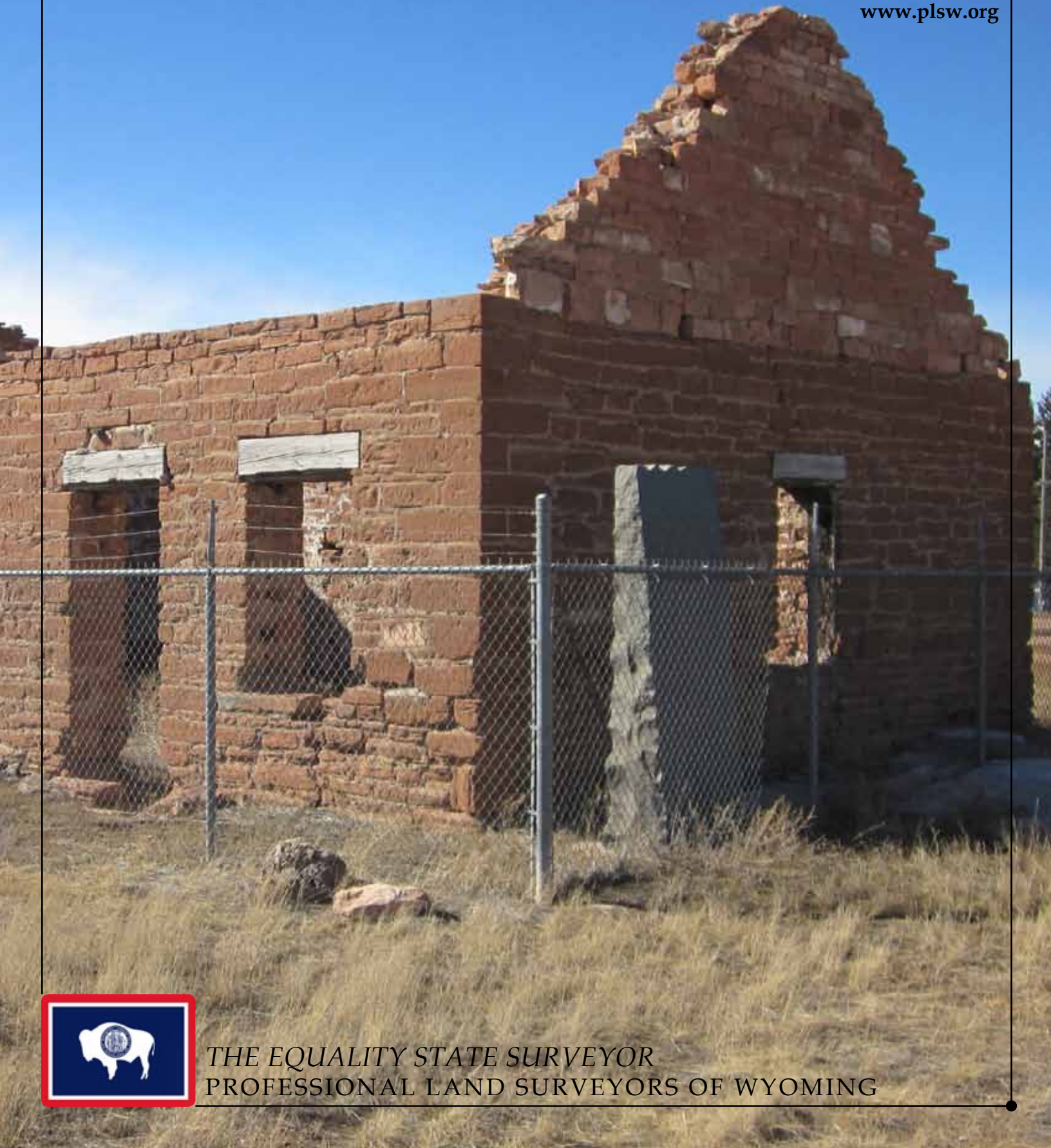


Volume 25: Issue 2
April, 2014



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GUARD HOUSE 2014
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For more information please contact Pete Hutchison or Jack Studley.

PLSW (Professional Land Surveyors of Wyoming) is a statewide organization of Land Surveyors registered 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 National Society of Professional Surveyors (NSPS) and the Western Federation of Professional Land Surveyors (WestFed).

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Hello, fellow PLSW members and affiliates,

It is the heart of the winter season, and as I sit out a raging blizzard in the warmth of my office, my thoughts are turning to what else? Fishing! I hope the rest of you have a similar subject to dream about as we wait for winter to transition to spring. I also want to thank all of you for electing me to this position of trust and responsibility within the PLSW.

I want to build on what I would like to be my agenda for the coming year, namely getting the youth of Wyoming involved with and encouraged to become part of the surveying world. I want to implement a program that will bring us as surveyors into the world of youth education here in the Equality State. I am proposing that the PLSW make a huge effort to get on board with this, and find a way to share your profession with our youth. It will require some time and energy from us, and as I look around the room, I see not only a graying group of people, but also people who have a lot to share.

I envision the PLSW reaching out to schools in our communities, and offering to make a presentation/workshop at "career days", to reach out to math students who would want to be involved with the Trig-Star program that NSPS sponsors, to make youth aware of scholarships that are out there and invite them to learn about what we do as surveyors. I envision the PLSW members contacting their local schools and actively working with them to make students aware of what we do, to find opportunities to reach young people who might possibly be interested in surveying as a career. I am hoping that someone from each school district in the state will volunteer to get on board to bring the profession of surveying into the educational experience at the junior high and senior high levels of our schools.

I realize that this takes time, and as I said before, it will require some energy from PLSW members, but I hope many of you will see the benefits of being involved with this initiative. I also know that my one year as President is really very short, but what I hope to accomplish is to set the ball rolling, to just get the process started. More to come as time goes by!

After all, as my mentor once told me, "what other job could you have where you get to go for a hike and have a picnic lunch every day?"

Sincerely,

Carl

PRESIDENT'S MESSAGE



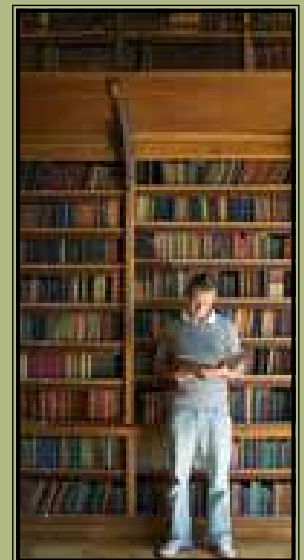
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ANNOUNCEMENTS

The Wyoming State Bar Association is in the rule making process and Real Property issues are involved. The documents are at: www.wyomingbar.org under "UPL Rules".

CONGRATULATIONS!

The members of the Professional Land Surveyors of Wyoming would like to recognize the achievement of the following new Wyoming registrants.

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Anthony Barnett,	Thermopolis, WY,	LSIT 153
Vincent Cavanaugh,	Cheyenne, WY,	LSIT 154
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To the surveying community:

I have been starting to receive some inquiries about points that can be occupied for the NGS 2014 campaign for GPS on Benchmarks. I would like to share a couple of links with you that would assist you in picking BM's to occupy.

The first link is the NGS web page talking about the campaign. It gives an overview of the purpose and some guidelines on selecting points. It also has some links to NGS programs that would allow you to display points in an area.

<http://www.ngs.noaa.gov/heightmod/GPSonBM.shtml>

The second link is to the shared projects web page for OPUS. I would suggest doing a county wide search to show if data has been collected on any BMs and published through OPUS-DB.

<http://www.ngs.noaa.gov/OPUS/view.jsp>

Some additional suggestions:

1. Do not re-occupy a point that has already been collected. Move up or down the road and occupy a different point.

2. While GPS on any BM is good, I would suggest that spacing would better suit the purposes of this campaign. Allow 10 to 20 miles between points if working in the plains; and closer spacing as you get towards the mountains would be better as the geoid can rapidly change in these areas.

Please feel free to contact me if you have any questions.

Michael D. Londe, PhD, NGS WY Coordinator

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SURVEYORS & TITLE

by Knud E. Hermansen, P.L.S., P.E., Ph.D., Esq †

Surveyors, as a general rule, stay clear of providing title opinions — rightfully so. Nevertheless, reasonably competent surveying services must rely on some fundamental knowledge of title opinions. A surveyor that is ignorant about the basis for a title opinion could fail to provide relevant information necessary for an attorney to provide a competent title opinion.

A deed is merely evidence of title – not proof of title

One of the fundamental concepts forming the need for an informed title opinion from a competent source is the fact that the deed is merely evidence of title, not proof of title. Every surveyor has heard a client or neighbor claiming: “I’ve got title to that property” or “I own that property.” The statement is usually made as they waive their deed about in a manner meant to forestall any further questioning of their right to claim to some boundary. However, unless the surveyor is in one of the few states permitting registered title and the surveyor is actually dealing with a registered title in that state, a deed is merely evidence of title – NOT proof of title. This is true despite the fact the deed is a warranty deed. If a deed were proof of ownership there would be no need for a title search or title insurance.

Since the deed is only evidence of title and not proof, the prudent buyer will obtain a title opinion. A title opinion is founded on two parts: 1) facts and information about the title and 2) an analysis of the facts and information culminating in an informed opinion. The facts are usually portrayed in the form of an abstract of prior records. The abstract is a compilation of information found in deeds, mortgages, releases, and other recorded documents. In the past, an abstract of title was prepared (or an existing abstract added to) for almost every property conveyed. The completed abstract was examined by a knowledgeable attorney who provided an opinion on the title.

A title opinion will opine that the title is one of the following (not always succinctly): clear, marketable, defensible, clouded (unmarketable), or there is merely color of title.

Clear title is title that has no defects. It is title unencumbered by liens, encroachments, or other impediments that would cut short or curtail the complete and reasonable enjoyment of the entire property. In modern practice, title that is encumbered by zoning restrictions is still

considered clear unless the current use of the property is in violation of the zoning.

Marketable title is title that a reasonably prudent and intelligent person, informed of the facts and their legal ramifications, would be willing to accept in the ordinary course of business. Marketable title is generally free from serious encumbrances, material defects, reasonable doubts, and well-founded concerns about its validity. It is title that can be sold or used as security at fair market value and allows the owner quiet and peaceful enjoyment of the property. It is title that does not expose an owner to probable litigation (regardless of the probability that the litigation outcome will be in the owner’s favor). Circumstances that have been found to make title unmarketable include breaks or gaps in the chain of title, encroachments that violate zoning, title founded on adverse possession (but not litigated to quiet title), less than a complete property interest, impairment of legal access, and boundary disputes or potential boundary problems.

Defensible title is title that has potential problems that will not likely cause the loss of title but would cause the prudent buyer to pay less than the market value. Defensible title looks to the probability of the outcome of litigation involving a title defect. Marketable title looks to the probable and reasonable likelihood of litigation exposure.

Clouded or unmarketable title is title that is defective in some aspect sufficient to cause reasonable concern that the buyer will not receive all the benefits they have bargained for. While the buyer may be willing to purchase the property, the price will be less than the fair market value of the property had the title to the property existed without the deficiency.

Color of title is the appearance of title. It is title that is all form without substance. The person has a deed but the deed conveyed no title.

Interjected into the title determination and acceptability of the title opinion is title insurance. Title can be insured against loss, damage, etc., from a multitude of sources, based on the standards of the insurer and the risk of loss. From a practical viewpoint, all title is insurable if the premiums are made large enough or the list of exceptions extensive enough. Consequently, the term “insurable title” has some wide possibilities.

Title insurance can, in some cases, insure the marketability of the title. This has given some people room to argue that title insurance should be able to substitute for marketable title when

the title insurance company is ready and willing to provide insurance that will affirmatively cover one or more conditions that may affect the marketability. However, marketable title and insurable title are not the same as they differ by discrimination criterion. Marketable title uses a reasonably intelligent or prudent person criterion based on future prospects for the property. Furthermore, marketable title requires a person accept or reject the title as it stands at the time of conveyance. The buyer or lender cannot qualify or condition their acceptance of the title.

On the other hand, insurable title uses a reasonably prudent investor or insurer criterion. The investor or insurer analyzes the risks, costs, profit margins, and the likelihood of successfully defending the title. The insurer can change the risk and amount of their indemnity by adding exceptions to the policy or using affirmative insurance. Consequently, they have the power to set conditions or stipulations for insuring the title that the buyer or lender does not have when determining if the title is marketable.

Consider the buyer who intends to build a house and a large garage where that person can indulge in his hobby of working on old cars. The buyer chooses a lot that is just sufficient in size to build

the house and large garage. The seller is an elderly widow who is motivated to sell and plans to move in with her daughter. As a result, the buyer gets a great deal, purchasing the lot and residence for \$120,000. In the purchase and sales agreement, the buyer agreed to accept insurable title rather than marketable title. As a consequence an abbreviated title examination occurs and an owner's title policy is issued. After purchasing the lot, the buyer discovers the width of the lot is five feet less than described in the deed. As a result of the deficiency in the width, the large garage cannot be built. The buyer files a claim with the title insurer. The title insurer contacts the neighbor to determine the cost and availability of purchasing a five-foot strip. The neighbor demands \$3,000. Next the title insurer obtains an appraisal on the lot with five feet less in width. The appraisal values the lot at \$119,000. The title insurer sends the buyer a check for \$1,000. The buyer has been financially compensated for the loss sustained by the reduced width. The title insurer is obligated to financially compensate for the loss sustained, not satisfy the needs or aspirations of the buyer.

Title opinions have deficiencies. Both the abstract and opinion are only as good as the knowledge, training, and experience of the person preparing

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the abstract and tendering the opinion. Even a quality title opinion has dozens of caveats (usually unstated). Matters outside the record, defects arising from government regulations (e.g., zoning), encumbrances appearing in the record beyond the period encompassed in the title search, or conditions at the site, to name a few, are often not factored into a title opinion. Without words to the contrary in a purchase and sales agreement for property, the buyer or lender has the right to expect marketable title from the seller or borrower where a warranty deed is sought and promised.

Every purchaser of land has a right to demand a title which shall put him in all reasonable security and which shall protect him from anxiety, lest annoying, if not successful suits be brought against him, and probably take from him or his representatives, land upon which money was invested. He should have a title which shall enable him not only to hold his land, but to hold it in peace; and if he wishes to sell it, to be reasonably sure that no flaw or doubt will come up to disturb its marketable value. *Hebb v. Severson*, 32 Wash.2d 159, 167-168, 201 P.2d 156, 159 (1948) quoting *Dobbs v. Norcross*, 24 N.J.Eq. 327

Consequently, surveying services involved in the conveyance of property should focus on those aspects of surveying services that could affect the marketability of the title. Discovery of disputed boundaries and encroachments are important. Even remote chances of boundary litigation will make the title unmarketable. All problems that have a potential detraction on the marketability of the property should be reported. Here is where a surveyor who presumes adverse possession or prescription has occurred and fails to report this deficiency in title does the client a disservice. Without a judgment supporting title gained by adverse possession or prescription, the title is not marketable.

Sometimes when a surveyor has discovered a problem and reported the problem, the surveyor has been pressured by a closing agent to obscure or remove the written disclosure from the survey work products in order that the buyer may be led to believe the buyer will be receiving marketable title.

The surveyor should make every effort to provide complete and accurate information for persons to arrive at a competent decision on the status of the title to be conveyed. This caution does always require every problem that exists be discovered or emphasized in a report.

Consider a 500-acre farm that has a one-foot strip of encroachment along an 80-foot section of the farm's boundary. This title is not a "clear title" because of the possibility of adverse possession of the one-foot strip. Nevertheless, the relatively small encroachment along such a small portion of the boundary to a large property will have no effect on the marketability of the title. A reasonable buyer, informed of the encroachment would still be willing to pay the fair market value for the 500-acre farm with or without the one-foot encroachment. Yet, the same one-foot encroachment on a one-quarter acre urban lot would make the title unmarketable. The reasonable buyer would either refuse to purchase the lot or demand a reduction in the purchase price upon discovery of the one-foot encroachment along a boundary of the one-quarter acre lot.

The concepts that have been outlined in this article point to the basis for many of the requirements set forth in the ALTA/ACSM Land Title Survey. As petty as many of the ALTA/ACSM Land Title requirements may appear to the surveyor, an insurer has judged the presence or, in some cases, the absence of certain features or conditions to have an affect on the marketability of the title or pose an unacceptable risk for the title insurer.

In the day-to-day practice of the surveyor, knowledge of the concepts presented in this article can help the surveyor in deciding what needs to be reported or can be safely ignored. A title analysis when contemplating the detail involved in surveying services and reporting problems discovered comes down to the answer to two simple questions: 1) Would the reasonable buyer be concerned with the problem? 2) Will the condition or problem affect the value of the property? (Both questions are interrelated.)

With these two questions in mind, the surveyor would not likely be faulted for failing to report that the neighbor's driveway cuts across the corner of the client's property (by 0.8 feet). On the other hand, the failure of the surveyor to report the neighbor's well head is five feet within the client's property would likely have adverse consequences on the marketability of the client's title and could result in liability to the surveyor. (Although the surface area of both encroachments is approximately the same.)

Hopefully the concepts explained in this article will help surveyors understand title concerns and how surveying services relate to and may impact on the title.

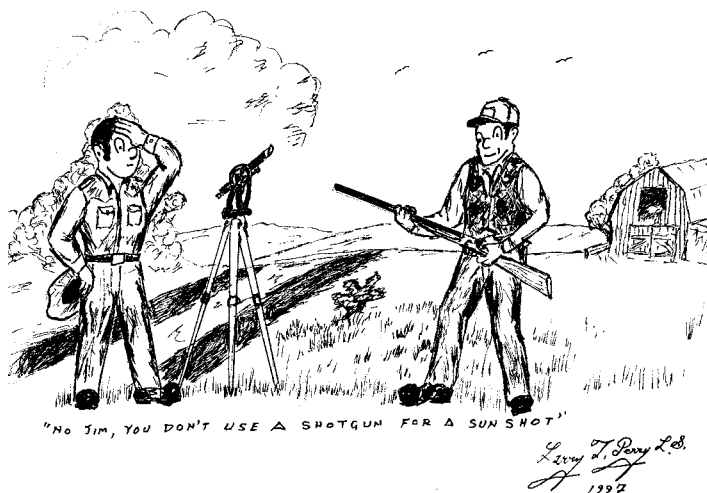
† Knud is a professor in the college of engineering at the University of Maine. He provides consulting services in the area of alternate dispute resolution, boundary disputes, easements, and land development.

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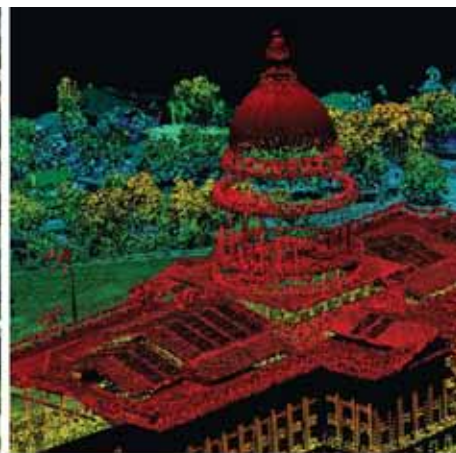
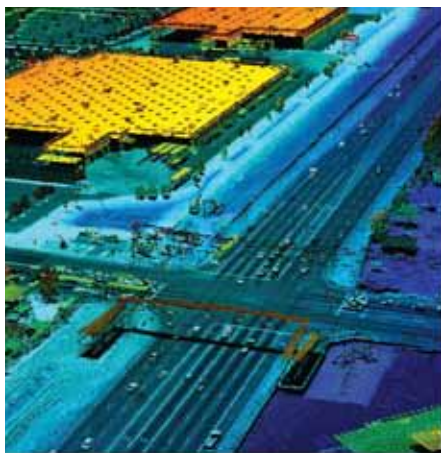
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Responsible Chapter	First Call Date	Last Call Date	Publication Date
Laramie Valley Chapter	THANK YOU!! (SEE "FORT SANDERS ARCHAEOLOGY" IN THIS ISSUE)		
Upper Platte Chapter	June 1	June 15	July 1, 2014
Southwest Chapter	September 1	September 15	October 1, 2014
Northeast Chapter	December 1	December 15, 2014	January 1, 2015
Northwest Chapter	March 1	March 15	April 1, 2015



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A letter from someone who farms, writes well, and believe it or not wants to remain anonymous because he actually tried this:

I had this idea that I could rope a deer, put it in a stall, feed it up on corn for a couple of weeks, then kill it and eat it. The first step in this adventure was getting a deer. I figured that, since they congregate at my cattle feeder and do not seem to have much fear of me when we are there (a bold one will sometimes come right up and sniff at the bags of feed while I am in the back of the truck not 4 feet away), it should not be difficult to rope one, get up to it and toss a bag over its head (to calm it down) then hog tie it and transport it home.

I filled the cattle feeder then hid down at the end with my rope. The cattle, having seen the roping thing before, stayed well back. They were not having any of it. After about 20 minutes, my deer showed up-- 3 of them. I picked out a likely looking one, stepped out from the end of the feeder, and threw my rope. The deer just stood there and stared at me. I wrapped the rope around my waist and twisted the end so I would have a good hold. The deer still just stood and stared at me, but you could tell it was mildly concerned about the whole rope situation. I took a step towards it, it took a step away. I put a little tension on the rope .., and then received an education.

The first thing that I learned is that, while a deer may just stand there looking at you funny while you rope it, they are spurred to action when you start pulling on that rope. That deer EXPLODED. The second thing I learned is that pound for pound, a deer is a LOT stronger than a cow or a colt. A cow or a colt in that weight range I could fight down with a rope and with some dignity. A deer...no chance. That thing ran and bucked and twisted and pulled. There was no controlling it and certainly no getting close to it. As it jerked me off my feet and started dragging me across

the ground, it occurred to me that having a deer on a rope was not nearly as good an idea as I had originally imagined.. The only upside is that they do not have as much stamina as many other animals.

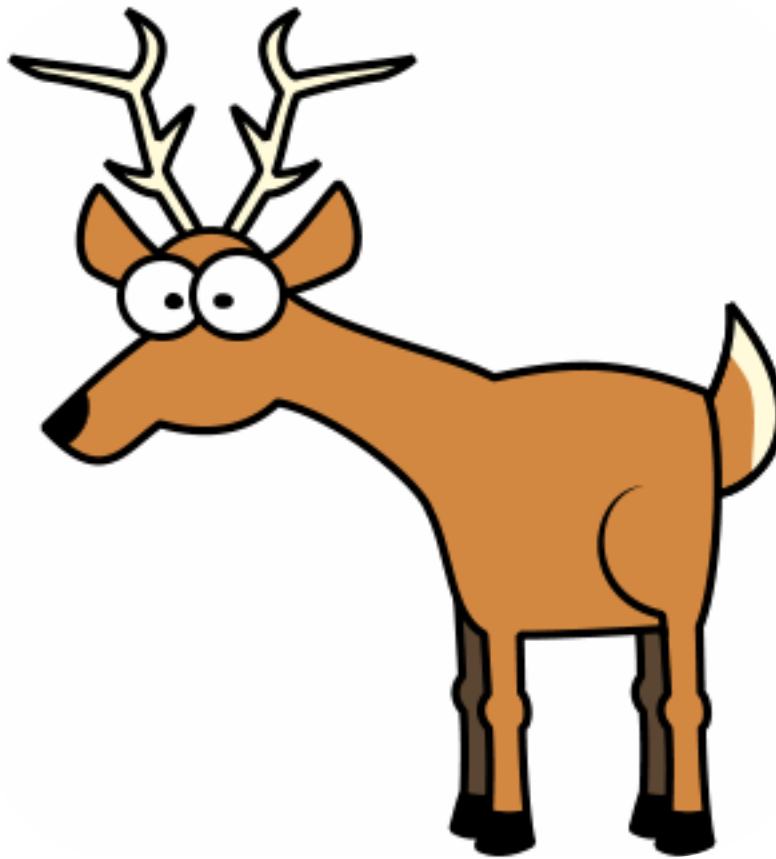
A brief 10 minutes later, it was tired and not nearly as quick to jerk me off my feet and drag me when I managed to get up. It took me a few minutes to realize this, since I was mostly blinded by the blood flowing out of the big gash in my head. At that point, I had lost my taste for corn-fed venison. I just wanted to get that devil creature off the end of that rope. I figured if I just let it go with

the rope hanging around its neck, it would likely die slow and painfully somewhere. At the time, there was no love at all between me and that deer. At that moment, I hated the thing, and I would venture a guess that the feeling was mutual. Despite the gash in my head and the several large knots where I had cleverly arrested the deer's momentum by bracing my head against various large rocks as it dragged me across the ground, I could still think clearly enough to recognize that there was a

small chance that I shared some tiny amount of responsibility for the situation we were in. I didn't want the deer to have to suffer a slow death, so I managed to get it lined back up in between my truck and the feeder - a little trap I had set before hand...kind of like a squeeze chute. I got it to back in there and I started moving up so I could get my rope back.

Did you know that deer bite?

They do! I never in a million years would have thought that a deer would bite somebody, so I was very surprised when I reached up there to grab that rope and the deer grabbed hold of my wrist. Now, when a deer bites you, it is not like being bit by a horse where they just bite you and slide



off to then let go. A deer bites you and shakes its head--almost like a pit bull. They bite HARD and it hurts. The proper thing to do when a deer bites you is probably to freeze and draw back slowly. I tried screaming and shaking instead.

My method was ineffective.

It seems like the deer was biting and shaking for several minutes, but it was likely only several seconds. I, being smarter than a deer (though you may be questioning that claim by now), tricked it. While I kept it busy tearing the tendons out of my right arm, I reached up with my left hand and pulled that rope loose.

That was when I got my final lesson in deer behavior for the day.

Deer will strike at you with their front feet. They rear right up on their back feet and strike right about head and shoulder level, and their hooves are surprisingly sharp... I learned a long time ago that, when an animal -like a horse --strikes at you with their hooves and you can't get away easily, the best thing to do is try to make a loud noise and make an aggressive move towards the animal. This will usually cause them to back down a bit so you can escape.

This was not a horse. This was a deer, so obviously, such trickery would not work. In the course of a millisecond, I devised a different strategy. I screamed like a little girl and tried to turn and run. The reason I had always been told NOT to try to turn and run from a horse that paws at you is that there is a good chance that it will hit you in the back of the head. Deer may not be so different from horses after all, besides being twice as strong and 3 times as evil, because the second I turned to run, it hit me right in the back of the head and knocked me down.

Now, when a deer paws at you and knocks you down, it does not immediately leave. I suspect it does not recognize that the danger has passed. What they do instead is paw your back and jump up and down on you while you are laying there crying like a child and covering your head.

I finally managed to crawl under the truck and the deer went away. So now I know why when people go deer hunting they bring a rifle with a scope.....to sort of even the odds!!

All these events are true so help me God...

A Educated Farmer

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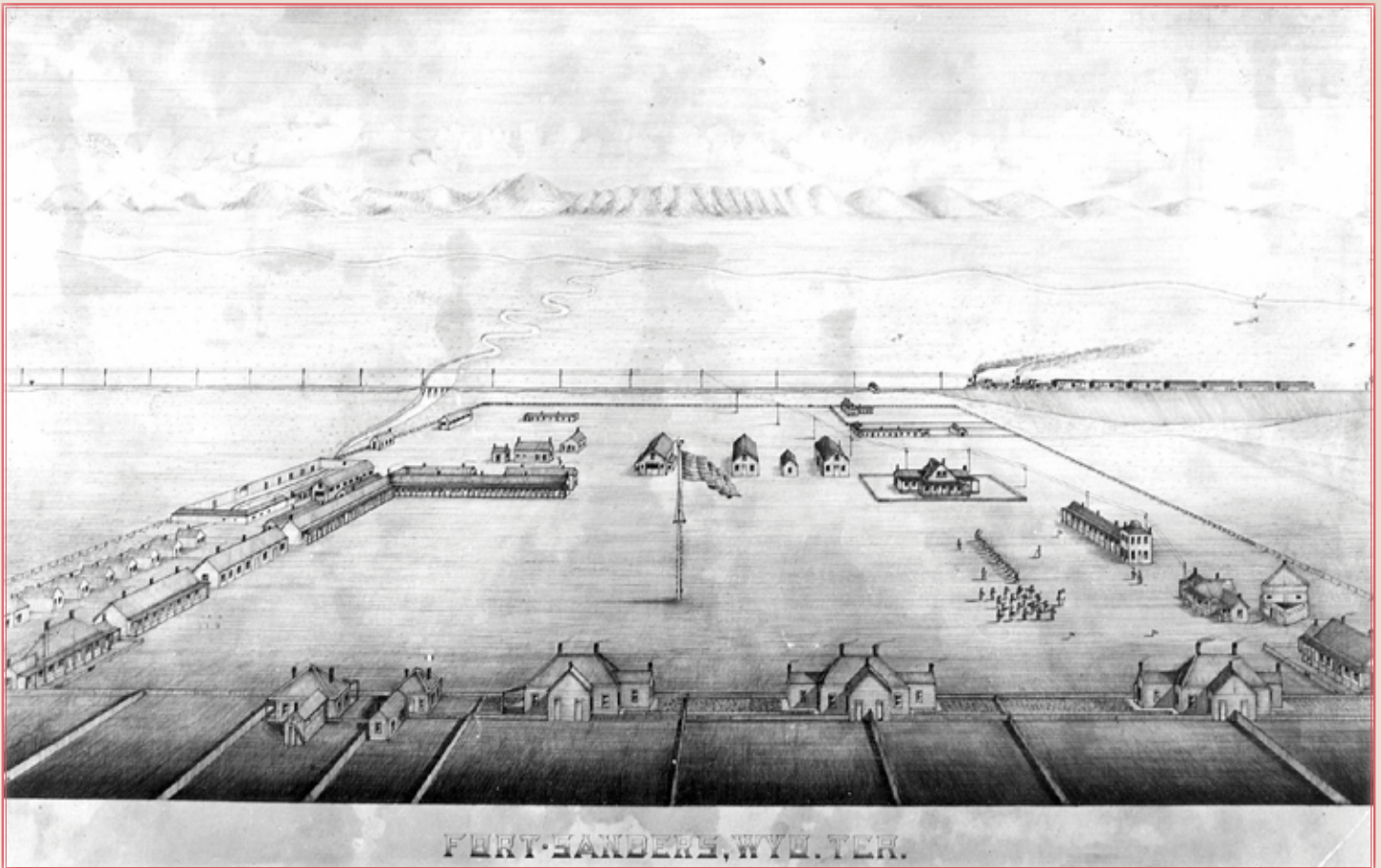
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FORT SANDERS ARCHAEOLOGY

MODERN GPS SURVEYING AIDES IN THE DISCOVERIES OF THIS HISTORIC SITE IN LARAMIE, WYOMING

by Dave Hammond, PLS & Joseph Wheeler



Fort Sanders Looking West

(Grace Raymond Heber Collection at the American Heritage Center at UW)

In the spring of 2010, I was contacted by a graduate student in Anthropology, at the University of Wyoming, who was beginning a documentary and archaeological research at the Fort Sanders site south of Laramie. The student wanted to have all of the present field work tied to a current datum to ensure future archaeological work would fit together. He asked me for assistance in the surveying

work and coordinate datum for the proposed field work. After reviewing the project area and final results, I set two control points that were occupied, and OPUS Solutions were computed on the points. NGS Benchmarks were also recovered for a vertical datum on the site. I also helped with the determination of the magnetic orientation between the 140 years between the surveys.

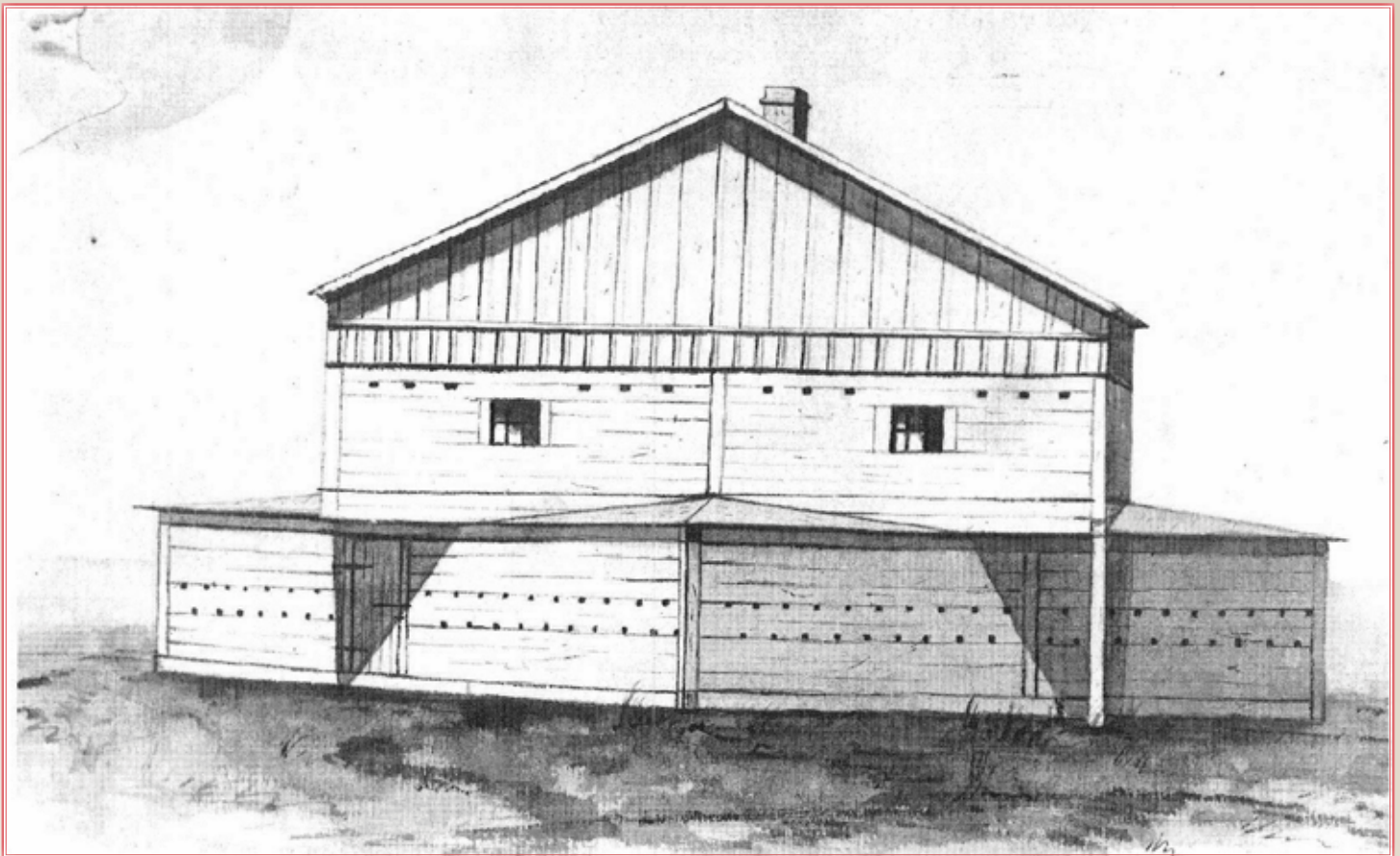
History of Fort Sanders

After the Civil War reached its climax in the East, Indian Wars and outlaws were increasing in the West. Congress had passed funding to open the Bozeman Trail which turned north from the Oregon Trail between Fort Laramie and Casper, and headed directly through Indian lands en route to the gold fields of Montana. Garrisons would have to be established to protect prospectors and immigrants that were expected to flood the Bozeman in 1866. Indian conflict along the Oregon Trail would likely drive California and Oregon-bound immigrants along the more southerly Lodge Pole Creek Trail, a slightly slower, but safer route for families of immigrants westward bound, across the Laramie Plains.

The transcontinental railroad would soon be surveyed and constructed through southern Wyoming over the course of the next two years. In the meantime, the Army had recently turned over the Denver to Salt Lake Stage route, following the Overland Trail, to a private company. Plagued by robberies, the stage company demanded protection for their stage line. The Overland Trail

and Denver to Salt Lake Stage route, the Lodge Pole Creek Trail and the expected route of the transcontinental railroad all intersected near the Big Laramie (stagecoach) Station, near the present day city of Laramie, Wyoming. In the spring of 1866, the War Department abandoned Fort Halleck, near the present day town of Elk Mountain. A new fort was to be built at the intersection of the trails that would come to be called Fort Sanders. The fort was mainly built of wood and only a few of the structures were constructed of stone.

Fort Sanders reservation occupied 27 square miles although the constructed part of the Fort proper took up only 13 acres and never had more than 64 buildings in the main. The rest of the land was required for the sparse forage on the plains of the Laramie basin, and to secure the springs which fed the creek supplying water to the post. The Union Pacific had passed through the Laramie Plains and the improved transportation and with the security offered by the fort, the Town of Laramie was growing. Troops from Fort Sanders participated in the battle of the Rosebud



Fort Sanders Blockhouse
(Fort Laramie National Historic Park)

in June 1876. Civil War Medal of Honor recipient Arthur MacArthur, later a Lieutenant General, Governor General of the Philippines, and the father of Douglas MacArthur served as a company commander at Fort Sanders. Other memorable visitors included Calamity Jane, dressed as a man, and lived with the scouts at Fort Sanders during the winter of 1871-72. Fort Sanders also hosted other well-known people of the period. Buffalo Bill Cody was an occasional visitor and Wild Bill Hickok was supposedly locked up in the post guard house for a run-in with the law in Laramie while waiting for the Black Hills to open to miners. Perhaps the most famous documented visit was the 26 July 1868 meeting at Fort Sanders attended by General, soon to be President Grant, and Generals Sherman, Sheridan, Gibbon and Harney and representatives of the Union Pacific Railroad Sidney Dillon and "Doc" Durant to decide the route of the railroad west to the link-up with the Central Pacific Railroad at Promontory Point, Utah.

It took several years for the Department of the Interior to release the land for claims, but when it did, most of the reservation became ranch land. The wooden constructed buildings of the Fort were disassembled and removed. The ruins of the powder magazine stands south of the entrance to



*Guard House (Left) and
Officer of the Guard Building c. 1933*
(Pence Collection, American Heritage Center)

the Cavalryman Steakhouse off US 287. The walls of the guardhouse, now on the National Register of Historic Places, stand along Kiowa Street. One officer quarters was moved to La Bonte Park and is now used by the City of Laramie. It is located west of Ninth Street.

Anthropology and Archaeological Field Work

In 2009, a graduate student in Anthropology at the University of Wyoming began documentary and archaeological research at the Fort Sanders site. Because of the difficulty obtaining permission for research from the 18 land-owners, effort was initially focused on remote sensing at the site.

The three extant historic surveys of the fort, from 1871, 1876, and 1881 were geo-referenced to the site using ArcGIS. Rather than establishing an arbitrary site datum, as is usual practice, control points were established and occupied with Total Stations and GPS receivers.

One thing which became quickly apparent was that the fort was laid out with a magnetic compass because the PLSS did not reach the area until 1871. The structures and visible building features were aligned at 15° 44' East of true north. Historic records show that to be the magnetic orientation in 1866 when the fort was constructed. It was therefore relatively easy to associate features found at the site with that orientation.

Later construction at the fort corrected for declination and used the PLSS system. This is particularly interesting in light of the first commander, LTC Mizner's comment about his contract surveyor



26 July 1868 meeting at Fort Sanders, Wyoming.
L to R: Sidney Dillon (UPRR), General and Mrs. Sheridan, General and Mrs. Gibbon, General Grant (in white straw hat), General Sherman (leaning on fence stile), General Harney of Indian Peace Commission (in top hat and cape), "Doc" Durant (UPRR) in white straw hat.
(A. J. Russell, National Park Service)

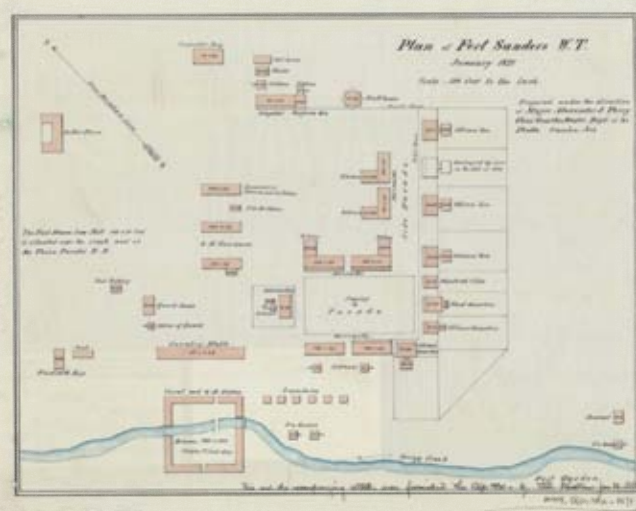
in correspondence of 17 July 1866: "I cannot commend the surveyor of the reservation for work already performed. His plats contain glaring imperfections...the most glaring of which is that his needle lays down North at a point which is almost due west." (Post Letters Sent, July 1866. University of Wyoming Microfiche)

In a bitterly cold first of May, 2010, 32 volunteers conducted pedestrian survey of the fort grounds. With permission secured to conduct research on the fort from one of the private owners, both Albany County and The Wyoming Department of Transportation, and one of the corporate land owners, nearly 60% of the constructed area of the fort was inspected. Three survey crews of four persons each walked closely spaced transects of the ground placing pin flags wherever they found surface artifacts and a GPS operator followed each crew recording the location of the artifact as well as the type. Another crew photographed and recorded with GPS the location of each exposed foundation stone.

In late May of 2010 the researchers were able to bring electrical resistivity equipment to the constructed part of the fort. This was followed in August by magnetic gradiometer testing. These geophysical prospection means were not ground disturbing so permissions from the land owners were relatively easy to obtain. The combined overlays of the surface artifact locations, the geo-referenced period maps, and results of the magnetometer and gradiometer presented a telling picture of what remained of the fort; all before a single shovel had been put into the ground.



*Exposed foundation of the guard building, running from southwest to northeast.
(Photo by Joseph Wheeler)*



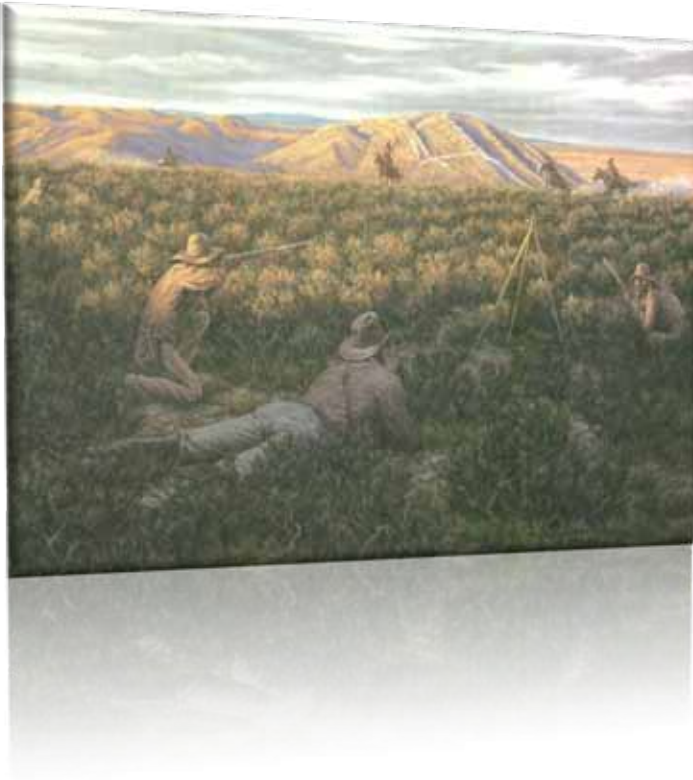
*1871 Survey Plan for Fort Sanders prepared under the direction of Alexander J. Perry, Quarter Master of the Depot of the Platte, Omaha, NE
(Note: North Arrow in upper left)*

Based on these results, one meter deep cores were dug in a closely spaced grid pattern near an anomaly that appeared that it might be a privy pit, but it resulted in neither artifacts nor distinctively identifiable stratigraphy. Finally, in October and November, four 50cm x 50cm alternating test units were excavated diagonally across the suspected location of the officer of the guard building. The test units quickly exposed the well-preserved 24 inch-deep foundations of a building which corresponded in location and dimensions to the officer of the guard building.

Initial field investigations at Fort Sanders relied heavily on one hundred and forty-five year-old surveys, and on locational data from precision use of new survey, GPS, GIS, and other geophysical tools. While the archaeological results raised more questions than were answered, the work clearly showed the utility of extensive location and archival data analysis before slow and expensive excavation was undertaken. One hundred and thirty years after the fort was abandoned parts of it lie tantalizingly close to the surface, awaiting the next series of investigations. Survey and remote sensing will likely determine how much of the fort can be located.

Foot Note: Permission from Mr. Wheeler to use some of his information is greatly appreciated. Again, GPS survey equipment aided in performing faster and more reliable field surveys. Surveyors use information to retrace their surveys and it is very similar to Archaeology.

~ GRENVILLE DODGE AND PARTY AT THE GANGPLANK ~



A signed and numbered reprint of Dave Paulley's original oil painting of UP Rail Road's survey party finding a route over the Laramie Mountains after being forced there by an Indian war party.

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Martin Pedersen Anecdotes

by Anita Morris

The Voice of God

When I first started working for RJS, we all went to Kemmerer to do a survey. Martin drove me around to several section corners and then turned me loose to go back and shoot them in with the GPS. I couldn't remember all the turns I was supposed to make, and suddenly there was Martin's voice on the radio, "You should have taken the road behind you". I looked all around and never could spot his truck, but obviously he could see me. I dubbed him the "voice of God." Throughout my working years Martin had a special knack for showing up or calling on the radio frequently when I made mistakes. I would be frantically trying to fix the mistake and there he would be, "You should have done ..."

The Vet and the Sea Gull

Martin drove his brand new red corvette to the office one morning. I went up front, looked out the window and told Darlette there was a sea gull outside. Then I said "Oh, nooooo. That sea gull pooped on the vet." There was no sound from Martin's office, but after about a minute he came bustling out, wet a paper towel and headed outside. I think he could hear us laughing from outside because he came back in and washed my face with that paper towel.

Martin Albert Pedersen



2 December 1946 - 18 January 2014

Martin A. Pedersen was born in Rawlins, Wyoming, to Rasmus and Ella Pedersen on 2 December 1946. He spent his youth in Rawlins, and graduated from Rawlins High School in 1965. He attended the *University of Wyoming*, for a short period of time. He spent approximately three months working with WYDOT before joining the surveying firm *Robert Jack Smith and Associates (RJSA)*. Martin served as rodman, chain man, and instrument man, learning all the facets of land surveying that firm practiced. He completed his internship and applied for professional registration. In June 1973, the Wyoming State Board for Professional Engineers and Professional Land Surveyors awarded him his professional registration of land surveyor (No. 544). Martin was also a registered professional land surveyor in Arizona, Colorado, Idaho, Montana, Nevada, North Dakota, and South Dakota. He would then spend the remainder of his life doing the work he loved, and helping others in their trek up the road to professional registration. In 1974, Martin purchased *Robert Jack Smith and Associates* serving as its chief executive officer until 2010 when the firm became the Rawlins office of *WLC*.

Martin had a diverse career. He spent most of his life as a resident of Rawlins. Shortly after assuming the leadership of RJSA, Martin and former PLSW president S. Dennis Dawson, at the time a recent PLS registrant, met and executed a survey at Fort Steele. Dennis writes:

I first met Martin in 1975 or 1976. We were both newly registered land surveyors, and had been assigned by our respective employers to work together to perform a sectional subdivision of land which encompassed the Fort Steele (historical site) and the WYDOT Fort Steele Rest Area just north of I-80 on the West side of the North Platte River. The survey was required by the State of Wyoming and the Warner Livestock Co. to describe and establish boundaries for the lands of Fort Steele to be donated to the State. We had been instructed that the survey had to be completed by 1 February. We initiated the survey in mid-January with over 12 inches of snow on the ground, and the river partially frozen. The lands to be surveyed were on both sides of the river, which would complicate our efforts. Any attempts to run survey lines across the river would not be an easy task, as the river was deep and the flow rapid. When I arrived from Cheyenne at the site, Martin was at the site with a handful of WYDOT and old railroad records indicating the GLO corners which had been found and located in earlier surveys. Invaluable assistance was provided by the rancher as he furnished two snowmobiles for the project. I immediately took Martin's records and searched the area recovering corners and other evidence required for the final boundary determination. Meanwhile, Martin performed a survey reconnaissance of the area searching for suitable transit stations with clear sight lines from which we could survey. He located a suitable site on a high point which overlooked the area. Because neither of our employers had a small, portable electronic distance measuring instrument, which had been introduced to the surveying market only one or two years earlier, his approach was to establish a small survey network covering both sides of the river and transferring lengths by triangulation. He laid out a baseline which we carefully taped. Once this network was completed, the remainder of the survey was an enjoyable snowmobile trek around the area incorporating the boundary data. I have witnessed other projects that Martin completed, and it seems to me that Martin approached each problem as a unique survey endeavor.

During his residence in nearby Sinclair, Martin was elected to the city council and served as mayor.

As far as this writer knows, this was Martin's only venture into the world of politics. He was a Boy Scout leader in Rawlins, and an active member of the *Christ Lutheran Church* in Rawlins. He served as director for the *Rawlins National Bank* and *Meridian Trust Federal Credit Union*. He participated in the Carbon County Search and Rescue. He joined and was active in the Elks BPOE No. 609 and the Rawlins Rotary Club. Over the years he hosted 18 Rotary Club International exchange students, and after they returned home he took the time to journey to their homes and meet their families.

In January 1977, at the annual meeting of the *Wyoming Engineering Society*, Martin arranged and convened a session to explore the possibility of forming a statewide professional society for land surveyors. Martin was a major mover in the effort, and PLSW was formed on 26 April 1980. He was elected the first PLSW president. The entire history of PLSW and Martin's efforts are documented in the *History of PLSW*. Later he would receive the organization's highest honor - *Honorary Member*.

Martin was active in the *Wyoming Engineering Society*. He was elected Secretary/Treasurer (1989 - 1996). During his tenure, the secretary/treasurer's annual report was a much anticipated highlight of the WES annual meetings. Although the reports were accurate, his style of presentation was brief, but humorous and entertaining. In 1997, Martin was chairman of the annual meeting in Sheridan. He was elected WES president (1997 - 1998). Martin was also elected a WES Honorary Member.

Besides his activities in PLSW and WES, Pedersen was a member of the *American Council of Engineering Companies of Wyoming*, and was elected the organization's president. He was a member of the *American Congress on Surveying and Mapping* and the *National Society of Professional Surveyors*.

In March 1995, Pedersen was appointed a land surveyor member of the Wyoming State Board of Registration for Professional Engineers and Professional Land Surveyors. He would serve twelve years, and leave the board in March 2007. He was elected the Board's president. As a member of the Wyoming Board, Martin was affiliated with the *National Council of Examiners for Engineering and Surveying*. He immediately became involved in regional (called Zones) and national activities. He served either as a consultant or a member of the Committee on Examinations for Professional Surveyors almost continuously. He served two terms as NCEES vice-president (Western Zone; 2000

- 2002). His national administrative assignments were: NCEES Treasurer (2002 - 2004); NCEES Vice-President (2004 - 2005); NCEES President (2005 - 2006); and NCEES Past President (2006 - 2007). From 1995 to 2013, Pedersen held over forty administrative or committee assignments. In 2007, the NCEES Western Zone conferred their Distinguished Service Award, and in 2008 the NCEES conveyed their highest award - the Distinguished Service Award.

In his free time, Martin enjoyed boating, camping, and its associated activities of fishing and hunting. His son, Hans, said that even though his father would spend all week outdoors surveying, he would then spend his weekends outdoors hunting and fishing, showing friends and guests the beauty of Wyoming. He also found time to ski and scuba dive. He even became a scuba instructor. Martin loved to travel seeing new vistas, making new friends, sharing culinary delights. Because Martin liked good food, he learned to cook, and prepared tasteful delights.

Martin was always interested in the people around him. It is apparent from the list of community service activities that Martin dedicated himself to helping others. If a problem arose, his first concern was immediately to address the problem and seek a method or procedure to fix the problem and continue the project. In that way, he felt time was conserved and the cause of the original problem would manifest itself later. He was a good listener when others had problems, and would offer advice if so requested.

Martin is survived by his wife, Shelly; children David, Hans, and Jennifer; step children, Jeremy Perkins, Heather Garrett, Ryan Perkins, and Brooke Gudahl; eight grandchildren (Jesse, Calysta, Savannah, Elliot, Taya, Rylee, Kael, and Taylor); his brother Jim Pedersen and wife Sandy (Cody); and several nieces and nephews.

Funeral services took place on Saturday, 25 January 2014 at *Christ Lutheran Church* in Rawlins.

In lieu of flowers, the family requested donations in his name be sent to the *Upper Platte Chapter, Professional Land Surveyors of Wyoming* to support scholarships; to a cancer research charity; or to the Elks W.E.S.T. program.

by Herbert W. Stoughton, Ph.D.
P.E., P.L.S., C.P., F.A.C.S.M., F.A.S.P.R.S.
Geodetic Engineer

THAT'S ONE LARGE ORIGINAL CORNER

Pictured is Brad Dillon, BLM Cadastral Surveyor, kneeling beside an original corner he found while conducting a dependent resurvey in T. 23 N., R. 94 W. The stone was found at the corner of sections 7, 8, 17 and 18. The original notes called for a sandstone 72 x 50 x 20 ins., 54 ins. in the ground, marked 4 notches on the S. and 5 notches on the E. edges. This stone measured 38 x 36 x 32 ins. above ground and was plainly marked with 5 grooves on the E. face. The southerly face had sloughed off.



The Publications Committee is looking for all your interesting survey related photographs for inclusion in Lines and Points and the web site. Please send your images files to any member listed on Page 2 with "Surveying photos" in the subject line, and we'll share them with the membership.

State of Wyoming Corner Record

(In compliance with the *CORNER PERPETUATION AND FILING ACT*, Wyoming Statutes, 1997, Section 33-29-140, et seq., and the Rules and Regulations of the Board of Registration for Professional Engineers and Professional Land Surveyors)

Reverse side of this form may be used if more space is needed.

Record of original survey and citation of source of historical information (if corner is lost or obliterated). Description of corner monumentation evidence found and/or monument and accessories established to perpetuate the location of this corner. Sketch of relative location of monument, accessories, and reference points with course and distance to adjacent corner(s) (if determined in this survey). Method and rationale for reestablishment of lost or obliterated corner.

COMMITTEE REPORT

To

Professional Land Surveyors of Wyoming

By

"Save our Surveyor" (SOS) Corner Recordation Committee

Dated: November 11, 2013

2013 SOS Competition

The 2013 SOS competition was conducted during the 2013 PLSW Fall Technical Session in Casper, November 7 and 8, 2013.

This year there were four submittals and the ballot results of the competition are as follows:

First Place: Rick Hudson for his corner record of the northwest corner of Block 6, McManigal's Addition to the Townsite of Thermopolis situate in Lot 4 of Fractional Section 36 of T.43N., R.95W., 6th P.M., Hot Springs County, Wyoming

Second Place: Kevin Jones for his corner record of AP 6 of Lot 74 of T.55N., R98W., 6th P.M., Park County, Wyoming.

Third Place: Yours truly, Paul Reid, for the corner record of the west ¼ corner of Section 5, T.22N., R.69W., 6th P.M., Platte County, Wyoming.

2014 SOS Competition

The 2014 competition will be conducted in conjunction with the 2014 PLSW Fall Technical Session.

Finally, I request that the award amount for the third place record submitted by me, be donated to the PLSW Scholarship Fund.

Respectfully submitted,

Paul Reid, PLS

SOS Committee Chairman

Date of Field Work: _____ Office Reference: _____

CROSS INDEX DIAGRAM

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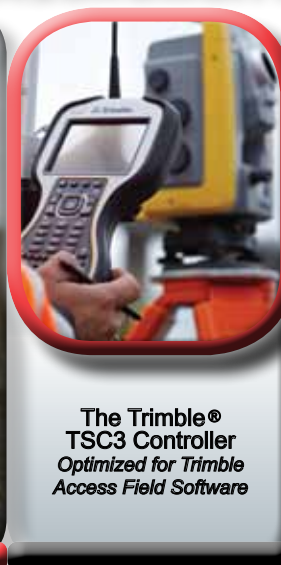
Land Surveyor / Firm / Address

Telephone: _____

This corner record was prepared
by me or under my direction
and supervision.
SEAL & SIGNATURE

Corner Name: _____ Section: _____ T _____ R _____; _____ P.M. Cross-Index No.: _____
SBRPEPLS/PLSW: March 1994; PLSW January 1998

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This letter is to inform you of the official cadastral surveys that were approved in Wyoming in 2013 and have been published to BLM Wyoming's Cadastral Survey website.

Township and Range	Type of Survey	Meridian	Accepted
T. 52 N., R. 93 W.	Dep. Res. & Subd.	6 P.M.	01/06/2013
T. 17 N., R. 102 W.	Dependent Resurvey	6 P.M.	01/06/2013
T. 29 N., R. 76 W.	Dep. Res. & Subd.	6 P.M.	04/10/2013
T. 21 N., R. 116 W.	Dep. Res. & Subd.	6 P.M.	04/10/2013
T. 27 N., R. 71 W.	Dep. Res. & Subd.	6 P.M.	04/10/2013
T. 26 N., R. 72 W.	Dep. Res. & Subd.	6 P.M.	04/10/2013
T. 22 N., R. 94 W.	Supplemental Plat	6 P.M.	05/31/2013
T. 16 N., R. 77 W.	Supplemental Plat	6 P.M.	05/31/2013
T. 19 N., R. 75 W.	Supplemental Plat	6 P.M.	05/31/2013
T. 13 N., R. 84 W.	Remonumentation	6 P.M.	05/31/2013
T. 52 N., R. 91 W.	Dependent Resurvey	6 P.M.	06/21/2013
T. 18 N., R. 102 W.	Dep. Res. & Subd.	6 P.M.	08/07/2013
T. 29 N., R. 99&100 W.	Dep. Res. & Subd.	6 P.M.	08/07/2013
T. 26 N., R. 80 W.	Dep. Res. & Subd.	6 P.M.	08/07/2013
T. 51 N., R. 97 W.	Dep. Res. & Metes & Bnds.	6 P.M.	08/07/2013
T. 12 N., R. 90 W.	Dep. Res. & Metes & Bnds.	6 P.M.	08/07/2013
T. 36 N., R. 75 W.	Supplemental Plat	6 P.M.	08/07/2013
T. 16 N., R. 87 W.	Dependent Resurvey	6 P.M.	11/22/2013
T. 44 N., R. 82 W.	Dep. Res. & Subd.	6 P.M.	11/22/2013
T. 24 N., R. 111 W.	Supplemental Plat	6 P.M.	11/22/2013
T. 52 N., R. 75 W.	Dep. Res., Subd. & Sur.	6 P.M.	12/18/2013
T. 30 N., R. 103 W.	Dep. Res. & Subd.	6 P.M.	12/18/2013

Copies of these images can be viewed or printed from this website:
<http://www.wy.blm.gov/cadastral/plats10.php>

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