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LINES & POINTS

www.plsw.org

PAUL NESLEN SCHERBEL

OCTOBER 21, 1917 - OCTOBER 22, 2015

THE EQUALITY STATE SURVEYOR
PROFESSIONAL LAND SURVEYORS OF WYOMING

P.L.S.W.

On The Cover

Paul Scherbel; U.S. Navy Service Portrait

CONTENTS

2016 PLSW SUSTAINING MEMBERS

- Bryan Baker - Frontier Precision Inc.
- John Baffert - Surv-KAP, LLC
- Chris Farnsworth - RDO Integrated Controls
- Kelly Goff - Underground Consulting Solutions
- Susan Hall - Trimble
- Tim Klaben - Berntsen International Inc.
- Troy Langston - Monsen Engineering

PLSW (Professional Land Surveyors of Wyoming; PO Box 725, Afton, WY 83110) 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).

PRESIDENT'S MESSAGE

Season's Greetings PLSW membership.

… and in a flash, the weather has changed and we are in the midst of the Christmas season. It seems that I was just sworn in and wrote my first letter to you. Within a few months, the gavel will be given over to a new President. Life just rolls along in spite of us.

The technical session was a great success. Many of our Wyoming surveyors attended, as did a few people from surrounding states. I hope that you all were provided with some food for thought. The raffle was a success as well. You will see a report on both in this issue. Ron Scherler's presentation is available on the PLSW website. Thanks again, to the education committee and their support staff for all the hard work. We look forward to what will be offered next year.

Let the education committee know if you have ideas for next year's event.

Be sure that you take time to review and comment on the "Resolution on Destruction of Survey Monuments" which was presented by the West Chapter and is posted to the website. As surveyors, we all agree that the indiscriminate destruction of survey monuments is not only a serious disservice to the public, but re-establishing those monuments is an expensive and time consuming effort for land owners and surveyors alike. Our hope is that each of you will resolve to educate the public about this issue when the opportunity arises, and that you will talk to your public officials, other professional societies, and our state legislators about supporting a bill that will require identification and preservation of survey monuments during construction activities.

As you work through the winter months, take time to recharge, reflect, and be thankful. See you all at the WES convention in Sheridan.

Cheers!

Suzie Sparks, PLS
President, Professional Land Surveyors of Wyoming

ANNOUNCEMENTS

Nataional Surveyors Week
March 21-26, 2016

Results of 2015 Technical Session Scholarship Raffle:

The raffle raised $1235, of which $250 was requested to be in honor of Paul Scherbel.

Following is a listing of items that were donated:

Selby's ESSCO: Garmin GPS

Frontier Precision: 2- $50 gift certificates to Rocky Mtn. Discount Sports

Hixon Manufacturing: 6 ball caps

Survey Supply: Stake bag

Inberg-Miller Engineers: 2-$25 and 1-$50 gift certificate to Rocky Mtn. Discount Sports

Apex Surveying Inc.: 2- Guidesman LED Flashlights

Engineering Associates: Nikon Rangefinder

Bill Chupka: Prints of Surveyors Notch

BLM: 2- 2009 Manual of Surveying Instructions

All,

http://arcims.laramiecounty.com/floodplainmap

The new mobile and touch friendly Floodplain Interactive Map for Laramie County went live this morning replacing the aging Adobe Flex based application. Besides being mobile and touch friendly the new site has many new features including, my location, popups, driving directions, enhanced searches and identify, and links back to the Assessor's MapServer (Parcel Viewer) application along with many others. To discover all the new features check out the help pages.

You can use any internet browser or device with the new site with the exception of the FireFox browser which is not currently compatible with the site. If you have any questions please feel free to contact me.

Enjoy,

David Sherrill
Laramie County Government
GIS Coordinator/Supervisor

CONGRATULATIONS!

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

Andrew Minton Casper, WY	LS 15301
Jeffery Whitson Portland, OR	LS 15312
Brent Christensen Prove, UT	LS 15338
Casey Faircloth Friendswood, TX	LS 15361
Austin Reed Cody, WY	SI 169
Brett Farmer Cody, WY	SI 170

WYOMING ENGINEERING SOCIETY

The following speakers/subjects will be presented during the surveying portion of the 96th Annual W.E.S convention in Sheridan on February 4 and 5, 2016.

Speaker: John Woodward
Subject: Broadaxes and Ties: The Construction and Operation of the Tongue River Tie Flume

Speaker: Pamela Fromhertz
Subject: A New National Geodetic Survey Regional Advisor for CO, WY, and MT.

Speaker: Wyoming State Engineers Office
Subject: An overview and principle issues related to Wyoming's interstate streams.

Random Thoughts

Some background:

In October 2015, Jeffrey B. Jones, P.L.S., and land surveyor member of the Wyoming State Board of Professional Engineers and Professional Land Surveyors, contacted the undersigned concerning a proposed change in the NCEES model rules concerning processing an applicant possessing a Ph.D. (Doctor of Philosophy) in Surveying being eligible for admission or waiver to the FS (Fundamentals of Surveying) examination. The reason for his request was that NCEES has had a similar (and parallel) procedure for professional engineering licensure and/or registration in place for a number of years. Jones is a member of the NCEES committee seeking information, guidance, and recommendations as to having a parallel procedure for land surveying applicants.

The following Memorandum for Record is a written response submitted by the undersigned. The following remarks are solely the opinion of the undersigned and are not the opinion of or endorsed by the Board of Directors of the Professional Land Surveyors of Wyoming.

9 November 2015

Memorandum for Record

Subject: NCEES waiver of the Internal Land Surveying examination.

1. The potential waiver for doctoral candidates in surveying and/or geomatics has several administrative impediments.

a. In general (probably at the level of two sigma or three sigma), the graduate curriculum in surveying and/or geomatics does not address "land surveying"; real property/legal aspects; and administrative, regulatory, and case law. The major emphasis of the subject matter for these graduate programs is either geodetic/engineering surveying or geographic information systems (GIS).

b. The predominance of the graduate GIS academic programs address GIS "inventory assessment" tools and gaining training experience in operating "product" software.

c. Nearly all the current academic faculty (both graduate and undergraduate) have little formal education and on-the-job professional experience in even the rudimentary aspects of land and real property surveying and the associated law/legal aspects as practiced in the United States. In the credentials and current work efforts a significant majority of the academic faculty in all the leading four-year and graduate academic institutions in Canada and the United States are reviewed, the level of education, experience, publications, and research pertaining to land/real property surveying and the associated intellectual disciplines would be less than ten percent of their total subject matter expertise.

d. Most of the academic programs offering graduate programs are housed outside the engineering and engineering technology schools/colleges. If the programs are not in the engineering/engineering technology forum, the core requirements in mathematics and physical/natural sciences are minimal, and generally reflect the administrative organization's core requirements in the other academic programs. For example: if the program is in the department of geography (where several graduate GIS academic programs exist), the minimum requirements in mathematics is algebra (and possibly trigonometry) (three to eight semester credits) and two entry level natural science courses (usually summary subject matter courses).

e. A significant majority of the graduate students in GIS programs do not have formal undergraduate education in surveying and mapping. Therefore, they do not have a formal understanding of the procedures, philosophy, and analysis for precise mensuration and statistics. Invariably, an in depth understanding of systematic, constant, and accidental errors in refined mensuration programs has never been introduced into those undergraduate or graduate programs.

f. With very few exceptions, graduate faculty are expected to seek and provide no less than forty percent of their salary, benefits, and the appropriate administrative

financial overhead through consulting and sponsored research. The undersigned personally knows of an outstanding associate professor in one of the leading post secondary surveying academic institutions who taught and performed significant contributions in professional and technical societies both nationally and internationally. He was denied promotion to full professor, because he did not have a large sponsored research program (according to his dean). At the University of Maine, Orono, there was a major (internal) confrontation between the surveying faculty and the GIS faculty. The dean of the College of Engineering divided the department of surveying, retaining the GIS portion in the College of Engineering and "sending" the survey portion to the College of Engineering Technology. His argument was he wanted the research money, and that the surveying portion was not "paying its way". There was a similar, nearly successful, attempt to remove surveying from the College of Engineering at Purdue University. From the beginning of the twentieth century, until 1941, there existed a department of surveying and geodesy at the University of Michigan. Because it was a small department, it was assimilated into the department of civil engineering. When Ralph Moore Berry, Professor of Geodetic Engineering, retired in June 1974, the civil engineering faculty recommended that he not be replaced and the academic program be moth balled. The same has taken place at Pennsylvania State University; University of Wisconsin; University of Minnesota; University of Illinois; University of California at Berkeley; Rensselear Polytechnic Institute; Massachusetts Institute of Technology; Yale; U.S. Military Academy; Georgia Institute of Technology; Oregon State University; Union College; University of Vermont; University of Cincinnati; and University of Washington, to name a few examples.

2. A significant number of the technical courses/ aspects of the surveying and mapping programs is "button pushing". This has several ramifications.

a. In the last four decades, the undersigned has encountered numerous "improved" technologies, particularly in data observation,

(Continued on Page 17)

Common Research Mistakes Surveyors Make

Easements

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

In previous articles I have explained three of the five common mistakes made by surveyors in researching the records. In the first article I discussed mistakes made in determining senior title often required when assessing the boundaries involving an overlap. In the second article I explained the deficiency that may exist when a forward search is omitted. In the third of five common mistakes I explained the necessity for researching the road records. In this article, I will explain the fourth deficiency – researching and identifying easements.

The failure to identify and locate easement records is a major source of liability for surveyors. There are numerous reasons for research difficulties associated with easements. Because some easements are public easements they suffer from the same difficulties associated with locating road records.

Other problems arise by the legal nature of the easement itself. An easement appurtenant to property that was created in, for example, 1823 by recorded grant need not be mentioned in any property records thereafter yet will still effectively burden property and benefit another property (appurtenant property).

The law presumes that an appurtenant easement is a part of the appurtenant property and passes with the conveyance of the appurtenant property even though the easement is not mentioned in subsequent records for the appurtenant property. For example, it is not unreasonable for a surveyor to stop the search of property records long before reaching the ancient property records where the deed for the easement was recorded - especially if all the boundaries to the property being surveyed were created subsequent in time to when the easement was created.

Another problem is that easements often arise from records that are not deeds. The sale of a lot by reference to a subdivision plan may give the lot owner an appurtenant easement in every road or other benefit shown on the plan (such as a park). Also, the call for a private road as a boundary, owned by the grantor at the time of the conveyance, may give an easement to the grantee in the grantor's private road. Unless the surveyor is aware of the law regarding implied easements, the surveyor may fail to research, locate, and mention the implied easement.

Finally, many easements that are evidenced by a deed are so poorly described that it is virtually impossible to locate or fix the width of the easement. These easements are often categorized as "blanket easements."

> *I hereby convey to William Surry an easement to install and maintain a water pipe across my property.*

Where the surveyor has stopped research prior to a grant from the government, the surveyor would be wise to inform the client of a caveat regarding the presence of easements that may not have been discovered and shown on the surveyor's plat.

† Knud is a professor in the surveying engineering technology program at the University of Maine. He offers consulting services in the area of boundary litigation, title, easements, land development, and alternate dispute resolution.

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.

FOR SALE BY THE PLSW SE CHAPTER

$50.00 per print plus shipping
Contact: Dennis Dawson
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DennieandBarb@aol.com

ATTENTION!

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Paul Neslen Scherbel

21 October 1917 - 22 October 2015

On Thursday, 22 October 2015, Paul Neslen Scherbel, PLSW Charter Member and Honorary Member, died, just one day after he celebrated is 98th birthday. Paul, the son of Paul Scherbel and Annette Neslen Scherbel, was born at Utah Holy Cross Hospital in Salt Lake City, on 21 October 1917. Scherbel attended elementary and secondary schools in Salt Lake, and graduated from West High School at the age of 16 years. He immediately enrolled at the University of Utah for only one year. Paul spent one year with the Civilian Conservation Corps (CCC) before enrolling at Utah State Agricultural College (now Utah State University) in the School of Forestry. He was graduated in 1940, and worked for the U.S.D.A. Soil Conservation Service and the U.S. Forest Service.

In 1942, Scherbel enlisted in the U.S. Navy. He attended the officers' training program at Columbia University (New York City) and was assigned to the USS Pakana as a communications officer. He saw action in the South Pacific near Kwajalein, Eniwetok, Guam, Saipan, Tinian, Okinawa, and Ulithi. In 1946, he retired from active duty, but remained active in the Naval Reserve for another four decades, retiring as a commander. Scherbel returned to work at the Soil Conservation Service accepting an assignment at Big Piney, Wyoming. In 1955, Paul was granted an early retirement from the Soil Conservation Service, which permitted him to become more active in the his consulting land surveying firm, known as Surveyor Scherbel, Ltd.

While on leave from the Navy, in September 1945, Paul met his future bride, Rachel Anderson (in Salt Lake City). The were married on 26 June 1946 at the Salt Lake Temple. The couple had three sons, Paul A., Scott, and Marlowe, and one daughter, Annette Priddis. Rachel preceded Paul in death. Also, Paul and Rachel had 32 grandchildren and 77 great grand children.

While studying at the School of Forestry and working at the Soil Conservation Service, Paul undoubtedly was introduced to the professions of surveying and mapping. He submitted his application to the State Board for professional land surveyor on 16 March 1951. The State Board approved his application, and Paul journeyed to Cheyenne for the professional examination (4 June 1951). The Board reviewed all his submitted credentials on 18 June 1951; accepted his application; and issued him professional land surveyor No. 164 on 28 September 1951. Paul was appointed a land surveyor member of the Wyoming State Board of Registration for Professional Engineers and Professional Land Surveyors in July 1987. He served two terms on the Board and step down in March 1995.

Within days after being notified he had completed all the requirements for a Wyoming land surveyor's registration, Paul had his first client - Belfer Petroleum Co. His client had him locate well sites for drilling permits and associated activities. His other early assignments included land/boundary surveying and the legal aspects of water rights, the two primary real property matters of local ranchers and residents in rural Sublette County and surrounding counties. At various times Paul was elected/appointed county surveyor in Lincoln Co. (30 years), Teton Co. (30 years), and Sublette Co. (67 years).

It was undoubtedly during his appointments as county surveyor(s), that Paul became interested in the Wyoming public land corner record document. Through the years he worked on the design of an acceptable form to be filed in the county

clerk's office, the quality of the information land surveyors placed in the document, and finally, the mandatory requirement that if a land surveyor found a public lands corner established by the original GLO deputy surveyor, a corner record was to be prepared and filed. This writer visited Paul in Big Piney about three years before his death, and the entire session was spent reviewing a sheath of filed corner records, assessing the quality of the provided information. Needless to say, Paul would write letters of counseling the form's preparer about the quality of the submitted data sheet. In February 1994, at the Wyoming Engineering Society Annual Meeting, Paul, members of the PLSW, and members of the State Board of Registration, convened a meeting chaired by Dr. Herbert W. Stoughton, to resolve long standing questions/concerns as to the format of the corner record form. When the meeting concluded, the attendees unanimously concurred on the revised version.

Paul's second major professional project was a compilation of the Wyoming statutes directly affecting the professional practice of land surveying in the state. The result was the book Scherbel on Surveying, which is a primary reference/authority for applicants completing the state specific land surveying professional practice examination. Scherbel also authored nearly twenty land survey amendments for the Wyoming legislature.

Scherbel's professional career was multifaceted. Besides pursuing a career in professional/technical practice (to earn a living), he recognized the professional responsibility of being a debtor to his profession and to civic involvement. At the state level, Paul actively participated in the activities of the Wyoming Association of Consulting Engineers and Surveyors (WACES), Wyoming Engineering Society (WES); Wyoming Board of Geographic Names (WYOBGN) and the Professional Land Surveyors of Wyoming (PLSW). Paul was a charter member of PLSW, where he played a major role in the formation of the organization. Subsequently, because of his many, unselfish contributions to PLSW and the land surveying profession, Paul was inducted (with four of his professional contemporaries) as the first Honorary Members of PLSW. At the national level, Paul was a member of the American Congress on Surveying and Mapping (ACSM), National Society of Professional Surveyors (NSPS), the American Society of Civil Engineers (ASCE), and the Surveyors Historical Society (SHS). In recent years, Paul regularly attended the annual SHS Rendezvous where re-enactments of historic surveying and mapping events were performed. Another personal interest of Paul's was the Surveyors of the Sixth Principal Meridian. This organization's mission was to remonument, restore, and preserve principal/historic survey monuments in Colorado, Kansas, Nebraska, South Dakota, and Wyoming. These included the Sixth Principal Monument (controlling land surveying real property boundaries and numerous state corners within the bounds of the Sixth Principal Meridian). Another of Paul's historical projects was to find the common corner of Idaho, Utah, and Wyoming set by deputy surveyor A.W. Richards (in 1874). The site is located about ten miles southwest of Cokeville, Wyoming. Paul and his survey crew spent three days attempting to locate the original site of Richards' monument (a stone), which had been dislodged. Richards' monument was nearly three-quarters of a mile west of the location set in 1871 by Daniel Major, which had been marked by an earthen bottle. Paul found Major's survey monument, and correctly reestablished Richard's corner. A news article of the feat was reported in the Wyoming Tribune Eagle (Cheyenne: 6 March 1992; page 6).

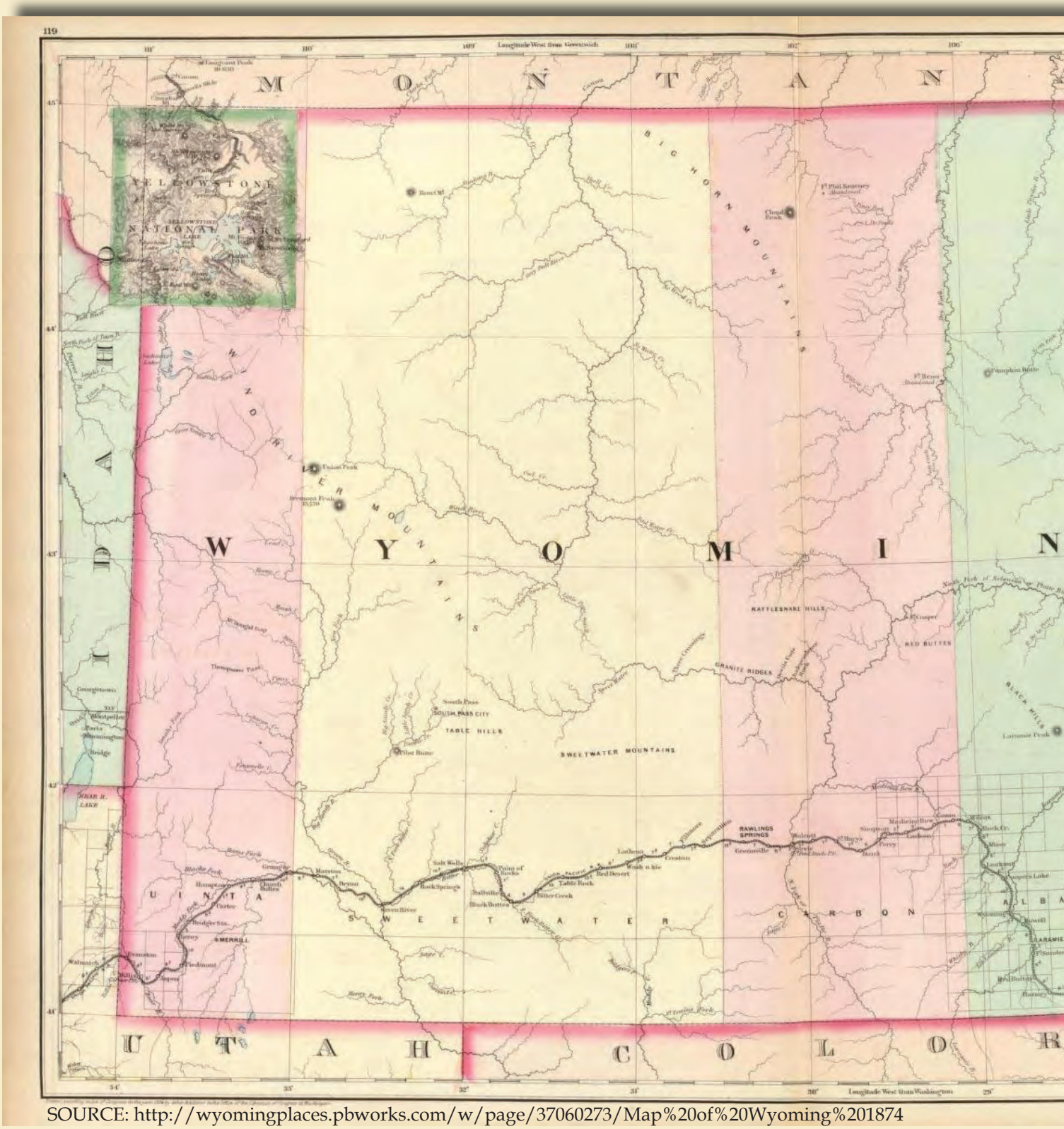
In the community, civic (nonprofessional), and political arena, Paul was equally active. Besides being a county surveyor, Paul was elected mayor of Big Piney for two terms. He helped to create the joint powers boards for the airport and the fire department. Many of his civic activities included seeking funding for the local health clinics; develop master plans for zoning and planning; mini parks in Big Piney; and obtaining lands for the expansion for the museum, library and Plainview Cemetery. Paul was awarded the Silver Beaver Award by the Boy Scouts of America for his lifelong leadership and support of this youth program.

Funeral services were conducted at the LDS Church in Big Piney on 31 October 2015, and burial with full military honors took place at the Plainview Cemetery.

A Wyoming History Primer, Natrona County

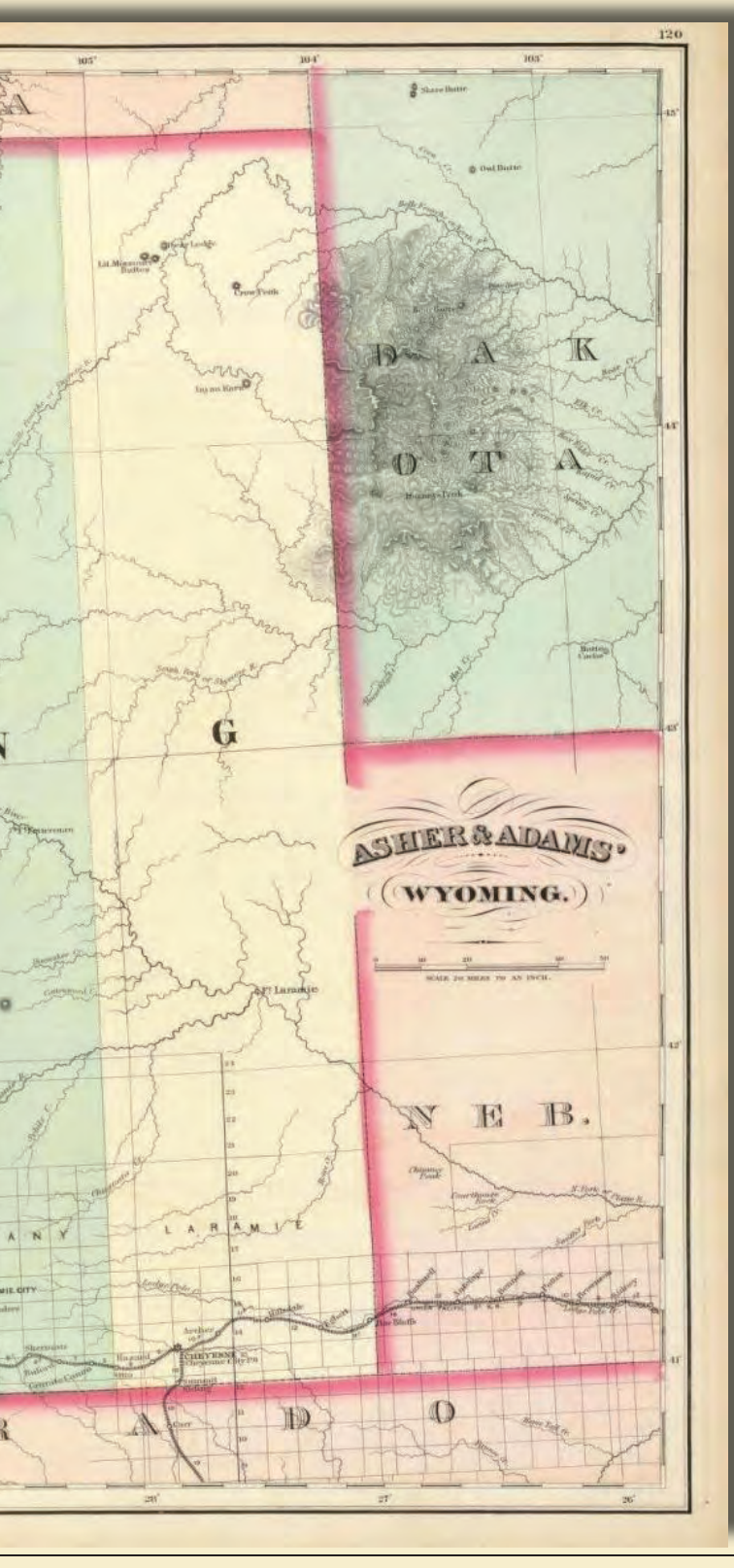
By: Don Davis, P.L.S.

Our states history and county configuration is as interesting as the people who carved it out of portions of the Louisiana Purchase, Northwest Territories, and Mexico, dating back to 1848. Harry Kessner, PE, PLS, PLSW Past–President, has written a very well researched article in the



SOURCE: http://wyomingplaces.pbworks.com/w/page/37060273/Map%20of%20Wyoming%201874

June 2015 *American Surveyor*, and in the October 2014 *Lines and Points*. With reference, he correctly states that this was not the Northwest Territories (historically understood to be Ohio, Michigan, Minnesota, Indiana, Illinois, and Wisconsin) but the Oregon Country, which for many years was shared by the U.S. and England. If you haven't read this article, you should.



The Establishment of Wyoming

The Tri-Territorial corner, where the Continental Divide crosses the 42 degree parallel, North Latitude, just north of Steamboat Mountain in Sweetwater County, was first claimed by Spain through the presumptive right of early discoveries and explorations. The area was also a part of Acadia, granted in 1603 by Henry IV of France, and part of New England as granted to the Plymouth Colony by James I, transferred to the Massachusetts Bay Colony in 1629. In 1682, Robert de La Salle claimed for France the whole basin of the Mississippi River (thus including the northeastern portion of this site).

France ceded its claim to Spain in 1762 but regained them in 1800 and sold the region of "Louisiana" to the United States in 1803.

Great Britain claimed the western portion of the site in 1792 and the United States laid formal claims in 1818 until the 42 parallel was accepted as the boundary between United States and Spain in 1819. Mexico, after gaining independence from Spain in 1821, reconfirmed the boundary lines. In 1824, Great Britain relinquished her claim to the area of the Columbia River basin, reaffirming this action by the Treaty of 1846 establishing the right of the United States to the "Oregon Country." On July 4, 1848, the cession of territory by Mexico was proclaimed giving to the United States the undisputed right to all of what would become Wyoming. (Ultimate Wyoming.com)

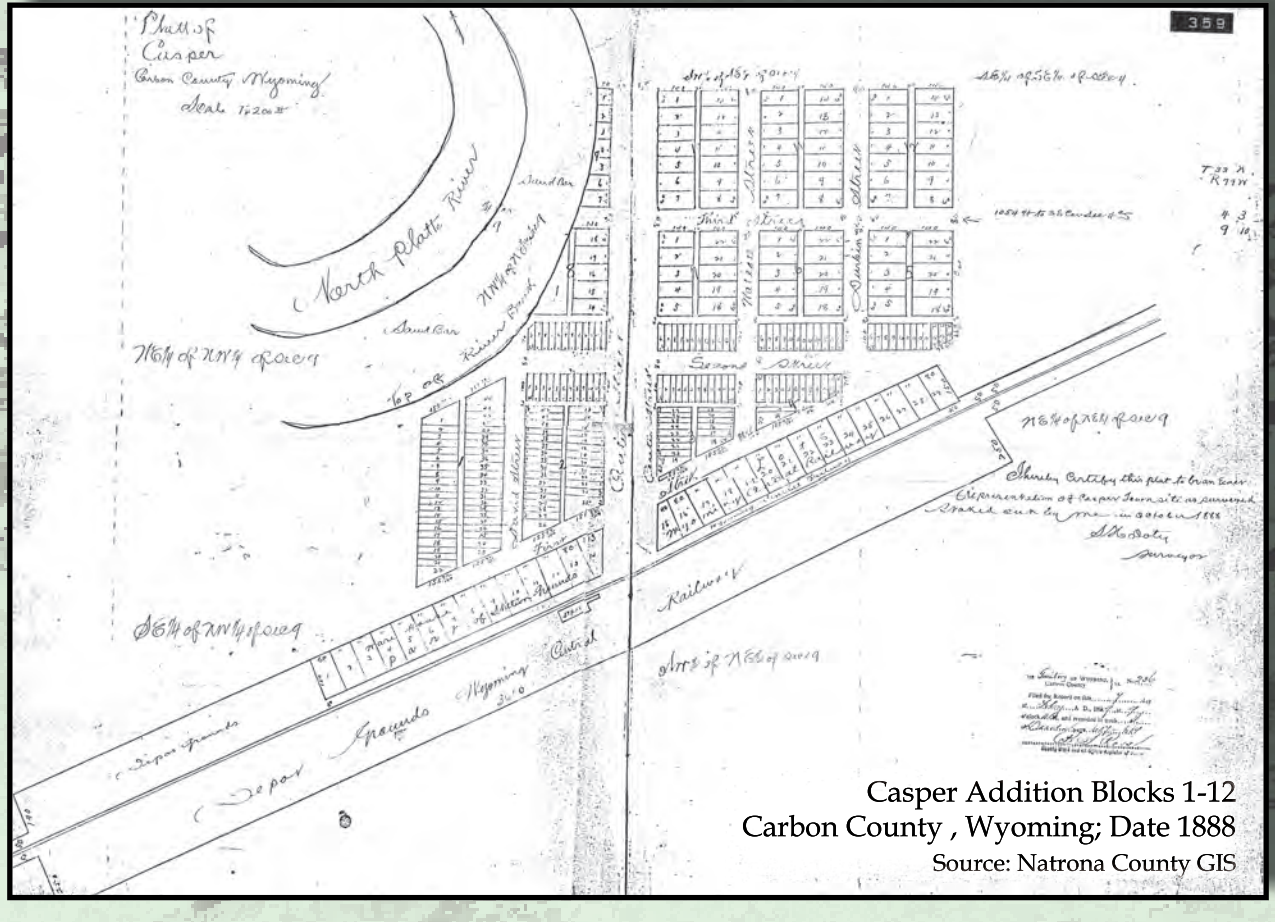
There is no place in the great Middle West more replete with interesting history than Central Wyoming and Natrona County. It was in this part of the country that John Colter, in 1808, while trapping along the streams and wandering over the plains, had thrilling experiences with the Indians that seem almost incredible. It was here that Robert Stuart, in 1812, with his small party of men, who, after traveling for many months through the mountains and over the plains, on their way from the Columbia River to Saint Louis, and having been overtaken with early winter, put up the first white man's cabin that was built in what is now the state of Wyoming. It was here that General Ashley, in 1823-4, explored the Big Horn Mountains and the Sweetwater Valley and gave its name to the "Sweetwater" River. It was here that Captain Bonneville, in 1832, spent much

of his time in his most interesting explorations, which are so ably described by Washington Irving. It was here that Father DeSmet, in 1840, spread the gospel among the Indians and trappers, and through his goodness no doubt averted many a clash between the red man and the whites. This great man chiseled his name on Independence Rock, which he gave the name, "The Register of the Desert". In 1868, however, a new era was inaugurated, and the enterprising settlers who laid the foundation for our new state made vigorous efforts to secure an organization nearer home. These were baffled until July 25, 1868, when the act to provide a temporary government for the "Territory of Wyoming" became a law. The boundaries designated for the foundling were the forty-first and forty-fifth degrees of north latitude and the twenty-seventh and thirty-fourth meridians of longitude west from Washington. This gave the territory the generous dimensions of 365 miles in length by 276 miles in breadth, and, besides taking a large proportion of Dakota's domain, carved smaller areas from Colorado and Utah.

Organizing Wyoming's Counties

There were originally five counties in the Wyoming Territory: Laramie and Carter, established in 1867; Carbon and Albany established in 1868; and Uinta, an annexed portion of Utah and Idaho, extending from Montana (including Yellowstone Park) to the Wyoming-Utah boundary.

Carbon County was one of the original five counties of the Territory of Wyoming, and was organized by legislative enactment in November 1869. Carbon County originally included the portions of the Territory of Wyoming lying between a point on the Union Pacific railway one-half mile east of Aurora station and the 107th degree and 30 minutes west longitude on the west, and the north and south boundary lines of the territory. The area of the land embraced



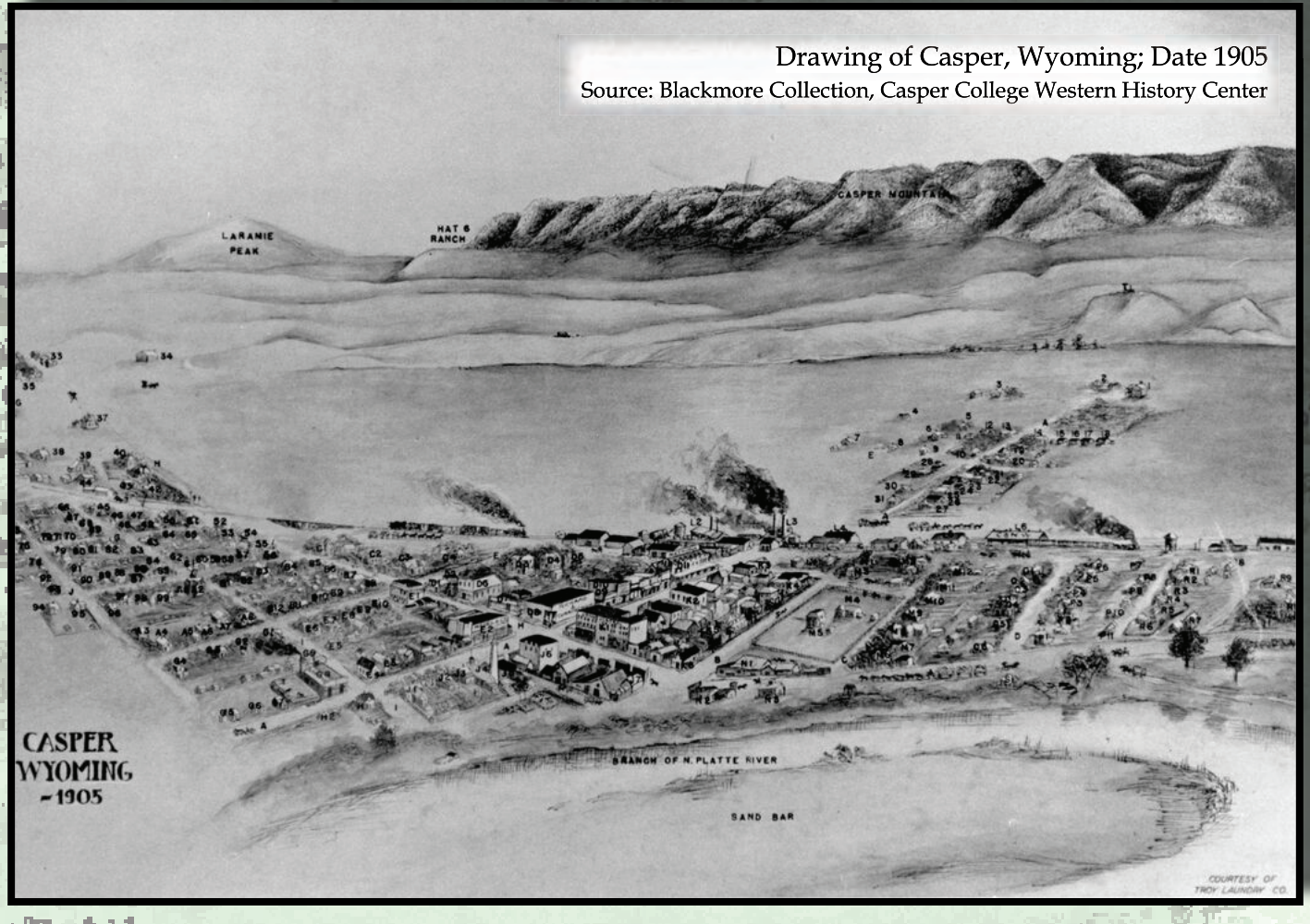
Casper Addition Blocks 1-12
Carbon County , Wyoming; Date 1888
Source: Natrona County GIS

was 22,080 square miles, 30 square miles more than are included in the states of Connecticut, Massachusetts and New Hampshire. In 1879 Carbon County was divided on the parallel of 43 degrees and 30 minutes north latitude, and the north portion was organized under the name of Pease, but was later changed to Johnson County. After this division Carbon County was reduced in land area to 12,816 square miles. Reduced to acres, the county contained 8,783,040 acres of land. Its population in 1877, before Johnson County was segregated, was given as 2,500 and its assessed valuation was $1.9 million.

With the two divisions of Carbon County that have been made from its original area, Natrona is left in the center of the old county. Natrona County derives its name from the natural deposits of natrum or carbonate of soda, which is found in the numerous basins and lakes that abound in the central part of the state. Judge Charles E. Blydenburgh of Rawlins suggested the name "Natrona" as the 13th county of Wyoming. The boundaries of Natrona County, at the time the bill was enacted by the territorial legislature, which have been changed but little since, were defined as follows:

"Commencing at a point on the seventh standard parallel north, at its intersection with the western boundary line of the present county of Albany; thence west along said standard parallel to its intersection with the west boundary line of the present county of Carbon; thence north along said last described boundary line to the southern boundary line of the present county of Johnson; thence east along said boundary line of Johnson county to the northwestern corner of the present county of Albany; thence south along the western boundary line of said county of Albany to the place of beginning; being all that portion of the present county of Carbon, Territory of Wyoming, lying north of the seventh standard parallel north."

Johnson County being to our north and Carbon



Drawing of Casper, Wyoming; Date 1905
Source: Blackmore Collection, Casper College Western History Center

to the south. Sheridan County was organized from part of Johnson County in 1887, and Big Horn County was organized from part of Johnson County in 1897.

Wyoming County records differ vastly from county to county in both quality and quantity. Some are carefully preserved while others have been substantially abused and neglected. Many Wyoming records have merely disappeared. For genealogists carrying out research in Wyoming there is no effective place to have an on-site search of county court house records.

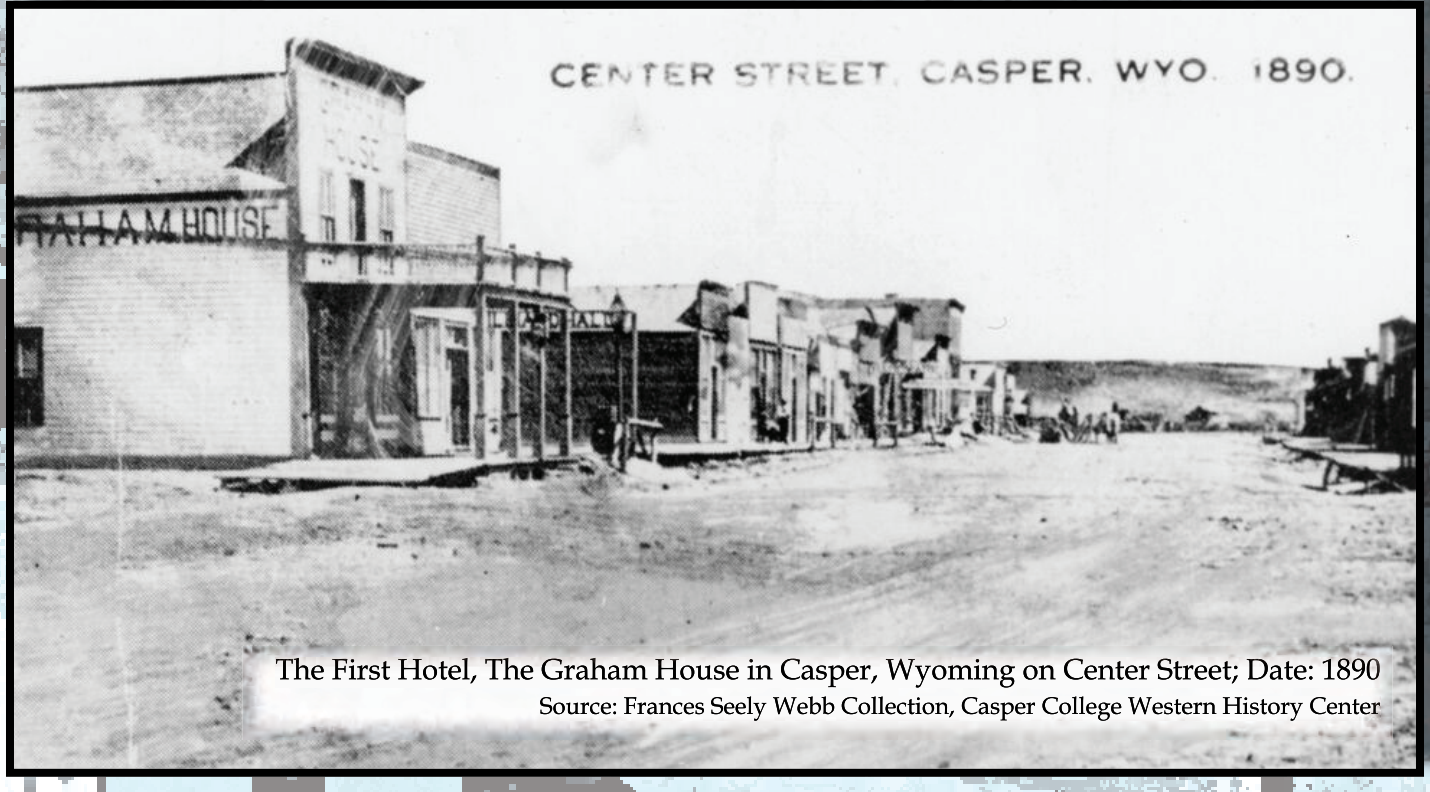
On July 10, 1890, Wyoming was admitted to the Union with thirteen counties.

Wyoming contains counties that no longer exist. They were recognized by the state, provincial, or territorial governing administration. Many of these counties were created and disbanded during the 19th century; county borders have changed little since 1900 in the great number of states. These parent counties should be investigated when performing ancestry and genealogy research. Pay close attention where the courthouse records went to if the county was eliminated or combined with some other county.

- Carter County was created December 27, 1867 and renamed to Sweetwater on December 13, 1869.
- Hanover County existed for seven days in 1911 before it was renamed Washakie County.
- Pease County was created December 8, 1875 from the Wyoming Territory and renamed Johnson County in 1879.

Platting Begins

Platting of lands began just prior to Statehood and the organization of Natrona County with the Casper Addition, Blocks 1 thru 12 on July 9, 1889, the first and only territorial plat, while still part of Carbon County. This plat encompassed what is now downtown Casper between the Wyoming Central Railway (Collins Street, formerly Railroad Avenue) and

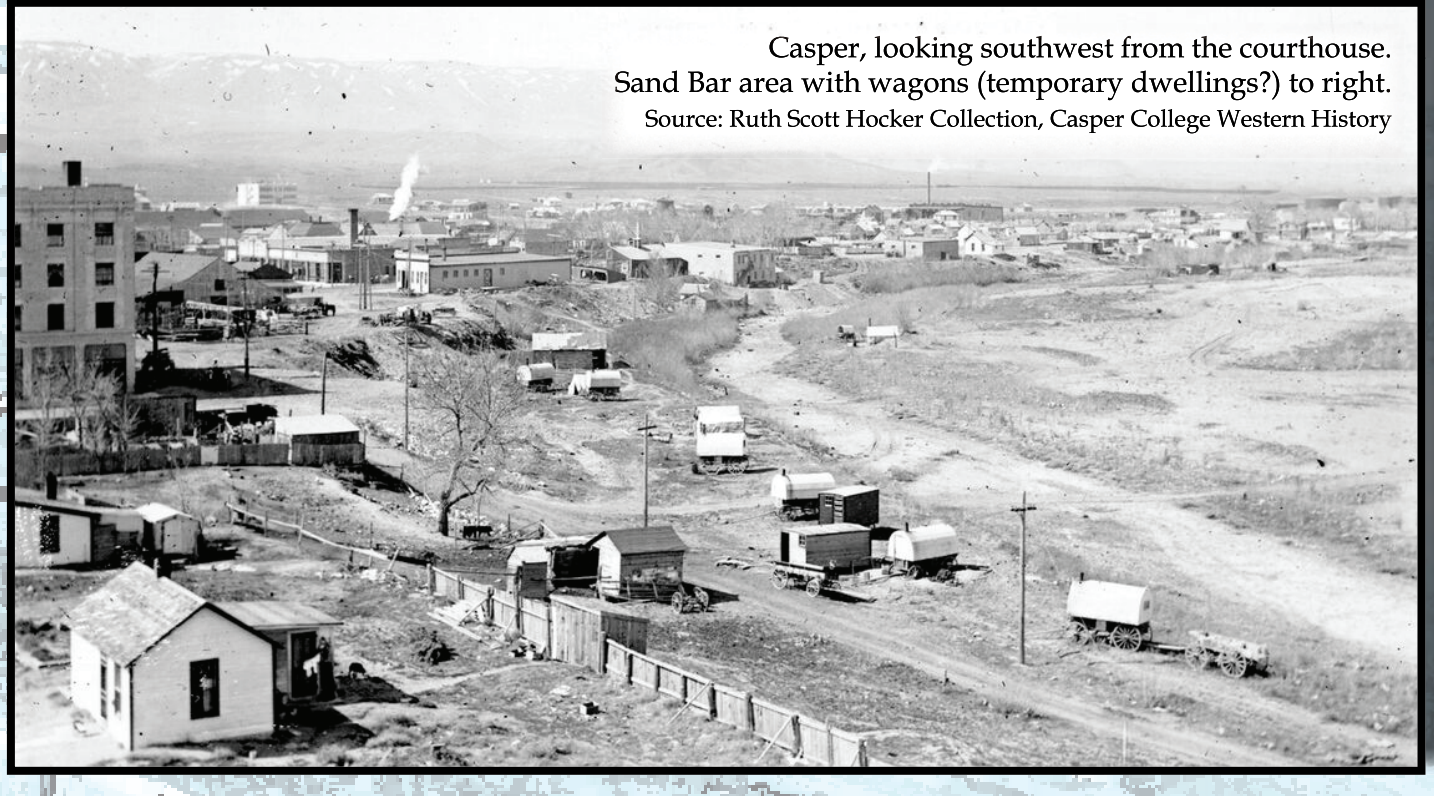


The First Hotel, The Graham House in Casper, Wyoming on Center Street; Date: 1890
Source: Frances Seely Webb Collection, Casper College Western History Center

what is now the BNSF, north and south, and Durbin Street to David Street east and west. The area known as the Sand Bar on the North Platte River was the limiting factor to the west. This area flooded annually and was a basic no-man's land until 1904 when the railroad spur and berm between the Chicago, Burlington, & Quincy, now BNSF, and the Midwest Refining Company (formerly the Amoco Refinery and now the Three Crowns Golf Course and BP Commons) tamed the river and ushered in the era of further development.

Platting in Natrona County was slow in the 1890's with only four plats being recorded. In following years, seven plats were recorded between 1900 and 1910 and 36 plats were recorded between 1911 and 1920. Of interest were the Midwest Addition in 1915 and the West Central Addition in 1916. These plats were established in what was known as the *Sand Bar*. This was an area of Casper that was known as the worst bad place in Wyoming. Walter Jones has published a book, the Sand Bar which is a must read for Natrona County residents. If there were nefarious activities going on in Casper, it was in the Sand Bar. Nearly lawless, this place earned its reputation based on murders, prostitution, gambling, alcohol, fighting and stabbings. In the early 1970s, the urban renewal and the construction of the County Hall of Justice and Casper City Hall ended what many politicians could not.

L.S. Worthington and Marion Wheeler, both land surveyors and civil engineers, provided much of the early platting in Natrona County. Both held the position of City Engineer between 1915 to 1925. L.S. (great initials for a surveyor) was the father of Harold "Spec" Worthington, who with Elmer Lenhart, started Worthington and Lenhart, now WLC Engineering, Surveying, & Planning (WLC), in Casper in 1948. WLC is proud to continue this long heritage that L.S. Worthington began in Natrona County more than 100 years ago.



Casper, looking southwest from the courthouse.
Sand Bar area with wagons (temporary dwellings?) to right.
Source: Ruth Scott Hocker Collection, Casper College Western History

(Continued on Page 6)

data collection, data reduction, and survey data adjustment which have serious imperfections. Many of these shortfalls resulted from the lack of technical, theoretical knowledge required to develop an operating system, in any one of these components, and having the sensitivity equivalent to the improved technology.

b. One of the major factors contributing to these problems is the "universally" published technical literature. The "general" surveying textbooks remain unchanged since Professor William Gillespie (Union College; 1855) and John Butler Johnson (University of Wisconsin; 1886) first wrote their books. A number of the "elementary" surveying textbooks published in the last three decades degrade the professional image. They, the elementary surveying "textbooks", degrade/demean the background intellectual body of knowledge (physical science; mathematics, statistics, etc.) and utilize inelegant technical terminology and English prose and grammar. The undersigned personally had several encounters with academicians in this arena. Case I: When teaching at a two-year academic program and being visited by an accreditation team, the undersigned was asked how could the undersigned teach rigorous least square adjustments to my students, when this team member, from a four-year program, stated it was impossible at their institution. The response was that the undersigned had performed least squares adjustments for over a decade, both long-hand and with digital computer (triangulation, trilateration, differential level nets, and traverses), for professional, non-academic assignments. Case II. In the second encounter, the undersigned was teaching the second plane surveying and plane surveying computation courses, in which was introduced five different trigonometrical and surveying figural area computations of plane figures. A faculty from a "leading" four-year surveying program called this approach "over kill". The undersigned's personal/professional philosophy was to expose the student to the techniques and procedures previously employed, and to introduce the

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students to the concept of the existence of alternative solutions to a particular problem which would produce equivalent (and professional) results.

c. Since World War II, the "definition" of the surveying (usually called land surveying) profession has been increasingly narrowed. This "narrowing" has altered the academic curriculum and career path of work assignments to achieve the minimum land survey professional qualifications. Even if an individual had an appropriate associate or baccalaureate degree, the career path has been: rod man - note keeper/recorder - instrument man - party chief - project surveyor trainee/ project surveyor. To date, this philosophy has basically remained unchanged. When the undersigned was a land surveyor member of the New York State Board for Engineering and Surveying, it was very common to observe that the applicants had less than five percent of their reported experience performing legal/courthouse research, performing the final legal solution analysis, and writing legal descriptions.

d. Another problem with the image of the profession results from interpreting public statements provided by the land surveying profession. In a professional journal one employment advertisement stated: ". . . seeking a registered professional surveyor (or be on the track to be able to sit for the PLS exam soon) . . .". The statement is a "cop-out" for desiring a professional person, but willing to accept a technician. The second advertisement read: "Candidate must be familiar with CAD & robotic survey equipment." This statement means the individual has a level of operational competency, which can be achieved by a technician. Also, the question is begged, if the potential candidate is hired, is there a land surveyor registrant superior/supervisor who will be able to "sign-off" on the applicant's subsequent work experience for professional registration [because there must be no "blank" experience, time intervals]?

3. Personal Observations.

a. The reader has probably comprehended that the undesigned has a very strong opinion about surveying education and the qualifications for academicians and practitioners.

b. In the 1950's and 1960's the American Society of Civil Engineers, American Congress on Surveying and Mapping, and several

state professional land surveying societies (particularly Michigan Society of Registered Land Surveyors (MSRLS)) addressed the role of professional land surveying. The first of these papers was the Austin Barry report (ASCE). Several other professional papers, which are in the files/archives of the undersigned, also addressed the theme. The MSRLS was asked by the Michigan Board of Registration to develop a four-year curriculum in surveying to satisfy the recently enacted legislation requiring a four-year degree for land surveying registration. The Michigan Society of Professional Surveyors report [to which the undersigned had first-hand knowledge of the committee's deliberations], accompanied by the Ralph Moore Berry minority report (which was not negative, but pro active of the MSLRS final report) provided a detailed curriculum under the engineering philosophy. In that era, every author/committee believed that surveying (and land surveying) was a branch of engineering. These papers/documents subsequently have been relegated to the dust bin. Since the mid 1970's, there has been no significant or seminal paper or report addressing the problem or issue. The national surveying educators' meetings have been silent in this matter.

c. Since the 1950's, the paramount philosophical question is whether Is Surveying a Branch of Engineering? But to specifically address and answer this question, the underlying, fundamental question requiring a definite definition is What is Engineering? or What are the Definitive Definitions of the Subject-Matter Topics of Engineering? For nearly seven decades, there has been a widening difference of philosophies between the engineering and surveying/land surveying professions (by both professional practitioners and academicians). One professional entity (engineers) believes that they are the professionals, and that the other professional entity are only technicians.

d. In a number of states, the combined professional engineering and professional land surveying boards have been separated into two separate and distinct entities.

4. Questions should be directed to the undersigned.

Respectfully submitted,

Herbert W. Stoughton, Ph.D., P.E., P.L.S., C.P.
Geodetic Engineer

Lines and Points Article Rotation Submission Schedule By Chapter

Responsible Chapter	First Call Date	Last Call Date	Publication Date
South Central Chapter	Thank You!! (see "A Wyoming History Primer" in this issue)		
Southeast Chapter	March 1	March 15	April 1, 2016
Laramie Valley Chapter	June 1	June 15	July 1, 2016
Upper Platte Chapter	September 1	September 15	October 1, 2016
Southwest Chapter	December 1	December 15, 2016	January 1, 2017
Northeast Chapter	March 1	March 15	April 1, 2017
Northwest Chapter	June 1	June 15	July 1, 2017
West Chapter	September 1	September 15	October 1, 2017
Central Chapter	December 1	December 15, 2017	January 1, 2018
South Central Chapter	March 1	March 15	April 1, 2018
Southeast Chapter	June 1	June 15	July 1, 2018
Laramie Valley Chapter	September 1	September 15	October 1, 2018

As the Board of Directors discussed, any four page article (with pictures) may be from within the particular chapter membership (survey stories, or technical experiences) or after acquiring permission to use an article from another professional society publication or which provides information of interest to the PLSW members. The Board also approved assigning the responsibility for the article development and submission to each chapter's vice president. If a Chapter does not provide an article that same Chapter shall be obligated to provide an article for the next publish date.

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