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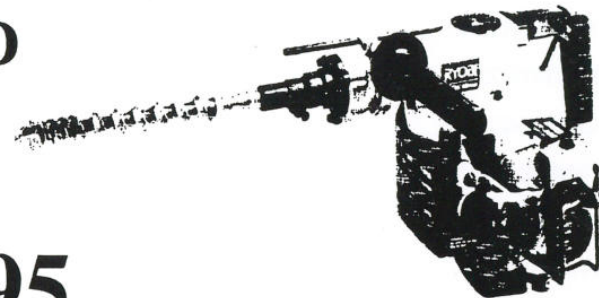
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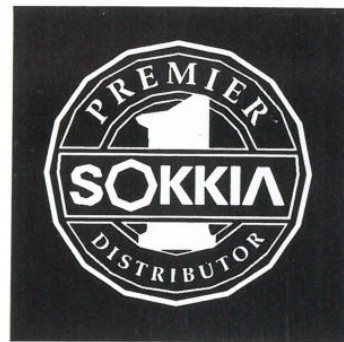
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VOLUME 7, NO. 3

OCTOBER 1995





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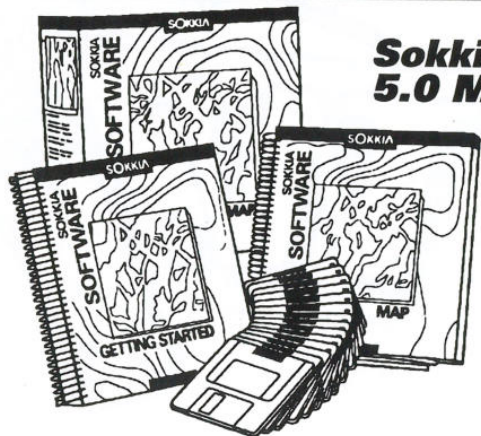
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REPORT OF NSPS GOVERNOR TO PROFESSIONAL LAND SURVEYORS OF WYOMING AUGUST 26, 1995

There has been no meeting of the Board of Governors for the National Society of Professional Surveyors (NSPS) since the last Board of Directors meeting for PLSW. There are a couple of points on which I will update the PLSW Board.

ACSM and NSPS have been working to clarify and focus their efforts on lobbying Congress. As you are aware the federal government is focusing on controlling growth of government and controlling spending. ACSM/NSPS has come up with a focus which will recognize that the federal government performs certain surveying and mapping functions that benefit the public, identify core surveying and mapping functions best funded by the federal government, support continuation of current surveying and mapping functions until a comprehensive study is done by ACSM, and adopt the recommendations of this comprehensive study. ACSM will be monitoring the current and future Congresses to support such programs as USGS, NGS and the surveying functions

of the BLM. Recent congressional appropriations kept and, in fact, increased the funding for the USGS mapping program, but decreased the funding to BLM cadastral surveying programs by about 15 per cent. ACSM will petition Congress to protect the BLM core cadastral survey functions, if necessary.

As I have reported earlier, I feel that Wyoming has a good chance for winning entries in the NSPS map/plat contest. Most important activity is to get our outstanding Wyoming maps entered. Our current state map/plat competition plans will result in entries in the 1997 national contest. In the meantime, I would like to urge Wyoming surveyors to submit maps to the 1996 national contest individually. All entries could be endorsed by PLSW or by a NSPS member until our state contest is underway. Enclosed is a packet of information from NSPS with suggestions about setting up the state contest.

PLSW MEMBERSHIP APPLICATION

☐ APPROVED ☐ REJECTED DATE _____

NAME _____ WY REG. NO. _____

(Please indicate preferred mailing address)

DATE _____

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YOUR TITLE: _____

States other than Wyoming in which you are registered: _____

Additional information or comments (optional): _____

CLASS OF MEMBERSHIP APPLIED FOR: (check one only and please submit dues with application, prorated for the remainder of the calendar year)

☐ MEMBER, ANNUAL DUES \$75 (Persons duly registered, PLS or PE&LS in Wyoming.)

AFFILIATE MEMBERSHIPS

☐ Associate Member, annual dues \$50. (Persons employed under the direction of a PLS and working toward PLS registration in Wyoming.)

☐ Special Member, annual dues \$50. (Not meeting above qualifications but with a particular interest in, or association with, the profession of land surveying.)

☐ Special Member, Student, annual dues \$15. (Pursuing a post secondary academic course of study, and currently enrolled.)

☐ Sustaining Member, annual dues \$100. (Persons, institutions or corporations desiring to assist PLSW financially.)

I AGREE TO OBSERVE THE CONSTITUTION AND BY-LAWS OF THE PROFESSIONAL LAND SURVEYORS OF WYOMING AND THE CHAPTER TO WHICH I WILL BELONG AND TO SUPPORT SAID ORGANIZATIONS IN THEIR ENDEAVORS.

APPLICANT'S SIGNATURE _____

SPONSOR'S SIGNATURE
(For Affiliate Member applicants only.)

NOTE: All portions of the state have chapters. Chapter dues or assessments may vary in amount. Applications are considered by the board of Directors at quarterly meetings. Send completed application to PLSW, c/o B.L. Hudson, 2895 W. 8th Ave., Denver, CO 80204.

REFLECTIONS

JOHN LISACK, JR.
EXECUTIVE DIRECTOR
AMERICAN CONGRESS ON SURVEYING AND
MAPPING

We all want our associations, be it local, state, regional or national to grow and flourish. New ideas are continually sought to improve services to our members and enhance our profession. With limited resources association's must carefully select avenues which will benefit the largest portion of members and potential members. This is a difficult task and care must be exercised not to alienate members of the professional when choosing one program rather than another.

All too often the volunteer leaders of associations are severely criticized for decisions made when in fact the vast majority of the membership has not actively participated in providing valuable information to the leaders upon which responsible and representative decisions can be made. We cannot forget that each of us has a responsibility to contribute positive suggestions by which our association and our careers can be enhanced.

A seasoned and sage association executive wrote the following observations in his book *A Coming of Age*. Mr. Samuel Shapiro feels that the following observations plague every association and that they represent ways to kill an organization.

- Don't come to meetings.
- But if you do come, come late.
- If the weather doesn't suit you, don't think of coming.
- If you do attend a meeting, find fault with the work of the officers and other members.
- Never accept an office, as it is easier to criticize than to do things.
- Nevertheless, get sore if you are not appointed to a committee; but if you are, do not attend committee meetings.
- If asked by the chairman to give your opinion regarding some important matter, tell him you have nothing to say. After the meeting tell everyone how things ought to be done.
- Do nothing more than is absolutely necessary; but when other members roll up their sleeves and willingly, unselfishly use their ability to help matters along, howl that the association is run by a clique.
- Hold back you dues as long as possible.
- Don't bother about getting new members. Let the Secretary do it.
- When a banquet is given, tell everybody money is being wasted on blowouts which make a big noise and accomplish nothing.
- When no banquets are given say the association is dead and needs a can tied to it.
- Don't ask for a banquet ticket until all are sold.
- Then swear you've been cheated out of yours.
- If you do get a ticket, don't pay for it.
- If asked to sit at the speaker's table, modestly refuse.
- If you are not asked, resign from the association.
- If you don't receive a bill for your dues, don't pay.
- If you receive a bill after you've paid, resign from the association.
- Don't tell the association how it can help you; but if it doesn't help you, resign.
- If you receive service without joining, don't think of joining.

business, howl that nothing is done.

- If it calls attention to abuses of your own, resign from the association.
- Keep your eyes open for something wrong and when you find it, resign.
- At every opportunity threaten to resign and then get your friends to resign.
- When you attend a meeting vote to do something and then go home and do the opposite.
- Agree to everything said at the meeting and disagree with it outside.
- When asked for information, don't give it.
- Cuss the association for the incompleteness of its information.
- Get all the services the association provides but don't give anything back to the association.
- When everything else fails, cuss the Secretary

We are all guilty of some of the above travesties. We must always remember "We are the association" . . . we can make it as good as we want it!

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EDITORIAL POTPOURRI

• **NEW PLSW MEMBER** - The newest members of PLSW, approved by the Board of Directors in August, are as follows:

Fred Coles	Member	Evanston, WY
Paul Rechard	Member	Laramie, WY
James Walker	Member	Spearfish, SD
Troy Fields	Associate	Laramie, WY
Jeffery Genzel	Associate	Cheyenne, WY
Sonja Newell	Associate	Rawlins, WY
James Hanchett	Sustaining	Thermopolis, WY
Gregory Tuttle	Sustaining	Phoenix, AZ

Congratulations and welcome to PLSW.

• **PLSW MEMBERSHIP** - If you are not a member of PLSW, join now. We need your support. An application is included in this issue. If you are a member, recruit a new member.

• **SUPPORT OUR ADVERTISERS** - Our advertisers have been very loyal to us. For your next purchase, consider our advertisers first.

• **LOCAL PLSW NEWS** - We need news of your chapter's activities. Send us a summary of your chapters activities or other related activities for publication. Summaries need not be typed. The deadline for the next issue of *Lines and Points* is presented on this page.

• **PLSW BOARD MEETINGS** - The minutes of the last Board of Directors meeting is contained in this issue. Present your views to your director and attend the next Board meeting. All members are welcome.

• **BRONZE RAFFLE** - Have you bought your raffle ticket? Have you sold any raffle tickets? Contact your Director for additional tickets.

• **LINEs AND POINTS PAX** - The *Lines and Points* fax number is 307-235-5604 or 307-235-8184.

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by
Larry T. Perry, P.L.S.
Chevenne, Wvoming

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PLSW (Professional Land Surveyors of Wyoming) is a statewide organization of Registered Land Surveyors licensed to practice in the Equality State of Wyoming. PLSW is dedicated to improving the technical, legal, and business aspects of surveying in the State of Wyoming. PLSW is affiliated with the American Congress on Surveying and Mapping and the Western Federation of Professional Land Surveyors.

Editorial Staff: John Hibsman, Steve Strang, Don Davis.

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BOARD OF DIRECTORS' MEETING SUMMARY

The summer meeting of the Board of Directors was held at Clear Creek Cafe in Buffalo on Saturday, August 26, 1995. The meeting was hosted by the Northeast Chapter with arrangements having been made by the staff of Grizzly Engineering, Inc., of Buffalo.

The meeting was called to order at 8:25 A.M. by President Jim Claflin. All chapters, except one, were represented by their Director or alternate. A total of thirteen members were present; including ten board members and three members of the hosting chapter.

The minutes of the April 29th board meeting, held in Riverton, were presented by Secretary Rick Hudson, discussed and approved.

The treasurers report, in its usual format of bank statement, itemized expenses and balance sheet, was distributed by Hudson and approved by the board. Rick also informed the board of the issuance of a 24-month certificate of deposit in the amount of \$7,500.

The written NSPS report, by Governor Becky Braman, was distributed and presented by Vice President Pete Hutchison. The report, dated August 26th, specifically mentioned ACSM and NSPS concern of proposed congressional funding cuts for NGS, USGS and BLM. Also mentioned was the NSPS map competition which led to a vote by the board for members to submit entries to Pete's SOS Committee by December 15th. Additional NSPS information, concerning ACEC's Council of Professional Surveyors, was distributed and discussed.

WFPS Delegate Paul Reid was unable to attend but furnished a verbal report which was presented to the board by Rick Hudson. Topics of concern included the upcoming WFPS conference next month in Denver, the continuing education resolution. The board voted to provide two items, a compass and vest from Brunton USA in Riverton, for the scholarship auction at the conference. Past President Chris Hamilton will make the final arrangements.

Committee reports were presented (either orally or distributed in written form) from Professional Practice, Scholarship, Corner Record and Newsletter Committees. Highlights included mention, by Jim Claflin, of a meeting between WYDOT personnel and UW staff members regarding licensure / education matters. The filing of corner reports using the old form, by USDI - Forest Service personnel, was discussed. The board asked Chris to contact the Ogden regional office regarding this matter. A letter from Martin Pedersen, Chairman of the Scholarship Committee was read by Director Paul Blough, wherein Rusty Blough will receive a three year scholarship from PLSW to assist his attendance at Oregon Institute of Technology at Klamath Falls. Director Don Davis, representing "Lines & Points", stated that the mailing list is being purged of duplicates and others who have shown no interest regarding advertising, which led into a general discussion with no formal action being taken by the board.

The first item of old business was the mention of the certificates of appreciation to members of the Corner Record Committee. Chris will deliver the certificates to Paul Blough for presentation to Harvey Copeland's committee members who are also the members of the Northwest Chapter. Insurance has been purchased to allow the "Mapping the Frontier" bronze to be transported to various sites. It has been in Gillette and will taken to Casper by Don Davis after this meeting; then to Denver

for the WFPS conference and on to Cody in October. Seminar plans were discussed and it was agreed the Education / Convention Committee will have authority, and responsibility, to make the final arrangements for a seminar in conjunction with the Wyoming Engineering Society convention next February in Casper. The board voted to approve a registration fee of greater than \$20 but not to exceed \$50 for the event.

New business commenced with the approval of applications for membership from eight individuals. New members include Fred W. Coles of Evanston, Paul A. Rechard of Laramie and James D. Walker of Spearfish. New affiliates are Troy T. Fields, Jeffrey A. Genzel, James G. Hanchett, Sonja S. Newell and Gregory M. Tuttle. Welcome to PLSW!

Material received from Milliken & Michaels, Inc., was distributed and presented by Rick Hudson. The firm, of Dover, Delaware, is offering collection services to PLSW members. Directors were asked to present this information at chapter meetings.

Ralph Goodson, President of the State Board of Registration for Professional Engineers and Professional Land Surveyors, and a member of the hosting Northeast Chapter, gave an oral presentation regarding his board's June meeting at Jackson. He discussed the results of the questionnaire furnished by Herb Stoughton's Professional Practice Committee and expressed appreciation to those registrants who participated. The present requirement for monumentation of controlling one-sixteenth corners remains in effect, as does the present minimum monumentation call of a 5/8" dia. x 24" long rebar (or equivalent) with registrant identification. In regard to mandatory continuing education requirements, Ralph stated that 1996 renewals will most likely be subject to 20 hours - then 30 hours for 1997 renewals. Following a general discussion, he added that the board will not give credit for practice, and concluded by mentioning the next board meeting will be in Cheyenne on September 8th.

Marshall Lindeen, alternate director of the Upper Platte Chapter, informed the board that he is the new Trig-Star coordinator for Wyoming and distributed an informational handout to board members. He mentioned the various levels of competition, including the \$300 award at state level, and urged members to contact him for additional information.

Jim Claflin spoke on behalf of John Steil regarding a request from Metro State in Denver and distributed written information regarding a "Partnership Agreement" to reestablish the surveying program at that institution. He stated that Professional Land Surveyors of Colorado has made a major contribution and urged directors to seek input from individual chapter members.

Announcements included concern, from Paul Reid, regarding the proposed Congressional legislation to transfer jurisdiction of federal lands to the several states - Paul's specific concern being "Who will be responsible for the (re)surveying of these lands once title is transferred to the state?" Director Dick Griffin announced that commercial differential GPS services are available in Rock Springs and gave board members some background into same. He stated that two more subscribers are needed before they will "Throw the switch" thereby allowing users with one GPS receiver to obtain results with a positional accuracy of one meter.

The meeting was adjourned at 11:18 A. M. and, following a short break, a luncheon was served.

Dated this 25th day of September, 1995.
R.L. Hudson,
Secretary / Treasurer

MESSAGE FROM THE PRESIDENT

Once again I would like to begin my message with a welcome to all of our new members who were recently approved and accepted into membership at our August BOD meeting. It is my hope that your membership in PLSW will be a rewarding experience.

It is time once again to begin planning for the PLSW/WES convention to be held February 1-3, 1996, in Casper. The education committee is working towards scheduling speakers and topics of interest. In following the format of the past several years we are attempting to bring in a "headliner" for a major portion of the convention at nominal fee, we will also offer the appropriate number of Continuing Professional Competency Units, (CPC).

At last report "Mapping the Frontier" bronze ticket sales were at approximately 35 percent. This means we still have approximately 260 additional tickets to sell. I encourage all PLSW members to make an extra effort over the next several months to sell your tickets. Plans are to announce the winner at the PLSW/WES convention in February. PLSW has made a huge investment in this money raising endeavor; please help support our scholarship fund by supporting this worthwhile venture. If you are in need of additional tickets contact the Bronze Committee Chairman, John Stiles.

Wyoming Land Surveyors will have several opportunities in the upcoming months to display their mapmaking skills. If you have a map or plat that you would like to submit for the NSPS map competition please contact Vice President Pete Hutchinson prior to December 15, 1995. In addition, plan to have your Corner Recordation Forms ready for this year's Save Our Surveyor competition. Certainly we all have numerous Land Corner Recordations that we have filed this past year that were unique in some respect? Let's strive for a major increase in the amount of entries at this year's convention.

The Land Surveying community continues to struggle to retain various survey degree programs throughout the country. Wyoming Land Surveyors are experiencing similar problems, as it was recently discovered that the Northern Wyoming Community College, Sheridan, Wyoming has tabled plans to hire a full time surveying instructor. I also understand that Laramie County Community College has limited the amount of surveying courses being offered at their school. In addition, our colleagues in Colorado are making a bold attempt at rescuing the surveying program at Metro State in Denver. In the future one of the largest issues that PLSW is going to have to confront is where do we as a profession go to obtain our required continuing education and who will provide quality surveying education for our aspiring registrants? There is a good possibility that we may need to make a commitment to a singular program in Wyoming or if our state cannot sustain at least one program, we may need to support an out of state program. Please take some time to discuss this in your chapters, as this problem may have far reaching effects for Wyoming Land Surveyors. We will discuss this subject at the upcoming annual meeting. All ideas, concerns and comments are encouraged.

The WYSBRPEPLS recently reviewed the comments received regarding the proposed changes in the rules and regulations. It appears that continuing education for retention of licensure is going to become effective for 1996 renewals. The board also received an overwhelming amount of comments to retain the current rules and setting the controlling corners during a section subdivision. One particular proposed change

which I found extremely disturbing was the definition of established, whereby under proposed changes established could mean to "determine" only.

The rules under Section 4, monumentation, currently read in part: "The words establish or reestablish as used in the Manual shall mean to determine the true position of a corner and mark it will a permanent monument". Hopefully the board will not make an attempt to water down this definition and will continue to require a prudent monumentation of all controlling corners.

In closing, I would like to make note of a recent workshop which I had the pleasure to be involved. This workshop was presented by the Bureau of Land Management, Cadastral Survey, Colorado State Office, Professional Land Surveyors of Colorado, WESTFED, and Metro State College, and was held in conjunction with the WESTFED convention in Denver, Colorado. The 3½ day workshop, entitled "Applying the Bureau of Land Management Manual to Cadastral Surveys" was a condensed version of the BLM's two week Advanced Cadastral Survey course. It was very rewarding to see classrooms full of Professional Land Surveyors from all over the western United States, furthering their knowledge of the Public Land Survey System. Congratulations to Colorado Cadastral Survey, PLSC, Metro State, and WESTFED for an extremely successful workshop. Congratulations to our Wyoming graduates.

The next PLSW BOD meeting is scheduled to be held in Casper, Saturday, December 9. Hope to see you all there.

—HERB'S CORNER

(Continued from Page 12)

The retracement of the GLO/BLM surveys requires that the professional land surveyor possess the best available information to retrace, locate, and/or establish/reestablish the previously monumented corners. The land surveyor must employ the primary historical data and information. As mentioned herein, "historical data" includes, but is not limited to, original survey notes and plats, resurvey notes and plats, the contract, special instructions, manuals of survey instructions in force during the various surveys (both original surveys and resurveys), and any correspondence between GLO/BLM officials and surveyors (now referred to as the case files).

The SBRPEPLS proposed rules and regulations V. 1. (b). (vii) and V. 4. (b) should be rewritten, emphasizing that sound professional practice as dictated by common law, with the encouragement to *seek guidance* from the current BLM publications as to good procedures for completing surveys.

Herbert W. Stoughton, Ph.D. Geodetic Engineer



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HERB'S CORNER

Memorandum for Record

SUBJECT: PROPOSED SBRPEPLS RULES AND REGULATIONS V.I.(B).(VII) AND V.4.(B)

The stipulation that the professional land surveyor must utilize 'appropriate "Manual of Surveying Instructions" issued by the Bureau of Land Management, United States Department of Interior.' [should read "United States Department of the Interior"]. V.I.(b).(vii) is unacceptable. The Bureau of Land Management (BLM) was established on 16 July 1946 [President's Reorganization Plan No. 3 of 1946]. Therefore, the only publications under BLM are *Manual of Instruction for the Survey of the Public Lands* editions of 1947 and 1973; and *Restoration of Lost or Obliterated Corners and Subdivision of Sections* editions of 1952, 1963, and 1974.

There were additional manuals, published by the General Land Office (GLO). These are: 1855 (reprinted in 1871); 1 June 1864; 3 May 1881; 1 January 1890; 30 June 1894; 1 January 1902 (reprinted in 1908); and 1930. Also, chapter I through VI of the 1930 Manual were issued as "Advance Sheets" in 1919 and 1924. The circular *Restoration of Lost or Obliterated Corners and Subdivision of Sections* were issued in 13 March 1883; 16 October 1896; 1 June 1909; and 5 April 1939. The 1883 edition was titled: *Restoration of Lost and Obliterated Corners*. All remaining editions contained the full title stated earlier. On 1 November 1879, the Commissioner of the General Land Office issued a circular letter on 'lost corners.'

According to a strict interpretation/reading of V. 1. (b). (vii) means that none of the GLO editions just cited are appropriate references for practicing land surveyors. This is unacceptable professional practice., and will expose practitioners who accept this dictum to severe liability.

The importance of plats and field notes in the retracement of earlier surveys is inestimable. In 45 L.D., pages 330 and 336 (Decisions of the Department of the Interior Relating to the Public Lands) states:

It has been repeatedly held by both State and Federal courts that plats and field notes referred to in patents may be resorted to for the purpose of determining the limits of the area that passed under such patents ... It is a well settled principle that when lands are granted according to an official plat of the survey of such lands, that plat itself, with all its notes, lines, descriptions, and land marks, becomes as much a part of the grant or deed by which they are conveyed, and controls so far as limits are concerned, as if such descriptive features were written out upon the face of the deed or the grant itself.

The 1974 edition of *Restoration of Lost or Obliterated Corners & Subdivision of Sections* states:

Subject: Proposed SBRPEPLS Rules and Regulations V.I.(b).(vii) and V.4.(b).

Under the above laws, and in principle as well, it is required that no survey or retracement shall be so executed as to impair the bona fide rights or claims of any claimant, entryman, or owner of land so affected.

... the local surveyor should be careful not to exercise unwarranted jurisdiction, nor to apply an arbitrary rule; he should note the distinction between the rules for original surveys and those that relate to retracements. This disregard of these principles, or for acquired property rights, may lead to unfortunate results

The GLO, and its successor the BLM, have addressed the use of the Manual by private sector practitioners. In the 1930 Manual, GLO stated (p. 22):

The instructions contained in this Manual are to be observed by every engineer engaged in the execution of the public-land surveys. All other surveyors who at times have been employed in the surveying service of the General Land Office, should bear in mind that in their private capacities they are acting under somewhat different rules of law from those governing original surveys, and surveyors should discriminate between the provisions of the statutes which control original surveys and those which apply to the retracement of lines that have been officially established and approved.

The 1947 Manual states (p. 2);

The Manual presents the detail of the plan and methods from the point where the subjects are ordinarily in the text books on Surveying. ... The Manual is for the guidance of the employees of the Bureau of Land Management. To all others this surveying practice should be regarded as advisory, with no attempt to interpret State law respecting the survey of private property.

The 1973 Manual is silent on the subject.

However, between the Manuals and the circulars, there is a definite philosophy that the writings were technical documents for use by GLO/BLM surveyors, and that the writings were only advisory to land surveyors in the private sector. There exist, however, an instance when the GLO/BLM publications are mandatory references. When privately owned lands are contiguous to Federal lands, then the Federal instructions control.

In 1989, the Supreme Court of Idaho stated that the Manual has never been adopted as a rule of civil procedure in the courts of that state, and nothing in the record demonstrated that it was intended to serve as anything but a rule for the guidance of surveyors in the field in their analyzing of evidence found at the scene [States *ex rel.* Evans v. Barnett, 776 P.2d 438 (Idaho 1989)].

In "Judicial Functions of Surveyors" by Justice William Cooley (1884) stated:

He (the surveyor) is not to assume that a monument is lost until after he has thoroughly sifted the evidence and found himself unable to trace it. Even then he should hesitate long before doing anything to the disturbance of settled possessions.

(Continued on Page 13)

Land Surveying Problems In The 90's

HERBERT W. STOUGHTON

GEODETIC ENGINEER

(PART 2 OF 3)

FIELD NOTES - DEVELOPING ACCURACY.

Field notes are the record of what was "seen" and "measured." Note keeping is the most important aspect of land surveying. This document is the record of what an individual saw at a specific epoch. The surveyor must, through the field notes, be able to impart to the court that an impartial stance was exercised in gathering the evidence and quantitative data.

Furthermore, the quantitative data observed can be statistically analyzed to estimate the goodness of the measurements. It is beyond the scope of this paper to describe the mathematical principles. There are two terms which require definition and clarification - *precision and accuracy*.

precision: degree of refinement in the performance of an operation or in the statement of a result. Precision relates to the quality of execution. Precision is of no significance unless *accuracy* is also obtained.

accuracy: degree of conformity to a *standard*. Accuracy relates to the quality of a result, and is distinguished from *precision* which relates to the quality of the operation by which the result is obtained. The standard of reference is the fundamental definition of the quantity being measured.

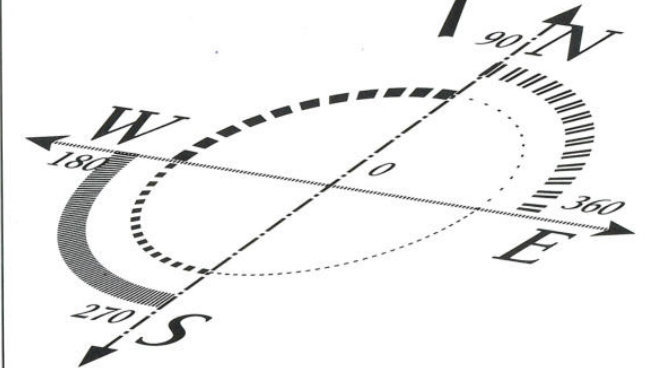
The field notes do not normally reflect the accuracy of the survey, but usually provide information about the precision of the survey. The normal way a surveyor converts precise data to accurate data is quite simple. Either the observing procedure or mathematical application of corrections to the observed data, or a combination of both, are used. These are valid procedures as the surveyor is not "manipulating" the data, but correcting the observations for *systematic errors* that degrade the data from the truth. Land surveyors should perform tests (comparisons) against accepted standards. These data are not kept with a project, and are not usually determined immediately prior to or following a survey, unless problems are encountered.

The previous discussion concerning field notes has addressed the accuracy and precision of quantitative data, which is only one aspect of accurate field notes. The second, and equally important aspect of the field notes is the data (information) reported concerning physical evidence that could affect title. All too often, field personnel fail to record salient facts that raise title issues. Examples include roof eaves overhanging adjacent property, common driveways, utility lines and other services crossing the property to adjacent properties, and "boundary fences."

The land surveyor must accurately report these features, and make sufficient measurements in order to inform the client, the client's attorney, and the court of the location of the evidence. Remember, *the same* physical evidence is required to acquire title by various unwritten means. It is not the land surveyor's role to decide which legal rule applies, but to furnish the court the relationship of existing evidence found on the ground.

The question that arises is how accurate should measurements be made. The answer is not exact, but requires judgment. For example, a chain-link fence with posts set in concrete can be

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—LAND SURVEYING

(Continued from Page 5)

located to ± 0.02 foot (1/4 inch). For a barbed wire pasture fence in rural areas, using either wood or metal posts, the location to an accuracy of ± 0.10 to ± 0.50 foot (1 inch to 6 inches) would be acceptable. When a fence is not visible its entire length, then numerous points along the fence should be measured. Unless a surveyor was employed to align a fence prior to construction, the fence will tend to "wander." In a recent survey project, a barbed wire fence over two miles long was surveyed (12,500 feet). 25 points along the fence line were located. Based upon statistical procedures, a most probable line was computed. Three of the original points were rejected as being definite outliers. The fence wandered from +3.45 to -3.30 feet (a plus distance was north of the line, and a negative distance was south of the line) of the most probable line.

Buildings, utilities, and other features should be located with reasonable accuracy. For example, the corner of a building's foundation is only accurate to about one inch (0.08 foot). Survey notes may state to one-hundredth of a foot (1/8 inch), but final reports on maps should be reported to ± 0.05 to ± 0.10 foot. Many survey maps depict buildings and structures. The planimetric dimensions should be reported to ± 0.10 foot.

Courthouse Research.

The topic "courthouse research" will foster considerable controversy. A large number of land surveyors do not believe that their duties and responsibilities require indepth research. Unfortunately, this writer does not endorse or support this viewpoint. The reason for this stance is predicated upon the information generally included in a title search. Title searches emphasize searching the historical records for documents that affect title. Unless the abstractor is alert, typographical errors in the physical description (particularly metes and bounds) are not noted. It is not uncommon to have a description of a parcel of land, which has not been divided in the interim, to not agree with the original (first) description.

Courthouse research is *not* a glamorous land surveying activity. There exist no academic training available. In this writer's opinion, although there are many excellent title researchers in the title industry, the number of superior researchers for the land surveying requirements is quite small. This is not a condemnation of the title industry, but a realization that the information required by the land surveyor is very different than that required by title companies.

The land surveyor has different needs. Not only does the surveyor require record information concerning the property being surveyed, but information concerning adjoining, utilities, and transportation routes. It is not uncommon for the land surveyor to require information that is one or more centuries old. Through the years this writer has executed several boundary surveys where the last transfer of title was between 100 and 140 years earlier! One survey required a retracement of a boundary established in 1789. Although no original monuments were recovered, the uncertainty of the reestablished boundary after studying hundreds of deeds was about one foot.

Some boundaries are defined by man-made or artificial features (i.e. crest of the mill dam, contour, etc.). The "contour" boundary is the legal-technical nightmare. A 1983 deed states that the contour at elevation 6,542 feet represents the boundary. The question arises, how was "6,542" determined? First, the land

surveyor must know when the use of the definition was first cited. Then, the history of surveying in the area must be studied. If this definition was used prior to 1899 (in Wyoming) then the problem of definition of the source of the elevation requires more research. It was not until 1899-1900 time frame that the first transcontinental geodetic leveling was executed in Wyoming. In all likelihood elevations stated in Wyoming prior to that date were determined by barometric hypsometry, railroad surveys, and/or the extension of local vertical (elevation) datums established by the Topographic Division of the U.S. Geological Survey. One such regional datum exists around Cheyenne and Laramie. The problem with older vertical datums being determined by aneroid barometer is the inherent error in the determination. Barometric elevations may be in error between a few feet to over 100 feet. Also, if the elevation was stated after 1929 and before 1988, then the datum would be the NGVD 1929 (National Geodetic Vertical Datum of 1929). Today, 1993, the vertical datum is NAVD1988 (North American Vertical Datum of 1988). In Cheyenne, the differences in elevation between the two datums is one meter. Remember, the surveyor must use the same reference systems that were employed to originally establish the definition. Therefore, considerable research is required to resolve definition determinations. It is very unlikely that a title abstractor or attorney would be cognizant of problems of this nature.

Another important aspect of performing title research is to know the "local" history. When researching title records, only about 10 to 20 percent of the pre-World War I information is available. This means that voids must be filled with assumptions. These assumptions are developed by studying the local history and learning about the local surveyors in order to understand how those surveyors performed their work, the types of monuments they set, and the accuracies of their work. Old survey records are invaluable aids. Boundary monuments and evidence that existed fifty or more years ago may no longer exist. The surveyor of record established monuments based upon the then existing information. The latter monuments are then used to reestablish boundaries, which can be traced to the earliest survey records and evidence.

In numerous instances, the researcher seeking information must search "unofficial" sources for requisite data. Not only the courthouse (county clerk's office or register of deeds' office) are used, but the county engineer, county surveyor, planning commission, county commissioners, county highway commission, State Engineer, State Lands Commission, Bureau of Land Management, National Archives, Interstate Commerce Commission, Corps of Engineers, etc. are potential sources of information.

Title Commitments And Reports.

Title commitments and reports are invaluable aids to the land surveyor. The land surveyor desires these documents prior to executing the survey. However, many times both activities are being performed simultaneously. This is poor planning, as the land surveyor is not privy to adverse information affecting the boundaries or title discovered in the records. Although the land surveyor should perform "courthouse research," the information contained in the title commitment and reports provide invaluable foundation information for the surveyor's research.

(Continued on Page 7)

EISENHOWER AND THE PEOPLE TO PEOPLE LEGACY

1996 will mark the 40th anniversary of People to People. A rapidly changing world makes its mission more vital than ever.

There must have been times when, sitting at his desk in the Oval Office, President Dwight Eisenhower wondered if another World War — one we might not win — wasn't inevitable.

But through each crisis and confrontation he faced, the former Supreme Allied Commander and Chief of the North Atlantic Treaty Organization drew on his vision of the world.

Eisenhower's vision was shaped both by his professional life and by his upbringing in a close-knit, devout Kansas family. A place where survival hinged on your ability to work side-by-side with your neighbors. A place where individual initiative, rather than government intervention, guided the community.

These are the same values President Eisenhower deemed essential to an organization he would call "People to People."

The president chaired the first meeting of People to People's administrators in 1956. The organization's inception, however, came at least a decade earlier, just a few months after the end of World War II.

Documents in the Eisenhower Presidential Library in Abilene, Kansas, point to a speech made by Eisenhower on August 22, 1945, as possibly the first recorded mention of the People to People concept.

"To reduce mutual suspicions and antagonisms, it is important that people-and I mean people themselves, rather than only governmental representatives, learn to know more of each other," he said.

Deeply touched by the experiences American soldiers had while serving in England during the War, Eisenhower could see the value of people-to-people encounters.

"Among the soldiers now returning to our shores from Europe, plenty can be found who will object to certain policies and customs that they encountered overseas. But few will you find who, having lived in Britain, did not like the British people ... you will find that almost all think of ordinary European citizens as people much like ourselves, and in the circle of actual contact, are losing those suspicions we instinctively hold toward strangers."

Attached to a transcript of the speech is a handwritten note from late House Special Assistant Frederic Fox to colleague Fred Dearborn, which reads, "The president apparently has an old, deep affection for the possibilities of People to People... Attached is an excerpt from a speech he made 12 years ago..."

Having an idea for making the world a better place is something of an American pastime. Translating that idea into a viable, ongoing operation takes much greater commitment and stamina, something Eisenhower brought to his administration.

People to People initially came under the administration of the United States Information Agency and included both the Sister Cities program and Project HOPE as part of its mission.

To broaden the scope of the organization, some of the nation's most distinguished leaders in such fields as business, the arts, literature, and education were asked to be the first chairmen of People to People. These included the Chairman of the Board of General Mills, Harry Bullis; cartoonist Al Capp; AFL-CIO president George Meany; Philadelphia Orchestra conductor

Nobel Prize winning author William Faulkner.

When Eisenhower left office in 1961, People to People had to survive without government support. Through the generosity of Joyce Hall, creator of Hallmark, a private organization called People to People International was formed and permanent headquarters established in Kansas City, Missouri.

Since 1956, the mission of People to People has remained unchanged: to bridge the gap not only between people, but also between what we think we know about the world-and the world as it really is.

For more information on People to People Citizen Ambassador Program write to Citizen Ambassador Program, Dwight D. Eisenhower Building, S.110 Ferrall Street, Spokane, WA 99202.



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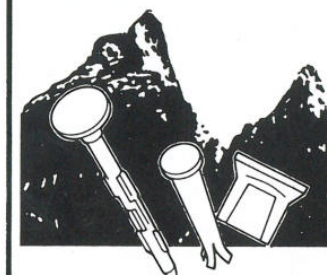
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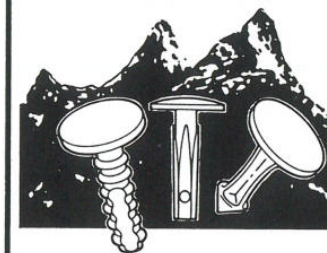
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—STANDARD OF RESEARCH

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property. "Standards that suggest otherwise expand the surveyor's role into that of the lawyer. With that expanded role goes an extended professional liability." In correspondence with me, Mr. Foster was concerned with our recommendation that "...the obligations of the surveyor to do a thorough job of research for the project are not relieved when the client is required to provide the record description and other information to the surveyor." He suggested that language such as follows provides a reasonable balance between the surveyor's responsibilities and their potential liabilities as surveyors most likely are currently practicing:

"Land surveyors are expected to exercise reasonable care in doing records research, but cannot be held liable for errors or omissions caused by defect in the chain of title for the property being surveyed, or for that of the Adjoiners. Title defects may be revealed through an examination of title by those professionals trained and experienced in this area." (Current Practice)

In correspondence to me, Mr. Hermansen takes a somewhat different view, urging surveyors to expand their scope of practice by consciously taking on greater responsibility:

"...Surveyors in other parts of the world grab on to more responsibility and by doing so become more crucial to the conveyance process perhaps indispensable ... How the difference in attitude and demand for responsibility makes a difference in the profession! By abdicating responsibility to do the research, surveyors lose the chance to control the process and the information they use. They no longer have the landowner as a client. For fear of responsibility and liability they shun the sometimes litigious landowner in order to have a boss who is a title agent or an attorney willing to take responsibility for mistakes. Responsibilities carry a heavy burden (such as increased liability) but the reward is control. As attorneys are well aware, responsibility is control; control is power; and power is money. The more surveyors are responsible for, the more they can charge for the responsibilities."

He has also developed what he considers an acceptable standard for research, noting that the standard can apply to either the surveyor doing the work or someone else that is capable of doing the research:

Surveyors shall cause a search of the public records to be made in sufficient scope and depth that a surveyor of ordinary prudence and skill would be expected to identify with reasonable certainty:

1. conflicting record and ownership boundary locations within the client's record boundaries,
2. gaps between the client's and the adjoiner's record boundary,
3. scrivener errors in historical and operative descriptions, and
4. the location of the client's record boundaries, so long as such information exists in the public records and is properly indexed. Surveyors shall seek to identify, locate, and review private records that:
 1. are cited in public records or
 2. a surveyor of ordinary prudence would reasonably believe:
 - a. to be critical in locating the client's boundaries,
 - b. could disclose a conflict with the client's boundaries,
 - c. would locate encumbrances on the client's property, or
 - d. could aid in fixing or refuting a reasonable location of the

3. provided, however, such private records:

- a. are known to exist,
- b. can be located in a reasonable time frame from a likely source,
- c. are accessible to surveyors upon request, and
- d. may be obtained or viewed with reasonable cost. Reasonable cost may be defined as a cost that does not exceed the value of the estimated area that would be placed in doubt by the records sought or the cost involved in compiling the information from other sources, whichever is less. (Future Practice)

Clearly, the above two examples of text meet the criteria of reasonableness in terms of definition. They do not place any absolutes on the surveyor as some definitions have in currently published standards. The latter (Future Practice) must be classified as more positive and expansive than the former (Current Practice). The former does not require the surveyor to be responsible for the materials being used but does require the surveyor "to exercise reasonable care in doing records research" but does not hold the surveyor liable "for errors or omissions caused by defect in the chain of title for the property being surveyed." In this example, the ultimate responsibility for research does not rest with the surveyor, nor can the surveyor be considered essential to the research process, but the surveyor must certainly understand something about records research and the implication of those records on the completion of the project.

In the latter example, either the surveyor or other title professional can be responsible for the completion of records research. This standard provides an expansive role for the surveyor but the surveyor can also decide to accept and rely on the record information of others. Clearly, the surveyor has both opportunities and responsibilities with the latter. If we have acquired the knowledge that the latter requires, why should we not take advantage of this knowledge for our own benefit and remuneration? As a professional, I believe that we should be working in obtaining the latter, as a standard of practice.

(Bob Prescott was the NYSAPLS representative to NSPS Board of Governors at the time this article was written)

Reprinted from the Empire State Surveyor 5/94.

—LAND SURVEYING

(Continued from Page 6)

Flood Plains And Environmental Issues.

The subject of flood plains and environmental issues are extremely controversial. There are two distinctly separate issues.

The Federal Emergency Management Agency (FEMA) oversees the flood plain program. Land surveyors and engineers strongly disagree with FEMA's definitions of flood plains. The land surveyor has no choice but to map flood plains as *defined* by FEMA. Before a land surveyor certifies as to a parcel being within or outside the limits of a FEMA defined flood plain, the land surveyor *must review* the latest FEMA documents. In many instances local authorities do not have these documents and notification of changes are not published by FEMA. When FEMA flood plain mapping does not exist, the land surveyor must carefully inspect the area in question. If the land surveyor is uncertain about flooding, then additional research is necessary.

Environmental issues present an interesting problem. Although no judicial opinion exists in Wyoming, the practice of evaluating environmental issues is not within the purview of land surveying practice as defined by statute, but is within the scope of engineering practice. The land surveyor cannot practice professional engineering unless so licensed.

Conflicting Terms In Deeds - Which One Is Primary, Which One Is Informational?

The subject of conflicting terms in deeds is a full semester graduate level course. The rules for interpretation are set forth in court decisions. A few treatises have been written about the subject. It is impossible to present all the aspects of the subject. The underlying cause of problems is the failure to carefully write and read the boundary description. The basic rule is: if a course contains two or more descriptions, then it is likely that two or more interpretations can result. When this occurs, it is the land surveyor and the attorney's responsibilities to determine which is primary or secondary in importance.

Every case is an individual problem, and must be treated as such. In a few instances, the ambiguities can be resolved by reviewing the written records. However, inspection and a survey of the property to correlate written records and physical evidence is the most frequent solution. It is important that the land surveyor and the attorney work closely together on these problems.

ALTA/ACSM Land Title Surveys.

A misunderstood and misused land surveying product is the ALTA (American Land Title Association) survey. Both attorneys and land surveyors are at fault. Many requesters have heard the term "ALTA survey," and ask for it. Many land surveyors fail to understand the intent of the survey. To obtain an ALTA survey, every interested party must contribute to the effort. Attorneys and title companies *must provide* specific information and data to the land surveyor. If the information is not provided, then the land surveyor should obtain the information and bill the client for the nonperformance. If an attorney desires an ALTA survey, then it is the attorney's duty and responsibility to inform the land surveyor of the issues that mandate the survey. It is a disservice to the land surveyor when information is withheld. All parties interested in an ALTA survey should know and understand the ALTA-ACSM standards and requirements. These requirements specifically state the duties and responsibilities of each party and the products produced. In 1992, the American

Land Title Association and the American Congress on Surveying and Mapping adopted revised standards, which clarified technical issues that existed.

What Are The Surveyor's Obligations To The Client In Relation To Environmental Issues?

As mentioned earlier, the land surveyor is practicing outside the statutorily define scope of the profession. However, the surveyor does have the responsibility to map the bounds of environmental zones (i.e. swamp lands, contaminated lands - dumps, etc.), and notify the client of the existence of any issues that are apparent. Also, when developing property, environmental statements may be required.

Depending upon local customs, the land surveyor may be permitted to prepare simple environmental assessments pertaining to drainage, etc. If this is the case, then the land surveyor is not practicing beyond the normal duties expected, and the Board of Professional Registration will have to review the limits of professional practice and possibly seek correcting legislation. Furthermore, the land surveyor must review the professional liabilities incurred when performing environmental tasks. There has been little case law developed that addresses this issue.

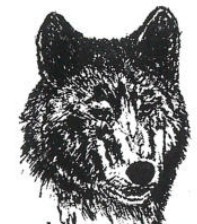
How To Find And Describe Boundaries.

The location of boundaries is a judgment decision based upon statutory, regulatory, and case law; experience; and evidence discovered. All factors are important, but the lack of discovered evidence is the most important information to the attorney and land surveyor. If a preponderance of evidence is available, then the legal issues are better defined. If the evidence is available and presented, the courts have substantial data from which a decision can be rendered. When insufficient evidence is submitted, rendered legal decisions are frequently ambiguous, and readers apply the decision indiscriminately.

Writing legal descriptions is an "art form" requiring not only legal knowledge but scrivener's skills. Today, there are very few opportunities to study description writing for both land surveyors and attorneys. Because the land surveyor has knowledge about the boundaries, the parcel description should be written by the surveyor. Attorneys should review the description for legal completeness, and seek clarification from the surveyor. The attorney should *not* alter a parcel description without the surveyor's consent. There are two reasons for this course of action. First: if the description is altered and litigation results, then the land surveyor is subject to regulatory scrutiny for professional misconduct. Second: the changes may be so drastic that it is impossible to determine the intent of the description and cause uncertainty to future generations.

Not all land surveyors write good descriptions, and attorneys should review the description for completeness. Land surveyors and attorneys who write large numbers of descriptions should assemble a technical library on the subject. There are several excellent references available.

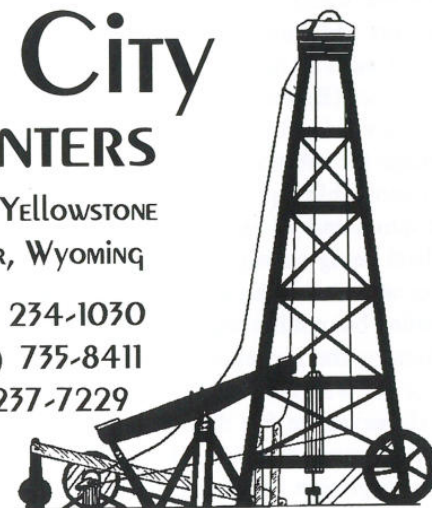
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The Metric Corner

It's no misnomer or secret, and you may have thought it was dead, but it's not. We are going metric. Despite headlines to the contrary, metric conversion of highway signs is not being rejected, merely postponed until after 1996. Although highway signs will not be converted until after the original target date, the rest of the metric conversion is proceeding as planned.

Like other states, Wyoming is rapidly converting to the metric system of units. The Federal Government has mandated that projects utilizing federal funds use metric units for construction. The Wyoming Department of Transportation (WYDOT) is currently using metric units on all new projects that will be bid for construction after October 1996.

WYDOT has created its own metric conversion policy in the form of Operating Policy 6-1. The policy was signed and adopted on December 14, 1992. Within the policy, WYDOT committed themselves to full compliance and implementation of the metric Conversion Act with implementation according to the guidelines established by FHWA and AASHTO. WYDOT's "Standard Specifications for Road & Bridge Construction" book is being rewritten in metrics and should be available in 1995. A "Metric Conversion Manual," March 1994 was produced by WYDOT to provide the basic information needed for designing and producing a metric project, as well as an explanation for the need for the change to metrics. The manual is intended as a reference guide for all programs within the Wyoming Department of Transportation.

Contractors, material suppliers and consulting engineers will be required to utilize metric measurements for WYDOT work and therefore must become familiar with the system. While local construction and maintenance projects may not be required to utilize metric units, local officials should be prepared for this change. The use of metrics, even on local projects, is coming and it will require an understanding of the metric system.

The Wyoming T² Center offers technical assistance to those converting to the metric system. Design aids, conversion data and training is offered through the T² Center.

Reprinted from Spring 1995 issue of the Wyoming T2 Newsletter.



SCHERBEL ON SURVEYING A compilation of parts of the WYOMING STATUTES

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Locating Historical Aerial Photography . . .

In dealing with historical land use data, the surveyor may need to determine old fence lines, old or abandoned roads, railroad grades, etc. One good source of information for these features is aerial photography; in many cases, the older the better.

Fortunately, it is a relative easy task to locate older photography, given in the right equipment, in this case a microfiche reader. The U.S. Geological Survey, National Mapping Division (NMD) has available on microfiche, its Aerial Photography Summary Record System (APSRs). The microfiche are set up by state, and contain all of the aerial photography projects within their data base.

The data for each project are sequenced by 7.5 minute cells along a parallel of latitude from the lower latitude to higher values (for the U.S., south to north.) Along each latitude the information is sorted every 7.5 minutes of longitude from smaller to larger values (for the U.S., east to west). Records within each of these 7.5 cells (Quadrangles) are sorted chronologically with the most recent date at the top of the list.

The data for each project is coded to show the date of coverage, status (planned or completed), agency project code, image scale, focal length of camera, film type (Black & White, Color, Color IR), film format, sensor class, cloud cover (percentage), camera specifications, and quad coverage (percentage). Under remarks the agencies may provide additional information on the projects such as locality, name of forest, river, etc. In some cases, the EROS Data Center at Sioux Falls, SD, has provided the cassette and frame numbers of the microfilm cassette locator information for previewing the photographs at the Earth Science Information Center (ESIC) offices in the NMD.

Contributing agencies represent both the public and the private sectors. Accompanying each microfiche is a contributors guide, which lists the agency code for each contributing agency. For the most part, the photography from U.S. Government agencies is available through the EROS Data center in Sioux Falls, SD. Department of Agriculture photography is generally available through the Aerial Photography Field Office in Salt Lake City, UT. In the foreseeable future, the USGS plans to put the entire APSRS data base on CD-Rom. For additional information regarding this product contact the USGS ESIC at the Denver Federal Center (303) 236-5829.

Submitted by Robert L. Brown, PE, CDOT, R-O-W Dept.

This article appeared in the Colorado "Side Shots". The contributor did not specify the issue.

What Is a Reasonable Standard of Research and Whose Responsibility Is It?

ROBERT R. PRESCOTT, LS

NSPS started the process of revising the "Minimum Standard for Property Boundary Surveys" nearly a year ago. These standards were adopted by the ACSM Board of Direction in 1979. As part of the process of revision, NSPS requested each state affiliate association to review not only the 1979 NSPS Standards, but also ALTA/ACSM (now ALTA/NSPS) 1992 Standards, the NCEES Model Minimum Standards for the Practice of Land Surveying (1992), and our own state standards if we had any. A committee met and prepared a complete review of the NSPS proposed draft. One of the areas the committee recommended changes to was the section on research. We recommended the inclusion of the following language: *It shall be the responsibility of the client to furnish the surveyor with the record description and all easements and instruments affecting title to the land being surveyed, including the liber and page showing the recorded information, and all necessary reference descriptions including but not limited to those of adjoining properties. Where customary, an Abstract of Title shall be furnished to the Surveyor.* If the legal description alludes to unique conditions, the Surveyor should consult other sources of information referred to in the legal description in order to assemble suitable written evidence of the corners and lines of the property.

Recently, I had a discussion with Knud E. Hermansen, PE, LS, PhD, on this subject, who feels that such a statement has no force on the client based upon the laws. He refers to the following: "...No profession may, by adopting its own standards of performance, method of operation, or paragons of care, insulate itself from liability..." See *Favalora v. Aetna Casualty and Surety Company*, 144 So.2d 544 (La.App. 1st Cir. 1962) quoted in *Lawyers Title Ins. Co. v. Carey Hodges & Associates, Inc.*, 358 S.2d 964, 968 (La.App. 1978)."

His thesis is that standards for the surveyor do not apply to the client since clients as a group had no say in the development of the standards and have no standing in the organization that offers the standards. He feels that standards are written for surveyors and cannot impose actions on the client. Actions of this sort must be negotiated between the surveyor and the client by contract (Business Practice). I believe that Mr. Hermansen makes a valid point. At my request he provided the following language for substitution: "The surveyor shall cause the client to be responsible for furnishing the surveyor with the record description and all easements and instruments affecting title to the land being surveyed, including the liber and page showing the recorded information, and all necessary reference descriptions including but not limited to those of adjoining properties. Where customary, the surveyor shall also cause the client to provide him or her with an Abstract of Title."

However, he felt that such language was not much better than what currently exists. He felt that "the standards a profession writes to govern its services to the public will reflect how the profession feels about itself and its future." I should note that there are surveyors who feel when the client or their agent specify that a survey shall be done to a specific standard, those persons

understand what the standards require of both parties. They feel the client or the agent should be bound by any provisions within the standards that refer to the client or their agent. It probably makes good sense for the surveyor to inform the person who is contracting for the service about any provisions within the standards that require the client to do something and what the implications are on the completion of the project. The most recent ALTA/NSPS standards use language that is similar to the above:

"...It is equally recognized that for the performance of a survey, the surveyor will be provided with appropriate data which can be relied upon in the preparation of the survey..."

"...The request shall set forth the record description of the property. The record description of the property, any record easements benefiting the property, the record easements or servitudes and covenants affecting the property ("Record Documents", the names and deed data of all adjacent owners, as available, and any other documents containing desired appropriate information affecting the property being surveyed and to which the survey shall make reference shall be provided to the surveyor for notation on the plat or map of survey..."

One of the major complaints about standards is that the client or their agent does not always honor this request which causes additional cost and time to the surveyor doing the survey. In these cases, many surveyors are concerned that they may end up providing these services at no additional cost or have to decline continuing with the project.

Recently, Robert W. Foster, PE, PLS, wrote an article titled, "Land Records Research: Whose Job Is It?" (Civil Engineering News, January 1994, Vol. 5, Number 12). In his article he notes that a great amount of confusion exists in terms of the definition of what constitutes acceptable research by the surveyor. This confusion exists because of the differing definitions of what constitutes reasonable research in the minimum survey standards developed by various jurisdictions. He feels that the confusion adds to, and provides liability implications for surveyors. He does not feel 'that most surveyors currently see as part of their role providing research of title to discover defects in title of real

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