properties, and he asked them why they were doing so, at which point he learned that the township had ordered the removal of all trees within the section line right-of-way, which would include his trees as well. Evidently unaware of the precedent established by the Court in the Gustafson case, Johnson decided to fight the township order by contesting the township's complete control over the right-of-way, in an attempt to preserve his trees, failing to realize that the fate of his trees had been sealed for decades, long before he was even born. Citing the 1894 rehearing of the Van Antwerp case, previously reviewed herein, on the issue of township authority, the Court upheld a lower court decision that Johnson's trees must go, on the basis that the township had both the authority and the responsibility to order the removal of any and all objects within the public right-of-way, and Johnson was entitled to no compensation for his loss, since he was charged with knowledge that his trees were situated within the publicly controlled right-of-way, at the time he acquired his property. In addition, this case included some uncertainty over whether or not Johnson's trees were truly within the section line right-of-way, and he claimed that one of them was not, based only upon his own measurements from the centerline of the road however, as he neglected to obtain a survey. Noting that the right-of-way was fenced on both sides, and the fences were 66 feet apart, and both trees were between the fences, the Court concluded that Johnson had failed to prove that the trees were not within the section line right-of-way.

1881 - A quarter section lying in the east half of an unspecified section, located in Gem Township in Brown County, which had been surveyed and platted by the GLO at an unspecified date, was settled by the predecessor of Gustafson. The corners and lines of the section in which this quarter was located were presumably still reasonably well marked at this time, so the location of his east boundary was apparently clear to this entryman, but whether or not he built any fences, or physically identified his boundaries in any other way, is unknown, and what actual use he made of his quarter is also unknown.

1890 - Gustafson's predecessor decided to plant a row of trees along his east boundary, apparently extending along most of that line, if not the full length of that half mile. The type of trees that he planted is unknown, presumably they were either ornamental, or they were intended for purposes of shade, or as a windbreak. Whether or not any kind of roadway existed at this time upon the section line forming the east boundary of this quarter is unknown, but Gustafson's predecessor chose not to plant the trees directly on the section line, although he apparently knew where that line was located, presumably either because a trail or path of some kind centered on the section line was already in use, or because he anticipated that a road might be opened in that location in the future. He evidently wanted these trees to remain as a permanent improvement to the



land, so he carefully placed all of them within a strip lying more than one rod, but less than two rods, west of the section line. Therefore, all of the trees were situated inside the section line right-of-way, but they were all set back far enough from the section line to allow unimpeded travel upon the section line, by means of the typical modes of travel that were in use at this time.

1891 to 1929 - During this period, the section line in question came to be used as a public roadway with steadily increasing frequency, while the trees in question steadily matured, becoming fully grown and fairly large, but there is no indication that anyone ever complained about the trees, or that they ever represented any real obstacle to the use of the section line right-of-way for purposes of travel by the public, or that any other concerns were ever raised about them. At an unspecified time during this period Gustafson acquired the quarter section bearing these trees, but what use he made of the rest of this quarter is unknown, he may or may not have resided in this location.

1930 - Apparently in response to public demands that this section line roadway needed to be improved, the Supervisors of Gem Township made plans to widen it, but no dimensions defining either its existing width or its proposed width are known. To facilitate this project, the township also passed a resolution stating that Gustafson's trees represented a public nuisance, and Gustafson was ordered to remove all of them, but he refused to do so, whereupon a contractor was hired by the township to do the job, and most if not all of the trees were cut down. What was done with the wood after the trees were cut is unknown. In response to this, Gustafson filed an action against the township and the tree removal contractors, seeking compensation for what he considered to be compensable damage to his property.

Gustafson argued that the trees had been properly planted within the section line right-of-way, under the laws that had been in effect at the time they were planted, so when he acquired his property he had acquired complete ownership of the trees, as permanent improvements to his quarter section, therefore he could not be legally required to relocate or destroy the trees, or to allow them to be relocated or destroyed, without proper compensation being made to him, through the process of condemnation. Gem Township argued that although Gustafson did own the trees and the ground in which they were planted, it had the authority to exert complete control over the full width of the section line right-of-way, and it was not obligated to tolerate any uses of any portion of the section line right-of-way that interfered in any way with the public interest in that right-of-way, so the township had been fully justified in destroying all of the trees, without compensating Gustafson for them in any manner. The trial court held that Gustafson had the right to maintain trees within that portion of the section

line right-of-way on his land lying more than one rod from the section line, so although the township had the authority to remove the trees, or to order them to be removed, compensation was due to Gustafson for the damage to his property that their removal represented.

While we have already seen, from a number of the section line right-of-way cases that we have reviewed, that the public right-of-way nominally created along with every section line has always been very strongly protected by the Court, as a highly valuable public asset, this case brings us into the modern era of automotive travel, and here we begin to see the Court encounter issues that are associated with the section line right-of-way in that particular context. When the section line right-of-way originally came into existence, no automotive issues were yet present or contemplated, the only objective at that time being the creation of public pathways suitable for travel on foot, on horseback, or by horse drawn wagons or carriages. Therefore, the language of the original legislation outlining the public right of use in relation to section lines was naturally quite basic, just as the language of RS 2477, the 1866 federal statute from which the section line right-of-way concept sprang, was exceedingly basic, so much so that it would go on to precipitate innumerable intense disagreements all over the west, concerning the details of the legislative intent that gave birth to RS 2477 and what its controlling effect should be. When Gustafson's predecessor planted the trees, the Court observed, the section line right-of-way had already long been in place, and the quarter at issue was therefore unquestionably subject to a public right-of-way, one chain in overall width, centered on the section line, thus the east 33 feet of Gustafson's quarter had been legally burdened from the moment of its creation, for the benefit of the public. Gustafson however, correctly pointed out that another law, passed in 1873 and still in effect in 1930, had bestowed upon all land owners, such as his predecessor and himself, the right to use a strip one rod in width, being the half of the 33 foot easement on his quarter lying farthest from the section line "for the purpose of cultivating the growth of timber and trees", and the Court acknowledged that the law relied upon by Gustafson was applicable to his land. In addition, since no evidence pertaining to the actual section line location was presented by either side, the Court recognized that the location and boundaries of the relevant section line right-of-way were not in dispute, so there was no reason to suspect that any of the trees had been any closer to the section line than the law allowed them to be, and the township conceded that in fact they had all been at least one rod west of the section line. Therefore, this conflict, like many if not most other disputes over land rights, included no boundary component, since the locations of both the right-of-way and the trees at issue were known and agreed upon, the only controversy was over the legal effect of the fact that two valid laws existed, the one creating the section line right-of-way, and the one permitting trees inside it,

(Continued on Page 18)

which overlapped to the extent of one rod, along the outer edge of the section line right-of-way. So the Court understood that its task was simply to define the scope or nature of the related public and private rights that existed under these particular laws, and to that end, harkening back to the 1891 Wells and Smith cases with which we began our study, the Court reiterated that:

"all section lines in this Territory shall be and are hereby declared public highways ... two statutes were in effect when plaintiff's land was entered ... The effect of the federal statute was to dedicate to the public a right-of-way over public land for highways when the same were properly designated by authority of the Legislature; and the effect of the Territorial Act of 1871 was to accept such dedication and designate the location of such highways ... When plaintiff's grantor entered ... two rods in width along the section line was burdened with an easement in favor of the public ... the Legislature could not legally appropriate said ground to any use incompatible with its use for highway purposes ... to occupy and use a strip of the right-of-way for the growth of timber ... would be incompatible with its use for highway purposes, and the very most that the Legislature could grant would be a mere license revocable by proper authority ... the town supervisors were strictly within their right in removing the trees ... the court was in error in granting ... damages."

Just as in the earlier section line right-of-way cases that we have reviewed, the Court again adamantly protected the section line right-of-way as an absolutely essential public right, having priority and supremacy over anything that might come into conflict with it, including any subsequent legislation that might be interpreted to betray, to some degree, the rights of the public to that precious one chain strip, and here the Court made it clear that such protection would be diligently carried to the full extent of that width. The trial court had actually arrived at the same conclusion as had the Court, regarding the fate of the trees themselves, so there was no judicial disagreement over the fact that the township had the authority to take out the trees, the key difference was over the need for compensation to private land owners such as Gustafson for the intrusion upon his property rights that was manifested in the destruction of the trees. The Court realized of course that all owners of property situated in a position such as that of Gustafson, within any given section, own all the land up to the section line itself, and the right-of-way is merely an easement over their land, yet so crucial to society is the section line right-of-way, in the view of the Court, that all land owners must know that any use they choose to make of such an area within their property is subject to termination under the law, and they can expect no compensation for their cessation of any such private use of that public right-of-

way. The Court also here drew a line clearly dividing the trees, although they were growing out of the ground, from the land itself, treating the trees as mere improvements to the land, no different from a building or a fence, rather than treating them as being part of the land, so the fact that Gustafson owned the land that the trees were growing from, gave him no implicit right to maintain them in that location, in defiance of the public will, desire or need to utilize the entire section line right-of-way. To clarify the relationship of the rights claimed here by Gustafson to the rights established by the creation of the section line right-of-way, the Court very appropriately classified the rights of Gustafson, under the law that he had pointed out, as being merely a license, which is in fact a mere privilege, and not a true right at all, being constantly subject to revocation, contrary to the permanent legal character of an easement. Since Gustafson had not presented any issue concerning the veracity of the immediate need for a wider roadway, that was alleged by the township, and he had conceded that the actual removal of the trees had been justified, maintaining only that he was entitled to compensation, the Court reversed the decision of the lower court only on the compensation issue, stating that while Gustafson did own the wood itself, and it should have been left on his property if he wanted it, he was entitled to no other form of remuneration. The Court may have understood that this case marked the dawn of a new era, featuring more intense scrutiny of the varying uses of the section line right-of-way by private owners that had generally been tolerated in the past, and with this decision the Court began gearing up to effectively defend the section line right-of-way in the age of modern high speed travel and advanced technology, as we shall see moving forward.

How important is privity to adverse possession?

Labore v Forbes (1931)

By this time, 12 years had passed since the Court had last been confronted with an adverse possession claim that required the Court to contrast and assess the value or significance of established physical boundaries with the merits of a PLSS retracement survey indicating a materially different boundary location. Although the integrity and overall quality of resurveys was undoubtedly developing and improving during this period, the survey placed before the Court on this occasion apparently left the Court unimpressed, and unfortunately still mindful of its many well documented previous encounters with inadequate resurveys, with the result that the Court remained highly skeptical of the legitimacy of such surveys at this point in time, leading the Court to continue to view adverse possession as a preferable means of boundary resolution. As we have previously observed, the Court had already approved the concept of turning to adverse possession for purposes of the adjudication of boundary disputes, due to the rapidly diminishing availability of original survey evidence, as civilization swept across the great plains, and we will look on as the Court extends the application of adverse possession to



the interior lines of a section in this instance, despite being fully aware that the adversely claimed line is of highly dubious origin, in relation to a quarter section line. Aside from any issues pertaining to the validity of the survey work however, having determined that the survey will not control the outcome, we will watch as the Court proceeds to squarely address 3 fundamental objections to the use of adverse possession as a means of boundary determination, systematically dismissing each of them on the basis of existing legal authority. Perhaps the most frequently raised of these objections are the so-called "mistake doctrine" and the related concept of "subjective intent", both of which seek to place controlling emphasis upon the mindset of the adverse possessor, as opposed to the visible physical evidence of established boundaries on the ground. Quite predictably, the defendant here learns the same lesson that was learned by Sullivan in 1919, and which would become clear to many others in future cases, that the Court will invariably focus on objectively evaluating all existing boundary evidence, and is typically unpersuaded by suggestions that either past errors or mistaken beliefs, relating to boundary locations, should be treated as controlling or limiting factors with respect to adverse possession. In concluding that such factors as mistaken personal opinions and measurement errors are typically irrelevant to adverse possession, the Court here also goes on to clarify that even statements openly made by an adverse possessor, acknowledging the questionable nature of a disputed boundary, do not necessarily foreclose his right to successfully maintain adverse possession up to a such a line, since a boundary that stands visible and undisturbed for the statutory period typically renders such considerations moot. Most notably however, in this case the Court takes an especially clear and decisive stance on the matter of privity, which is essential to the validity of the concept of tacking the rights of successive adverse parties together. In so doing, the Court places its reliance upon the basic principle that the strongest controlling element in all conveyances of land or land rights is intent, and the highest and strongest evidence of the intentions of the parties to any conveyance is provided by the existing conditions on the ground at the time of conveyance, since there can be no clearer source of notice to all parties than that which is supplied when a grantee occupies and utilizes the land that has been granted to him, without objection from anyone, up to the boundaries that have been shown to him by his grantor.

Prior to 1902 - Section 4 in a certain township in Kingsbury County was settled, and the north half of the section was put into use as cropland. How much time passed between the subdivision of this township by the GLO and the arrival of the earliest settlers is unknown. Who the first occupants of the northeast and northwest quarters of the section were is also unknown, but when they initially broke the land, they evidently reserved a strip upon which to toss the rocks that they encountered and removed while plowing, and this strip eventually came to form a line

running north and south, more or less through the middle of the north half of the section. Whether or not any effort was made by these original parties to locate the north and south quarter corners of the section, and to deposit the rocks along the quarter section line, is unknown as well.

1902 - Jackson, who was the patentee of Lot 3 in Section 4, placed a house near the northeast corner of his land, and he also built a fence, on or near the aforementioned rock line, which he apparently believed to be the quarter section line forming the east boundary of Lot 3. Whether or not Jackson had any knowledge relating to the location of the north quarter corner of Section 4 is unknown, there is no indication of how Jackson decided where to situate his house.

1904 - Gonsted acquired Lot 3 from Jackson and he continued to treat the rock line as the east boundary of Lot 3, just as Jackson had, cultivating his land up to the fence. Presumably the remainder of the land in the north half of the section was all still under cultivation as well, by the other original settlers or their successors.

1905 - Labore acquired the rest of the northwest quarter of Section 4 and he continued the cultivation of that entire area. How Labore determined where any of the boundaries of his land were located is unknown, since there is no indication that any section corner or quarter corners monuments were ever found anywhere around the section, but Labore apparently experienced no boundary conflicts with Gonsted or with any of the other parties who owned the land surrounding Labore's land at this time. Labore noticed the line of rocks and he adopted this line as the east boundary of the southeast quarter of the northwest quarter. Who owned the northeast quarter of the section at this time is unknown, but the rock line had evidently always been accepted and treated by the land owners on both sides of the quarter section line as their boundary, so Labore's use of all of the land on his side of that line went unquestioned.

1908 - Labore acquired Lot 3 from Gonsted, making Labore the owner of the entire northwest quarter. There is no indication that any surveys had ever been done in Section 4, subsequent to the original GLO survey that had created it, and no survey was done at this time either, Labore and all of his neighbors apparently accepted the existing visible boundaries as genuine, definite and binding, so no boundary issues arose at this time.

1909 to 1920 - Labore continued to use the northwest quarter throughout this period without incident. At an unspecified time, either during or prior to this period, Forbes acquired the northeast quarter of Section 4 and his son acquired the southwest

(Continued on page 20)

quarter of that section. For an unspecified number of years they apparently accepted the existing visible boundaries between their lands and the land of Labore, but toward the end of this period, for unknown reasons, they evidently became increasingly curious or suspicious about the location of the quarter section lines.

1921 - Forbes and his son confronted Labore with their concerns about the quarter section lines. Forbes believed that the south end of the rock line was too far east and intruded into the northeast quarter, and Labore agreed that the line of rocks appeared to run in a somewhat northwesterly and southeasterly direction, rather than running due north and south. Forbes proposed to Labore that they should either obtain a survey or make some measurements of their own, to try to determine where the quarter section lines were really located, and Labore agreed, but no such action was taken by either party at this time.

1925 - Forbes ordered a survey to locate the quarter section lines. Who performed the survey, in what manner it was conducted, and whether or not any existing monuments, original or otherwise, were found or used in making the survey, are all unknown, but according to this survey, the quarter section line between the northeast and northwest quarters was 110 feet west of the fence and the rock line at the north end of the section, and 233 feet west of the rock line at the south end of the north half of the section. Since the land owned by both Labore and Forbes was presumably described in the typical aliquot fashion in their deeds, Forbes believed that the surveyed quarter section line represented the true location of his west boundary, so he took down the fence that had been built by Jackson and built a fence on the surveyed line. Labore responded by filing an action against Forbes, seeking judicial confirmation that Labore owned all of the land in the north half of the section lying west of the line of rocks, by means of adverse possession.

Labore did not contest the validity of the 1925 survey, instead he argued that a visible line of occupation, represented by the rocks, had been in place for well over 20 years, and that line had always been accepted and treated by all of the previous owners of the land in the north half of Section 4 as their mutual boundary, so he had acquired title up to that line by virtue of adverse possession, making the record location of the quarter section line in question, as that line that had been defined by the survey, irrelevant. Forbes argued that Labore could not successfully maintain that he had acquired any portion of the northeast quarter through adverse possession for 3 reasons, because the location of the line of rocks represented a mistake, because Labore had not personally held possession of all of his land for a full 20 years, and because Labore had freely and openly admitted that he owned nothing more than the northwest quarter, so the survey controlled, and Forbes still owned

the entire northeast quarter up to the surveyed line. The trial court agreed with Forbes that the possession of Labore had amounted to only a correctable mistake, and that Labore's own statements indicated that he never had any adverse intent, denying that there was any validity in the adverse possession claim set forth by Labore, and finding that the surveyed line controlled the location of the boundary in question.

In resolving this controversy, the Court relied heavily upon the same basic principles that it had applied in deciding the Sullivan case in 1919, previously reviewed herein, so the relevance of that case to this one, and the principal difference in the two scenarios, are both noteworthy. As will be recalled, the Sullivan case, like this one, involved the cultivation of land which was found, by means of a survey, to extend beyond a PLSS boundary, and just as here, no title conflict existed, presenting a pure boundary location issue. In addition, in that case, just as here, there were no competing surveys presented by the litigants, there was only one retracement survey, since no survey had been done on behalf of the opposing side, so in both of these instances, no argument could successfully be made by the adverse claimant that the original PLSS line in question was in any location other than that indicated by the survey, therefore the boundary location issue had been effectively forsaken, through a failure to present any contrary boundary evidence. As was noted in discussing the Sullivan case, the Court there chose to apply the progressive view of adverse possession, first adopted in the Ingalls case of 1916, enabling Groves to defeat the challenge presented by Sullivan through the use of adverse possession, because just as in the Ingalls case, the Court was justifiably suspicious of the validity of the resurvey relied upon by Sullivan, and therefore saw fit to allow adverse possession to function as a judicial tool with which to preserve the obliterated PLSS boundary, which Groves had relied upon, but could not otherwise defend. Having definitively established a strong and critically important precedent in those two prior cases, by allowing adverse possession to operate as a surrogate for missing boundary evidence, and to counteract and overcome the legal effect of an uncontested recent survey, the Court naturally recognized this dispute as another opportunity to apply adverse possession in the PLSS boundary context, in the absence of any direct or reliable original survey evidence. The Court had displayed a great propensity for defending both original monuments and reliance upon them by land owners, in a number of the earlier boundary cases that we have reviewed, but in these subsequent cases the Court had demonstrated that it was also prepared to uphold visible physical boundaries in those instances in which the litigant who was in the position to do so failed to present any evidence directly connecting the established physical boundary location to the original boundary location, by exercising adverse possession as a means of boundary resolution. The key difference presented by the conflict brought before the Court by Labore was that it involved a quarter section

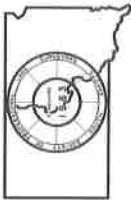


line, as opposed to a section line in the Sullivan and Ingalls cases, so the Court now found itself adapting adverse possession one step further into the realm of boundary law, since the PLSS line in dispute here had never even been run on the ground by the GLO, and there was no basis upon which to portray or defend the rock line as a perpetuation of an authentic original PLSS line. Nonetheless, the Court did not withdraw in the least from its consistent judicial course, devoted to protecting long established boundaries by any means available, regardless of how such boundaries may have been established, thus quoting from the testimony of each of the litigants, the Court indicated that:

"defendant testified ... I told him that the line wasn't right and I wanted to have it surveyed or measured up, and I told him there we could do it ourselves ... He said ... he didn't want any of my land - he didn't want a foot of it ... Plaintiff testified ... I probably did tell Mr. Forbes I didn't want any of his land ... What I wanted was the true line and I supposed I had it when I bought the land ... (The Court resuming) It is not necessary that the property should have been in the possession of the same person ... possession of successive occupants may be tacked together if there is privity between them. Privity exists between two occupants when possession is acquired by voluntary transfer of title or possession. There was privity as to Lot 3 from the time of the possession by Jackson ... The plaintiff and his predecessors in interest entered into possession ... under a mistaken belief as to the true boundary ... there is adverse possession ... notwithstanding the land extends beyond the calls of the occupant's deed ... adverse possession is established, unless by affirmative proof or admission it is shown that for a part of the time at least possession was not adverse and was subordinate to the true owner ... plaintiff admitted that the fence was not on the true line and that he agreed to have a survey made to establish the true boundary ... Physical exclusion of all others under a claim of right ... is the sole test of adverse possession."

Thus the Court most adroitly swept aside all 3 of the potential obstacles to adverse possession in the PLSS boundary context that had been set up by Forbes, sending a clear message that historically honored boundaries would be diligently respected by the Court, thereby paving the way for adverse possession to exert a level of control over the resolution of boundary locations comparable to that which it has always had over the resolution of genuine title conflicts. The Court fully realized of course that every uncontested survey typically bears the presumption of correctness, but having been frequently disappointed by the improper methodology that had been so prevalent in the early resurveys that had come to its attention, particularly the high disregard for physical evidence of established boundaries that was

manifested in those resurveys, the Court was understandably still very reluctant at this time to allow that legal presumption to become a decisive factor in boundary determination. The survey that was done for Forbes may in fact have been properly executed in all respects, but it bore the weight of the legacy of the many independent and unauthorized resurveys that the Court had been compelled, as we have observed, to deal quite sternly with in past cases, so the Court was disinclined to allow it to stand as controlling boundary evidence, against a long honored and physically well marked line, particularly in the absence of a clear connection between the resurvey that was in play here and any original survey evidence. With respect to the issue presented by the words spoken by Labore in conversing with Forbes about their mutual boundary, the Court held that statements made by an adverse claimant do not overcome or negate the controlling value of his physical acts, unless his words are deliberately deceptive or intentionally fraudulent, which would serve to raise an estoppel against him, pursuant to the fundamental principle that actions speak louder than words. On the crucial matter of privity, the Court strongly upheld the concept of tacking, noting that privity exists between every typical grantor and his grantee, because privity of title is not limited to descriptive words appearing in deeds or other documents, it can equally well be based upon the physical limits of occupation or use that visibly mark the area actually transferred or physically delivered by a grantor to his grantee. Moreover, in the view taken here by the Court, the rule that one cannot sell what one does not own has no application, because where the grantor intends to convey all of his land rights, and the adjoiner, whose land has been occupied in part by the grantor, is on notice of the ongoing use of a portion of his land, a transfer to an innocent grantee is legitimate and binding upon all parties, whether the delinquent adjoiner later decides to apprise himself of the true boundary location or not. In conclusion, the Court here again reiterated that the presence of a mistake cannot prevent adverse possession, since every boundary dispute involves a mistaken notion of some kind, and if no mistake had been made by either of the current land owners, or any of their predecessors, regarding the true line location, then there would be no disagreement and no boundary issue would ever have arisen. Therefore, declaring that adverse possession is purely a function of which party held actual dominion over the land, in accord with the trend established by its previous decisions on that topic, the Court reversed the ruling of the lower court, finding the rock line to be the boundary between the properties of the litigants, sufficient in strength to carry the title of Labore, limited though his title was to the northwest quarter, well beyond the surveyed quarter line, back to its time honored resting place, amidst the rock pile.



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