

August 2012

SIDE SHOTS

Professional Land Surveyors of Colorado

Volume 43, Issue 3



'Being in the Wrong Place at the Wrong Time'

page 6

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

Becky Roland
Executive Director
PLSC, Inc
PO Box 460022
Denver, CO 80246



HIXON
Mfg. & Supply Co.
www.hixonmfg.com

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

SALES - SERVICE - RENTAL

24/7 WEB STORE - www.hixonmfg.com

**Join the largest RTK Reference Network in Colorado and Wyoming!
Call us today for information on how it will save you time and money.**

Home | Subscription Information | Network Coverage | Resources | How it works | Products | Contact | Distributors Friday, 23 December 2011, 14:51:34 | Login

ANY CONSTELLATION - ANY APPLICATION - ANY CONSTITUTION
ANY CONSTELLATION - OPEN TO ALL

ANY CONSTELLATION
ANY APPLICATION
OPEN TO ALL



SmartNet
North America

News & Announcements

Important information about Virginia Earthquake!
SmartNet Alert: SmartNet Team is working to determine the possible effects of the Virginia Earthquake on SmartNet stations → Full story

SmartNet North America User Portal officially launched!
The Portal provides live status maps, rover tracking & mapping tools, site database information & much more → Full story

GNSS Network Coverage



Locate SmartNet Coverage

How it Works



An introduction to RTK Networks, methods, standards and the economic and technical advantages of using SmartNet.

Get Connected



SmartNet is truly Open to All. Our Configuration & Connection information page will show you how to get your equipment connected to SmartNet

RINEX Data & SpiderWeb Tools



Smart RINEX RINEX NETWORK SERVICE GNSS QC

SmartNet Newsletter Subscription



Subscribe to our SmartNet newsletter for up-to-date information. → Click here

Subscribe to SmartNet



With coverage throughout North America, SmartNet provides solutions for Any Application, Any Constellation, and is Open to All



smartnet.leica-geosystems.us/smartnet.html



FREE Shipping



For a limited time, www.hixonmfg.com is offering FREE UPS Ground shipping! Visit our website today to take advantage. (some restrictions apply)

Find Hixon Mfg. & Supply Co. on many social networking websites.



FORT COLLINS
1001 SMITHFIELD DR
FORT COLLINS, CO 80524
970.482.0111 800.762.5252

www.hixonmfg.com



DENVER
8775 E ORCHARD RD, #807
GREENWOOD VILLAGE, CO 80111
303.694.0012 800.475.3422



Professional Land Surveyors
of Colorado, Inc.

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

OFFICERS (2011)

Roger Nelson
President

2450 South Peoria Street . Aurora, Colorado 80014
O: (303) 353-3916

Micheal Bouchard
Vice President

4755 Forge Road, Suite 150 . Colorado Springs, CO 80907
O: (719) 590-9194

Terry Maw
Secretary/Treasurer

8055 E. Tufts Avenue, Suite 850 . Denver, CO 80237
O: (719) 590-9194

Becky Roland
Executive Director

Becky Roland
PO Box 460022 . Denver, CO 80246
Phoenix AMC O: (303) 551-3266 F: (720) 230-4846

2011 PLSC CHAPTER
ORGANIZATION

CENTRAL COLORADO PROFESSIONAL SURVEYORS

President: James "JJ" Rihaneck
Vice President, Chris Raml;

Secretary, David Kuxhausen; Treasurer, Aaron Willis

Directors: Shawn Clarke, Eldon Knoll, George Robinson,
John Wilhelm, Kevin Kucharczyk, Terry Pickering, Jason Pollock,

NORTHERN CHAPTER - PLSC, INC.

President: Kayce Wohlman

President-elect: Laine Landau; Secretary/Treasurer, Rob Hintz

Directors: Paul Bacus, Bob Edmonds, Steve Varriano, Douglas Ritter
President Emeritus: Ron Perkins

NORTHWEST 1/4 COLORADO
LAND SURVEYORS

President: Brian T. Kelly

Vice President, William Whelan; Secretary/Treasurer, Jeff Gustafson;

Gordon Dowling, Immediate Past President and Director

Directors: Thomas H. Effinger, Skidge Moon, Walter Magill,
Lloyd Powers, Peter Epp

SOUTHERN COLORADO PROFESSIONAL
LAND SURVEYORS

President: Joe Alessi

Vice President: Steve Parker; Secretary: Bill Brooks;

Treasurer: Dan Hanten

Directors: Nathan Lira, Jon Tessin, Steve McAnally,
Lyle Bissegger, Don Hulsey

SOUTHWESTERN CHAPTER - PLSC, INC.

President: Joshua Casselberry

Vice President, Robert L. Trudeauux; Secretary, Parker Newby
Treasurer, Ed Young

WESTERN COLORADO LAND SURVEYORS

President: Richard Bullen

Vice President: Jonathan Kobylarz; Sec'y-Treas.: Brian Bowker

Directors: Leslie Doehling, Patrick Green,

Scott Thompson, Peter Krick, Mike Drissel, Tom Sylvester

COLORADO SPATIAL REFERENCE NETWORK

President: Brian Dennis

Vice President, Eric Carson; Secretary, Jan Sterling; Treasurer, Chris Duda

Directors: Larry deVries, Jack Sparks, Jon Doty,

Larry Rector, Harold Schuch

SIDE SHOTS

may Journal 2012

Volume 43

Number 2

- President's Letter4
- From the Editor5
- 'Wrong Place at the Wrong Time'6
- Hello, PLSC!6
- Control Points — Early History of the PLSC8
- State Board Update10
- PLSC Storage Items Moved11
- Letter from the Bureau of Land Management12
- Educational Drought14
- The Three Mile Method of Surveying
in the Ute Meridian16
- GPS Day18
- The Unusual Survey20
- Rule of the Month, 6.5.2, Responsibility to
Research Records21
- Professional Liability Insurance Costs —
What's Important23
- PLSC Board of Directors Meeting Minutes
May 12, 201225
- Chapter News27
- Sustaining Members30

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.

Roger Nelson
President

Micheal Bouchard
Vice President

For Editorial Correspondence, contact:

John B. Guyton

Editor: Side Shots

5385 Centennial Trail, Boulder, CO 80303

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 (2011-2012)

MICHEAL BOUCHARD
VICE PRESIDENT
O: (719) 590-9194
mbouchard@f-w.com

TOM ADAMS
PAST PRESIDENT
O: (719) 546-5454
tom.adams@plsc.net

ROGER NELSON
PRESIDENT
O: (303) 353-3916
roger.nelson@merrick.com

TERRY MAW
SECRETARY/
TREASURER
O: (719) 590-9194
tmaw@f-w.com

DIANA E. ASKEW
EXECUTIVE DIRECTOR
O: (303) 838-7577
diana.askew@plsc.net

DIRECTORS (2011-2014)

TODD BEERS
O: (720) 225-4646

PETER KRICK
O: (970) 256-4003

WILLIAM BUNTROCK
O: (303) 829-4047

PARKER NEWBY
O: (970) 247-1705

BRIAN DENNIS (ex-officio)
O: (719) 268-8537

BRIAN T. KELLY (ex-officio)
O: (970) 879-0045

KAYCE WOHLMAN (ex-officio)
O: (303) 443-3282

DIRECTORS (2009-2012)

PETER KENT
O: (720) 865-3116

GARY D. GABLE
O: (303) 882-0161

PATRICK GREEN
O: (970) 245-4099

STAN VERMILYEA
O: (303) 796-4640

WFPS DELEGATES (2011-2012)

JOHN B. GUYTON
O: (303) 443-7001

MICHEAL BOUCHARD
O: (719) 590-9194

NSPS GOVERNOR (2011-2012)

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

I want to take this opportunity to recap some of the PLSC summer activities. First, several PLSC Board members (Todd Beers and Brian Dennis) participated in the Colorado Spatial Reference Network (CSRN) GPS Day along with the CSRN Board members. This event was well organized and offered an opportunity for the surveying profession to reach out to future surveyors by guiding attendees through three different survey activities. The first activity was operation of a GPS rover to collect predefined points. When these collected points were viewed on screen they spelled out "GPS." The second activity was a geo-cache course where participants used handheld GPS to locate 4 caches and log their findings. The third activity was designed to explain how the United States acquired land and the system designed for disposal to private ownership. Maps detailing the limits of the Louisiana Purchase, annexation of Texas, ceded territory from Mexico, and the like were on display. The system of survey was discussed progressing from establishment of initial points down to survey of sections. An exercise was developed to replicate section subdivisions. After each exercise a completion card was stamped to authenticate the participant's completion, and serve as a means for those involved in the Boy Scouts to secure the appropriate badge. Lunch was provided and served to allow time to reconnect with fellow surveyors. Thanks to the CSRN for setting a great example of community involvement.



The second significant activity that has been accomplished is the transition of executive directors. As a part of this transition the PLSC storage was moved from Conifer, Colorado to the Aurora area. See the article in this issue for photos from that day. I want to extend a big thank you to Diana Askew, Becky Roland, J.B. Guyton, and Todd Beers for their hard work on a warm Sunday to accomplish the move. Also, Justin Abrahamson lent his flatbed trailer to the cause. Thank you Justin!

Another important step in the transition has been a continuous exchange between Diana and Becky by email and phone of the knowledge, duties and goals Becky will need to get up to speed. Diana's help with this exchange will continue in the coming weeks and is much appreciated.

Looking forward, we are underway with a membership drive scheduled to begin in late October to coincide with annual membership renewal that begins January 1st. Resources have been distributed to respective chapters to identify Land Survey Interns (LSI) and Professional Land Surveyors (PLS) licensed and residing in Colorado. A template letter inviting those LSI's and PLS's to join the PLSC and respective chapter has been distributed for each chapters' use and customization. We are also beginning our conference planning and will begin identifying topics and speakers in the coming months. Should you have ideas please contact Todd Beers.

I hope that your summer has been filled with increased work opportunities!

Sincerely,
Roger D. Nelson, PLS, CFedS

DEDICATED TO THE IMPROVEMENT OF LAND SURVEYING EDUCATION AND PRACTICE.



I would first like to join Roger Nelson and the rest of the PLSC membership in welcoming our new Executive Director, Becky Roland. I had the pleasure of meet-

ing her in person at a very strenuous event, the moving of the PLSC archives and other assorted stuff that had been kept in Di Askew's storage shed at her home in Conifer (see photos in this issue). Di has been very gracious and generous with her time in bringing Becky up to speed on all of the various details and duties of the job. Becky will be responsible for ads and mailing labels for *Side Shots*, and I look forward to working with her.

As the Editor of this publication, I usually must plead with people to consider writing an interesting article, to have enough material to assemble into one magazine, and it always

seems to come out fine at the last minute. This issue, however, was an exception – I had too much. That puts me in the uncomfortable position of having to choose, and declining to print articles on which someone spent time and effort. Extra pages cost money, and funds are limited. But please don't let this one time bounty of articles discourage any of you from becoming an author in *Side Shots*. It's a great way to share your knowledge or interesting experiences with your peers, gives you statewide recognition, and it just feels good to see your work in print. Contact me at any time if you have an idea, and we can make it happen.

This issue has a nice how-do-you-do note from Becky, an historical Control Points (we are up to number 17), and a column explaining that very strange cover photo of PLSC President Roger Nelson at gunpoint in Aurora (thanks for being such a good sport, Roger!). Angie Kinnaird Linn's well written State Board Update has a very interesting and useful discussion about the ongoing problem of

the re-use of improvement location certificates in real estate transactions. Mesa County Surveyor Patrick Green has prepared a story on surveying the Ute Meridian, Brian Dennis gave us another excellent summary of this year's GPS Day, Brian T. Kelly contributed a wonderful story about surveying among unexploded ordinances, Earl Henderson writes about the statute defining the responsibility to research records, and Scott Sorensen contributed a very useful piece about things you can do to control the cost of your professional liability insurance.

Side Shots will continue to bring you news and information that will enhance your professional practice, make you feel connected with the Colorado surveyor community, and just provide some enjoyable reading, for those issues in which it all seems to come together. Thanks to the efforts of so many of you, we did it again!

JB Guyton,
Editor, *Side Shots*

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 • 877.686.8561

'Wrong Place at the Wrong Time'

By Roger D. Nelson, PLS, CFedS

"I am not a crook!" the famous words of President Nixon now echoed by the President of PLSC. I thought our readers might be interested in my June 2, 2012, encounter with the Aurora Police Department (APD).

My Saturday began with a family trip to the furniture store motivated by my wife and daughter. Upon them successfully convincing me that we needed to purchase a futon, I left them at the store and headed off to retrieve my truck so that we could carry the piece of furniture home. As I approached the intersection of Iliff and Buckley I noticed a significant amount of APD activity and thought that there must have been a really bad accident at the intersection. Seeing that the far right lane was open and it appeared that traffic could bypass the event, I elected to proceed in that lane only to learn that all traffic was suspended and there was no accident. The APD used a GPS tracking device placed in the money from a bank robbery to isolate the money's location to the intersection that I happened into.

As I sat in my car, more and more officers gathered brandishing their firearms and began the process of removing each and every driver from their respective vehicles followed by complimentary handcuffs and detainment on the adjacent curb. I watched the first driver be removed and instructed to lay on the then wet pavement to receive his shiny temporary bracelets. Then they announced for the driver of the white Versa to exit the car with hands up. I looked around only to realize that they were speaking to me. I took a deep breath as I gathered myself for the exit, hoping that none of the officers were feeling trigger happy. As I slowly exited the car the K9 gained my full attention with his anticipation of a perceived perpetrator in sight. I was instructed to assume a posi-

tion laying on the asphalt and was immediately handcuffed and led to the curb. I had the pleasure of remaining on the curb for a couple of hours while this process repeated itself until all drivers were secured from their automobiles.

Meanwhile, back at the furniture store, my wife and daughter were getting increasingly impatient with my delayed return and began walking home. After a few blocks they opted to call a friend and as evidenced by the number of missed calls on my cell phone were anxiously wanting to speak with me to learn of my whereabouts.

Fortunately the APD accomplished their goal of securing all without incident and the FBI arrived to refine the GPS signal and isolate it to the SUV adjacent to the car I was driving. A brief time later my

personal information was provided and consent to search my car was given to APD so that I could escape the situation.

I still had some explaining to do with the family so I returned one of the many missed calls from my wife. Once she was able to gain control of her laughter, she was very understanding of why I did not return to pick her and my daughter up from the furniture store.

I truly am not a crook and hope that I never have to experience anything like this again. ■

Hello, PLSC!

I am so excited to become a part of this organization!

Di has done a great job providing initial training, and we have completed the transfer of files. Di will still be a resource as I organize the information and move into the Executive Director position – I really appreciate her assistance. I am now on a steep learning curve to get up to speed and learn all I can about PLSC and this great profession.

As introduction, my background is in association management. I have worked for, and with, non-profits for over 20 years. My company, Phoenix AMC, also brings a professional meeting planner and customer service specialist to assist PLSC as needed. Each has as much experience as I do in assisting non-profits with realizing their mission.

I would like to thank the Directors that have assisted to this point with my transition. In particular, thanks to Roger Nelson, who has patiently answered questions and helped identify priorities as I start my tenure.

I look forward to meeting many of you at upcoming events. In the meantime, please feel free to contact me with any questions or comments.



Becky Roland
303-551-3266
broland@plsc.net
PO Box 460022, Denver, CO 80246

NOW YOU CAN HAVE A PERFECT
POINT OF VIEW FROM ANYWHERE



Trimble VISION

Trimble Vision™ is designed to make surveying more efficient wherever the job takes you. Our portfolio of solutions provides you with the ideal tool kit to get your job done right the first time.

Choose Your Vision:
www.trimble.com/trimblevision



© 2012, 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. All other trademarks are the property of their respective owners.

**FOR MORE
INFORMATION
CALL YOUR
TRIMBLE DEALER**

Frontier Precision
Denver, CO
800-652-1522

Vectors Inc
Denver, CO
303-283-0343

Control Points – Number 17

By Warren Andrews, PLS

Early History of the Professional Land Surveyors of Colorado (up to 1994)

The Professional Land Surveyors of Colorado was formed to improve the profession of surveying in Colorado. For several years prior to its founding in 1966, Dex Brinker had tried to work within the framework of the Colorado Society of Engineers or Congress on Surveying and Mapping to better the status of Colorado surveying and surveyors. None of these organizations was found to be compatible and at an ACSM fall symposium at the Colorado School of Mines in October, 1965, Dex Brinker, Walt Swackenberg, Ted Rousses, Warren Andrews and two Mines students on the steps of Guggenheim Hall agreed to set up a meeting at CSM in December. The meeting was to vote on whether to form a new state surveying organization or not. The Professional Engineers of Colorado under the presidency of Jim Johnstone (a CSM professor) tried to convince the surveyors present at that meeting to become a part of the PEC. Unfortunately, the PEC only offered non-voting associate membership status to the surveyors so the vote was 18 to 14 against the PEC and to form a new organization instead.

Various committees were formed and at the first formal meeting of The Professional Land Surveyors of Colorado in February, 1966, Dex Brinker was elected Presi-

dent with Bob Harrison as Vice-President and Walt Swackenberg as Secretary-Treasurer. Other committees, such as the Constitution and By-laws Committee with Warren Andrews as chairman, set up a framework for the new organization with the three mentioned officers plus eight directors. After the first year the three officers would be elected on a two-year basis at the annual general meeting on the third Saturday in February. The eight directors would be elected for four-year terms with half being elected every two years for continuity. It was specified that no president could succeed himself so there would be no dynastic establishment, that each director would chair one of the standing or special committees for communication within the organization, and that the Secretary-Treasurer would chair the Nominations and Elections Committee because he had the membership rolls for the written ballots. Other standing committees were: Legislation, Liaison, Survey Monuments, Surveying and Records Standards, Membership, and Ethics and Fair Practices. Soon a Publications Committee was formed with Jerry Pesman as first editor of the newsletter, which he named "Side Shots." Later a few of the special committees were: Metric, Education, and Program. (The Program Committee was soon named a standing committee.)



The two Past-Presidents, Dexter Brinker and Bob Harrison of Professional Land Surveyors, accepting the Lufkin Standard Tape for Colorado.

continued on next page

Officers after the first year were:

<u>Years</u>	<u>President</u>	<u>Vice President</u>	<u>Sec.-Treas.</u>
1966	Dexter Brinker	Bob Harrison	Walt Swackenberg
1967-68	Bob Harrison	Warren Andrews	Walt Swackenberg
1969-70	Ira Hardin	Jerry Pesman	Ted Rousses
1971-72	Jerry Pesman	Walt Swackenberg	Ted Rousses
1973-74	Walt Swackenberg	John Moos	Leo Goldsmith, Joe Gust
1975-76	Warren Andrews	Sebe King	Joe Gust and Art Hipp
1977-78	Tom Brown	Dave Archer	Art Hipp
1979-80	Warren Alloway	Fred Adams	Art Hipp
1981-82	Fred Adams	Chic Chichester	Art Hipp
1983-84	Chic Chichester	Roger Patterson	Art Hipp
1985-86	Roger Patterson	Homer Gilson	Art Hipp
1987-88	Homer Gilson	Doyle Abrahamson	Art Hipp
1989-90	Doyle Abrahamson	John Walker	Art Hipp
1991-92	John Walker	Chuck Albrecht	Art Hipp
1993-94	Bob Stollard	Dave DiFulvio	Art Hipp



Warren Andrews



Walt Swackenberg



Ira Hardin



Jerry Pesman



Ted Rousses



Art Hipp

Major legislation was written by the PLSC and was passed by the state legislature in 1967. The first Sunset Review of the Colorado State Board of Registration for Professional Engineers and Professional Land Surveyors in 1981 resulted in the establishment of the Surveyor's Quorum of the State Board composed of one PE and PLS and two PLS's to take care of surveying, not engineering, problems. Currently there is also a public member (non-PE and non-PLS) on the Quorum.

A change in structure of the PLSC occurred in 1985 when state chapters were established. There are now four: Central Colorado Professional Surveyors, Northern Chapter of the Professional Land Surveyors of Colorado, Inc., Southern Colorado Professional Land Surveyors, and Western Colorado Land Surveyors.

PLSC became a constituent society of Colorado Engineering Council in 1971 through the efforts of Dex Brinker to have a closer liaison with the technical societies and has been active in Council with Warren Andrews as PLSC representative. Also PLSC is represented at the Western Federation of Professional Surveyors by Chic Chichester and Zoe Zylstra represents the PLSC at the National Society of Professional Surveyors. ■



Governor John Love signing H.B. 1225 with J. Warren Andrews, Past Vice President, looking on.

STATE BOARD UPDATE

By Angie Kinnaird Linn, Program Director
State Board of Licensure for Architects, Professional Engineers, and
Professional Land Surveyors

We have one topic to focus on this quarter. A Colorado Professional Land Surveyor wrote the Board to express his frustrations with a practice that several of you are witnessing – the re-use of Improvement Location Certificates (ILCs) in subsequent real estate transactions with an “Owner’s Affidavit” to attest that there have been no changes. Presumably, in these tight economic times, this practice is the result of a desire to save money. The problem is that in the long run, the consumer could end up paying a lot more money if there is an encroachment. The questions and answers put to the Board’s Survey Quorum are as follows.

At the April 13, 2012 meeting of the Survey Quorum of the Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors, your request for opinion was reviewed and discussed. A draft response was finalized during the June 8, 2012 meeting for submittal:

1. When title companies and/or realtors use Improvement Location Certificates (“ILCs”) that were prepared for the use of a specific client to close a mortgage loan for another client, is this procedure legal per Colorado Revised Statute 38-51-108?

Section 38-51-108, C.R.S., defines who the land surveyor can and cannot prepare an ILC for; that it is not a Land Survey Plat or an Improvement Survey Plat; and the requirement of a statement on the certificate and certain wording. It does not define what title companies or realtors can do with the ILC and the legality of its use is unknown. The Board’s authority is limited to Professional Land Surveyors preparing the ILCs for a specific client, not over mortgage companies or real estate brokers.

It is possible to include a statement on the ILC: “The use of this Improvement Location Certificate by any person or entity other than the person or entity certified to without the express permission of (PLS or Surveying Company Name) is prohibited.”

2. When title companies and/or realtors ask individual owners of parcels to sign an Affidavit that “nothing has changed on the parcel,” using an ILC that was prepared for another client, is this procedure legal per §38-51-108, C.R.S.?

The signing of an Affidavit by the property owner does not comply with §38-51-108, C.R.S. A Professional Land Surveyor is the only person that can sign the ILC and statement certifying to its authenticity. An Affidavit on an ILC does not meet the minimum standards for ILCs set out in Board Rule 6.6. An Affidavit signed

by a property owner would probably not have the same legal bearing as an ILC.

3. Assuming that DORA is not equipped to enforce the current statute, wouldn’t it be prudent and wise to change the statute?

The desire to change the statute regarding ILCs is something that may be more appropriate for the professional associations and the industry to pursue.

4. Would DORA consider eliminating Improvement Location Certificates as a type of “survey” entirely?

It is not up to DORA to decide what survey types to retain or eliminate in the Colorado Revised Statutes. This is a decision for the Colorado General Assembly and it is the Board’s responsibility to modify its Rules and Policies to reflect any changes in the statutes.

5. If DORA agrees that the use of ILCs by clients other than whom they were created for violates the current statute, can or should individual land surveyors or survey firms notify the realtors or title companies in their specific part of the state of the Survey Quorum’s findings?

The Board does not have any jurisdiction over the use of Improvement Location Certificates nor its enforcement.

During the Survey Quorum’s discussion on this issue at the June 8, 2012 meeting, Marcia Waters, Director of the Colorado Division of Real Estate, participated in the discussion. Ms. Waters informed the Survey Quorum that real estate brokers should not procure ILCs during real estate transactions on behalf of clients, due to perceived conflicts of interest and potential violations of state and federal law. The laws imposing these restrictions have been in place since 1974 and 1994.

She also indicated that she would work to provide the information in this article to licensed real estate brokers and mortgage loan originators to better their understanding of ILCs and prevent misuse.

Further, we are working with the Colorado Division of Insurance to provide similar information to the title insurance industry. We have been informed that the use of ILCs has diminished on established, residential lot/block real estate transactions by title insurance companies.

We look forward to collaborating on this issue with the Real Estate and Insurance Divisions to benefit the surveying community. ■

PLSC Storage Items Moved

The contents of the PLSC storage shed was relocated to a new location on Sunday, June 24th from the home of Diana Askew, retiring PLSC Executive Director, in Conifer. The contents included file cabinets and boxes of archived materials, including items that had been stored since the days of Executive Director Art Hipp.

The volunteers for the move included Roger Nelson, J.B. Guyton, Todd Beers, incoming Executive Director Becky Roland, and of course, Diana Askew. Also, Justin Abrahamson lent his flatbed trailer which made it possible to accomplish the move in a single trip.

The group showed up at Diana's home between 9:30 and 10 a.m. to see that Diana had already begun moving office items out for loading. Becky, J.B. and Todd stuffed their cars with items that could not withstand open transit on the flatbed trailer. The group completed unloading the last of the PLSC storage around 2:30 p.m. in triple-digit temperatures. Thanks to all who participated for their hard work and dedication.

The new storage facility is at Uncle Bob's Storage, just east of Peoria at 11951 E. Mississippi. Should anyone require access to the new storage unit please contact Becky Roland. ■



The **MEASURE OF EXCELLENCE**
EASY ORDERING ONLINE!



SURV-KAP.com
SURVEY MARKERS, CAPS AND ACCESSORIES
800-445-5320





United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Colorado State Office

2850 Youngfield Street

Lakewood, Colorado 80215-7210

www.co.blm.gov



CO-956

9655.2

June 27, 2012

Mr. John B. Guyton, Editor
Side Shots
3825 Iris Ave.
Boulder, Colorado 80301

Dear Mr. Guyton:

This letter is to inform you of official BLM cadastral surveys in Colorado that have been accepted from January 13, 2012, through May 25, 2012. These surveys were filed in the Public Room, Bureau of Land Management, Colorado State Office, 2850 Youngfield Street, Lakewood, Colorado, 80215.

The accepted original surveys, resurveys, supplemental plats or remonumentations are listed below by township, range, meridian, group number, type, approval date and number of plats.

<u>Township</u>	<u>Range</u>	<u>Meridian</u>	<u>Group No.</u>	<u>Type</u>	<u>Approved</u>	<u>Plats</u>
T. 10 S.	R. 70 W.	Sixth	1388	Plat & Notes	1/13/12	1
T. 9 S.	R. 71 W.	Sixth	1388	Plat & Notes	1/13/12	1
T. 10 S.	R. 71 W.	Sixth	1388	Plat & Notes	1/13/12	1
T. 1 N.	R. 71 W.	Sixth	1564	Suppl. Plat	1/20/12	4
T. 1 N.	R. 72 W.	Sixth	1564	Suppl. Plat	1/27/12	1
T. 51 N.	R. 05 E.	NMPM	1556	Plat Only	2/03/12	2
T. 7 S.	R. 95 W.	Sixth	1565	Plat & Notes	2/08/12	1
T. 36 N.	R. 11 W.	NMPM	862	Plat & Notes	2/21/12	1
T. 3 S.	R. 73 W.	Sixth	1570	Suppl. Plat	4/06/12	4
T. 25 S.	R. 73 W.	Sixth	1410	Plat & Notes	4/06/12	3
T. 8 S.	R. 78 W.	Sixth	1493	Plat & Notes	4/13/12	4
T. 13 S.	R. 92 W.	Sixth	1584	Suppl. Plat	4/13/12	1
T. 5 N.	R. 86 W.	Sixth	1587	Suppl. Plat	4/18/12	1
T. 5 N.	R. 87 W.	Sixth	1587	Suppl. Plat	4/18/12	1
T. 15 S.	R. 97 W.	Sixth	1548	Plat & Notes	4/30/12	1
T. 48 N.	R. 06 W.	NMPM	1557	Plat & Notes	5/03/12	1
T. 1 N.	R. 71 W.	Sixth	1564	Suppl. Plat	5/09/12	1
T. 10 S.	R. 103 W.	Sixth	1341	Plat & Notes	5/25/12	3

As other surveys are completed, I will advise you of their acceptance. You may circulate this letter among the membership of the Professional Land Surveyors of Colorado.

Sincerely yours,

Randy Bloom
Chief Cadastral Surveyor for Colorado



Total Service Solutions Provider



Wagner Equipment Co. is now your service solution for Trimble surveying equipment.

With the most experienced service department in the region, we have the resources to fulfill our commitment to total customer satisfaction. Wagner repair services the complete line of Trimble surveying solutions.

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



Authorized Dealer



Call: **1-866-903-2335**

*Your authorized dealer for
Machine Control Solutions*
www.wagnerequipment.com

Educational Drought

by Lynn Patten

Colorado is suffering from an educational drought. As of 2010 the Professional Land Surveyors of Colorado reworked the education requirements for licensure of a "professional land surveyor." Apprenticeship by experience only is no longer accepted unless the internship was underway in 2010. The minimum education needed for Colorado licensure is now a two-year Associate Degree in Surveying. The options for obtaining this education in Colorado have evaporated. A degree in land surveying cannot be obtained within the State of Colorado.

The only bachelor degree program left in the region was at Metropolitan State University of Denver. That program moved to the department of Earth and Atmospheric Sciences, as an "area of interest" under the Geographic Information Systems Area of Concentration, Land Use Major. It is no longer a bachelor degree in surveying.

Another local educational option was the Associate of Applied Science degree in Surveying offered at Westwood College. Unfortunately, that degree is also no longer available. The last three students in the program graduate in October. The economy and a lack of commitment by administration have forced the legacy of the Brinker of School of Surveying to cease to exist.

I have been working with J.B. Guyton, Chairman and C.E.O. of Flatirons Surveying in Boulder, to restart an Associate Degree in Surveying program at Front Range Community College. This would open up a more affordable opportunity for students than has previously been available. P.L.S.C. and the Colorado State Board of Licensure for Architects, Engineers and Surveyors both support the drive to get this program in place. The target date for achieving this is early 2013.

In the meantime, to bring some moisture to Colorado's educational drought, I have established a website: www.NorthAzimuth.com. This website offers a surveying curriculum on a per course certificate system. It features GEOMETRIX – Earth Measurement "from the ground up," providing review courses for professional land surveyors and surveyor interns.

GEOMETRIX is designed as an in-depth set of courses for professional surveyors needing to review certain topics, and surveyor interns preparing for their fundamentals exam. Each course provides information in document form for review and includes "homework". A simple review of math, algebra and geometry is provided for surveyor interns needing a boost to understand surveying topics.

Support for this educational opportunity is being sought from the Colorado State Board of Licensure of Architects, Engineers and Surveyors. Adding professional development hours to the certificates is an additional goal.

The surveying profession has successfully weathered a poor economy. So, what is the forecast for growth in the future? Job opportunities for surveyors will rise. Surveyors are already an integral part of the economy from housing and infrastructure replacement to the oil and gas industry expansion. As the economy improves so will the job opportunities for surveyors. With this in mind, Colorado should be proactive in creating and keeping an educational program for surveyors within our state. ■

COMM.TECH

Increasing your bottom line

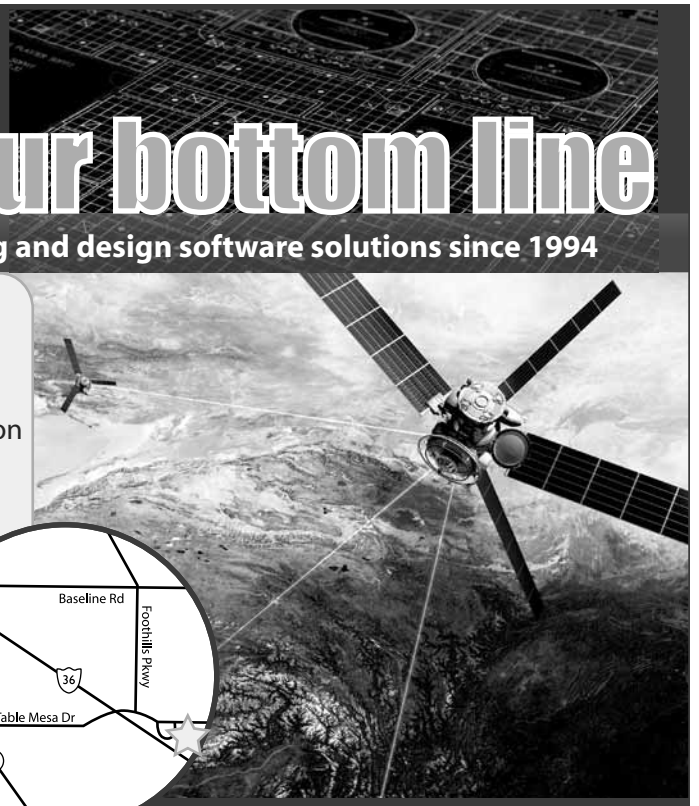
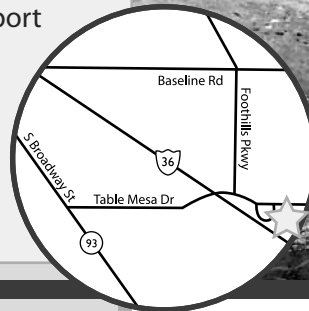
with customized drafting and design software solutions since 1994

products

- AutoCAD LT
- AutoCAD
- Map 3D
- Civil 3D
- Infrastructure Design Suites
- Infrastructure Map Server
- Raster Design
- Design Review
- Subscription

services

- State of the art training facility
- Implementation & customization
- Workflow analysis consulting
- Styles & standards set-up
- License activation support
- License compliance
- Technical support
- Pilot projects
- Transition assistance
- On-site consulting
- Government Specialist



303.530.4976 | www.ctcivil.com

5398 Manhattan Circle
Boulder, CO 80303

Autodesk

Silver Partner
Architecture, Engineering & Construction
Authorized Government Partner

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

The Three Mile Method of Surveying in the Ute Meridian

By Patrick R. Green, PLS
Mesa County Surveyor

Mesa County, located at the confluence of the Grand (Colorado) and Gunnison Rivers on the Western Slope, is a very unique area for land surveying. The original GLO surveys are based on three meridians: 6th Principal Meridian, New Mexico Principal Meridian and the Ute Meridian. Therefore, it is very important to know and understand, which method of surveying is required for any given township in the county. Townships based on the 6th and New Mexico meridians, use the standard BLM section retracement and breakdown methods. Surveying in the Ute meridian, however, is unique and very different from a standard section retracement or breakdown, and adherence to the 3-Mile Method is required.

Basically the Ute Meridian covers the Grand Valley from the east end in Palisade to the west end of Mack through Grand Junction, Fruita, and Loma. It also covers the area south of Grand Junction to Whitewater. The Ute Meridian was established in 1880 to provide 40 acre tracts for the Uncompahgre Utes. The survey had to be done quickly in order to layout a reservation for the Indians. For this purpose the Special Instruction, sent out by the Department of the Interior, General Land Office (The Three Mile Method), created a very different type of section. However, once the reservation was established the decision was made to move the Indians to another location. Therefore, the area was never used as a reservation. The Three Mile Method, however, turned out to be very good for creating 40 acre tracts for agriculture and farming in the Valley; and for establishing a network of control, which included all of the 1/16th corners of each section.

The Three Mile Method requires running 3 additional lines for each section. Instead of the traditional layout of a section, all 1/16th corners are set along the perimeter of the section; interior lines are then

SPECIAL INSTRUCTIONS
TO
Daniel G. Major Surveyor
December 20, 1880

For survey of lands assigned to the Uncompahgre Utes in the State of Colorado

Department of the Interior
January 6th, 1881

Approved

Recorded in Contract Book No 6 page 293
Secretary
For card see Colorado Vol. 3 page 396

Special Instructions
Department of the Interior
General Land Office
December 20th 1880

Sir:

Having been designated by the Secretary of the Interior, as surveyor of that part of the Agricultural lands (recently ceded to the United States by the confederated Band of Ute Indians in Colorado) which under the agreement, has been assigned to the Uncompahgre Utes on Grand River near the mouth of the Gunnison River as mentioned in your contract of even date, and to which, under the provisions of an Act of Congress approved June 15, 1880, the said land is to be removed by the Commissioners appointed under the Act, and having been directed by the Department to proceed at once into the field of your operations, with a view of exploring the country and establishing Initial Point of the contemplated surveys as well as running and marking an independent Base and Meridian lines, it will now be your duty to survey the necessary Standard parallels, Guide Meridians, township interiors and subdivisional lines. The foregoing surveys being requested the proper descriptions of the lands allotted to the Uncompahgre Utes conformity with the rectangular system of the public land surveys, and these instructions, and in accordance with the printed Manual of Surveying Instructions of February 22, 1885, so far as the same may be applicable to this work. As the provisions of the first section of the Act contemplate the allotments to be made in severalty of agricultural and grazing lands, you will subdivide each section of land surveyed by you into quarter-quarter sections or forty acre tracts as near as may be conformably to the accompanying diagram of a section which illustrates the method to be observed by you in the subdivision of a section into forty acre legal subdivisions. It will be seen that in order to provide all the corners to each subdivision, so that each allottee may see the boundaries of his land, the system will require three additional East and West lines to each section besides those called for by the printed Manual of Surveying Instructions. The additional lines will be run in random and true lines, from the quarter section and quarter-quarter section corners to the opposite corresponding corners within each section as is shown on the diagram in yellow color. In running these lines you will erect permanent corners on the true lines at the equidistant points of the character required for quarter section corners, marking the corners 1/16 with the exception of the centre section corners which shall be marked 1/4. Stone corners of not less size than are required by the Manual

run from east to west, from the opposing 1/4th corners or 1/16th corners in the section lines. Running the 3 additional lines from east to west across the section (lines 5, 6, 7 in Fig. 1) is the major difference between the 3-Mile Method survey and a traditional section layout.

In retracing the interior lines of a Three Mile section in the Ute, if the surveyor determines that a 1/16th corner is truly lost, the surveyor must re-established the corner by single proportion from the nearest found corners to the east and west within the section. In other words, the 1/16th corners north or south of a line are not to be used to establish the interior 1/16th corners.

Figure 2 shows how to re-establish the SW 1/16th corner if it is lost. The corner would be set on a straight line between the S 1/16th corner on the east line of the section and the SW 1/16th corner using an equal distance spacing for the 1/16th corners. No other corners to the north or south would be used to establish the corner.

After establishing the 1/16th corners by the 3-Mile Method, the BLM Survey Manual standard section breakdown is used to create any divisions less than 40 acres that require aliquot corners smaller than 1/16th corners.

should be preferred to posts, with two pits where practicable, in the direction of the cardinal points, so as to indicate the course of the lines.

You will provide yourself with appropriate instruments, and a chain of standard measure. You will be furnished by this office with field books necessary to mote your operations in the form prescribed in the Manual and in these instructions. You will also be supplied upon application to this office, with the requisite field note paper and blank township plats for the purpose of making your returns of the survey in triplicate. The original field books and plats of your surveys will be delivered by you to the Ute Commissioners for their use in carrying out the provisions of the Act under which they hold their commissions, such books and plats to be submitted by then to the Secretary of the Interior with necessity and the scope thereof is not now apparent for want of the information in required to the number of the Uncompahgre Indians entitled to the lands in severalty, a nominal sum of eighty thousand dollars being the double of the estimated amount which may be due to you under the contract, is inserted in the Bond which you are required to furnish, so that your contract may be acted on by this office and submitted to the Secretary of the Interior for his approval, and when so approved, your own copy will accompany these instructions, the receipt of which you will duly acknowledge.

J. A. Williamson
Commissioner

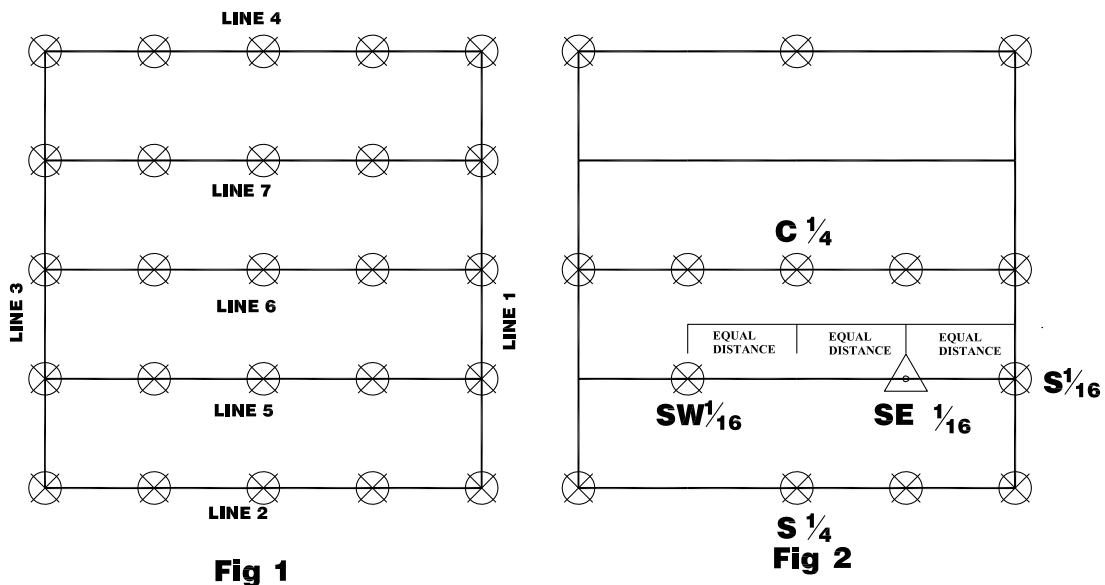
Daniel G. Major Esq.
Surveyor of the Uncompahgre Ute land in Colorado

There are exceptions to the Three Mile method in the Ute Survey in which a surveyor would use a standard section breakdown. As with any retracement, a surveyor must obtain the original township plat and field notes before starting a survey in the Ute Meridian.

See the separate box for a re-type of the original 1880 Special Instructions.

For more information or answers to specific questions, please visit the Mesa County website, <http://surveyor.mesacounty.us> or call me at 970-244-1821. ■

SECTION 15



GPS Day

By Brian Dennis, PLS
CSRN President, 2012

On June 9th, 2012, The Colorado Spatial Reference Network (CSRN) represented Colorado on behalf of the Professional Land Surveyors of Colorado (PLSC) for the 2nd annual "GPS Day" event. This event was an extension of the National Society of Professional Surveyors (NSPS) "Surveyors Week" in March. We elected to hold our event in June to capture the better weather. It was a beautiful Colorado day of clear skies and 93 degrees. The event was held at Utah Park in Aurora and the park facilities were sponsored by the City of Aurora Survey and Parks Department.

Our challenge was to find a way to enhance and expand the event from last year. We wanted to encompass Land Surveying, GIS and GPS. Based on the excited feedback from the attendees and volunteers we accomplished that goal! This year we focused on a theme "Learn about the professions from the Professionals". To accomplish this, we created three separate activities that encompassed land surveying, GIS or GPS.

The first activity was titled "PLSS Section Course". Numerous maps were created and placed around this activity in progression that illustrated how the United States was originally acquired from other countries and the year of the conveyance. Other maps included a standard township breakdown, a standard section breakdown, a United States Base Line and Principal Meridian map and a township in the City of Aurora. We had professional land surveyors from Merrick & Company and David Evans & Associates as volunteers for this activity. To maintain our theme and not be a self guided tour, our volunteers guided the participants through the maps providing an explanation and narrative of each

and its importance to land surveying. The participants enjoyed learning some history of land surveying from actual land surveyors who clearly showed passion for the profession.

Prior to the start of the event, using rope and stakes, we created a simulation, on the ground, of an irregular section being approximately 50' x 50' in size. The section was established partially on flat ground and partially on a slope. Then we pre-established three of the four quarter corners leaving one quarter corner unknown. With the help and guidance of the volunteers, the attendees, using chaining pins, 100' tapes and a plumb bob, had to establish the missing quarter corner. Once all four quarter corners were known, the participants had to establish the center quarter corner. This portion of the activity allowed the participants to use the information they learned through the map narratives and actually apply it on the ground. Placing the section partially on a slope also allowed the volunteers to illustrate and discuss the differences in horizontal and slope distances to make the simulation a more realistic scenario. This provided the participants with a fundamental foundation to land surveying and how land was originally subdivided.

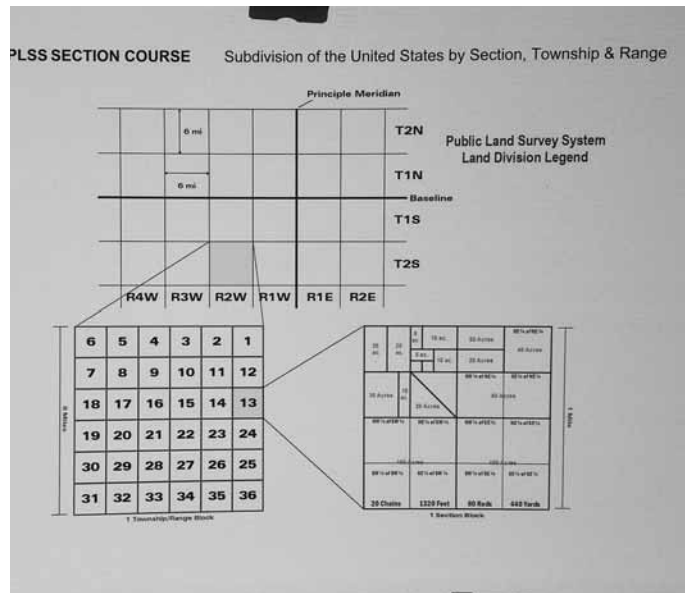
The second activity was titled "Data Collection Course". Maps and narratives were created and placed around the activity illustrating satellite constellations, GPS/GNSS receivers on the ground and what is GPS. We had Professional Land Surveyors from the Colorado Department of Transportation (CDOT), Edward James Surveying, City of Aurora Survey Department, Frontier Precision (Trimble rep.) and Rocky Mountain Lasers (Topcon rep.) as volunteers. For this activity, on the



ground, we spelled out the word “GPS”. The letters were 20’ long and 10’ wide, spaced 5’ apart with 60D nails with orange whiskers on 36” centers. This was established on the City of Aurora’s GPS network and on the Colorado State Plane Coordinate System. RTK GPS equipment, on loan from our volunteers, was used for this activity. Again, to be a hands-on activity, the participants operated the GPS equipment and observed the position of each nail. The data collectors (controllers) were set to the mapping screen and each participant watched the word “GPS” spell out on the screen in real time. This allowed our volunteers to discuss RTK GPS, GPS basics and coordinate geometry. They also discussed how data collection is a primary function to mapping in land surveying. The participants had a great time operating the equipment and seeing real time results. They also enjoyed being able to discuss the complexities of GPS, and land surveying during a live demonstration versus hypothetical scenarios. This was a great introduction to the participants into the technologies that surveyors employ for various task. A GPS base station was also operating near the activity to allow the volunteers to discuss the differences between a standard GPS to rover relationship/communication versus real time networks.

The third activity was titled “GPS Navigation Course”. Maps and narratives were placed at the beginning of the navigation course illustrating treasure hunting, what is GIS and what is geocaching. We had professional land surveyors and GIS professionals from Bohannon Huston, GeoCounsel, Inc., City of Aurora GIS Water Dept., Boundary Stone, LLC. and Compass Tools, Inc., as volunteers for this activity. Four stations were placed throughout the venue, each having a specific land surveying instrument picture attached to a post. Each station had a pre-determined latitude and longitude position. The participants, at the beginning of the course, received a mapping grade hand held GPS unit provided by Compass Tools, a card with the pre-determined lat/long positions printed and a PLS or GIS professional as a guide. The objective of the course was to find, via the provided coordinates and GPS unit, the four stations. To validate the finding of each station, the participant had to write the name of the survey equipment pictured. During the activity the volunteer would discuss the basics of GPS and how GPS is used in land surveying and GIS mapping. This is always a fun activity that everyone enjoys. This activity could be done individually or as a group and always initiates great conversations and comparisons between the participants.

We created completion cards for the participants with each activity listed that they received at the registration table. After each activity was completed, one of the volunteers, with that activity, would stamp the card. This provided the kids with a tangible item proving they actively participated in each activity. We also provided silicone support logo bracelets embroidered “CSRN GPS DAY” which each attendee received at registration. The NGS Colorado State Advisor provided the CSRN with pamphlets regarding NGS and GPS for the attendees to take. The City of Aurora Survey Department



provided pamphlets on the TRIG Star program and land surveying. Additional volunteers included land surveyors from the Mollenhaur Group and Titan Consulting.

Attendees included folks from the Westwood College surveying program, Metro State University GPS courses, Boy Scouts, Girl Scouts, geocaching groups, land surveyors, GIS professionals, high school students, junior high students, elementary students and those interested in pursuing land surveying or GIS. We had approximately 60 attendees throughout the day. This was a four hour event from 10 A.M. to 2 P.M. To divide the event into a morning and afternoon session, we provided a picnic style lunch, grilling hamburgers and hot dogs. There were plenty of drinks, chips and socializing on the menu. GeoCounsel, Inc. and Costco provided sponsorship for lunch.

Frontier Precision, Inc., Compass Tools, Inc. and Rocky Mountain Lasers were the GPS vendors and manufacturer representatives. Each had a booth and GPS equipment and actively engaged the attendees. They discussed GPS in general, the GPS technologies and various GPS projects they have been involved in. They were an intricate part of our success with this event. ■



The Unusual Survey

Brian T. Kelly, Vice-President, PLS

All of us, sometime during our surveying career, encounter a survey so unusual that we take a moment to ponder, "Have I ever done anything remotely like this before?" For some of us, it is getting greeted at the front door by a shotgun.....or being asked to calm down two neighbors that hate each other like cats and dogs- all the while they are moving the property corners like musical chairs - or perhaps the contradicting set of instructions that leaves one scratching your head and trying to decipher what the heck you are supposed to survey anyway. But in my case, unquestionably the UXO survey is one of the top five unusual surveys of what is now a thirty-five year career. And yes, that is UXO, not UFO.

UXO stands for unexploded ordinance. The U.S. military and the National Guard throughout the states have for years been practicing launching small rockets and artillery on remote sites. At least in the area of northwest Colorado, this practice was abandoned some forty years ago. But during its time, from the mid-late fifties to the early seventies, it was apparently common practice for the local National Guard to haul out their rocket launchers and artillery to these remote sites and discharge ordinance. What were once remote sites on public lands are now being utilized by a variety of users. Since about 10% of the ordinance that is fired never explodes, some of these sites have dozens, or hundreds, of these UXO's. And the arid environment of Colorado enhances their preservation.

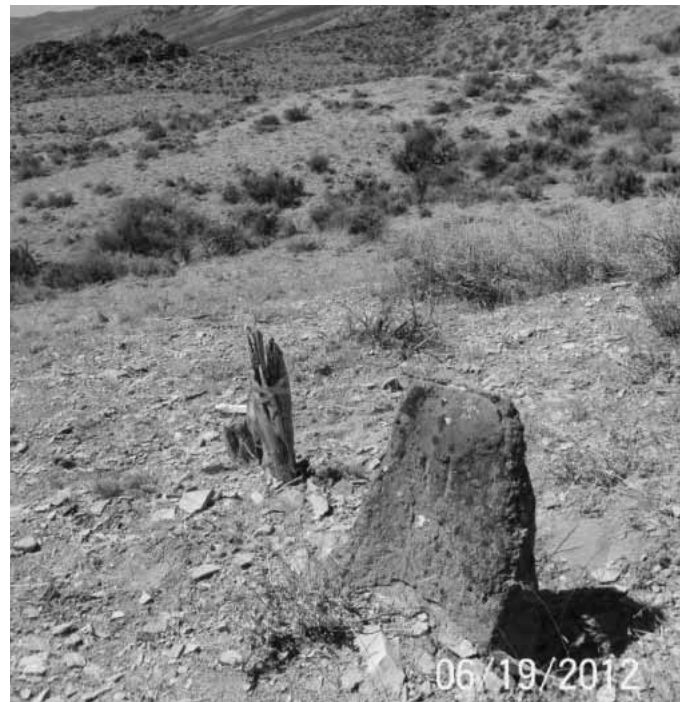
So our job was to set up a framework grid, in UTM coordinates, to enable Munitions Geophysicists to set up their search patterns. Their search patterns depend on the location of the firing line, type of ordinance discharged, range of the ordinance and probable volume

of the ordinance. Looking around the ground along one of the firing lines, we noticed well rusted fifty year old beer cans. That told us we were in the right place. How did we know? The wild horses nearby certainly don't use church keys to open beer cans and pop tops have been around since the late sixties. Therefore, the guys firing the big guns were probably the culprits.

While out surveying the framework grids, I also located a number of section corner stones. These also were in remarkable condition, given the fact they are about 110 years old, but one in particular was excellent, having the Township and Range chiseled onto the corner stone. Just like the old beer cans, that let me know I was in the right area!

The UXO team uses a variety of metal detectors to search for the UXO's. Some are as simple as the everyday Schonostat we are all familiar with, to a cart with a GPS and much more sophisticated metal detector, and lastly a helicopter mounted with a metal detector capable of widespread search. Once the location of the probable anomalies are found, the UXO team develops a set of anomaly coordinates and we layout these locations for additional search.

I shall leave the other four unusual surveys for future articles, but suffice it to say they involve all the necessary components: head scratching, soul searching, irate land owners and the ability to invoke one overwhelming question: What the heck am I doing here? ■



Rule of the Month, 6.5.2, Responsibility to Research Records

By Earl Henderson, PLS

“6.5.2 Responsibility to Research Records. The licensed professional land surveyor shall conduct or be responsible for conducting such research activities that are needed to properly define *the property boundary* relative to *instruments of record* and show all visible evidence that may affect ownership and property rights. This may include record research at the County Clerk and Recorder’s Office, the Colorado Department of Highways, the State Office of the Bureau of Land Management, the County Surveyor’s Office, an abstractor’s office and any other appropriate local offices; as well as field research of physical features and monuments and any other features significant in the locality. *Instruments of record* may be obtained from an abstract, title commitment, or title policy.” *(emphasis added)*

It is my contention that this Rule is closely associated by many Land Surveyors (LS’s) with Colorado Statute 38-51-106(i) which requires Land Survey Plats to contain: “A written property description, which shall include *but shall not be limited to* a reference to the county and state together with the section, township, range, and principal meridian or established subdivision,

block and lot number, or any other method of describing the land as established by the general land office or bureau of land management;” *(emphasis added)*

And let’s not forget Item 6.B(i) of the Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys (Effective February 23, 2011) which in part requires an ALTA/ACSM Land Title Survey (ALTA Survey) to contain: “The *current record description of the surveyed property*, and any new description of the *surveyed property* that was prepared in conjunction with the survey, including a statement explaining why the new description was prepared.” *(emphasis added)*

The reason for my contention is that I often see Land Survey Plats (LSP’s), and don’t forget that the AES Board at DORA has ruled that an ALTA Survey is also a LSP, that contain a property description headed by “Provided by the Owner” or “As shown in title commitment...”. It seems as though the surveyors who are using these phrases are doing so by inappropriately combining Rule 6.5.2 which allows the surveyor to accept the *instrument of record* from a title commitment,

Complete Photogrammetric Services

MAP WORKS

Contact: Ralph Vomaska, Certified Photogrammetist, ASPRS

7625 W. 5th Ave. #203E • Lakewood, CO 80226

Phone: 303-445-1856

E-mail: mapworks@qwestoffice.net

with Statute 38-51-106(i) which does not require a notification of where the property description was obtained.

Why do I feel that it's inappropriate? Well, sit back, relax, and I'll tell you. Hopefully we have all figured it out by now that we survey *property* not descriptions found in documents (like I've been told by some title agents). Usually, the property boundary and the description are NOT the same thing or even in the same place, but that's a discussion for another article. Rule 6.5.2 states that as LS's we are responsible for the research "to properly define *the property boundary*". Notice that it does NOT say, "To properly locate the description on the ground." The *instrument of record* should only be the first piece of our research. We can obtain the *instrument of record* from a title commitment or the other listed sources, but we have to obtain the instrument of record one way or the other in order to properly complete our research per Rule 6.5.2 and also to properly survey *the property boundary* (Remember, we don't survey the description.). So the phrase quoted above that the description is "As shown in the title commitment..." doesn't qualify, in my humble opinion, as the correct description of the property being surveyed since it's not from the *instrument of record*. It might read the same, and 38-51-106(i) only requires "a written property description..." without requiring that it be from the *instrument of record*, or an accurate description or even of the property being surveyed (although I think that's implied don't you?). Plus, Rule 6.5.2 allows us to obtain the *instrument of record* from those sources listed but it does not go so far as to allow us to obtain the property description from those sources, two very different things.

If your LSP is also an ALTA Survey the requirements are for the "*current record description*" not the description found in the title commitment so why not show that on your plat by referencing the *current record document*? If you reference the description from the

title commitment then you're not following the current ALTA/ACSM standards and you also better hope that the title company didn't have a typo in there somewhere. And finally, ALTA or not, I want my clients, my colleagues, and everyone else to know that I'm surveying the correct property using the correct description, so I have found it best to head the property description on LSP's with a phrase more like "Property Description as found in Reception #1234567 at the Moffat County Clerk and Recorder's Office:". That way there's no mistaking that the description is the proper description for *the property boundary*.

So, in conclusion, if you're using a phrase similar to "Description from title report..." then you're not following the ALTA standards. If you're using that phrase on your LSP's then I don't feel as though you're following Rule 6.5.2 which requires you to "properly define the *property boundary* relative to *instruments of record*".

Given all that, can you imagine a situation in which you would use a property description that was "Provided by the Owner?" The first thing we all do once the client describes to us what they own is go and get a copy of the *instrument of record* so we can survey *the property boundary* rather than the limits the owner pointed to. "Provided by the Owner" makes me wonder if the owner wrote the description themselves on a bar napkin! As a retracement surveyor especially, I find any LSP with a description headed by "Provided by the Owner" to be suspect because I have no idea where that description came from.

But all of this is just what I think. What do you think? I would enjoy reading your feedback, if you care to send it to Earl@ZenithLS.com Heck, I might even respond. ■

Professional Liability Insurance Costs – What’s Important

By Scott Sorensen

Contract Considerations

Standard of Care

The Land Surveyor shall perform its services consistent with the professional skill and care ordinarily provided by land surveyors practicing in the same or similar locality under the same or similar circumstances.

Limitation of Liability

In recognition of the relative risks and benefits of the Project to both the Client and the Land Surveyor, the risks have been allocated such that the Client agrees, to the fullest extent permitted by law, to limit the liability of the Land Surveyor to the Client for any and all claims, losses, costs, damages for any nature whatsoever or claims expenses from any cause or causes, including attorneys’ fees and costs and expert-witness fees and costs, so that the total aggregate liability of the Land Surveyor to the Client shall not exceed \$_____, or the Land Surveyor’s total fee for services rendered on this Project, whichever is greater.

Certifications

The Land Surveyor shall not be required to sign any document, no matter by who requested, that requires the Land Surveyor having to certify, guarantee or warrant anything that the Land Surveyor cannot definitively determine. The Land Surveyor shall not be required to execute any certificate, guarantee, or warranty that the Land Surveyor deems unreasonable. The Client agrees not make resolution of any dispute with the Land Surveyor or payment of any amount due to the Land Surveyor in any way contingent upon the Land Surveyor’s signing any such certificate, warrantee or guarantee.

Hazardous Materials

The Client agrees, notwithstanding any other provision of this Agreement, to the fullest extent permitted by law, to indemnify, defend and hold harmless the Land Surveyor, its officers, partners, employees and subconsultants from and against any and all claims, suits, demands, liabilities, losses, damages and cost, including reasonable attorneys’ fees and defense costs arising out of or in any way connected with the detection, presence, handling, removal, abatement, or disposal of any asbestos or hazardous or toxic substances, products or materials that exist on, about or adjacent to the Project site, whether liability arises under breach of contract or warranty, tort, including negligence, strict liability or statutory liability.

Mediation

The Client and Land Surveyor agree that all disputes between them arising out of or relating to this Agreement shall be submitted to mediation.

Going without professional liability insurance is no longer a viable business option for land surveyors. Clients have become very savvy at managing risk. They won’t assume the risks and liabilities of others by contracting with under-insured businesses and professional firms. Professional liability insurance has become a standard expense in the cost of doing business. Like all other overhead costs, managing insurance costs is important. Understanding how an insurance underwriter prices risk can help. Here are eight things you and your agent/broker should consider:

1. **More is Always Better** – While insurance applications can seem too long, painfully detailed and more than a bit confusing, taking the time to complete your insurance application can save you money. The more information underwriters have, the fewer assumptions they have to make when pricing your professional liability coverage. Faced with an incomplete application, an underwriter has no choice but to apply the most conservative measures. This almost always results in a higher premium quote.
2. **Get It in Writing** – Land surveyors that work with written contracts are better at managing risk and reducing professional liability exposures. Knowing that a land surveyor uses contracts is an important part of the underwriting process.
3. **Make Your Contract Count** – Include a copy of your standard form contract with the insurance application. Key contract provisions can make a difference. Your contract should address these key provisions:

Scope of Work – Agreeing on what services are going to be provided is important. Documenting what services are going to be pro-

vided is critical. Don't let time pressures short circuit your sound contracting practices. With today's high-speed data freeway, there is no excuse for starting work on a job without an executed contract in-place that includes a detailed scope of work.

Standard of Care – A carefully-drafted standard of care provision assures that you do not agree to provide a level of service that goes beyond what is covered under your professional liability insurance. (See Sidebar)

Limitation of Liability – Limitation of liability provisions address the dilemma land surveyors often face when their fees are disproportionate with the project's inherent risks. Managing risk includes taking steps to assure your liability exposure is in balance with your fee structure. (See Sidebar)

Certifications, Warranties, Guarantees – Clients can ask land surveyors to certify, warrant or guarantee their services. Project lenders can request land surveyors to execute certificates attesting to the complete accuracy of their surveys including language that confirms there are no errors or omissions. Head-off these unrealistic demands by including contract language that address certificates, warranties and guarantees and third party certifications. (See Sidebar)

Hazardous Materials – Land surveyors should avoid all risks associated with hazardous materials. Your contract should clearly state that the client shall assume all these risks. (See Sidebar)

Mediation – Protect your deductible by including contract language that makes mediation the first course of action in resolving disputes. Most insurance companies provide a deductible credit for claims resolved through mediation. Hanover provides a 50 percent deductible credit up to \$25,000. (See Sidebar)

4. **Your Stake in Construction Staking** – Staking construction sites is risky business. Even the slightest surveying error can lead to a costly professional liability claim. Land surveyors that provide construction-related services should develop detailed quality procedures to address the risks and provide a copy of the procedures with the insurance application.

5. **Sheepskins Matter** – Underwriters value land surveying firms with licensed professionals. Most underwriters consider firms with more licensed professionals to be better risks.

6. **Stay Connected/Stay Informed** – Underwriters value firms that participate in professional societies and make a commitment to continuing education.

7. **What Gets Managed, Gets Done** – To effectively manage risk, land surveyors need to develop, implement and enforce firm-wide policies and procedures. When submitting your insurance application, include copies of policies and procedures that demonstrate

the firm's commitment to managing risk and reducing liability exposures.

Here are policies and procedures that underwriter's value:

Contracts – Land surveyor professional liability claims often occur because the parties failed to execute a clearly defined contract. A formal contracting procedure goes a long way in assuring the contracts are in place before the surveying work starts.

Project Planning – Careful project planning is essential to the elimination of errors occurring in the field. Checklists are a proven way to manage important planning activities. Over time land surveyors that consistently implement project planning protocols make fewer mistakes and become better insurance risks.

Quality - Measure twice and cut once makes perfect sense. What doesn't make sense is expecting quality programs to succeed without a roadmap to follow. Step 1 is Quality programs that are documented. Step 2 is quality programs that are monitored by senior management. Step 3 is quality programs audited on a regular basis. Step 4 is Insurance applications that confirm steps 1 through 3 by providing a copy of related quality documentation.

Training - The days of the level, transit and 100 foot steel chain are long gone. Today's high-tech surveying equipment demands a highly-trained professional staff. Making training a priority makes good business sense.

Equipment Calibration – Keeping today's surveying equipment in good working condition takes a strong management commitment. This commitment starts with implementing a documented equipment calibration program.

Corrective Action – Professional liability claims provide opportunities to address risk management failures and implement corrective action plans. Formal corrective action procedures and related documentation help underwriters measure the firm's commitment to managing risk. Taking steps to eliminate the underlying practices that cause claims have a positive impact when underwriting a firm's risk profile.

8. **Bundling Can Help** – Land Surveyors may realize a cost savings by putting all their insurance needs with one carrier. Discuss available options with your agent/broker.

Land Surveyors can take steps to control the cost of professional liability insurance. Working closely with your agent/broker and insurance carrier can improve your risk profile and lower your insurance premiums. Don't take the insurance buying process lightly. Do your homework. You need professional liability insurance to be viable and competitive in today's risk conscious market. ■

PLSC Board of Directors Meeting Minutes

May 12, 2012 4:00 p.m.: Conference Call

Call to Order: 4:05 PM

Recognition of PLSC Board Members and Officers:

Present:

Officers: Roger Nelson, Mike Bouchard, Terry Maw, Diana Askew. Board: Todd Beers, Bill Buntrock, Patrick Green, Peter Kent, Peter Krick, Parker Newby, Stan Vermilyea. Ex-officio: Kayce Wohlman, JJ Rhineck, Brian Dennis. Nonvoting: J.B. Guyton

Absent: Gary Gable

A Quorum was present.

- Welcome of Guests:

Additions, deletions and modifications to agenda:

- None – agenda approved unanimously.

Agenda:

- 1: Approval of Minutes from Previous meetings:
March 21, 2012– Buntrock moved and Wohlman 2nd - Approved as written -unanimous consent.

2: Executive Director Selection:

The Choices are between Phoenix AMC and Lynn Patten. Bouchard moved to hire Phoenix AMC as PLSC's new Executive Director – Buntrock 2nd, after discussion a roll call vote was called. The vote was 12-0 Phoenix AMC. Phoenix AMC will be offered the Executive Director's job.

3: 2012 Budget Tracking – Terry Maw & Diana Askew. Reviewed items as shown.

4: Anticipated meeting expense's & NSPS Fall meeting request:

Buntrock moved to table this item – Vermilyea 2nd. Motion passed unanimously.

5: Elections:

Nelson – need someone to run the elections – Bill Buntrock volunteered. Up for election: President, Vice President, Secretary/Treasurer, and 4 Directors.

PLSC Treasurer's Report General Funds - As of 5/15/2012

Account	3/31/2012 Balance	4/30/2012 Balance	5/15/2012 Balance
Bank Accounts			
C PLSC Inc	105,598.37	63,404.88	55,637.63
MC PLSC Inc	10,497.78	11,821.25	16,150.86
S PLSC Inc	30,335.01	30,340.00	30,340.00
TOTAL Bank Accounts	146,431.16	105,566.13	102,128.49
OVERALL TOTAL	146,431.16	105,566.13	102,128.49

PLSC Treasurer's Report Scholarship Funds - As of 5/15/2012

Account	3/31/2012 Balance	4/30/2012 Balance	5/15/2012 Balance
Bank Accounts			
C PLSC Scholarship Fund Inc	1,894.62	1,794.62	1,694.62
S PLSC Scholarship Fund	50,144.86	50,253.12	50,353.12
TOTAL Bank Accounts	52,039.48	52,047.74	52,047.74
Investment Accounts			
ICA	30,403.49	30,403.49	30,355.29
Investment at Merrill Lynch Investments	26,244.85	26,244.85	24,995.20
WMIF	28,807.58	28,807.58	28,135.18
TOTAL Investment Accounts	85,455.93	85,455.93	83,485.68
OVERALL TOTAL	137,495.41	137,503.67	135,533.42

6: 2013 Surveyor's Summit Planning Status:
Beers – wants to get guidelines down in writing, use the guidelines as a base for chapter participation. Dates February 28, March 1 & 2. 2012 Budget to be base for 2013 budget.

7: PLSC Scholarship Procedure committee: Nelson – have not heard from the committee – Roger to provide an update once he has heard from the committee.

8: PLSC Website – Updates, Protocol:
Dennis – Completed updating the chapter sections for uploads and events.

9: Warren Andrew's letter regarding donation for memorial for past PLSC Presidents:

Krick – Cost of \$720 with \$70 contributed. Krick moved to wait until end of year to see if we have monies or move to future years. Wohlman 2nd. Motion passed unanimously

10: 2013 Sunset Review Process – Nelson – conference call with Alan Blair – still collecting information for review and public comment to the legislature.

11: GISCI Position – NSPS Update? Motions from Warren Ward (e-mails) Look at and make comments to Warren.

12: Bob Stollard's House (Update?).
Askew talked to Dave Pehr, No update.

13: PLSC 2012 Main Goals - Update
- Financial Stability – Membership Drive (Roger Nelson – CCPS has begun campaign) – some activity on membership drives.
- Improve PLSC Communication (Chapters, fellow surveyor's)
- Public Involvement – CSRN Event Rescheduled to June 9th.

14: Reports:
President – see latest *Side Shots*.
Vice President – will forward WFPS report.
Secretary/Treasurer – membership +/- 550 – Upcoming training with Phoenix AMC.
NSPS Governor – Warren Wards emails.
WFPS – Bouchard will send out report.
MSCD – Guyton – process glacial – Lynn Patten will teach at Front Range.

Next Meeting Date and Location
July 24, 2012, 4:00pm, 4:00 to 5:30 pm, Merrick conference room.

Being no further business Maw moved, Beers 2nd, to Adjourn.

Adjourned at 5:10 pm

Respectfully Submitted
Terry R. Maw
Secretary/Treasurer PLSC

Digital Terrain Models
Digital Elevation Models
Orthometric Photos

Western
Research & Development, Ltd.

Topographic Mapping
3-D As-Builts
Contour Maps

State-of-the-art LiDAR & Digital Imaging

- **High Accuracy LiDAR**
Maximum rate of 200,000 KHz which translates to a point cloud as high as 150 points/m².
- **High Definition Digital Images**
Our Leica 39 megapixel RCD 105 Digital Camera produces images at two inches per pixel or higher.
- **Real-time Decision-making**
Our field & flight crews are staffed with Professional Engineers & Land Surveyors who truly understand data collection in real-time.
- **Reliable Topographic Mapping**
The helicopter flies at low altitudes and is capable of providing elevations at two-tenths of a foot or less.

Tel (307) 632-5656 5908 Yellowstone Rd, Cheyenne, WY www.wrd-ltd.com

CCPS

At the June 28th General Membership meeting at the Table Mountain Inn in Golden, the CCPS unveiled the results of a 2 year search by Shawn Clarke, PLS, one of your directors. We have found a location for a new baseline at the Douglas County Open Space at Greenland. The only drawback is that you will have to hike to the points but that is not a problem for surveyors.

CCPS is joining CSRN and the Northern Chapter for a summer picnic. Information will be out shortly.

August 23rd is our next general meeting at the Double-Tree Hotel at the SW corner of Iliff & 225 in Aurora. The festivities start at 6:00 PM with a cash bar, then a 6:30 dinner, followed by a short general meeting at 7:00. The featured speaker is Ken Wright, PE of Wright Water

Engineers. Ken will be telling us about surveying Machu Picchu in Peru. Ken and his staff have given us 2 great topics on Moray and Ancient Roman Aqueducts.

Our October 25th general meeting at the Table Mountain Inn just South of Foss Drug on Washington Street in downtown Golden will feature Andrew Eagles, PhD, PE, D.WRE of Wright Water Engineers. He will be telling us about surveying an ancient Buddhist temple in Cambodia. We hope to see all of you at those last two meetings of the year.

James (JJ) Rihaneck, PLS
CCPS President

CSRN

The CSRN "GPS Day on June 12, 2012 was a great event. We had attendees from the Boy Scouts,

Girl Scouts, Westwood College, Metro State and many others. Everyone had a good time and learned at least a little something about GPS, land surveying and GIS. We are looking forward to next year. This will be an annual event for us.

We are discussing with the Central Chapter and Northern Chapter about having a multiple chapter summer picnic sometime in August or September. We will keep you posted as it comes together.

The CSRN will also be at the GIS in the Rockies event in September for the PLSC. We will most likely be discussing GPS and GPS networks for Colorado. We will keep you posted as this further develops.

A new baseline in the Denver area is badly needed. Most baselines have been either destroyed or



The Professional Land Surveyors of Colorado, Inc. Now Offers Exclusive UPS Savings to its Membership

One of the many benefits of being a part of the Professional Land Surveyors of Colorado is the ability to leverage our vendor relationships to improve your business. With that in mind, the Association is proud to announce a new relationship with UPS that provides outstanding shipping discounts for our members. Through the UPS Discount Program, you can save up to 28% on international, air and ground shipping.

It is always helpful to save money. By enrolling in the UPS Savings Program, you can save your company money, so I encourage you to enroll in the UPS Savings Program today.

Here is what you can save with UPS:

- Save up to 28% on UPS Next Day Air® and UPS Worldwide Express® services
- Save up to 21% on UPS 2nd Day Air® and UPS Worldwide Expedited® services

For more information on the UPS Savings Program, visit the Professional Land Surveyors of Colorado Web Site at www.plsc.net or call (800) 325-7000 or visit www.savewithups.com/enroll. **Use the PLSC, Inc. promo code WES456 to enroll.** The savings on shipping, which increases the more packages or letters the user sends, will be applied once enrollment is complete.

Thank you for your commitment to Professional Land Surveyors of Colorado and to UPS. We believe that these member benefits combine significant savings with the unmatched capabilities and reliability of UPS.



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

For more information and registration visit our web site:
www.mscd.edu/surdd or send an email to mscd_surdd@mscd.edu
or call Extended Campus at **303-721-1313**.

CHAPTER NEWS

or out of calibration. The CSRN is talking with the Central Chapter, who is already working on a possible new baseline, about assisting them in their efforts or creating a second new baseline. This would be a project extending into next year. We will keep you posted.

As you can see, we are involved with many things regarding Land Surveying and GPS. Contact us if you are interested in participating or becoming a member at info@csrn.us or visit our website at www.csrn.us and keep current with our activities.

Brian Dennis, PLS
CSRN President

NC-PLSC

The Northern Chapter is on our annual summer hiatus and will reconvene the Wednesday September the 5th (location to be determined). There are plans in the works to have a summer picnic with our sister chapters; CSRN and CCPS. Stay tuned for more details.

Kayce Wohlman, PLS
Northern Chapter President

NW 1/4 CLS

Hello from Northwest Colorado... Not a lot to report on this quarter, summer is definitely here and we are busy with the 2012 survey season. It has been unseasonably hot and dry as I am sure we are all aware of. The big news up here is the drought and heavy fire restrictions. We are keeping our fingers crossed and hoping we don't get any fires in our area that the fire fighters can't stay on top of.

On May 23 we had a meeting of the NW1/4 Chapter. It was well attended and featured a discussion regarding title issues with guests Stan Urban of Land Title Guarantee

Company and a representative from one of their underwriters, Rich Jones of Old Republic National Title. They spoke regarding the title industry's point of view towards land surveyors and boundary surveys, ALTA's, and survey related title issues. The discussion was lively and interesting.

In the meantime we are all busy with this summer's projects, and trying not to start any fires!

Jeffry A. Gustafson, PLS
Secretary-Treasurer, NW1/4

SCPLS

The Southern Chapter had their latest board meeting on June 19 at the Crown Plaza. Discussion included the offer only (at this time) to adopt a bench mark to assist Colorado Springs Utilities with the FIM's project. Numerous topics and speakers were discussed for future membership meetings. We are currently planning the annual golf tournament for August. We have experienced a firestorm during the last week in June that has affected many of our clients and friends. Over 32,000 persons were evacuated and 346 homes destroyed. We offer our hearts and prayers for the displaced homeowners and the

warmest Thank You to the firefighters and police who have provided outstanding service during this firestorm.

Our next board meeting will be August 21, 2012 in Pueblo.

Joseph Alessi, PLS
Southern Chapter President

SWC-PLSC

The SWC-PLSC held the Four Corners Survey Seminar June 15 and 16. We would like to thank everyone for attending and we look forward to seeing you next year. We would also like to thank the presenters for their time and efforts. It could not happen without you.

Our next chapter meeting is scheduled for Tuesday, September 11 at Christina's Bar and Grill, 21382 US Hwy 160 West, Durango. Michael Boekman, a local BLM surveyor, will be doing a presentation on dependent resurveys. Please join us.

Joshua Casselberry, PLS
President, SWC-PLSC

WCLS

Thank you to all for attending the Spring Seminar. Special thanks to James Beckwith and Dave Pehr for sharing their knowledge and giving informative presentations. Behind every successful seminar are the people who worked hard to put it together. Thank you to Dennis Shellhorn, Peter Krick and Brian Bowker for their efforts.

We are having our annual Bar-B-Q on July 11th at Canyon View Park, Grand Shelter (24 Road & G Road) 6:00 – 8:00. RVSP to Richard at (970) 245-4921. This will help ensure that there is enough food for everyone. The Bar-B-Q will take the place of our scheduled meeting for July.

September 12th will be the next scheduled meeting for WCLS. We plan to have BLM present on Geographic Coordinate Data Base (GCDB). The meeting will be at the Grand Junction City Hall Building (4th & North). Dinner is at 6:00; meeting starts at 6:30. Come and enjoy the great cooking of Peter Krick, the company of fellow surveyors and the presentation by BLM.

Richard Bullen, PLS
President, WCLS

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

ASSURANCE RISK MANAGERS

2851 S. Parker Road
Suite 760
Aurora, CO 80014
303-454-9562

TERRY C BARNES

Range West, Inc.
P.O. Box 589
Silverthorne, CO 80498
(970) 468-6281

BERNTSEN INTERNATIONAL, INC.

P.O. Box 8670
Madison, WI 0
608-249-8549

CAD-1

12130 N. Pennsylvania Street
Thornton, CO 80241
303-427-2231

CARLSON SOFTWARE

12161 W. Layton Avenue
Morrison, CO 80465
303-482-1836

COMPLIANCE SOLUTIONS

3980 Quebec Street
2nd Floor
Denver, CO 80207
303-307-9220

COMM-TECH

5398 Manhattan Circle
Boulder, CO 80303
303-530-4976

DAVID EVANS AND ASSOCIATES, INC

1331 17th Avenue
Suite 900
Denver, CO 80202
720-946-0969

ESRI

380 New York Street
Redlands, CA 92373
909-793-2853

FLATIRONS SURVEYING, INC.

3825 Iris Avenue, Suite 395
Boulder, CO 80301
303-443-7001

FRONTIER PRECISION INC

5855 E. Stapleton Dr. North A-140
Denver, CO 80216
720-214-3500

HIXON MFG & SUPPLY CO

8775 E Orchard Road, Suite 807
Englewood, CO 80111
303694-0012

ROBERT R JOHNS

Range West, Inc
P.O. Box 589
Silverthorne, CO 80498
(970) 468-6281

NGS/NOAA

Pamela Fromhertz
c/o USGS Core Science Informatics
Building 810, MS 306
Denver, CO 80225
303-202-4082

NV 5

8000 South Chester Street
Suite 200
Centennial, CO 80112
303-220-6400

POWER SURVEYING COMPANY INC.

120 W. 84th Avenue
Thornton, CO 80260
303-702-1617

PWSI LAND SURVEYORS

3545 S. Platte River Drive, #M-3
Sheridan, CO 80110
303-904-1345

DIANE SIERRA

10355 Westmoor Drive
Westminster, CO 80021

SITWISE CORPORATION

7000 N Broadway #3-305
Denver, CO 80221
303 459 6531

SKLD INFORMATION SERVICES

9540 East Jewell Avenue
Suite A
Denver, CO 80247
(303) 695-3850

TOTAL POSITIONING SOLUTIONS

5385 Quebec Street
Commerce City, CO 80022
303853-0311

SURV-KAP LLC

P.O. Box 27367
Tucson, AZ 85726
520-622-6011

TERRAMETRIX, LLC

4852 S 133rd Street
Suite 105
Omaha, NE 68137
402-618-3165

UNDERGROUND CONSULTING SOLUTIONS

2701 W. Oxford Avenue, Suite 6
Englewood, CO 80110
303-904-7422

VECTORS, INC

8811 E Hampden Avenue
Ste 110
Denver, CO 80231
303-283-0343

WESTERN RESEARCH & DEVELOPMENT

634 Suntrail Drive
Loveland, CO 80538
307-632-5656

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

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.

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

Call 303-428-9529
to order

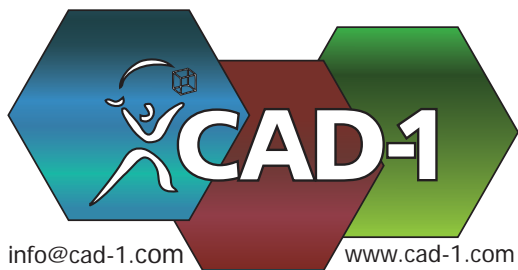
C. Albert White's second book, **INITIAL POINTS** OF THE **RECTANGULAR SURVEY SYSTEM**

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.)



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.

Published by the Colorado Professional Land Surveyors Educational Foundation, Inc., a non-profit foundation, *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.



info@cad-1.com

www.cad-1.com



Maximize Your Data with
CAD-1 Survey Field to Finish
Classes Coming This Fall

for more information contact

Kelly Marrill

Local: (303) 427-2231

Toll Free: (877) 569-9050

kelly.marrill@cad-1.com

Autodesk®

Gold Partner

Architecture, Engineering & Construction
Authorized Training Center
Authorized Certification Center

12130 Pennsylvania St. Suite 101 - Thornton, CO 80241
Phone - (303) 427-2231 - Toll-free - (877) 569-9040

Need to get Utilities located?



Don't let these guys scare you..

Call UCS for Utility Locating

We will tell you what they are hiding under those boxes...



Underground Consulting Solutions

- QUALITY -
- DEPENDABLE -
- EXPERIENCED -



We'll get the job done right - the first time

Private and Engineering Utility Locates