

## BOUNDARY DISPUTES AND THEIR CAUSES

by

LeRoy F. Middleton, PLS

Land boundary disputes have existed since man has been on this earth. Territorial disputes between cave dwellers and indian tribes were early forms of these problems. In more modern times uncertainty over the location and boundaries of nations, states, as well as indian reservations continue to reach the court system for clarifications. Most of the boundary problems, however, occur between neighbors and abutting land owners. This paper is an attempt to bring out and clarify some of the problems of boundary disputes and in particular the role of the professional land surveyor.

Boundary disputes are caused by a multitude of factors but they usually end up being due to a mis-understanding of the legal description or a lack of understanding of where the true boundary line runs between abutting land owners. Legal descriptions were created by surveyors, engineers, title officers, attorneys, realtors, or the land owners themselves. Unfortunately many descriptions were (and still are) poorly written, ambiguous, and subject to interpretation. The use of incorrect wording and wrong punctuation can later lead to an ambiguous situation.

The location of land boundaries are determined by questions of fact and the application of law. In a court of law the facts are decided by a judge or jury. In the final analysis the law is always interpreted and applied by the court. Land surveyors, when locating land boundaries, are charged with the responsibility of adequately gathering facts, correctly evaluating them, and making decisions which can be used in court decisions.

### Public Land Survey System

Most of the public lands in the United States, with the exception of the original 13 colonies, Texas and Hawaii, were surveyed and patented by the General Land Office (GLO). The surveys were run by contract deputy surveyors under instructions by the GLO. The system used was known as the rectangular survey system and was originated by Thomas Jefferson and was enacted by the Land Ordinance Act of 1785. The purpose was to allow the survey of the public domain into sections, townships and ranges before a patent (deed transfer from the federal government) could be issued.

The states of Washington and Oregon were part of the Oregon Territory which was formed in 1848. By 1851 there were approximately 7,400 settlers occupying land without benefit of legal ownership. This land was part of the public domain and was subject to disposal by the federal government. Before a patent could be issued the land needed to be surveyed and section corners set on the ground. On June 4, 1851 the surveys began with the establishment of the "initial point" within what is now the City of Portland , Oregon.

After placing of a monument at the initial point two survey lines were run in the field, one north and south and one east and west. The north-south line was run as a true meridian and identified as the "Willamette Meridian". The east-west line was run at 90° to the meridian and became the base line for all surveys north and south of it.

Working along the Willamette Meridian and base line the surveyors set township corners at six-mile intervals, and then, by extension, the tract is marked of into a grid. Each of the six-mile squares is a township containing 36 square miles and are numbered north and south of the base line. The townships are further divided into sections of one-mile squares containing 640 acres. Individual sections within a township are identified by a numbering system that starts with section 1 at the northeast corner of the township and ends with section 36 at the southeast corner. A section can be further sub-divided into quarter sections of 160 acres which became the basic unit under the Homestead Act of 1862. Quarter sections can be then divided into quarter-quarter sections of 40 acres each.

Thus a typical parcel of land could be described as: "The northwest quarter of Section 9, Township 27 North, Range 3 West, Willamette Meridian". By reading this description one can determine that its general location is in the state of Washington (north of the base line) and is 27 townships north and 3 ranges west of the initial point.

Instructions were issued by the Surveyor General as to the methods the deputy surveyors were to use in the prosecution of their work. Distances were determined by the use of a "gunter's" chain which was 66 feet in length. A compass with a solar attachment was used to determine angles. Because a compass alone was not reliable the solar attachment was used to determine true north. At each corner monuments were set using wood stakes, rocks and other materials that were readily available. Besides

the basic four corners and at  $\frac{1}{2}$  mile intervals other monuments were set under special conditions. Section surveys proceeded from the southeast corner of each township and ran north and west to close on previously run township boundaries. All errors of excess or deficiency would be placed along the north and west portions of each section abutting along the township lines. These tracts of more or less 40 acres were designated as "government lots" or "fractional lots" and were numbered as such. Government lots were also established in case of areas of more or less than 40 acres due to abutting upon previously disposed tracts of land or against bodies of water.

Survey conditions in Washington and Oregon during the early years were not ideal. Iron deposits caused variations in the needle of the compass. the terrain was rugged and heavily wooded and this made it difficult to run straight lines. Due to inclement weather and smoke from numerous forest fires delays in the prosecution of the surveyors work were common. As a result of these problems and the limitations in the survey equipment errors were introduced. Thus a section being measured one mile on each side and containing 640 acres became either more or less when a re-survey was made. One of the cardinal rules in surveying is that survey monuments as set by the original GLO surveyors are absolute and can not be moved or changed to a more precise location.

Any survey within the boundaries of a section must always start with a re-survey of the applicable portions of the section to determine its size and location before any further sub-division is made.

To compound these problems there were a few fraudulent surveys made by deputy surveyors in which false field notes and township plat maps were prepared and submitted without the surveyor ever having set foot on the site. Most of these were conducted in Washington by the "Benson Syndicate" and were not numerous.

### Types of Legal Descriptions

Any transfer of land will involve a written legal description which should adequately describe the land so conveyed. These descriptions can be generally classified as: (1) Bounds, (2) Metes and Bounds, (3) Subdivisional, (4) Plats, and (5) Any combination thereof.

## 1. Bounds

Probably the oldest form of a land description by which the parcel conveyed will be bounded on all sides by natural objects such as a river, a road, or even other tracts previously conveyed. Although a "bounds" description is more easily understood by the owner, especially if the objects can be seen, it does cause problem for the surveyor who must precisely locate and monument the boundary on the ground. A typical bounds description might be described as: "That portion of the SW $\frac{1}{4}$  of Section 18, Township 27 North, Range 4 East, W.M., described as bounded on the north by the north line of said SW $\frac{1}{4}$ , on the east by the G.N.R.R. R/W; on the south by the Swift River; and on the west by County Road No. 448; Snohomish County, Washington."

## 2. Metes and Bounds

Metes means to measure by distance and direction while bounds indicate the limits or extent of the property so described. This description type is quite prevalent and usually is based on a survey. The description would consist of a series of bearings and distances enclosing the parcel. A typical description might be:

"That portion of the SE $\frac{1}{2}$  of Section 9, Township 27 North, Range 4 East, W.M., described as follows: Commencing at the northwest corner of said SE $\frac{1}{2}$ ; thence S 0°02'59" E, along the west line thereof, a distance of 663.50 feet to the true point of beginning of this description; thence N 89°58'00" E, a distance of 300.00 feet; thence S 0°02'59" E, a distance of 150.00 feet; thence S 89°58'00" W, a distance of 300.00 feet; thence N 0°02'59" W, a distance of 150.00 feet to the true point of beginning."

## 3. Subdivisional

As previously stated most of the states have been surveyed under the rectangular survey system. After the original surveys by the GLO deputy surveyors township plats were prepared and filed with the General Land Office which made them official documents, Proper descriptions could then be made and the "public domain" lands patented. An example of this type of description would be:

"The northwest Quarter of the Northwest quarter of Section 8, Township 27 North, Range 4 East, Willamette Meridian, Snohomish County, Washington."

#### 4. Plats

After the subdivision of land by the rectangular system, and as more settlers arrived to claim land in the pacific northwest, it usually became necessary to divide ones large tract into smaller parcels. This was accomplished by a procedure called "platting", in which a subdivision was surveyed and a plat prepared showing lots, blocks and streets, and then recorded in the county where the plat existed. A typical plat description then might be described as:

"Lot 5, Block 8, Plat of Seattle Heights Division No. 1, as recorded in Volume 8 of Plats, Page 37, records of Snohomish County, Washington."

#### 5. Combination of Descriptions

It is quite common to see descriptions written that are a combination of the of any of the above types.

#### Interpreting Legal Descriptions

The surveyor uses his professional training and skills, together with his hi-tech instruments to locate , to the best of his ability, the location on the ground legal descriptions furnished. This of course involves measurement but the true professional part of his job is to correctly interpret the meaning of the description. In this process the surveyors' duty is to gather evidence, show any discrepancies that might exist, ascertain the intent of the parties, and some cases advise his client in seeking the advise and council of a competent attorney.

In writing and preparing a legal description one can refer to a good guideline in the state of Washington WAC 332-130-040 (copy attached).

A few problem areas in the writing and interpretation of descriptions can be summarized as follow:

#### Errors and Mistakes

Errors may be defined as the difference between a true value and the observed quantity. Errors may be classified as either systematic or accidental, and are due to such factors as inherent errors in the instruments or the surveyors tape. The effect of these errors usually may be removed by correction.

A mistake or blunder can be due to such acts as mis-reading the surveyors tape or transit, transposing numbers, or incorrectly interpretation of a legal description. Mistakes cannot be corrected without repeating the whole procedure. So called "mistaken boundary lines" can be put in this classification.

### Precision and Accuracy

Precision refers to the degree of refinement by which a quantity is determined. Accuracy is a measure of how close to the true or exact value the determination is. Precise values can be close to each other but not necessarily close to the true value.

Accuracy would be the degree of closeness to the true value, such as, the setting of a lot corner at or close to the original or true position. Thus a surveyor could, by using sophisticated equipment, locate a corner precisely, but not be accurate as to its true position.

### Junior-Senior Conveyances

With the exception where lots were created at the same time, such as a recorded plat, there exists a situation in which lots or tacts are created at different times. If for instance a platted lot shows a width dimension of 400.00 feet, and in 1945 the westerly parcel was sold and described as "the west 200.00 feet," and then in 1960 the remaining parcel was described as the "East 200.00 feet," this could lead to a boundary problem at a future date. A subsequent survey might disclose that, in fact, the width of the original platted lot was 395.00 feet, thus causing a shortage of 5 feet in the measurement and an overlap between the two parcels. The correct procedure in this case would be to give the first parcel sold its full width of 200.00 feet, and the easterly parcel would receive the remainder or 195.00 feet. This is based upon the theory that the original grantor could only sell what he had left after his initial conveyance of 200.00 feet.

In the case of a situation where the platted lot was determined to be 405.00 feet, and parcels were sold as the "East 200.00 feet" and the "West 200.00 feet," there would exist a gap of 5 feet. Each parcel owner would receive 200.00 feet and the 5 ft. gap would still be owned by the original platted lot owner.

### Proportionate Measurement

Pro-ration or proportionate measurement is sometimes used to distribute any excess or deficiency found in lots that were created at the same time such as a recorded plat. If, for instance, a measurement between controlling block monuments was different from the recorded dimension, this difference would be pro-rated into the intervening lots. All street widths would, however, receive full platted dimensions. This procedure cannot be used to distribute an obvious mathematic mistake in a lot dimension nor can it be used to alter senior rights or to alter original monument positions. Proportionate measurements begin and end at the nearest original monuments. It also cannot be used where lots have no dimensions, such as the case in older plats where end or remnant lots did not have widths shown. Pro-ration is a general rule and should only be used as a last resort.

### Adverse Possession

Adverse possession is the case where a neighbor occupies a strip of land that belongs to the abutting land owner. This is a complex situation and the surveyors duty, after surveying the described boundary line, to locate all fences, structures, driveways and any other feature that might constitute a possible encroachment. Adverse possession can, under certain conditions, transfer ownership to the person that is the "possessor." Adverse possession is a legal matter and is covered by washington statute laws and must be resolved by court decisions. The elements considered in such cases include time of possession, actual possession, uninterrupted, open, notorious, hostile, exclusive and made in good faith. Again, this is a legal matter and should be handled by a competent attorney.

### Solving Boundary Disputes

Neighbors can live side by side in a friendly manner until that fateful day when the surveyor arrives on the scene. When a discrepancy is discovered in the common boundary line the easiest way to solve these problems is the use of a boundary line agreement, but of course both parties must agree. The next step would be to enter into a type of arbitration where a disinterested party, usually another surveyor, can arrive at some agreeable solution. If all else fails then the case would end up in court at considerable costs for all sides.

GENERAL EXHIBITS



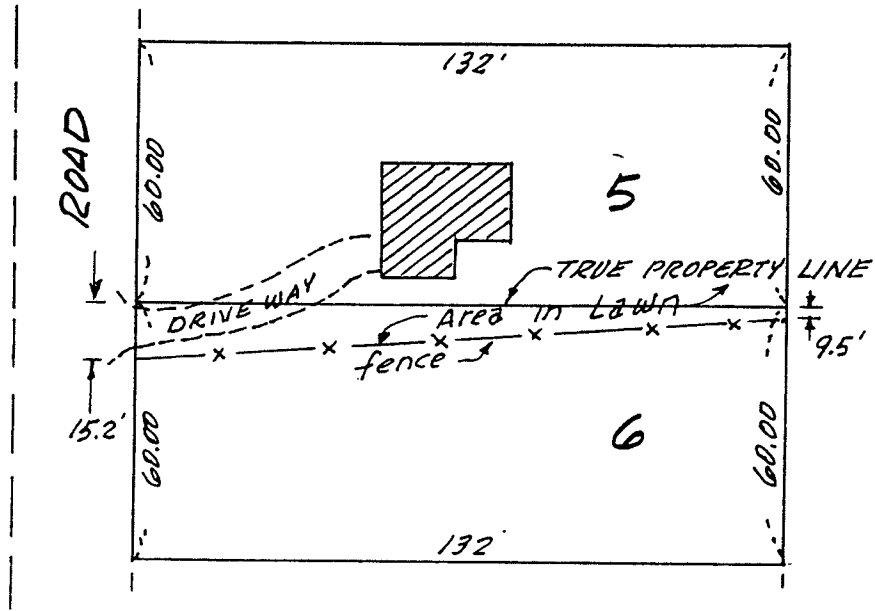


FIG. 1

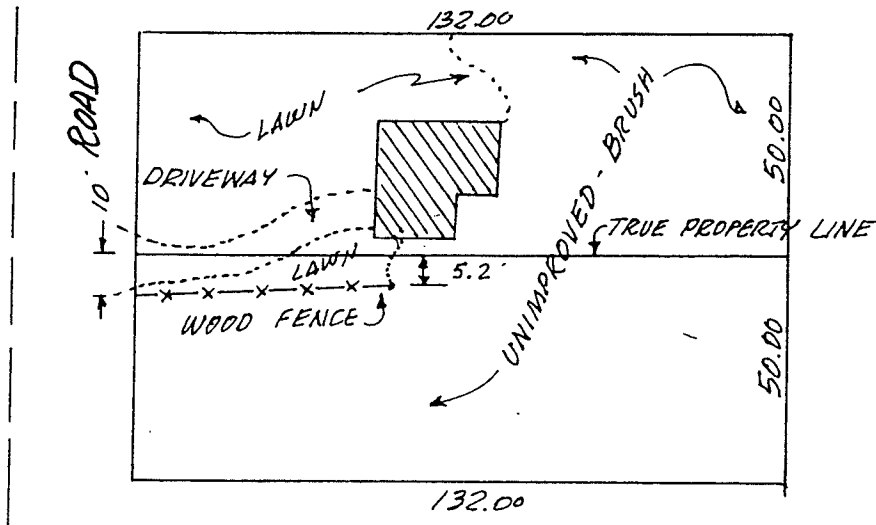


FIG. 2

Adverse possession situation indicating encroachment along the entire length of lot 6 as shown in Fig.1, and only partial encroachment as shown in Fig. 2.

TIDELAND AND SHORELAND BOUNDARIES

## BEDS OF NAVIGABLE WATERS

Under the laws of the United States all navigable waters have always been and shall forever remain common highways. The beds of such navigable bodies of waters are not a part of the public domain and are not subject to the survey and disposal by the United States. The survey of the public lands adjacent to navigable bodies of waters must be segregated on the mean high water elevation. The "Manual of Surveying Instruction," governing the surveying of the public domain required the surveyor to run meander lines along all "navigable" bodies of waters including rivers over 3 chains in width and lakes having an area of 25 acres and upwards. The fact that meander lines were in fact run in the field does not necessarily mean that such body of water is navigable. Also the meander lines were not run exactly along the mean high water mark so some places water intervened between the meander line and the shore line. The meander line was used not as a boundary line but a closure line for the survey and also the line by which the acreage of the various government lots were calculated.

Title to the beds of all navigable waters remained in the United States until November 11, 1889 after which title vested in the State of Washington, with the exception of all tide and shore lands patented by the United States prior to November 11, 1889.

The question of the meaning of "navigable waters" has created controversy over the years and can only be determined by a court of law. The Supreme Court of the United States has ruled that "... streams and lakes which are navigable in fact must be regarded as navigable in law; that they are navigable in fact when they are used, or susceptible of being used, in their natural and ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water; and further that navigability does not depend on the particular mode in which such use is or may be had - whether by steamboats, sailing vessels or flat-boats - nor on an absence of occasional difficulties in navigation, but on the fact, if it be a fact, that the stream in its natural and ordinary condition affords a channel for useful commerce." This rule laid down by the Supreme Court is that to be navigable the waters must be capable of being used practically for the use of commerce.

Because of the controversy over the meander line and the true line of ordinary high tide or high water the courts have ruled that "Where patents were issued by the United States prior to statehood (Nov. 11, 1889), if the waters are navigable, the boundary is the line of ordinary high tide (or high water) or the meander line whichever is the lower one. Patents after statehood the boundary goes to the line of ordinary high tide.

## DEFINITIONS TIDELANDS AND SHORELANDS

In 1890 the Legislature of the State of Washington established three classes of tidelands and shorelands. Prior to 1897 the Legislature had classified 1st class adjacent to a city, 2nd class which included improvements and 3rd class which embraced all other tidelands. After 1897 the 3rd class was abolished and the following two classes are now in effect for all tidelands and shorelands in the State:

**FIRST CLASS TIDELANDS** - Means the beds and shores of navigable tidal waters belonging to the state, lying within or in front of the corporate limits of any city, and within one mile thereof upon either side and between the line of ordinary high tide and the inner harbor line, and within two miles of the corporate limits on either side and between the line of ordinary high tide and the line of extreme low tide.

**SECOND CLASS TIDELANDS** - Means the public lands belonging to the state over which the tide ebbs and flows outside of and more than two miles from the corporate limits of any city, from the line of ordinary high tide to the line of extreme low tide.

**FIRST CLASS SHORELANDS** - Lands bordering in the shores of a navigable lake or river not subject to tidal flow, between the line of ordinary high water and the line of navigability and within or in front of the corporate limits of any city or within two miles thereof on either side.

**SECOND CLASS SHORELANDS** - Lands bordering on the shores of a navigable lake or river not subject to tidal flow, between the line of ordinary high water and the line of navigability and more than two miles from the corporate limits of any city.

It should be noted that from 1889 to 1895 tidelands were sold by metes and bounds descriptions. From 1895 to 1911 the seaward boundary of tidelands were set at mean low tide. Since 1911 the seaward limit has been extreme low tide and the abutting tideland owner who purchased prior to 1911 had the right to purchase the area between mean low tide and extreme low tide.

First class tidelands and shorelands are usually platted by the state into lots and blocks and a map is filed in the office of the Commissioner of Public Lands at Olympia and a copy is filed in the office of the County Auditor of the county in which the lands are located.

Second class tidelands and shorelands are unplatted and are usually described as that part of the tidelands or shorelands of the second class lying in front of a certain described tract.

**LINE OF NAVIGABILITY** - is the outer boundary of shorelands and is an indefinite term. Shorelands were sold on the basis of front footage along the meander line and the courts have ruled the holders of shorelands took their lands subject to the right of the state to come along later and set the outer boundary by determining the "line of Navigability".

The state constitution also provided for the establishment of "harbor lines in the navigable waters of the state, wherever such navigable waters lie within or in front of the corporate limits of any city, or within one mile thereof on either side." The harbor lines so established consists of:

**OUTER HARBOR LINE** - The line beyond which the state shall never sell or lease any rights.

**INNER HARBOR LINE** - The line located and established in waters between the line of ordinary high tide (in the case tidelands) or the line of ordinary high water ( in the case of shorelands) and the outer harbor line and constituting the inner boundary of the harbor area.

**WATERWAY** - A strip of land between the inner and outer harbor lines which remains in public use and can not be sold or leased to provide access from the uplands to the beds of navigable waters

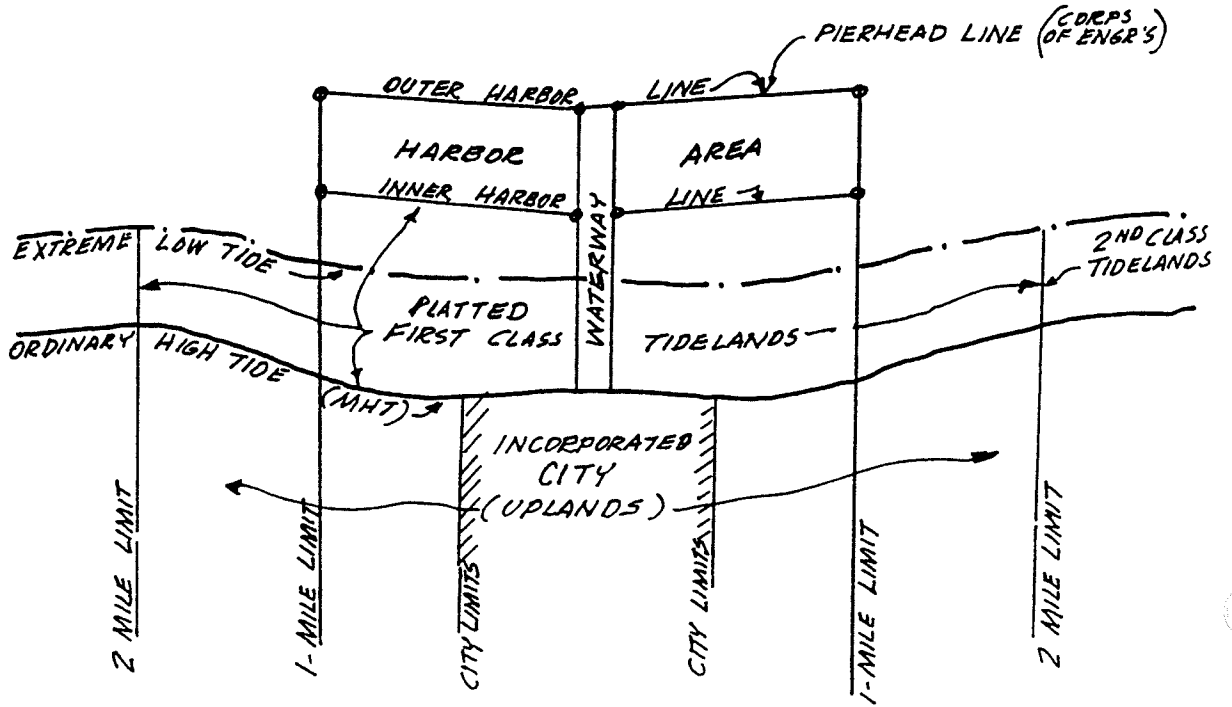
**PIERHEAD LINE** - A line established by the Corps of Engineers beyond which there can not be any bulkhead or improvement and as a rule, these line are coincidental with the outer harbor line established by the state.

Changes or modifications in the location of harbor lines requires legislative authority and the work would be accomplished under the direction of the Board of Natural Resources, now acting as the Harbor Line Commission.

The harbor area lying between the inner and outer harbor lines is never to be sold or granted by the state, nor its rights to control same relinquished. This area although can be leased is reserved for landings, wharves, streets and other conveniences of navigation and commerce.

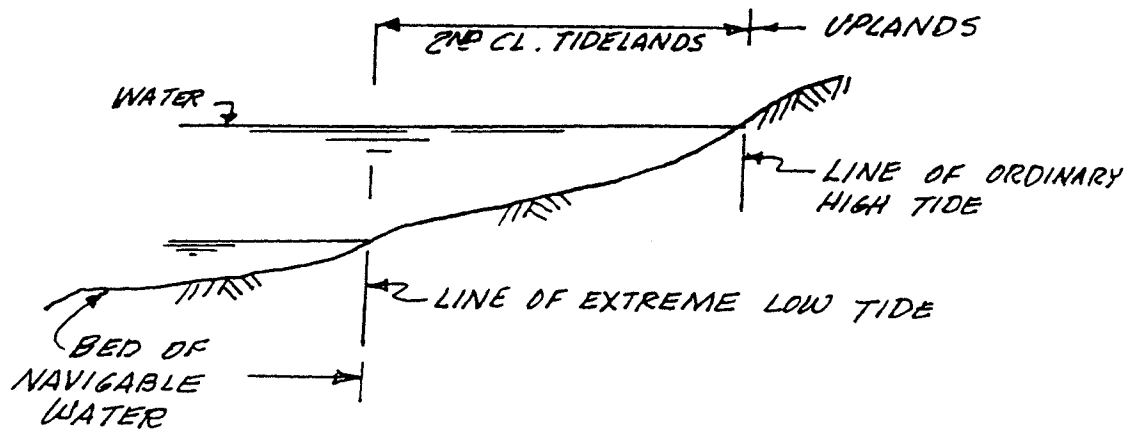
**OYSTER LANDS** - Under the Busch and Callow Acts certain areas within the beds of navigable waters could be obtained by individuals to be used solely for the purpose of cultivation of oysters. Upon non use thereof the area was to be returned to the ownership of the state.

# BEDS OF NAVIGABLE WATER

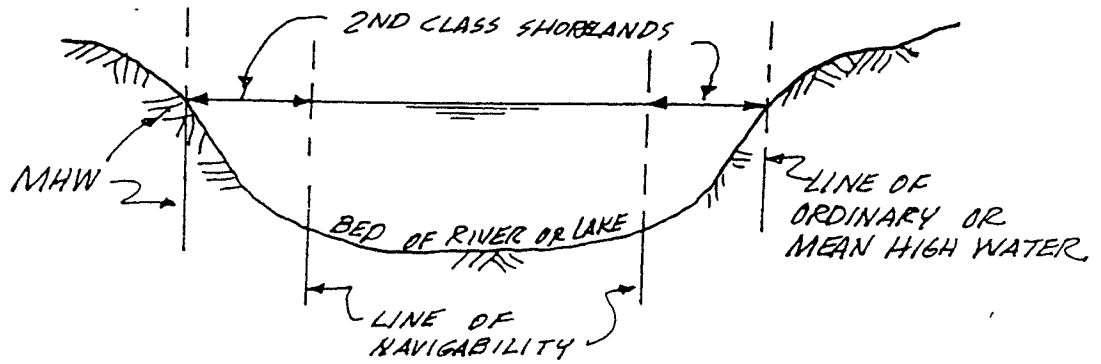


## FIRST CLASS TIDELANDS

## 2ND CLASS TIDELANDS



## 2ND CLASS SHORELANDS



## 2nd CLASS TIDELANDS & SHORELANDS

## TIDELAND AND SHORELAND LEASES

It is the position of the State of Washington that the state can never at any time convey fee simple title to any lands lying below the line of extreme low tide in tidal waters, and below the line of navigability in lakes and rivers claimed by the state. Oyster lands which were acquired under the Bush Act and the Callow Act were only a qualified fee, with a reversion of the title back to the state if such lands were not used for the cultivation of oysters.

The state may lease portions of the beds of navigable waters lying below the line of extreme low tide or below the line of navigability and generally can only be leased to the abutting tideland or shoreland owner. The state can also lease the Harbor Area but not the Waterway. Leases are for a particular time period with the annual fee to be determined by the state.

Typical leases include such uses as log booming areas, gravel removal, mineral prospecting, clam harvesting, marinas, docks and underwater cables. Any structures effecting navigation must not extend past the Pierhead Line, as defined by the U.S. Corps of Engineers, except that in some circumstances the pierhead line will be ignored. Any person erecting such improvements must secure a permit from the U.S. Corps of Engineers, as well as from any other local or federal regulatory agency involved.

Legal descriptions of state leased areas are usually described as metes and bounds. Careful attention should be made to areas adjacent to coves or headlands to be sure that the descriptions are prepared recognizing the effect of proportionate widths along the pierhead line, line of navigability or the outer limit line.

Information on sales, leases and easements can be obtained from the Aquatic Lands Division of the Department of Natural Resources, Olympia, Washington. This department has tideland plates (showing leases, sales and early state surveys), tideland and shoreland plats, and has information on navigability of lakes and rivers and court cases involving accretion and avulsion.



## LATERAL BOUNDARY LINES

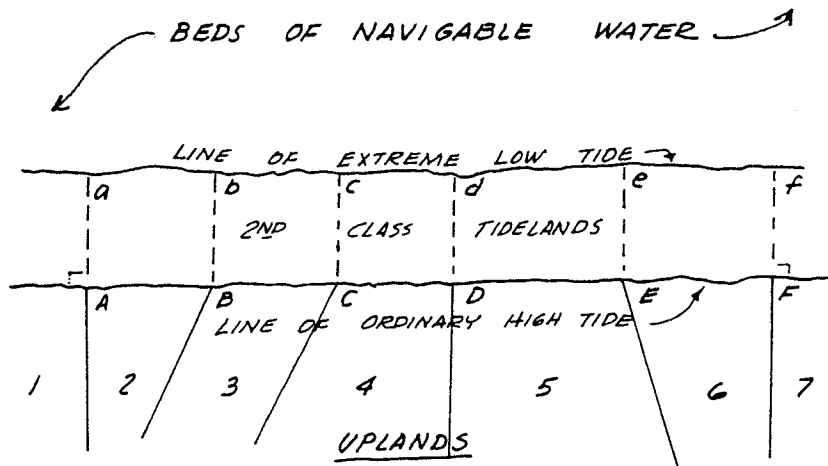
A complex surveying problem is encountered when there is a need to ascertain and survey on the ground the sideline or lateral boundaries of tideland or shoreland ownership.

Most of the second class tidelands and shorelands were conveyed by the State of Washington by reciting a distance, in chains, in front of the meander line. Later descriptions used the words "and together with second class tidelands adjacent thereto" along with the upland legal description. No effort was made by the grantor to actually define the property lines as they extended into the tideland or shoreland areas.

A common belief and mistake upland owners (and unfortunately some land surveyors) make is assuming that their sideland boundaries in the tideland or shoreland area are direct extensions of their upland lateral boundaries. This assumption can cause problems if structures are placed using the erroneous position.

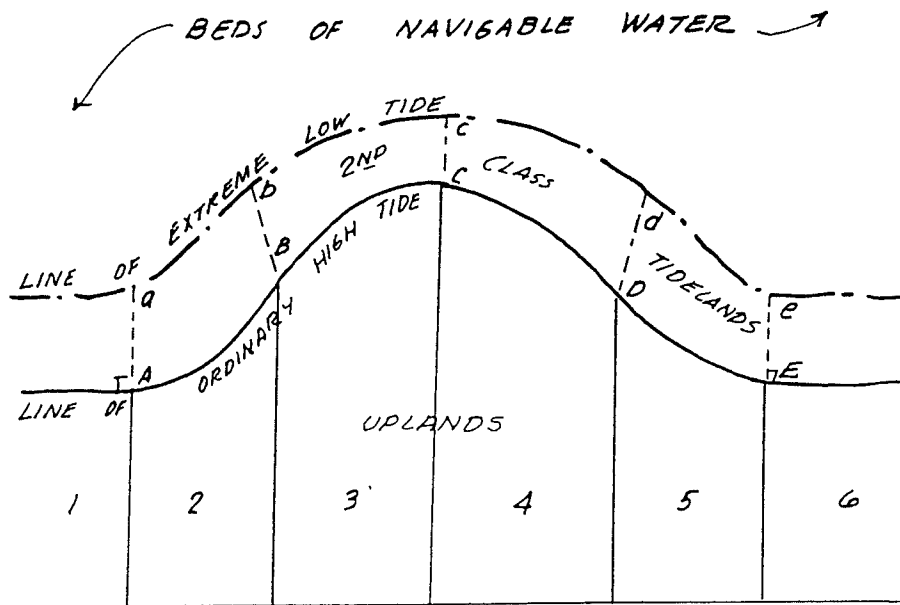
The general rule, as supported by court decisions, is that in the case of a fairly straight beach (at the ordinary high water line or ordinary high water) the property lines extend at right angles to the beach line. In the case of a cove or headland, however, there are practical difficulties. Here the general rule is that upland property owners are entitled to a pro-rata or equitable division on the tideland or shoreland. This technique involves extending the lateral boundaries at the shore line to proportionate widths of frontage at the line of extreme low tide, or, in the case of shorelands, the line of navigability. It is obvious that many different surveyors could arrive at slightly different line positions. The practical approach to this problem is to define your lateral boundary by the methods above and have both adjoining parties enter into a boundary line agreement.

**LATERAL LINES IN NAVIGABLE WATERS**



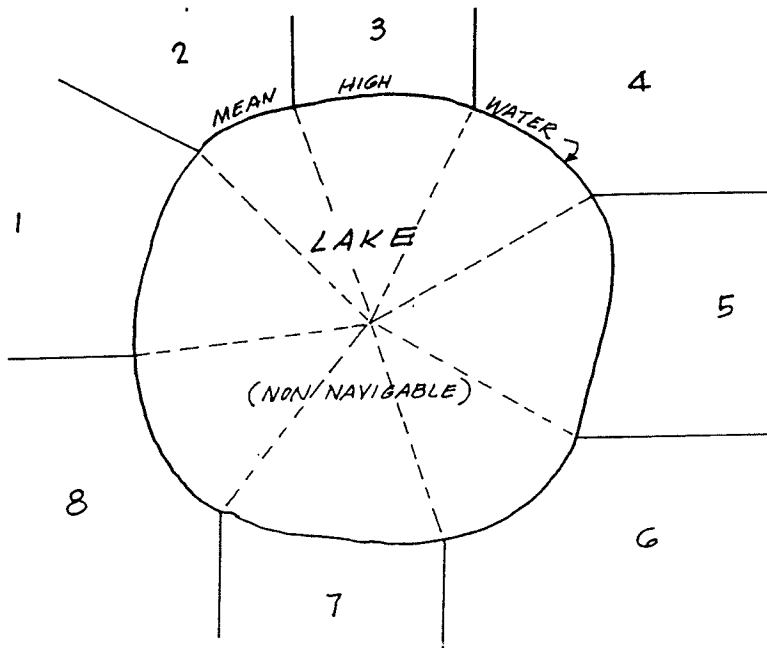
"STRAIGHT BEACH"

Unless otherwise indicated in the legal description, the sidelines of ownership within 2nd class tidelands, in the case of a straight beach, are extended out to the line of extreme low tide at right angles to the beach at the ordinary high tide line.



"HEADLANDS AND COVES"

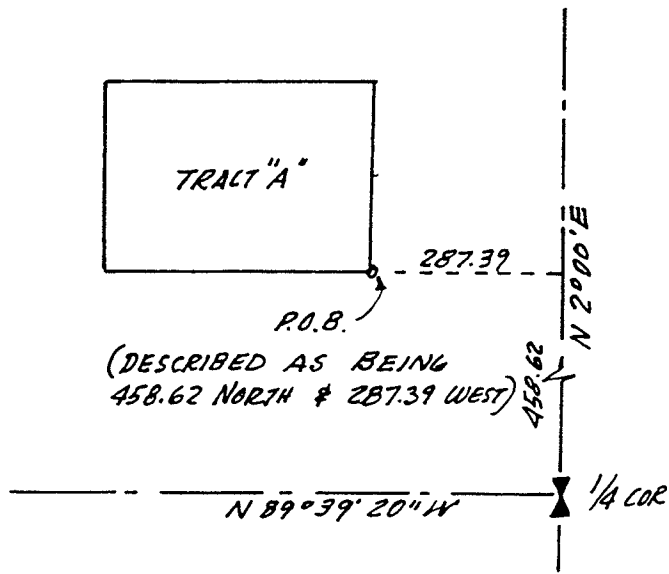
Lateral boundary lines within 2nd class tidelands, in the case of both headlands and coves, are extended out from the ordinary high tide line to the extreme low tide in an equitable manner so that all upland lots will have equal access to the water.



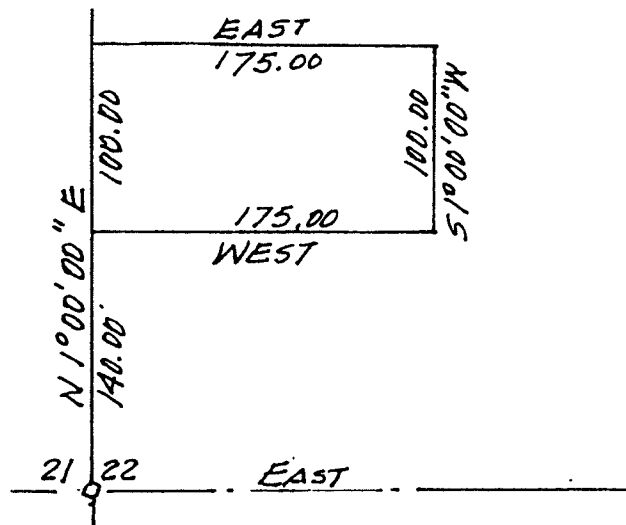
#### NON NAVIGABLE BODIES OF WATER

In the case of a non-navigable body of water, including both lakes and rivers, the ownership of the surrounding uplands usually own a portion of the beds. The accepted method of defining the boundary lines for each lot in the case of a "round" lake would be to extend the property lines from the mean high water to a point at the center of the lake. Other methods are employed on rivers where the ownership might extend to the centerline and a type of equitable division could be used.

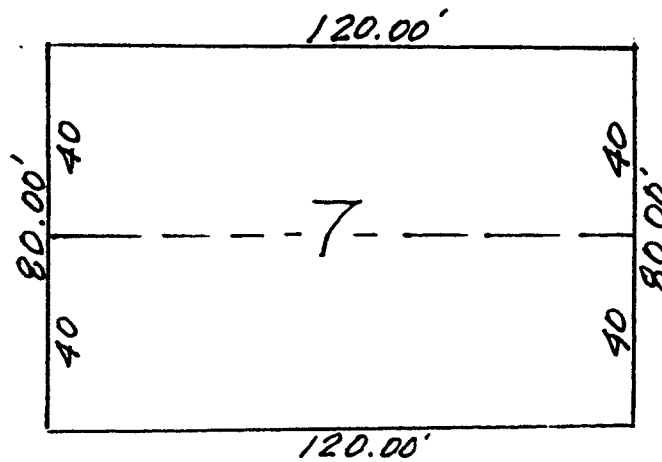
GUIDELINES IN WRITING LEGAL DESCRIPTIONS



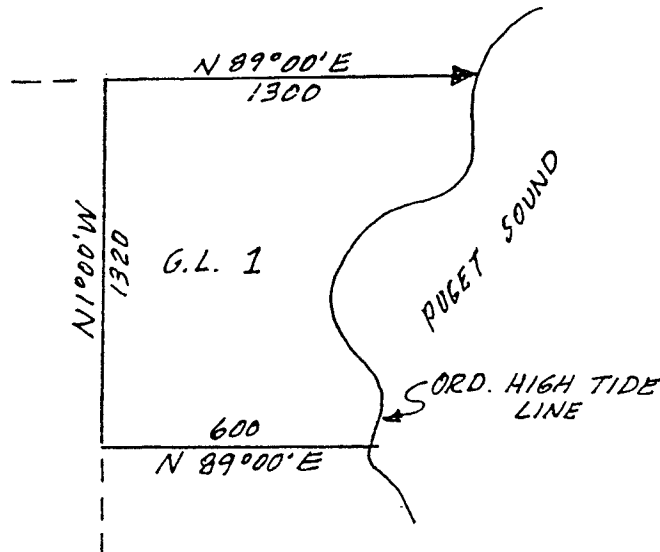
A description that describes a point of beginning as 458.62 feet north and 287.39 feet west of a certain subdivision corner is open to ambiguity. It is best to say "the point of beginning is 458.62 feet north, along the east line of said subdivision, and 287.39 feet west, parallel with the south line of said subdivision".



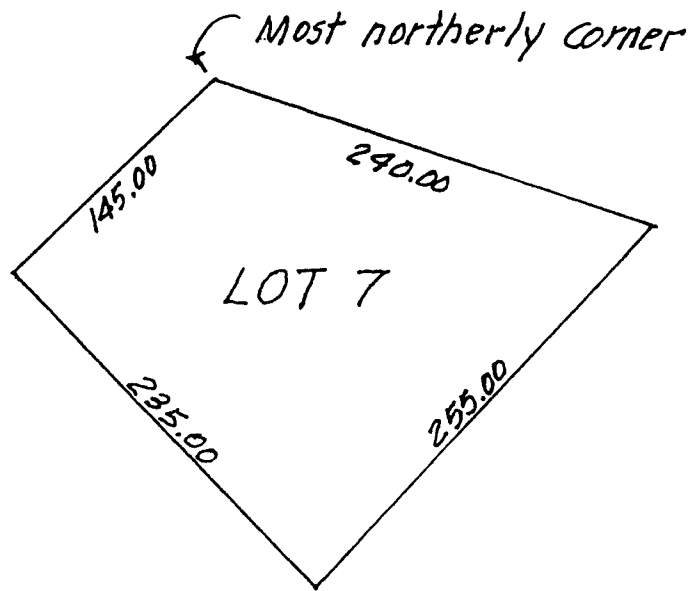
There are countless meridians and bearing systems so be sure when writing a "metes and bounds" description to identify a base line direction. On the above example you would say "thence North 1°00'00" East along the section line between sections 21 and 22".



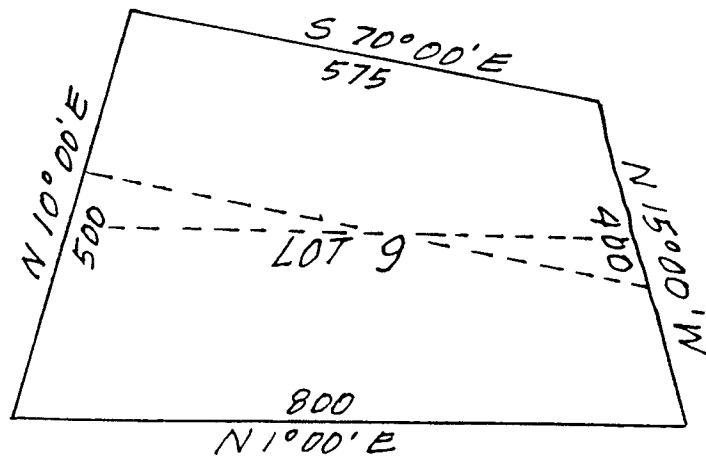
To avoid gaps or overlaps don't describe the "north 40 feet" and the "south 40 feet" of a plated 80 ft. lot. This because the 80 ft. lot may, in fact, measure more or less as a result of a newer survey. The correct way to describe this would be to describe the first conveyance as the "north 40 feet" and the south parcel as "lot 7, except the north 40 feet." Another way would be to describe the parcels as the  $N\frac{1}{2}$  and the  $S\frac{1}{2}$  of lot 7.



Avoid the use of  $N\frac{1}{2}$  or  $S\frac{1}{2}$  of a government lot. Government lots are remnant tracts of land in the sectionalized land system and often abut bodies of water so that their area would be subject to change over a period of time.



Many times the "northwest corner" of a irregular lot or tract could be construed to mean more than one corner. It is better to use the term "most northerly" or most "easterly" in order to make that particular corner more certain, as shown on the above sketch of Lot 7.



The location of the dividing line of a description described as the "north half" of a lot, which is not a rectangle, and whose sides do not follow cardinal directions, is ambiguous and subject to many interpretations (remember that half in this case means half by area). See sketch above.

WASHINGTON STATE RCW & WAC LAWS



INDIAN RESERVATION BOUNDARIES

# **SURVEYING CONSIDERATIONS ON PACIFIC NORTHWEST INDIAN RESERVATIONS**

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## **BIOGRAPHICAL SKETCH**

LeRoy F. Middleton, PLS, retired from Reid Middleton, Inc., is licensed as a land surveyor in the states of Washington, Oregon, Idaho, and Alaska. He received his B.S. in Civil Engineering from the University of Washington in 1949. His 46 years in private practice include surveying, research, boundary reports, and testifying as an expert witness in federal court on Indian reservation boundary cases. These include the Swinomish, Suquamish, Quinault, Lummi, Muckleshoot, Tulalip, and Kalispel reservations.

## **ABSTRACT**

Most surveyors who are engaged in the re-surveys of what was the public lands in the Oregon and Washington Territories are not, as a general rule, called upon to provide surveys on reservation lands or even to re-establish reservation boundaries. Surveyors who may be called upon to do these types of surveys should be thoroughly familiar with the proper aspects of how these surveys should be conducted. Unfortunately, most of the surveying procedures are not readily discovered or even covered in the *Federal Manual of Surveying Instructions*.

## **HISTORICAL BACKGROUND**

In order to properly understand the problems inherent with re-surveys of both reservation boundaries and section subdivisions within reservations, it is important to have a knowledge of the history of the Pacific Northwest, the Indians who were the original inhabitants, and the process of establishing reservation boundaries. Also important is how the General Land Office (GLO) conducted their original surveys on the reservations.

Prior to settlement of the Pacific Northwest, the Indians or Native Americans of Western Washington were divided into a

number of distinct tribes, with a leader or chief of each group, who generally kept within their own geographical areas. For instance, the Puyallup Indians lived along the banks of the Puyallup and White Rivers but also residing at the present site of the city of Tacoma and the island known as Vashon Island. Some tribes were friendly with each other and traded goods and food. Other tribes were very war like and conducted raiding parties to take slaves.

The War Department was the first federal agency to supervise Indian matters within the United States from 1789 to 1824. The Bureau of Indian Affairs was established in 1824, and in 1832 Congress authorized the appointment of a Commissioner of Indian Affairs. In 1849, by an act of Congress, the Commissioner's Office was transferred to the Department of the Interior. After this transfer the office was known as the Office of Indian Affairs until 1947, when the name Bureau of Indian Affairs (BIA) was formally adopted.

Land title to the United States originated by the discovery and settlement of United States citizens in the Oregon Territory. After claims by the Spanish and English were settled by treaties and the northern boundary of the territory was fixed at the 49th parallel, Congress declared the formation of the Territory of Oregon in 1848. The new Territory of Oregon included what is now all of the states of Oregon, Washington, Idaho, and parts of Montana and Wyoming. The aboriginal title of Indians in the Territory was protected (9 Stat. at 323). To encourage the settlement within the territory, public lands were offered to non-Indians upon the fulfillment of certain conditions in the *Donation Land Claim Act* of September 27, 1850. To make these lands available for settlement in the Territory, Congress authorized the President to appoint superintendents and commissioners to conduct treaties with the Indian tribes for the extinguishment of their aboriginal title to the public lands. The Washington Territory was created on March 2, 1853, and the laws relevant to the Oregon Territory were made applicable to the newly formed Washington Territory.

Isaac I. Stevens, a graduate of West Point and a Major in the Army Engineers, was appointed by the President to be the first governor of the Washington Territory. Previous to his appointment, he had served as an assistant director of the Coast Survey (predecessor to what is now known as the National Oceanic and Atmospheric Administration or NOAA). In addition, he was given the task of conducting a reconnaissance survey for the proposed northern route of a transcontinental railroad while

enroute to his new home in Olympia, Washington. It was common practice for a governor of a territory to act ex-officio as Superintendent of Indian Affairs. With this added duty Stevens was instructed to make agreements or treaties with the Indian tribes to extinguish their aboriginal claims on the land, so these claims would not interfere with existing non-Indian settlements or the process of settlement.

During this time, settlers who were occupying lands in the Territory or who had made applications under the *Donation Land Claim Act* and other homestead acts could not receive clear title from the federal government until the treaties were completed. Cases of isolated friction between the settlers and Indians were beginning to surface, and there was an effort made to urge the government to remedy the land issue.

Upon arriving at Olympia, Governor Stevens immediately began a series of treaty negotiations, beginning in western Washington. The first completed treaty, commonly referred to as the *Medicine Creek Treaty*, was conducted on the Nisqually Flats between Tacoma and Olympia in December of 1854 and included the Nisqually, Puyallup, Steilacoom, and certain other tribes in the general geographical area. Other treaties were conducted in 1855, and these included the Point Elliot, Point No Point, Neah Bay, and Quinault treaties. Basically, the Indians gave up any interest in the public lands; in return the Indians received certain benefits and a series of reservations. They were to move to the reservations within one year after ratification.

In addition to giving up the land, the Indians agreed to their dependence upon the United States, friendship with non-Indians, prohibition of the sale or use of liquor, abolition of slavery, as well as other conditions. The tribes also retained the right to take fish in their usual grounds - in common with all citizens of the territory. The United States promised to maintain an agricultural and mechanical school in the Puget Sound region for 20 years. They were also promised access to a farmer, blacksmith, a carpenter, as well as a physician who would provide free care and medicine.

## TREATY CESSION BOUNDARIES

All of the treaties began with a paragraph outlining the area being ceded, relinquished, and conveyed by the Indian tribes involved to the United States. These descriptions were of the metes and bounds type and typically used natural features for

identification. As an example, the *Medicine Creek Treaty* (1854) described the area being ceded as:

Commencing at the point on the eastern side of Admiralty Inlet, known as Point Pully, about midway between Commencement and Elliott Bays; thence running in a southeasterly direction, following the divide between the waters of the Puyallup and Duwamish, or White Rivers, to the summit of the Cascade Mountains; thence southerly, along the summit of said range, to a point opposite the main source of the Skookumchuck Creek; thence to and down said creek, to the coal mine; thence northwesterly, to the summit of the Black Hills; thence northerly, to the upper forks of the Satsop River; thence northeasterly, through the portage known as Wilke's Portage, to Point Southworth, on the western side of Admiralty Inlet; thence around the foot of Vashon's Island, easterly and southeasterly, to the place of beginning.

It is apparent, after reading the above description; that a surveyor charged with the task of identifying the exact lines and points on the ground would have difficulty in the interpretations of the points described as well as their specific locations. The boundaries of the ceded areas become most important in determining the exact areas that certain Indians have rights, outlined in the treaties, to hunt and fish in their usual and accustomed areas, and as such have been the subject of litigations.

## RESERVATION BOUNDARIES

Reservation boundaries were described in the treaties. As most of them were on Puget Sound or the Pacific Ocean, the descriptions were described as islands or tracts of land with definite areas that would be surveyed and marked out for the Indians' exclusive use. Unfortunately, these descriptions were vague, and problems have occurred in their interpretations. Over the years it has become apparent that there were boundary conflicts between whites and Indians on some reservations; and on others, the land set aside was found unsuitable for use. The President had the authority to make changes on boundaries by Executive Orders, and a few changes were made in 1873. As an example, the Swinomish Reservation, established under the *Treaty of Point Elliot* in 1855, was described as, ". . .the peninsula at the southeastern end of Perry's Island called Shais-quil . . ." The northern and westerly boundary, between Similk Bay and Padilla Bay, was the subject of a Presidential Executive Order on September 9, 1873. Perry's Island, named by Lt. Charles Wilkes in

1841, later reverted back to its original Spanish name of Fidalgo Island. By 1873 the public land surveys had reached the Puget Sound area, so the Executive Order description of the westerly line followed section lines that had been previously run by the GLO. The question of tidelands being included in the reservation or where the boundary line along the Swinomish Slough lies is still being debated. Other reservations were described in like manner so that description interpretations have been litigated in federal courts from time to time.

## **SURVEY OF LANDS WITHIN A RESERVATION (THREE MILE METHOD)**

The *Act of 1864* placed the survey of Indian lands under the General Land Office (GLO). Each Indian treaty, executive order, or resolution pertaining to specific Indian land may have contained a provision for the survey and subdivision of the land. The *General Allotment Act of 1887*, commonly called the *Dawes Act*, provided for the patenting of allotments to individual Indians on the reservations. These surveys were made by GLO surveyors under contract with the Surveyor General, although some were surveyed by land surveyors under the direction of the Commissioner of Indian Affairs. Many reservations were then subdivided into 20-acre or 40-acre allotments, all done by the "Three Mile Method." These subdivisions by the GLO of sections did not follow the normal legal method of subdividing a section. In the case of 40-acre allotments, the surveyor was given "Special Instructions," which indicated he was to establish 1/16th corners around the perimeter of the section, then run the north 1/16th line, the east-west center line, and the south 1/16th line across the section (3 miles total), and to set all 1/16th section corners and the center quarter corner at equidistant positions. The surveyor conducting re-surveys should be aware that if interior corners of sections subdivided in this manner are now lost and are to be restored, they must be so restored by proportional measurement in the same manner that they were originally established and not by the rules of subdivision of sections as required by the *Manual of Surveying Instructions*. Thus, the establishment of the center one quarter corner would not be done by the intersection of straight lines between opposite quarter corners. The township plat map will usually have a note indicating that certain surveys were done by "Special Instructions." If so, the surveyor should obtain a copy of these instructions.

## **LAND OWNERSHIP WITHIN RESERVATIONS**

Land ownership on reservations is a complicated and complex matter. Under the treaties and congressional acts, two general types of Indian titles have been used in order to prevent the Indians from disposing their lands that may be detrimental to their interests.

One type of Indian title issued the allottee a deed, called a trust patent, and declared that the United States would hold ownership in the land for a designated period and in trust for the

sole use and benefit of the allottee. The other type of Indian title issued a patent from the United States conveying the land in fee but imposed a restriction upon any resale to a non-Indian (called alienation) for a designated period. Thus, in one case the fee title is retained by the government, but in the other case the fee title is passed but subject to restraint against alienation.

Other types of ownerships in use on most reservations include lands owned by the Tribal Community, either in fee or trust; lands which have been alienated and are owned by non-Indians; and lands that are leased and developed into residential tracts with homes owned by non-Indians, with the land being under lease by the Indians. The Bureau of Indian Affairs handles most of the details on land ownership as it affects Indian title.

## RESEARCH SOURCES

Any surveyor involved with the determination of a reservation boundary or a land survey within the reservation must conduct a full research before making a survey decision that may put your client in conflict with the United States government. Your research may extend to any of the following sources:

1. The tribal community records
2. Bureau of Indian Affairs - Portland, Oregon
3. Bureau of Indian Affairs - Puget Sound Agency, Everett, Washington
4. National Archives - Washington, D.C.
5. National Archives - Regional Branch, Seattle, Washington
6. National Archives - Cartographic Division; Alexandria, Virginia
7. Bureau of Land Management (BLM) - Portland, Oregon
8. Public Land Survey Office - Olympia, Washington
9. U.S. Corps of Engineers - Seattle, Washington
10. Washington State Archives - Seattle and Bellingham, Washington
11. National Ocean & Atmospheric Administration (NOAA) - Seattle, Washington
12. Applicable county records
13. Private survey records.

The primary source for information relating to reservation boundaries and their surveys is found in the records of the National Archives in Washington, D.C. However, the regional branch of the National Archives in Seattle has, among other records, copies of the Bureau of Indian Affairs' letters sent and received prior to 1880. No cartographic maps are available, but these can be found



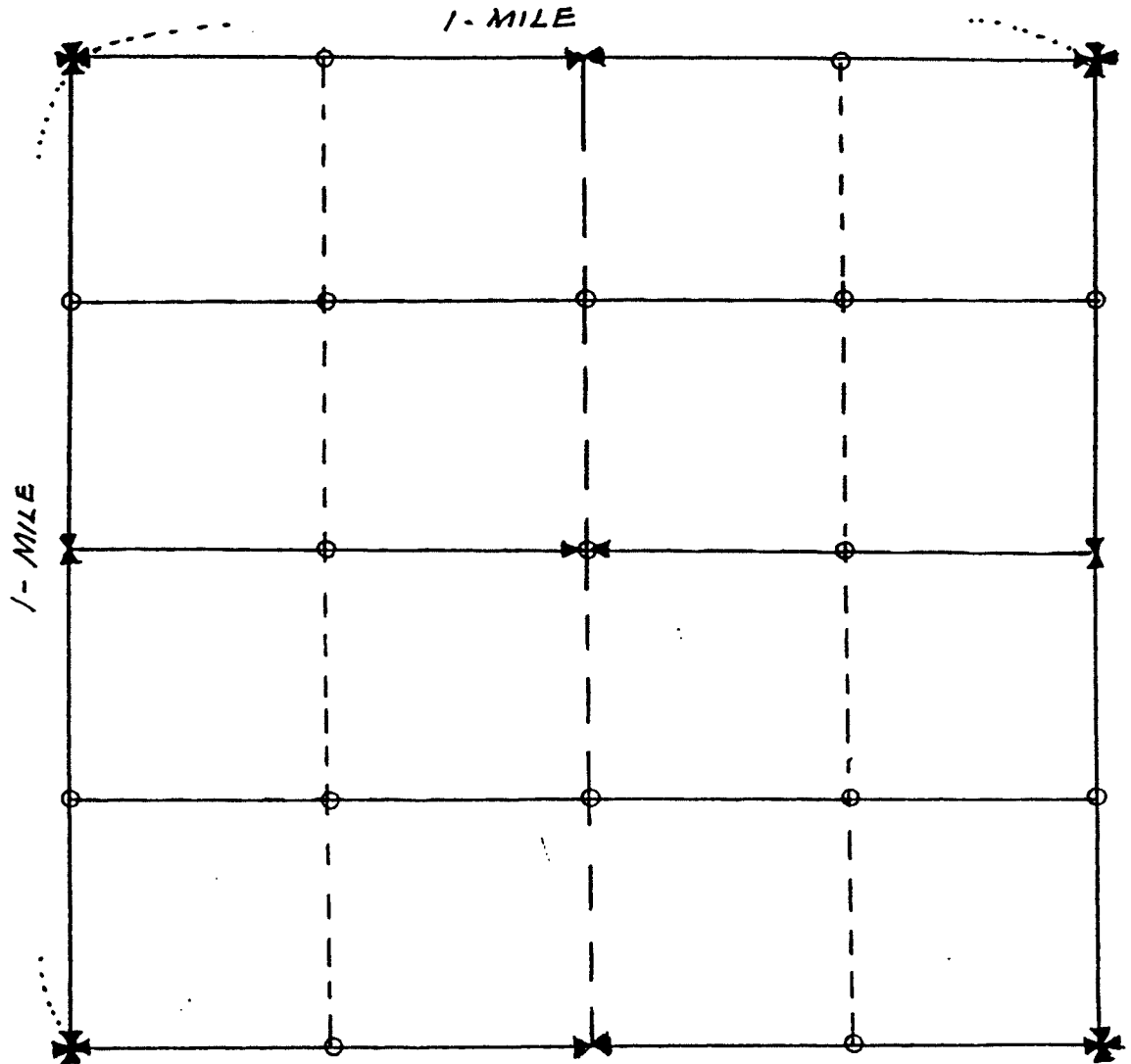
at the Cartographic Records of the National Archives at  
Alexandria, Virginia.

General land office letters are also found at the regional branch in Seattle, and these include such things as letters from the Surveyor General to the Territorial Surveyor General and letters to and from the contract surveyors. Most of this is in the "Royer" inventory, which lists all of the Oregon and Washington GLO contract administration correspondence. Township plat maps and survey field notes are at the Bureau of Land Management in Portland, Oregon, and the Public Land Survey Office in Olympia, Washington.

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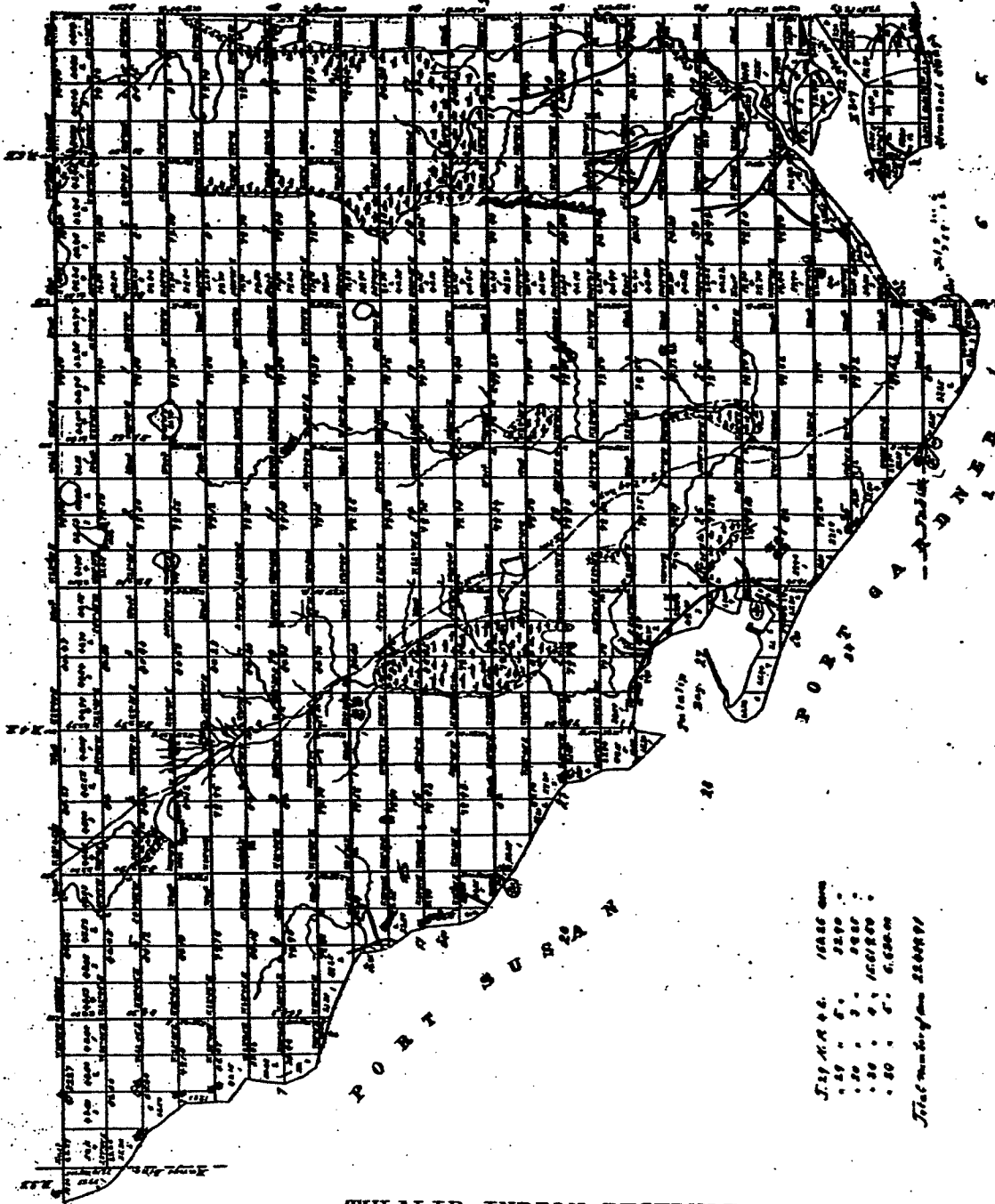
INDIAN RESERVATIONS  
 "3-MILE RULE" - ALLOTMENTS



✕ ↔ - SECTION & 1/4 CORNERS SET  
 ○ - INDICATES ADDITIONAL CORNERS  
 SET BY G.L.O.  
 LINES RUN IN THE FIELD \_\_\_\_\_

30-4-B+

Tulalip Indian Reservation  
Traverse 20 N 00 W 21 E 2 N 6 E 2  
Milewide Meridian  
Surveyed by Gen. Wm. G. B. 1874



T. 21 N. R. 46. 16866 000  
 . 27 . 5 . 2290 .  
 . 28 . 5 . 2300 .  
 . 29 . 5 . 1601800 .  
 . 30 . 5 . 6,000-00  
 Total number of acres 2209991

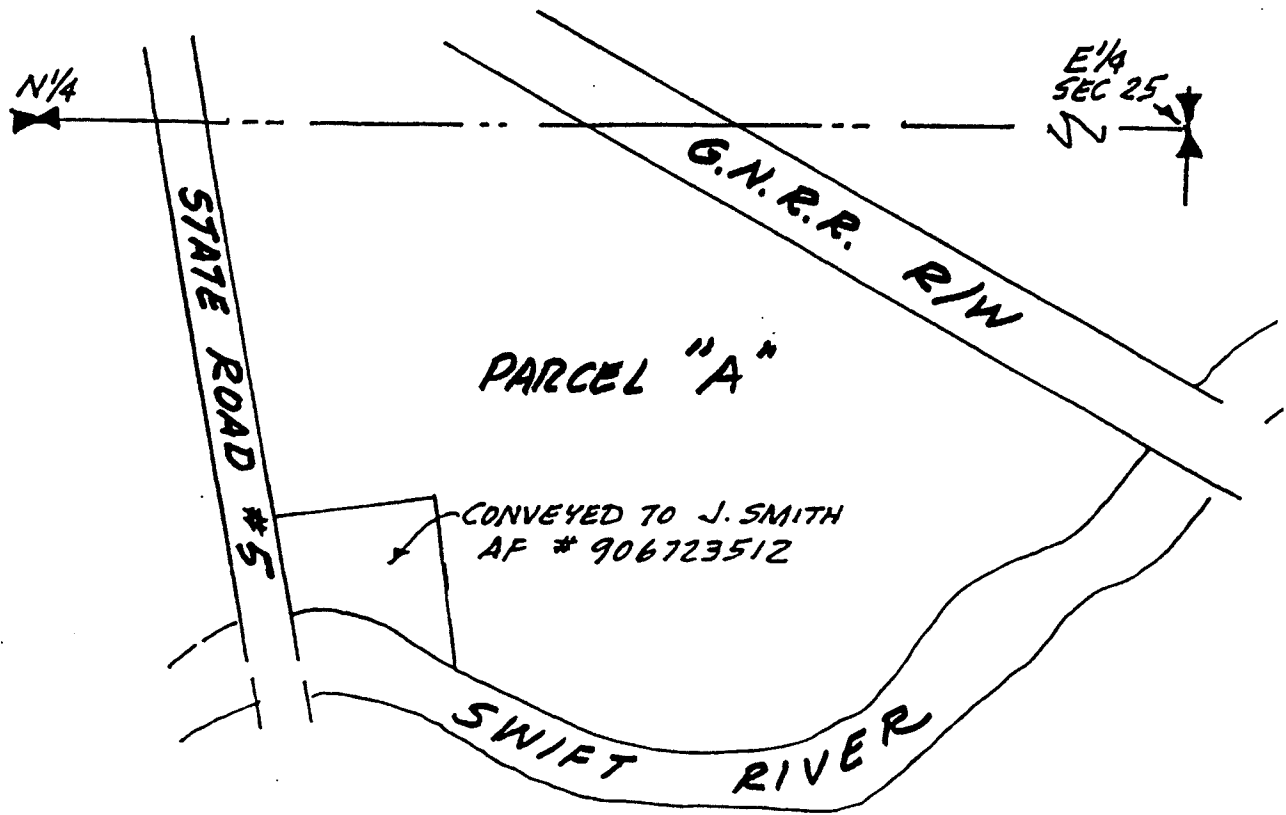
Section	Acres	Value	Notes
Section 20	36	110	1874
Section 21	36	110	1874
Section 22	36	110	1874
Section 23	36	110	1874
Section 24	36	110	1874
Section 25	36	110	1874
Section 26	36	110	1874
Section 27	36	110	1874
Section 28	36	110	1874
Section 29	36	110	1874
Section 30	36	110	1874

TULALIP INDIAN RESERVATION  
SHOWING THE "THREE MILE RULE"

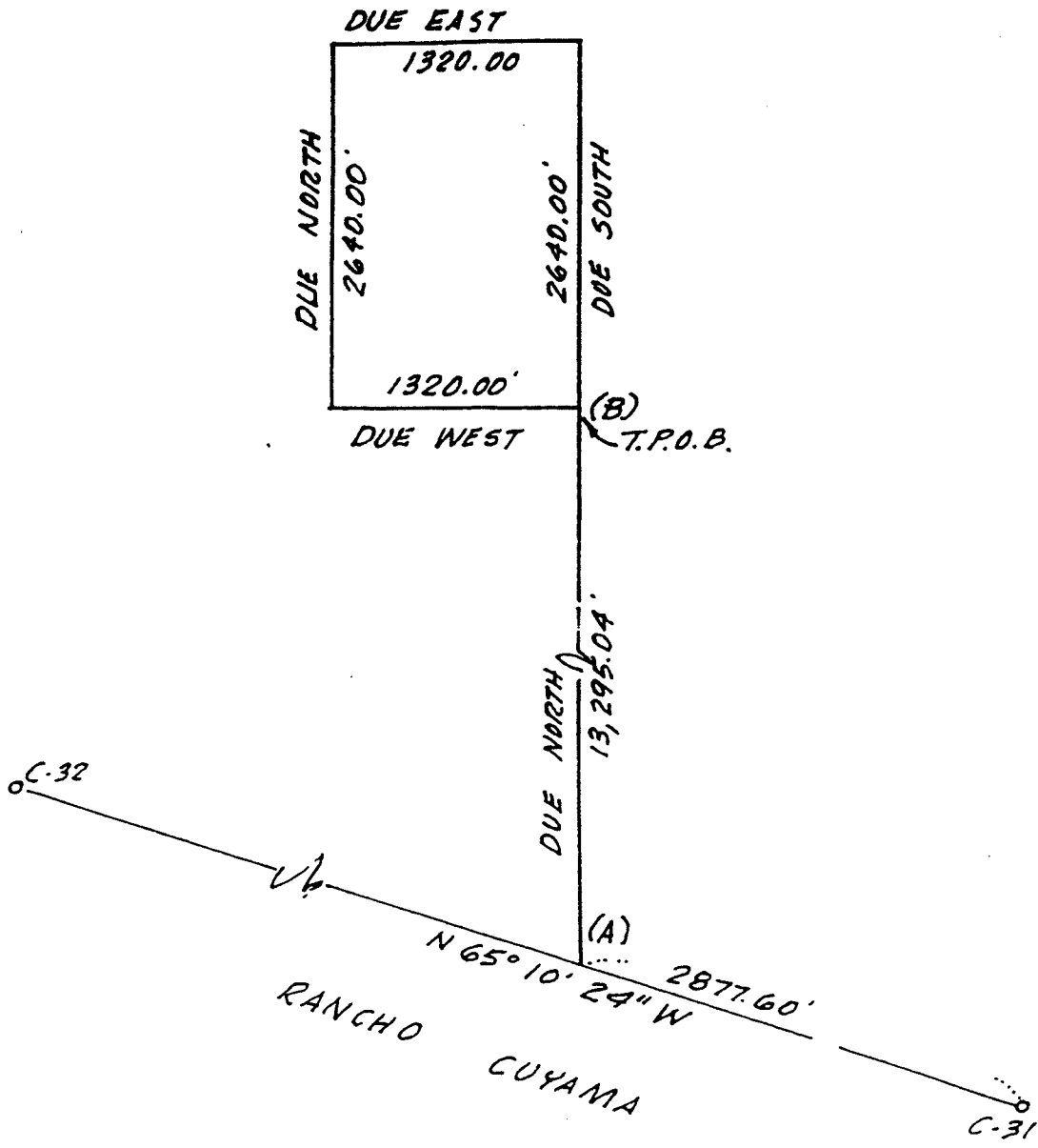
Department of the Interior  
 Bureau of Land Office  
 Office No. 1874  
 Having custody of this survey is a true photograph  
 copy of this original filed in this office  
 Acting Commissioner

The above copy of the City of Seattle  
 is a true copy of the original  
 filed in this office on the 10th day of  
 August 1874.  
 W. M. McKean  
 Surveyor General of W.T.

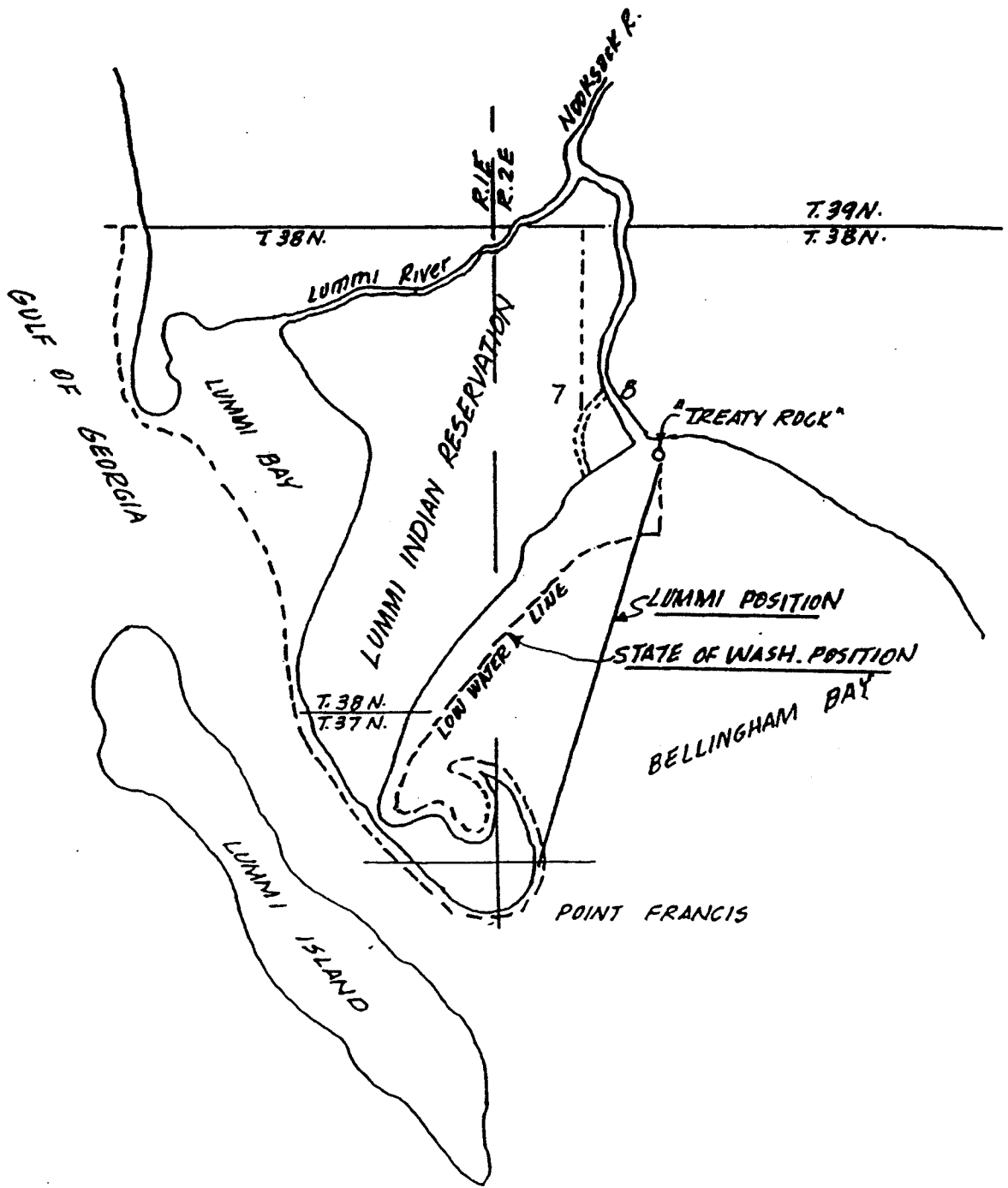
**CASE DISCUSSIONS**



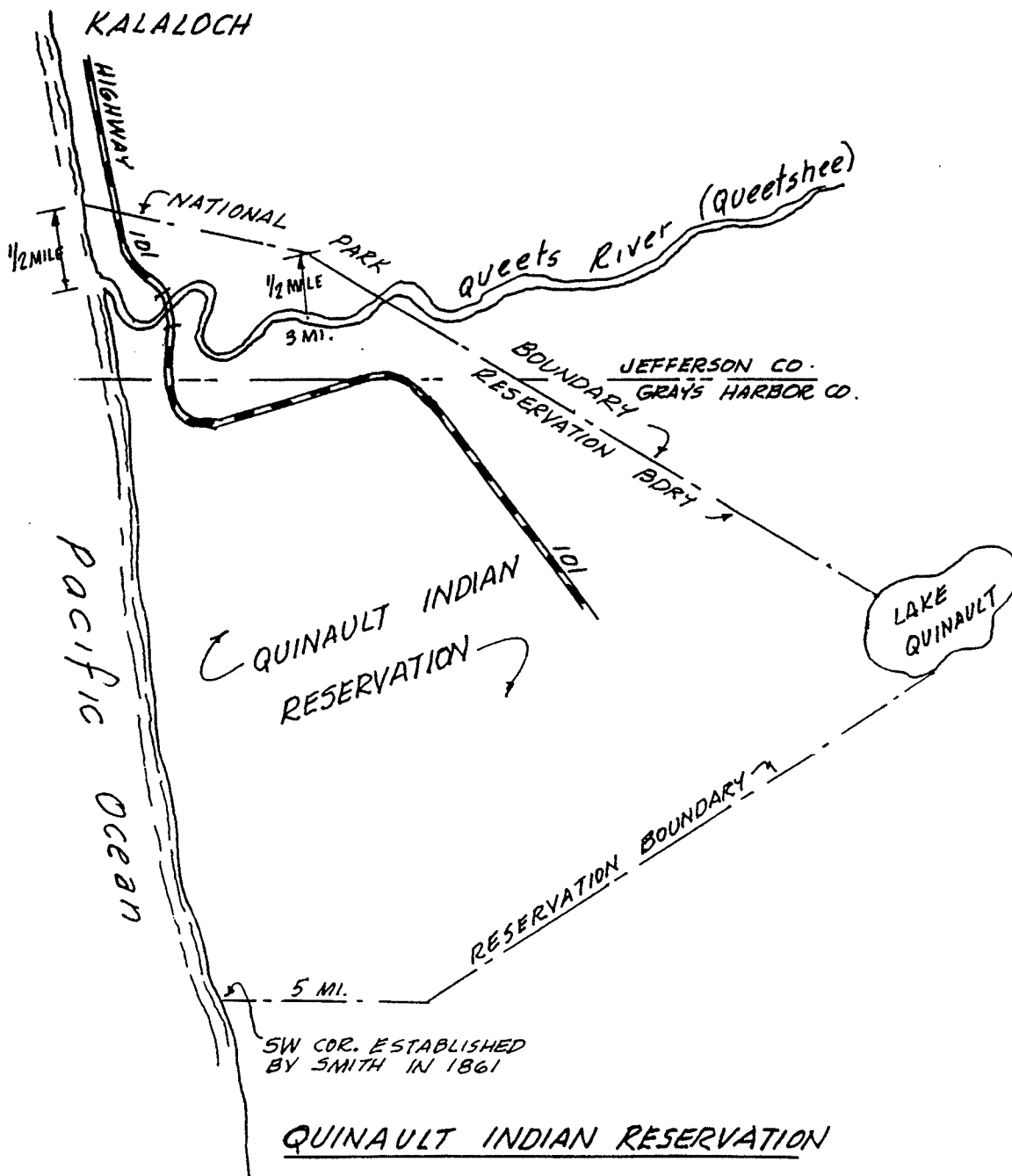
" BOUNDS " DESCRIPTION



"..... Beginning at a point on the SW line of said Rancho Cuyama at a 2-inch galvanized iron pipe 6-inches high in a mound of stones, with brass cap marked "Cuyama Rancho C-31, set by Gerald Fitzgerald, Registered Civil Engineer, and shown on map recorded in Book 26, Pages 138 and 139 of Records of Surveys, Records of Santa Barbara County; thence N 65° 10' 24" West along said SW line a distance of 2,877.60 feet; thence due North 13,295.04 feet to the true point of beginning; thence due West 1320 feet: thence due North 2640 feet; thence due East 1320 feet; thence due South 2640 feet to the true point of beginning, and containing eighty acres, more or less."



United States v. State of Washington  
 Lummi Indian Reservation Boundary



AMBIGUITY IN INTERPRETATION AND LOCATION OF QUINALT INDIAN RESERVATION BOUNDARY



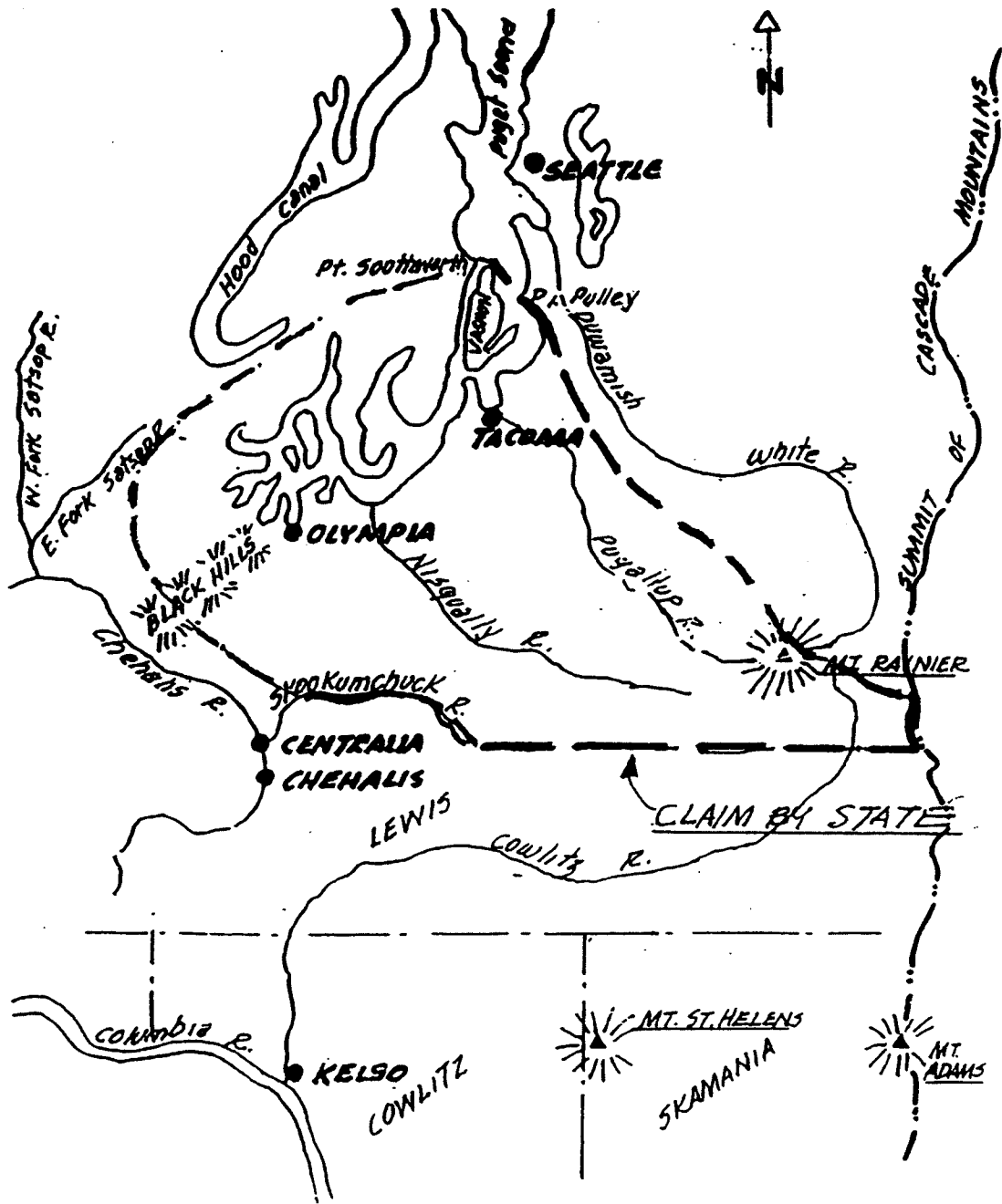


Fig. 1

STATE OF WASHINGTON v. DAVID WHITENER et al  
 (Squaxin Island Tribe)

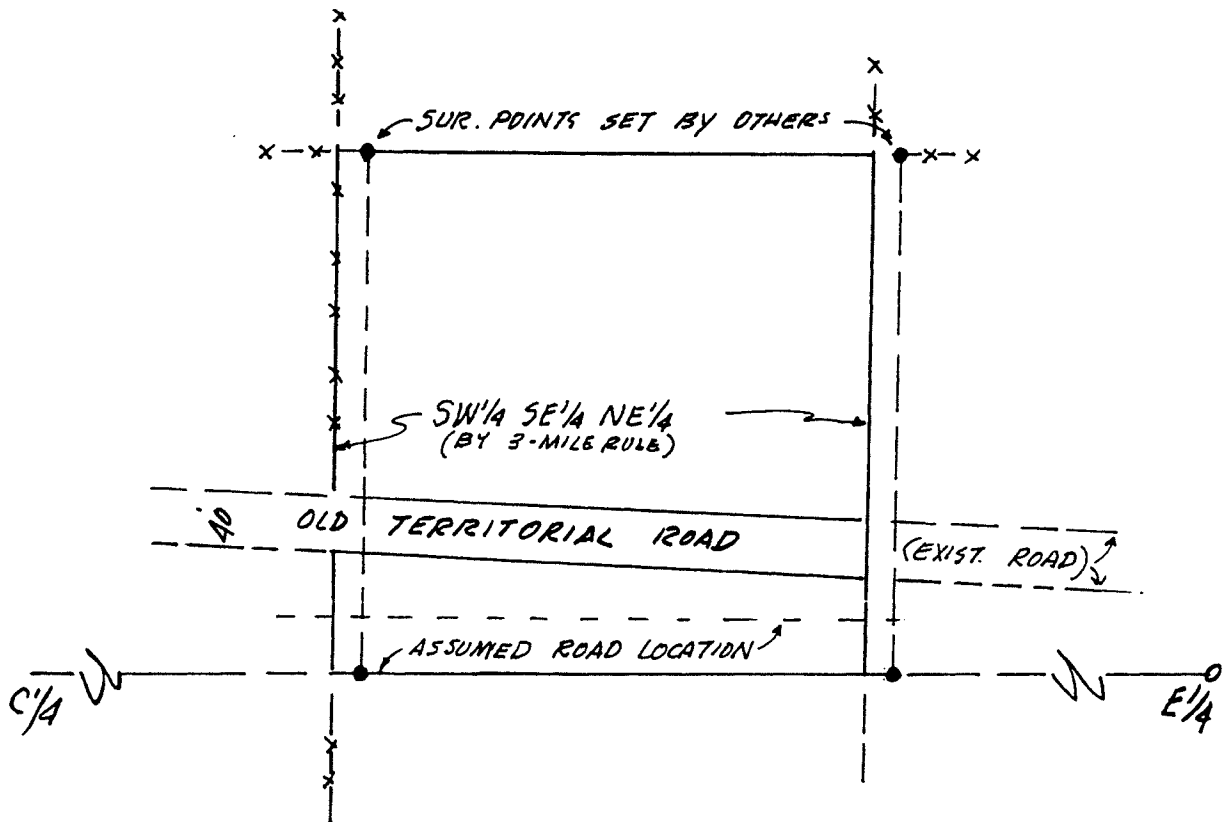
Showing the states position on the boundary line, as described in the Medicine Creek Treaty of 1854, to define the limits of the area ceded to the United States.



Fig. 2

STATE OF WASHINGTON v. DAVID WHITENER et al  
(Squaxin Island Tribe)

Showing the Squaxin Island Tribes position on the boundary line  
as described in the Medicine Creek Treaty of 1854.

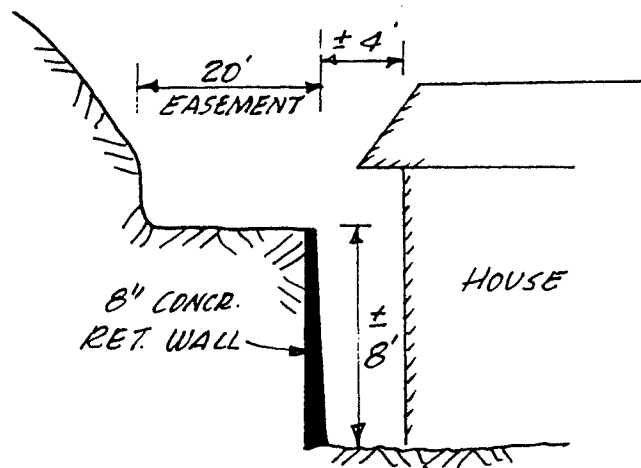
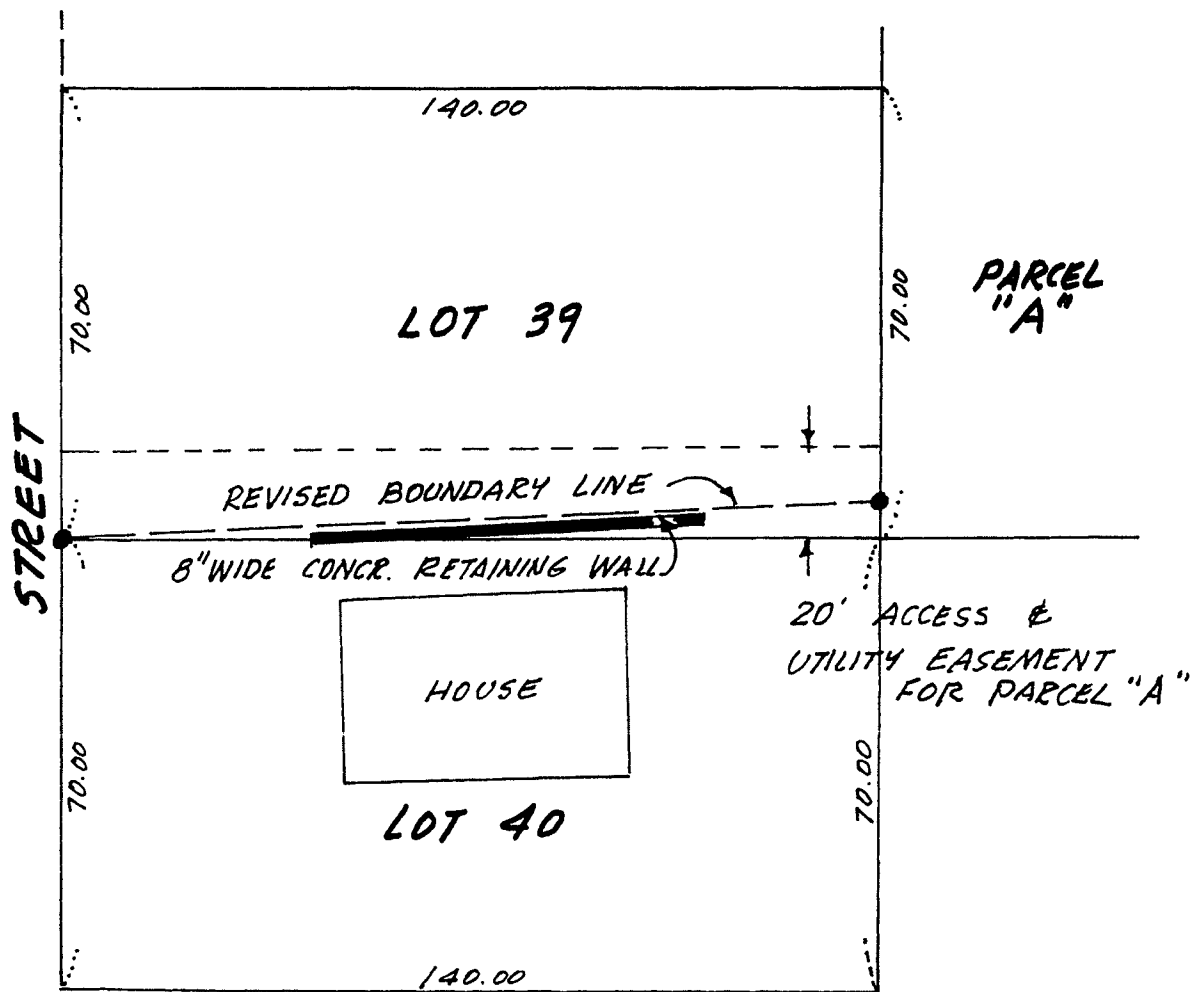


DESCRIPTION:

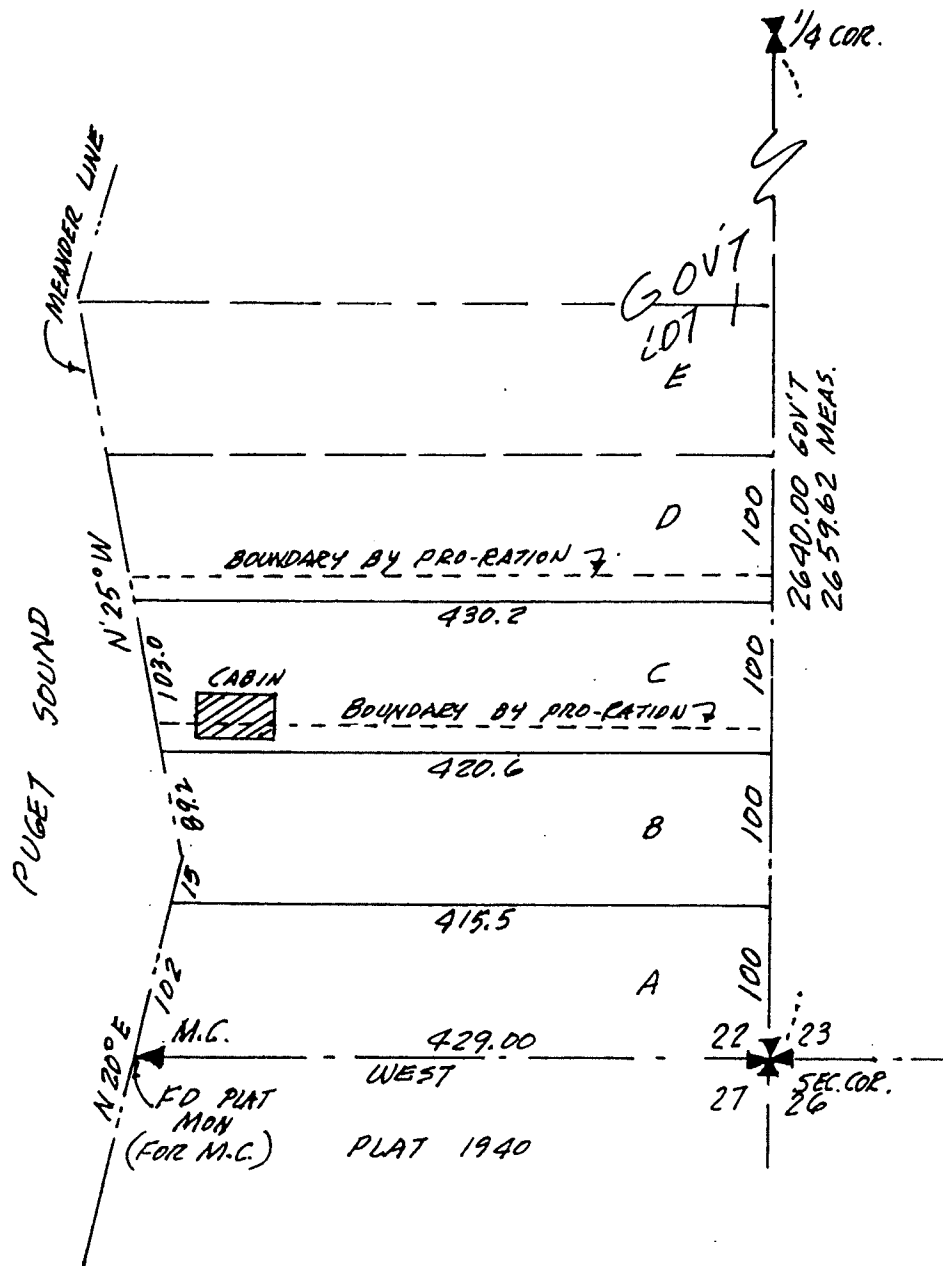
SW 1/4 SE 1/4 NE 1/4 SECTION 8, T 17 N. R 30 W. W.M.  
 EXCEPT FOR A 40 FT ROAD R/W ALONG THE  
 SOUTHERN PORTION THEREOF.

(MUCKLESHOOT INDIAN RESERVATION)

EXAMPLE OF AMBIGUITY IN A RIGHT OF WAY LEGAL



ENCROACHMENT INTO ACCESS AND UTILITY EASEMENT



Example showing when the use of pro-rata is not to be used. Tracts were sold using metes and bounds descriptions and sold at different times.

