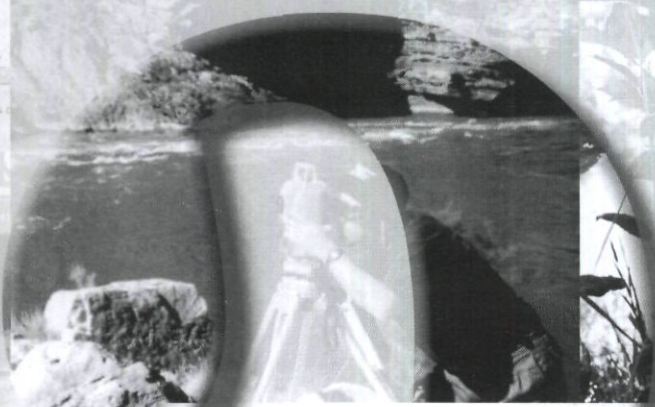


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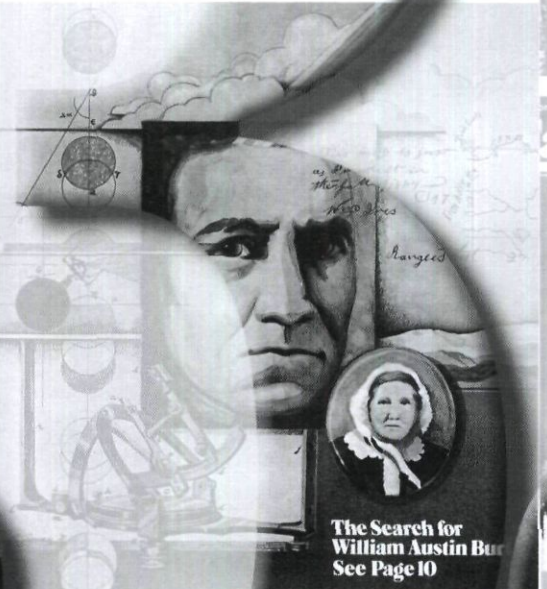
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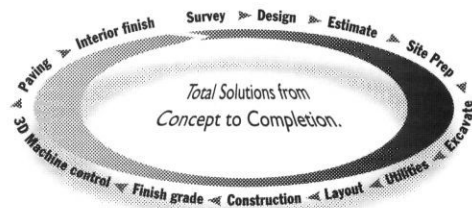
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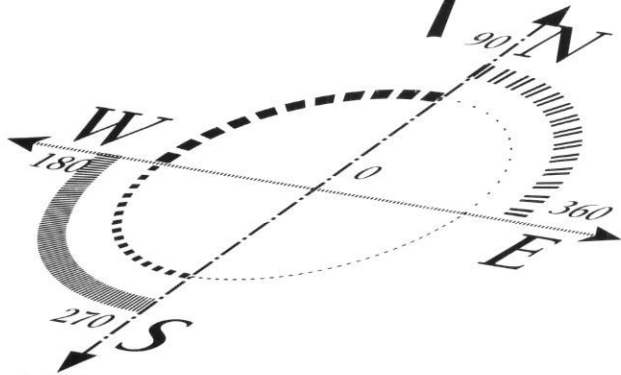


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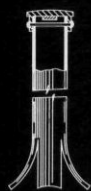
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“Recognizing that the true merit of a profession is determined by the value of its services to society, the California Land Surveyors Association does hereby dedicate itself to the promotion and protection of the profession of land surveying as a social and economic influence vital to the welfare of society, community, and state.”

“The purpose of this organization is to promote the common good and welfare of its members in their activities in the profession of land surveying, to promote and maintain the highest possible standards of professional ethics and practices, to promote professional uniformity, to promote public faith and dependence in the Land Surveyors and their work.”

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Inside This Issue

Features

Working with Attorneys
 by: Knud E. Hermansen 11

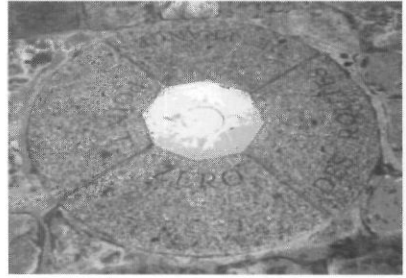
Meet Your Board 12

CLSA Celebrates 35 Years
 by: Orlean Koehle 14

Aurora, A Survey Settles a Violent Fued
 by: Kevin D. Burgess 21

Postcards

From: Judy Frank 31



Department

From the Editor 6

Letters to the Editor 8

President's Message 9

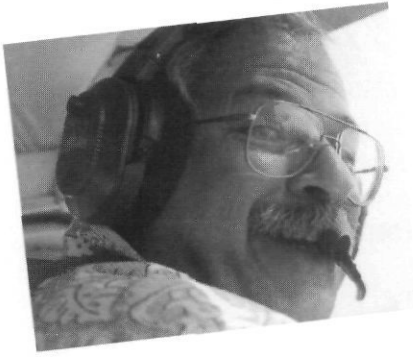
CLSA Membership Application Form 33

CLSA Publication Order Form 34

On The Cover

CLSA Celebrates 35 Year Anniversary





From the Editor

By: Phil Danskin, PLS

SURVEYING WAS LITTLE ON MY MIND

My first experience with surveying began when I was about sixteen and had nothing to do with what I wanted to be. My father took me to an airport and bought me a flying lesson and after that I was hooked - I desperately wanted to be a pilot.

My flight instructor and owner of the flight school, took me under his many wings and gave me a job in Field Ops (fancy title for a fuel & wash boy) in trade for flight time. I was in heaven and at seventeen obtained a Private pilot license. I was addicted to flying.

Mr. Thomas decided to build an airport closer to town (one that did not flood during the winter). He bartered for the services of another flying student, Eric, who happened to be a brilliant surveying student at a local community college. Eric became the project surveyor/engineer/architect and I his chainman and the grading contractors' operating engineer. I was on top of the world - surveying, driving a water wagon, a compactor and flying my arse off! That summer we worked from sunup to sundown . . . and I loved every sweaty minute of it, (although I had no idea what I was doing). I didn't think of it as work. (Work was evenings at my parents Dairy Belle drive-in). My bartered time had earned enough hours to get my commercial and flight instructor licenses.

My objective at the time was to earn an Associate Science degree from a community college, whereby, in the late sixties, the Marines might accept one for flight school if you held a commercial ticket and a two-year degree. Off to Santa Rosa Junior College where I chose the curriculum of the second-best-job-in-the-world - surveying!

Subsequent to graduating, the Marines wanted "real" men - with a four-year degree. There went that bright idea. Oh well. And as luck would have it, my selective service

"random Sequence Number" (278, hand written in blood red) was not called! Luck on top of luck. No Vietnam for this naive hick.

I worked at a Chevron service station to provide for myself at community college. As my good fortune would have it, a customer was George P. Colson (the late PLS 2654). He would share interesting survey experiences (his Tunnel Laser system, etc.) as I serviced his car. About the time of graduation, George suggested I contact a member of his firm who had just opened an office in St. Helena. Within days of contacting Mr. Thompson, I had a job in surveying! I started at three dollars an hour (1971) which was like Mr. Lucky hit the jackpot . . . and no more smelling like a refinery.

I enjoyed work nearly every day . . . until I realized I had not been in the field for almost two years! One of the benefits of this vocation was being outdoors and I missed it. So I whined and they reluctantly sent me to the field. Now I knew how the ground looked when I drew my maps and another integral part of my vocation became illuminated.

Curta and Book of Peters were inseparable. Vests chuck full . . . keel, protractor, a straightedge, #four lead mechanical pencils, yellow, red, pointer, nails, tags, etc., etc. . . there wasn't an empty pocket to be found. I felt like the walking accouterments of a fire engine.

In 1974 my supervisor, Joseph Grippi (LS 3775) decided he would try self-employment. I worked for this successful surveyor initially on weekends, then full time for fourteen years. During that fourteen years, I obtained my LSIT, got divorced, got custody of my two daughters, got remarried (to a lady with four sons -what was I thinking?) and got licensed. Whew! I had the good fortune of being

employed by such maverick surveyors. Their tutelage provided me with invaluable experiences and knowledge to go solo.

In the Spring of 1988 I decided it was time to strike out on my own tandem with building our home, and not knowing how I would finance all the equipment I would need. In the beginning business was wonderful. Until 1990. From then through 1995 I had experienced my first recession as self-employed. Those were some depressing times. Kraft Macaroni and Cheese sustained us. (It still turns my stomach when I see those blue 'n white boxes!) Times were so bad, that I would call my competitor (when he wasn't calling me) to be sure our phones were still working.

Things have changed for the better, for these past years have been prosperous ones. Let's hope it continues.

TRIGSTAR ANYONE?

Did you ever have an epiphany subsequent to opening a box of flagging? It happens. Recently I opened a box of flagging and inside was literature on the marvels of the manufacturers' latest toys and glamorous projects which

employed *their* toys. I thought what the heck, the Metamucil is working. I'll read it. One slick brochure I thought. If only we could do such a wonderful job of promoting surveying, er geomatics.

An idea came to mind: With the aid of the slick brochures, I might be able to cultivate an interest in our profession at the local high school - and possibly snag some part-time help.

I called cousin Armand Marois (not really my cousin-just a maholo-ism) on how best to present the Trigstar competition to the local High School. He forwarded directions and suggested I obtain a Trigstar packet from NSPS, (\$30). Done. Next, a mathematics instructor for the local high school was contacted to determine if they would be interested in such an endeavor. Interested was an understatement. The guy was so happy I thought he'd cry. Although that is more likely what the students will do if they have to take another test!

Liken a conscientious member of the California Oak Foundation - we should broadcast "geomatic seeds" with the students. Should an interest in *The* profession exist,
Continued on page 28



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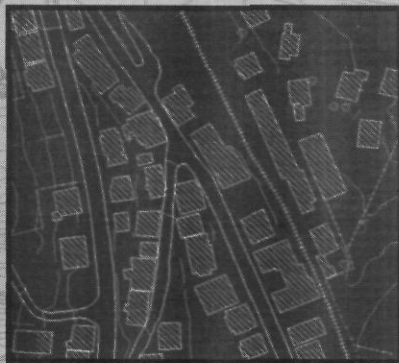
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Letters to the Editor



■ CALIFORNIA/NEVADA

I found the article "California/Nevada State Boundary" in the Fall issue of *The California Surveyor* extremely interesting. As editor of a monthly newsletter for the Riverside County Transportation Department which includes the Survey Division, it is my intention to reprint this article in our January 2001 edition. Full credit will of course be given to *The California Surveyor* and to the author, John P. Wilusz. We greatly appreciate the quality and interesting content of your magazine.

Don Doers
Principal Survey Technician, Riverside County

■ CALIFORNIA/NEVADA

I read with great interest about your fascinating story of the establishment of California's boundaries. It brought back fond memories of earlier articles written on the subject, especially about the famous "Von Schmidt" diagonal line. This line still appears on many of the U.S.G.S. topographic quadrangle maps for that area of California. Using modern CD-based maps, it's particularly interesting to trace the diagonal Von Schmidt line, from Lake Tahoe to the Colorado River.

Beginning at the South Lake Tahoe, CA - Stateline, NV shoreline, the line appears about 1/3 mile West of the current "true boundary". It then proceeds almost parallel, slowly converging to a cross-over point, located southeast of the northerly corner of Mono County and a few miles east of Sweetwater, NV. At a point about 5 miles, more or

less, northwest of Highway 374, we encounter the "Baker Line", which is slightly less than halfway between the current state boundary and Von Schmidt's line. However, I'm not familiar with the story of the Baker line - any takers out there?

In this same area, we encounter a relatively unfamiliar fourth cadastral U.S.P.L.S. system, i.e. for most Northern Californians. Yes Virginia, a fourth system in California. It is known as the "Gila Bend Baseline & Meridian" system. Von Schmidt's line eventually diverges to a maximum of about 1-1/4 miles east of the current state boundary. Then, around Stewart Valley, it begins to converge again, crossing over east of Mesquite Lake, then diverges westerly again, helped by a strange and relatively rapid deflection, going from a 1/4 mile away to a 1/3 mile separation, over a short distance of only a mile or less. I wonder what prompted Von Schmidt to make this kind of "large" azimuth correction? Was he perhaps affected by some unholy presence around nearby Devil's peak, just 2 miles to the southwest? Von Schmidt's line eventually ends at a point of intersection with the original center of the main channel of the Colorado River, now 0.62 miles west of the current channel's center and the California-Arizona state line.

Bruce Hedquist, PLS 6615

■ CERTIFICATES OF COMPLIANCE

Thanks for your letter in the *California Surveyor*. Certificates of Compliance are not yet dead in Napa; the Board of Supervisors haven't (can't, won't, don't dare to??) pass the enabling legislation that would trigger the enforcement of the State law. Napa is SUCH a special place! Hence my generic LLA letter to my clients. Did I leave anything out?

Robert Bell, PLS 5080

(Mr. Bell has an excellent fact-sheet for lot line adjustments. Exemplary Robert!)

DON'T MISS AN ISSUE!

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President's Message

By: Pat Tami, CLSA President

Our Land Surveying Profession was built by a number of very distinguished surveyors including

several who became President and several more known as internationally renowned explorers. Certainly there are some equally distinguished surveyors today, but will we see any surveyors in the future equal in stature to those of the past? As I begin my term as president of the California Land Surveyors Association, I will be looking to you for ideas and thoughts for helping to carry on this professional legacy. Perhaps a good place to start would be to help raise the level of recruitment into our historic profession.

Land Surveying is a unique profession, allowing each person to select from a variety of disciplines. Surveyors may choose to be proficient in highly advanced technology in field and office environments or to efficiently perform with more physical tools such as hammers and hubs. We perform our work in all types of venues including dense urban infrastructure, suburban roadways and untouched rural lands. Surveys are performed in every conceivable environment from warm beaches to arid farmland to snowy mountains. We may be called on to work from a boat on the water or in the sky from a plane. Our profession is practiced equally well in big corporate settings and mom and pop garage shops. We work on large projects, medium projects and small projects. We may be the owners or managers or employees of these businesses, sometimes all three at once. We work in union shops and non-union shops. We may be found in boardrooms wearing suits and ties or we may be outdoors working in shorts and T shirts. We may be high school dropouts or college educated. And we are typically paid quite well for our efforts. For example, a beginning union chainman can make over \$26 per hour plus benefits in

California. With all of this diversity offered in our profession, why would we have a problem recruiting new Surveyors?

To begin with, not many people really know what service a land surveyor performs for society. I have not heard many young children say "I want to be a land surveyor when I grow up." This is certainly not the fault of our children, but the fault of our profession. We need to learn to inform and educate the public about our profession. Each of you reading this statement is involved in land surveying. It is our collective responsibility to bring new people into surveying. We must consciously and actively keep our profession growing. Think about this: when was the last time you recruited a person into the field of land surveying?

What should we do about this? I have a few thoughts about this topic and I'm certain you can generate more. There is a compelling and immediate need to fill positions throughout our ranks. How about going to high schools and asking the geometry teachers if you can speak to their class about some practical, real world uses for mathematics? This does not have to be difficult. You might generate interest by doing something really simple like setting up a total station and showing them how you can determine the height of the flagpole using the math they are learning in their schoolbooks. Better yet, you can get a scripted talk with the Trig Star Program. The best and brightest may just ask you for an after school or summer job.

We also need to generate more chiefs of party. Perhaps if we are willing to spend a little time now and then with our chainpersons, they might improve their skills rapidly. The time invested will pay you back many times over. Think how valuable a first class crew chief is to your livelihood. We should also remember that some chainpersons do not want to become chiefs and this is certainly fine and dandy. The best chainman I ever

Continued on page 10

worked with had no desire whatsoever to be behind an instrument and I'm certain that he could still leave me in the dust today.

Now, office Surveyors and chiefs of party should not stop learning either. Perhaps one of your employees has expressed a desire to become licensed. It then becomes your job to expose them to the broad range of progressive experience that licensure requires. Provide them with challenges that will help them to achieve their Professional Land Surveyors License exam. This may mean sending someone to work for another firm for a while. Realize that it may very well be in your best long term interest to have a talented person work where they can grow. If your business does not perform a broad spectrum of land surveying it stands to reason that your staff may have real difficulty passing California's very demanding Land Surveyors exam.

Something that no one ever seems to bring up is the fact that real harm can be done to society at large without our services. Boundaries must be determined for land to be owned and sold and developed. Roads and buildings will not locate themselves upon the land. Topography will not map

itself. A shortage of surveyors directly affects the services they supply. This work will then be done by someone other than a land surveyor. Take a look around right now and see how much work that was historically performed by a land surveyor that is now being done by someone in another line of work.

Well, what do you say? The key to recruitment is to find the right people for the profession. It is my personal challenge to each and every person involved in land surveying to talk to two people each month and simply talk to them about land surveying. Ask people what they like to do for fun. Is it hiking, boating, building, exercising, or playing on a computer? Is it on the water or in the forest that they prefer to do the things that they enjoy? Then tell them how they can make money in a professional environment they like, doing exactly what they do for fun. Remind them that Surveyors have made a real impact in the past.

I hope it will be our common goal this year to recruit more people into our profession. It is the profession of Presidents and explorers. And it is up to each of us to keep it growing.



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Working with Attorneys

By *Knud E. Hermansen, P.L.S., P.E., Ph.D., Esq.*

As a surveyor, engineer, and attorney, I often find myself working with attorneys on engineering and surveying legal problems. Without doubt there are some members of the Bar that I have clearly enjoyed working with. Bright, intelligent, knowledgeable, good listeners, eloquent, logical, and capable are among a few of the attributes that these attorneys share. However, not all interaction with attorneys has been enjoyable. For those engineers and surveyors who have not worked with attorneys or within the legal system, I would like to share some frustrations and advice about working with certain attorneys and the legal system.

What's Good for the Goose is Good for the Gander

— One time I had the pleasure to listen to a justice of a state supreme court speak. During the course of his speech, he remarked that he was recently involved as a party in a lawsuit. He made a very appropriate remark by saying that every attorney should be sued at the beginning of her or his career in order that they may approach the practice of law with humility and some common sense. Unfortunately, few attorneys have been sued and many opt for the shotgun approach to litigation. In other words, sue everyone that was ever involved with the project and let the legal system sort out the negligent parties. I have always been very frustrated with the shotgun approach to litigation that some lawyers adopt and employ. I've heard one lawyer justify the process by saying the approach is necessary to bring all relevant persons before the judge and let the judge decide who is at fault. I would opine that those attorneys that employ this tactic have never been a party in a lawsuit and undergone the agony, apprehension, and emotional trauma involved with litigation not to mention the expense, time, and resources required to defend against a frivolous complaint. Furthermore, for those trying to operate a consulting firm, there is the stain on the reputation of the firm every time a lawsuit involves the firm. As a consequence, I believe it would be in the best interest of surveying and engineering firms if a system was adopted that requires the loser pay the legal expenses of the winner. This system would reduce litigation faced by engineers

and surveyors. I know a few victims will go uncompensated under this policy. However, under the present policy a lot of innocent firms become victims of frivolous lawsuits.

Procrastination and Negligence — Without doubt, we have all procrastinated from time to time. However, when we procrastinate to the point that our client's position or project are jeopardized, we are negligent. Procrastination to the level of negligence seems to happen so frequently in legal practice that I am appalled by its common occurrence. For example, I will get a call the day or night before trial asking if I would be an expert witness. (Let me make it clear that a week before trial is no less negligent in my opinion.) I am bothered by this behavior for three reasons. First, there is the inference that the engineering or surveying testimony that I will be presenting is so simple that it does not require any preparation time. Second, there is the attitude from the attorney that their client should immediately take priority over my existing clients. Third, there is the unquestionable inference that I will give testimony that helps the attorney's client. In other words, as an engineer or surveyor I am a hired gun and can be expected to provide only favorable testimony without knowing or analyzing the facts and the situation. If engineering and surveying firms were to operate in a similar manner on behalf of their client, I have little doubt attorneys would find it very easy to convince the court the engineer or surveyor is liable for negligence. I would advise engineers and surveyors to avoid situations where an appearance in court will occur without adequate and thorough familiarity with the facts and probable questions that will be asked.

Learning Curve — Before attending law school, experience taught me that there are three types of attorneys. First, there are attorneys who simply do not want to listen or learn. These attorneys are easily identified because they prefer to argue some unrelated legal concept or go to great lengths to settle rather than litigate the question (but settle only after great expense to their client). This attorney tends to be arrogant or subject to unreasonable procrastination. Second, there are some attorneys that, try as they might to learn, will not be able to understand because they lack the fundamentals required to understand the problem. Let me explain this category by way of selected experiences. I went to law school in the era when the HP-41 was just making its appearance so, as most of the readers know, calculators had been around for some time. (So much so that I had long since gotten rid

Continued on page 18

2001 - How I Got Started

Pat Tami, CLSA President



RBF Consulting has been my home for only five years, but it remains a place where I am comfortable and hope to be for a long time. It was by chance that I entered into our profession. During my last year in high school a good friend went away to college, leaving his job at an engineering and surveying company. He asked

if I wanted his glamorous job since I was staying to attend the local junior college. At the interview the boss explained the job would entail running blueprints and making deliveries. I accepted with great anticipation. Along with emptying the trash and cleaning coffee cups, my first year included the chance to use my high school drafting skills. The manager of the survey department noticed my skills and started having me do work for his department. He talked to me about his profession, the CLSA and the surveying program at California State University, Fresno. I took his advice, changed my major and two years later went to Fresno. I highly recommend the program at Fresno to anyone interested in becoming a land surveyor.

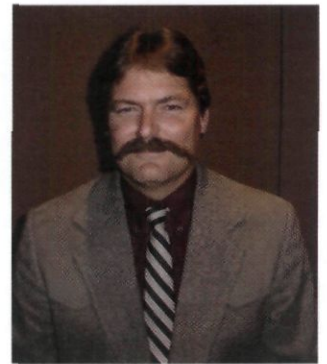
During the school breaks and summers I would return to work at the same company. That is except for one year when the economy took a turn for the worse and no jobs were available. For a Fresno student this was not a problem and I was hired at a utility company. My time there was enjoyable with no revolving blackouts or deregulation. I spent much of my day listening and learning from my supervisor and co-workers.

Leaving Fresno and my new friends was tough, though I still have fond memories of the days and nights learning about survey. Especially the lessons on Polaris observations,

least square adjustments, Fortran and cow tipping. I really miss the lab classes on a hot Fresno day performing topographic mapping of the landscaping mounds near the dorm pool. As if it wasn't difficult enough.

Marc Van Zuuk, CLSA President Elect

I got my start in working outdoors where I grew up in Central Iowa. All of the great uncles' were farmers. They were always quite glad to have me come visit & "help with the chores". You see, all of their own kids were grown and out of the nest. It didn't take me long to discover why I never saw them at their folks house.



They probably have laws against kids doing those kinds of "chores" by now. When my family moved to the Bay Area as I started High School, I was questioned as to which of the uncles back in Iowa I would like to go "visit" that summer. Realizing that criticizing without presenting a valid alternative was pointless, I turned to the help wanted ads. If I had a job here, I wouldn't spend all summer working my rear off tilling & chasing pigs.

What I thought was salvation came from a one man surveying company in Los Gatos. The owner, Will, needed a helper for a couple of jobs in the nearby coastal mountains. Being a big farm kid with a strong back Will opined I would do just fine. I was saved from the swine!

I soon learned new definitions of steep, high, obnoxious animals, irritating insects & viscous vegetables. A real eye opener for a kid from the Corn Belt. Miles of brushing through poison oak & manzanita. Some say it builds character, the ones that haven't done much of it.

By watching Will I learned that the instrument man can fill all available time fiddling with the instrument, thus avoiding the brushing, packing, whacking, etc. For the next six years I worked as a pack mule, brush buster, chainman, rodman, grunt and peon. If it needed to be fixed, I fixed it. If it needed breaking, I hadn't used it yet. To this day I can change out a busted ax handle faster than anybody I know.

In Land Surveying

In 1976 when I started the fall semester at what was then called Fresno State, I was a Civil Engineering Student. It wasn't two weeks before I was sitting in class in the Engineering East building watching the Surveying Lab class through the huge plate glass windows. It never dawned on me before that moment that there was actually a college level degree in fiddling with the instrument long enough to avoid the brushing, packing & whacking. Immediately after class I marched straight to the admissions office and changed majors. The rest, as they say, is history.

Raymond B. Mathe, CLSA Secretary



I entered the field of Land Surveying in 1979 as an eighteen-year-old Junior College student looking for a full time job. I heard that the County was hiring Surveyors so I filled out an application, got an interview date and went to the interview. At this point I thought that surveying involved going door to door and asking survey

questions. At the interview, I had no idea why they asked me if I had any problem clearing weeds away from survey monuments in the desert. But wanting a job I said, "No problem!" It wasn't until they offered me the job that I even began to understand what Land Surveying was really all about.

Fortunately, math had always been easy for me and I enjoyed the outdoors. What a great job! The first four years I worked either on a Geodetic field crew surveying townships with a TH-2 and a laser EDM or in the office researching jobs for the field crews and adjusting their township surveys with a four-inch stack of data punch cards; Least Squares programs sure have evolved. Since that time I have obtained an A.S. in Land Surveying Technology, a B.S. in Workforce Education, my Professional Land Surveyor's license, an opportunity to serve my local CLSA chapter in various positions and now CLSA at the state level as Treasurer and Secretary. I feel a tremendous sense of fulfillment in what I've been a part of and look forward with anticipation to what the future is for me in land surveying.

The profession of Land Surveying is enjoyable and rewarding. Regrettably, too many people are unfamiliar with what we do or even why we are needed; and as a result, the number of people entering our profession is decreasing. It was luck that brought me into the field of land surveying, what is going to bring others into our field tomorrow?

Dean J. Palumbo, CLSA Treasurer

I began my survey career in 1982 when I was hired as a chainman with the New York State Department of Transportation (NYSDOT). Since that time, I've asked many fellow professionals how and why they chose land surveying as their vocation. Invariably, they respond, "... I didn't choose it, it chose me...."



Well, my story isn't much different. You see even my first job with NYSDOT was accidental; I was trying to get a job as an inspector. My original career choice was Civil Engineering. I attended several different colleges, first a junior college where I received an A.A.S. degree and then Rochester Institute of Technology and on to Arizona State University – all the while working either part time or full time as a surveyor. I honestly tried to get hired as a civil designer or even a draftsman but once an employer saw surveying on my resume, I was type cast and immediately was sent to the survey department.

As I finished my college career I made an uncertain decision. In retrospect, I believe the decision had been made for me – either way, it was to make Land Surveying my career. I've worked for large and small firms, public and private, and even owned my own company but through it all I truly believe that Land Surveying is one of the most satisfying and honest professions in the world.

I would agree that this great profession doesn't get the headlines, it sometimes is looked down upon, and that respect is hard earned. It may be this aspect of surveying that bonds its members. The day-to-day elements may sometimes yield disagreements amongst its brethren, but overall, we are united with the common goal to uphold professionalism and integrity. Because of this, I'm glad land surveying chose me.



CLSA Celebrates Its 35TH Anniversary 1966 - 2001

The following is an edited version of the Twentieth Anniversary issue of the California Surveyor

You've Come a Long Way – CLSA

By: Orlean Koehle

The California Land Surveyors Association, founded in the winter of 1966, will be celebrating its 35th Anniversary, (1966-2001) this year! Much growth, change and maturing have taken place since those early days of 1966. Let's turn back the wheel of history and find out (1) how CLSA became an organized; (2) about the beginning problems, objectives, and purposes; and (3) what CLSA is like today.

I. The Organization of CLSA

The roots of the present California Land Surveyors Association stem from two separate organizations: (1) a tri-county group called "Sonoma, Lake and Mendocino Counties, Engineers, and Land Surveyors," and (2) the "California Association of Licensed Surveyors" in Sacramento. The Sonoma, Lake, and Mendocino organization was really the group responsible for forming the state wide association. It had existed for many years. Dick Hogan, later to become CLSA's first president, had belonged to the tri-county group for nearly eight years. He described it "as pleasant, rather loosely organized bunch who, about every few months, would get together for a cocktail dinner and a program, usually at the Old Occidental Hotel in Santa Rosa." Their main topics of discussion were "tough surveys, developers, and unpaid accounts."

The group had basically become inactive in 1965. Bob Curtis, also a past president of CLSA, and one of the men responsible for its founding, recalls, "how Dick Stephen and I used to sit in an office in Healdsburg and look out of the window when it was raining, and there was nothing else to do and try to figure out why the [surveying] profession had gotten into the mess that it had."

They decided something had to be done about it, and were able to contact and arrange a meeting of the old tri-county group to see if they could arouse some interest in forming a state-wide organization; they found, that there was enough

interest, and the California Licensed Land Surveyors Association was formed, the CLLSA, later shortened to CLSA. Dick Hogan was elected as provisional president and a nine member steering committee was formed to draw up a constitution and bylaws. The committee met on February 18, 1966 in Sebastopol. Bob Curtis had written to other state associations asking them for information on how they had become organized. Eight of them responded; Bob shared their replies and displayed the Illinois State Association organizational materials from which nine recommendations were then proposed; forming a board of directors and chairman of the board, a provisional state headquarters chapter; various standing committees; establishment of initiation fees and dues; meetings at two month intervals.

Proposed were also three classes of membership which still exist today but with different titles:

- (a) active (now, corporate members) – licensed Land Surveyors; these members have the right to vote and hold office;
- (b) associate – (now: affiliate status) – persons associated in associated or affiliated fields such as title companies, civil engineers, etc.;
- (c) junior – (now: associate members) – persons working for a licensed Land Surveyor.

President Dick Hogan then sent a letter to Mr. Gene Foster of Sacramento inviting him and his group of surveyors, the California Association of Licensed Surveyors, to meet with the newly formed CLSA at a halfway point for discussion and the possibility of merging. They met at Jonesy's Steak House at the Napa airport on June 3, 1966.

The Sacramento Group was basically a state group set up by Gene Foster and Fred Darby and a number of other people who were government employees. They had united for the same reasons: to gain status for the profession but they were also rather loosely formed, without a constitution or bylaws. It was suggested that since their goals and objectives were basically the same as that of the newly formed CLSA, and since they did not have any formal constitution yet, that they simply join CLSA and adopt their name. That is exactly what they did; so overnight the membership doubled from 15 to 32 members, and has been climbing ever since. Today, there are some 1,000 members in the CLSA.

The next problem was getting Southern Californians involved. They, at first, ignored the new organization in Northern California, probably thinking it was so small and would never really get off the ground. The early CLSA spent a lot of money and time having board meetings in Los Angeles, specifically for the purpose of inviting Surveyors in that area to take a good look at CLSA and see what they were beginning to see some results. In the mid-1970's the Southern Californians really became involved. Now there is a predominance of members from Southern California including many leaders of the organization.

II. Problems and Concerns

1. The practice of land surveying by unlicensed individuals. One of the main problems CLSA had from the beginning was related to surveying done by unlicensed individuals. The licensed Land Surveyor felt those persons who practice land surveying should be educated, experienced, tested and licensed to practice land surveying.

Chuck Wooldridge, a former president of CLSA—a licensed Land Surveyor who had also acquired a degree in civil engineering—noted that in some ways this issue served a

useful purpose: it made Surveyors united and working together, “this question provided a terrific battle ground for the many divergent solutions while appealing to all Surveyors to the extent of gaining great momentum and serving as the unifying force to bring Surveyors together under one umbrella.”

Other problems, as related by Bob Curtis were:

2. Upgrading the profession. There was a lot of poor work being done and a lot of “moonlighting that was subprofessional.”

3. Lack of education. Very few universities offered any kind of land surveying curriculum; only a few two-year programs were offered. According to Bob Curtis, “the four-year curriculum is the basis for Land Surveyors entering the profession as a professional.” He strongly advocates working for more four-year programs.

4. Legislation. The problem was how to get the members well enough informed, united and strong enough to combat harmful legislation such as legislation proposed by the American Society of Civil Engineers, Surveying and Mapping Division which had as its object to have all state registration boards require that “those who

Continued on page 16

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wish to engage in the practice of land surveying and related engineering work should first be required to qualify for a professional engineers license, and the right to practice land surveying should be a moral right based on professional competence and the engineers code of ethics" rather than a legal right based on separate registration for land surveying.

5. And, of course, as with every beginning organization, there was the problem of finances. There really was not much money to help with anyone's expenses. As Bob Curtis expressed, "Everything was volunteered time and volunteered money, and I spent a fortune in gas."

This was true of so many of the past presidents as well as other officers, and is still true today. There is much personal sacrifice, generosity and going "the extra mile" service that has helped build CLSA to the great organization it is today.

Objectives and Purposes

In a letter to the members sent out in April, 1967, by Bob Curtis, he states what he considers the primary purposes and objectives of CLSA: (A) To get the active participation of all California Land Surveyors involved in CLSA - to gain strength and unity in their association. (B) To be able to advance their career through supporting proper legislation, to be aware of harmful legislation and be strong enough to combat it. (C) To demand Land Surveyors' right to better educational facilities and the resources to use them. (D) To be regarded and respected as a profession by realizing that "high standards require high performance."

On a message prepared for this article Bob Curtis stated what he feels should be the primary objectives of CLSA: (1) to be the voice of all Land Surveyors in California and their main source of information, and (2) to preserve the land surveying profession. He concluded with an impressive statement of what the alternative could be by not getting involved: "We could through blissful ignorance-like the Kiki bird- become extinct."

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III. CLSA Today

Fortunately, the CLSA members chose not to become extinct and today the CLSA has grown from its original 32 members to over 1,000. There are still some of the same concerns such as (1) The issue of continuing education for relicensure - mandatory, compulsory or none at all. (2) The exorbitant record of survey checking fee. (3) The consistency of the PLS examination.

But, many of CLSA's purposes have been achieved, for example: (1) the membership has steadily grown and there is greater unity and strength in the Association. (2) CLSA has a professional lobbyist representing them in Sacramento and keeping them abreast of any kind of legislation concerning land surveying. CLSA is now regarded and respected as a viable state association able to have a strong impact on the successful passage or defeat of legislation. (3) the publication, *The California Surveyor*, goes out to all surveyors in the state regardless of their membership status. This approach has helped CLSA to achieve its objective as being the

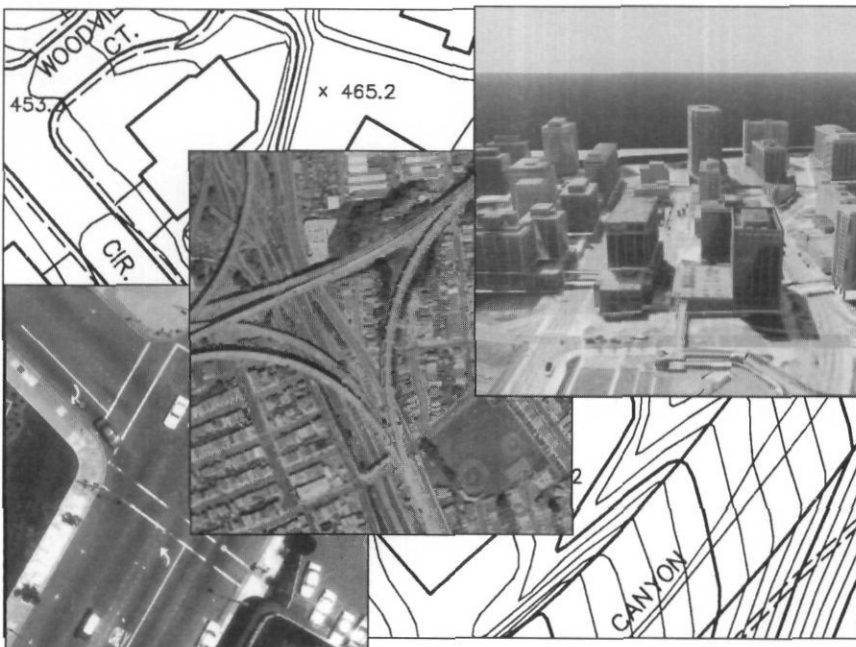
voice of the Land Surveyors of California. (4) CLSA has helped to bring higher standards and greater recognition for the Land Surveyor as a profession.

In summary, the future looks very promising for CLSA as we consider what has been accomplished over the past twenty years. We salute the hardworking leaders who were instrumental in its founding and guiding it over the years as well as those presently at the helm of the organization. You truly have come a long way - CLSA.

Our apologies for any inaccuracies in this history. To quote from Chuck Wooldridge, "the good old days are primarily based on poor memory and a good imagination."



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Working with Attorneys - Continued from page 11

of my log tables and slide rule.) Nevertheless, when the instructor announced that everyone would need a calculator for tax class, I was shocked to learn that many of my classmates had never owned a calculator. The instructor, seeing the student's consternation at the suggestion of using a calculator for the first time, tried to reassure the class by stating that only rudimentary calculations were going to be performed such as adding, subtracting, multiplication, division, and percentages. Again, I was shocked to hear many of my fellow law students start asking me if I could show them how to do a "percentage." I was incredulous that any person could have earned an undergraduate degree without owning a calculator or knowing how to do a percentage - yet these people exist and many are now attorneys practicing law. Now the purpose for this discourse is not to make light of all the attorneys with B.A.'s in political science, art history, English, social work, etc. who don't understand simple math yet practice law. No doubt, they are familiar with many seemingly simple subjects that I am unfamiliar with. My point for recounting the experience in tax class is to convey some idea of the frustration I often face when explaining to certain attorneys an engineering or surveying problem requiring far more mathematics than simple percentages. To present the problem in other terms, it takes at least 30 credit hours of course work to bring engineering students with SAT scores of 1400 or better to some level of understanding - surely not every attorney is up to the task after only an eight hour session. This brings me to the last category of attorneys. In this category fall those attorneys who take the time to learn, listen to you when you explain, and do learn what it takes to understand and present the surveying or engineering problem in an intelligent and accurate manner. Unfortunately, when I have the pleasure to work with these attorneys, more times than not this attorney has to argue before a judge who falls in one of the first two categories. The bottom line is that because of the learning curve among some members of the Bar, there really is no logical defense engineers and surveyors can use to counter frivolous litigation or prevent illogical verdicts from occurring. As a result, it is not enough that an engineer and surveyor know they are correct in their analysis and opinion when it comes to litigation. The engineer or surveyor that becomes involved in litigation must meet four criteria to stand a chance of success: 1) the practitioner must be thoroughly familiar with the facts and engineering or surveying principles relevant to the problem, 2) the practitioner must have the skill, resources, and time to adequately educate the attorney and judge on the relevant engineering or surveying principles, 3) the client's attorney has to have



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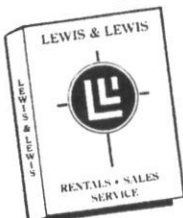


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the ability and be willing to devote the time to learn, and 4) the judge must have the ability and be willing to devote the time to learn. Seldom are all four criteria present. My advice is to encourage alternate dispute resolution to resolve engineering and surveying problems whenever possible. Encourage your client to compromise rather than litigate.

Speedy Justice or Litigation — Flowing from the last category of frustration, is my latest frustration with certain members of the Bar. I have been a zealous proponent of alternate dispute resolution, also known as ADR, for solving engineering or surveying problems. Frankly, I have had little success in convincing other attorneys that ADR is an acceptable alternative to litigation. I will accept some of the blame because I am usually pushing for engineers and surveyors to be arbitrators and mediators rather than attorneys — not a smart political move when many attorneys can't find work or enough billable hours as it is. In my defense, I feel if there has to be some ignorance in the system, justice is better served when the arbitrator or mediator understands the problem, rather than the law. For my efforts, I hear

comments from attorneys such as "without the rules of evidence my client won't stand a chance," "I need the time to beat my client on the head with his wallet," "I won't put my kids through college that way," etc. As a consequence of this disdain for ADR, I see people win judgments of \$100,000 and have a \$120,000 legal bill after spending five years in litigation. Of course, it has been pointed out to me by several engineers and surveyors that even ADR falls prey to the ills surrounding litigation if enough attorneys get involved.

In spite of the few frustrations I have been allowed to vent, I find practicing law in conjunction with engineering and surveying a very rewarding experience. A good deal of credit goes to the many exemplary attorneys, engineers, and surveyors I encounter and work with in my practice. To these individuals I offer a heartfelt "thank you." There is always an outstanding offer to work with you as a team in order to remove these frustrations from your practice and mine.

Knud Hermansen is an Assistant Professor at the University of Maine and a private consultant. He is a licensed surveyor, engineer and attorney in several states.



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Aurora, A Survey Settles a Violent Feud

By Kevin D. Burgess PLS

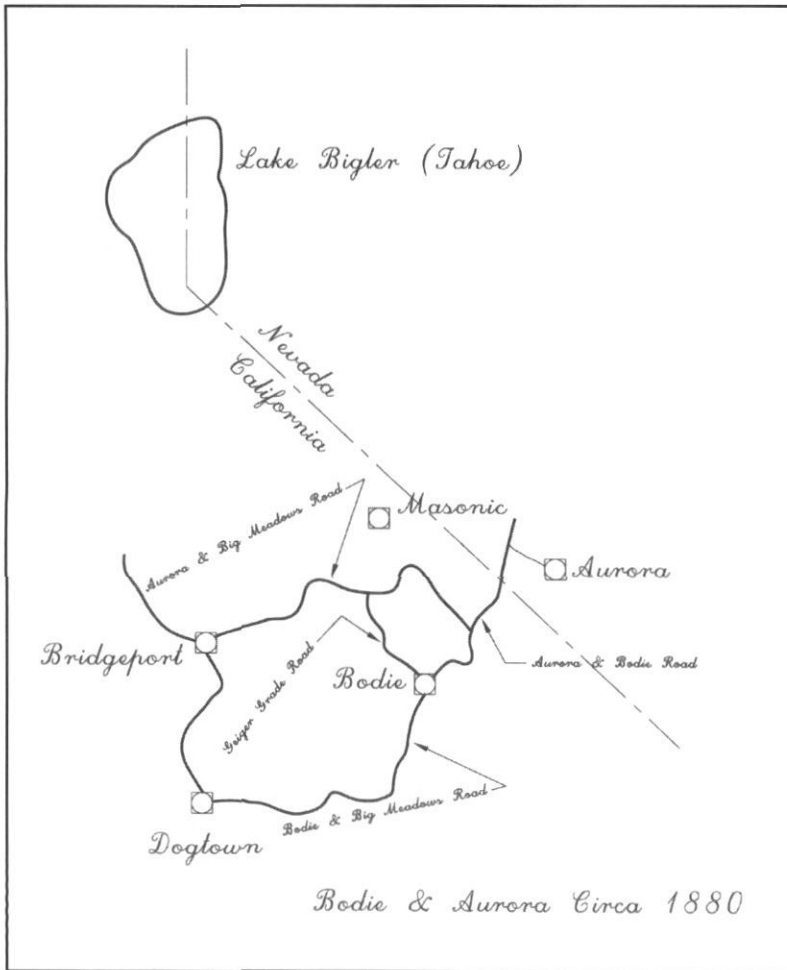
In the best tradition of western mining towns, Aurora was discovered by accident, born amidst a bustle of excitement and died a quick death. But before the short boom was over, more than 5,000 people occupied the city, including one lackluster miner but inspired writer named Samuel Clemens. Clemens found mining to be a much more physical occupation than he desired, but his experiences among the saloons and bawdy houses of Aurora would provide material for his future career as one of America's greatest writers, Mark Twain.

In August of 1860, three hard luck prospectors J.M. Corey, James Braly and E. R. Hicks stopped in Esmeralda Gulch to rest and fatten up their stock. One afternoon Hicks climbed to the crest of Esmeralda Hill west of their camp to search for some game. Instead he found ledges of Quartz with strange blue streaks running through it. The prospectors recognized the blue streaks as very rich sulfurets of silver. The miners posted notices on their claims and headed back

to Monoville to file their claims. By November, 357 claims had been filed and the Esmeralda Mining District had been born. In the matter of a couple of years 17 quartz mills were operating crushing quartz and retrieving silver and gold that assayed at from \$100 to \$300 dollars a ton. The town that sprang up around the mills was named Aurora

Aurora set in the high desert (around 7500 feet in elevation), and soon had a population of 5,000 people, almost entirely men. These men supported the local establishments, most notably the many saloons which offered a gathering place for the miners to share their stories of the day, partake in gambling and of course consume the red eye whiskey that made harsh conditions more tolerable. Soon choice town lots were selling for the incredible price of \$5,000.

As in most of the western mining towns violence was a way of life and one of the many sources of violence was the location of the eastern boundary of California, combined with the politics of the Civil War. California's eastern boundary had been defined in the 1849



Bodie & Aurora Circa 1880

Continued on page 25



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Constitution as beginning at the intersection of the 42nd degree of latitude and 120th degree of longitude, thence south to the intersection of the 39th degree of latitude, thence running in a straight line in a southeasterly direction to a point where the Colorado River intersects the 35th degree of latitude. Thus creating the curious angle point that falls within Lake Tahoe (known as Lake Bigler at the time). Although the boundary had been defined it had never actually been surveyed, and relying on old maps, Aurorans assumed their city fell within the state of California. Aurora petitioned the state legislature to form a new county and Mono County was formed with its county seat located at Aurora.

In one of his last acts as president, James Buchanan signed into law a bill that created the Territory of Nevada. By this time there had become some doubt as to whether Aurora was actually located in California and two factions were formed, one favoring California and the other Nevada. In April of 1861 the two sides each drew up a petition to support location in their favored state and as the petitions were circulated several fights broke out fueled

by generous quantities of red eye, one miner noting that "the Californians pummeled the Nevadans most handsomely." The feud would continue on for several months with many fistfights, one murder and a pistol duel related to the issue. As was standard in western mining towns, the murderer was acquitted based on self defense and the duel resulted in an injured leg after four shots were fired. The duelers apparently agreeing after the shot in the leg that the problem had been solved.

To compound the problem, the Civil War had erupted and became a divisive issue among the town people as well. In June of 1861, the towns first elections were held and the majority of elected officials were Democrats who supported California. Most of the town celebrated the event by getting drunk. The quality of the officials can be determined by the comments of one miner who noted "I think we have elected a pretty fair set of officials-they can all drink plenty of whiskey but whether they can steal or not remains to be seen." The disgruntled Republicans began to side with the pro Nevada faction. The Republicans as a whole were pro Union while most

Continued on page 30

The Lost Art of Professionalism

by: Michael Hoffman, PLS

I suppose it was the day I stepped into an attorney's office wearing my pin striped suit to market my business, and his jaw practically hit the desk as he was shocked at my appearance that I realized ... professionalism has become a lost art in the field of surveying. He had to verify with me that I was the Land Surveyor that had called earlier.

Why is it that this profession has sadly been known for its lack of business savvy and respectable appearances in dealing with clients and other businesses? The general public knows a surveyor as "The one out in the middle of the street wearing the orange vest and looking through that thing-a-ma-bob," or as the office that "couldn't" take the time to handle a "small" job.

I receive many calls every month from frustrated people who have been told by several survey firms that they're just simply too busy to provide services of such a minimal size. I can't remember a time where a respected doctor told a patient he's too busy to care for such a minimal concern or need, and brushed them off in such an unprofessional way. Surveyors who uphold a thriving business still have the responsibility to treat the public with respect. They can take a few minutes to find what the prospective client needs and lead them to another firm that may be able to help. Having received a license by the state to practice Land Surveying is a privilege, and one that is not easily attained. Yet hanging a license on the wall doesn't give one the right to hang up their respect for those they come in contact with. The field of Land Surveying is only as respected and honored as every surveyor portrays himself.

There have been several times that attorneys, bank lenders, and land owners have clung to my company in a sort of desperation, claiming they have never experienced being treated so well by a Land Surveying firm. Being cordial, professional, and knowledgeable on the phone is always

Continued on page 26

the beginning of a tight client relationship. For some reason, the public seems to be shocked when a project is completed on time and with quality. If I had a dime for every time I hear how they have been starving to work with a Surveying company that portrays professional etiquette, I could retire.

It is interesting that in the latest newsletter from the Oregon State board, only 5% of the complaints against professionals had to do with their technical ability, while the other 95% had to do with professionalism and ethics. We have an entire generation of people who pay lip service to a "work ethic," but their actions tells us that they don't believe it. Despite the complicated and supposedly sophisticated psychological, sociological, and numerous other "logical" answers being bandied about as reasons the American work ethic is fast disappearing, I pose this question: is there a clear cause that has created these powerful negative effects? Is it possible that the low degree of professionalism seen in a company is a mere symptom of a much deeper issue? Perhaps the way we run our business and treat people in our workplace is a mere reflection of our character. This idea is seen daily

in the way our country is run. The beliefs, opinions, and decisions made by our president have been made evident through the corrupt system, which surrounds us and affects our lives. This shows that loss of ethics and principles can have an overwhelming affect on all those we relate with.

The lost art of professionalism must make its way back into the field of Surveying, whether in the office or in the field. If it's true that your company is a reflection of your character, and the amount of professionalism is only as strong as your ethics, how well would your company be rated? If you were to look back on your previous workweek, and discovered that someone had been observing you and how you handled your profession, do you think that by what they discovered, they would ever desire to contact your office in the future?

My blue pin-striped suit, and professional attitude not only gave me the opportunity to watch a lawyer at a loss for words, it has also brought an unending workload to keep my company busy. I've found there is life beyond the reputation of the orange vest and the thing-a-ma-bob...and it's good.



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From the Editor - Continued from page 7

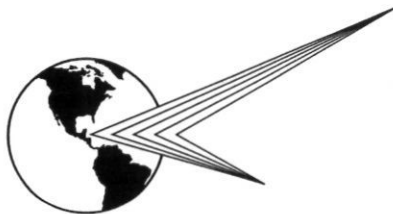
we should hire them during school vacations to sprout them. Hopefully, they'll establish a tap root and seek nutrients at the local Community College. (*Corny? Hang on, it gets cornier.*) And if the soil is right, together with some summer rains the sapling will branch out and seek further nourishment . . . maybe a baccalaureate. Voila! A geomatic engineer comes "of age" like a *Quercus agrifolia*. My cousins, for the survival of the species we must farm!

THIRTY-FIVE BIG UNS! . . .

According to the consensus on wedding anniversaries - it's a "Coral or Jade" year for our Association! That being 35 years! (*The trivial things I get to research*). Our thirty-fifth anniversary of the California Land Surveyors Association also coincides with *The millennium*. And . . . writing this draft on New Years Day 2001 makes me want to take my left fist; extend my index finger and thumb; affix the same to my forehead; look in the mirror and shout - LOSER! All this, I do for you my cousins! So Happy Anniversary!

Don't send us your coral
Don't send us your jade
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(Sorry, that's the best I could do.) Thank you for your time and support.



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Index To Advertisers

Allen Instruments & Supplies	24
Aris Insurance	23
Berntsen International, Inc.	29
Burrell Engineering	29
California Surveying & Drafting	10
Cartwright Aerial	28
CD Data	27
Crotalus Enterprises	16
Eastern Special Risk Insurance Agency	26
GeoLine Positioning Systems	20
Geo Plane Services	36
HJW & Associates	17
Industrial Pipe & Steel	15
Lewis & Lewis	18
Mark-It (Desert Engineering)	4
Nikon	19
Surveyors Module	22
Surveyors Service Company (SERVCO)	2, 35
Surv-Kap	15
Tri State Photogrammetry	7
Trimble Engineering & Const. Div.	3
VTA	29

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of the Democrats sided with the Confederacy. The pro southern men formed a society and began to hold meetings and rallies, which of course upset the unionists. Word of their actions reached Colonel (later general) Patrick Edward Connor at Fort Churchill, Nevada and he issued "Order No. 1" which read:

Being credibly informed that there are in this district persons who, while claiming and receiving protection to life and property, are endeavoring to defame and destroy the principals and institutions of our government. It is therefore most rigidly enjoined upon all commanders of posts, camps and detachments, to cause to be promptly arrested and closely confined until they have taken the oath of allegiance to the Government of the United States. Traitors shall not utter treasonable sentiments in this district with impunity.

Aurora's Confederate sympathizers promptly put Connor's order to the test. According to the Esmeralda Star "a party of rebels took to the street and made a complete pandemonium of our town, and continued into Sunday morning with a continuous orgy cheering Jeff Davis, Stonewall Jackson and the Southern Confederacy." Apparently the most outspoken was arrested and after a brief fight, hauled to the county jail to ponder the value of freedom after the red eye wore off.

In July of 1861, James W. Nye was named the territorial governor of Nevada and he promptly formed the territory into election districts and disregarding California's claim to Aurora and the Esmeralda Mining District made Aurora part of District One. Nye suggested that the California boundary be established at the summit of the Sierra Mountains, a natural boundary but also one that would grant the dust dry Nevada Territory some much needed pasture land, timber and of course the wealth of the Esmeralda Mining District. California ignored his pleas.

It soon became apparent that the only way to solve the problem was to survey the eastern boundary of California as it was defined in the constitution. In April of 1863, the California Legislature enacted into law a bill that would provide funds to survey the eastern boundary and asked Nevada to cooperate in the survey. The surveyor-general of California, J.F. Houghton appointed surveyor John F. Kidder to represent California on the survey, and surveyor Butler Ives was named by Nevada. Thus the survey became known as the Kidder-Ives survey. By June of 1863 the crew was in the field or more appropriately in

the waters of Lake Tahoe where the angle point of the eastern boundary was determined to fall. The crew then established the southeasterly line based on astronomical observation and began to run a line towards Aurora.

In the meantime it became obvious that the crew would not reach Aurora by Election Day and in one of the strangest elections in American history Aurorans voted for officials in both states. The elected officials to take office once the boundary had been decided. A few weeks after the election the survey crew arrived in Aurora placing California's eastern boundary three and one third miles west of Aurora and thus Nevada took in Aurora and the Esmeralda Mining District. The survey crew intended to run the line to the Colorado River and then correct back, but Joaquin Jim and a band of hostile Paiute Indians forced the crew to quit the survey about twenty five miles south of Aurora.

Although the survey was incomplete both states accepted the result and the feud had been resolved. The bad news for Aurora and Nevada was that the rich quartz ledges were very shallow and at a depth of less than 100 feet they began to play out. The town began a quick decline and within a few years, those \$5,000 choice town lots could not be sold at a sheriff's auction for \$50.

Today little remains to indicate the site where one of the great western mining towns was located. When the boom subsided many of the frame structures were torn down for firewood and in the 1930's and 40's used brick became popular as a building material and the original brick buildings were torn down and the bricks shipped to Southern California to build fine modern homes. But one can still get a glimpse of the western mining town by visiting Aurora's sister city, Bodie, California.

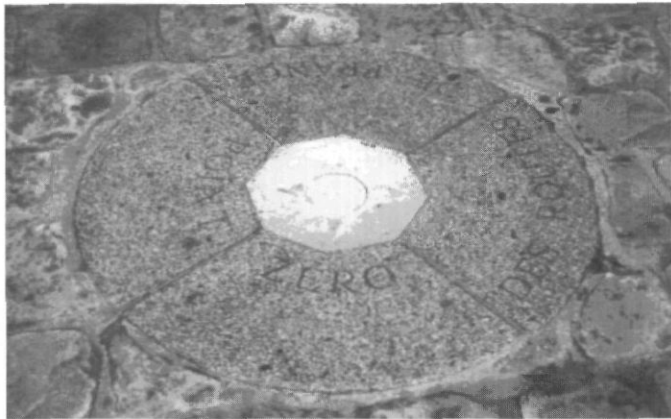
Bodie is located a few miles west of Aurora and southeast of Bridgeport, California. It is operated by the state park service and is preserved in its original form. One can walk down the streets of a town like Aurora where raucous miners once spent their earnings on bad whiskey, poker and ladies of the evening. A few short miles to the east of Bodie lies the line that a group of diligent and honest surveyors marked and helped decide the fate of two great western mining towns.

Kevin D. Burgess, PLS, is a second generation Land surveyor and is a graduate of the University of Arkansas Land Surveying Program. He is currently employed as a Supervising Land Surveyor for Sacramento County. He is a frequent contributor to several land Surveying publications, including Professional Surveyor and is the author of one book entitled Land Survey Field. Practice. Besides a passion for Land Surveying, he is interested in history, archeology and outdoor activities.



Postcards

From: Judy Frank of Johnson-Frank Associates



(When most of us go on vacation surveying seems omnipresent. The following was sent by Judy Frank of Johnson-Frank Associates, last October. So interesting I had to share with ya'll . . . as this troglodyte hardly gets out of the county, let alone the country! - Ed).

I enjoyed Europe and just couldn't resist letting you know that while I was on vacation, the surveying profession managed to nudge its way into my travels.

I saw the building for The Royal Institution of Chartered Surveyors in London circa 1899. The RICS was founded in 1868 as the Institution of Surveyors. It then had 131 members. By 1992 it had grown to 65,000 qualified members and 20,000 trainees.

The plaque went on to say that "Traditionally surveyors were mainly employed in the measurement of land and buildings. Today, Chartered Surveyors are concerned in almost every aspect of land use and development. Specialized branches of the profession cover the planning and management of both urban and rural land, property investment and development, construction cost control and project management, building maintenance and refurbishment, and the management of mineral and marine resources.

Like many professional societies in Britain, the RICS developed from earlier social clubs for professional people, such as the Surveyors' Club founded in 1729. The RICS was granted a Royal Charter in 1881 and the Royal prefix was conferred upon it in 1921. Her Majesty The Queen is patron of the institution." This is the best one though - in France (Paris to be exact) touring Notre Dame, I

experienced a flashback. The tourist guide told us to all step on this gold spot and it would assure us that we would return to France.

Everyone stepped on the "gold spot" and went on. I approached this bronze object set in concrete in front of the Notre Dame cathedral and peered down to find it was actually the Zero Point for France from which all distances are measured!

I thought of how surveying had once again made me appreciate more than just the average tourist. I thought that this would make a neat picture. Here you go...



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Here's Some Important Information About CLSA

The goal of the California Land Surveyors Association is to promote and enhance the profession of surveying, to promote the common good and welfare of its members, to promote and maintain the highest possible standards of professional ethics and practice, and to elevate the public's understanding of our profession. CLSA represents all Land Surveyors, whether they are employees or proprietors, whether in public or the private sector.

Representation

■ **LOCAL:** Your local chapter represents you in local issues. Through your chapter representative to the State Board of Directors, the individual member can direct the course CLSA will take. ■ **STATE:** The Surveyor is represented at the state level through an active legislative program, legislative advocate, and liaison with the State Board of Registration. ■ **REGIONAL:** CLSA is an active member of the Western Federation of Professional Surveyors. This Federation is composed of associations throughout the western United States and addresses regional issues. ■ **NATIONAL:** Through institutional affiliation with the National Society of Professional Surveyors and the American Congress on Surveying and Mapping, CLSA is represented at the national level.

Education Opportunities

CLSA presents annual conferences which provide technical and business programs, as well as exhibits of the latest in surveying and computing technology. Seminars and workshops are presented to assist in continuing education. CLSA publishes the California Surveyor magazine and the CLSA NEWS to keep the membership abreast of changing legislation, legal opinions, and other items which affect our profession.

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CLSA provides a fully staffed central office which is available to answer questions or to provide up-to-date referrals concerning legislation, educational opportunities, job opportunities, or other issues concerning our membership. Professional liability insurance programs are available to members.

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- **CORPORATE MEMBER:** Shall have a valid CA Professional Land Surveyor or Photogrammetric license *\$159.00 + Entrance Fee
- **AFFILIATE MEMBER:** Any person who, in their profession or vocation, relies upon the fundamentals of land surveying \$79.50 + Entrance Fee
- **ASSOCIATE MEMBER:** Any person who holds a valid certificate as a Land Surveyor-in-Training *\$79.50 + Entrance Fee
- **OUT-OF-STATE:** Any person who resides in a state other than California, who is a member of their resident state Land Surveyor Association, and meets the requirements of Regular Corporate Member, Associate Member, or Affiliate Member *\$79.50 + Entrance Fee (Corporate); *\$39.75 (Associate or Affiliate) + Entrance Fee
- **STUDENT MEMBER:** A student in a college or university actively pursuing a surveying education *\$15.90
- **SUSTAINING MEMBER:** Any individual, company or corporation who, by their interest in the land surveying profession, is desirous of supporting the purposes of this corporation. *\$318.00 + Entrance Fee

Application for Membership in the California Land Surveyors Association

Mail your Completed Application to:

CLSA Central Office
P.O. Box 9098
Santa Rosa, CA 95405-9990

Questions?

Phone (707) 578-6016
FAX (707) 578-4406

*First year's annual dues are to be prorated from date of application

Name _____ Bus. Phone _____
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2001 Complete Package including PLS Roster, Pre-'82 CE Numerical Listing, PE & PLS Act with Board Rules, Subdivision Map Act & Binder	\$28.00	\$49.00		
2001 Complete Package (as above) including PE & PLS Act with Board Rules and Subdivision Map Act on Disk	\$36.00	\$63.00		
2001 Refill Package including PLS Roster, PE & PLS Act with Board Rules, and Subdivision Map Act	\$20.00	\$35.00		
2001 Refill Package (as above) plus Disk	\$28.00	\$49.00		
PE Act & PLS Act with Board Rules - 2001 publication (51/2 x 8 1/2)	\$6.50	\$11.50		
Subdivision Map Act - 2001 publication (51/2 x 8 1/2)	\$6.50	\$11.50		
2001 Celestial Observation Handbook and Ephemeris (Sokkia) - with HP-41, HP-42 and HP-48 Programs	\$5.00	\$7.50		
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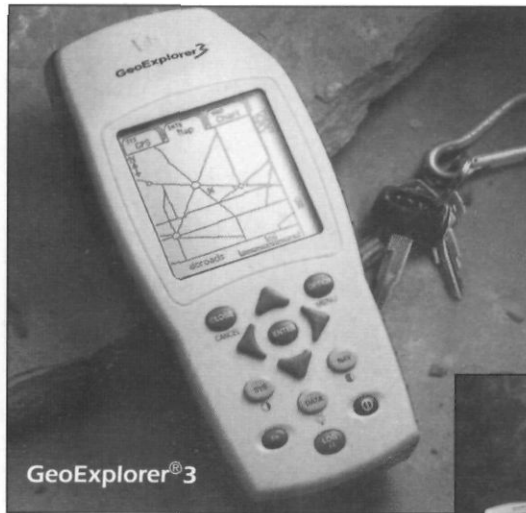
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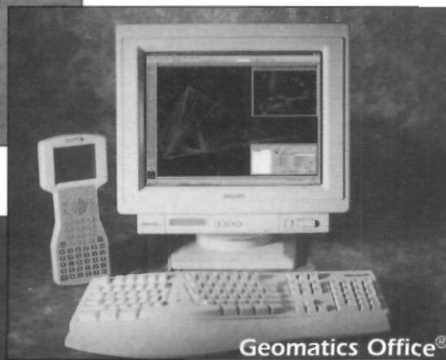
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