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The California Surveyor



Photos: 1 and 4, Jim Ruetenik, Ron Galloway and Doug Neufeld of the Central Contra Costa Sanitary District.

2 and 3, Jim Swanson, Mike Marchini, Dan Oleszko of the East Bay Municipal Utility District.

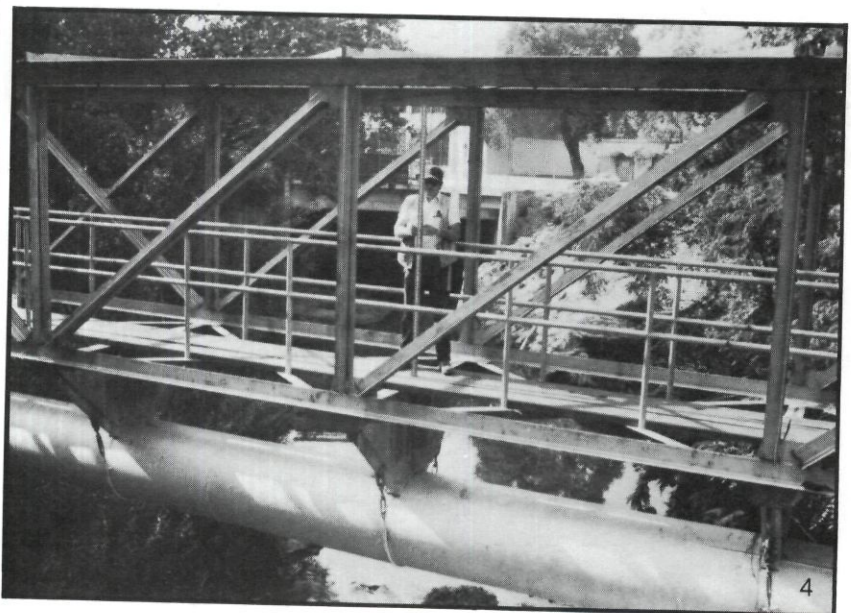


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The California Surveyor

is the quarterly publication of The California Land Surveyors Association and is published as a service to the Land Surveying profession of California. It is mailed to all Licensed Land Surveyors and Land Surveyors in Training in the state of California as well as to all members of California Land Surveyors Association. *The California Surveyor* is an open forum for all surveyors, with an editorial policy predicated on the preamble to the constitution of the California Land Surveyors Association and its stated aims and objectives, which read:

"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."

Personnel

Owner: California Land Surveyors Association
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Sustaining Membership

Membership in the California Land Surveyors Association as a sustaining member is open to any individual, company or corporation who, by their interest in the Land Surveying profession, is desirous of supporting the purposes and objectives of this association. For information regarding sustaining membership, contact the Editor of *The California Surveyor*.

Editorial Material

All articles, reports, letters and contributions are accepted and will be considered for publication regardless of the author's affiliation with the California Land Surveyors Association. Material should be sent to *The California Surveyor*.

Unless indicated, all articles in this publication are prepared by the editor.

EDITOR: J.E. Terry, L.S.I.T.
 6059 Harwood Ave.,
 Oakland, CA 94618

DEADLINE DATES FOR THE CALIFORNIA SURVEYOR

Winter December 15, 1983

Articles, Reports, Letters, etc., received after the above mentioned date will be placed in the next edition.

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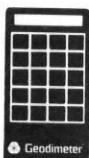
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Articles

THE S.I.

by: Harry W. Abbott, L.S.

My own early observations of old-time surveyors were that they always did everything right. They kept notes with 6H pencils, they ran logarithm traverses, they threw the chain, and they set monuments with interesting descriptions. For example: "Set a bridge spike at the intersection of Toad Hill Road and County Road 16"; or "Set a steel wagon axle at Peterson's N/W corner."

None of the things I do nowadays seem to be quite as exciting as the work of the old time S.I. My surveys consist of 2H penciled notes for xeroxing, EDM's, pocket calculators, and plastic rebar caps. Occasionally when something as exciting as a "RR Spk" happens it will be at a place like "The intersection of Park View Terrace and Knob Hill Court."

It all makes sense when you think about it because nothing is done 100 percent right these days. After all, wooden furniture is

made of particle board and automobile bumpers are made of plastic. Young men go to college to learn all about surveying and there is no one there to tell them all the old stories of to hand down the bits of lore that bridge the past with today. I'll wager that most of today's young surveyors have never heard of an "S.I." They are like my cat who lives in a world of concrete sidewalks, lawns and planter-boxes filled with white pebbles. They and my cat have both lost touch with tradition. My cat doesn't look for loose dirt when nature calls. He just does his job on someone's lawn like a dog and then walks away from it without so much as a token kick to cover it up. It is a sign of the times.

What we all need to do is to get off of the grass and back into some good loose dirt where we can do the job right like it was done in the good old days. The old time surveyors called themselves S.I.'s with a touch of humor and tongue in cheek pride. There was good

reason for them to feel pride for in spite of the fact that the self imposed title of S.I. suggested a humble beginning, it also suggested many of the virtues to be found in these early surveyors. They were ambitious, industrious, meticulous, and they were a hard-nosed lot for they learned by experience. They knew how things should be done and that is how it was done and it was correct.

The original story of the first S.I. was probably invented beside a camp fire many years ago but I don't think it had changed too much by the time it filtered down to me. I was both chagrined and pleased to discover that I had much in common with that first S.I. I am also sure that most of the young men entering the survey profession today will find that they have much in common with him in spite of the generation gap. Why don't we read a letter that a young ex-cowboy wrote to his "Ma" many years ago.

(Continued on page

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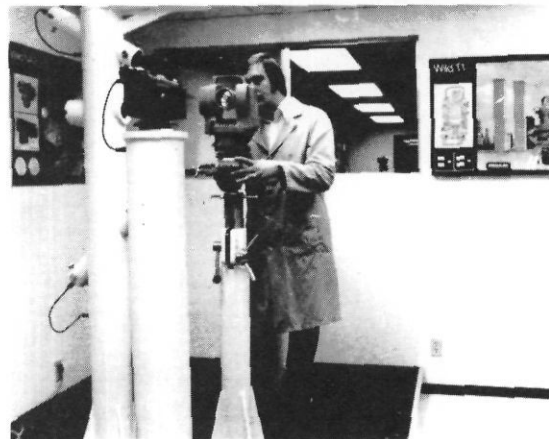
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Dere Ma

I give up on ridin since I got throwed and hurt my back. I cant run cattle no more for Mr Cagle but I can still get around good and do regular work like cutting wood and such. In fact I got me a job with the railroad on a survey party. I sure am glad you made me finish the 6th grade before I lit out west. All that readin and writin is comin in real handy now that I am an S.I. I hired on as an axe man but Mr. McQuade the chief of party figgers since I got all that education he is lettin me work my way on up the line till some day I will be in charge just like him. I dont cut brush no more since I got moved up to flag man. Mr McQuade sometimes lets me carry his transit when we are walkin thru a town and let me tell you it sure feels good when you see all them people lookin at you and knowin your a honest injun S.I. Mr. McQuade says hes goin to charge me twobits to carry his transit thru the next town. I dont know why he wants twobits but I guess maybe he was just funnin me. He didnt laugh none so I dont

know for sure why he said that. Sometimes Mr McQuade lets me look thru the transit and fiddle with all them little knobs and things. I reckon it will be some time before I learn all there is to know about surveying but I figger that by this time next year I ought to be a chain bearer for sure. Well Ma I just wanted you to know your son is doin fine out west workin for the railroad.

Respectfully your son
Wilmer S. Groggins

P.S. I forgot to tell you Ma that a S.I. is short for Sivil Engineer.

W.S.G.

□

ARE WE AND THE APPLICANT QUALIFIED

by: John J. FitzGerald

More than likely, sometime during your professional career you will be asked to act as a reference for someone applying for registration as a surveyor. I would like to take this opportunity to review the general requirements and procedures for application as a surveyor to help you more fully

understand the importance of your role as a reference. Along with this I would ask that you keep in mind your own experience as an aspiring LS applicant and reflect on any past experience in connection with acting as a reference.

An applicant for license as a surveyor in California must meet minimum requirements which are: (1) furnish evidence of six years qualifying experience in land surveying acceptable to the Board of Registration for Professional Engineers; (2) hold a valid L.S.I.T. certificate (or qualify for an L.S.I.T. exemption); (3) pass an eight hour examination prepared by C.L.S.A. and approved by the Board of Registration.

The standard information packet sent to the applicant explains that he or she must show a minimum total of six years of land surveying experience, of which the L.S.I.T. certificate may be equivalent to two of those years—(more about this later). Also, that "equivalent credit," including credit for education and

(Continued on page 18)

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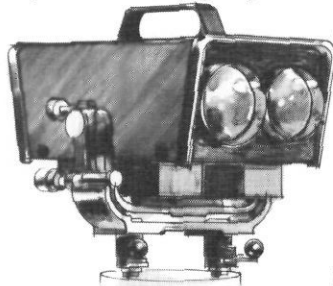
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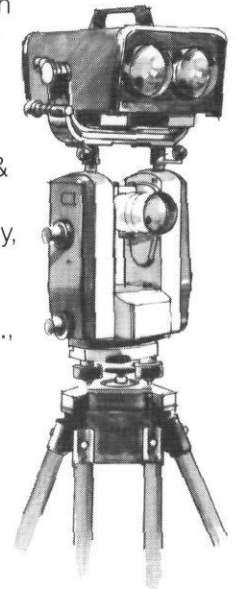
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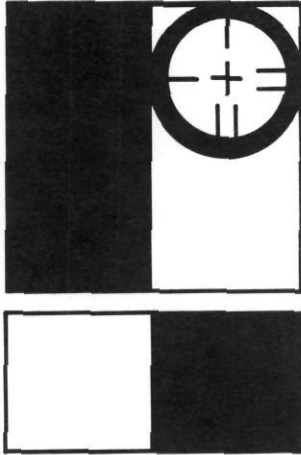
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Of Interest

HOUSE PANEL REQUIRES "AS-BUILT" SURVEYS FOR COAL SLURRY PIPELINES

Washington, D.C.—The House Surface Transportation Subcommittee today approved an amendment to require an "as-built" survey of newly constructed or extended coal slurry pipelines.

The provision, authored by Representative Jim Moody (D-WI), would require that a survey of the pipeline and right-of-way be conducted and recorded under any applicable state law. The amendment was added to a bill to grant the right of eminent domain for the construction of pipelines to carry a mixture of finely ground coal and water, known as coal slurry. "As-built" surveys are also known as "post-construction" civil works. Current plans anticipate the construction of eleven pipelines covering more than 9,000 miles through 24 states.

"Past experience with other pipeline carriers has shown that the lack of 'as-built' surveys has made subsequent location quite difficult. This can lead to accidental pipeline ruptures which cause injury, loss of life, and property damage. The amendment will make it possible to locate coal slurry pipelines before drilling or excavation takes place in their vicinity," ACSM-ASP Government Affairs Director John M. Palatiello said.

The coal slurry pipeline bill, H.R. 1010 must still be considered by the House Public Works Committee and the full House of Representatives. A similar bill, S. 267, is pending before the US Senate.

The American Congress on Surveying and Mapping (ACSM) and the American Society of Photogrammetry (ASP) formed a Joint Government Affairs Program in January, 1982. The two professional societies have a combined national membership of 18,000 with an additional 16,000 members in affiliated state associations. Their membership consists of surveyors, mappers, photogrammetrists, remote sensing specialists, and geodesists.

LICENSE A REQUIREMENT FOR COUNTY SURVEYOR'S OFFICE IN TEXAS

Due to charges of practicing surveying without a license against elected Bowie County Surveyor Willie Willis, W.T. Satterwhite, Chairman of the Texas Board of Land Surveying, requested an Attorney General's opinion on the following questions:

1. Can a county surveyor engage in the practice of surveying as defined in the Land Surveying Practices Act of 1979 without being a registered surveyor pursuant to the requirements of the act?
2. Is a person required to be a registered surveyor under the Land Surveying Practices Act of 1979 in order to become a candidate for the office of county surveyor?

Although there have been no appellate court cases interpreting the new enactment which consolidated the State Board of Registration for Public Surveyors and the Board of Examiners of Licensed State Land Surveyors into the Texas Board of Land Surveying, The Attorney General's opinion said the answer to the first question was included in Section 4 of the new statute as follows:

Sec. 4 The provisions of this act do not apply to any of the following:

- (1) a county surveyor acting in an official capacity as authorized by law in counties under 25,000 population, but only until the expiration of the term of persons currently holding such office.

(Continued on page 12)



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(Continued from page 8)

(2) an officer of the state, county (except as provided by Subsection (1) of this section when applicable), city, or other political subdivision whose official duties include land surveying when acting in his official capacity, but only until the expiration of the term of persons currently holding such office.

The opinion continued, "It is a parent from this language that a county surveyor cannot engage in the private practice of land surveying without being either a registered surveyor or a licensed state land surveyor under the act, even though the unexpired term of the county surveyor's office may have commenced prior to the effective date of the act. It is equally clear that a county surveyor who is neither licensed nor registered and whose unexpired term commenced prior to the effective date of the act may continue to discharge his duties until his term expires."

"... The obvious intent of the legislation is to require that county surveyors be licensed or registered under the act in order to hold office, exempting during the

unexpired portion of their terms only those holding office at the time the act took effect."

Article XVI, Sec. 44, Texas Constitution, which creates the office does not specify any qualifications for it. However, cases involving the disbarment of District Attorneys, have found that where no qualifications are set forth in the Constitution for an office it creates, the legislature may validly require licenses. The Attorney General's opinion stated that the legislature could require that county surveyors be either licensed or registered.

The summary of the opinion states: "A county surveyor may not engage in the private practice of land surveying without being either registered or licensed pursuant to the Land Surveying Practices Act of 1979, nor is a person eligible to election as county surveyor unless at the time he takes office he is either registered or licensed pursuant to this act."

Willis was found guilty of violating the Act and fined \$250. The Attorney General's opinion made him ineligible to take office as Bowie County Surveyor in January.

from "Metes and Bounds," publication of the Texas Surveyor's Association.

PROSPECTUS:

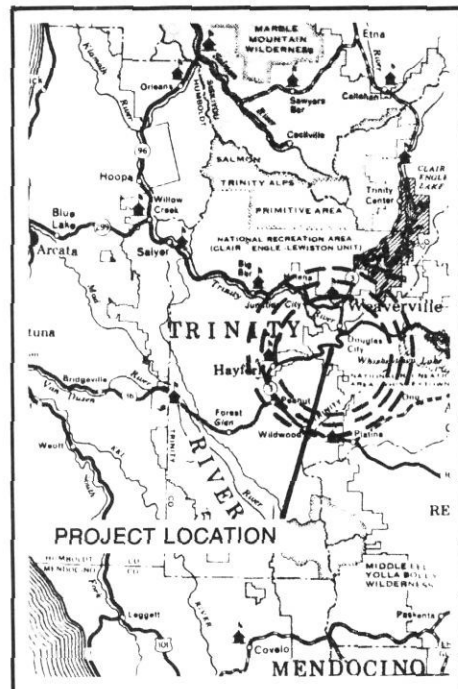
The Bureau of Land Management, California State Office, is currently planning to contract a cadastral survey. The present schedule for award is April, 1984, providing adequate funding is available.

The present scope of services will require the following:

- (Approx.)
1. Resurvey/Survey 75 miles "
 2. Monumentation 139 corners "
 3. Rehabilitation 16 corners "
 4. Search 65 corners "
 5. Property Line 50 miles "
 6. Platting/field notes 1 job "

The project area is in T. 32 N., R. 10 W., MDM, and is located in Trinity County, California (see attached location maps). The north boundary of the township is approximately four (4) miles south of Weaverville and Douglas City is located in section 1.

Interested contractors should contact Clifford A. Robinson, Chief, Branch of Cadastral Survey, 2800 Cottage Way, Room E-2841, Sacramento, California 95825, if they wish to have their names added to the "Prospective Contractors Mailing List." The request for proposals (solicitation) will probably not be issued until November, 1983.



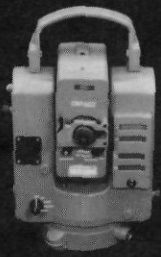
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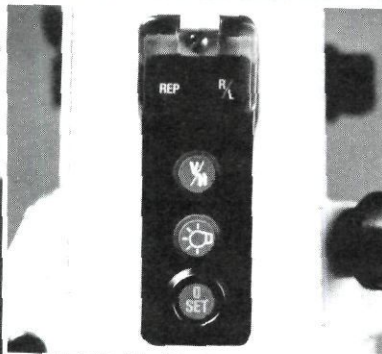
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News Briefs

NEW FELLOWSHIP ANNOUNCED

The American Congress on Surveying and Mapping (ACSM) and the American Society of Photogrammetry (ASP) have announced a new fellowship, the *John W. Pumpelly Fellowship Award in Cartography*. The Pumpelly Fellowship has been made possible through National Tire Wholesale, Inc. by John Reed Pumpelly and Thomas F. Pumpelly to commemorate the work of their father, John W. Pumpelly, topographic engineer and cartographer of the US Geological Survey for over 38 years.

The purpose of the award is to provide financial assistance to persons pursuing a full-time course of graduate study in cartography or a related field. The award consists of a \$2,000 check to the recipient. Any member of ACSM or ASP may apply. Application forms will be available from the ACSM-ASP Education Director and the application deadline is January 15 each year. Recipients will be chosen by a fellowship awards

committee. The award will be presented each year at the ACSM-ASP annual Convention regularly held in March. Reed and Tom Pumpelly, Secretary-Treasurer and President respectively of National Tire Wholesale, said "We are glad to be able to commemorate our father's work and to support his chosen profession in this manner. He was always interested in the education of young people. A fellowship to help students continue their studies would be the kind of an award he would wholeheartedly approve."

John Pumpelly joined the US Geological Survey (USGS) in 1933 and later transferred to the Tennessee Valley Authority. In 1948 he returned to USGS in Washington, DC where he became Chief of the Map Distribution Section. He later became Chief of the Branch of Cartography in the Special Mapping Center at Reston, Virginia. An active ACSM and ASP member, John Pumpelly served as Chairman of the ACSM Cartography Division in 1970 and 1971. After his retirement from USGS in 1971, he co-

founded National Tire Wholesale, Inc. with his sons. John Pumpelly died in 1980. He is survived by his wife Helen, the former Mrs. Earl J. Fennel, and his two sons Thomas F. and John Reed.

For details and application forms contact: Education Director, ACSM-ASP, 210 Little Falls Street, Falls Church, VA 22046; Phone (703) 536-8320.

□

NO ETHICS VIOLATION OR WARRANTY BREACH BY SURVEYOR FOR INACCURATELY PLACED HOUSE

A Maryland trial court has ruled in favor of a surveyor in regard to home buyers' allegations that the surveyor had violated the state's code of ethics for surveyors and/or breached a statutorily imposed warranty in the sale of real estate. The court said that the code did not create a right of action in third parties against licensed surveyors and that surveyors are not "vendors" or "developers" as defined in the warranty statute. *Hess v. Clark, Finefrock & Sackett (1980)*

No written contract existed between the owners and the sur-

(Continued on page 16)

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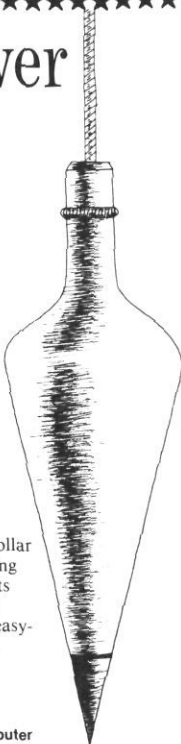
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CATALOG #	DESCRIPTION	LIST	SPECIAL
001 015	SERVCO Floor Brace f/setting up tripods on a hard Surface... Ea.	\$ 50.00	\$ 42.50
001 800	SERVCO Aluminum Ext. Tripod - 5/8 x 11 Ea.	130.00	91.00
RY5100B	LUFKIN 100' x 1/4" Yellow Chain Tape Ea.	35.85	26.89
12-100	Lufkin 4-Arm Reel for RY5100B Ea.	48.70	36.53
PG-10-25	KESON 1" x 25' Engineers Pocket Tape..... Ea.	14.30	11.44
1024	24 oz. Plumb Bob with extra point in cap..... Ea.	18.80	15.04
1019	Leather Scabbard for 24 oz. Plumb Bob..... Ea.	6.50	4.88
2100	SERVCO 3/4" Surveyors Brass Tags - Stamped with License # etc. (up to 9 digits each of 2 lines)..... Per/100	12.00	10.20
PRC-1X	EASY TALK Personal Radio Communicator, with body pack Transmitter w/attached headset. Voice Act'd, 1/4 mi. range... Ea.	70.00	63.00
PRC-2X	EASY TALK Personal Radio Communicator, same as above except has fully contained transmitter in headset Ea.	70.00	63.00
★★★	SERVCO Safe-T-Vest - Pimento Red - 50% Cotton & 50% Polyester in the following sizes..... Ea.	11.00	8.80
	3250-Small 3251-Medium 3252-Large		
3253	Safe-T-Vest as above but Extra-Large..... Ea.	12.00	9.60
5102	SUUNTO Clinometer - Perc./Deg. w/Leather Case Ea.	63.00	53.55
5103	SUUNTO Clinometer - Perc./Topo w/Leather Case..... Ea.	63.00	53.55
5208	SERVCO Double Penta Prism w/yellow center glass..... Ea.	65.00	52.00
5262	SCHONSTEDT GA-52B Locator..... Ea.	650.00	546.00
9503	SERVCO Canvas Stake Bag, white w/Fluor. Stripe..... Ea.	23.00	19.55

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veyor. The owners alleged that, in the course of making the drawings, the siting of the house was moved without their authorization or approval. They asserted that the change did not come to their attention until the house was under roof and that, as a result of the change, it was impossible to construct a driveway to the garage without using land from an adjacent, occupied lot. As a result, they were forced to purchase an easement across their neighbor's land and lost several valuable trees from their property. The owners sued the surveyor, among others, and alleged the surveyor violated the Maryland Code of Ethics for the Practice of Professional Land Surveying and Property Line Surveying. The owners also alleged the surveyor breached an express warranty created by a Maryland statute. The surveyor denied the allegations.

The trial court agreed with the surveyors. It found that surveyors are not "vendors" or "developers" as defined by the express and implied warranty statute. "Therefore, they are not obligated under any alleged express or implied

warranties to the plaintiffs. Their liability, if any, would be to the builder or developer who employed them, and not to third parties with whom they have no privity of contract." As to the count based on the Code of Ethics, the court said, "The purpose of the Code of Ethics is to outline certain professional standards to which land surveyor licensees must adhere, if they are to be permitted to retain their licenses. There is nothing in the statutes or the Code regulations which creates or implies that a right of action exists in a third party to sue a land surveyor licensee with whom the third party has no contract, written or oral."

SURVEYOR NOT LIABLE FOR INACCURACY RESULTING FROM RELIANCE ON TOWN PLAN'S PLACEMENT OF WATER MAIN

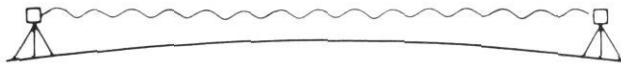
In a negligence action brought by a seller alleging a surveyor's plan incorrectly showed access to town water, New Hampshire's supreme court has approved a master's* report recommending a verdict for the surveyor. Although there was no testimony concerning the applicable standard of care, the master ruled that it was reasonable for the surveyor to rely

on the location of the water main as shown in a previous plan prepared for the town. *Rabe v. Carnaby, N.H., A.2d (New Hampshire Supreme Court, December 17, 1980).*

The seller had engaged the services of the registered surveyor prior to purchasing a large tract of land. The surveyor was to draw a subdivision plan from which lots would be sold. At that time the seller indicated to the surveyor that a town water main ran along the entire frontage of the tract. In the course of his research, the surveyor relied on a plan prepared by an engineering firm for the town within which the land was located. In particular, he relied upon the location of the town water main in that plan. Accordingly, when selling the lots, it was represented that town water was available. Soon after the sale, however, the purchaser learned from the town water department that the water main did not extend to his lot.

The purchaser brought an action against the seller, and the seller counterclaimed against the survey-

(Continued on page 20)



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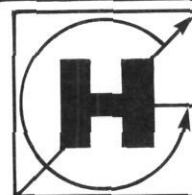
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1922

Zeiss introduces the first optical theodolite, the famous Th 1, with graduated glass circles.

1930

Zeiss introduces the first optical scale reading theodolite, Th 4.

1931

Zeiss introduces the first modern, one second theodolite, Th 2.

1950

Zeiss introduces the first automatic level and starts a new era with an instrument, the Ni2, with a mechanical compensator instead of a tubular bubble.

1968

Zeiss introduces the first electronic recording tacheometer, Reg Elta 14, and brings surveying into the electronic age.

1976

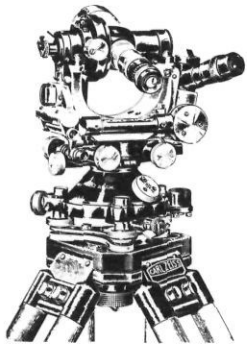
Zeiss introduces SM4, the first compact, lightweight EDM/theodolite.

1978

Zeiss introduces Elta 2, the first complete computerized surveying system, and Elta 4, the first lightweight electronic tacheometer.

1981

Zeiss introduces Prog 12, program module for Elta 2, the first software program that provides 12 important surveying routines for direct in-the-field computation.



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Equipment Corner

by Reily Smith

The response to the last issue's poll on computers was not what we had hoped for. Knowing that there must be surveyors with computer information to share, we would like to try this poll once again.

What is needed from computer users is general information on the computers themselves as well as information on peripheral hardware and software which may be beneficial to the land surveyor. In addition, we'd like to know if computers are cost efficient and if so, for what size firm. Could you also share any information on publications, besides the ones listed in the last issue, which may help other computer users.

Members of the C.L.S.A. need your help! If you use a computer, please fill out the questionnaire card in the magazine and send it back to us as soon as possible. We look forward to hearing from you and of course, publishing the results of this poll!

Even if you don't use a computer, we'd like to hear from you. Perhaps you could send us suggestions for future topics. For example, if you have a piece of surveying equipment that you feel is either great or poor, let us know so we can share that information with other members.

ARTICLES

(Cont. from page 6)

L.S.I.T. may not exceed a total of four years. "Each applicant must show a minimum of two years of actual experience in land surveying." The individual applying is required to submit the standard application form on which must be stated, among other things, education and experience which he or she feels is qualifying pursuant to Section 8726 of the Land Surveyors Act. Also, each applicant must provide the Board with at least four references. The references may be licensed surveyors or engineers and may be licensed inside or outside of the state. As directed by the Board, these references should be persons who have personal knowledge of some part of the applicants qualifying experience and qualification to receive a license.

Now here is where we as licensed professionals come into the picture. Usually we are past or present supervisors, co-workers, or business associates of the person requesting our participation and further we may even be long time friends.

At this point I would like to review the process that follows your contact by the applicant and suggest some procedures which I have found helpful in the past. Normally the applicant will approach you prior to mailing the standard reference form. However, sometimes this is not the case and you will receive the reference request directly in the mail. In either situation this is where you must begin thinking whether or not you qualify as a reference for that particular person. I have found it helpful to have the entire application as submitted to the Board by the applicant. This gives me the opportunity to put my personal knowledge of the applicant into perspective based on their past schooling and experience. Therefore, I would suggest that you ask for a copy of their application in its final form. It may be the case, for example, that you are only referencing six months of their experience and that those six months may have been several years ago. Or, the applicant may have worked for you for eight months but you feel that only six months of that was at a sub-professional level. So you can see that the application becomes very helpful in recalling dates of significance

(Continued on page 20)

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3/4"	I.D. x 18"	.51 each
1"	I.D. x 18"	.71 each
1 1/2"	I.D. x 18"	1.09 each
2"	I.D. x 18"	1.38 each
3/4"	I.D. x 24"	.63 each
1"	I.D. x 24"	.88 each
1 1/2"	I.D. x 24"	1.37 each
2"	I.D. x 24"	1.74 each
3/4"	I.D. x 30"	.75 each
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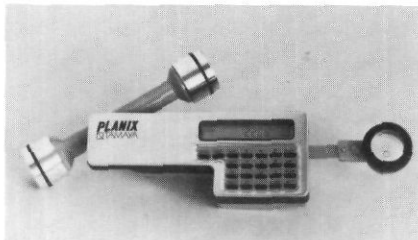
SURVEYING PROGRAMS INTRODUCED FOR POCKET COMPUTERS.

PocketInfo Corp. has introduced three surveying programs for the Radio Shack PC-1 and Sharp PC-1211 pocket computers. The programs take advantage of the portability of these computers. They are easily used due to the English prompts at every step. The BEARING TRAVERSE program computes and stores coordinates for 12 numbered points, whether straight courses or curves, using bearings or azimuths.

The INVERSE program computes bearings and distances between points with specified coordinates. The FIELD ANGLE TRAVERSE program computes coordinates of points connected by straight lines where the input data may be entered as angles, deflections, slope distance, stadia or horizontal distance.

The BEARING TRAVERSE and INVERSE programs compute the closure data, area and compass adjustment.

Each of the SURVEYOR programs sells for \$19.95 on tape cassette with comprehensive user manuals. Immediate availability. PocketInfo Corp. describes 40 other programs for Sharp, Radio Shack and Casio pocket computers in a free catalog. Write or phone: P.O. Box 152, Beaverton, OR 97075; (503) 649-8145.



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The Lietz Company introduces its newest planimeter, the Planix 7 electronic digital planimeter, for accurate area measurements of blueprints, maps, photographs, drawings and more.

The Planix 7 features a custom-made LSI (large scale integration) microprocessor that processes and displays measurements via an eight-digit LCD readout.

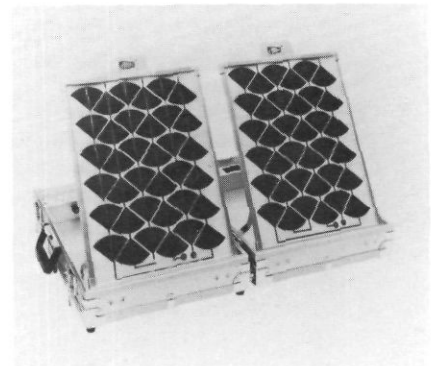
Other features include: measurement accumulation, for two or more different areas to be measured and stored in memory; measurement averaging, for the same area to be measured repeatedly, up to nine times, and averaged for the most reliable results; dual-scale capability, so two different scales can be entered and processed for the same plot; automatic area computation, automatic area shifting, display hold, push-button zero set, and back-up memory for the scale factor, allowing the scale to remain in memory even when the power is shut off.

Power is supplied by a rechargeable NiCd battery or an A/C adaptor, both included. Each planimeter comes complete in its carrying case. The Planix 7 is covered by a one-year warranty from The Lietz Company. For additional information, contact Kristy Lantz, The Lietz Company, 9111 Barton, Box 2934, Overland Park, KS 66201.

□

SOLAR POWERED BATTERY CHARGER FOR NIKON ELECTRONIC DISTANCE METERS

Garden City, NY, June 8, 1983 —Nikon is introducing a Solar Battery for charging the on-board battery of its Electronic Distance Meters (EDM) while they are used in remote locations without access to other electrical power



sources.

Under ideal conditions an EDM can operate directly from the Solar Battery, but in practice, the Solar Battery is simply arrayed in the sunlight at a campsite for several hours while the EDM battery becomes fully charged.

The Solar Battery converts sunlight collected by twin solar panels to a total electrical output of 8.5 W. The battery is conveniently housed in a carrying case about 19-in. x 14-in. x 6-in. and weighs less than 20 lbs.

There are two models of Nikon EDMs, Model ND-250 and ND-160. They employ a modulated beam of infrared light to measure very accurately distances up to approximately 8,200 ft. (1.5 mi.).

For further information about the new Solar Battery contact Nikon Inc., Instrument Division, Surveying Department, 623 Stewart Avenue, Garden City, NY 11530. Phone (516) 222-0200.

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and other information relevant to the individuals overall qualifications. Remember, however, the applicant is under no obligation to submit his application to you.

Now recall that an individual who has passed the L.S.I.T. examination may be credited with the equivalent of two years experience. Anyone may apply for and take the L.S.I.T. examination. At present there are no requirements that a person have any prior surveying experience to set for this examination. Therefore it is possible that the individual is applying for his or her L.S. based on four years of surveying experience not six. An additional one or two years of credit can be attained by graduation from the approved curriculum of one of the schools approved by the Board. At present, here in California, the Board has approved one 4-year curriculum at Fresno State College, and four 2-year curriculums at Pasadena, Riverside, San Bernardino, and San Francisco Colleges.

The law, however, is specific about having a minimum two years of actual experience. The Board requires, based on Section 8742(b) of the Land Surveyors

Act, that one year of experience include work in the office performing **planning, research and analysis** of surveys as defined in Section 8726(b),(c),(d) and (f) of the Act. Also, that one year of experience include field work performing **planning, directing and analyzing** field work related to Section 8726(a) through (f) of the Act. I would suggest that you review these sections of the Act. Now, to help it verify this minimum qualifying experience the Board, through the applicant, asks for your assistance in substantiating what has been submitted to them. The form that they supply and that you fill out and send directly to them asks specific questions: Do you have personal knowledge of the applicant's experience?; How do you appraise their work?; Do you consider the applicant qualified? Further, you are asked to list by date from personal knowledge the applicant's work, types of projects worked on, and the specific function of the person. There is a space to give additional information regarding the applicants land surveying experience, abilities, and estimate of potential. Finally, you are asked to sign and place your license number on the form.

The request to be a reference should be taken seriously and careful consideration given to whether or not the applicant is qualified and also whether or not you qualify as a reference for the particular person making the request. If you are not qualified then let the applicant know immediately so they can make other arrangements. If you feel you are qualified, then be specific in your response and think carefully about what you are saying is credible qualifying experience. We not only have a responsibility to be honest to the applicant, but just as important we must be honest to our profession and the Board of Registration which has as its ultimate responsibility the protection of the public at large.

John J. FitzGerald L.S., R.C.E.
Marin County Chapter Rep.

□

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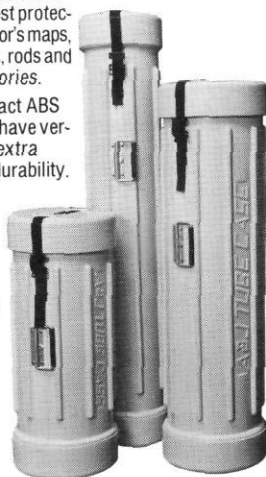
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NEWS BRIEFS (Cont. from page 16)

or. A master recommended a verdict with damages for the purchaser and a verdict for the surveyor in the seller's counterclaim. The trial court approved the master's report, and the seller appealed.

In view of the fact that the seller did not offer evidence of the standard care applicable to registered surveyors and that the seller had represented that town water ran along the entire frontage of the tract, the master ruled that it was reasonable for the surveyor to have relied on the prior survey. After the master's report was issued, the surveyor corrected his testimony to indicate that he had, in fact, made a mistake in not copying the water main exactly as shown on the town's plan. However, on reconsideration the master determined that this change in testimony did not affect his ultimate decision in the case. The supreme court affirmed.

Taken from **GUIDELINES FOR IMPROVING PRACTICE—Architects and Engineers Professional Liability**

Continuing Education

Falls Church, Virginia—The American Society of Photogrammetry Foundation has announced a new, one-time scholarship award, the *Hugh B. Loving Memorial Scholarship*. The Hugh Loving Scholarship is being awarded in memory of Hugh (Red) Berlin Loving, former President and Honorary Member of ASP, Research Photogrammetrist with the US Geological Survey (USGS) for 32 years, and ASP Assistant Executive Director.

The purpose of the scholarship is to provide financial assistance to one or two students enrolled in an undergraduate or graduate curriculum in photogrammetry for academic year 1984-85. The scholarship will consist of the entire sum of the contributions received for this purpose, currently about \$2,800. In case of two recipients, each will receive one-half the sum. The scholarship will be awarded at the ASP 50th Anniversary Installation of Officers and Awards Meeting in March 1984. Application information will be available from ASP-ACSM Education Director, and the application deadline is January 15, 1984. According to Rex McHail, ASP Foundation President, "Red Loving was very interested in developing educational opportunities for photogrammetrists. During his term as ASP President, education was one of his highest priorities. He would be pleased to know this award is being made in his name."

Hugh Loving joined the USGS in 1942 and, except for military service and two years with a private firm, remained there until his retirement in 1976 as Chief of the Geological Survey's Office of Research and Technical Standards. After his retirement, he served as Assistant Executive Director of ASP until his death in 1982.

ACSM-ASP JOINT EDUCATION PROGRAM CALENDAR OF COURSES

August 20, 1983 *Adverse Possession and Other Unwritten Rights: How They Affect the Land Surveyor*. Place: Quality Inn, Arlington, TX. Instructors: Walter G. Robillard and Roy Minnick.

August 26-27, 1983 *Evidence and Procedures for Boundary Location*. Place: Louisiana State University, Baton Rouge, LA. Instructors: Walter G. Robillard and Roy Minnick. Cosponsored with Louisiana Society of Professional Land Surveyors.*

September 9-10, 1983 *Evidence and Procedures for Boundary Location*. Place: Worcester Inn, Worcester, MA. Instructors: Walter G. Robillard and Donald A. Wilson.*

September 10, 1983 *Closing Corners*. Place: Holiday Inn—Metro Center, Phoenix, AZ. Presented by BLM. Instructors: Robert Ball and Homer Gilson. Sponsored by Central Chapter, Arizona Professional Land Surveyors. Contact: David Horner, 10130 East Jenan Drive, Scottsdale, AZ 85260; (602) 991-2969.

September 17-18, 1983 *Understanding Basic Geodesy*. Place: Hotel Utah, Salt Lake City, UT. Instructor: Muneendra Kumar. Offered in conjunction with ACSM-ASP Fall Convention.*

September 23, 1983 *Effective Communication*. Place: Hotel Utah, Salt Lake City, UT. Instructor: Robert S. Brewer. Offered in conjunction with ACSM-ASP Fall Convention.*

September 30 - October 1, 1983 *Restoration of Lost Corners by Proportionate Measurement, Corner Point Identification, and Introduction to Water Boundaries*. Place: Defiance College, Defiance, OH. Presented by BLM. Cosponsored with Northwest Chapter, Professional Land Surveyors of Ohio.*

October 3-7, 1983 *Basic Hydrography*. Place: Essex Inn, Chicago, IL. Sponsored by the ACSM Marine Surveying and Mapping Committee.*

October 12, 1983 *Marketing Professional Services for Surveyors and Photogrammetrists*. Place: Doubletree Inn, Monterey, CA. Instructors: Joseph P. Burns and Milton E. Denny. Offered in conjunction with ACSM-ASP California Conference. Contact: Gerry Sample, Towill and Co., Inc., 608 Howard St., San Francisco, CA 94105; (415) 982-1758.

October 15, 1983 *Coordinate Transformation: The 1983 North American Datum Adjustment and the California Coordinate System*. Place: Doubletree Inn, Monterey, CA. Presented by NGS. Instructor: Edward J. McKay. Offered in conjunction with ACSM / ASP California Conference. Contact: Bob McClary, P.O. Box 3362, Eureka, CA 95501; (707) 442-5761 ext. 293.

October 21, 1983 *Expert Testimony*. Place: Howard Johnson's Motor Lodge, Culver City, CA. Cosponsored with International Right of Way Association. Contact: Betsy Fann, IR / WA, 6133 Bristol Parkway, Suite 270, Culver City, CA 90230; (213) 649-5323.

November 4-5, 1983 *Evidence and Procedures for Boundary Location*. Place: Sheraton-Denver Airport, Denver, CO. Instructors: Walter G. Robillard and Roy Minnick.*

November 9-11, 1983 *Surveying Instrumentation and Coordinate Computation*. Place: Keller Conference Center, The Pennsylvania State University, University Park, PA. Presented by NGS. Sponsored by the Pennsylvania State University. Contact: G. Warren Marks, 212 Sackett Building, University Park, PA 16802; (814) 863-0578.

November 12, 1983 *Adverse Possession and Other Unwritten Rights: How They Affect the Land Surveyor*. Place: DeSoto Hilton, Savannah, GA. Instructors: Walter G. Robillard and Donald A. Wilson.*

November 18-19, 1983 *Evidence and Procedures for Boundary Location*. Place: Scheman Continuing Education Building, Iowa State University, Ames, IA. Cosponsored with the Society of Land Surveyors of Iowa and the Civil Engineering Department at Iowa State University. Instructors: Walter G. Robillard and Roy Minnick. Contact: Patty Campbell, (515) 294-7834.

December 2-3, 1983 *Evidence and Procedures for Boundary Location*. Place: Howard Johnson's, Dublin, CA. Instructors: Walter G. Robillard and Roy Minnick.*

*For information contact:
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210 Little Falls St., Falls Church, VA 22046
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Letters to the Editor

Editor: I find what, to me, is a simpler solution to find the mean bearing in your problem on pages 7 and 8 of *California Surveyor* No. 70, Winter 1983.

$$\begin{array}{r} 89^{\circ}-46'-38''=89.777^{\circ} \\ 90^{\circ}-08'-04''=90.134^{\circ} \\ 89^{\circ}-40'-46''=89.679^{\circ} \\ \hline 1426 \quad \times \quad 89.777 = 19.196 \\ 6669 \\ \hline 2610 \quad \times \quad 90.134 = 35.275 \\ 6669 \\ \hline 2633 \quad \times \quad 89.679 = 35.406 \\ 6669 \\ \hline \text{mean} = 89.877^{\circ} \\ = 89^{\circ}-52'-37'' \end{array}$$

As a survey party chief, I did considerable work retracing government section lines, to monument found stakes, rocks, corners that could be established from bearing trees or markers and as a last resort those established improvements or perportionate measurement, in Antelope Valley for L.A. County, E.A. Rosecrans, L.S. 2384 Retired

Committee Reports

LEGISLATIVE COMMITTEE

The Legislative Committee is presently monitoring 160 different bills, watching for impact on our profession. We have sponsored four bills, one of which has passed into law and one will probably be enacted by the end of August.

Bills of interest which have been signed by the Governor are: Senate Bill 427 (Chapter 150, Statutes of 1983) C.L.S.A. sponsored bill: Changes name of Board to "State Board of Registration for Professional Engineers and Land Surveyors."

Assembly Bill 69 (Chapter 52, Statutes of 1983) amends Streets and Highways Code to allow for summary vacation of an easement superseded by relocation.

Assembly Bill 492: (Chapter 95, Statutes of 1983) Sets penalty for subventing or attempting to subvent a licensing examination.

All of these bills are effective January 1, 1984.

If you are interested in the exact wording of any of these bills, you may obtain one copy free from your legislator.

Harold B. Davis, L.S., Chairman, Legislative Committee

Education Committee

As reported to you in the last California Surveyor, a Land Surveying class was being taught at California State University Fresno. This was a 15-week class, held once a week for three hours, that started January 27, 1983 and terminated May 12, 1983. The class was taught by twelve members of C.L.S.A. that taught various areas of Land Boundary Surveying. Dr. Fareed Nadar helped coordinate the classes and completed the paper work the school required. He also attended all the lectures, writing the test questions from the class room presentations.

The students have informed us that this class was among the most informative and useful in their studies. They appreciated the materials presented because the class each week dealt with the real world of surveying and not just made up text book examples. The Education Committee will be meeting with University Fresno representatives in August to review the class taught and to formulate plans for future classes.

We would like to sincerely thank all of the instructors that gave of their time and knowledge experience

to teach in this program. Listed below are the instructors and classes they taught.

The Small Business Surveyor—Richard P. Siegmund; Boundary Cales & Map Preparation—John FitzGerald; Government Approach to Retracement—Eugene Ehe; Water Boundary & Titla Datum—James Dowden; Mineral Surveys—Jon Blake; Map Checking—Louis Rutledge; Government Land Office Retracement—H. Wade LeRoy; Federal Land Systems—Charles Safford; Earthquake Problems & High Rise Surveys—Pericles Cosseboom; Spanish Land Grants—Joel Readio; Legal Descriptions—Harold Davis; Boundary Control & Research—Earl Cross.

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Surveyors Historical Society

The Surveyors Historical Society is interested in hearing from you. We are compiling a list of the names of persons who have practiced land surveying in California and where their survey records are located. The list at this time contains 310 names of former and deceased surveyors.

Please take the time to duplicate the form and provide us with as much information you or people you know have on the subject. MAIL TODAY.

Myron A. Lewis, Secretary

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SURVEYORS HISTORICAL SOCIETY QUESTIONNAIRE

The Surveyors Historical Society is compiling an inventory of survey maps, field books, and other survey records in California for a centralized information retrieval system, and we need your help!

The society recently mailed questionnaires to state and county agencies (survey and recorder offices, libraries, Cal Trans, etc.), historical societies, and museums, asking about records retained, how indexed, and location. So far, the response from this questionnaire has supplied information from 48 out of 58 counties.

We are now requesting similar information from and/or about all individual surveyors in California. Please take the time to answer the following questions regarding your own survey records, and those of deceased or out-of-practice surveyors, that you may have in your possession, and return as soon as possible to:

Myron A. Lewis, 31457 Hugh Way, Hayward, CA 94544

We would also appreciate names of other contacts who do not receive this publication.

1. Name of surveyor or engineer: _____
2. Registration Number _____ L.S. _____? R.E. _____?
3. Active? _____ Inactive/Retired? _____ Deceased? _____
4. Records cover years from ___ to _____, for the following area(s):

5. Present location of records: _____
6. Were any records destroyed? no ___ yes ___. Which? _____
7. Are records indexed? no ___ yes ___.
Index method: _____
(Example: Calif. Coord. System, Township & Range, Client's name, etc.)
8. Who has access to these records?: _____
9. Would you release records for public access? no ___ yes ___
10. Your name (if different from above): _____

Your address: _____

Your Phone : _____

Comments: _____

Please make copies of above for each surveyor's records.
Attach additional sheet if needed.

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