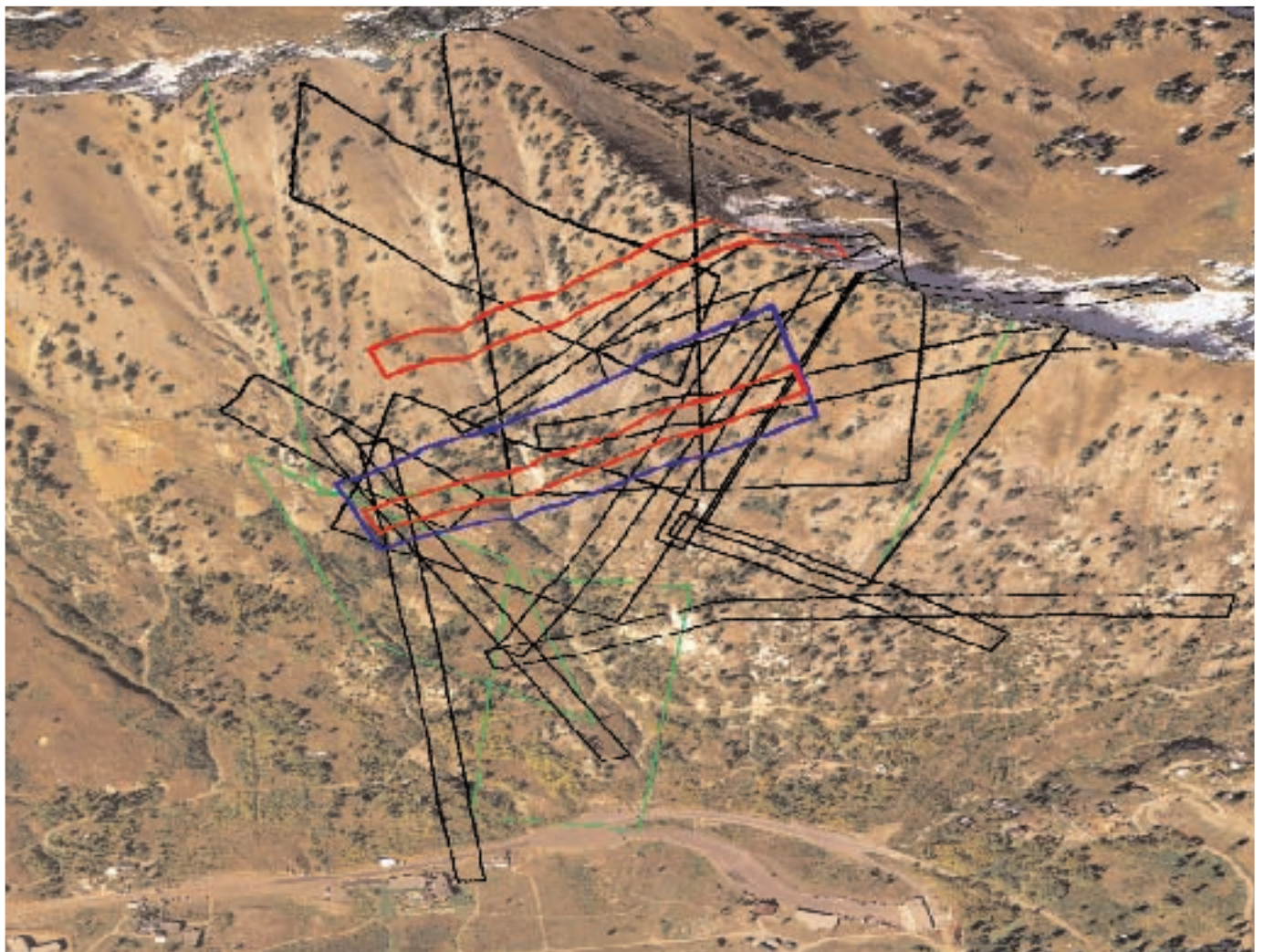


May 2011

# SIDE SHOTS

Professional Land Surveyors of Colorado

Volume 42, Issue 2



## THEORETICAL EXCLUSIONS IN MINERAL PATENTS

PAGE 8

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# SIDE SHOTS

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*Side Shots is the official publication of the Professional Land Surveyors of Colorado, Inc.  
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Dear Fellow Members:

This is my first letter in *Side Shots* as your newly elected President of the PLSC. I am both excited and humbled to be chosen for this important post, and hope that I will be able to make positive changes to this organization that has been so important to all of us for many years. I would like to thank outgoing President Tom Adams for his years of service, and the time and energy he devoted to the PLSC. I would also like to extend a special thanks to Diana Askew for her continued dedication and hard work as PLSC Executive Director. Additional thanks to the PLSC Board members for their time and effort over the past two years.

Our annual Rocky Mountain Surveyor's Summit conference combined the Southern, Central, and Northern Chapters with the PLSC Annual conferences for the first time. The education committee, in conjunction with respective chapter representatives, worked together to put on one of the best conferences that I have attended in recent memory. The multiple tracks offered a broad spectrum of educational opportunity for attendees and can only be improved by your feedback. I would like to take this opportunity to thank those that attended and those that presented at the conference. I look forward to next year's conference with excitement and hope to see all of you in attendance.

One of the best decisions our Board has ever made has been to extend a year of free membership to anyone who recently received their LSI or PLS from the State Board. You should have received an invitation from Diana Askew, our Executive Director, with a code to take advantage of this offer. Your efforts toward licensure were an investment in your career and your future; this free year offer is the PLSC's investment in the future of this valuable organization. If you are still in your free membership year, or it has recently expired, I would urge you to consider becoming a regular member. For most people, your dues to this organization are a tax deductible contribution. You are now part of an important profession, and the PLSC will play a very important role in your career within Colorado for many years. Some of the many benefits of membership include:

- Networking opportunities with your peers, including the chance to meet and learn from the more experienced surveyors in Colorado;
- A chance to discuss job/career opportunities;
- A venue to talk about technology changes in the surveying and GIS profession;
- The chance to provide input on legislation that will affect your daily work activities;
- An annual Summit workshop with courses that offer continuing education and credits;
- This magazine, which offers quarterly articles written by Colorado surveyors, including news from the national organizations and all seven of our regional chapters;
- The opportunity to run for a regional or statewide leadership role with the PLSC, to enhance your credentials as a professional surveyor.

Signing up for your annual membership is easy, either by responding to an email invitation (which is fast, and takes credit cards), by going to the website at [www.plsc.net](http://www.plsc.net), or by completing the paper application that appears in this magazine.

You are a vital part of our future, and we would love to have every one of you on board!

Sincerely,  
Roger Nelson, PLS, CFedS



# FROM THE EDITOR

I am pleased to present our members with this latest issue of *Side Shots*, packed with information, educational articles, news items from around the state of Colorado, notices of well deserved awards, and all of the other content that makes this publication so useful, and so much fun to pull together.

Gene Kooper has produced the latest installment of his well researched Mineral Corner series, which has received many favorable reviews in the past. Thank you Gene! I am also pleased to see Roger's first President's Letter in this issue, and the minutes of the last Board of Directors meeting from our capable Executive Director, Diana Askew.

I also put together a short summary of our first annual Surveyor's Summit meeting held at the Arvada

Center, with a few photos as well. The people who worked so hard for so many hours to make that complex event happen, and so successfully, are acknowledged there. Some emails have been received saying that it was the best conference the PLSC has ever had in its history. Thanks to all who participated, presented, organized, and of course, attended.

I would also like to express my thanks to Lisa Isom, of Assurance Risk Managers in Aurora, who has been a supplier of specialized professional liability and other insurance products tailored to the surveying profession for many years. Lisa has generously decided to donate the space that she had been providing for our valuable PLSC library collection, until the Board can find an appropriate and affordable replacement. Thanks, Lisa.

The PLSC membership numbers are down again this year, reflecting a nationwide trend due to the economy. If you have not joined or renewed for 2011, please take note of Diana Askew's message below and don't put it off any longer. The PLSC exists only to serve its members in their professional activities, and your support is urgently needed for that support to continue. To all who renewed their memberships already, turn the page, and enjoy!



JB Guyton  
Editor

## This Month on WWW.PLSC.NET

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

Mineral Survey Corner – Additional information and the original plats concerning the 1916 Dept. of Interior Land Decision "The Wasatch Mines Co." (supplement to the article "Theoretical Exclusions in Mineral Patents")

## On the cover...

Image is a 3-dimensional depiction of lode mining claims above Alta, Utah. Base image is a 2006 High Resolution Ortho-Photograph (HRO) 25 cm resolution color aerial photography available from the Utah Automated Geographic Reference Center. Image courtesy of Gene Kooper.

## WILL THIS BE YOUR LAST ISSUE OF THE AWARD WINNING PLSC *SIDE SHOTS* PUBLICATION?

If you were a member in 2010 and have not renewed your membership for 2011, this will be your last issue unless you renew soon!

The PLSC needs YOUR input and YOUR voice! We only exist because of our membership. We value every member and would hate to lose YOU!

PLSC Membership begins January 1 and ends on December 31 of each year. Existing members are considered delinquent on April 1 and all membership privileges end on that date each year.

In order to reward members in good standing and begin production of the 2011 PLSC Roster, July 1st is the last day to join for 2011. Please visit [www.plsc.net](http://www.plsc.net) to join or renew online, OR copy the application form in this issue and mail it today with your check.

— Di Askew, Executive Director

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# Mineral Survey Corner

## Theoretical Exclusions in Mineral Patents

by Gene Kooper, PLS

The May 2006 issue of *Side Shots* contains the first of a series of articles describing a misguided General Land Office policy. Beginning in June 1899, the GLO required U.S. Deputy Mineral Surveyors to report the positions of any senior, conflicting claims based on their patent description rather than the found monuments. During the five years that the policy was in effect, the Surveyors General of Colorado issued over 4,000 mineral survey orders. Not surprisingly, since the patent position of a prior official survey was fixed by its tie to a distant rectangular survey corner, the patent position was often at odds with the actual, monumented position of the senior claim.

One of the unintended consequences of this policy was the uncertainty that crept into mineral land titles. The "evil foisted upon the mining industry" was described in several articles published in *The Mining Reporter*, a weekly mining industry newspaper published in Denver, Colorado. A scathing rebuke of the GLO policy was written by Robert S. Morrison and Emilio De Soto, two prominent Colorado mining attorneys. The below excerpts from their article published in the February 18, 1904 edition have eerie similarities to the modern issue of geographic information systems being erroneously regarded as equivalent to a land survey.

*Here the department applies its ruling of 1899, and says to the applicant: "The description in the first patent controls the locus of that claim on the connected sheet, and your claim, though correctly surveyed, shows a conflict on our map with that patented claim. We know that the first patent is erroneously described, but you must exclude the conflict or compel, cajole, or persuade the first patentee to surrender his patent. We*

*cannot change our maps to show the truth."*

....

*A lawyer does not like to confess any weakness to his oft-quoted maxim, "For every wrong the law affords a remedy." What then is the remedy? It is not in the courts, for the courts will neither enjoin nor mandamus the surveyor general. The remedy is the one suggested by the government itself, to wit: to stoop to the low ethical position of the land office and make the same false calls originally made in the prior patent. "You will, then," says the land office, "receive a patent with false calls for government corners, but with correct calls for local monuments, and you will then have as good a patent as the man has who occupies your ground on our connected sheets, for you will be relatively out of position no more than he is, but will have a patent which the courts hold good, and you will not spoil the looks of our official maps."*

The adverse economic impact to the mining industry, especially the instability of mining titles was the catalyst that spurred Congress to legislatively halt the Executive Branch's policy. The Act of April 28, 1904 (the Legislative history of this act is described in the May 2006 issue of *Side Shots*), expressly states that whenever a conflict exists between the officially established monuments and the patent description, the monuments shall govern which ground is included in the patent!

However, none of the mineral survey instructions issued to U.S. [Deputy] Mineral Surveyors explicitly authorized the resurvey of senior conflicting claims. If a mineral surveyor was unable to locate a corner during the retracement of the senior line(s) that defined the conflict, the

mineral surveyor was instructed to return the record position of the missing corner in his field notes. Returning the record position of missing senior corners began in the 1870s. The Act of April 28, 1904 did not alter this policy. In fact, the "Mineral Survey Procedures Guide", written by John V. Meldrum in 1980 cautions mineral surveyors to, "not remonument a restored corner; at least, it should not be done without the full knowledge and approval of the owner."

The focus of this article deals with the DOI Land Decision, "The Wasatch Mines Company" (45 L.D. 10) that was decided on March 15, 1916. The decision addresses theoretical exclusions in conflicting lode mining claims. The decision is less than two pages in length, but my opinion is that it is one of the most important DOI Land Decisions issued for mineral surveys. The decision summary states:

*Where exclusions are made from mining claims of supposed conflicts with a prior patented claim, and the position of the prior patented claim as actually marked, defined and established upon the ground is not identical with its position as represented upon the plat and described in the field notes of survey, and the supposed conflicts have no existence in fact, the areas represented by such theoretical exclusions pass under the patents to the claims and are therefore not subject to appropriation by subsequent location.*

The case concerns the Highland Chief and Emma Copper lode mining claims, which are located on a steep mountainside above the ski resort of Alta, Utah. At first glance, this decision is merely the last of four Land Decisions that sought to remedy a specific land title conflict



caused by the prior GLO policy. The plat of the Emma Copper lode shows two positions for the patented Highland Chief lode, with the northern position labeled, “(As located on the ground)”. However, the Emma Copper lode claim was located on July 16, 1906, a full two years after the *Sinnott v. Jewett* DOI Land Decision (33 L.D. 91) administratively ended the policy (see the August 2009 issue of *Side Shots*).

Figure 1 shows the approved positions of the early mineral surveys. The survey of the Emma lode (Lot 37) was completed on August 14, 1871 and is the first mineral survey in the Little Cottonwood mining district. The Montezuma (Lot 128) and Savage (Lot 129) lodes were the last claims to be surveyed that are shown on Figure 1. Both claims were surveyed on June 19, 1880. The mineral survey plat for the Highland Chief (Lot 81) shows conflicts with the Hiawatha (Lot 40) and Caledonia (Lot 53) lode claims. In the course of the survey, Deputy Edward B. Wilder made an error in his tie to U.S. Mineral Monument No. 3. The true position of the Highland Chief lode is located N3°45'E,

617 feet from its approved position, which lies north of the Flora Temple lode (Lot 58) as shown on Figure 2. The patent for the Highland Chief expressly excludes the theoretical conflicts with the Hiawatha and Caledonia lodes (0.361 and 0.232 acres respectively), but fails to exclude the conflict with the Flora Temple lode.

Believing that the tie to the mineral monument was correct, Deputy Wilder attempted to locate the corners of the Hiawatha and Caledonia lodes. Failing to find any of the corners, he duly showed their record positions on his Highland Chief plat. An examination of the plat verifies that the conflicts were calculated by Deputy Wilder rather than the conflicts being based on the found, original monuments. The courses of all three claims are reported to the nearest half-degree and distances reported to the nearest foot. The plat of the Hiawatha lode has a misclosure of nearly 10 feet. Deputy Wilder reported the eight intersections on the Highland Chief plat to the nearest hundredth of a foot! A comparison of the intersections computed by Deputy Wilder with a

CAD drawing where the ties to the mineral monument were held yields a difference of 0.01 feet for the four intersections with the Caledonia lode and a difference of 0.07 feet for the four intersections with the Hiawatha lode.

In the course of surveying the other early claims in the area, other U.S. Deputy Mineral Surveyors were unable to locate the Highland Chief lode and returned its record position in their field notes. The patents for the South Star, North Star, Montezuma and Savage lode claims all expressly excluded the theoretical conflict with the Highland Chief. In 1901, U.S. Deputy Mineral Surveyor Edward M. Le Prohan surveyed the Bonanza, et al., lodes (Mineral Survey No. 4705). This was the first survey to show the true position of the Highland Chief lode. It is unknown why Deputy Le Prohan labeled the true position on the plat with “Compromise Area Highland Chief (Unsurveyed)”. The term “unsurveyed” usually indicates an unpatented claim that is senior to the claim being surveyed. Deputy Le Prohan likely *borrowed* the term so he could indicate the true posi-

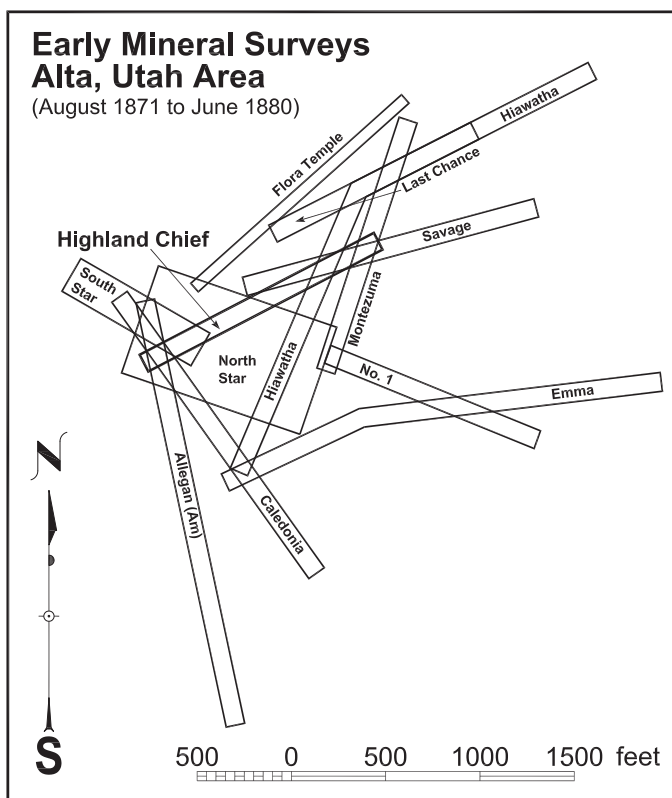


Figure 1

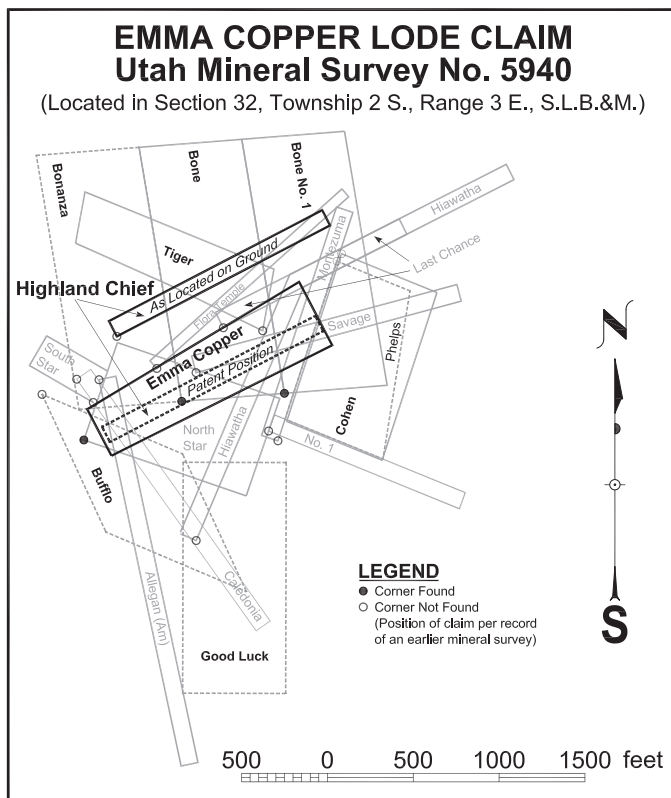


Figure 2

tion of the Highland Chief, since the survey was done during the time when the patent description position was shown on mineral survey plats. The following note in his field notes states:

*As no corners were found standing except on Lot No. 92, Eclipse lode, Lot No. 95, South Star lode (amended) and Lot No. 140, Pride of America lode, the conflicts with all other claims have been calculated through the recorded bearings and distances on file in the Surveyor General's Office.*

On July 17, 1906, Deputy W. Edward Wilson commenced the survey of the Bone, et al., lode claims (MS 5549). He was the first U.S. Deputy Mineral Surveyor to state that he had located an original corner of the Highland Chief. His field notes state:

*Lot No. 81, Highland Chief lode. Cors. Nos. 3 and 4, are pine posts 2x4 ins., 2 ft. long, set in mound of stones scribed 3 U.S.*

*81 and 4 U.S. 81, respectively.*

*Cors. Nos. 1 and 2 were not found in place and were established in accordance with the official courses and lengths of lines 4-1, 3-2, and 1-2.*

Unfortunately, the record positions of Cors. Nos. 1 and 2 returned by Deputy Wilson do not match the topographic features depicted on the original plat of the Highland Chief. The plat does not show the drainage divide between Little Cottonwood and Big Cottonwood canyons. However, using the "official courses and lengths of lines 4-1 and 3-2", Cors. Nos. 1 and 2 of the Highland Chief are shown to be approx. 280 feet east of the topographic divide!

As stated previously, the Emma Copper lode claim was located on July 16, 1906. The claimant obviously knew that Deputy Wilson had found the original monuments marking the west end line of the Highland Chief. The claimant likely presumed that since the record position of the Highland Chief was

expressly excluded from the patents of the South Star, North Star, Montezuma and Savage lode claims, the theoretical position of the Highland Chief excluded in those patents was open ground that could be appropriated under the U.S. mining laws. On October 10, 1908, N. Percy Browne completed the mineral survey of the Emma Copper lode claim. Figure 2 shows the results of his survey. Only three corner posts of prior official surveys were found by Deputy Browne. Among the corners listed as missing was Cor. No. 3 of the Highland Chief. Ironically, his field notes confess that the position of the Highland Chief labeled, "(As located on the ground)" was determined based on the tie in the prior official survey of the Bone, et al., lode claims.

The Department of Interior's Office of Hearings and Appeals web site (<http://www.oha.doi.gov>) has a "Search Decision" function that allows one to search nine databases. A search of the term "theoretical exclusions" returns "6 hits in 1 document". That singular document is "The Wasatch Mines Co." land decision. The full text of the decision is available for free download from the Office of Hearings and Appeals web site. While this decision is the only instance where the term "theoretical exclusion" was used by the Land Department, the logic behind the decision is based on one of the most fundamental principles of land surveying. No surprise, it is that original monuments control over course and distance!

*This land decision will be discussed in greater depth during my mineral survey workshop on Saturday, June 11, 2011 as part of the Four Corners Conference in Durango, Colorado. I hope to see you there.*

# 2012 Colorado Refresher Course

The Central Colorado Professional Surveyors and the Professional Land Surveyors of Colorado are offering a comprehensive Land Surveying Refresher Course for 2012. This course offers a review and self-study plan for those taking the National Council of Examiners for Engineering and Surveying (NCEES) **Fundamentals of Surveying (FS) and Principles and Practice of Surveying (PS)** examinations. The course is designed to aid candidates in developing and expanding exam-taking proficiencies.

**Registration and further information  
will be provided by October 1, 2011.**

# Control Points – Number 13

By Warren Andrews, PLS

## Angle and Direction

There are two things that are basic to surveying that in one way or another all surveyors are involved with, and those are distance and direction. Distance is probably simpler to solve whether you're pacing and counting your steps, laying out rods in a line for a baseline, stretching a rope or a chain, pulling a suspended band tape, or relying on the tiny time difference it takes a high frequency beam to go out and return from a reflector. (Incidentally, did you know the Latin word *mille*, for 1000, is where our English word *mile* comes from? One thousand paces, or double steps, of a Roman soldier – averaging 5.28 feet each – equals one English statute mile. The nautical mile is different and longer.)

Direction is the second basic element of surveying and there are generally five systems used today. American surveyors use the sexagesimal system or 360 parts to the circle while most of the rest of the world uses the S.I. System of 400 parts or 100 to the quadrant. The third system is the artillery officer's in mils which is essentially 1 yard shift angularly at 1000 yards distance (6400 to a circle). The fourth system is

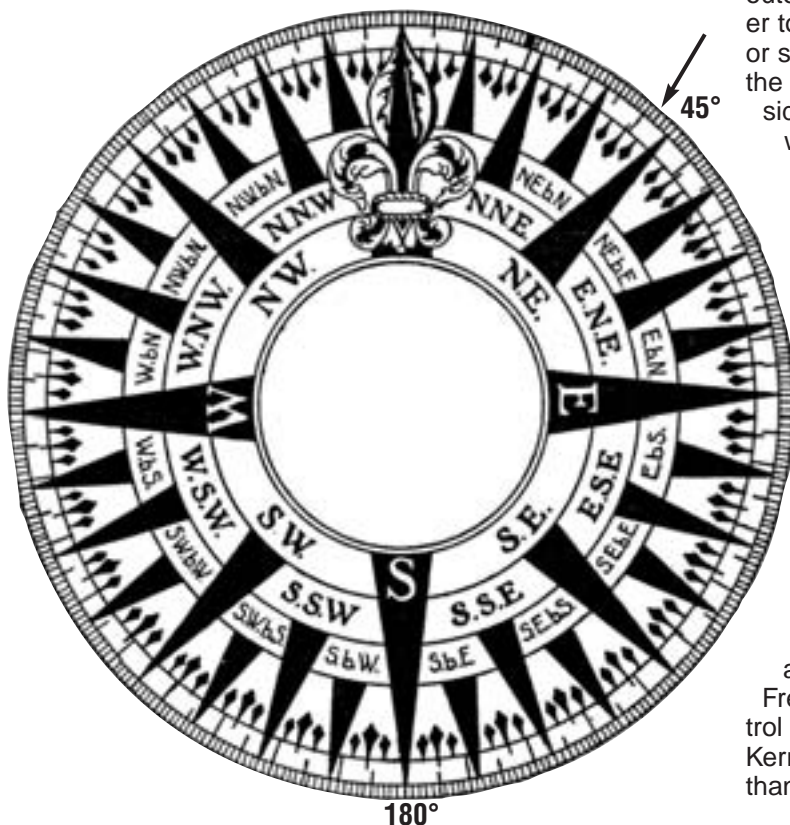
unusable to a surveyor in the field and that is the mathematician's  $2\pi$  radians to a circle, which is impossible to divide easily or rationally.

The fifth system is the old system used by navigators based on the directions of the compass. The compass card on the binnacle was divided into eight points to the quadrant and later into quarters of each point so 32 directions could be specified for each quadrant for a sailing direction. In other words, a command to the helmsman on the wheel of "northeast by a quarter north" is one diamond mark counterclockwise from the N.E. marker on the mariner's compass, which is equal to  $42^\circ 11' 15''$  azimuth from north. Bowditch's *"Practical Navigator"* gives this in great detail.

If the sexagesimal system is used there are several different ways to scribe or mark a circle. For example, my Ainsworth mining transit is marked with two sets of numbers on the horizontal circle, the outer ring from 0 to 360 in a clockwise direction while inside that the numbers go from 0 to 90 to 0 and continuing from that 0 to 90 and back to 0 (same as the 360 on the outer scale) for the four quadrants. This makes it easier to read, or set, azimuths or angles right or to read or set bearings directly. (The 30 minute vernier is on the inside circle). The vertical circle is end reading, not side reading for tight spots, for the four quadrants with zero being horizontal. (European instruments use zero as vertical to reduce the possible error in recording plus or minus angles).

My C. L. Berger & Sons mining transit marks the horizontal circle differently. Clockwise it is numbered from 0 to 360 and from the same 0 counterclockwise to 360. This combination will give an angle right or an angle left – but don't mix up the two.

Before the dividing engine, such as that of Jesse Ramsden in England in the 1770's, the horizontal and vertical circle plates had to be scribed by hand with ensuing slight inaccuracies. Ramsden's theodolite, scribed from his dividing engine, had a 36-inch diameter horizontal plate that was readable to one second of arc and was first used in July, 1787, to connect with the French triangulation across the Channel. (See Control Points No. 10). The modern Wilde T-4 and the Kern DKM-3 could be read ten times more accurately than Ramsden's one second.



Mariner's Compass. Clipart Courtesy FCIT



# First Annual Surveyors Summit a Big Success

By JB Guyton, PLS, Editor

The first ever statewide PLSC conference, called the Rocky Mountain Surveyors Summit, was held on March 3rd, 4th and 5th, and by a sample of reviews received by email so far, was very well received. This Summit combined the regular PLSC workshop meeting with those of the Central, Northern and Southern Chapters for the first time. Attendance was approximately 240, the second highest ever for a PLSC conference. Held at the Arvada Center for the Arts and Humanities for the first time, the accommodations, facilities and meals were all top-notch. Some photos from the event are included here.

The efforts of many PLSC members made the complex planning and execution of this event possible, and deserve recognition. First and foremost is our very capable Executive Director, Diana Askew, who coordinated, delegated, and saw to every last excruciating detail before and during the event, including publicity, preparing those impressive email notices about conference registration, and a multitude of other details. She put in 14-hour days for weeks to make it all work out well. When it got to be too much, Mike Greer, who Di Askew calls the "King of Conference Help," came forward to assist with meeting arrangements at the Arvada Center, and in dealing with the swag and the merchandise. Todd Beers also stepped up and helped organize the efforts of many others. Di nominated him for the Distinguished Service award, which he won, and deservedly so.

Others that deserve credit and praise, in no particular order, include:

- Aaron Willis, for his help with the program and flyers;
  - Ian Cortez, who managed the silent auction, collected funds and deposited them;
  - JJ (Jim) Rihanek for food, classrooms, and being the point person for venue related items;
  - Earl Henderson for coordination of vendors, being the point person for vendor related needs, with help from Shawn Clarke, Mike Dlin.
  - Kayce Wohlman and Patrick Green, for check-in and merchandise sales;
  - Steve Parker for the printed name badges and signs, with help from Randy Zerr;
  - The Power Flushers Band, in which Mike Dlin played for free;
  - Jan Sterling for her Trigstar support over the years;
  - Larry Phipps for offering a strategic planning session at no cost to the board;
- And everyone else not mentioned, and all who presented and attended.

While the attendance and the quality of the programs were a success, the financial outcome for the PLSC is less certain. Costs of the venue, catering and speaker expenses were much higher than in previous years, resulting in less net gain for the organization and the chapters than the year before. I suspect that the Board will be taking a much closer look at these costs next year to insure more of a profit to keep the PLSC going.



*Lynn Patten (left), head of the surveying program at Westwood College, talks with Angie Kinnaird Linn, Program Director of the State Board of Licensure.*



*Todd Beers (left), PLSC Director and Past President of the Central Chapter, accepts his Distinguished Service Award from PLSC President Roger Nelson.*





*Mike Drissel (center), Past Chair of the State Board for Professional Engineers and Land Surveyors and a member of the Western Chapter, receives the Distinguished Service Award from Roger Nelson (right), President of the PLSC, and Stan Vermilyea (left), Awards Committee Chairman and PLSC Director.*



*(From left) Kaycee Wohlman, President-elect of the Northern Chapter; Earl Henderson, Director of the Central Chapter and Diana Askew, PLSC Executive Director, pose for a picture.*



*Donny Sosa and Katie Radke at the ESRI booth in the vendor area.*



*Mike Greer (left), former Vice President of the PLSC and current member of the State Board of Licensure, stands with Ira Hardin, one of the original founders of the PLSC.*

All photos courtesy of Mike Greer.



# State Board Update

By Angie Kinnaird Linn, Program Director

State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors

Spring time is here and it brings new growth around us. Positive changes are happening at the AES Board and its Survey Quorum, too. Information on a few of those is in the following paragraphs.

## March 2011 AES Board Newsletter Available

The newsletter is available electronically at [www.dora.state.co.us/aes/newsletter](http://www.dora.state.co.us/aes/newsletter). In it, you will find the latest on:

- Changes in the Laws
- Changes in the Board's Rules and Policies
- Changes in Application Deadlines
- Requirements for Landscape Architects
- Board Statistics
- Renewal Information
- Enforcement Activity

## New Monument Record Research Tool

A collaboration between Don Lambert, PLS, of Frontier Surveying, Inc., and the Department of Regulatory Agencies (DORA) has produced the Colorado Monument Records Google Earth Mapping Project found at [www.cp-db.com](http://www.cp-db.com). This tool georeferences all of the Colorado monument records filed with DORA to the Bureau of Land Management's Geographic Coordinate Database and makes that information available in a Google Earth format. (Note that DORA is not responsible for the content or the accuracy of the information of the Colorado Monument Records Google Earth Mapping Project.)

Please be advised that licensed Colorado Professional Land Surveyors are, of course, required to conduct appropriate and thorough research that includes the Colorado

Land Survey Monument Records housed by the Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors and DORA.

## Monument Record Form and Instructions Updated

The monument record form has been revised and the instructions have been updated to reflect the most recent version of the BLM Manual of Surveying and to refer to relevant Board Rules. It makes sense to read the new version of the instructions to refresh your understanding of what is required on monument records. The new monument record form is available in numerous formats to accommodate a variety of licensee needs and work settings. A big thank you goes out to Merrick & Company that developed the Auto-CAD versions of the monument record for your use.

Please destroy your old monument record templates and use the new ones found at [www.dora.state.co.us/aes/monumentrecords](http://www.dora.state.co.us/aes/monumentrecords). You will find the monument record instructions at the same link.

## Survey Quorum and Board Opinions

The Survey Quorum of the AES Board meets quarterly prior to the full Board meeting to discuss land surveying issues and questions. Depending on the timing of a request, it may go to the quorum or to the full Board for consideration. In either case, consensus is reached on its position and the information is posted on the Board website at the Surveyors Corner – Surveyors Q&A. This can be found from the AES homepage at [www.dora.state.co.us/aes](http://www.dora.state.co.us/aes) or the direct link is

[www.dora.state.co.us/aes/surveyorsQA](http://www.dora.state.co.us/aes/surveyorsQA).

There have been several requests and opinions worth noting over the past year.

- The Board received an inquiry regarding the definition of "survey point." It was the recommendation of the Survey Quorum this is an ambiguity in the statute that should be addressed in sunset review. Until then, because of the ambiguity, the Quorum agreed that no action should be taken should a complaint be filed on the basis of a "survey point."

- The Board considered a request for a Board opinion relating to an Information Map prepared by a licensed Professional Land Surveyor. There are no statutory criteria for the preparation of an "Information Map." Since the Board was not able to determine the purpose of this document, it is unable to judge whether it is correct or not. The Board suggested that the individual meet with the land surveyor to discuss his concerns and should that effort fail, submit a complaint to the Board's office including as much additional documentation as feasible to assist the Board in determining the scope of work in this project, including the contract.

- The Board considered a request for an opinion relating to two situations involving changing common boundary lines.

The first question involved a question of changing a common boundary line between two properties and whether it is acceptable to monument only that line or if the entire perimeter of the two properties is required to be monumented. One of the properties is a metes and bounds parcel.

The second question posed was the vacation of a boundary line between two contiguous parcels and whether the entire perimeter of the newly combined parcels must be monumented. The properties are metes and bounds parcels.

It was the consensus of the Board that neither scenario falls within the statutory requirements for platted subdivisions. Therefore, it was the Board's conclusion that the county requirements would govern in these situations.

- The Survey Quorum reviewed a letter from a Professional Land Surveyor regarding the limitations of the current Online Monument Record System's search capabilities. The Program Director had recently met with the Office of Information Technology. There is a plan to transition to new software and hardware by the end of the 2011

calendar year that will improve the system substantially. However, the surveyor's problem appears to stem from not using the wildcard function when searching the monument records.

- The Survey Quorum reviewed an inquiry regarding replacing or resetting monuments after construction and tabled the discussion until Staff conducted and completed research of past Board opinions on this issue. Reviewing past minutes, it was the consensus of the Survey Quorum that its position remains virtually unchanged from what was stated in the September 2001 minutes. It is restated here for reference.

It was the consensus of the Survey Quorum that if it is known which corners will be destroyed during construction, they may be referenced prior to destruction and

replaced after construction by a surveyor using his/her own caps. An exhibit map should be prepared showing the original monuments, how they were referenced, and what monuments and caps were used to replace the destroyed monuments. This exhibit should be deposited. In this situation the surveyor is not attesting to the accuracy of the original corners, only replacing them as found.

In the event that the corners are destroyed before they can be referenced, the replacement of those corners would then necessitate the preparation of a land survey plat in accordance with state statutes.

Have a super summer!

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# “Star Crossings and Stone Monuments – Field Astronomy by the Wheeler Survey in 1870’s Colorado,” by William E. Wilson, PhD

By JB Guyton, PLS, Editor,

I was very pleased to receive an autographed copy of the USGS Circular #1362 of the above title by Dr. Bill Wilson. You may recall the story of the Wheeler Monument in Georgetown, featured on the cover of the August, 2007 issue of *Side Shots*. The PLSC, along with Hixon Manufacturing, provided the funding for a bronze plaque and a steel shelter to minimize any further weathering of the historic marker. The PLSC donation was prominently acknowledged in the circular.

Now the complete story of the six Wheeler monuments across Colorado has been meticulously researched and documented in this 38-page, color-illustrated book by Dr. Wilson. It is highly recommended reading for any surveyor interested in Colorado history.

The Wheeler Survey, funded by the U.S. Army Corps of Engineers, was one of four competing government-sponsored surveys mapping the West during the 1870s. The Wheeler Survey was the most ambitious of these; its plan was to systematically map the entire coun-

try west of the 100th meridian, which runs through western Kansas. Before Wheeler could complete his task, however, Congress disbanded all of the surveys in 1879 and in their place created the U.S. Geological Survey.

The report describes the activities of one of Wheeler's astronomers, Dr. F. Kampf, to determine the latitude and longitude at six locations in Colorado during 1873-74. The framework of the story is based principally on Kampf's journal, or "Recording Book," which the author discovered among a collection of original Wheeler field notebooks at the archives of the Norlin Library on the CU campus. Kampf installed blocks of sandstone monuments on which to place his transit to observe the stars and use those observations to determine the coordinates of each site.

Wilson augments the story with information he obtained from more than 100 references that he cites. He visited each of the six sites to look for the stone monuments; in addition to the one at Georgetown, he found only two others, at Trinidad and near Julesburg. The ones at

Florence, Colorado Springs, and Brighton have apparently been either moved or destroyed.

Included in the report are various sidebars that highlight some interesting aspects of the story, including, among others, details on the methods Kampf used to determine latitude and longitude, a controversy in the press over the source and lithology of the stone monuments, Wilson's research to identify who Dr. Kampf was, and the story of the Mormon observatory at Salt Lake City.

Dr. Wilson, a USGS retiree, lives in Georgetown with his wife in a house that was built in 1870, three years before Dr. Kampf installed the Georgetown monument and made his observations. He has indicated that he would appreciate receiving comments, questions, and new information at [wewilson@wispertel.net](mailto:wewilson@wispertel.net).

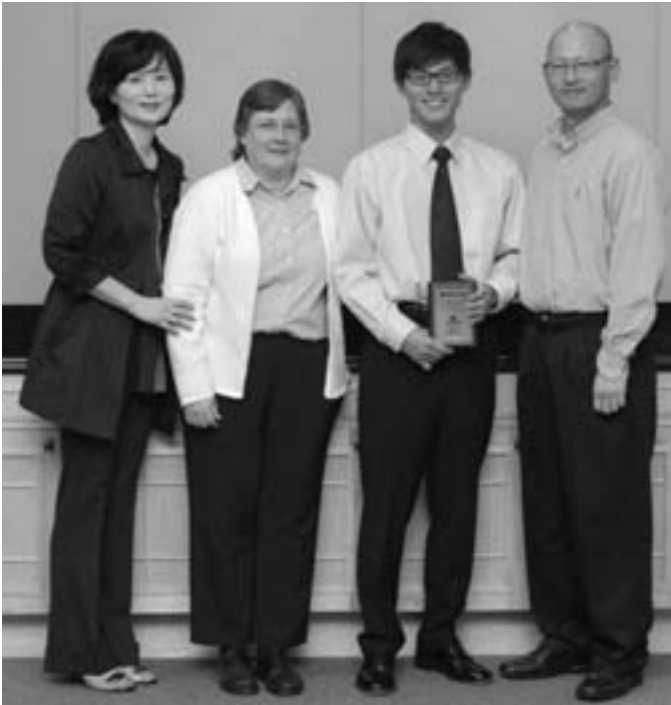
You may obtain copies of this publication (USGS Circular 1362) from any one of several sources: 1) Go online at <http://store.usgs.gov>. You must then log on (green tab at the top). Then on the left column fill in the box labeled "Enter Search Term" with the **product number**, which for this publication is **244366**, and then follow instructions. You may order 1-5 free copies this way, but a \$5.00 handling charge is added for each shipment, regardless of the number of copies ordered. 2) Visit Building 810 (Map Sales) at the Denver Federal Center, Lakewood (use the visitor entrance off of Kipling Ave.). At the salesroom, ask for Circular 1362; no charge. 3) Purchase at the Georgetown Gateway Visitor Center or from Historic Georgetown, Inc. (\$3.95 plus tax; discount for members of HGI).





# Aurora student earns first national Trig-Star award for state in contest's history

By JB Guyton, PLS, Editor



*Trig-Star winners Dotty Dady and Jiyong Shim (second and third from left), flanked by Jiyong's parents, at the awards presentation in Aurora City Hall, April, 2010.]*

For the first time in 26 years, Aurora—and the state of Colorado itself—can boast that it had the best trigonometry student in the country.

Former Cherokee Trail High School senior Jiyong Shim won first place in the Richard E. Lomax National TRIG-STAR competition last July, which was co-sponsored locally by the city of Aurora's Public Works Department.

Shim competed against 33 other students nationwide in a timed exercise that involved solving a trigonometry problem incorporating the use of right triangle formulas, circle formulas, the law of sines and the law of cosines. The winner was selected based on the fastest time with the most correct answers.

Since the contest began 26 years ago, the city of Aurora Public Works Department has served as the local sponsor for Trig-Star, which is sponsored nationally by the National Society of Professional Surveyors. Students must first compete at the local level against students within their own high school. The winner with the fastest time is the one student that goes on to compete at the national level.

Shim, who is now attending the University of California at Berkeley, had been the local winner at his school for the last three years and competed nationally the last two times.



*Jan Sterling, PLS (right), Chief Surveyor for the City of Aurora and the Colorado Trig-Star Coordinator, and Heather Lassner (left), LSI, Senior Survey Technician for Aurora and Trig-Star Program Assistant.]*

This was Shim's first time to place at the national level, and with a \$2,000 first prize in his pocket, he demonstrated in competition that he was the most skilled among his peers in the practical application of trigonometry.

"We are thrilled to have our own national winner this year," said Jan Sterling, the city of Aurora's chief surveyor who has coordinated the local sponsorship duties for Trig-Star since its inception. "This contest is a great way to promote careers in surveying and mapping to high school students across the country."

Each state's local sponsor is responsible for working with participating schools to distribute test materials, host an awards ceremony and distribute awards to the local TRIG-STAR winner for each high school. In Colorado, 10 high schools participated, and the local winners were awarded a plaque and \$100 gift card to Micro Center Computers & Electronics in April at the Aurora Municipal Center.

The National Trig-Star Committee also selects the Richard E. Lomax National Teaching Excellence Award, and Cherokee Trail High School teacher Dotty Dady won first place this year. Congratulations to both Jiyong and Dotty!

For more information on the awards competition, visit [www.trig-star.info](http://www.trig-star.info).

# City of Aurora's chief surveyor named Colorado's Surveyor of the Year

*Press release, March 29, 2010 by Julie Patterson, Senior Public Information Officer, City of Aurora*

AURORA, Colo. – The Professional Land Surveyors of Colorado (PLSC) has named the city of Aurora's chief surveyor as Surveyor of the Year for the state.

Jan Sterling, who received the award March 5 at the Arvada Center, was nominated and selected by professional land surveyors throughout the state.

Sterling, who has worked for the city of Aurora's Public Works Department for 35 years, also has spent the last 26 managing the state's TRIG-STAR program. Locally sponsored by the Public Works Department and nationally by the National Society of Professional Surveyors, the Richard E. Lomax National TRIG-STAR competition features both local and national trigonometry competitions annually for high school students. Last year, an Aurora high school student won first place in the national competition.

"Jan is highly respected among her peers, and was given the award specifically for her dedication and hard work in working with the high schools on TRIG-STAR every year," said Stan Vermilyea, the PLSC's award committee chairman. "She mentors the students each year, and the fact that one of our state's students won the national competition last year is pretty amazing."

Sterling earned the Surveyor of the Year honor for both her work with TRIG-STAR as well as her work as a land surveyor for more than three decades.

"The city of Aurora Survey Section is respected by land surveyors across the state, and they trust the



*Jan Sterling, PLS receives her Surveyor of the Year plaque from PLSC President Roger Nelson during the Surveyors Summit meeting.*

work that is produced by the land surveyors working for the city of Aurora, one of which is me," she said.

Sterling is the third land surveyor with the city of Aurora to have received this award, with the two other now-retired employees having received the award for their stellar boundary work completed for the city when it was growing in the 1970s and 1980s.

Just out of college and looking for work in 1975, Sterling applied for an entry level land surveyor position after her summer temporary job as an inspector with the city of Aurora's Public Works Department came to an end. As her passion grew for

land surveying, she worked her way up the ranks and was promoted to chief surveyor in 2005.

"I have loved the work outdoors in all weather conditions, and the inside work of research and math calculations to perform the tasks of being a land surveyor," Sterling said. "I know that I have provided the city with surveying work to the best of my abilities, and am proud to say that I work for the city of Aurora."

# Western Federation of Professional Surveyors Board of Directors Meeting Report – March 5, 2011 in Spokane, Washington

by: David C. DiFulvio, PLS, Colorado Delegate

Dave DiFulvio was the only delegate from Colorado to attend this Board meeting, with J. B. Guyton attending the PLSC Conference taking place during the same time. Since this meeting was held in concurrence with WFPS's joint conference with the Idaho and Washington societies, there were a number of guests in attendance at various times throughout the meeting.

There were several changes to state delegates at this meeting. Please refer to the WFPS web site, [www.wfps.org](http://www.wfps.org), for a listing of current officers and delegates, and their contact information.

A significant portion of the

meeting was spent discussing the status of the situation with NSPS and ACSM and the NSPS vote to initiate the process of separating from ACSM. Highlights from this topic, as well as other items of interest from State Reports are as follows:

**ACSM & NSPS** - The WFPS Board received an update from WFPS Chairman Ray Mathe, as he has been a part of the ACSM Re-Structure Committee, and Curt Sumner, Executive Director of ACSM and NSPS. It was noted that the input from the WFPS Board is regarded with high importance with both organizations in their considerations of what the future restructure

of both organizations would (and should) look like. The standard agenda format for this meeting was changed to put this matter ahead of state reports, as the highest priority for this meeting. The ensuing discussion consumed about half of the meeting.

The initial committees that were formed by NSPS and ACSM have completed their reports, along with recommendations to their respective boards in consideration of their next action steps, as was reported in my last WFPS meeting report. Since that time, ACSM has formed a restructure subcommittee that has been meeting to work out a framework of what changes, guidelines,

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and policies would be recommended for implementation that would constitute a complete re-vamp of ACSM. There has been a recent press release, posted on their respective web pages, on the results of the sub-committee's recommendations. The items of that committee's recommendations were discussed, along with other issues brought up from delegates.

Updates on this situation were provided by both Ray Mathe and Curt Sumner. Based on input from across the country from many organizations and individuals, a number of general desires and themes seemed to be consistent and common. They are:

- The need for one national organization to be the leadership representing all of the interests for not only the surveying and mapping professionals, but for all related geo-spatial professionals;

- The need for a broader approach to encompassing these professionals, rather than a narrow approach focused on only licensed professional surveyors;

- The organization needs to be one multi-faceted, unified organization, ideally with widespread individual representation rather than the past focus on group or corporate representation; and

- Local and regional groups representing the interests of surveying, mapping, and geo-spatial professionals, such as WFPS, should have participatory opportunities with the single national organization.

After much discussion, the WFPS Board voted to adopt a resolution that sets forth a summary of the position of the WFPS Board on this issue, including specific actions and results that are recommended and desired. The resolution passed with 11 states approving, 1 absent and 1 abstaining. A copy of the Resolution, #2011-01, is shown.

This resolution was presented to the NSPS senior officers at their annual "transition meeting" held in Las Vegas on March 6, 2011 at the CLSA/NALS conference. It was a part of their meeting for more than one and a half hours. The WFPS Resolution was well received and they committed to communicate their vision, as requested, and take a leadership role (if selected) on the ACSM Ad-Hoc committee.

Additionally, WFPS Chairman Ray Mathe met with the NSPS Governors for California and Nevada, and the NSPS Area 10 Director in regards to the WFPS Resolution and his meeting with the NSPS senior officers. They agreed that clear communication, discussions, and debate are necessary to achieve the best results in this process.

#### Selected highlights from **WFPS member states' reports:**

**Alaska:** Their 2013 Conference will be a major event commemorating the Alaska/Canada Boundary, with a series of events that will culminate with a Centennial Celebration of the setting of the last International Boundary monument of the United States.... ASPLS dues are at \$200, including NSPS membership.... Their State Board is considering a regulation to adopt the ASPLS Standards of Practice Manual by reference, and a regulation requiring a 4 year degree to





become a licensed surveyor is out for public notice and is scheduled to take effect in 2013, also a change in the number of required Continuing Education Units, from 30 to 24, is also out for public notice.... With respect to NCEES, a Professional Activities and Knowledge Study (PAKS) is underway. If anyone receives a questionnaire, they are strongly encouraged to respond and participate. This is a very important questionnaire that will have an impact on future licensing exams.

**Arizona:** APLS is working with their State Board to implement a Continuing Education Program, and are also talking about a degree requirement for licensure.... They are also seeking to upgrade the minimum requirements for licensure.

**California:** CLSA not only has one of the most useful and comprehensive websites of any society, recently adding a Google search within the website, they are also now on Facebook.... Their Voluntary Professional Development Program is now a free benefit to their members, including the maintenance feature of the program, resulting in an increase on membership to this program.... Is putting together a monument conservation (preservation) brochure .... Is also developing a brochure discussing the relationship between GIS and Land Surveyor professionals.... CLSA was involved with the UDC v. CH2M Hill case on "Duty to Defend", and indemnities. It was suggested that each state look into spreading the word about this court case, so they can promote a closer look at related verbiage in contracts their members are signing. As of now, the California Supreme Court has denied the petition to hear the case, and denied the de-publishing of the ruling; however a bill was pushed through and passed in the CA legislature in 2010, with strong assistance from ACEC, that will protect the design professional, which is a great accomplishment for engineers and surveyors. See the discussion board on the WFPS website for more information related to this SB

972. (Personally, I feel this will have a huge impact on our liability and strongly encourage everyone to review this issue and discuss it with their liability insurance specialists).... Their education foundation awarded over \$46,000 in scholarships, and has established a goal of \$75,000 for the year 2014.

**Colorado:** Dave DiFulvio presented a report summarizing the activities and matters of PLSC, including newly elected officers.

**Hawaii:** Their issues being addressed include legislation to define land surveying, a Hawaii coordinate system, continuing education, and right of entry. WestFed delegates have provided input and support for these issues, at the request of their delegate Kevin Kea.... Their Trig Star program, now in its 4th year, involves 29 schools, up from 20 last year. One of their students came in 8th in the national competition last year, helping to fuel very strong growth of the program.

**Idaho:** Their 2011 ISPLS conference was a joint conference with WestFed and Washington, concurrent with the WFPS meeting in Spokane, WA.... The only legislation affecting surveyors in Idaho is concerning monumentation clarifications.

**Montana:** Their 2011 conference was very successful, with handouts electronically copied on jump drives donated by a vendor, saving an estimated \$8,000 in printing costs.... Their 2012 conference will be in Great Falls on Feb. 14-17.... A discussion was held regarding the Certified Federal Surveyor (CFedS) program and the policy of the Rocky Mountain Region, Bureau of Indian Affairs regarding cadastral surveying on Federal Trust Lands.

**Nevada:** NALS has hired a lobbyist and is tracking 45 draft bills in their legislature.... Fall enrollment at Great Basin College in Elko is half of what it was last year, and a Mining Survey course is being offered

this spring for the first time.... They are expecting that 10 high schools in Nevada participated in Trig Star this year.

**New Mexico:** Their Engineering and Surveying Practice Act will sunset this year; HB 32 was introduced in the legislature to renew it, with few changes .... Congratulations to Earl F. Burkholder, PS, PE, FASCE on being the recipient of the ASCE 2010 Surveying and Mapping Award.... The NMSU CORS station is up and running.

**Oregon:** The results of the Executive Office telephone survey on "how we are doing" with respect to returning value to the membership, has been published and available on their web page.... Their participation in the 2011 TwiST (Teaching with Spatial Technology) program was tentatively scheduled in June in Las Vegas, however the plan was dependent upon a sufficient number of WFPS state's support to send a minimum number of teachers. The commitment for support by a number of WFPS states was insufficient to meet the minimum participation level, and as such, the program was cancelled this year.... The PLSO Board is embarking on an effort to develop a 501(c)3 charitable foundation in addition to its current 501(c)6 association status to enable receiving tax deductible contributions.... ODOT is proposing a low distortion projection system.... Their state board of licensure is close to adopting a Standards of Practice for surveying in Oregon.

**Utah:** UCLS has hired a new lobbyist, who has been working on changes to a bill that would change statutes on how Boundary Line Agreements are handled.... UCLS has not proposed any new legislation this year and has been able to stop any legislation that would have adverse effects on the surveying profession.... Their 2012 conference will be February 9th & 10th in St. George... 2 yr. surveying degree program is offered at Salt Lake Community College, and a 4 yr.



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degree program at Utah Valley University.... UCLS has hired a new Executive Secretary, Susan Merrill.

**Washington:** The membership of LSAW is down, similar to other WFPS member states and a special, reduced membership rate has been approved for unemployed and underemployed members.... Their Dept. of Labor & Industry has established a new Prevailing Wage for Public Funded construction projects in Oregon, with most of the state using a union wage rate of \$50.39 /hour ....their proposed redefinition of surveying in the State of Washington, as proposed by their Board of Registration has been killed when their Governor put a moratorium on any changes to such regulations.

**Wyoming:** The Outreach Program at U. W. is working with Sheridan College to obtain AAS and BS degrees.

#### Other items of interest:

- The FEMA Elevation Certificates were discussed, specifically with respect to benchmark problems in Arizona and other states

- Curt Sumner provided a report on the activities of ACSM and NSPS, including the restructure committee. The discussion led to the Resolution attached to this report

Our next meeting is tentatively scheduled for June, in Reno, NV.

# PLSC Board of Directors Meeting Minutes

## February 17, 2011; 11:00 a.m.: Conference Call

Call to Order: 11:00 AM

Recognition of PLSC Board Members and Officers:

**Present:** Officers; Adams, Askew, Greer; Board: Berling, Bouchard, Green, Kent, Newby, Nelson, Vermilyea; Nonvoting; Ward, Guyton, Krick

**Absent:** Clark, Gable, DiFulvio,

Welcome of Guests:

Terry Maw, Todd Beers, Bill Buntrock, Gene Kooper, Parker Newby, Rick Mason, Earl Henderson, JJ Rhianek

Additions, deletions and modifications to agenda:

Diana asked for a vote on the UPS program.

Secretary - Treasurer: Diana Askew

Approval of Minutes from Previous meeting: The minutes were published in *Side Shots* with the requested edits. These minutes can be approved at the annual meeting.

Di presented her last Treasurer's Report to the Board and will update that report for the Annual meeting. She will no longer be a member of the board.

Election Committee; Chair- Doug Berling

New officers and directors elect: Doug will announce the results of the election at the start of the Annual Meeting. The Annual meeting is scheduled for 5:30 to 6:30 on Friday.

Education Committee; Chair- Peter Kent

1st Annual Surveyors Summit and PLSC Annual meeting; Di, Mike and Todd reporting:

Last minute help needed  
The education committee will get going on next year's conference  
Mike Greer and Di have ordered PLSC Logo hats and will be offering them for sale at the conference.

Di ordered the books for John Stahl's workshop on Feb 15.

Roger to prepare a short agenda for the meeting. At the Awards Dinner Roger will also introduce the new board and Stan will present the awards. Email anything that needs to be added to the agenda to Roger prior to the meeting.

Todd is updating the task sheet for the conference. The southern and northern chapters will not be

holding a board meeting at the conference.

Awards Committee; Chair- Stan Vermilyea

Stan suggested that we present Distinguished Service Awards for everyone on the list.

Motion: Stan moves to honor all of the nominations on the list. Seconded. Discussion: Doug asks to add Warren and the engraver for the monuments at the Four Corners project. Christian Muller in Boulder engraved the stones and would be tickled to receive some recognition. Christian will receive a citizen surveyor award. Gene asks that Bonna Kay McComber and Sally Patterson be acknowledged as life members. Stan will contact them and order a plaque for them. Vote: Unanimous approval.

Doyle Abrahamson, Bob Stollard and Chic Chichester will be honored at the Awards Ceremony. Bob Stollard's son has never picked up the final point monument and it is still at Mike's house. Stan may contact him and have that presented at the conference.

Stan will contact everyone so they can come to the Awards Din-

### PLSC Treasurer's Report 3-31-2011

Account	12/31/2010 Balance	1/31/2011 Balance	2/28/2011 Balance	3/31/2011 Balance
<b>Checking and Savings Accounts</b>				
Checking at Wells Fargo - Main	6,858.79	24,947.58	19,615.93	55,875.82
Merchant Checking at Wells Fargo	13,818.24	25,679.32	83,264.61	8,625.05
PLSC Savings at Well Fargo	30,255.25	30,260.39	30,265.03	30,265.03
PLSC Scholarship Fund Inc	2,372.34	2,264.43	2,156.50	1,961.62
PLSC Scholarship Fund Savings	48,514.82	48,623.08	48,730.55	48,830.55
<b>TOTAL Bank Accounts</b>	<b>101,819.44</b>	<b>131,774.80</b>	<b>184,032.62</b>	<b>145,558.07</b>
<b>PLSC Scholarship Fund, Inc Investment Accounts</b>				
ICA	26,572.57	26,572.57	27,911.46	28,313.34
Investment at Merrill Lynch Investments	24,448.05	24,448.05	23,068.30	21,710.55
WMIF	26,362.42	26,362.42	27,710.98	27,599.23
<b>TOTAL Investment Accounts</b>	<b>77,383.04</b>	<b>77,383.04</b>	<b>78,690.74</b>	<b>77,623.13</b>
<b>OVERALL TOTAL</b>	<b>179,202.48</b>	<b>209,157.84</b>	<b>262,723.36</b>	<b>223,181.20</b>

ner. Warren will help with Christian.

TrigStar Awards: Jan Sterling is scheduled to give a presentation on Saturday. Di has the plaques and checks from the NSPS and will give those to Jan so she can give them to the teacher and student.

Action-item regarding the PLSC Library: Roger asked about the status of the Library. We voted to move the library and stop paying for library space. Gene still has all of Art Hipp's books in his garage. He was not able to get in touch with ARM to get those books added to the library. JB has a filing cabinet full of books from Art that he was given when he became president.

Westwood is offering a home for resource material from the PLSC.

Legislative Committee; Chair- Roger Nelson

Earl sent a suggestion for the legislative committee.

President, Tom Adams

Tom discussed the need to have an ex-officio director from every chapter.

The Articles of Incorporation Tom sent out; Roger edited and Terry has asked to make one more change. Terry will update and get the bylaws and articles of incorporation onto the PLSC.net Website. The changes to the articles of incorporation need to be reported to the Colorado Secretary of State.

Executive Director, Diana Askew

Motion: Di moves to approve and implement the UPS Membership Discount program. Second: Roger Nelson. Discussion: None. Vote: Unanimous Approval. Di will contact Dan Hayes to implement the program.

NSPS Governor: Warren Ward

See attached report.

WFPS Delegates Dave DiFulvio and JB Guyton

Next meeting same day as PLSC Annual meeting

MSCD Surveying and Mapping Advisory Council, Chair- JB Guyton

AES approved the remainder of the students in the Metro program through December, 2012, to have a four-year board approval for their program even though the program lost the ABET accreditation.

Westwood has restructured their two year degree program to a 90 hour Geomatics program.

Next meeting date and location: March 4, at 5:30 p.m. at the Arvada Center following the sessions.

Adjourn: 11:58 AM

Respectfully submitted,  
Diana Askew, PLS  
Outgoing Secretary-Treasurer



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# *In Memoriam*

**Richard A. Gossett, PLS 7361**  
**June 17, 1941 to March 11, 2011**



Richard A. Gossett passed away at his home in Hugo, Colorado. He was born in Sheldon, Missouri, but Colorado had always been his home.

Mr. Gossett's occupation as a land surveyor began with Bell Surveying Company of Denver Colorado in 1961. In 1966 he earned his Colorado Land Surveyor's license, (PLS-7361), and was, at the time, the youngest person to hold that honor in the state. Mr. Gossett became a partner in Bell Surveying Co. in 1970 and bought controlling interest of the business in 1981. After selling the business in 2004, Richard and his wife, Jane, retired to Hugo, Colorado where they enjoyed the quiet life of the country.

In addition to thousands of projects in the Denver metro area, he was also instrumental in the Snowmass Ski Development, the Amax Molybdenum Mines, the Inverness Business Park, and ran a satellite office in Grand Junction during the oil shale boom.

**Ardys G. "Art" Entsminger**  
**May 15, 1921 to January 27, 2011**



A truly cherished Husband, Father, Grandfather and Great Grandfather, passed away in Denver, CO. He was born in Mullen, NE.

A Colorado resident since 1926, Ardys served in the National Guard and then served during WWII in the US Army Air Forces and in the Air Force Reserves. He received a Civil Engineering degree from the University of Denver and made his career as a Registered Professional Engineer and Land Surveyor in the Denver area. A Mass of Christian Burial was held on February 2nd at Our Lady of Lourdes Catholic Church in Denver, followed by reception and interment with full military honors at Hampden Memorial Gardens. In lieu of flowers, donations may be made to the Hospice of St. John or charitable organization of donor's choice.

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## CCPS

Well we just finished the first quarter of 2011 and it has been very busy thus far. At the general membership meeting on January 27th we installed new officers and directors. Joe had this partially correct in the February *Side Shots* but Rob Snodgrass is not an outgoing director, he is continuing his 2 year term.

In February a lot of people were preparing for the 1st Annual Rocky Mountain Surveyors Summit held at the Arvada Center on March 3, 4 and 5 where a great time was had by all. March 24th was our 2nd of 5 General Meetings held at the DoubleTree in Aurora. We had Jim Reinbold present information about interoperability and data share capabilities of Carlson Software. The featured speakers were Technician TJ Waters and Trooper Lisa Middleton with the Colorado State Patrol Accident Reconstruction Team based in Castle Rock. They are responsible for the entire district which encompasses seven counties. His team only responds to serious or fatal crashes in which lives are in jeopardy or felony charges are possible. This was a great presentation!

March also brought us some sadness as one of our new directors, Eldon Knoll, had a stroke. The good news is that he is doing better every day and recovering at Kindred Hospital in Denver. If you wish to send him a message or just watch how he is doing you can sign in to: <http://www.carepages.com/carepages/ekcarepage>.

The next General Membership meeting will be held at the Table Mountain Inn just South of Foss Drug on Washington Street in Downtown Golden with a 6:00 PM cash bar, 6:30 dinner, followed by a 7:00 general meeting. Featured

speakers are Kelly Mul from SKLD Information Services LLC, on document retrieval, and Don Lambert, PLS of Frontier Surveying, Inc. showing us the NEW DORA Monument Record Retrieval using Google Earth.

This should get us into sunshine and rain and out of the snow, maybe. Have a good summer.

James (JJ) Rihaneck, PLS  
CCPS President

## CSRN

### Board Member Change

Dan Akin resigned from the Board earlier this year as a result of new employment with the BLM as a P.E. and because of his conflicting schedule. We wish Dan all the luck in his new adventure as we always enjoyed Dan and his contributions to the CSRN. The CSRN welcomes our newly appointed Director Chris Duda, PLS with LW Survey Engineering & Design Company and are looking forward to Chris's energy and ideas for the CSRN events and activities this year.

### Surveying USA Event

On March 19, 2011, The Colorado Spatial Reference Network (CSRN) represented Colorado on behalf of the Professional Land Surveyors of Colorado (PLSC) for the first annual National Society of Professional Surveyors (NSPS) "Surveying USA" event. The purpose of the event was to introduce the public to the Surveying Profession. The CSRN elected to capture this opportunity and incorporate GPS for the Surveyor. We held the event at the Colorado Department of Transportation (CDOT) Headquarters located at 4201 E. Arkansas Ave., Denver, CO from 10:30am to 1:30pm. We obtained GPS observations on the NGS monument "TRANSPORTATION". We hosted approximately 120 attendees, ranging from Surveyors, Boy Scouts, Girl Scouts, Geocachers, Westwood College, NGS, NSPS and others. Our GPS Network sponsors were Frontier Precision Inc., Hixon Mfg., Vectors Inc., Compass Tools Inc., and Rocky Mountain Lasers. Steve Parker with Boundary Stone, PC sponsored a hand held GPS navigation course at the CDOT complex. This was very popular with the Scouts. The Scouts are now discussing becoming part



Participants in the NSPS "Surveying USA" event on March 19, 2011: From left: Jan Sterling, Jack Sparks, Eric Carson, Todd Beers, Chris Duda, Steve Parker, Brian Dennis & Pam Fromhertz

of the event and making the GPS navigation course a requirement for the Scouts to earn their Geocaching badge. The CSRN had eight to ten Professional Surveyors, identified with vests provided by CDOT, available to respond to questions and provide information about Land Surveying. In addition, each sponsor had a talking point regarding GPS for Surveyors and Pam Fromhertz had a station to introduce the public to the National Geodetic Survey (NGS). We received 100% positive feedback from the attendees and they are anxiously awaiting our next event.

As part of the event NSPS requested that each state's participants occupy and observe a monument with GPS from 11:00am to 11:30am to become eligible for the World Book of Records for simultaneous GPS observations. We should know soon what the national total of participants was during that time frame and I will provide that information once available. Frontier Precision was in the process of collecting a 4 hour static observation data set during the 11:00 to 11:30 time frame. This information will be submitted to the NGS On-Line Positioning User Service (OPUS) and then provided to NSPS. From 11:30 to 1:30 each network sponsor observed the monument with RTK GPS capturing a total of 9 measurements each with 3 measurements each at 15 second, 60 second and 180 second intervals for position comparisons to the post processed OPUS static session and the NGS data sheet since "TRANSPORTATION" has an adjusted horizontal value. We are evaluating the data of the GPS observations and will be generating graphic representations of the results to be posted to the CSRN website at [www.csrn.us](http://www.csrn.us) under the Industry Showcase section. For information on the national effort by NSPS, visit [www.nspsmo.org](http://www.nspsmo.org). Since the event

was such a success the CSRN has already voted and it is unanimous to continue hosting this event annually. We hope to see you next year!

Brian Dennis, PLS  
CSRN President-2011

## NC-PLSC

Our Chapter is proud to announce the production of Colorado Bylaws, rules, and legislation changes in booklet form for our Chapter Members. Leading the production of this compilation is one of our devoted Directors, Paul Bacus. Paul, for his own benefit, puts together Colorado laws associated with surveying annually so he's up to speed on all changes in legislation. He has offered to share this booklet with the Chapter at no charge. Upon a unanimous vote at our January meeting, this booklet will be printed for all members of the Northern Chapter free of charge. Booklets will be printed in the near future and provided to our constituents at our monthly meetings. It is our hope to have these printed by our May meeting so please attend so you can pick up your free copy courtesy of your local Chapter.

The Northern Chapter will be hosting a free technical presentation on Machine Control GPS on construction equipment Wednesday, May 4th at 6:00. The presenter presently works for Wagner Equipment and has years of experience with GPS for construction purposes. Our Chapter continues to create a platform for monthly technical sessions. If you have any ideas for presentations or a particular speaker in mind for one of our technical sessions, feel free to pass it along to our Secretary, Rob Hintz @ [rhintz@fcgov.com](mailto:rhintz@fcgov.com).

In addition to the educational presentations our Chapter sets up, we are actively working with Larimer County to try to get unrecorded maps, recorded. Presently there are maps such as Lot Line Adjustments, Minor Subdivisions, and Exemption Plats prepared in the late 1960's to early 1980's which reside in the Planning Department however are not recorded with the Clerk and Recorder's Office. These maps are of interest for any surveyor working in the County in addition to title companies, attorneys and property owners. One of our dedicated Chapter members, Laine Landau, has spearheaded the daunting task of getting these plats recorded. The NC-PLSC is convinced that recording these plats would help our constituents and would be of value to the entire community. The NC-PLSC is in the process of setting up meetings with all of the County Departments which may be affected by recording these maps and is working with County Officials to find a resolution to this problem. It is clear that this task will take time however our Chapter is committed to seeing this through. We will keep our members abreast of any breakthroughs on matter.

After the May meeting, our Chapter will be taking a break from our monthly meetings for the summer and will be starting back with our monthly general meeting in September. Since this is the busy season for surveyors, this gives our chapter members a time to focus on work. There will be infrequent updates from the Chapter Officers on updates and changes to the surveying community. As always, notifications via email will be sent prior to all meetings.

Kayce D. Wohlman, PLS  
President-Elect

## NW 1/4 CLS

The NW1/4 met on February 22, 2011 at the Craig Holiday Inn. Present were John Noonan, Lloyd Powers, Tom Effinger, Skidge Moon, Brian T. Kelly, Willy Whelan, Jeff Gustafson, and Presiding President Gordon Dowling. After dispensing with the Treasurer's Report, Minutes, and Old Business, we moved on to the two topics of the evening: Updates to the rules and regulations governing land surveying and Tract 38, Section 7, T2S, R83W, 6th P.M.

Dan Corcoran, formerly of the Board of Registration and current Eagle County Surveyor, had in passing brought to Brian's attention the number of changes in the Rules and Regulations. John Noonan looked it up on the DORA website and lo and behold, there they are. The 2011 rules and Regulations are over 40 pages and CRS Title 38 is roughly the same length. Especially pertinent this year is declaring the length, distance above ground and size of cap found or set. It is no longer sufficient to state, "Found #5 rebar and yellow plastic cap, LS Blah." Now we will be stating, "Found #5 rebar and 1-1/4" yellow plastic cap, 4" above ground, LS Blah." Or in the case of setting a corner, the length of the rebar must be stated. These are not the only changes, and in looking back through the rules and regulations,

some of these sneak up on one over time. Geodetic Surveying and Control for Engineering Projects must be performed by a licensed surveyor and this has been a requirement for a few years now. Yet we still see architects, engineers and unlicensed individuals performing these services and others. Just something to be very aware of - get on the DORA website and review the Rules and Regulations and CRS Title 38!

The second topic was another interesting survey whose underlying land literally shifted three times. Unlike Japan, we do not believe the actual land shifted, but this parcel of land along the Colorado was at one time in Section 6, then the SE1/4SW1/4 of Section 7 and finally it landed in Tract 38. Given its relative remoteness, only some of the pertinent legal descriptions had been updated to reflect the land and its adjoiners were now in Tract 38. Five years after the Independent survey was approved in 1938, the land even changed title under the SE1/4SW1/4 of Section 7. Those forty acres are up on the side of a mountain, far removed from the actual location along the Colorado River. And then to really convolute things, the calls along the River were off hundreds of feet, despite the fact the River is in a steep canyon at this location and obviously has not moved nearly that much. It is bounded on one side by a cliff

and the other side by a well maintained railroad. But it appears through the exemption platting process and feedback from two other surveyors that seventy-five years later, the land is finally described correctly.

The lesson here is never to assume it is simple. Clients always try to convince us of that fact and occasionally we fall for it! Especially on April Fools Day!

Lastly, we nominated officers for the new decade (kidding). They are: John Noonan, President; Brian T. Kelly, V.P.; Jeff Gustafson, Sec.-Treas.; Directors: Tom Effinger, Skidge Moon, Gordon Dowling (immediate past-pres.), Lloyd Powers and Peter Epp.

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

## SWC/PLSC

The SW Chapter had its regularly scheduled meeting on March 1st, 2011 at Christina's Bar and Grill at the Best Western Motel in Durango. Members in attendance were Larry Connolly, Ed Young, Dave Seiler, Josh Casselberry, Rob Trudeau, Parker Newby, Steve McCormack, Billy Foster and Richard Harrison. The minutes from the previous meeting were read and approved.

Parker Newby has been elected to the PLSC Board of Directors as a representative of the SW Chapter.

The PLSC SW Chapter will be holding a 2011 Four Corners Survey Seminar on June 10th and 11th. The speakers for the upcoming seminar are Randy Bloom, Pamela Fromhertz, Larry Phipps and Gene Kooper. Postcards will be sent out soon with seminar and registration information.

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# C H A P T E R N E W S

Officers for 2011 PLSC-SW Chapter were announced as follows:

Rob Trudeau – President  
Josh Casselberry – Vice President  
Secretary – Parker Newby  
Treasurer – Ed Young

Larry Connolly did a presentation on the Colorado State Rules and Regulations updates effective January 1, 2011. He provided a handout with the pertinent items and reviewed some of the recent interpretations of the board. Larry also discussed the new monument record form and the much improved monument record data base available on line.

Next meeting location and date: May 10th at 6:00 PM. Christina's Bar and Grill, Durango.

Rob Trudeau  
President, PLSC SW Chapter

## WCLS

At our January 12 meeting, Scott Thompson gave an excellent presentation concerning surveying in the City of Fruita, Colorado. In the mid 1980s, the Fruita City Council adopted a plat for street monumentation stating that all of their rights-of-way were dependent on the monuments on the plat and their street rights-of-way were to be as depicted

on the plat. All surveyors were directed to use these monuments. There were several critical surveying and boundary law principles that were ignored. The WCLS at that time was very active in trying to bring sanity to the City's process. The concerns were that several of the new City monuments varied from already established monuments, including certain aliquot monuments by a few feet to as much as 20 feet. Most of the surveyors that were around at that time knew of the problems and were able to work around the issues to protect bona fide private ownership rights. In recent years, more and more surveyors are not aware of the problems and some surveys are being conducted with the 1980s monuments, others in accordance with the original subdivision plats, and some with a combination of the two. Needless to say, it can get tricky in Fruita to establish the true ownership lines.

At our March 9 meeting, Peter Krick presented the changes to the 2011 ALTA/ACSM Land Title Standards. For those of you who have reviewed them, the changes are numerous and significant. Again, it was an excellent and needed presentation.

At our March meeting, we presented Jon Kobylarz with our March 2011 Surveyor Appreciation Award for his outstanding service with the 4-H group in our community.

Rich Mason has successfully gotten the WCLS involved in Trig Star, starting with Central High School in Grand Junction. We hope to expand on his success in coming years. See the separate article elsewhere in the magazine.

Les Doehling and Jon Kobylarz have gotten the \$1500 scholarship forms out. The winner will be announced at our May 6 Spring Seminar. Thanks to the PLSC for funding \$1000 of this scholarship.

And speaking of the May 6 Spring Seminar, you are all invited to come see us here on the Western Slope on May 6. Mr. Dennis Mouland will be our main guest speaker and will be discussing the 2009 BLM Manual of Instruction. Flyers and internet sign-up directions have already been sent out. For anyone not receiving the information, please get hold of me. Dennis Shelhorn has been doing yeoman's duty getting everything organized and lined out.

Our meetings also include discussions of AES Board Rulemaking updates, Legislative Committee report, other committee reports, and other issue of local interest.

Thomas W. Sylvester  
P. E. & P. L. S.  
President, WCLS

# Grandiose Ideas

By Dean F. Glorso, PLS

AUGUST 26, 2010 – Turning age 62 earlier this year, now entitles this “Baby Boomer” to a “Social Security Retirement”. But I’m just not ready to call it quits. Loving the profession for over 40 years, as many of us do, I’ve always intended to just keep working until my calling to the “here-after”.

My original plan, back in 1991, when I first started building my own small business, was to; work hard, hire good people, and someday turn over the business to my children and younger, loyal employees. Subsequently, I intended to take on a part-time roll in the company, with my fingers still in the operation and “profit pie”. That idea is still in the mix, but now with zero employees, and a dismal economy, it just doesn’t seem like a reality anymore.

I’m sure there are many other small land surveying businesses that started with similar “grandiose ideas”.

So now we tell ourselves, “times will get better and the economy will come back”. But the nightly news of the economic future, in these pre-election months, seems to be more gloom and doom. A ploy that my wife reassures me is only a media tactic to further their bias agendas for the up-coming elections. I hope she is right! So I pretty much leave the TV off these days, and try to filter out the media bombardment by clinging to personal verbal conversation with the opinions of the people I respect. It is very difficult these days to be a free thinker sitting in front of a television.

We’ve all been through hard times in our lives, and things usually work themselves out one way or another. It’s true, not many people still alive today, have seen this kind of economic disaster, but there are other personal traumas we’ve all been through. Many of us have experienced; divorce, death of a

loved one, unemployment, going off to war, and other significant life changing events. I like to think of it as just “Living Life”. These are all experiences that build character and make us better people. Looking at the day in a positive light will keep our attitudes open for opportunities. If we drag ourselves down by focusing on the negative news of the day, we become sad and depressed. No one will hire a person, or wants to be around someone who brings a storm cloud into the room.

Call upon your friends, go to a social gathering, and give people you come in contact with some good news. Hug your children, and reassure them that better days are coming. Spend some time thinking up and talking about “grandiose ideas”. Plot ways of implementing your dreams and take control of your own destiny.

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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.

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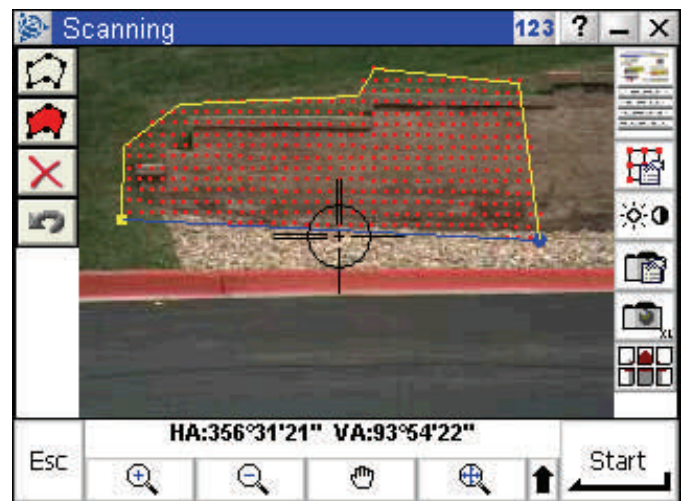
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