

May 2010

# SIDE SHOTS

Professional Land Surveyors of Colorado

Volume 41, Issue 2



Ethics for the  
Professional Surveyor  
page 7

Prst std  
U.S. Postage  
PAID  
Denver, CO  
Permit No. 1222

Diana Askew, PLS  
PLSC, Inc.  
PO Box 704  
Conifer, CO 80433





## Service - Training - Support - Rentals

Trimble VX Lite  
Upgradable Robotic Scanner  
Get a robot with imaging now.  
Upgrade it to a scanner later

Call us to find out how the Trimble Spatial Imaging-  
can increase your productivity.



**Frontier Precision offers surveyors more  
products and services than any other  
Colorado instrument dealer!**

- Surveying
- Scanning
- Construction
- Mapping / GIS
- Infrastructure
- Factory Service
- Supplies
- Certified Training



## Serving Colorado Surveyors Since 1991

5855 E. Stapleton Dr. North A-140, Denver, CO 80216  
800-652-1522 / 720-214-3500 / [www.frontierprecision.com](http://www.frontierprecision.com)  
Technical Support Hotline 888-797-4774



Professional Land Surveyors  
of Colorado, Inc.

AFFILIATE—NATIONAL SOCIETY OF  
PROFESSIONAL SURVEYORS  
MEMBER—COLORADO ENGINEERING COUNCIL  
MEMBER—WESTERN FEDERATION OF  
PROFESSIONAL SURVEYORS

**OFFICERS (2009)**

Tom T. Adams  
*President*  
1210 24th Lane • Pueblo, CO 81006  
O: (719) 546-5454 F: (719) 546-5414

Michael M. Greer  
*Vice President*  
7174 Union Street • Arvada, CO 80004  
O: (303) 271-8787 F: (303) 271-8706

Diana E. Askew  
*Executive Director/Secretary-Treasurer*  
PO Box 704 • Conifer, CO 80433  
H: (303) 838-7577 F: (303) 838-7179

**2009 PLSC CHAPTER  
ORGANIZATION**

**CENTRAL COLORADO PROFESSIONAL SURVEYORS**

**President Joe Conway: 303-586-6411 (O)**

Vice President, James "JJ" Rihaneck; Secretary, Norm Simonson  
Treasurer, Aaron Willis

Directors: Earl Henderson, Jim Beatty, Rob Snodgrass, Chris Raml,  
Jim Holben, Warren Ruby, Shawn Clarke

**NORTHERN CHAPTER - PLSC, INC.**

**President: Ron Perkins: 970-420-5542 (O)**

President-elect: Carl Sumpter; Secretary/Treasurer, Rob Hintz  
Directors: Bennie Salgado, Laine Landau, Bob Edmonds,  
Steve Varriano

**NORTHWEST 1/4 COLORADO  
LAND SURVEYORS**

**President: Gordon Dowling 970-276-3613 (O)**

Vice President, John C. Noonan; Secretary/Treasurer, Brian T. Kelly  
Directors: Thomas H. Effinger, Jeffrey A. Gustafson

**SOUTHERN COLORADO PROFESSIONAL  
LAND SURVEYORS**

**President Mark Johannes: 719/633-8533 (O)**

Vice President: Joe Alessi; Secretary: Bill Brooks;  
Treasurer: Daniel Hanten  
Directors: Nathan Lira, Dennis Craig,  
Steve Parker Mike Bouchard, Jon Tessin

**SOUTHWESTERN CHAPTER - PLSC, INC.**

**President Robert L. Trudeau: 970/247-1705 (O)**

Vice President, Tom E. Au; Secretary, Parker Newby  
Treasurer, Ed Young

**WESTERN COLORADO LAND SURVEYORS**

**President Tom Sylvester: tomsylvester@bresnan.net**

Vice President: Richard Bullen; Sec'y-Treas.: Brian Bowker  
Directors: Rick Mason, Leslie Doehling, Patrick Green, Jonathan  
Kobylarz,  
Dennis Shellhorn, Scott Thompson, Peter Krick and Mike Drissel

**COLORADO SPATIAL REFERENCE NETWORK**

**President: Dan Smith: 303-512-4401**

Vice President, Brian Dennis; Secretary, Jan Sterling;  
Treasurer, Todd Beers  
Directors: Matthew Barr, Pam Fromhertz,  
Lawrence deVries, Jack Sparks, Daniel Akin

# SIDE SHOTS

may Journal 2010

Volume 41

Number 2

■ President's Letter .....	4
■ From the Editor .....	5
■ Ethics for the Professional Surveyor .....	7
■ Control Points – Slide Rules .....	12
■ Call for Nominations .....	14
■ Why Join the PLSC .....	16
■ In Memory: Chic Chichester and Bob Stollard .....	17
■ NSPS Excellence in Journalism Announcement .....	18
■ PLSC Board Minutes .....	19
■ WFPS January Meeting Report .....	22
■ Legislative Committee Update .....	24
■ Chapter News .....	25
■ Sustaining Members .....	30

## This Month on WWW.PLSC.NET

*In the online version, click on the titles below to download the documents.*

Expanded meeting minutes of the PLSC Board, February 26, 2010 including all attachments and reports.

Full text version of House Bill 10-1085 concerning surveyor's licensure criteria and affidavit of corrections (signed on April 15, 2010).

Expanded memorials for Bob Stollard and Chic Chichester.

*Side Shots is the official publication of the Professional Land Surveyors of Colorado, Inc. and is published quarterly for the betterment of the surveying profession.*

**Tom T. Adams**  
*President*

**Michael Greer**  
*Vice President*

*For Editorial Correspondence, contact:*

**John B. Guyton**

*Editor: Side Shots*

3825 Iris Ave., Boulder, CO 80301

303-443-7001 • jguyton@flatsurv.com

*This publication is not copyrighted and articles may be reprinted with due credit.*

*Statements made and opinions expressed are from the contributors and do not necessarily express the official views of the Professional Land Surveyors of Colorado, Inc.*

*Deadlines for editorials, articles, pictures and advertising are January 1, April 1, July 1 and October 1. All material received after the current deadline will appear in the next issue of Side Shots.*

*We would like to invite anyone who is interested to advertise in Side Shots.*

*Do you have something you want to sell, trade or buy? Why not use Side Shots for your next ad? We can also reproduce business cards for advertising. Ad space reservation must be arranged with Diana Askew, PO Box 704 Conifer, CO 80433; 303-838-7577. Ad copy may be sent to: diana.askew@plsc.net before the editorial deadline (January 1, April 1, July 1 and October 1).*

**Current Advertising Rates:**

Business card size or less - Member \$25.00; Non-member \$30.00

One-Half Page - Member \$115.00; Non-member \$150.00

Full Page - Member \$225.00; Non-member \$300.00

Color advertisements — add 33 percent





# PROFESSIONAL LAND SURVEYORS OF COLORADO, INC.

P.O. Box 704 Conifer, CO. 80433

AFFILIATE – NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS  
MEMBER- WESTERN FEDERATION OF PROFESSIONAL SURVEYORS

## OFFICERS (2009-2010)

MICHAEL M. GREER  
VICE PRESIDENT  
O: (303) 271-8787  
MGREER@JEFFCO.US

TOM ADAMS  
PRESIDENT  
O: (719) 546-5454  
TOM.ADAMS@PLSC.NET

JOHN B. GUYTON  
PAST PRESIDENT  
WFPS DELEGATE  
O: (303) 443-7001  
JGUYTON@FLATSURV.COM

DIANA E. ASKEW  
EXECUTIVE DIRECTOR  
SECRETARY-TREASURER  
O: (303) 838-7577  
DIANA.ASKEW@PLSC.NET

## DIRECTORS (2007-2010)

DOUGLAS R. BERLING  
H: (303) 252-1861

MICHEAL BOUCHARD  
O: (719) 590-9194

RUSSELL CLARK  
O: (719) 633-8533

ROGER D. NELSON  
O: (303) 353-3916

## DIRECTORS (2009-2012)

PETER KENT  
O: (720) 865-3116

GARY D. GABLE  
O: (303) 422-0199

PATRICK GREEN  
O: (970) 245-4099

STAN VERMILYEA  
O: (303) 796-4640

## WFPS DELEGATE (2009-2010)

DAVID C. DIFULVIO  
O: (303) 692-8838

## NSPS GOVERNOR (2009-2010)

WARREN D. WARD  
O: (970) 725-3347

Dear Fellow members:

Winter is finally over. In the last issue, our seasoned panel of experts told us that surveying is often one of the first economic activities to recover at the end of a long recession. I hope that most of you are starting to see that. This economic downturn appears to have hurt most everyone.

I am excited to announce that our long-time efforts to combine our separate workshops that take place along the Front Range into a single, annual event are finally coming to fruition. Having our programs in a single, larger event would offer a greater selection of educational opportunities, be more diverse, attract more sponsors, offer more choices and events, avoid duplication, and be more efficient for both members and the PLSC organization. So, the Board has approved of the concept of replacing the Fall Technical Session at Denver University in November, and the CCPS, the Northern Chapter workshop and Southern Chapter workshops with what is tentatively being called the "Rocky Mountain Regional Conference and Annual Meeting" in February/March, 2011. A new and more convenient location, with easier parking, has been planned.

With a single, large event of this sort, the PLSC will be able to attract more impressive speakers and have comprehensive programs that would appeal to business owners as well as field staff. It would also draw a larger crowd and offer our members a much better situation for professional networking, as well as for running into old friends and associates. Of course, more details on this new event will appear in future issues of Side Shots.

The PLSC has chosen to have a representative on QBS Colorado, an organization formed by state architects and engineers to promote qualification-based selection of professionals in the construction fields, rather than selecting on the sole basis of price. They define qualification-based selection (QBS) as "a process for the selection of design professionals by public owners. It is a negotiated procurement process for selection based on qualifications and competence in relation to the work to be performed." The organization offers assistance to districts, agencies and other government groups to implement such selection procedures. I believe the PLSC Inc. can provide valuable input and prove to be a productive contributor to the organization.

One of our board members had to leave the PLSC due to personal issues. Peter Kent will replace him for the remainder of that term. Also, we have added Parker Newby as an "exofficio" director, representing the SW Chapter. Thanks to both of you for filling in on the PLSC Board.

Thanks and congratulations to JB Guyton (editor of Side Shots) and to Terry Sanders (webmaster of [www.plsc.net](http://www.plsc.net)) for their recent recognition by the NSPS by placing second in state organization magazines and by placing first place in web sites (respectively). Thanks also to Diana Askew, our capable Executive Director, who has greatly assisted in the quality of the website by providing updates and monitoring the content on a regular basis, and created our online registration capability. Please thank them when you see them for their excellent work.

Finally, as you will see elsewhere in this issue, I was shocked to hear that both Chic Chichester and Bob Stollard have died. Both men were past presidents and long-time supporters of the PLSC, and well known to many of us. I had a great admiration for both of them.

Sincerely, Tom Adams, PLS





Late last year, we submitted nominations and samples of both Side Shots and our excellent website, [www.plsc.net](http://www.plsc.net) to the National Society of Professional Surveyors in Gaithersburg, Maryland for the "NSPS Excellence in Journalism Contest 2009." I was told that they made an extra effort to secure many more nominations than the year before, so there was considerable competition. And yet, the PLSC hit the jackpot!

Terry Sanders, who designs and maintains the website, won First Place in the website category. When you consider the fact that we were up against larger states with far more resources to spend on their websites, this honor is particularly impressive and very well deserved. Congratulations to Terry for his many years of work on our "award winning" website. If you haven't visited the website lately, please give it another look.

And this publication that you

have in your hands, Side Shots, won Second Place in the professional magazine category, coming in behind The California Surveyor. Placing second after the biggest state society in the nation is no small achievement, and we are honored by this recognition. I would like to extend my thanks to everyone who contributes to this publication each quarter, from the advertisers, the good folks at The Publishing House, and especially those who do the hard work of writing and contributing material that gets our interest and makes the magazine so worthwhile for our membership. Keep up the good work.

This issue contains a dues reminder, "Why Join the PLSC?" If you haven't yet renewed your membership for this year, or have thought about joining, please look this over, and get those dues paid right away.

I was shocked and saddened to learn that two of the seven contribu-

tors to the February, 2010 issue's cover story, "Lessons from Surveying Downturns of the Past," have passed away: Chic Chichester and Bob Stollard. More details appear in this issue. Both were former Presidents of the PLSC and extraordinary members of our profession. I am so grateful that they were able to share their experiences of former bad times with us and offer their advice. My condolences are extended to their families, friends and associates.

Let's hope that the thawing of the ice and snow, and the stirrings of life in this depressed economy, will get all of us busy and making money again this spring!



JB Guyton  
Editor

## Your deadlines are our deadlines



Custom orders your way ... when you need them.

When your name is on it, our name is behind it.

**Berntsen delivers.**

The professional's choice in survey products • [www.berntsen.com](http://www.berntsen.com) • 877.686.8561





The shortest distance between two points  
is not a trip back to the tripod.

## TRIMBLE S8 TOTAL STATION



"Back and forth." Easily two of the most hated words for any surveyor. Except perhaps, "again".

Trimble® VISION™ technology brings new levels of productivity to the Trimble S8 Total Station by dramatically reducing trips back to the tripod. Now you can see everything the instrument sees from your controller.

Why walk back? With the longer range EDM you can stay put, keep your feet dry, and use your controller to aim, acquire, and capture measurements to reflectorless surfaces – at more than twice the distance you're used to.

The Trimble S8 also gives you live video streaming with surveyed data on the screen to confirm your task list. With photo documentation, you have visual verification for all data before leaving the site. Eliminating an even costlier form of back and forth.

Trimble VISION is the latest in a long line of innovations designed to make surveying more productive, in the field, in the office, and wherever the next opportunity takes you.



© 2010, Trimble Navigation Limited. All rights reserved. Trimble and the Globe & Triangle logo is a trademark of Trimble Navigation Limited, registered in the United States and in other countries. Trimble Access is a trademark of Trimble Navigation Limited. All other trademarks are the property of their respective owners. SUR-183

**FOR MORE  
INFORMATION  
CALL YOUR  
TRIMBLE DEALER**

**AGA Geodimeter**  
Denver, CO  
303-431-1652

**Frontier Precision**  
Denver, CO  
800-652-1522

**Vectors Inc**  
Denver, CO  
303-283-0343





# ETHICS FOR THE PROFESSIONAL SURVEYOR

by Ed T. Bristow, Esq., PLS

While a common definition of ethics is “the rules or standards governing the conduct of a person or the members of a profession,” I would give ethics a practical definition that is “those conscious guidelines that allow human beings to live in harmony as a society, resulting in prevention of personal gain at the expense of and/or intentional harm to individuals.”

There has been a lot of discussion of ethics on a worldwide basis in the last few years, most extensively in the media. It does appear that there has been a decline in ethical standards, especially with government and large corporate interests. As I recall growing up, however, each generation has its own mantra that ethics are declining among the population. When discussing individuals within our society, I do not believe this to be true. There are, of course, exceptions, but in my experience, each individual I have dealt with in my two professions has been of the highest character with great honesty and integrity. By living up to our own highest ideals, chances are very slim that we will ever be in violation of an ethical code, rule, standard, or guideline. Those codes, rules, standards, and guidelines do exist, however, and I would now like to present them for your consideration and guidance.

Is there a written mandate that we, as Colorado Licensed Professional Land Surveyors, must conduct ourselves in an ethical manner? Yes, there is. It is found in Rule 3.1.2 of the Bylaws, Rules and Policies of the State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors (hereinafter the “Board”).

**Ethical Conduct.** Licensees shall conduct the practice of . . . land surveying in an ethical manner and shall be familiar with appropriate, recognized codes of . . . land surveying ethics.

Even though individuals within the profession are of very high integrity and honesty, occasionally someone does violate an ethics provision, either knowingly or unknowingly. I present here a list of some possible violations.

- < Violating, attempting to violate, or aiding or abetting the violation or attempted violation of specific Statutes, Board Rules, or Orders of the Board (C.R.S. § 12-25-208(1)(e); See also Board Rule 3.1.8.); violating any law or regulation governing the practice of professional land surveying in another state or jurisdiction (C.R.S. § 12-25-208(1)(m)); or failing to meet the generally accepted standards of the practice of land surveying through act or omission (C.R.S. § 12-25-208(1)(b)).
- < Practicing without a duly authorized and issued license (C.R.S. § 12-25-208(1)(n), Board Rule 3.4.9, and Board Policy 40.9); attempting to use an expired, revoked, suspended, or nonexistent license, practicing or offering to practice when not qualified, or falsely claiming that the individual is licensed (C.R.S. § 12-25-208(1)(n)); fraud, misrepresentation, or deceit in obtaining or attempting to obtain a license (C.R.S. § 12-25-208(1)(a)), whether by direct misrepresentation, or by omission of perti-



nent facts; assisting someone else to obtain a license when they are not qualified (Board Rule 3.3.3.1); or using in any manner a certificate or certificate number that has not been issued to the individual by the board (C.R.S. § 12-25-208(1)(o)). This final prohibition would include using the seal of another who is working at your company. Consider whether you have their permission, and whether they have reviewed the document. You, as a licensed professional, have the responsibility to maintain control over your seal (Board Rules 3.1.3, 3.2.2, 3.2.3, and those under 6.1). In this electronic age, and with the common usage of electronic seals, as well as the ease of creating an electronic seal with anyone's name and LS number, this control has become much more difficult. If you exercise reasonable control over your seal, any unauthorized use may be a violation for the user, but not for you. What is "reasonable" control? At the very least, do not leave your electronic seal in electronic drawing files that leave your office. Keep your rubber stamp or crimp seal in your possession, and allow employees to use it only when you have reviewed the work product, and are ready to sign it. Finally, unless specifically required by a reviewing government agency, do not seal draft copies of work product.

< Conviction of a felony that is related to the ability to practice land surveying as set forth in C.R.S. § 12-25-208(1)(c). Only the ability to practice land surveying? Could you argue that non-related offenses could relate to your ability to practice land surveying? Or perhaps if you are on the other side of the fence, you could argue that only felonies specifically stated to relate to land surveying would apply under this Statute.

< Performing services beyond one's competency, training, or education (C.R.S. § 12-25-208(1)(g))(See also Board Rules 3.2.1 and 3.3.2)). Notice the "or" separator. Can you have training and education, but still be incompetent and perform services? I would say yes, it happens occasionally.

< Failing to report to the board any other professional land surveyor known to have violated any Statute related to the practice of professional land surveying, or any Board order or rule (C.R.S. § 12-25-208(1)(h)). There are varying degrees of violations, and limited Board resources to prosecute violations. Think about those violations that endanger the safety, health, property, and welfare of the public versus those that are minor infractions. Even if you notice an infraction, I suggest contacting the surveyor first to allow an opportunity to correct the action. Another failure to report violation is the failure to report to the Board within 60 days, any malpractice claim against the professional land surveyor or his company, which was settled or in which judgment was rendered (C.R.S. § 12-25-208(1)(k)). Based on personal experience, I have been informed that since the Board does not regulate Companies, only individuals, you do not have to report your Company for

a violation by an individual who is no longer with your Company, either due to changes in employment, or death.

< Double compensation for one project is regulated by Board Rule 3.4.5. There are a few situations where this may become an issue. In some instances, accepting compensation from two different clients on the same project is acceptable, with full disclosure and approval of all parties. One example is working for the engineer, architect, and contractor all on the same project. Make sure you only charge one client for any particular task. Also be very careful that you charge individual tasks to the right client. Keep very detailed records in order to prevent future problems. Charging two clients for the same task is not allowed. Other situation may arise which require caution and possible avoidance, such as two professionals for the same company working for two separate clients on the same project, and working for two clients on a project who become adversaries in legal proceedings.

< Using plans created by another professional (Board Rule 3.2.2). This situation arises under several possible scenarios. Presented below are two.

< After Original Professional Discharged: This can occur when the plans were created by the professional on behalf of the firm and then leaves their employ. The firm is tasked with completing the plans. Another possibility is when the firm is discharged and a replacement firm takes over the project. In either situation, the subsequent professional assigned to the project must assure that the work to date is reviewed, understood, and complies with that professional's requirements. If you adopt the plans, you are adopting as your own ALL OF THE INFORMATION REFLECTED THEREON. In the replacement firm situation, however, you MUST OBTAIN THE PERMISSION OF THE ORIGINAL PROFESSIONAL, particularly if the original professional has not been paid for those services. If they have not been paid, and you cannot obtain permission, DO NOT USE THE PLANS. To do so is a direct copyright violation under Federal Law. Even the underlying data is copyrighted if the original professional has not been paid. If the services were paid for, the underlying data is not then copyrighted, but the style and presentation (the "map") is copyrighted. (See Hermansen, Knud E., Copyright Basics for Surveyors. *Hoosier Surveyor Magazine*, Vol. 32, No.1, p 17 (2005).

< As Part of a Complete Set for a Team: CDOT right of way plans may have seal and signature locations for the design survey LS, for the CDOT reviewing LS, and/or for the final construction LS. In Colorado, this is ok as long as you clearly state which elements of the plan set you are certifying to. (See Board Rule 3.2.3) Alternatively, you may be signing a set along with architects,



# NOTHING BEATS EXPERIENCE.

AGA is the most experienced sales and service organization in Colorado. So we'll get your crews up and running fast. And the faster they get efficient, the faster you will realize your return on investment.



**AGA**

Advanced Geodetic Applications

14700 W. 66th Place, #10  
Arvada, CO 80004

**303-271-0077**

[www.agageo.com](http://www.agageo.com)



*With the most experienced service department in the region and in-house support, we have the resources to fulfill our commitment to total customer satisfaction. To further support our customers we offer accessories, training and both short and long-term rentals of the most current systems.*

**We sell and support the complete line of Trimble surveying solutions**

- GPS field surveying systems
- GPS infrastructure solutions
- Robotic and servo-driven total stations
- Digital levels
- TDS data collectors
- Trimble Controllers and solutions





engineers, and/or landscape architects. Again, limit your certification to those parts of the plan set prepared by you or under your direct responsibility and checking.

- < Leaving employment and taking files or drawings. If you are the surveyor of record, you or your employer are required to keep a copy of all documents displaying the licensee's seal, signature, and date, for a minimum of three years from the date such documents are tendered to the client, and you must keep copies of your research records, field notes, etc., as well (Board Rules 6.1.7 and 6.6.3). Your employer does not have to let you take copies, but most do not object, even for draftspersons as examples of work completed.
- < Approaching clients of former employer. While there is no specific prohibition, watch out for the Rules under 3.5, and if you are an owner or key manager of a Company, and have signed a non-competition agreement, there may be written contractual issues.
- < Violation of non-competition agreement. This is not an issue addressed directly by the land surveying Statutes, Board Rules or Policy Statements. This topic is much too complex for a full discussion here, but generally speaking, non-competition agreements are not enforceable in Colorado, as they are held to be an undue restraint of trade. There are exceptions, however, and both the language of the agreement and the status of the individual involved have a bearing on the outcome. These are actions brought by the Company, and are EXTREMELY EXPENSIVE to litigate.
- < Issues related to allowing others to control the work product are covered by Board Rules under 3.6 and 6.2. This is not a common occurrence, with two exceptions.
- < If a client wants a specific outcome on their boundary determination, DO NOT give in to their wishes if that outcome is not fully supportable in your mind. Your decision should be totally independent and reasoned.

- < Certification written by others arises commonly, and involves a certification, typically for an ALTA/ACSM Land Title Survey, presented by the lender for inclusion and signature. Review the language carefully. If there is anything included that you are unwilling or unable to certify to, negotiate a change in language, or refuse to sign. The most commonly used offending language includes items outside the purview of a land surveyor, such as planning and use conclusions.

- < There are several other Statutes and rules of interest not specifically discussed above:

- C.R.S. § 12-25-208(1)(f) - Using false, deceptive, or misleading advertising
- C.R.S. § 12-25-208(1)(l) - Being addicted to or dependent upon alcohol or any habit-forming drugs or controlled substances
- C.R.S. § 12-25-208(1)(j) - Using any schedule 1 controlled substance
- C.R.S. § 12-25-208(1)(l) - Failing to pay any fine related to the practice of professional land surveying
- 3.1.3.1 - Control of Caps
- 3.1.5 - Maintenance of Confidentiality
- 3.1.7 - Cooperation with Board Investigations
- 3.1.6 - Caliber of Association
- 3.3.1 - Truthfulness in professional reports, statements, and testimony
- 3.4.1 - Conduct that Discredits the Profession
- 3.4.2 - Appearance of Impropriety
- 3.4.3 - Undue Influence
- 6.5.2 - Responsibility to Research Records

Finally, I would like to conclude with an issue that I feel is extremely important: Cooperation with other surveyors on boundaries. Competition in the marketplace is often at odds with cooperation to resolve a specific boundary. Communication is the key to success. When you review the work product of another surveyor, and you disagree with their boundary conclusion based on the evidence you have found, contact the other surveyor. They may have found evidence that is no longer available, or may have a reasoned conclusion that you didn't consider. On the other side of the issue, if you are the surveyor being called, cooperation will assist not only the later surveyor, but the general public as well.

Remember, communication with clients, landowners, regulatory agency personnel, and fellow professionals is the best way to avoid most of the issues set out above. Always maintain your honesty, integrity and professionalism. Others will generally respond in like kind.

tion.  
- DERIVATIVES  
**ethics** • pl. n. 1  
erning or influ  
branch of know  
need a survey  
ethics



# UTILITY LOCATING



**Underground  
Consulting Solutions**

(303) 904-7422

**Engineering Utility Locating**  
*and*

**Locating of  
Privately-Owned Utilities**

Call UCS for good honest utility locating in conjunction with your next project. Utility locating is our **Number One** concern which means you can expect our full undivided attention to your every project.

*UCS locates throughout Colorado and will travel to your out of state project.  
No job too big , no job too small.*



**Underground Consulting Solutions**

2701 West Oxford Avenue, Suite 6 Englewood, Colorado 80110

Phone (303) 904-7422 FAX (720) 554-7889 Email: [ucs@totalspeed.net](mailto:ucs@totalspeed.net)



# Control Points – Number 9

By Warren Andrews, PLS

## Slide Rules

In the last Control Points article, I said that logarithms were the underlying reason that the slide rule works. That is true, that a slide rule is just a log scale on a stick. The accompanying pictures show both sides of a fancy K&E Log Log Duplex Decitrig slide rule that I tried to learn how to use when I started at the Colorado School of Mines back in the Dark Ages. No one nowadays needs one of these things when a hand calculator is much easier to use and you don't have to worry about where the decimal point goes.

Only a historian probably would be interested in the background of the slide rule even though they are still today quite usable. To me as a mathematical calculating tool, I think they are rather neat. As I previously said, John Napier of Merchiston, Scotland, in 1614 came up with the idea of a better way of calculating large numbers for the astronomers by using powers of numbers that are logarithms. He wrote:

"Seeing there is nothing (right well beloved Students of Mathematics) that is so troublesome to mathematical practice, nor doth more molest and hinder calculators, than the multiplications, divisions, square and cubical extractions of great numbers, which besides the tedious expense of time are for the most part subject to many slippery errors, I began therefore to consider in my mind by what certain and ready art I might remove those hindrances."

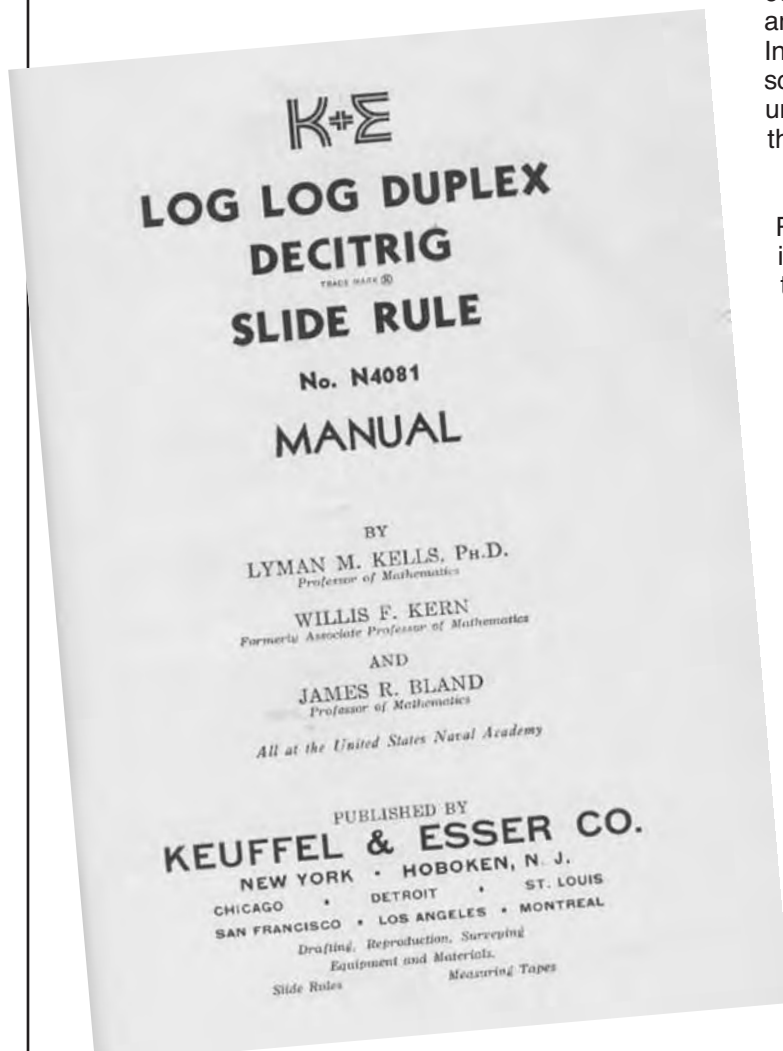
Soon after, in 1620, Edmund Gunter, famous to surveyors for his 66-foot Gunter's Chain, invented the straight logarithmic scale and calculated with it by means of a pair of compasses.

The history of the slide rule continues with William Oughtred in 1630 who arranged two Gunter logarithmic scales alongside each other and adapted to slide past each other. In 1675 Sir Isaac Newton solved the cubic equation by means of three parallel logarithmic scales and made the first suggestion about using an indicator. In 1722 John Warner, a London instrument maker, used square and cube scales. Sometime before 1733 unknown inventors made circular slide rules and some of these used spiral scales.

Still in England, in 1775 at the time of the American Revolution, Thomas Everard, an English Excise Officer, inverted the logarithmic scale and adapted the slide rule to gauging. (Maybe these were measuring the odd shaped barrels of illegal Scotch whiskey.) In 1815 an English physician, Peter Roget, invented a Log Log scale.

Then in 1859 Lieutenant Amedee Mannheim, of the French Artillery, invented the present form of the slide rule that bears his name. Cylindrical calculators with extra long logarithmic scales were invented by George Fuller, of Belfast, Ireland, in 1878 and Edwin Thacher, of New York, in 1881.

A quite different slide rule construction, with scales on both the front and back of body and slide and with a double faced indicator referring to all scales simultaneously, was patented in 1891 by William Cox, who was mathematical consultant to the Kueffel & Esser Co. With the manufacture of Mannheim rules and this new rule, K&E became the first commercial manufacturer of slide rules in the United States. Previously these had all been imported from Europe.





Folded scales CF, DF, and C1F were put on slide rules about 1900, to reduce the amount of movement and frequency of resetting the slide. At first the scales were folded at the  $\sqrt{10}$  but K&E later folded such scales at  $\pi$  so that  $\pi$  could be used as a factor without resetting. Log-log scales in three sections were put on K&E rules about 1909.

A scale referring to the A or B scales to give the logarithms of the co-logarithms of decimal fractions was introduced on K&E slide rules about 1924. Puchstein's scales for hyperbolic functions, patented in 1923, were put on commercial K&E slide rules in 1929. The trigonometric scales were divided into degrees and decimals of a degree, thus making it possible to eliminate all non-decimal sub-divisions from the rule.

K&E introduced a slide rule (patented in 1939) in which all of the trigonometric scales are on the slide and refer to the full length C and D scales. In solving vector

problems on this rule or other similar problems involving continuous operations and progressive manipulation, only the final answer needs to be read.

In 1947, on the basis of Bland's invention, the scales of the logarithms of decimal fractions were referred to the C and D scales, correlated with the Log-log scales and also with all the other scales of the rule, thereby increasing the power of the slide rule by simplifying the solution of exponential or logarithmic problems, the determination of hyperbolic functions, reciprocals, etc.

Of course, K&E was not the only maker of slide rules but was one of the principal makers. Many types of slide rules have been devised and made in small quantities for the particular purposes of individual users. Rules have been made especially for chemistry, surveying, artillery ranging, steam and internal combustion engineering, hydraulics, reinforced concrete

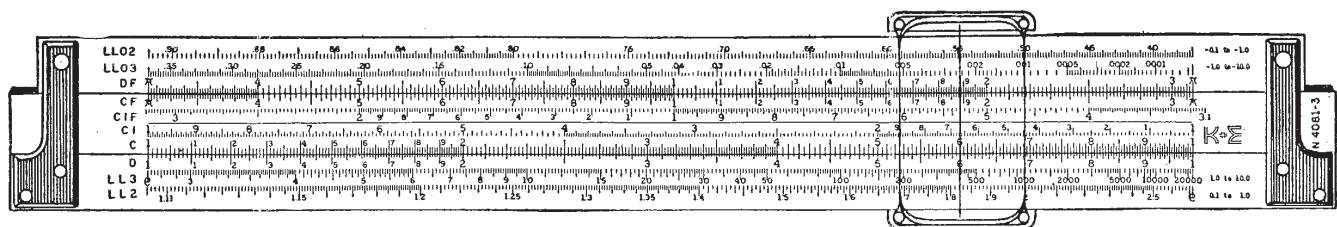
work, air conditioning, radio and other special fields. However, the acceptance of such rules has been relatively limited.

The actual use and manipulation of the slide and the setting of the glass indicator for multiplication, division, squares and square roots, cubes and cube roots, proportion, reciprocals, trigonometry and surveying, plus powers and roots of any number are given with many examples in the K&E Manual that goes along with the slide rule. Unfortunately for surveying, the disadvantage of the slide rule is the uncertainty of the fifth significant figure. But you sure learn quickly where the decimal point goes.

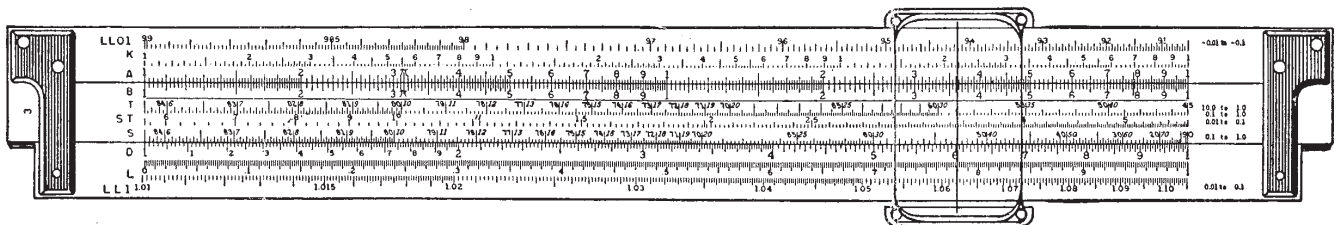
## THE K & E LOG LOG DUPLEX DECITRIG SLIDE RULE

REG. U. S. PAT. OFF.

No. N4081



Front Face



Reverse Face

From the Keuffel & Esser Co. Slide Rule No. N4081 Instruction Manual by Lyman Kellis, Willis Kern and James Bland, 1947



# Call for Nominations

**The Nominations and Elections Committee of the PLSC  
is now accepting nominations for the following positions:**

- 1 – President, for a 2-year term (2011-2012)
- 1 – Vice President, for a 2-year term (2011-2012)
- 1 – Secretary-Treasurer, for a 2-year term (2011-2012)
- 4 – Directors, for a 4-year term (2011-2014)

The terms for the following individuals will conclude after the election in February/March of 2011:

Tom Adams, President (2009-2010)  
Mike Greer, Vice President (2009-2010)  
Diana Askew, Secretary-Treasurer (2009-2010)  
Douglas Berling, Director (2007-2010)  
Michael Bouchard, Director (2007-2010)  
Russ Clark, Director (2007-2010)  
Roger Nelson, Director (2007-2010)

Directors Gary Gable, Peter Kent, Patrick Green  
and Stan Vermilyea will continue until 2012.

Your nominations can be sent either by mail or email:

Douglas Berling  
11536 Community Center Drive, #87  
Northglenn, CO 80233  
drberling@earthlink.net

Deadline for nominations: December 15, 2010

Please include name of nominee, position nominated for, and their contact information.

Ballots will be sent to the membership 36 days prior to the annual meeting, to be held in February, 2011.

## Complete Photogrammetric Services

# MAP WORKS

**Contact: Ralph Vomaske, Certified Photogrammetist, ASPRS**  
**7625 W. 5th Ave. #203E • Lakewood, CO 80226**

**Phone: 303-445-1856**

**E-mail: [mapworks@mho.net](mailto:mapworks@mho.net)**



First Name	Middle Name	Last Name
Company	Primary Phone	PLS or LSI Number and State
Primary Address ___W ___H	Primary Suite or Apt No	Primary City
Primary State	Primary ZIP/Postal Code	Primary Email address
Secondary Address ___W ___H	Secondary Suite or Apt No	Secondary City
Secondary State	Secondary ZIP/Postal Code	Secondary E-Mail address

### PLSC, Inc 2010 Membership Application

#### Questions

Newsletters and announcements via email? ☐ Yes ☐ No  
 Print Primary Email in PDF/Printed Roster? ☐ Yes ☐ No  
 Print Primary Contact info in Online Roster? ☐ Yes ☐ No  
 Print Primary Email in Online Roster? ☐ Yes ☐ No

#### PLSC Membership Level

Sustaining \$230 ☐  
 Voting \$110 ☐  
 Associate \$75 ☐  
 Student \$30 ☐  
 Retired \$60 ☐  
*PLSC Membership Dues include ONE Chapter*

Membership Level \_\_\_\_\_  
 Additional Chapters (\$20 ea) \_\_\_\_\_  
 Total Enclosed \_\_\_\_\_  
 Total Enclosed \_\_\_\_\_  
 Membership Card? \_\_\_\_\_ Yes \_\_\_\_\_ No

#### Choose ONE

**Included Chapter**

CCPS - Included ☐  
 CSRN - Included ☐  
 NCPLSC - Included ☐  
 NW1/4CLS - Included ☐  
 SCPLS - Included ☐  
 SWPLSC - Included ☐  
 WCLS - Included ☐  
**Additional Chapter(s) \$20 ea**

CCPS - Additional ☐  
 CSRN - Additional ☐  
 NCPLSC - Additional ☐  
 NW1/4CLS - Additional ☐  
 SCPLS - Additional ☐  
 SWPLSC - Additional ☐  
 WCLS - Additional ☐

#### Volunteer to participate in PLSC Standing Committees

(choose one or more)

Publications  
 Survey Monuments and Records Standards  
 Ethics and Fair Practices  
 Education and Seminars  
 Legislative  
 Liaison  
 Membership  
 Nominations and Elections

#### Make Checks Payable to:

PLSC, Inc

#### Mail application and payments to:

PLSC, Inc  
 Diana Askew Secretary - Treasurer  
 P O Box 704  
 Conifer, CO 80433  
 303-838-7577

The opportunity for 2010 membership ends July 1  
 Payments by Credit Card are only available through  
 the Online Membership application at [www.PLSC.net](http://www.PLSC.net)





# Professional Land Surveyors of Colorado, Inc.

## 2010 PLSC Dues Reminder Why Join the PLSC?

Members have access to benefits and services including the following:

- PLSC is highly involved in proposing legislation that affects surveying, education, continuing education and other relevant laws. Whether you agree or disagree with legislation that the PLSC has supported, you need to be a member to have your voice heard.

- PLSC has informational & educational workshops at its annual meeting. These workshops bring in speakers from around the state and around the country to speak on topics that are relevant to surveyors, from Laws, Ethics and Least Squares, to CORS stations and GIS networks.

- PLSC sponsors the educational opportunities for members and future land surveyors: The Surveying & Mapping program at Metro State College of Denver (the only four-year accredited program in the state), the Colorado Land Surveying Refresher course at the Colorado School of Mines to help prepare Survey Interns to take their LS exam, the McComber Mentoring Programs- an excellent way to get an overview of some of the many facets of Land Surveying, and the PLSC awards scholarships to students enrolled in Surveying, GIS or other mapping-related programs.

- The PLSC has several regional chapters, one of which serves the area you live in. The chapters meet regularly and have workshops and guest speakers to discuss various topics of interest to land surveyors in that region. The meetings also provide members an opportunity to communicate with others and keep abreast of the latest techniques and equipment.

- The PLSC is working to establish a Real Time Reference Network in Colorado. A special Chapter, the Colorado Spatial Reference Network of the PLSC, has been formed for this purpose.

- The PLSC journal, "Side Shots", is a quarterly publication that keeps members up to date on important activities of the PLSC, the latest legislative information, and upcoming events that would be of interest to surveyors.

- The PLSC offers its members an insurance program. The PLSC Insurance Program offers a full selection of commercial and personal lines of insurance to members of the PLSC.

However, all these benefits and services do not completely convey why a PLSC membership is so important to Land Surveyors in Colorado.

Perhaps the most important benefit is dissemination of information, including news of what is going on in our profession, data on the latest technologies, trends in and development of rules and legislation and government regulations, and the list goes on.

Or maybe PLSC's most important benefit is opportunity. The opportunity to network with peers from across Colorado, across the west, and across the nation through relationships with other state surveyor's societies. Another opportunity is to increase one's proficiency and efficiency through education and the acquisition of new skills in our ever-evolving technology. Being part of the PLSC provides members with the opportunity to make a difference in our profession and to our fellow citizens.

Finally, there is the benefit of active participation in the future of our profession. Surveying is rapidly changing - LIDAR, GIS and land information systems, GPS, CAD. How many were involved in these just a few years ago? We are truly in the digital age. These new technologies are revolutionizing the way we do our work! We are facing higher educational standards, stricter requirements for financial responsibility and a mutual responsibility for competence. Beyond all of this lies the ability to help shape the future, in cooperation with other surveyors, doing collectively that which we cannot do ourselves. PLSC is and will be at the forefront of these developments.





# *In Memoriam*



## **Robert “Chic” Allen Chichester, PLS** **September 27, 1928 – February 17, 2010**



Chic was born in Pittsburgh, Pennsylvania to Harold and Haxel Chichester, and moved west to Colorado in 1949.

Chic was a jack of all trades. He worked with cars, ran a gas station, plowed snow, was a draftsman and teacher, but the passion of his life's work was being a professional surveyor. Like almost everything he took on, he did his utmost best to be a good surveyor, support his profession and advance his own knowledge as well as the knowledge of others about his craft. Chic was one of the founders of the PLSC and a former President. He was also a delegate to the Western Federation of Professional Surveyors for many years. He was the

founder of Contract Surveyors, Ltd.

He was just as passionate about how he spent his free time. Jeeping in Colorado and Utah was his favorite thing to do, especially if he could combine it with camping and fishing. He bought a bike when he was in his 70's so he could ride with his grandchildren and he loved to ride down (only down) Vail Pass and into Frisco.

Chic is survived by his wife, Pat; children, Debbie Moyer of Florida, John Chichester of Leadville and Kathie Chichester of Denver; and grandchildren, Tara, Erik, Caitlin and Sarah.



## **Robert Milo Stollard, PLS**

### **September 26th, 1929 to April 7th, 2010**



Robert "Bob" died peacefully on April 7th 2010. Bob was born in Omaha, Nebraska on September 26th 1929. He married Ida Louise Graves on August 5, 1951 and they moved to Colorado Springs in August, 1952. Bob continued his education in Land Surveying and received his Certificate of Registration in Wyoming in 1957 and then in Colorado in 1958.

In April 1962 they moved to Denver and he worked for J. W. Williams Engineering and Associates until 1974. He received his Bachelor of Science at the University of Colorado in 1973 and became a teacher from 1974 to 1976. Bob worked for Hutchinson Homes, doing surveying from 1976 to 1981. In 1982 he worked for the Jefferson County Mapping

Department and retired in 1996. Bob served on the PLSC board of directors and was a former president of the PLSC. He loved going to conferences to be with close friends and to learn and share with fellow surveyors.

More recently, he enjoyed many years of doing missionary work for his church. He assisted refugee families from Burma, Bosnia and the Congo, helping them find housing and medical care. He hosted foreign students at his home, enjoyed his Kiwanis group and delivered meals on wheels.

Bob leaves behind his loving children Dale Stollard, Durwin (Diane) Stollard and Deanna (Steve) McKay, grandchildren, Amberlee Stollard, Shawn and Christa McKay and sister Shirley (Dick) Beck and first cousin Lucy (Tom) Murch and Sharon (Dave) Weddle.





## National Society of Professional Surveyors

6 Montgomery Village Avenue, Suite 403, Gaithersburg, MD 20879

Phone: 240-632-8950, ext. 105 \* Fax: 240-632-1321

Email: [trisha.milburn@acsm.net](mailto:trisha.milburn@acsm.net) \* [www.nspsmo.org](http://www.nspsmo.org)

A member organization of the American Congress on Surveying and Mapping

March 20, 2010

Diana Askew, Executive Director  
Professional Land Surveyors of Colorado  
P O Box 704  
Conifer, CO 80433

RE: NSPS Excellence in Journalism Contest 2009

Dear Diana:

Congratulations!

*Side Shots* has been awarded Second Place in the Professional Magazine category of the 2009 NSPS Excellence in Journalism Contest.

The PLSC website, [www.plsc.net](http://www.plsc.net), has been awarded First Place in the Website category.

Please share our congratulations with the Editor, web manager, and the PLSC leadership and members.

We hope that someone representing PLSC will be able to attend the awards presentation ceremony scheduled to be held on Sunday April 25, 2010 at 6:30 PM during the ACSM/APLS Conference in Phoenix, AZ.

Please let us know if someone will be accepting the awards during the ceremony.

If this is not possible, we will send the awards to your office.

Again, I congratulate PLSC on behalf of the National Society of Professional Surveyors' Officers, Directors, Governors, Members, and staff.

Sincerely,

Curt Sumner, LS  
NSPS Executive Director



# Abridged PLSC Board of Director's Meeting Minutes

Hosted by CCPS as part of the CCPS Annual Surveying Conference on February 26, 2010  
Tivoli Center, Zenith Room, Denver, CO

**Call to Order:** 6:00 P.M.

## **Recognition of PLSC Board Members and Officers Present:**

Present: Tom Adams, Michael Greer, Diana Askew, Micheal Bouchard, Doug Berling, Roger Nelson, Patrick Green, Stan Vermilyea, Gary Gable, Peter Kent, Warren Ward, JB Guyton

**Absent:** Russell Clark, Dave Difulvio

**Welcome of Guests:** Todd Beers, Pam Fromhertz, Andrew Cornelius, Warren Andrews, Tom Sylvester, Bryan Clark, Rob Snodgrass, Jim Rihanek

## **Reports**

### **Legislative Committee - Roger Nelson, Chair**

Discussion of HB-1085:

Affidavit of Correction – Mike Greer expressed concern that county surveyor involvement may not be supported by counties who do not have budgets for the county surveyor. Many elected county surveyors are not paid a salary. Doug Berling indicated that the wording of the bill should be clarified. For example, Adams County said they don't have the staff to review the affidavits and are concerned about changes per the

affidavit would change the plat.

Revision to bill regarding apprenticeship – the original bill increased the number of years to qualify for licensure to 20 years, up from 10 years. DORA was against increasing the number of years for apprenticeship, but would accept removing it altogether. A compromise was made to remove the apprenticeship option for licensure by Warren Ward and Roger Nelson in order to avoid pulling the entire bill. It could be possible that the PLSC could lose the respect of the Legislature if the bill were pulled at that time. According to Warren Ward, Angie Kinnaird Linn had mentioned that DORA was in favor of a four year degree requirement with no apprenticeship option. A two year degree will remain one of the options toward licensure. The apprenticeship option will be gone in 2020. Warren Ward said that we need to spend the next 3 years figuring out what kind of courses should be required for a non-surveying 4 year degree to be considered toward licensure.

Legislative issues for committee to begin working on:

Tom Adams feels that the legislative committee can discuss anything they want; however, it is necessary

to maintain communication and discussion between the committee and the board. Tom reiterated that he wants to avoid the possibility that the committee will spend a long time working on legislation language that is not approved by the board.

Discussion of machine guidance – Alan Blair

The legislative committee should begin some research concerning machine grading.

Discussion of revisions to the monument record – Warren Ward

Warren would like to ask that the committee consider increasing the monument record depositing time for up to a year. JB reminded the board of the suggestion from Gaby that there should be some type of coordinate added as well.

Tom Adams asks for a straw vote – who feels that the language in the Board Rule for Monument Records should be extended from six months to a year?

The result is: Ten for, two against.

Tom Adams asks the legislative committee to begin work on the revisions to the monument record and to investigate machine grading. The committee will continue to look for direction from the board.

## **Secretary-Treasurer, Diana Askew Treasurer's Report**

<b>Bank Accounts</b>	<b>1/31/2010 Balance</b>	<b>2/25/2010 Balance</b>
Checking at Wells Fargo - Main Checking	32,745.52	39,509.31
Merchant Checking at Wells Fargo	15,449.68	9,541.34
PLSC Savings at Wells Fargo	40,164.39	40,164.39
PLSC Scholarship Fund Inc.	2,527.26	2,527.26
PLSC Scholarship Fund Savings	50,760.80	50,760.80
<b>TOTAL Bank Accounts</b>	<b>141,647.65</b>	<b>142,503.10</b>
<b>Investment Accounts</b>		
ICA	23,461.52	23,461.52
Investments at Merrill Lynch Investments	27,764.90	27,347.60
WMIF	23,788.94	23,788.94
<b>TOTAL Investment Accounts</b>	<b>75,015.35</b>	<b>74,598.05</b>
<b>OVERALL TOTAL</b>	<b>216,663.00</b>	<b>217,101.15</b>



The 2010 proposed budget will be prepared once the Board of Directors determines proposed goals and accomplishments for 2010. Income and expense for 2009 are shown in the chart below. Attendance for the Fall Technical Session was down in November of 2009 as compared to the previous year; however, it was good considering the economic conditions. Our dues restructuring may help to offset some of the membership decreases due to the economy. The voting and sustaining membership was modestly increased, and the associate level remained unchanged. 2010 dues now include a chapter membership. At this time, membership renewals are slow, so it may be necessary to send a first class reminder this year.

**PLSC, Inc Income and Expense 2009 Jan 1 – Dec 31, 2009**  
**INCOME**

Chapter Conference Income (disbursed)	\$17,685.00
Fall Technical Session	\$45,712.00
Membership Dues (Includes Chapter Dues)	\$65,390.15
Other Inc, Bus	\$8,598.25
Side Shots Ads	\$400.00
_DivInc	\$1,380.67
<b>TOTAL INCOME</b>	<b>\$140,823.03</b>

**EXPENSES**

Bank Charge (merchant account fees)	\$4,807.30
Chapter Credit Card income from Conferences (disbursed)	\$19,468.78
Computer software and maintenance	\$322.33
Dues and Subscriptions	\$125.00
Insurance, Bus	\$1,000.00
Chapter Membership Disbursements	\$28,315.15
Office Supplies (ink, paper, membership cards, mailing labels, etc)	\$851.33
PLSC Meeting Expense (venue, food, speakers, etc)	\$12,211.31
Postage and Delivery	\$1,358.65
Printing and Reproduction	\$14,516.81
Prof and Legal Fees (tax prep, lobbyist)	\$5,735.00
Rent Paid (PLSC Library, storage)	\$4,550.00
Supplies, Bus (lapel pins, decals, pens, name badges, plaques)	\$8,526.04
Tax	\$17.99
Travel, Bus (PLSC Meetings, WestFed, NSPS)	\$5,372.45
Wages (Executive Director)	\$15,000.00
Web Site (Web server, domain, CVENT, Web Master)	\$8,349.31
<b>TOTAL EXPENSES</b>	<b>\$131,645.45</b>
<b>OVERALL TOTAL</b>	<b>\$9,177.58</b>

**Executive Director, Diana Askew**

Tom Adams and I worked on a job description for the position of Executive Director, to be more comprehensively discussed later in this meeting. Our biggest challenge was to separate the roles of the Executive Director from the roles of the Secretary – Treasurer.

I have included some questions in the online membership application to fine tune the 2010 Roster and create an avenue for posting our membership information online, while protecting the privacy of our membership. With the economy as it is, I would like to support business through our roster, if possible. I would

also like to support our sustaining members with more of a presence on our Web site and within our publications. In addition, we have ordered 100 copies of the 2009 BLM Manual of Instructions which were offered through the online membership application at a discount. Those who renewed or joined early in the year spoke for them very quickly.

I also sent post cards to all of the PLS's and LSI's who passed their exams in 2008 and 2009, offering them a free membership with the PLSC for a year. This has been something that Tom has wanted to do since he was Vice-president and we had two years of catch-up now that we can afford it.

The Executive Committee is working on the changes to the by-laws, which will be discussed by the Board of Directors once we get the changes outlined.

The CSEF accounts were closed just after the first of the year and the funds were moved into new accounts under the PLSC Scholarship Fund, Inc. I found the correspondence between the Moos family and the PLSC, which determined that the Moos funds were to be deposited into the PLSC Scholarship Fund. All of the funds in the CSEF account were Moos funds.

**President, Tom Adams**

Goals for 2010:

Ed Bristow volunteered his time to help prepare a contract for the position of Executive Director. Tom offers thanks to Ed for his time and expertise! Tom proposes that the PLSC Board review the contract and job description at this meeting and move forward with implementing a contract with Di for 2010. Di has been working without a contract through 2009. (see attached online)

**Motion:** Gary Gable moves to accept the contract and proposed wages for the Executive Director of \$2,500 per month for 2010. Stan Vermilyea seconds.

**Discussion:** The Secretary-Treasurer duties are outlined in the by-laws, which provide a separation of duties from those of the Executive Director. The Board asks that the language in the contract be amended as follows to provide for renewal of the contract in the case of inaction by the board:

“Following the installation of the new president, the board is obligated to review the performance, the job description, the contract, and the salary of the Executive Director prior to the expiration of the contract or the contract will renew automatically at the current terms and conditions.” Vote: unanimous approval

The PLSC Board needs to include an appointee from every chapter as an ex-officio director on the board. We have tried to include members from every chapter in the past and it appears we need to add pressure so that every chapter has a voice on the PLSC Board of Directors. The names of the ex-officio directors will be added to the letterhead and in Side Shots. They will need to attend the meetings and report back to their chapter.

The PLSC needs to start promoting Trigstar. Colorado is last in Trigstar participation. Tom would like to see a committee formed among the chapters to promote the



program across the state. NSPS is in charge of promoting Trigstar across the US. JB will send a draft to the board, and he went on to say that one person should not be doing this, if a lot of people do a little then the schools will love it! Students love it and get money for participating.

Standing committees and committees of one need to be reviewed and given a purpose.

Tom will create a new education committee to research a 4 year degree program, continuing education, and the annual meeting and seminars.

Tom has asked Diana to find ways to add CEUs for other fields to our seminars and get speakers certified to teach surveying topics to other professions. This will bring in revenue to the PLSC and help build respect among the other professions.

Warren asked that Tom write a letter in support of the Railroad bill.

Action Item: JB and Warren will educate the chapters about Trigstar and get the program rolling

The scholarship application form needs to be in a more prominent place. It needs to include Westfed as well as a source of scholarships. Di will be the clearinghouse and point of contact.

Action Item: Rob Snodgrass has volunteered to standardize the form, and create standards for evaluation. Rob is now the chair of the Special Committee for Scholarships.

Action Item: Todd Beers has offered to help revive the chapter summit and help organize strategic planning sessions.

Action Item: Doug Berling will send information to JB for inclusion in the next Side Shots on Nominations and Elections for this year.

**Next Meeting:** Conference Call, March 31, mid-day. Time to be determined.

**Motion:** Diana Askew moves to adjourn. Pat Green seconds. Vote: unanimous approval.

**Adjourn:** 10:15 PM

Respectfully submitted:

Diana E Askew, PLS

PLSC Secretary-Treasurer and Executive Director

A complete version of the minutes with all of the attachments is available online at [www.plsc.net](http://www.plsc.net)

# UNDERGROUND UTILITY LOCATING



**Diversified Underground** is a Denver Based DBE-certified Company providing Subsurface Utility Engineering (SUE), Utility Locating, Hydro Vacuum Excavation throughout Colorado and the surrounding states.



## SUBSURFACE UTILITY ENGINEERING (SUE)

Diversified Underground combines utility locating, hydro vacuum excavating and data research / management to produce an accurate map depiction of existing underground utilities.

## UTILITY LOCATING

Diversified Underground offers complete utility locating services for the identification and marking of privately and publicly owned underground utilities.



**Phone: (303) 636-9999 • Fax: (303) 671-8728 • [www.diversifiedunderground.com](http://www.diversifiedunderground.com)**



# Western Federation of Professional Surveyors Board of Directors Meeting Report

January 30, 2010 in Honolulu, Hawaii

By John B. Guyton, PLS, Colorado Delegate

The WFPS meeting in Honolulu was held in conjunction with the annual conference of the Hawaii Land Surveyors Association (HLSA), who extended their great hospitality to the WFPS delegation. There was at least one delegate from each state in attendance. I was the only delegate from Colorado, and the two staff members of WFPS did not attend, in order to defray expenses. Several delegates were able to attend conference seminars at the HLSA conference and learn about the unusual character of Hawaiian land law. We also shared lunch with members of the HLSA Board of Directors during their meeting, and were treated to stories about surveying in Hawaii by Kevin Kea, their WFPS delegate, and Artie Sevigny, current HLSA president.

I conducted a workshop on the Public Lands Survey System, since the NCEES exam requires all prospective registrants to have a fundamental knowledge of the PLSS, even in Hawaii, a state that is not included in the PLSS. The session was followed by a well attended breakout session for questions and answers, and the interest and enthusiasm in the topic by the Hawaiians was both surprising and satisfying. Many of the attendees at the conference were quite young, an unusual departure from the mostly older crowds we typically see at conferences in the other WFPS states.

WFPS current assets stood at \$142,051 as of the end of 2009, up \$7,327 from 2008. NSPS President John Matonich gave a presentation during the conference luncheon. He mentioned how NCEES is moving toward a "curriculum based" knowledge for questions on the FS exam. This will be a significant shift in national testing, as candidates

will be unlikely to pass the exam without a degree in surveying, or a related field.

There has been news circulating that the solvency of the National Museum of Surveying in Springfield, Illinois may be in jeopardy. More information will be distributed as it becomes available. It is advised that no donations be sent to the museum at this time.

CaGIS, a member organization of ACSM, has opted to leave ACSM in 2011. A motion was carried to change WFPS banners, logos, letterhead, etc. to reference affiliation with NSPS instead of ACSM.

Finally, most state reports indicate a decrease in their memberships, and it's fair to say that the economy has played a part in that situation.

## State Report Highlights

### ALASKA

The 2010 conference of the Alaska Society of Professional Land Surveyors will be held in Anchorage from Feb. 22-26th and will highlight the 50th anniversary of their organization. Membership fees remained unchanged for 2010; in 2009, there were 497 registered Professional Land Surveyors, with 110 of those living out of state, and 163 paid members in the ASPLS. The Alaska Legislature convenes on January 19th, and legislative priorities include protection of signed and sealed documents from being copied or altered without authorization, to allow easier enforcement through the state court system.

### ARIZONA

They are working on a joint conference with ACSM. They are

also working on affiliations with GIS organizations, and certification requirements of control layers by surveyors. Arizona is also looking to move to a four-year degree, with some opposition. They are also looking into basing surveying licensure on specialties.

### CALIFORNIA

Membership in 2009 was down slightly, to 2,486. The CLSA website has been redesigned and is now online, with a new look and improved functionality. The CLSA recruitment campaign materials have been customized for use in 17 other states, including their DVD and print materials.

The CLSA has developed a right-of-entry brochure for homeowners and law enforcement, as well as a brochure for surveyors that provides guidelines for working on private property.

The CLSA donation to the National Museum in Illinois for \$25K is currently on hold. CLSA is sending a representative to Boy Scout Jamboree to assist with the NSPS Surveying Merit Badge Booth. In addition, a Voluntary Professional Development Program has been implemented in California.

### COLORADO

The PLSC sponsored the annual Fall Technical Session at the University of Denver on November 12-14th, 2009. Attendance was 160, down from the record setting 260 session in 2008. The 22nd annual GIS in the Rockies Conference was held last September in Loveland, Colorado. The Colorado licensing board has advised the PLSC that any changes to educational requirements for licensure and/or continuing education should wait until the next sunset review period by the



state legislature. Randy Zanon, who retired last year as the Chief Cadastral Surveyor for the BLM in Colorado, has been replaced by long-time BLM employee Randy Bloom.

## HAWAII

A discussion about the society's banquet and the conference in general took place. Kevin Kea asked for comments/feedback. Kevin talked about his production of the video showing interviewers talking about "Pat Cummings" and Pat being given "The Hawaii Surveyor of the Year Award." It was the first time ever for this in Hawaii. Kevin thanked Ray and myself for participating in the conference.

## IDAHO

Qualification-based selection (QBS) law was passed by the State Legislature. ISPLS has reviewed the possibility of separating from engineers on the State Board. They've decided to stay with the present system maybe adding more members.

## MONTANA

MARLS website has been overhauled, [www.marls.com](http://www.marls.com). Membership as of the end of 2009 was 484 members. *Treasure State Surveyor* magazine is not being sent out to WestFed anymore due to cost. Do they want us to start it up again? The consensus was "yes."

## NEVADA

Enrollment for Great Basin College stands at 48 students and only half are from Nevada, with the balance from other states utilizing their distance learning option. A four-year degree in surveying is required for licensure as of July 2010. ABET for the school is being considered but funding is an issue.

## NEW MEXICO

The State Legislature introduced a bill concerning Land Grants and notification prior to surveying. Surveyors are dealing with counties that believe patented government lots are not separate parcels.



METROPOLITAN STATE  
COLLEGE of DENVER

*Extended Campus*

## DISTANCE DELIVERY OF COURSES FOR

### LAND SURVEYORS

Now it is possible to pursue or advance a career in land surveying via distance delivery.

- Select courses individually or as part of the degree completion program.
- Enroll year-around; take six months to complete a course.
- Take exams close to home or work.
- Communicate with your instructor by e-mail or telephone.

### Twelve Self-Paced DVD Lecture Courses

SUR 1510-4	Surveying I
SUR 2520-4	Surveying II
SUR 2530-4	Route Surveying
SUR 2550-3	Surveying Computations
SUR 3100-3	Survey Data Adjustment/Analysis I
SUR 3150-2	Astronomy for Surveyors
SUR 3220-2	Real Property Descriptions
SUR 3300-3	Photogrammetry
SUR 3540-3	Boundary Law I
SUR 3700-3	Geodesy I
SUR 4510-3	Map Projections and Coordinate Systems
SUR 4540-3	Boundary Law II

### On-line Course

COM 3615-3 Technical Writing for Surveyors and Engineers

### Noncredit LSI Review Course

Are you preparing for the PSI or PLS exam?

Help is available! Forty (40) hours of videotaped preparation for LSI and PLS exams.

For more information and registration visit our web site:

[www.mscd.edu/surdd](http://www.mscd.edu/surdd) or send an email to [mscd\\_surdd@mscd.edu](mailto:mscd_surdd@mscd.edu) or call Extended Campus at **303-721-1313**.

*continued on page 24*



# Legislative Committee Update

– Tom Adams, President

House Bill 10-1085 that was proposed by the PLSC legislative committee was signed into law by the Governor on April 15th, 2010. Some of the highlights of the bill include:

- Language to allow for a land surveyor's affidavit of correction when an error is discovered;
- Adding to the qualifications for obtaining licensure as a Professional Land Surveyor to include a bachelor's degree in a non-surveying curriculum with some minimum courses along with experience;

- Repealing the section on obtaining licensure by apprenticeship-only by the year 2010.

The legislative committee has now been asked to work on several other issues. The committee will be researching the issues surrounding "machine control grading". With the aid of GPS technology, rough grading can now be done by machine and without survey stakes. The concern, of course, is that the data is electronic in nature (less secure than a signed and sealed drawing) and the grading could be done without an engineer or surveyor being

responsible for the product. Many other states have started to address this issue in their statutes. CDOT presently has written standards for controlling and checking work done by machine-control grading. The committee will research this issue and hopefully come up with some recommendations on how to deal with it.

Other issues the legislative committee is looking into include, the timeline for filing monument records, electronic filing of plats, and electronic signatures and seals.

## WFPS from page 23

### OREGON

Oregon is doing away with State Plane Coordinate System and going to a low distortion projection system. Access will be available on the web and there will be 20 zones.

WestFed's meeting, June 12, 2010 will be held at Offices of David Evans & Assoc., 2100 SW River Parkway, Portland, OR 97201. Please use the trolley to get downtown from the airport.

State society membership is down by 100 members.

Oregon's Board of Registration adopted the State Surveying Professional Society Standards of Practice Manual.

### UTAH

Right-of-Entry law was rescinded by State Legislature. The state society is working to allow surveyors an exemption. Machine Control Basis was being handled by non-licensed individuals, creating problems. For UCLS, it has been 10 years since current standards have been modified/updated. UCLS membership is up.

### WASHINGTON

Membership is down 13%, at 1,364 with Associate memberships down 28% due to the economy. Attorney General has been requested to give a definition for "Land Surveying".

### WYOMING

There are currently 273 active members. Southeast Chapter is taking over the publication of PLSW Lines and Points. President Mark Rehwaldt has taken a position with the University of Wyoming as Surveying Director in the Wyoming Outreach program, replacing Rod Skaggs.

The next WFPS meeting will be held June 12, 2010 in Portland, OR.

The September 2010 meeting will be held somewhere in Nevada.

**WILD THEODOLITE**

**T16 D**

Mint Condition

\$2100

303-816-0965



## CCPS

Spring is in full swing and CCPS is busy looking forward to the coming seasons and planning for a successful year. The committee assignments for the year have been finalized and CCPS committee contacts are listed below:

Membership committee chair – Jim Beatty, Director

Election committee chair – Earl Henderson, Director

Scholarship committee chair – Rob Snodgrass, Director

Sustaining member committee chair – Earl Henderson, Director

Website communication and outreach committee chair – Chris Raml, Director

General meeting committee chair – JJ Rihanek, Vice President

Conference committee – All board members serve.

Finance committee chair – Aaron Willis, Treasurer

All board members help each other with these committees and the atmosphere on the board is, as always, respectful and cooperative. The other members of the 2010 board are:

Joe Conway, President

Norm Simonson, Secretary

Shawn Clarke, Director

Jim Holben, Director

Warren Ruby, Director

If you are interested in helping out with one of our committees please contact the committee chair person. All members of CCPS are eligible to serve on the board of directors. Elections are held at the end of the calendar year for terms starting in February. Please consider volunteering as an officer for next year to help and to serve your community.

CCPS offers scholarships to students twice each year who are working toward an Associate's Degree or a Bachelors Degree in surveying. See the website at [PLSC.net](http://PLSC.net) for scholarship applications and details about how to apply for scholarships. If you know anyone attending one of these pro-

grams, please pass this information on to them.

CCPS is joining forces with PLSC to organize and hold a super conference in February, 2011. Look for more details to follow and plan to attend. It is going to be huge!

Look for the CCPS newsletter to find out all the details about our general membership meetings. We provide an interesting topic for discussion or presentation 5 times each year. Meetings are held on the 4th Thursday of January, March, May, August, and October.

Special thanks to outgoing president Todd Beers. His efforts and organizational skills got the CCPS running like a top. This board of directors will try to keep it spinning, Todd. If you see Todd please take the time to thank him for his efforts personally.

On behalf of the CCPS board and members we wish to acknowledge the passing of Bob Stollard. Bob was a consummate professional dedicated to serving the public. He was our colleague and friend. We will miss him at our meetings and functions. He did a lot for CCPS, too.

Joe Conway  
President - CCPS

## CSRN

The Colorado Spatial Reference Network (CSRN) has had an active beginning to the year. We have initiated discussions and are actively pursuing numerous items to enhance the CSRN's exposure to the survey and GIS community.

The CSRN is going on its 4th year as a chapter of the PLSC and this year was the first time the CSRN has collected membership dues through the PLSC and we had a surprisingly large response and enrollment. The CSRN would like to thank all of those who selected the CSRN as a chapter affiliate and the

PLSC for working with us to accomplish this. If you are not a member of the PLSC but want to be involved with the CSRN efforts, contact Dan Smith via our website at [www.csrn.us](http://www.csrn.us) to discuss a trial membership offer that may be available. We encourage all professionals who are involved with mapping or geodetic measurements to participate.

The CSRN is actively developing an "Industry Showcase" display on our website. This feature will allow companies to showcase Colorado-specific projects performed using RTK GPS from any of the available reference networks or your own network. If you have a project that you believe is exciting, interesting, difficult or illustrates how the reference networks helped you complete or accomplish your project/client objectives, submit a brief summary to us via our website to be considered for posting. If you have pictures and a story to go with your project, please submit these as well. If selected your project and company information will be posted for 30 days. Submit several projects if you have more than one that you would like us to consider.

Currently our website is being hosted by Bohannon Huston through their Denver office and they have done an outstanding job, however this is set to expire in April, 2010. The CSRN is actively seeking a firm to provide web hosting services for our website to begin at the end of April. This is a great opportunity for a firm to market their web talents and abilities by placing your company logo on our web page throughout the hosting duration. For details on the web hosting requirements, please visit our website at [www.csrn.us/docs/enewsletters/march2010](http://www.csrn.us/docs/enewsletters/march2010). This commitment will be for one year. Please email us if you are interested in additional exposure to numerous markets. You can address your emails to Dan Smith or Brian Dennis and we will contact you to discuss further.

The CSRN is currently dis-



cussing a summer BBQ late this summer to allow members an opportunity to meet on a social level. This would be a family event for adults and children. The location is to be determined but a pavilion at a local lake is being considered. This will be a great networking opportunity as we expect professionals from the private and public sectors of several markets to attend. If you have any ideas or suggestions, contact us. We may be organizing a planning committee for this event. This type of social networking event is something that the CSRN has wanted to do for some time to help create a collaborate effort in the surveying/GIS/mapping/geodetic communities.

The CSRN's next open board meeting will be May 26, 2010. The location is not determined at this time. If you are interested in hosting a meeting for the CSRN, contact Dan Smith. The meeting times are 3-4pm for open board meetings and 4-6pm for general membership meetings. An agenda will be provided prior to the meeting date.

Brian Dennis  
Vice President-CSRN

## NC/PLSC

Our March meeting was a little different than usual. Wally Muscott, City Surveyor for the City of Fort Collins, gave a presentation on Crime Scene Surveying. In Fort Collins, crimes involving a murder, where placement and careful cataloging of evidence is essential, the City Surveyors are called out to survey the scene of the crime. They usually arrive after the scene has been processed by the detectives, but still need to be extremely careful not to touch any evidence. Wally outlined the situations they've encountered, methods they use to get accurate measurements, and how they correlate the evidence to the maps. If the case is going to court, the survey department also

produces large, clear maps to be used as court exhibits. Even bullet trajectories and blood spatters can be measured and shown. Wally said that when called into court and questioned about his mapping methods, being a professional land surveyor for whom taking measurements is his professional occupation makes him, and his exhibits, credible to both sides.

Our April meeting will feature a presentation by Todd Beers from Nolte Associates, Inc. on High Definition Surveying. The May meeting will be a planning meeting with a full schedule of topics picking up in the fall. Please contact Rob Hintz [rhintz@fcgov.com](mailto:rhintz@fcgov.com) for meeting location, session topic, or to become a member of the Northern Colorado Chapter.

Laine Landau  
Director, NC

## NW 1/4

The NW 1/4 met March 22 in Craig, Colorado at the Holiday Inn. The meeting was called to order by John Noonan, V.P., attending were Tom Effinger, Walter Magill, Brian T. Kelly, Lloyd Powers, Jim Joy and Dave Ginther. The treasurer's report revealed we have \$1,316.56 in our account, and the report and minutes were approved with minor revisions.

New business primarily concerned the database for the plat deposits in Routt County. Tom Effinger and John have been working hard on this and there are over 2500 records so far. The County has tentatively agreed to keep the database updated once it is complete at a point in time, but Skidge Moon, County Surveyor, needs to confirm.

Tom let the members know that the biggest disciplinary action by the State Board concerns failure to pay licensing fees, and essentially practicing without a valid license.

Dave Ginther, BLM surveyor for NW Colorado, Craig office, led the program for the evening. His program concluded an earlier presentation from December concerning the confluence of three principal meridians, the Ute, New Mexico and 6th P.M. in Section 36, T15S, R98W, 6th P.M. This area is now commonly known as the Dominguez-Escalante National Conservation Area which is about 220,000 acres. There is private land in Section 36 and also along the Gunnison River. The surveys in the area started with an 1883/1884 Third Correction Line South, followed by a survey by Edwin Kellogg in 1895. Treece and Fuller also did surveys in the township and there was even a suspended survey - the government refused to recognize the survey work due to large errors. A subsequent survey directed the surveyors to remove all evidence of the suspended survey, such as removing the stone corners, but apparently they missed at least one, because Dave Ginther found it. The country is extremely rugged and none of us have ever done this, but the 1890's surveyor probably looked at the probable corner location and said, "Oh, they wouldn't set that." But of course they did, it was invalid, and Ginther's crew pulled the stone 110 years later. The meeting concluded at nine o'clock.

Brian T. Kelly, Sec.-Treasurer  
NW 1/4

## SCPLS

Jon Tessin was elected for a two-year term as a Director of the Southern Chapter board and was installed at the February board meeting. Jon replaces Mike Mincic, who had decided not to run for reelection. Our thanks to Mike for his service to the chapter.

On March 16, 2010, the Southern chapter held a membership meeting at the Miramont Castle located in Manitou Springs, Colorado. The Miramont Castle is the



home of the Manitou Springs Historical Society.

The event was the presentation of the Historic Map and Document Collection from Sawyer & Garstin Engineers, who were active from around 1880 to the 1940's.

The evening began with a St. Patrick's Day corned beef dinner with all the fixings. The chair of the Preservation of Historic Maps and Documents Committee, Joseph Alessi, PLS was master of ceremonies and presented the guest speaker, one of our own, Mr. Charlie Tucker with the Farnsworth Group. Mr. Tucker gave a very informative presentation on the preservation of maps and documents.

The evening concluded with the display of numerous maps and documents from the Sawyer & Garstin collection. The display was only a small fraction of the documents, maps, field books and correspondence comprising the collection.

There were approximately 50 attendees comprised of PLSC members (including PLSC President Tom Adams), title company representatives, local historians, BLM employees, and representatives of Teller County Planning and the City of Colorado Springs Engineering and Development Review department.

Volunteer opportunities are available with the Preservation of Maps and Historic Documents Project:

1. Archiving
2. Assisting in future plans and goals
3. Grant Applications
4. Professional Evaluation of Map Room Environment
5. Serving on committees
6. Completing the construction of the Map Room

Karen L. Crilly, Business Development Director with the Farnsworth Group, Inc. has sched-

uled an inspection of the map room facility for renovation recommendations.

Thank you,  
Mark Johannes  
President, SCPLS

## SWC/PLSC

New officers have been appointed for 2010 for the PLSC SW Chapter:

President – Rob Trudeau  
Vice President – Tom Au  
Treasurer - Ed Young  
Secretary – Parker Newby

At our March 16th Chapter meeting in Durango, Colorado, discussion continued regarding the involvement of the Chapter in community relief efforts and other volunteer organization. Contact with Engineers Without Borders (EWOB) will be made and other research will be done to determine the opportunities for community outreach by the Chapter. Ideas from Chapter members are welcome.

Josh Casselberry gave a legislative committee update. He expressed difficulty in being able to properly represent the Chapter as a legislative representative due to his schedule. Parker Newby will step in and begin monitoring legislative items to report to the Chapter. A notification to the PLSC of the change in Chapter representative will be made.

Unfortunately, due to a short time frame and our ability to secure an adequate amount of speakers, the PLSC SW Chapter has decided not to have its 2010 SW Seminar. Thank you to everyone who put in the extra time and effort to make it happen this year. We will plan on having the seminar again in 2011. Also, the chapter members want to thank Clyde King for continuing to keep the SW Chapter website up to date with the latest meeting minutes, newsletters and chapter projects. The website can be found at

<http://plscswc.com>.

The next meeting is scheduled for May 11th at Christina's Bar and Grill, Durango Colorado, 6pm.

Rob Trudeau  
President, SWC/PLSC

## WCLS

Western Colorado Land Surveyors held their bi-monthly meetings January 13, 2010 and March 10, 2010.

At the January meeting, new officers were installed as follows: Tom Sylvester, President; Richard Bullen, Vice President; Brian Bowker, Secretary/Treasurer. The following were named to the Board of Directors: Rick Mason (Immediate Past President), Les Doehling, Mike Drissel, Patrick Green, Jon Kobylarz, Peter Krick, Dennis Shelhorn and Scott Thompson.

Rick Mason gave an update on the legislative committee activity.

The Chapter voted to offer a \$1000 scholarship at the May Seminar.

Tom Sylvester gave an update on the 2nd semester Mentoring Classes being held at the Delta Montrose Technical College.

Rick Mason (outgoing President) presented Mike Grizenko with a Surveyor's Appreciation Award from the Chapter for his exceptional work in almost single handedly organizing this year's seminar and the seminars for the last several years. Congratulations Mike.

Tom Sylvester presented Rick Mason a plaque and letter of appreciation for his outstanding work over the last two years as President. Congratulations Rick.

At the March meeting, Tom Sylvester gave a presentation of the heretofore unpublished method that the BLM in Colorado uses to subdi-



vide a section especially as it applies to sections with witness corners, angle points on section lines, etc. This is not in the 1973 Manual but is an unpublished internal policy used by the BLM in Colorado. We're still researching whether the 2009 Manual addresses the issues. There was considerable discussion after the presentation.

Rick Mason gave us an update on the latest work of the legislative committee and the status of the proposed surveying bill as it is moving through the legislature. He also summarized the various licensure requirements if the bill passes as written, i.e. those portions without changes and those portions with changes.

Lee Stiles will be term limited as Mesa County Surveyor at the end of this year. Patrick Green expressed an interest in running for the position and has since officially entered his name in the party caucuses.

Les Dohling and Pat Green gave an update on the \$1000 scholarship (\$500 from WCLS and \$500 matching from PLSC) that we will be presenting at our May seminar. Applications were sent out in March and early April to various high schools and colleges. We hope to have an extensive list of well qualified candidates from which to choose.

Mike Grizenko gave us an update on the upcoming May 7 Seminar. The Professional Track

will be "Quiet Title Actions in Colorado" by Geoff Anderson. The Technical Track will be "Thinking Outside the Box" by Bob Green, Chuck Hutchins, and Matt Nawrocki. This will be an excellent seminar and we hope to have a good turnout. The PLSC is planning their Board meeting right after the seminar and we encourage everyone to attend.

Peter Krick was presented with our March 2010 Surveyor Appreciation Award for his outstanding service to the WCLS Chapter, the surveying profession, and to the community. Congratulations Peter.

Tom Sylvester, President  
WCLS

## Now Available

*A masterful documentation and historical perspective of each initial surveying point for federal public lands in the United States. Published in 9x12 format, Initial Points of the Rectangular Survey System features a 4-color section with more than 130 photos depicting monuments and landmarks.*

## C. Albert White's second book, **INITIAL POINTS OF THE RECTANGULAR SURVEY SYSTEM**

**Never before, in the history of surveying, has so much pertinent and interesting material been so meticulously compiled in one publication. (White personally visited EVERY Initial Point.)**

Number of copies	Price
1	\$89
2-5	\$79
6-10	\$69

**Call 303-428-9529  
to order**



Mr. White's first book, A History of the Rectangular Survey System, published by the BLM in 1983, is considered the definitive work on the U.S. Public Land Survey System. Arguably the most distinguished authority on the history of nineteenth and twentieth century public lands surveying, White began his career with the General Land Office in 1946. Both as BLM and a private surveyor, he applied his zeal to a wide range of activities. White's expertise represents a bridge between the wisdom and experience of the American heritage of land settlement and the contemporary uses of surveying technology.

Initial Points of the Rectangular Survey System is undertaken in the spirit of, and dedication to, Mr. White's remarkable contributions to his field. Net proceeds from its sale will be returned to the Professional Land Surveyors of Colorado Inc. Scholarship Fund.



## *Professional Land Surveyors of Colorado has the Insurance Program that's Designed for Its Members.*

*I have had several conversations with clients over the past few months; about the "what if" of insurance. Therefore, I want to address a few risk management topics with the PLSC members in this article.*

What if...a client slipped and fell on your property? A customer sued me for an error I made? An employee stole funds? A power surge zapped your equipment?

Unfortunately, today's surveying business owner faces big risks every day. And while it's impossible to eliminate risks, it's possible to reduce the financial impact on you by using a few proven risk management ideas.

The following will be a general overview of three ways or tips to manage your business risks or how to control property losses, lawsuits, vehicle losses, and workplace accidents.

Accidents. Surprises. Losses. They all come with owning your own business. But there's no reason you have to be a "victim" of these unexpected losses, not if you take advantage of following three key ways to manage your risks.

### **1 You can insure risk**

One primary approach to risk management would be purchasing insurance to transfer the losses to your insurance company.

Know your insurance policies. If you don't know what types of losses your policies cover, you may be in for a surprise when a loss occurs. You need to review your policy and if necessary purchase additional coverage to ensure that your company is fully protected.

### **2 You can transfer risk**

When appropriate; you'll want to shift the risk to your subcontractors, competitors and even your customers. Here are some tips on how to transfer some of your business risk to others.

- **Hire the right subcontractors.** Using knowledgeable, properly insured subcontractors can reduce your risk and minimize high risk professional liability exposures. Request Certificates of Insurance to verify that your subcontractors have current insurance.

- **Consider "hold harmless" agreements.** A "Hold Harmless" agreement is a tool that shifts legal and financial risk from you to another party

- **Don't try to be all things to all people.** Let your competitors take the job and the chances on potentially problem projects.

### **3 You can control risk**

Of course; there are some things you can't prevent, like storms, power failures, or accidents. But there are ways of minimizing either the likelihood something will occur, or the impact it will have on your business after it occurs.

**Fire. Theft. Water damage.** Just a few of the things that can do damage to your property—one of your business' most valuable assets. Unless property and equipment are main-

tained properly and insured adequately, they can be at significant loss and damage to your business.

Some tips:

- Review your insurance to make sure you understand what is and is not covered.

- If your policy has "blanket" coverage for a number of different properties, make sure that all properties that should be insured are actually listed on the property policy.

- Be sure that your property is insured to replacement value. Improvements or changes in building costs should be reflected on your insurance coverage. So periodically review and update your property values and adjust the coverage accordingly.

### **Managing Your Vehicle Risks**

Your business' autos represent many types of risk in one place such as loss of equipment, loss of jobs, and liability to persons and injury to your employees. No wonder your auto premium can account for a large portion of your commercial insurance cost. However, risk management can be used to reduce motor vehicles liabilities, by simply:

- verifying driving records of potential employees.
- monitoring employee driving records.
- keeping your drivers properly trained.

Like any other aspect of owning your business, risk management is an on-going, ever-changing process. As your business grows, so do the risks. As your business changes direction, new risks may arise. Like any small business it is not able to have large losses that would be uninsured. Your profession depends on the small surveying businesses, yet small surveying businesses are more vulnerable when claims, lawsuits, or accidents strike. I can help you identify and insure those risks before they become threats. And, of course, help you understand and obtain the insurance that is right for you.

As a member of PLSC you have available to you the PLSC Insurance Program that will provide coverage necessary to cover your business needs.

I am here to discuss your own situation as to whether you are insured properly and the most competitive way.

**Lisa Isom**  
**ASSURANCE RISK MANAGERS**  
2851 S. Parker Road, Suite 760  
Aurora, CO 80014  
Phone: 303-454-9562  
Fax: 303-454-9564





# S U S T A I N I N G M E M B E R S

## **ACCURATE CORE DRILLING, INC.**

15550 Hwy. 86  
Kiowa, CO 80117  
303-898-4385  
[www.accuratecoredrilling.com](http://www.accuratecoredrilling.com)

## **AGA GEODIMETER**

14700 W. 66th Pl., # 10  
Arvada, CO 80004  
303-271-0077  
[www.agageo.com](http://www.agageo.com)

## **ASSURANCE RISK MANAGERS**

2851 S. Parker Road, Suite 760  
Aurora, CO 80014  
(888) 454-9562 or (303) 454-9562  
[www.arm-i.com](http://www.arm-i.com)

## **BACKLUND LAND SURVEYS**

PO Box 614  
Frisco, CO 80443-0614  
970-668-3730  
[www.backlundlandsurveys.com](http://www.backlundlandsurveys.com)

## **BERNTSEN INTERNATIONAL, INC.**

P.O. Box 8670  
Madison, WI 53708-8670  
877-686-8561  
[www.berntsen.com](http://www.berntsen.com)

## **CAD-1, INC.**

12130 Pennsylvania Street #101  
Thornton, CO 80241  
303-427-2231  
[www.cad-1.com](http://www.cad-1.com)

## **DEMANCHE ENTERPRISES CO. INC**

605 Joyce Ct  
Berthoud, CO 8513  
303-519-7933

## **DIVERSIFIED UNDERGROUND INC**

2851 S. County Road 137  
Bennett, CO 80102  
303-636-9999  
[www.diversifiedunderground.com](http://www.diversifiedunderground.com)

## **ESRI**

One International Court  
Broomfield, CO 80021  
[www.esri.com](http://www.esri.com)

## **FLATIRONS, INC.**

3825 Iris Ave., Suite 395  
Boulder, CO 80301  
303-443-7001  
[www.flatsurv.com](http://www.flatsurv.com)

## **BOB JOHNS**

P.O. Box 589  
Silverthorne, CO 80498

## **NOAA**

Pamela Fromhertz  
4201 E. Arkansas Ave., 4th Floor  
Denver, CO 80222  
240-988-6363

## **NOLTE ASSOCIATES, INC**

8000 South Chester St, Suite 200  
Centennial, CO 80112  
[www.nolte.com](http://www.nolte.com)

## **OATLEY & DIAK LLC**

5299 DTC Blvd., Suite 1075  
Greenwood Village, CO 80111  
303-221-1900  
[www.oatleydiak.com](http://www.oatleydiak.com)

## **RANGE WEST, INC.**

P.O. Box 589  
Silverthorne, CO 80498  
970-468-6281  
[www.rangewestinc.com](http://www.rangewestinc.com)

## **SITWISE, LLC**

7000 N. Broadway #3-306  
Denver, CO 80221  
303-650-8680  
[www.sitwisellc.com](http://www.sitwisellc.com)

## **SKLD INFORMATION SERVICES**

9540 East Jewell Ave., Suite A  
Denver, CO 80247  
303-695-3850  
[www.skld.com](http://www.skld.com)

## **TOTAL POSITIONING SOLUTIONS**

5385 Quebec Street  
Commerce City, CO 80022  
303-853-9891  
[www.totalpositioningsolutions.com](http://www.totalpositioningsolutions.com)

## **UNDERGROUND CONSULTING SOLUTIONS**

2701 W. Oxford Ave., Suite 6  
Englewood, CO 80110  
303-904-7422  
[www.dontdigwithoutucs.com](http://www.dontdigwithoutucs.com)

## **VECTORS, INC**

8811 E Hampden Ave., Suite 110  
Denver, CO 80231  
303-283-0343  
[www.vectorsinc.com](http://www.vectorsinc.com)

## **WESTWOOD COLLEGE OF TECHNOLOGY**

7350 North Broadway  
Denver, CO 80221

## **GARY WILKINSON**

P.O. Box 589  
Silverthorne, CO 80498

These firms support our organization.  
please show them your appreciation  
with your patronage.





# HIXON

Mfg. & Supply Co.

[www.hixonmfg.com](http://www.hixonmfg.com)

**SALES - SERVICE - RENTAL**

TWO CONVENIENT RETAIL LOCATIONS  
SURVEY, CONSTRUCTION, AND ENGINEERING  
INSTRUMENTS AND SUPPLIES

LARGEST GNSS RTK REFERENCE  
NETWORK IN COLORADO AND WYOMING

LOCAL SUPPORT, TRAINING, AND SERVICE

24/7 WEB STORE - [www.hixonmfg.com](http://www.hixonmfg.com)

## LEICA **VIVA** SERIES ROBOTIC TOTAL STATIONS

LEICA **VIVA** TPS IS THE FASTEST TOTAL STATION IN ITS CLASS. WITH A COMPLETE PORTFOLIO OF MODELS, BEST-IN-CLASS ONE-PERSON SURVEYING, UNMATCHED EDM PERFORMANCE AND NEW LEVELS OF EASE-OF-USE, YOU'LL ALWAYS FIND YOUR IDEAL ROBOTIC TOTAL STATION AT HIXON MFG. & SUPPLY CO.

# SAVE OVER 22%\*

FOR A LIMITED TIME ONLY,  
HIXON MFG. & SUPPLY CO. IS  
OFFERING DISCOUNTS OF UP TO  
**\$8,700** FOR A NEW LEICA **VIVA**  
SERIES ROBOTIC TOTAL  
STATION PACKAGE.\* CALL  
HIXON TODAY FOR DETAILS.

\* Off MSRP - Limited Time Only

### Fort Collins

1001 Smithfield Dr  
Fort Collins, CO 80524  
Phone: 970.482.0111

### Denver

8775 E. Orchard Rd., Unit 807  
Greenwood Village, CO 80111  
Phone: 303.694.0012



- when it has to be right

**Leica**  
Geosystems





**THE TRIMBLE 36 PROGRAM GIVES VECTORS, INCORPORATED  
CUSTOMERS 0% LEASE FINANCING FOR 36 MONTHS!**

*In Select Situations*

**NOW IS YOUR CHANCE TO GET THE  
EQUIPMENT YOU NEED!**



**TRIMBLE R8 GNSS BASE & ROVER**

**TRIMBLE R6 BASE & ROVER**

**TRIMBLE 5800 BASE & ROVER**

**HPB450 RADIO'S**

**TRIMBLE TSC2 DATA CONTROLLERS**

**S6 ROBOTIC TOTAL STATIONS**

**VX SCANNER SPATIAL STATION**

**VECTORS KEEPS A FULL INVENTORY IN STOCK AND  
IS AVAILABLE FOR IMMEDIATE DELIVERY!**

**PROGRAM HIGHLIGHTS**

- Minimum transaction size is \$20,000.00
- Subject to credit approval
- Available only through Trimble Financial Services and Vectors, Incorporated
- Up to two-day training and installation
- Equipment listed above is ready for immediate delivery
- Vectors gives complete training and installation with every purchase

**FOR ADDITIONAL INFORMATION, CONTACT**

**VECTORS, INCORPORATED**

*A Company Working for Land Surveyors*

**LOCATIONS:**

5500 Pino Ave. NE  
Albuquerque, NM 87109  
Phone: (505) 821-3044  
Fax: (505) 821-3142  
Toll Free: (866) 449-3044

8811 E. Hampden Ave, Ste. 110  
Denver, Colorado 80231  
Phone: (303) 283-0343  
Fax: (303) 283-0342  
Toll Free: (877) 283-0342

Visit our website at: [www.vectorsinc.com](http://www.vectorsinc.com)