

Legal Description and Land Status

Course Number 2000-01SS

A SELF STUDY GUIDE



**NATIONAL
TRAINING
CENTER**

**BUREAU OF
LAND
MANAGEMENT**

A MESSAGE TO THE USER

Considerable effort has been expended in creating the written materials and video tape to make this training package an effective learning tool. It is important that we maintain a record of the usage and effectiveness of this training package. You are the only resource in providing that important information to us. Since we have taken the time to provide a quality product to you, please take the time to complete the evaluation and notification of completion form in the back of this guide and return to us. Upon receipt, your training records will be updated with this information.

The National Training Center thanks the many individuals who participated in the field test of this training package.

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OVERVIEW

WHO CAN BENEFIT FROM THIS TRAINING

This self-study guide is intended for use as an introductory or refresher course for anyone who needs to know how to read and write legal descriptions and how and where to locate information about land status.

Its primary benefit is to Resource Specialists, Land Law and other examiners, or any employee whose job requires knowledge of these tools.

HOW TO USE THE SELF-STUDY PACKAGE

The Legal Description and Land Status self-study training package consists of a self-study guide and a video tape.

The package is self-paced. This means that the package has been designed for you to work through at your own pace. Some of you may be able to complete the material in a few hours, others will require a few days or longer. In order for the material to be of the most value to you, you should continue to work through the package once you begin - but you should feel free to take the amount of time appropriate to your own learning style.

The Self-study Guide. The self-study guide contains 3 sections: Overview, Lesson Plan, and Resource Aids.

The Overview Section will help you to understand the goal and objectives of the training package. It also contains some historical information helpful to your understanding of the course material and information about how you may obtain a training certificate. Read through this section before starting the lessons.

The Lesson Plan Section contains 3 lessons. As you work your way through the lessons you will be directed in the use of the video tape. You will also find a column titled "Assistance" on the left side of most pages. The Assistance Column is used to highlight the introduction of new concepts as you work through the lessons and to suggest use of the Resource Aid Section.

The Resource Aid Section contains a wealth of useful material for you to use as you proceed through the lesson. It is expected that you will find the Resource Aids even more valuable once the training is over.

The Video Tape. The video tape contains three video segments: Legal Description, Land Status Records, and Answers to the Final Exercise.

Lesson 1 begins with the viewing of the Legal Description video tape. You may view this video as frequently as you need before and during your work in Lesson 1.

Lesson 2 begins with the viewing of the Land Status video tape. You may view this video as frequently as you need before and during your work in Lesson 2.

Lesson 3 ends with the viewing of the Answers to the Final Exercise video tape. The video for Lesson 3 is an interactive video and must be used in the following manner. Before viewing any part of the video, Answers to the Final Exercise, you must have completed all of the questions in Lesson 3. After you have completed the written exercise, which is Lesson 3, then you are to play the video and follow along as the questions are repeated, answered, and explained.

GOAL

The goal of this self-study training package is to provide BLM employees with the ability to use the rectangular system of cadastral survey, to accurately read and write legal land descriptions and to use the land status records system to accurately determine the ownership and status of any parcel of public land.

After completing the self-study guide, employees will be more aware of the reasons for these records and will be better equipped to use them in the performance of their jobs.

OBJECTIVES

After completing the lessons and questions in this study guide, participants will be able to:

1. Use the components of the rectangular system of a cadastral survey to legally describe land,
2. Describe any area on a map, in writing, using the correct legal description format,
3. When provided with a written legal description, identify the described area on a map or plat,
4. List the six components of the land status records system: Master Title Plat, Use Plats and Supplemental Plats, Historical Index, Control Document Index, and Index to Miscellaneous Documents, and Serial Register Page,
5. List the sources and location of land status records and,
6. Use land status records to research and document the current status of any parcel of land.

SURVEYING OUR PUBLIC LANDS -- A BRIEF HISTORY

History...

Land surveying dates back to ancient times. More than one civilization recognized the need for marking the boundaries of land for taxing purposes as well as for defining just where one ownership begins and another ends.

The Egyptians, with their great expertise and accuracy in building pyramids more than 7,000 years ago, must have possessed the techniques and instruments to perform surveys which are comparable in precision to some present day requirements. In fact, the Egyptians were very much involved in property surveys since land boundaries along the Nile River were annually lost from flooding, and resurveys were constantly needed.

Most modern BLM monuments have an inscription which reads "UNLAWFUL TO DISTURB." Such warnings are not at all new. Babylonian boundary stones set about 3500 years ago contain not only geographical information and the surveyor's name, but also numerous curses on anyone daring enough to move the monument!

There were several other notable surveying endeavors in earlier times including the Roman rectangular plots which were laid out with the four-armed groma instrument, William the Conqueror's land surveys of England with their resultant "Domesday Book," and the pyramid, road, city and bridge related surveys of the 11th to 14th century Incas.

In early day America, several types of surveys were performed, utilizing state-of-the-art instruments, and calling principally on mathematicians, astronomers, and navigators to perform as land surveyors. Most of these earlier surveys were of the metes and bounds type, meaning they were established by distances and directions which were not in accordance with a regular pattern. Some prominent surveyor names from that time include Roger Sherman, Charles Mason and Jeremiah Dixon, David and Benjamin Rittenhouse, Thomas Jefferson, and George Washington.

But, it remained for the late 1700's of colonial America for the beginning of what was to become the most ambitious program of land disposal, ownership recording, and actual on-the-ground boundary marking which has ever occurred. Described as a "marvel of simplicity," the United States rectangular survey system was designed to layout one mile square parcels over all of the Federal lands outside of the original thirteen colonies and their western territories.

A contemplation of the scope of establishing such a minute, legally acceptable, and accurate grid system across a billion and a half acres of the thirty "public land states" is truly an appreciation of the magnitude of effort involved in "Surveying Our Public Lands."

Actual authority for starting the United States rectangular survey system occurred on May 20, 1785, when the Continental Congress approved modified recommendations of a committee chaired by Thomas Jefferson. Actually, the committee's work was the culmination of much thought, debate, and involvement of earlier survey activities. Two military engineers, Colonel Henry Bouquet and Thomas Hutchins were among the original major contributors. (Hutchins later became the first geographer of the United States.) In any case, the 1785 Land Ordinance laid the legal and technical foundation for the country's public land surveys of almost the past two hundred years.

With Hutchins' personal attention, the first surveys under the ordinance took place in Ohio where the west boundary of Pennsylvania crossed the north boundary of the Ohio River. The first township was surveyed by Absolom Martin of New Jersey in 1786. The State of Ohio was the testing ground for the new type of surveys in that State.

By 1805, the rectangular surveys were started across Indiana. The system's elements had been well settled by then, and the surveys were eventually extended westward to the Pacific Ocean.

The plan developed three new theories in land administration. First, the principle of "survey before settlement"; second, the principle of a mathematically designed plan to be followed throughout the entire area of the public domain; and third, the creation of a standard land unit, the section, of uniform shape and area and with boundaries physically marked on the ground. These features did not follow any plan in use within the area of the original Colonies in America, where land locations were made in irregular form and without any orderly plan.

In 1812, the General Land Office was established by Congress as a bureau of the Treasury Department "to superintend, execute, and perform all such acts respecting the public lands...." Before then, the public domain workload was handled by the Treasury Department, but it was recognized that a more focused land management agency was needed. However, the Surveyor General posts, with responsibility for contracting surveys to private surveyors, remained independent of the GLO.

Edward Tiffin of Ohio was appointed the first commissioner of the GLO. Tiffin's contributions to land surveying were significant in consolidating and organizing land and survey records, and later as a Surveyor General, in designing a plan of correction lines for the solution of the troublesome problem of conforming a rectangular pattern to a round earth.

Another remarkable pioneer surveyor was William Burt who surveyed large areas of land in upper Michigan and Wisconsin in the mid 1800's. Burt, who did not have much of a formal education, was the inventor of the solar compass which used the sun to maintain direction, instead of the magnetic compass. His invention came of necessity from trying to run lines in a region of vast iron deposits which caused deviations of the compass needle.

The exploration and survey of the western lands continued with many verbal and written accounts by curious surveyors of colorful discoveries of the nature of a new land, and tales of hardship, misery and financial loss. One 1852 field note record of an Iowa survey reads, "one of my men was accidentally shot yesterday and died almost instantly." The notes continue with bearings and distances to the stricken Ivy Johnson's grave.

Until 1910, the public land surveys were generally administered by regional Surveyors General who contracted with authorized Deputy Surveyors to perform the work. Sets of instructions to the Deputies were often written by the Surveyor General to specify the method of survey, and the accuracies expected. However, it gradually became evident that a consolidation of officially authorized surveying procedures was needed. An Oregon Manual of Surveying Instructions was published in 1851, and a revision of this Manual was published by GLO in 1855 for national use. Subsequent manuals were issued in 1871, 1881, 1894, 1902, 1930, 1947 (BLM), and 1973 (BLM).

In the land surveying profession, integrity is recognized as one of the most desirable attributes for surveyors. Although the contract system of conducting government surveys had been mostly successful for more than one hundred years; it was proposed that better control over the soundness of individual projects, and greater public responsiveness could be obtained by appointing a corps of directly employed surveyors. Starting from July 1, 1910 until the present, most federal cadastral surveys have been performed by federally employed surveyors.

Growth of the public domain...

In 1803, President Thomas Jefferson arranged to buy a large amount of land from France. This is known as the Louisiana Purchase. It amounted to over 500 million acres and included most of the land from the Mississippi River west to the Rocky Mountains, except what is now the State Of Texas. The Louisiana Purchase cost the United States about \$23 million.

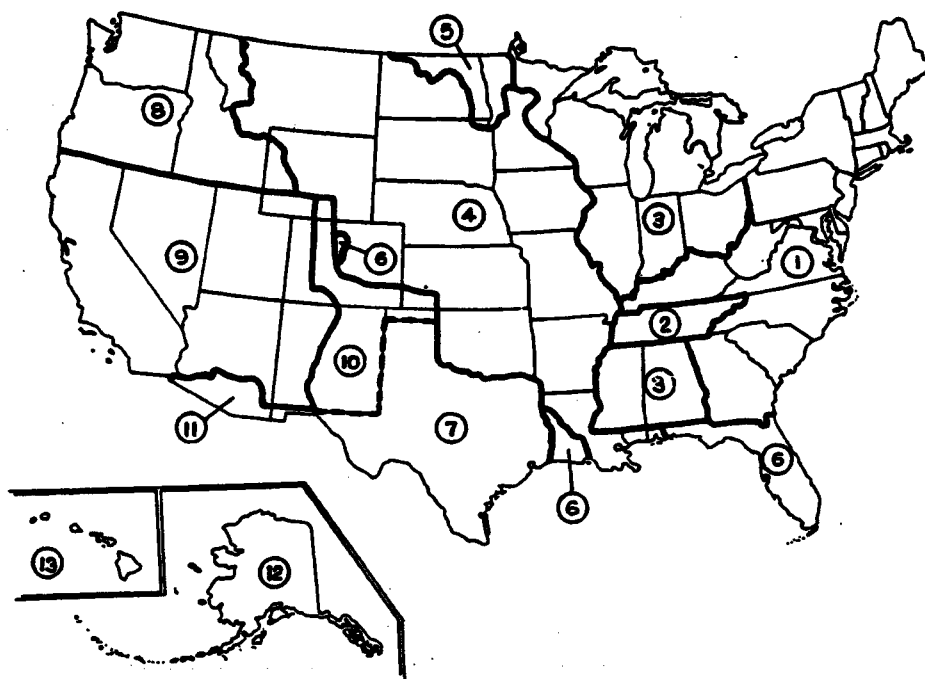
Then in 1819 the land that is now Florida became part of the United States. Texas became part of the United States in 1845. A year later the United States signed a treaty with Great Britain which added the area that is now the States of Oregon, Washington and Idaho. This treaty is known as the Oregon Compromise.

In 1848, just one year before the discovery of gold in California, the United States obtained from Mexico the lands that are now the States of California, Nevada, Utah and parts of Arizona, Wyoming, and Colorado. The Gadsden Purchase in 1853 added what is now southern Arizona.

The last large addition to the land area of the United States came in 1867 when the United States purchased Alaska from Russia. The area of Alaska amounted to over 375 million acres (that is about one-fifth the area of the rest of the United States). It cost about \$7 million.

With these additions, the public domain stretched from the west boundary of Pennsylvania to the Pacific Ocean, from the Canadian border to the Gulf of Mexico, and it included Florida and Alaska. Altogether it embraced over 1 billion 800 million acres.

ACQUISITION OF THE TERRITORY OF THE UNITED STATES



1. The Original Thirteen States
2. 1790 North Carolina Cession
3. 1781-1802 State Cessions
4. 1803 Louisiana Purchase
5. 1818 Red River of the North
6. 1819 Treaty with Spain
7. 1845 Annexed Texas
8. 1846 Oregon Compromise
9. 1848 Mexican Cession
10. 1850 Purchased from Texas
11. 1853 Gadsden Purchase
12. 1867 Purchased from Russia
13. 1898 Annexed Hawaii

WORKING WITH THE STATE TRAINING OFFICER

One of the first things you should do when you decide to take this training is to contact your supervisor for approval.

To register online use the National Training Center's Homepage: <http://www.ntc.blm.gov/courses/courses.html>. To receive specific requirements, check the Course Descriptions by clicking on the course name.

If you would like to receive proper credit for completion of the course, please return the training evaluation form on page 11.

LESSON 1

LEGAL DESCRIPTION

INSTRUCTIONAL OBJECTIVES:

After successfully completing this lesson, you will be able:

1. to use the components of the rectangular system of cadastral survey to describe land boundaries,
2. to describe any area on a map in writing using correct legal description format, and
3. when provided a written legal description be able to locate the described area on a map or plat.

LESSON 1: Legal Description

Assistance

View the video tape Legal Description.

Resource Aid 1
Glossary

See Resource Aid 2 for more information on the metes and bounds system.

Initial Point

Study Guide

I. View the **Legal Description** segment of the video tape. This video tape will provide you with the proper foundation to work through this self-study guide.

View the Legal Description segment of the video tape now.

Good! now that you've viewed the video tape, you are ready to tackle the "hands-on" portion of the training.

Any time you feel lost, either back up a few pages in the workbook, or take a second look at the video tape. That's what's nice about this type of training--you set the pace to match your own learning style.

One last thing before you begin. You will likely come across a number of new words as you work through the self-study guide. When you come to a new term, see the glossary in the Resource Aids section.

II. The Rectangular System of Surveying

The present system for the surveying of the public lands in the United States was established by law in 1785, under the Articles of Confederation. As a result, all of the states in the Union, except the thirteen original states and Kentucky, Maine, Vermont, West Virginia, Tennessee, and Texas, became subject to the rectangular survey system. At that time, the existing system of "pitches," or "metes and bounds" was the general practice. By comparing the irregular and unreliable metes-and-bounds descriptions used by the original colonies to the streamlined rectangular system now in use, you can clearly see the advantages of the rectangular system.

The structure of the rectangular system of survey is simple. The entire system is built around initial points, 36 of which have been established throughout the United States (includes Alaska).

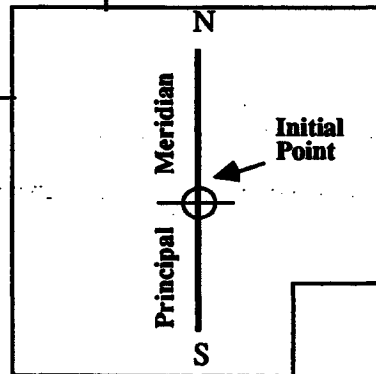
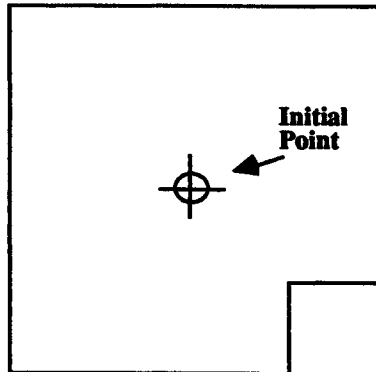
When entering a new, unsurveyed area, the surveyor would establish an initial point from which to begin the survey.

LESSON 1: Legal Description

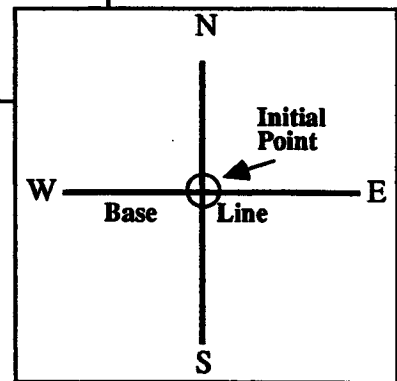
Assistance

Study Guide

The surveyor defined the initial point by determining exact latitude and longitude through astronomical observations or through ties to other points of known geographical position. Surveyors then establish a north-south line configured from true north (not magnetic north) extending above and below the initial point and an east-west line parallel to the equator.



The north-south line that intersects the initial point is called the principal meridian.



The east-west line that intersects the initial point is called the base line.

Principal Meridian

Base Line

See Resource Aid 3 for a map of Principal Meridians and Base Lines.

LESSON 1: Legal Description

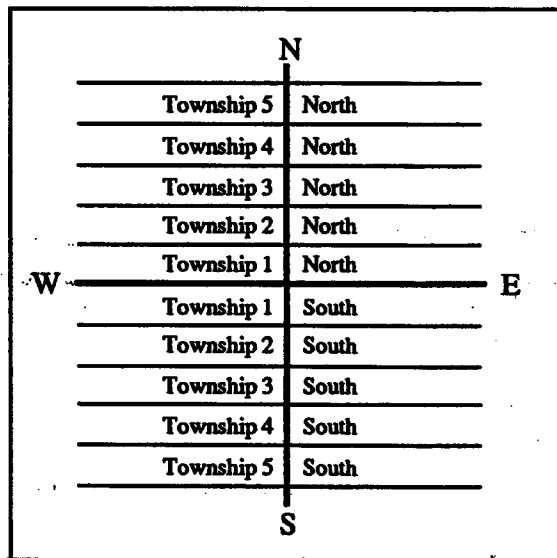
Assistance

Township Lines

Study Guide

Township lines are established at intervals of 6 miles to the north and 6 miles to the south of the base line. The resulting 6-mile wide spaces are called townships and are numbered north and south of the base line.

Remember that the spaces, not the lines, are called townships, and the spaces, not the lines, are numbered.

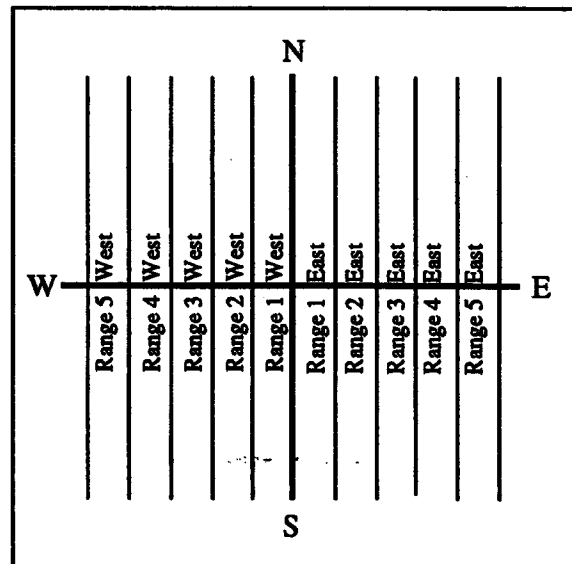


The first township north is called Township 1 North. The next township north is called Township 2 North, and so on.....

Range Lines

Range

Range lines are established at intervals of 6 miles to the east and 6 miles to the west of the principal meridian. The resulting 6-mile-wide spaces are called ranges and are numbered east and west of the principal meridian. The first range west is called Range 1 West, the next range west is called Range 2 West, and so on.....



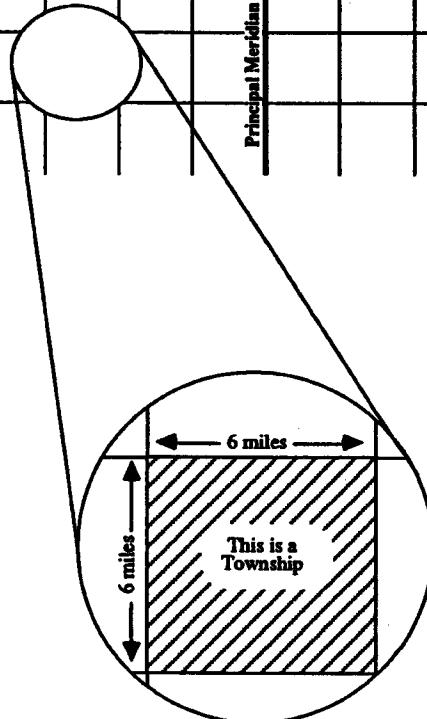
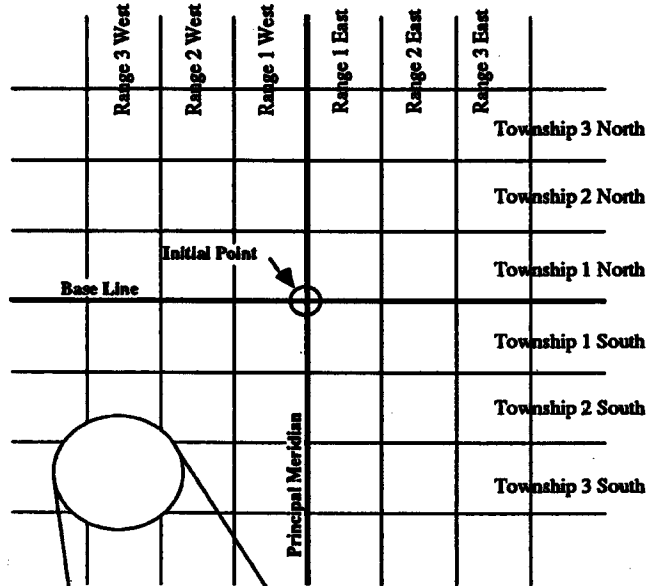
LESSON 1: Legal Description

Assistance

Townships:

Study Guide

The range lines and the township lines intersect and establish the boundaries for 6-mile by 6-mile squares called townships.



The 6-mile by 6-mile square shown to the left is called a township. This township's location would be described as follows:

Township 3 South, Range 3 West

LESSON 1: Legal Description

Assistance

Study Guide

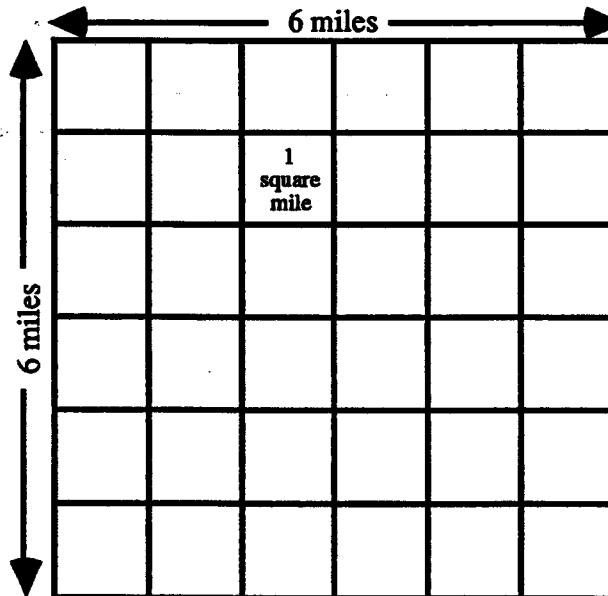
You have probably noted that we have applied two different meanings to the term "township." Because the use of a single term to describe two different situations is potentially confusing, you must understand each meaning and how each is used.

First, we used "township" to describe a series of 6-mile-wide horizontal rows north and south of the base line. These horizontal rows serve as the north-south coordinates in the rectangular system of cadastral survey. The east-west coordinates are the ranges.

Second, we used "township" to describe a single 6-mile square area that is situated within two adjacent range lines and two adjacent township lines.

Sections

Each 6-mile square township consists of 36 sections and each section is about 1 square mile each.



LESSON 1: Legal Description

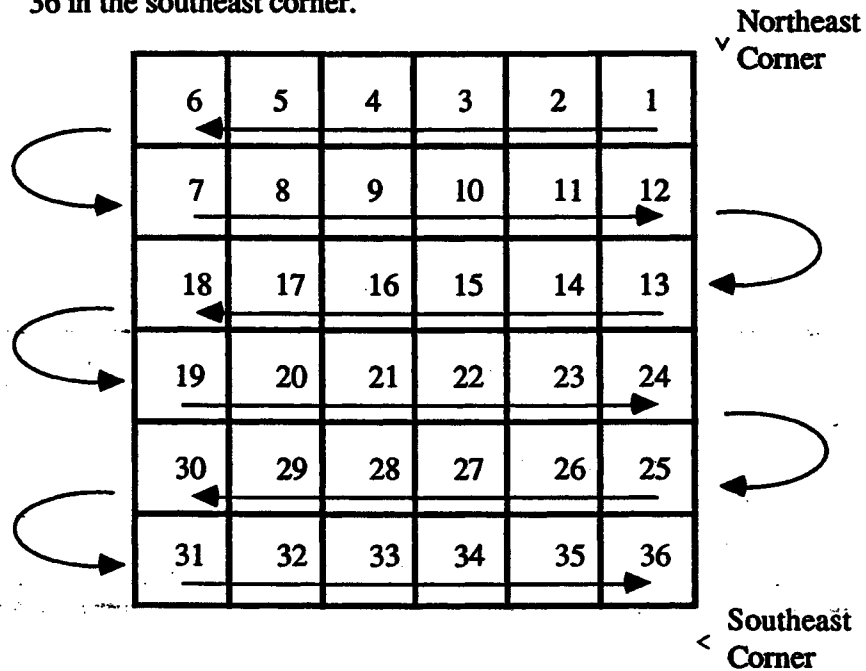
Assistance

Section Numbering

Fractional Townships

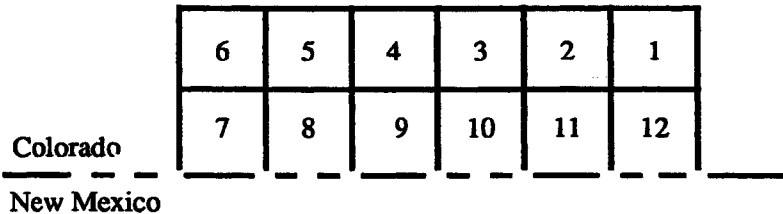
Study Guide

The sections in each township are always numbered consecutively, beginning with number 1 in the northeast corner of the township, and counting westerly six sections; then, with number 7, south of section 6, counting back to the east side of the township, and so on, weaving back and forth through the sections of the township, and ending with number 36 in the southeast corner.



There are also half townships and half ranges that do not contain all 36 square miles. In some areas there are one-quarter and three-quarter townships and ranges. These townships or ranges are referred to as fractional townships.

Fractional townships occur because of irregularities in the survey or because the township is intersected by a state, reservation, or grant boundary or by a large body of water. This is an example of a fractional township resulting from the boundary line between two states.



LESSON 1: Legal Description

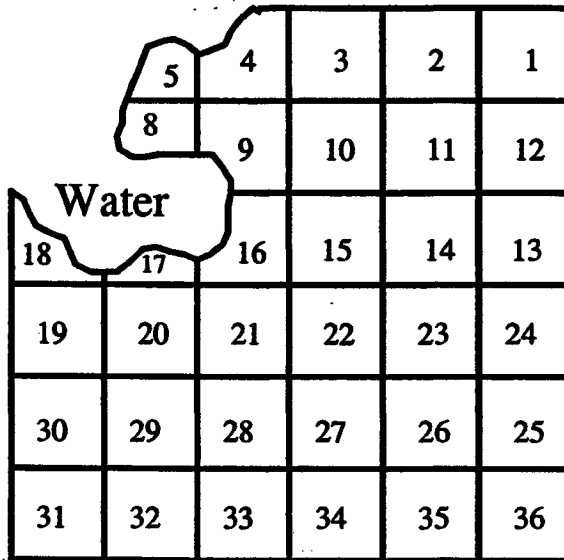
Assistance

Fractional Sections

Monuments
Section Corners
Quarter Corners

Study Guide

This is an example of a fractional township resulting from the shoreline of a body of water. The sections of land abutting the body of water (Sections 4, 5, 8, 9, 16, 17 and 18) are called fractional sections.



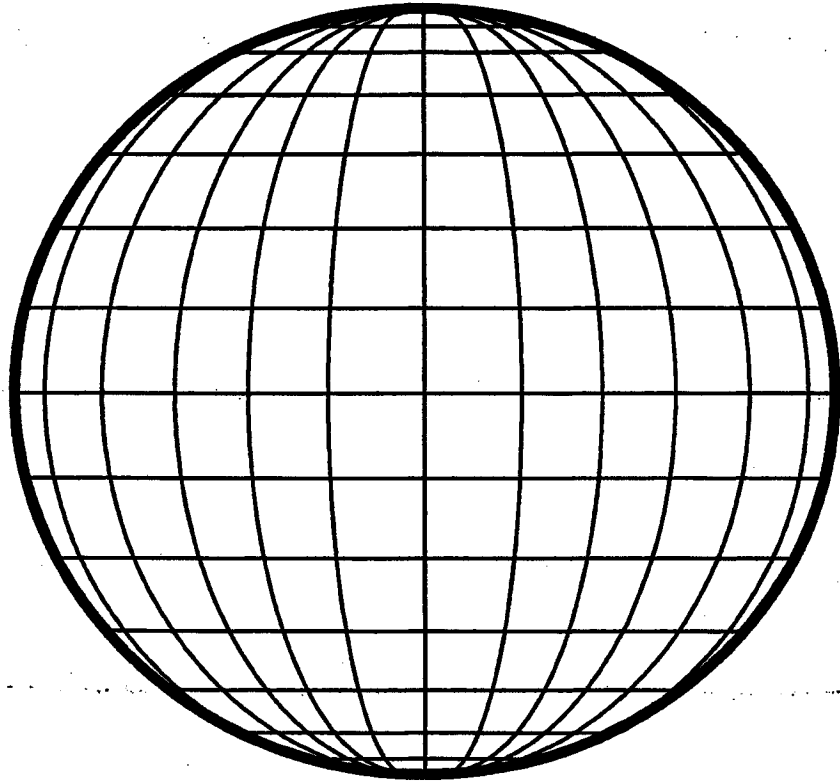
Monuments, called section corners, are required to be set at each mile. A monument is also set between each section corner. These monuments are called quarter corners and are set so that a section can be subdivided into quarters.

LESSON 1: Legal Description

Assistance

Study Guide

Because of the shape of the earth, principal meridians come closer together as they extend toward the North Pole.



Guide
Meridians

If not corrected, a township on the base line would be larger than one further north. To adjust for this problem, correction lines called guide meridians are established.

Guide Meridians extend true north and south, generally at intervals of 24 miles to the east and to the west of the principal meridian. The vertical lines to the east or west of the principal meridian are known by either a name or a number, such as "1st Guide Meridian East" or "1st Guide Meridian West," or "2nd Guide Meridian West," and others.

Standard
Parallels

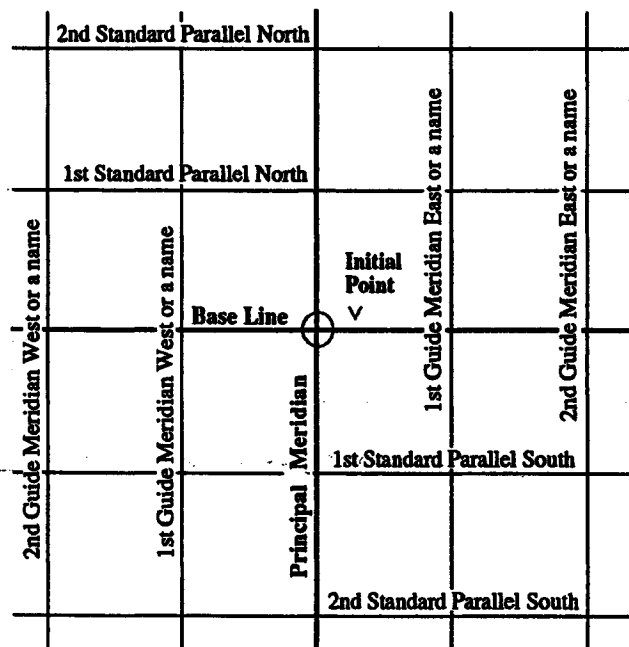
Another major control in the structure of the rectangular system is the establishment of standard parallels.

LESSON 1: Legal Description

Assistance

Study Guide

Standard Parallels extend true east and west, generally at intervals of 24 miles to the north and to the south of the base line. The first horizontal line to the north of the base line is called the "1st Standard Parallel North," and the next successive line north is called the "2nd Standard Parallel North," and so forth. The first horizontal line to the south of the base line is called the "1st Standard Parallel South," and the next successive line south is called the "2nd Standard Parallel South," and so forth. The following diagram is a generalized representation of the 24-mile square pattern.



Each of the squares in the diagram represents a 24-mile square tract, or an area of 576 square miles (not 24 square miles). Additional guide meridians may exist to the east and west, and additional standard parallels may exist to the north and south, depending on the control needed for further surveys.

Auxiliary Guide Meridians or **Auxiliary Standard Parallels** are established and named when the intervals exceed the distance of 24 miles.

Auxiliary
Meridians
and
Parallels

LESSON 1: Legal Description

Read and Answer Questions

Let's review what we've covered so far. Please write your responses on the blank lines. The answers are on page 22.

1. Before land can be measured, a surveyor must define an initial point for which the exact latitude and longitude are known. From that initial point, the surveyor runs two lines, one north-south, the other east-west.

The north-south line is called the _____.

The east-west line is called the _____.

2. Lines are established at intervals of 6 miles to the north and 6 miles to the south of the base line.

These lines are called _____ lines.

3. Lines are established at intervals of 6 miles to the east and 6 miles to the west of the principal meridian.

These lines are called _____ lines.

4. The term "township" can mean two different things in legal description jargon. Write out two brief definitions of "township."

A. The term "township" may refer to _____

B. The term "township" may refer to _____

5. The correct number for the second to last section in a township is _____.

6. Half townships and half ranges are referred to as _____.

7. Monuments set at one-mile intervals are called _____,
and monuments in between the above monuments are called _____.

8. The curvature of the earth's surface has created the need to provide control within the rectangular system. The two major controls are the _____
and _____.

LESSON 1: Legal Description

Read and Answer Questions

The following are the answers to the questions on page 21.

1. The north-south line is called the Principal Meridian.
The east-west line is called the Base Line.
2. These lines are called township lines.
3. These lines are called range lines.
4. A. The term "township" may refer to a series of 6-mile wide east-west coordinates.
B. The term "township" may refer to a single 6-mile square area situated within two adjacent range lines and two adjacent township lines.
5. The correct number for the second to last section in a township is 35.
6. Half townships and half ranges are referred to as fractional townships.
7. Monuments set at one-mile intervals are called section corners, and monuments in between the above monuments are called quarter corners.
8. The two major controls are the guide meridians and standard parallels.

LESSON 1: Legal Description

Assistance

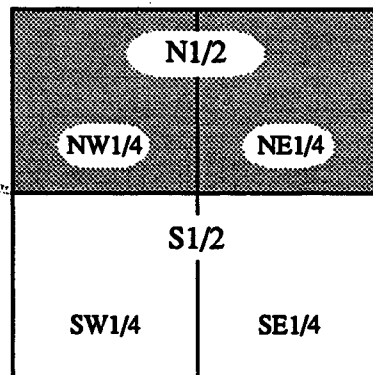
Study Guide

III. Subdivisions

Aliquot Parts

“Aliquot” is a Latin word meaning to divide (a number or quantity) into equal parts leaving no remainder. In legal descriptions, only quarter or half divisions of a section of land are known as “aliquot parts.” An aliquot part is always described in relation to the four points of the compass, with the use of the standard compass abbreviations, N, W, S, E.

For example, to describe the west half of a section, you write “W1/2”; the east half would be written as “E1/2.” The same rule applies to the north and south half, “N1/2” and “S1/2” respectively, as shown in the figure below. To describe each of the quarter-sections, you need to add one notation; that is, show which of the four corners is intended, such as “NE1/4,” or “NW1/4,” or “SW1/4,” or “SE1/4.”



In describing adjoining quarter sections, combine NE1/4 and NW1/4 to make N1/2 or combine SW1/4 and SE1/4 to make S1/2.

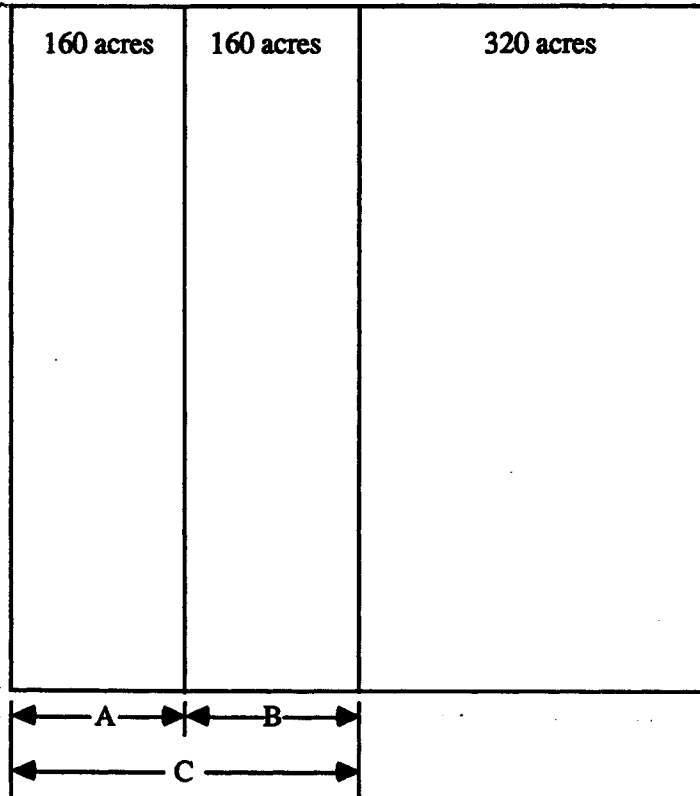
The “1/2” and the “1/4” are the only fractions that appear in the description of land by aliquot parts.

LESSON 1: Legal Description

Assistance

Study Guide

The figure below shows a section divided into several parcels of land. The letters A, B, and C are used to identify some of the parcels.



Half Section

Parcel C, the west half of the section, would be written as W1/2. Parcel C may also be referred to as a half-section. To describe parcel B, which is the east half of the west half, write E1/2W1/2.

IMPORTANT NOTE

Whenever describing a parcel of land within another parcel of land, always write the smaller parcel to the left of the larger parcel.

E1/2W1/2

Smaller parcel > < Larger parcel

9. Write the description for parcel A?

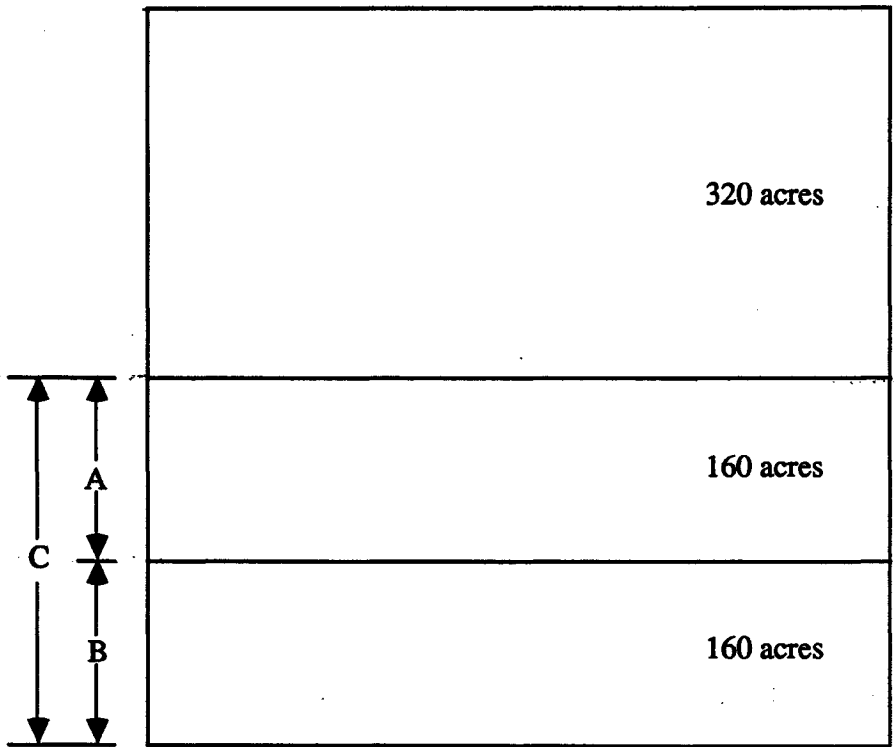
See page 33 for the correct answer.

LESSON 1: Legal Description

Assistance

Study Guide

The figure below shows a section divided horizontally instead of vertically.



To describe parcel C, the south half of the section, write as S1/2. To describe parcel A, the north half of the south half, write N1/2S1/2.

10. Write the description for parcel B?

See page 33 for the correct answer.

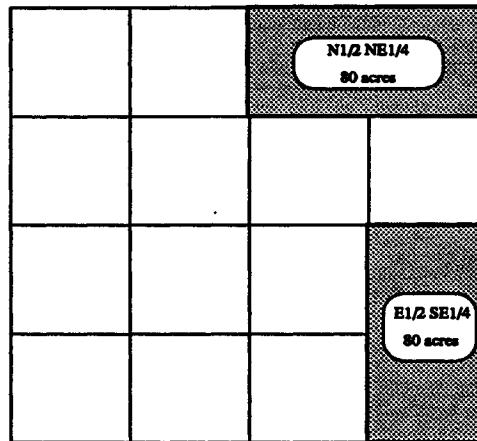
LESSON 1: Legal Description

Assistance

Study Guide

Suppose that you want to describe the north half of the northeast quarter and the east half of the southeast quarter. These legal descriptions would be written as $N\frac{1}{2}NE\frac{1}{4}$ and $E\frac{1}{2}SE\frac{1}{4}$ respectively.

Note that the description of the larger tract from which a half was taken does not change.

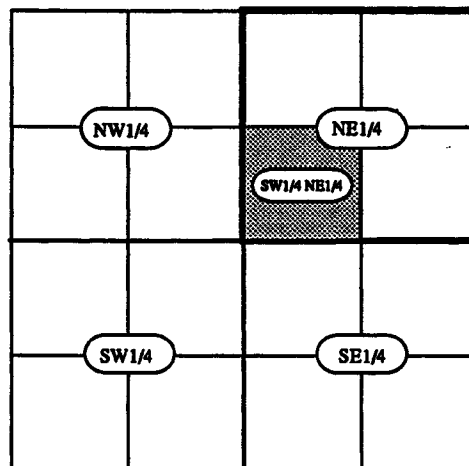


Suppose you want to describe the northeast quarter of the section shown below. Describe the northeast quarter as $NE\frac{1}{4}$. Since the northeast quarter represents one-fourth of the section, it is called a quarter section.

Quarter Section

Quarter-Quarter Section

To describe the southwest quarter of that quarter section, write $SW\frac{1}{4}NE\frac{1}{4}$.



The dark line is the boundary of the $NE\frac{1}{4}$. The shaded area shows the $SW\frac{1}{4}$ within the $NE\frac{1}{4}$, which is described as $SW\frac{1}{4}NE\frac{1}{4}$.

LESSON 1: Legal Description

Assistance

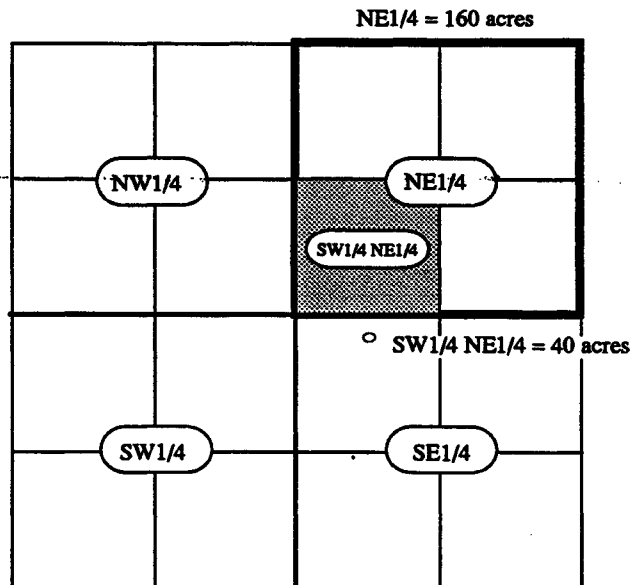
Acreages

Study Guide

When writing an aliquot part description for a section, begin in the most northeastern portion and work in a counter-clockwise direction, regardless of where the largest portion is located.

Perhaps we should take a moment here to look at the size, in acres, of the land we are learning to describe. Generally a section of land consists of 640 acres, but sections along the north and west boundaries of a township will not generally contain 640 acres because of the convergence of meridians.

A quarter section such as the northeast quarter (NE1/4) would consist of 160 acres (1/4 of 640 acres). A quarter-quarter section such as the southwest quarter of the northeast quarter (SW1/4NE1/4) would consist of 40 acres. A further quartering of the SW1/4NE1/4 parcel would result in four parcels of 10 acres each.



The entire section equals 640 acres

LESSON 1: Legal Description

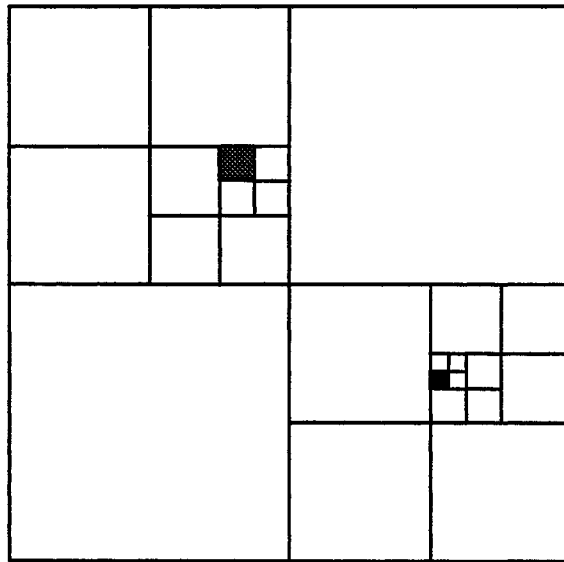
Assistance

Minor Subdivisions

Study Guide

The subdivisions of sections into 10- and 5-acre parcels follows the same rule you have already learned. Remember that when you describe a parcel of land within another parcel of land, the smaller parcel is always written to the left of the larger parcel. With each subdivision the legal description grows longer and to the left.

11. Try writing the legal descriptions for the two parcels shown below.





See page 33 for the correct answers.

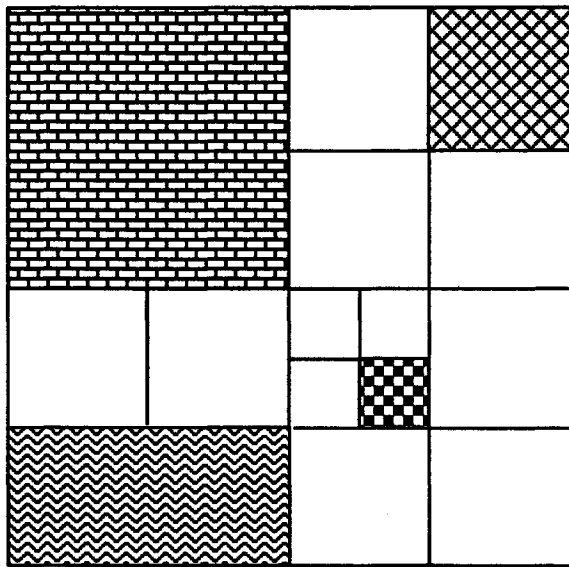
A section may be further subdivided into 2.5- or 1.25-acre parcels, but this practice is not common.

LESSON 1: Legal Description

Assistance

Study Guide

12. Selected parcels of land in the section shown below have been filled in with different patterns. Write the legal description for each parcel.









See page 33 for the correct answers.

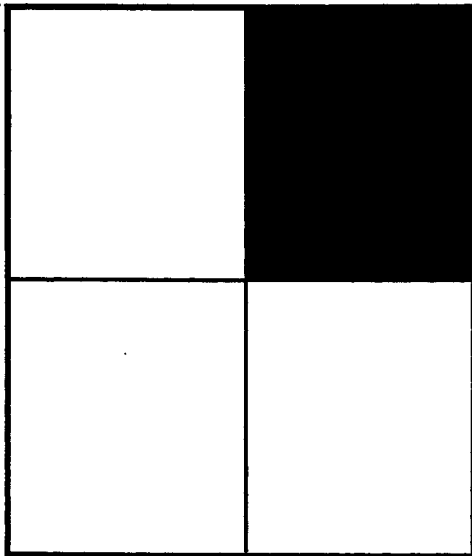
LESSON 1: Legal Description

Assistance

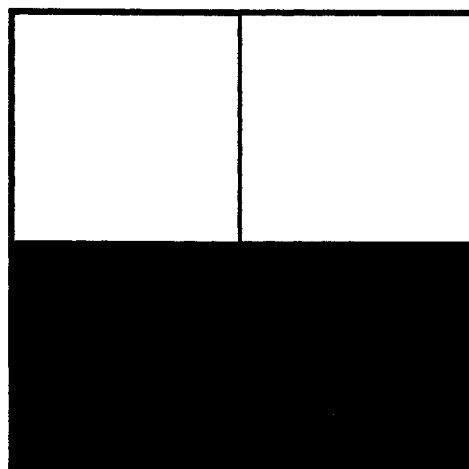
Study Guide

Review:

Remember that a 160- or 320-acre parcel contains only one aliquot part notation, such as:



NE 1/4 = 160 acres



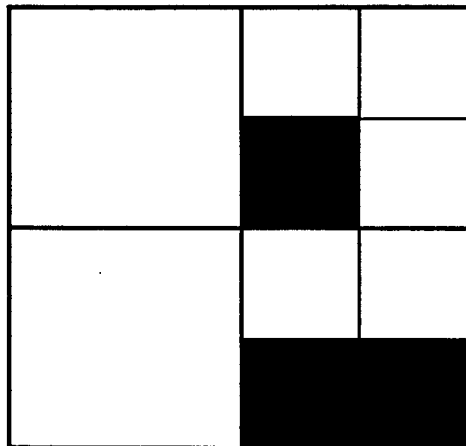
S 1/2 = 320 acres

LESSON 1: Legal Description

Assistance

Study Guide

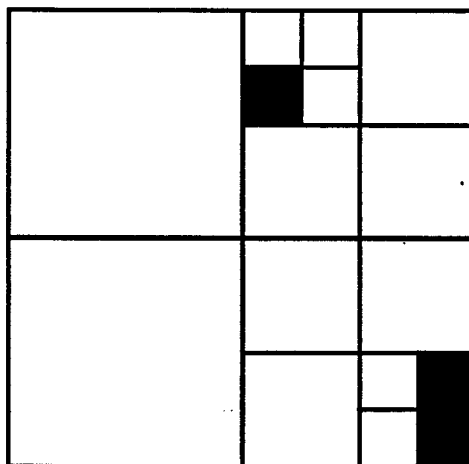
and that a 40- or 80-acre parcel contains two aliquot part notations, such as:



SW1/4NE1/4 = 40 acres

S1/2SE1/4 = 80 acres

A 10- or 20-acre parcel contains three aliquot part notations, such as:



SW1/4NW1/4NE1/4 = 10 acres

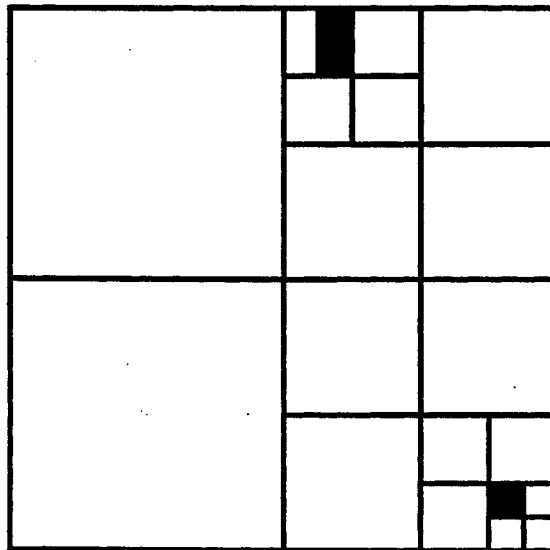
E1/2SE1/4SE1/4 = 20 acres

LESSON 1: Legal Description

Assistance

Study Guide

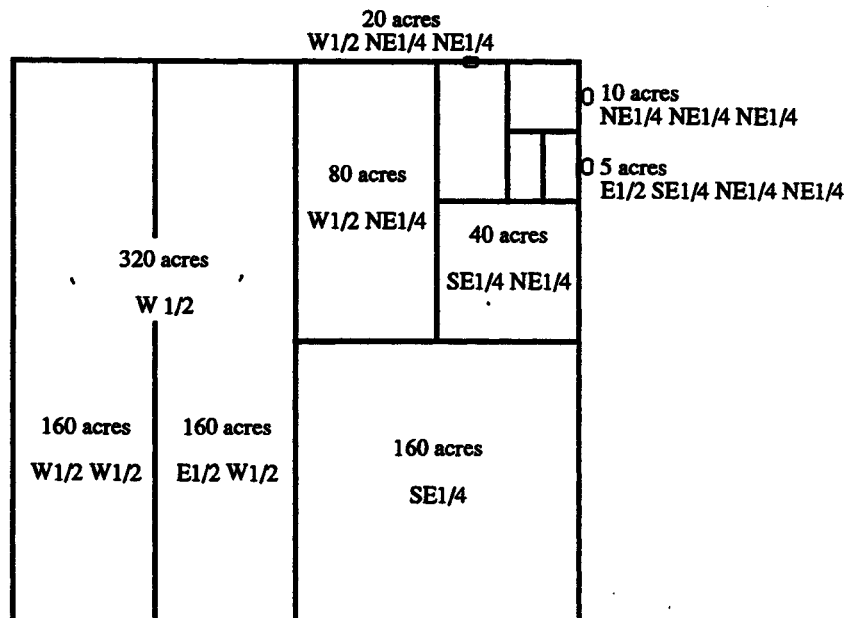
and a 2.5- or 5-acre parcel contains four aliquot part notations, such as:



**E1/2NW1/4NW1/4NE1/4
= 5 acres**

**NW1/4SE1/4SE1/4SE1/4
= 2.5 acres**

The figure below shows various configurations of aliquot parts, the acreage within that aliquot part and the proper legal description notation.



LESSON 1: Legal Description

Read and Answer Questions

The following are the answers to questions 9, 10, 11, and 12.

9. Write the description for parcel A?

Parcel A would be written as W1/2W1/2

10. Write the description for parcel B?

Parcel B would be written as S1/2S1/2

11. Try writing the legal description for the two parcels shown below.

a. NW1/4NE1/4SE1/4NW1/4

b. SW1/4NW1/4SW1/4NE1/4SE1/4

12. Write the legal description for each parcel.

a. NW1/4

b. S1/2SW1/4

c. NE1/4NE1/4

d. SE1/4NW1/4SE1/4

LESSON 1: Legal Description

Assistance

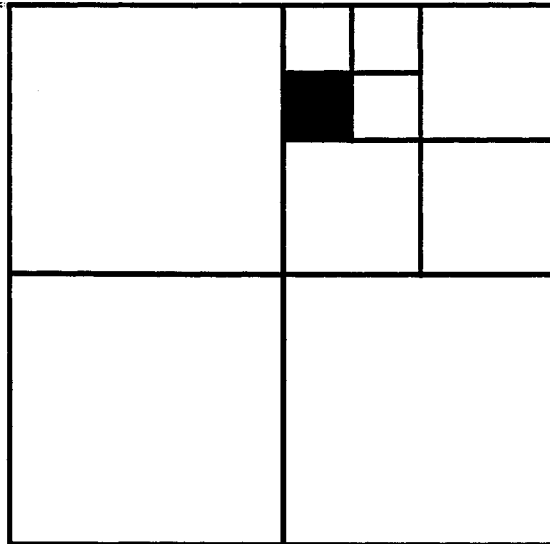
Comma

Study Guide

IV. The Comma

Seldom can the inadvertent omission or insertion of a comma be more misleading and do more damage than in a land description.

Commas in land descriptions mean "AND THE," whereas the absence of commas means "OF THE." To show the effect of a comma (or commas) in a land description, let's take a typical description of a 10-acre parcel. The notation SW1/4NW1/4NE 1/4 is read as "the southwest quarter of the northwest quarter of the northeast quarter."



SW1/4NW1/4NE 1/4 = 10 acres

LESSON 1: Legal Description

Assistance

Study Guide

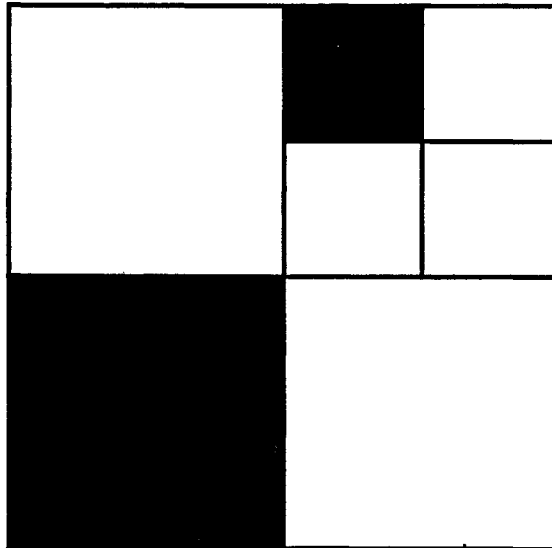
By inserting a single comma into the notation between SW1/4 and NW1/4 we have drastically changed the notation. Instead of describing

SW1/4, NW1/4NE1/4



comma inserted here

a single 10-acre parcel, we are now describing two separate parcels totalling 200 acres (160 acres and 40 acres respectively). The notation would now be read as "the southwest quarter and the northwest quarter of the northeast quarter."



NW1/4NE1/4, SW1/4 = 200 acres

LESSON 1: Legal Description

Assistance

Lotting of a Section

Study Guide

V. Lots

Lots are irregular or fractional parcels of land in a section that cannot be described as aliquot parts. They generally lie on the north and the west sides of a township, or along meandering lakes, ponds, or rivers.

That lots are created as a result of irregularities in boundaries or resurveys presents unusual problems, which are beyond the scope of the self-study guide.

Be aware, however, that lots exist, that they serve a purpose in the rectangular system of survey, and that they generally are numbered by the same method as are sections.

The following example will show how lots are numbered and will help you to visualize some of the circumstances that result in lotting.

Look at the example to the right. The north and west side of the section contains fractional parcels of land ranging in size from 36.70 acres to 41.20 acres. Because these parcels cannot be described as aliquot parts, they cannot be considered as quarter-quarter sections. Hence, they are described as lots. Note that the lots are numbered consecutively from east to west and then from north to south.

Numbering of lots

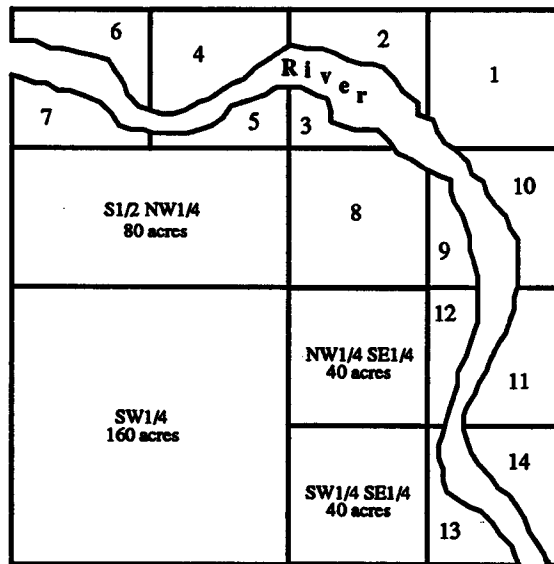
	4	3	2	1
	36.70 acres	40.40 acres	40.80 acres	41.20 acres
	5 37.10 acres	SE1/4 NW1/4 40 acres	S1/2 NE1/4 80 acres	
	6 37.50 acres	E1/2 SW1/4 80 acres	SE1/4 160 acres	
	7 37.90 acres			

LESSON 1: Legal Description

Assistance

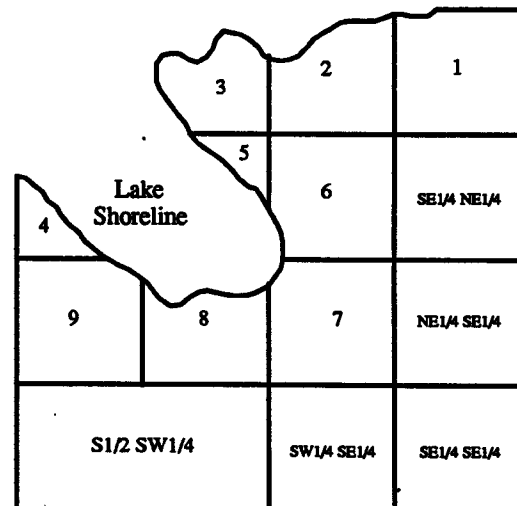
Study Guide

The next example shows a meandering river that has created fractional parcels of land along its banks. Note that the numbering begins in the northeast corner and continues west until each fractional parcel has been numbered. In the example, the top row contains lots 1 through 7. The second row is numbered from west to east, ending with lot 10. The third row is numbered from east to west ending with lot 12, and the fourth row is numbered from west to east ending with lot 14.



The following five examples show the numbering of lots for several different situations.

The shoreline of a lake.

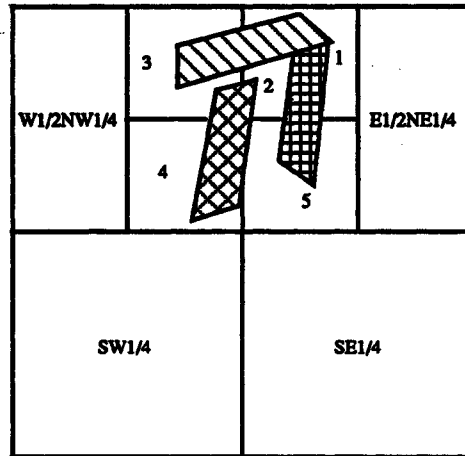


LESSON 1: Legal Description

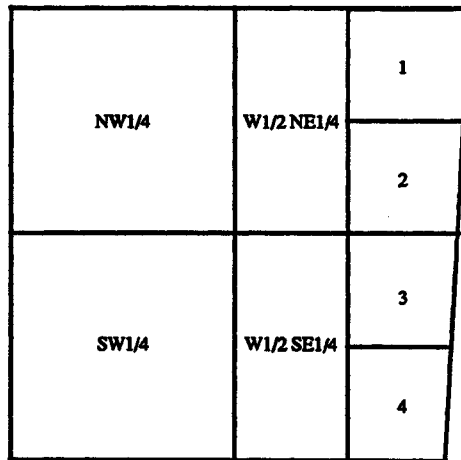
Assistance

Study Guide

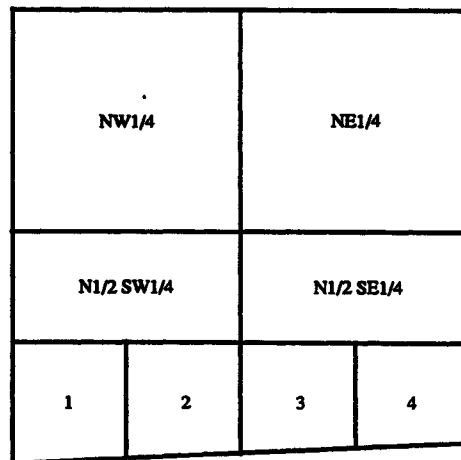
Mineral claims.



An irregular alignment of the east boundary.



An irregular alignment of the south boundary.



LESSON 1: Legal Description

Assistance

Study Guide

An irregular alignment of the east and south boundaries.

NW1/4		W1/2 NE1/4		1
		N1/2 SW1/4		NW1/4 SE1/4
N1/2 SW1/4				NW1/4 SE1/4
4	5	6	7	

When writing the subdivision portion of the legal description, first write the lots, followed by the aliquot part. Each lot will also be separated by a comma. Three or more consecutively numbered lots can be separated by the word **thru**. Nonconsecutive lots should be written in ascending order from lowest to highest number. Some examples are shown below:

lot 1, SE1/4

lot 1 thru 4, inclusive, SE1/4

lot 1, 3, 9, 10, SE1/4

LESSON 1: Legal Description

Read and Answer Questions

Please write your responses on the blank lines. The answers are on page 41.

1. The legal description NE,NE would be read as the northeast quarter and the northeast quarter. How would that same legal description be read if the comma were omitted...

... the northeast quarter ____ northeast quarter

2. Lot numbers are numbered consecutively from east to west and then from ____ to ____.

3. Three or more consecutively numbered lots can be separated by either the use of commas or the use of the word _____.

LESSON 1: Legal Description

Read and Answer Questions

The following are the answers to the questions on page 40.

1. The legal description NE,NE would be read as the northeast quarter and the northeast quarter. How would that same legal description be read if the comma were omitted.

... the northeast quarter of the northeast quarter

2. Lot numbers are numbered consecutively from east to west and then from north to south.
3. Three or more consecutively numbered lots can be separated by either the use of commas or the use of the word thru.

LESSON 1: Legal Description

Assistance

Study Guide

VI. Special Surveys

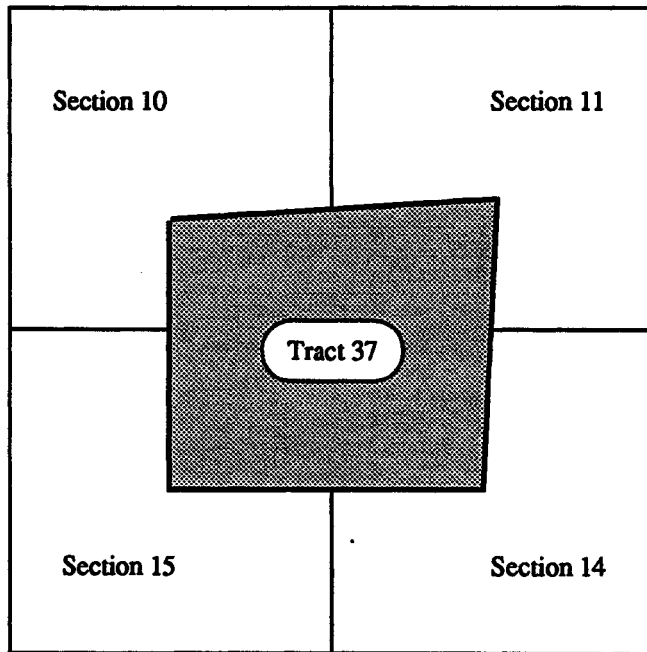
Special surveys involve unusual applications or departures from the rectangular system. Although there are many types of special surveys, we will cover only two types in this lesson -- tracts and metes and bounds.

Tracts

Tracts

Tract surveys involve areas of land that usually lie in more than one section or that cannot be described wholly as a part of a section. Tracts within a township are numbered beginning with 37 to avoid confusion with section numbers.

Tract Survey involving 4 sections



LESSON 1: Legal Description

Assistance

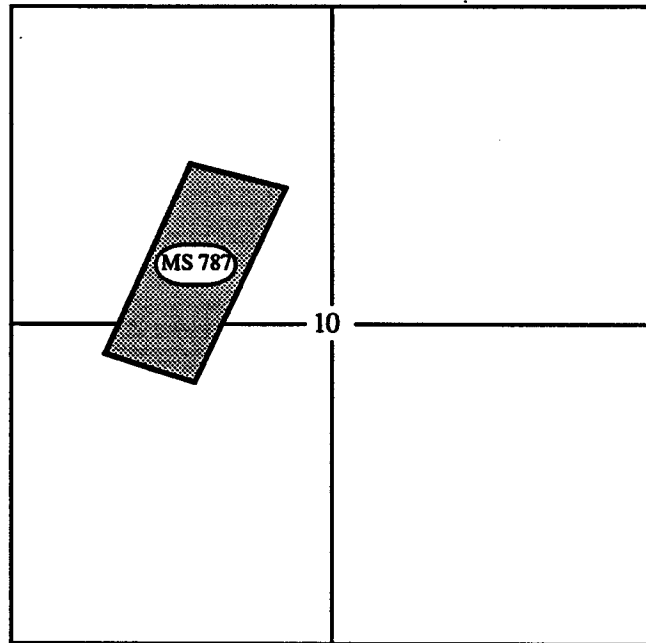
See Resource Aid 2 for more information about metes and bounds.

Study Guide

Metes and Bounds

Metes and bounds surveys are used for defining boundaries of an irregularly shaped parcel of land that cannot be practically described in any other way.

A metes and bounds survey may be appropriate for such cases as mineral claims, homestead claims, private land grants, national parks and monuments, and Indian reservations.



Sample Mineral Survey

LESSON 1: Legal Description

Assistance

Study Guide

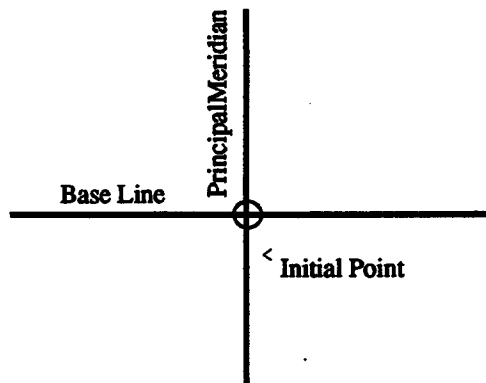
VII. Writing the Complete Legal Description

Initial Points

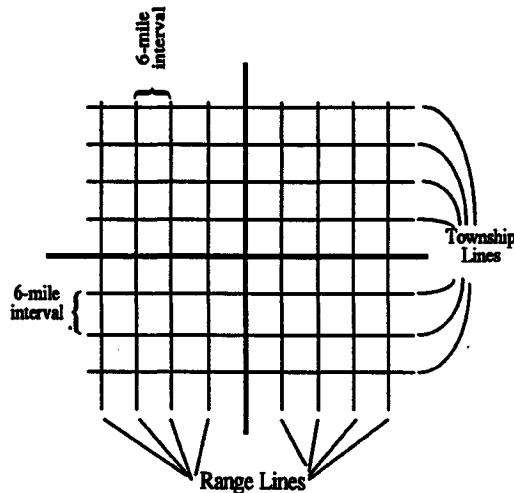
Up to this point you have learned that the entire rectangular system of survey is built around selected starting points called initial points.

Principal Meridians
Base Lines

You know that north-south principal meridians and east-west base lines intersect at each initial point.



You also know that township lines are established every six miles north and south of the base line and that range lines are established every six miles east and west of the principal meridian.



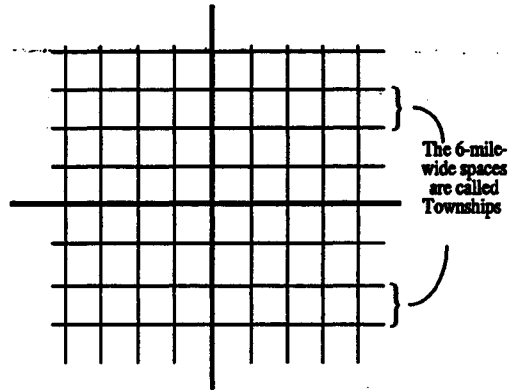
LESSON 1: Legal Description

Assistance

Study Guide

Township
Coordinate

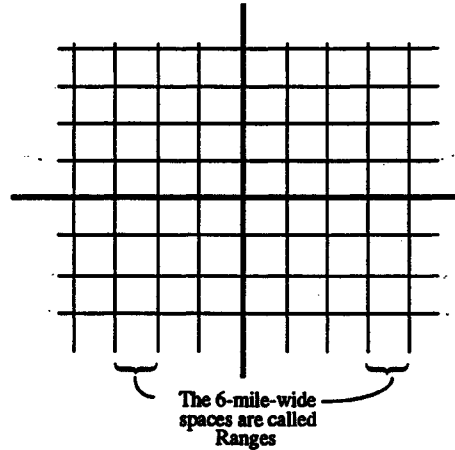
And you have learned that the 6-mile-wide spaces between each set of township lines represents an east-west coordinate called a township,



that

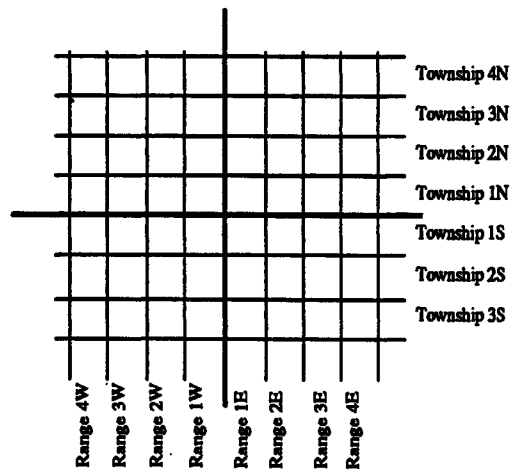
Range
Coordinate

the 6-mile-wide spaces between each set of range lines represents a north-south coordinate called a range,



and that

the township and range coordinates are numbered according to their position relative to the base line and principal meridian.



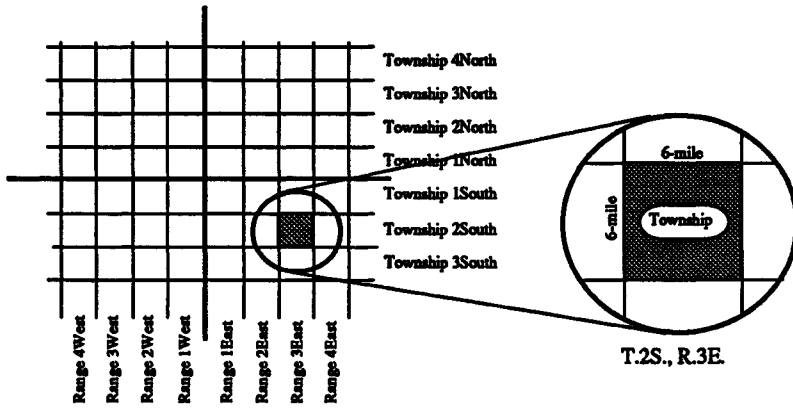
LESSON 1: Legal Description

Assistance

Township

Study Guide

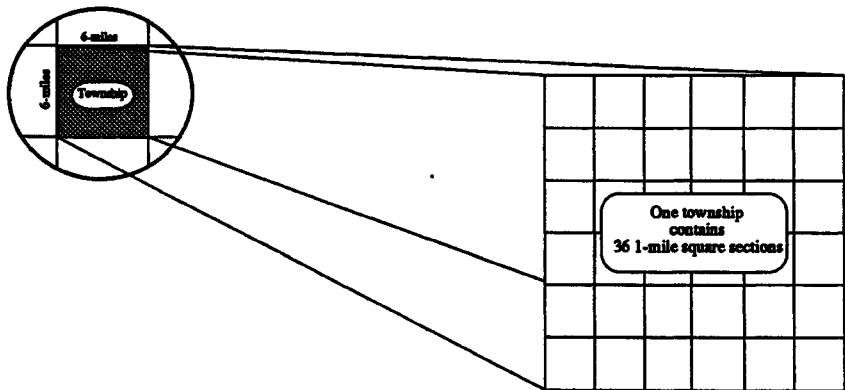
You have also learned that each intersection of a township coordinate and range coordinate creates a 6- by 6-mile square called a township.



and that

Section

each township consists of 36, 1-mile square areas called sections.



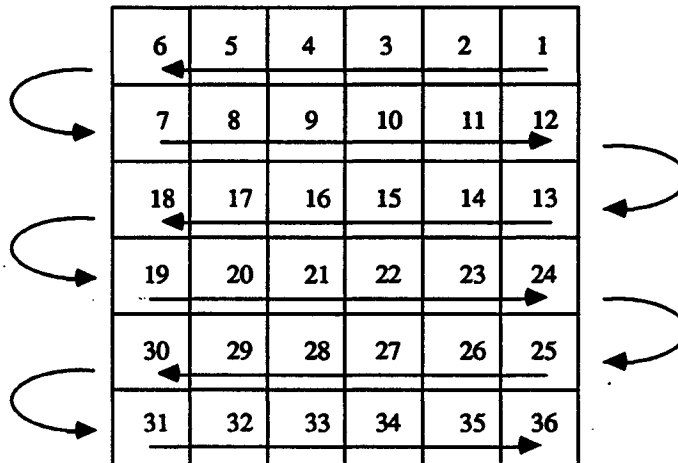
LESSON 1: Legal Description

Assistance

Numbering of Sections

Study Guide

You know that sections are numbered beginning with number 1 in the upper right corner and weaving alternately right-to-left, left-to-right, then right-to-left until all 36 sections have been numbered -- ending with number 36 in the lower right corner.



You've also learned how to describe parcels of land within a section, remembering that the smaller parcel of land is always written to the left of the larger parcel.

For consistency in legal descriptions, BLM has adopted the following standard notation abbreviations for public lands.

Abbreviations

See Resource Aid 4 Common Abbreviations

Principal Meridians

The 36 principal meridians are abbreviated with capital letters. For example, the Willamette Meridian used in Oregon and Washington is shown as WM. The 6th Principal Meridian is shown as 6th PM or SIXTH PM.

Township

Abbreviated as a capital T.

LESSON 1: Legal Description

Assistance

Study Guide

Range

Abbreviated as a capital R.

Section

Abbreviated with lower case letters as "sec." (with a period following the "c".)

Compass Points

Abbreviated with capital letters N, W, S, E.

Two methods are acceptable for writing complete legal descriptions:

1. Beginning with the principal meridian
 - name the principal meridian
 - name the township
 - name the range
 - name the section
 - name the subdivisions

A properly notated legal description beginning with the principal meridian would be written as follows:

6th PM, T.8 N., R.4 W., sec. 8, SE1/4NW1/4

Important Note

Look at the placement of the periods and commas.

Complete legal
description

Method 1

LESSON 1: Legal Description

Assistance

Method 2

Multiple Townships

Study Guide

2. Beginning with the subdivision

- name the subdivision
- name the section
- name the township
- name the range
- name the principal meridian

A properly notated legal description beginning with the subdivision would be written like this:

W1/2NE1/4SW1/4, sec. 26, T.6 S., R.8 E., 5th PM

If several townships are included in the description, the primary order is determined by the range number, beginning with the lowest number, and within each range by the township numbers beginning with the lowest number.

Where townships north and south of the base line or east and west of the meridian are involved, the order of listing is usually; first those north and east of the initial point, followed by those north and west, then those south and west and finally by those south and east.

Example:

Sixth PM
T.5N.,R.1E.
sec. 6 All;
sec. 7 All.
T.5N.,R.1W.
sec. 1 All;
sec. 12 All.
T.2S.,R.1W.
sec. 1 All;
T.2S.,R.1E.
sec. 6 All.

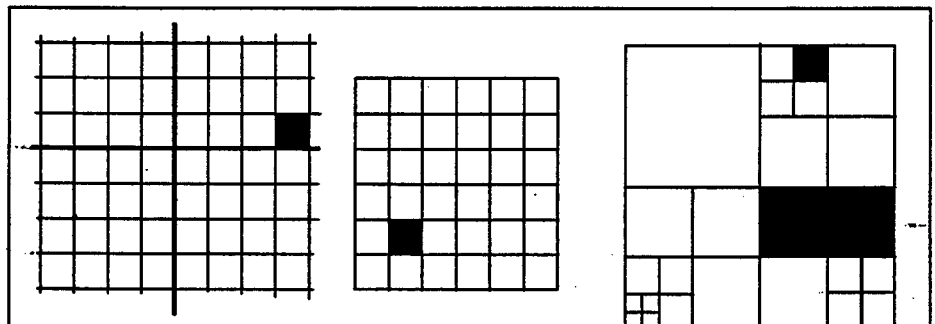
LESSON 1: Legal Description

Assistance

Study Guide

Write the complete legal descriptions for the highlighted parcels of land in each of the problems shown on the following two pages. Use method 1 for writing the first two legal descriptions and method 2 for writing the last two legal descriptions.

Example:



P Black Hills Meridian (BHM)

Write your legal description here (Method 1):

BHM, T.1N., R.4E., sec. 29, NE1/4 NW1/4 NE1/4, N1/2 SE1/4

LESSON 1: Legal Description

Read and Answer Questions

Problem 1

➤ Sixth Principal Meridian (SIXTH PM)

Write your legal description here (Method 1):

Answer on page 54.

Problem 2

➤ Wind River Meridian (WRM)

Write your legal description here (Method 1):

Answer on page 54.

LESSON 1: Legal Description

Read and Answer Questions

Problem 3

Problem 3 consists of three diagrams. The first is a 10x10 grid with a vertical line at the 5th column and a horizontal line at the 5th row. A single square at the intersection of the 6th column and 8th row is shaded. The second is a 10x10 grid with a single square at the intersection of the 1st column and 8th row shaded. The third is a 4x4 grid with a 2x2 grid inside. The top-left cell of the 2x2 grid is numbered '1', the top-right '2', the bottom-left '3', and the bottom-right '4'. The square in the bottom-left cell of the 2x2 grid is shaded.

⌘ Salt Lake Meridian (SLM)

Write your legal description here (Method 2):

Answer on page 54.

Problem 4

Problem 4 consists of three diagrams. The first is a 10x10 grid with a vertical line at the 5th column and a horizontal line at the 5th row. A single square at the intersection of the 1st column and 1st row is shaded. The second is a 10x10 grid with a single square at the intersection of the 9th column and 8th row shaded. The third is a 4x4 grid with a 2x2 grid inside. The top-left cell of the 2x2 grid is shaded. The bottom-left cell of the 2x2 grid is shaded. The bottom-right cell of the 2x2 grid is shaded.

⌘ Mount Diablo Meridian (MDM)

Write your legal description here (Method 2):

Answer on page 54.

LESSON 1: Legal Description

Read and Answer Questions

Answers to problems on pages 52 and 53.

Problem 1:

SIXTH PM, T.2 S., R.3 W., sec. 9, NE1/4SW1/4SW1/4

Problem 2:

WRM, T.4 S., R.3 E., sec. 26, SW1/4NW1/4NE1/4, NW1/4

Problem 3:

lot 4, sec. 18, T.3 N., R.2 E., SLM

Problem 4:

SE1/4SW1/4SW1/4, N1/2SE1/4SE1/4, sec. 35, T.3 N., R.4 W., MDM.

When writing multiple land descriptions within a township, end all lines with a semicolon except for the last line, which should end with a period.

For example:

SIXTH PM,
T & R
sec. 1, lot 1,4, SE1/4;
sec. 2, all;
sec. 3, lot 1 thru 4, inclusive, S1/2N1/2;
sec. 10, HES 599;
sec. 12, MS 700;
sec. 13, lot 1, NW1/4, HES 600;
sec. 14, N1/2, SW1/4;
Tract 37.

If the land being described is unsurveyed or partly surveyed, add the words "unsurveyed" or "partially surveyed" to the legal description.

For example:

SIXTH PM,
T & R
sec. 1, all, unsurveyed;
sec. 2, all, partially surveyed;
sec. 3, all.

LESSON 2

LAND STATUS

INSTRUCTIONAL OBJECTIVES:

After successfully completing this lesson, you will be able:

1. to list the six components of the land status records system: Master Title Plat, Use Plats and Supplemental Plats, Historical Index, Control Document Index, Index to Miscellaneous Documents, and Serial Register Page,
2. to list the sources and location of land status records, and
3. to use land status records to research and document the current status of any parcel of public land.

LESSON 2: Land Status

Assistance

View the video
tape Land Status

Cadastral
Survey Plat

Study Guide

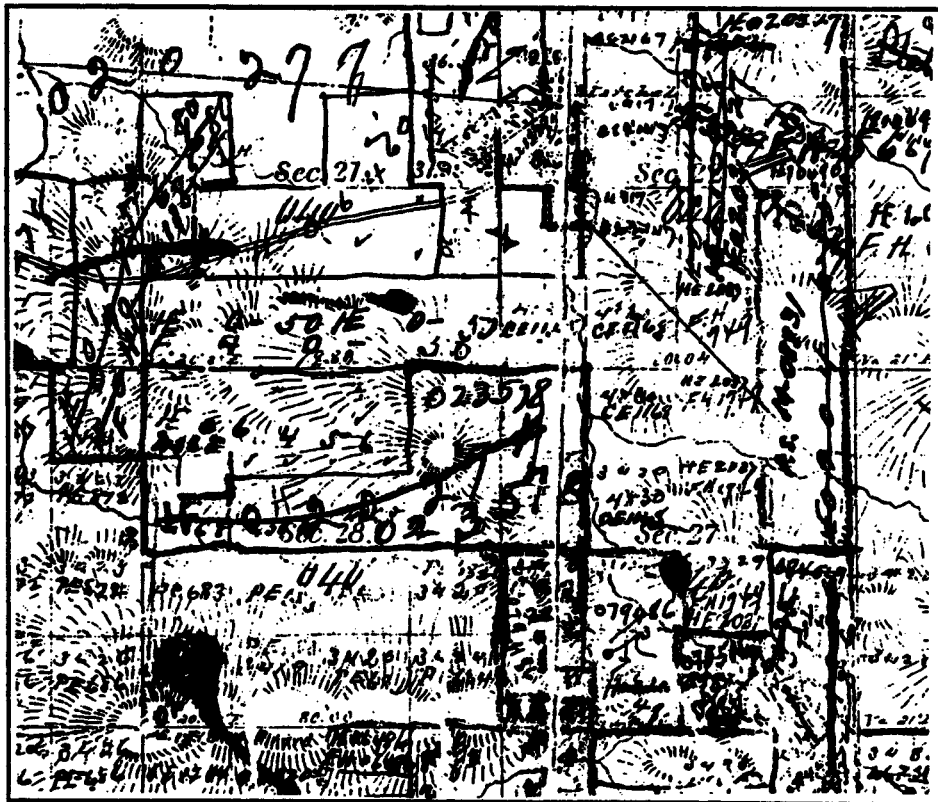
- I. View the Land Status segment of the video tape. This video will provide you with the proper foundation to work through this section of the self-study guide.

View the Land Status segment of the video tape now.

- II. In the Beginning

A systematic approach to recordkeeping for the public lands began over 200 years ago with the Ordinance of 1785. That ordinance set forth the use of the Cadastral Survey Plat, a system for recording land patents and related case records essential to the chain of title in the public domain states.

The cadastral survey plat worked well at first. However, the handwritten entries soon became difficult to read and track. A portion of a plat is shown below.



LESSON 2: Land Status

Assistance

Tract Book System

Serial Register System

Study Guide

In 1800, the tract book system was established by an Act of Congress. This new recording system was designed to be a permanent reference for all land transactions for the survey of public lands. These tract books were broken down by:

- State
- Territory
- Meridian
- Township
- Range
- Section and subdivision

By 1908 there was a need to document the history of each land case transaction that occurred on the public land. The Serial Register System was designed to accomplish this purpose. Every transaction within a state was given a serial number so that each event that occurred could be recorded on the register.

SERIAL No.		0 57	
DATE	DESCRIPTION	DATE	DESCRIPTION
	117 N. Mont. 24 N. 24 E. 14 S. 14 W.	Apr 17 1908	See Contour Book page 227. Bit
	71-1111-16-1111		10 April 1908. Requester evidence of citizenship notified 30 days.
	1111 16	May 7	Statement that final papers will be filed as soon as rail train to G. L. O.
July 1	App to make final survey received 10/17/08	July 5	Copy of Contour Book Serial Class G. L. O.
	Office sent to South. Census Bureau	July 24	6 Feb 1913 direct issuance of G. L. O.
	Proof Aug 8 1908.		Reg. final class issued.
Aug 26	Final proof recd.	July 24	Patent # 397294 dated July 17 1913 acquired by transfer
	See 78760.		
	Applicant called for additional evidence and testimony fee.	Aug 20	Patent mailed James Vandear Weller Mont.
	24 hrs 78765 before 1910.		
	Forces up call on for a post refusal but action taken pending.		
	1/2 is 6198 agree.		
Sept 3	74 plus 6 G. L. O. with monthly reports.		
Nov 2	100 Reg. sq. direct proceedings and dec. circular of Nov 25 1907.		

Sample from old Serial Register Page

LESSON 2: Land Status

Assistance

Land Status Records System

Study Guide

Tracking land status through numerous handwritten entries was awkward at best. By 1955, the Tract Book System had become so difficult to read and cumbersome to use that Congress authorized the establishment of yet another records system. This system is generally referred to as the Land Status Records System.

The first step in the new system was to microfilm all patents, withdrawals, proclamations, orders, and other related documents that affect land status. The Land Status Records System consists of six parts. They are the

Master Title Plat

Use Plats and Supplemental Plats

Historical Index

Control Document Index

Index to Miscellaneous Documents

Serial Register Page

LESSON 2: Land Status

Read and Answer Questions

-Please answer the following review questions before moving on to Part III. Circle the correct answer.

1. The Ordinance of 1785 instituted a system for recording transactions on the public lands. The main feature of the system was a document called?
 - A. the Serial Register Page
 - B. the Cadastral Survey Plat
 - C. the Ordinance Tract Book

2. After being in use for a number of years, the system created by the Ordinance of 1785 became difficult to use and maintain. In 1800, Congress established a new system. This new system required all transactions to be recorded in?
 - A. Tract Books
 - B. Serial Register Books
 - C. Land Transaction Plat Books

3. In the early 1900s, another system was designed and implemented. This system required the assignment of a number to each transaction to make tracking records easier. The system was called?
 - A. The Numerical Index System
 - B. The Master Title Plat System
 - C. The Serial Register System

4. In 1955, a new system was established. This system, which makes extensive use of microfilming, is the system in current use. It is the?
 - A. Land Status Records System
 - B. Public Land Automated Tracking (Plat) System
 - C. Master Title Plat System.

See the following page for answers.

LESSON 2: Land Status

Read and Answer Questions

Answers to review questions for Part II.

1. B. The Cadastral Survey Plat
2. A. Tract Books
3. C. The Serial Register System
4. A. Land Status Records System

LESSON 2: Land Status

Assistance

Chain
Measurement

Exceptions to
Chain Measure-
ment

MTP Heading

Study Guide

A mylar base is used so when changes occur in either the land status or the survey status, updates can be easily made.

Partial townships such as one-quarter, one-half, and three-quarter townships are positioned on the plat as if a full township were being shown.

The chain is a unit of linear measurement for the survey of the public lands. One (1) chain is equal to sixty-six (66) feet, and 80 chains equal 1 mile.

With two exceptions, cadastral surveyors' field note measurements are always recorded in chains. The two exceptions to this rule are the townsite survey and the mineral survey. These surveys are recorded in feet.

The heading on each Master Title Plat will give you the legal description by Township, Range, Meridian and State.

TOWNSHIP 3 NORTH RANGE 18 EAST OF THE PRINCIPAL MERIDIAN, MONTANA

Typical Master Title Plat heading

When the township has not been surveyed or has only been partially surveyed, a notation for survey status will precede the heading. If the township has been completely surveyed, there will be no notation.

PARTIALLY SURVEYED

UNSURVEYED

Headings similar to the above identify the survey status of townships on the Master Title Plat.

LESSON 2: Land Status

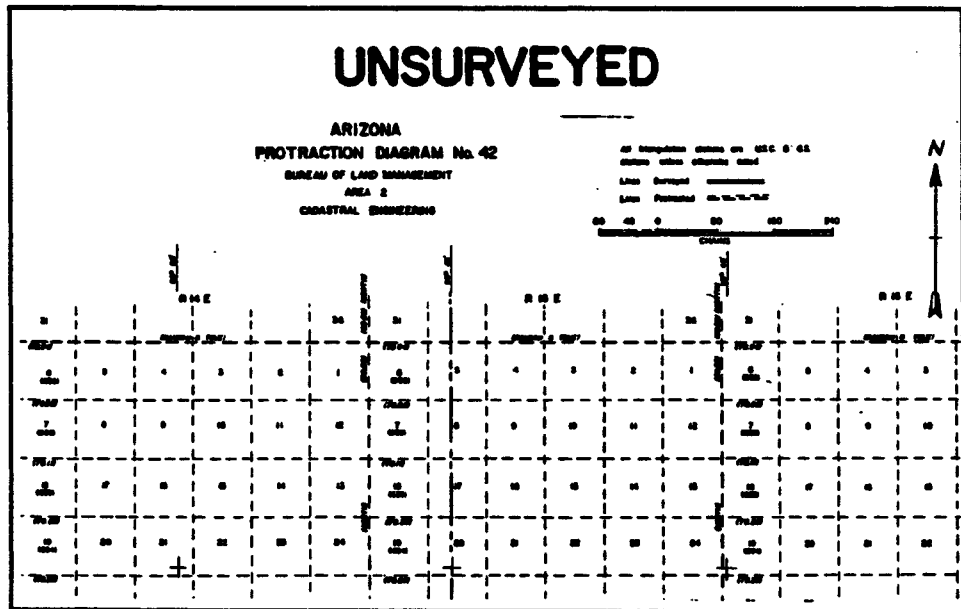
Assistance

Protraction Diagram

Study Guide

When a township is unsurveyed, the information to compile the MTP is taken from an approved protraction diagram.

The protraction diagram is a graphic display of the extension of the rectangular survey system over unsurveyed public lands.



A portion of an approved Protraction Diagram

Also, if there has been an updated survey on the land, the most recent information will be described on the plat.

All newly drafted MTP's must have the following statement on the bottom right side of the township diagram:

“This plat is the Bureau’s Record of Title, and should be used only as a graphic display of the township survey data. Records hereon do not reflect title changes which may have been effected by lateral movements of rivers or other bodies of water. Refer to the cadastral surveys for official survey information.”

The column on the right side of the MTP lists and contains information to aid the reader.

Disclaimer

Column Information

LESSON 2: Land Status

Assistance

Study Guide

Plat Designations

At the top of this column the following statement will appear:

**STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES**

Next, on the right, is a single line that designates the kind of plat. Examples of plat designations include:

- MT PLAT for Master Title Plat
- MTP SUPPL for Supplemental Master Title Plat
- USE PLAT for Special Use Authorizations
- OG PLAT for Oil and Gas Plat

On some plats, the line intended for the plat designation is left blank. When this occurs, you can assume that the plat is a MT Plat (Master Title Plat).

MT PLAT

Sample Plat Designation

Index to Segregated Tracts

Underneath the plat designation is a box labeled Index to Segregated Tracts. This box shows the resurvey tract numbers for any resurveys. In addition to the resurvey tract number, the box contains information about the Township, Range, Section, and subdivision in the original survey from which the resurvey was made.

INDEX TO SEGREGATED TRACTS				
RESURVEY	ORIGINAL SURVEY			
TRACT NO	T	R	SEC	SUBDIVISION
37	16N	30E	17	SW1/4 NW1/4, N1/2 SW1/4
37	16N	30E	20	NW1/4 NE1/4

Sample Index to Segregated Tracts

LESSON 2: Land Status

Assistance

Remarks Area

Study Guide

Below the Index to Segregated Tracts box is an area for writing out information that does not appear on the plat. This area, which is ruled for entering text, is commonly referred to as the "Remarks" area of the plat. The following statement will appear at either the top (older plats) or bottom (newer plats) of the remarks area:

FOR ORDERS EFFECTING DISPOSAL OR USE OF
UNIDENTIFIED LANDS WITHDRAWN FOR CLASSIFICATION,
MINERALS, WATER AND/OR OTHER PUBLIC PURPOSES,
REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

The above statement refers users of the plat who are looking for information about the disposal or use of unidentified lands to another document within the Land Status Record System - The Index to Miscellaneous Documents. Information about the Index to Miscellaneous Documents will be covered later in this lesson.

The remarks area will also contain information on actions that cannot be entered on the plat such as:

1. Pending Surveys
2. Cases that are subject to prior existing rights or claims
3. Petitions for Restoration of Lands
4. Unit Agreements
5. Segregative effect on certain lands, such as lands closed to mining but open to mineral leasing.

The information noted in the remarks area should be read before proceeding with any work associated with the plat. If you fail to check the remarks area for restrictions and reservations to land status information, you may end up making erroneous decisions or judgements regarding a parcel of land.

LESSON 2: Land Status

Assistance

Study Guide

In the lower right hand corner of the plat, immediately below the remarks area, is an area of information helpful in locating and using the plat.

"Current to"

Notice the box labeled "Current to." The date that information was last entered on the plat should be entered here. Current procedures in many states allow the use of an automatic date-stamping machine that stamps the date in close proximity to the "Current to" box.

On newer versions of plats, there will be another box that lists any use plats that have been made for the same township.

In the lower right hand corner of this area, there will be a set of abbreviations showing the Meridian, the Township, and the Range.

CURRENT TO	CURRENT TO

USE PLATS:

MD Mer
T. _____
R. _____

Sample showing lower right hand area of a Master Title Plat. These boxes are commonly referred to as the "Current To" boxes.

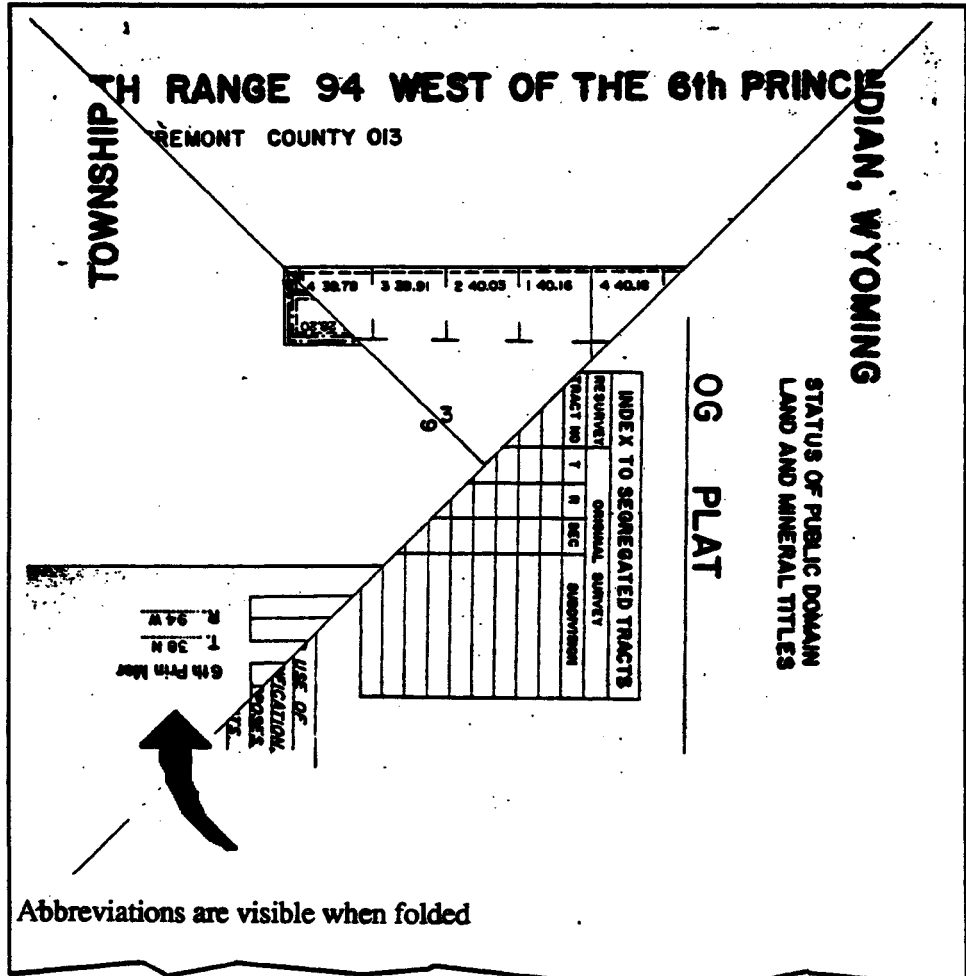
LESSON 2: Land Status

Assistance

Study Guide

The abbreviations for Township and Range are positioned to be visible when the plat is folded to a size of approximately 8 1/2 x 11 inches. This prevents the user from having to unfold the plat to identify its contents.

Folded Plat



Abbreviations are visible when folded

One common way to fold an MTP

LESSON 2: Land Status

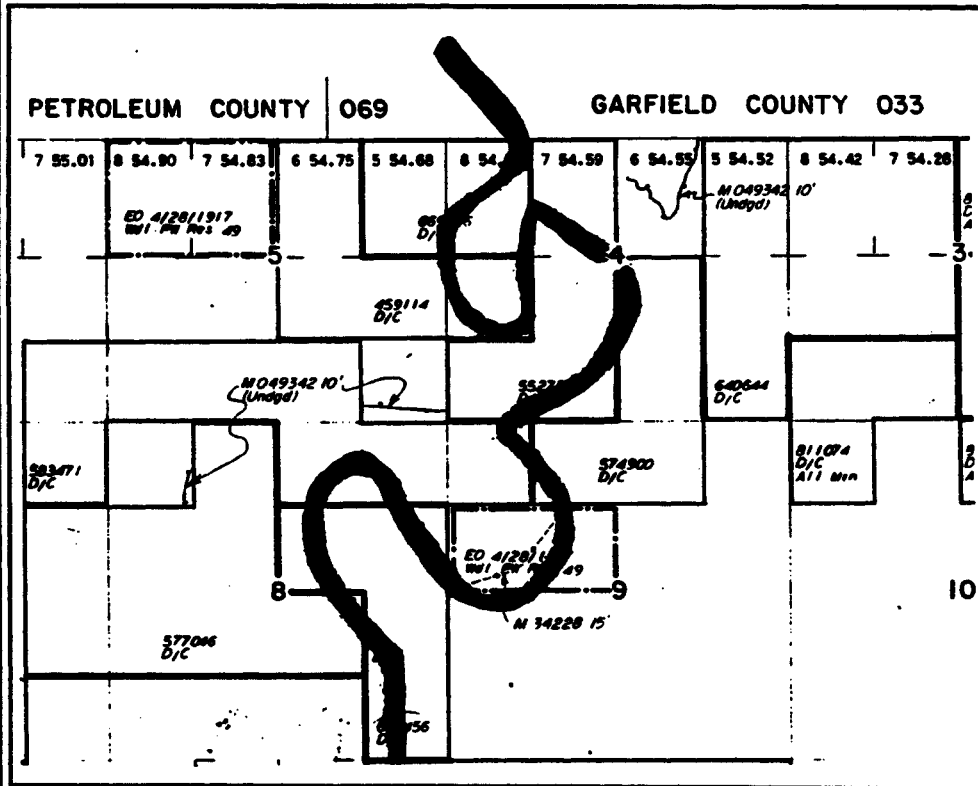
Assistance

County Name and Number

Study Guide

Additional information on a plat that may be helpful is the county name and/or number, district name or number, protraction diagram number, latitude and longitude.

The County name and number is centered above the diagram on the plat. If the township encompasses 2 counties, the county symbol will be depicted on the plat to show the division between them. Along with the symbol, the county names and numbers will be noted on either side of the symbol.



Sample showing plat with two counties

LESSON 2: Land Status

Assistance

District Name

Protraction Diagram Number

Latitude and Longitude

Study Guide

District name and/or number are sometimes noted below the county name or referenced in the remarks column.

**ESMERALDA COUNTY
LAS VEGAS GR DIST**

Sample District Notation

If the township is unsurveyed or partially surveyed, the protraction diagram number will be noted below the word partially surveyed in the heading or in the remarks column of the plat.

**PARTIALLY SURVEYED
PROTRACTION DIAGRAM NO. 52**

Sample Notation for Protraction Diagram

When the township has been surveyed, the latitude and longitude of the Southeast corner of the township will be noted.

Lat. 33°48' 37" N
Long. 114°04'32" W

Sample Notation Showing Latitude and Longitude

LESSON 2: Land Status

Read and Answer Questions

Let's review what we've covered so far. Write your answers on the blank lines.

1. _____ is a graphic display of the township survey data.
2. The statement, "Status of Public Domain Land and Mineral Titles" appears on the top of the _____ column.
3. OG Plat is the abbreviation for _____.
4. The Index to Segregated Tracts shows _____.
5. The area used for writing information which does not appear on the plat is called _____.
6. The box on the plat that holds the date which information was last entered is labeled _____.

The answers to these questions can be found on the following page.

LESSON 2: Land Status

Read and Answer Questions

The following are answers to the questions on page 69.

1. Master Title Plat is a graphic display of the township survey data.
2. The statement, "Status of Public Domain Land and Mineral Titles" appears on the top of the right - hand column.
3. OG Plat is the abbreviation for Oil and Gas Plat.
4. The Index to Segregated Tracts shows the resurvey tract numbers for any resurvey.
5. The area used for writing information which does not appear on the plat is called remarks.
6. The box on the plat that holds the date which information was last entered is labeled current to.

LESSON 2: Land Status

Assistance

Abbreviations and Symbols

Resource Aid 4
Common Abbreviations for BLM Records

Resource Aid 5
Commonly Used Symbols

Survey Weight Line

Study Guide

Knowing the meanings of abbreviations and symbols is vital to understand land status records. In fact, there are so many abbreviations and symbols used in land status work that without an abbreviation and symbol key, first time or infrequent users will find interpretation of plats and other documentation difficult. To assist users, each BLM State Office has a listing of abbreviations and symbols to use with the Land Status Records System.

Different weights or thickness of lines are used to show ownership status on the Master Title Plats. The lines discussed here are the:

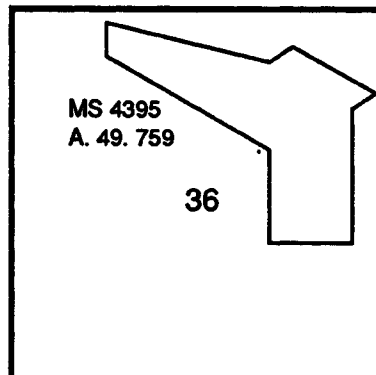
Survey weight line 

Single weight patent line 

Double weight patent line 

The survey weight line is a thin line that depicts the boundaries of a section or the boundaries of special surveys within a township. The survey weight line is drawn for the section boundary regardless of whether the section is surveyed or unsurveyed.

Special surveys such as homestead and mineral surveys are also depicted by the use of the survey weight line.



Depiction of mineral survey using a survey weight line.

LESSON 2: Land Status

Assistance

Patent

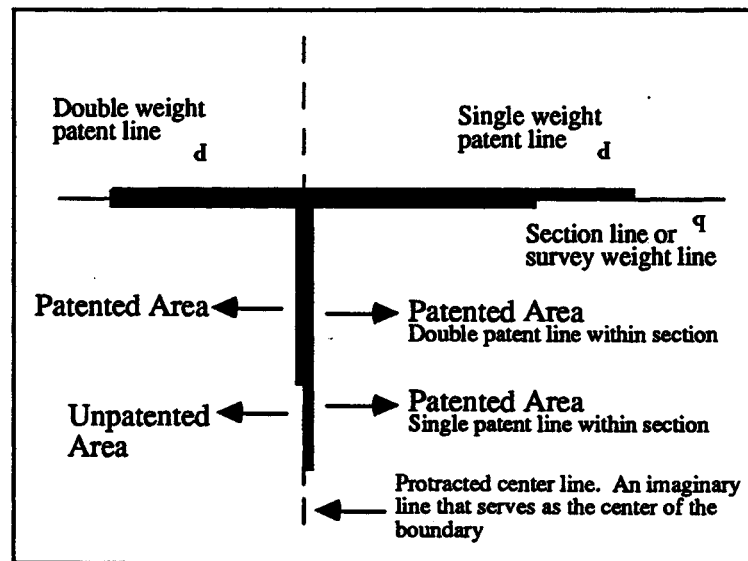
Single and Double Weight Patent Lines

Study Guide

A patent as it relates to public land laws, is the instrument (or deed) by which the government conveys title to the public lands.

There are two thicknesses or weights of lines used for depicting the boundaries of patented land. The two patent lines are referred to as the single weight patent line and the double weight patent line. The double weight patent line is twice as thick as the single weight patent line.

These patent lines are used to show the transfer of land title from federal ownership to private or state ownership. Patent lines are drafted around the entire exterior boundary of the parcel of land that has been transferred.



A single weight patent line shows that transfer of ownership has occurred on one side of the line.

A double weight patent line shows that transfer of ownership has occurred on both sides of the line.

LESSON 2: Land Status

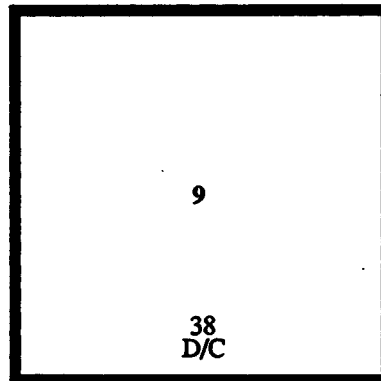
Assistance

Patent Number

Reserved Rights

Study Guide

Each parcel of patented land is assigned a patent number. The number is noted at or near the lowest part of the described parcel of land. Immediately below the patent number, any reserved rights that the federal government is retaining will be shown.

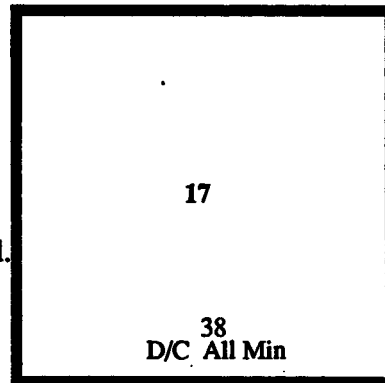


This shows an original patent with ditches and canals reserved.

All patents issued after 1890 will show ditches and canals as reserved to the United States. This reservation will be noted on the plats with the abbreviation D/C.

Any reservation for mineral rights will be determined by the documentation in each individual case file. When all of the mineral rights are to be reserved to the United States, the words "All Min" will appear below the patent number.

This shows an original patent with ditches, canals, and all minerals reserved.



LESSON 2: Land Status

Assistance

Sequential
Numbering
System

Centrally
Controlled
Numbering
System
1908 - 1964

State Controlled
Numbering
System
1964 - Present

Study Guide

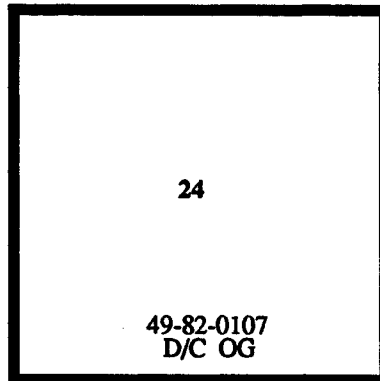
Early patent numbers used a sequential numbering system. The first patent number was issued under the Homestead Act of 1862.

Each land district office started with patent number "1" for each of the following four types of land entries.

Homestead
Desert Land
Cash Entry
Timber Culture

A centrally controlled, sequential numbering system was introduced in 1908. The system, which was used in all states, required patents to be numbered from the Washington Office. The 1908 system was replaced in 1964 by the present numbering system.

In 1964, BLM established a state controlled numbering system in which each state issued the numbers for the patents in that state(s).



This shows a patent issued after 1964 with ditches and canals, and oil and gas reserved.

LESSON 2: Land Status

Assistance

Resource Aid 6:
State Codes for
Patent
Numbering

Land Grants for
Education

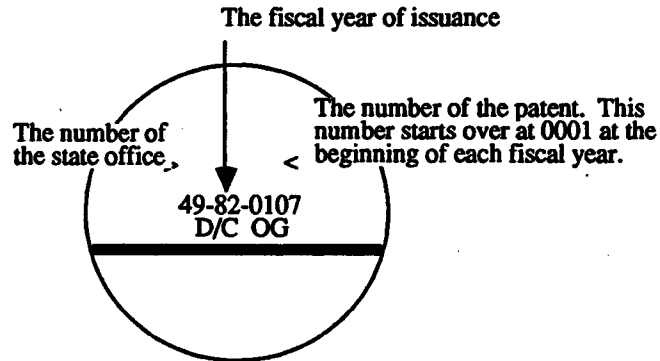
Resource Aid 7
Public Education
Land Grants

Study Guide

The first two digits of the patent number identify the state office that issued the patent. A list of these numbers can be found in Resource Aid 6.

The second pair of numbers identify the fiscal year of issuance. The government fiscal year begins on October 1st of each calendar year. Fiscal year 1982 would begin on October 1, 1981 and end on September 30, 1982.

The last four digits represent the number of the patent issued during that fiscal year.



When admitted to the union, states were granted from 1 to 4 sections of land in each township to be used for support of the public education system. See Resource Aid 7 for a listing of the states and the number of public education sections granted to each.

Public education land grants are noted on the Master Title Plat with the letters "SG" and a date. SG means state grant.

The date that follows the letters SG shows when the cadastral survey for the township was approved.

16

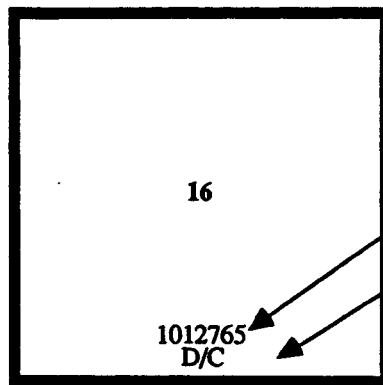
SG 7/10/1890

LESSON 2: Land Status

Assistance

Confirmatory Patent

If the school section has a patent number in lieu of the letters SG and date, then the patent was issued after June 21, 1934. Congress enacted legislation effective June 21, 1934 that provided states the right to request from the federal government a confirmatory patent for the section(s) granted for public education.



A confirmatory patent has been issued for this "school" section as shown by a

patent number
and
reservations

in lieu of the letters "SG" and a date.

Withdrawals

The Federal Government has the authority to withdraw land from the public domain for specific purposes. All lands that have been withdrawn are shown by the use of a dash-dot line on the Master Title Plat.

Withdrawal line -----

Examples of withdrawn land include land for:

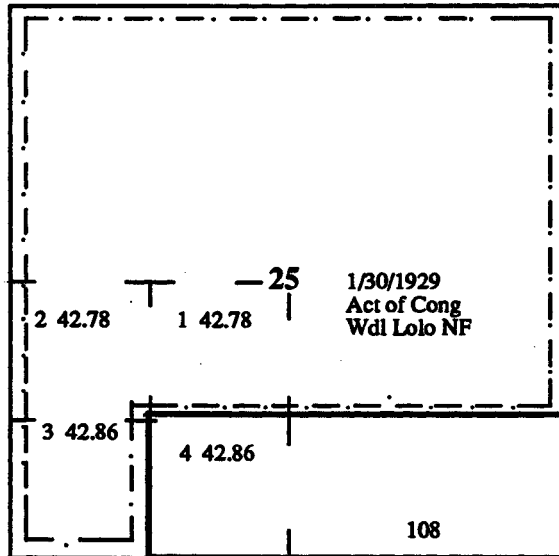
- National Forests
- Indian Reservations
- Military Reservations
- Reclamation Withdrawals
- Power Site Classifications

LESSON 2: Land Status

Assistance

Study Guide

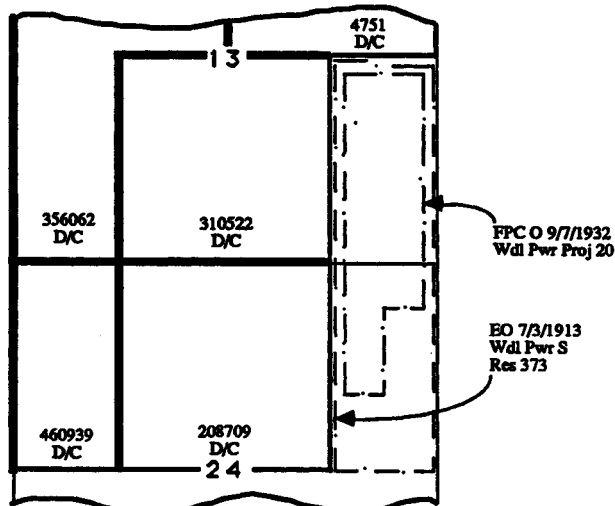
The dash-dot line in the figure below indicates that the land within the boundaries of this section (section 25) has been withdrawn by the Federal Government.



This withdrawal was due to a 1929 Act of Congress that established the Lolo National Forest in Montana.

The abbreviation "Wdl" stands for Withdrawal.

Different withdrawals can overlap each other. The figure below illustrates an occurrence of overlapping withdrawals. In this case, a withdrawal was made for a power project (Pwr Proj 20) for the Federal Power Commission (FPC) that overlapped an earlier withdrawal for land for a power site (Pwr S Res 373) as established by a 1913 Executive Order (EO).



LESSON 2: Land Status

Assistance

Study Guide

Withdrawals are annotated on the Master Title Plat by various abbreviations, including:

EO meaning Executive Order

SO meaning Secretarial Order

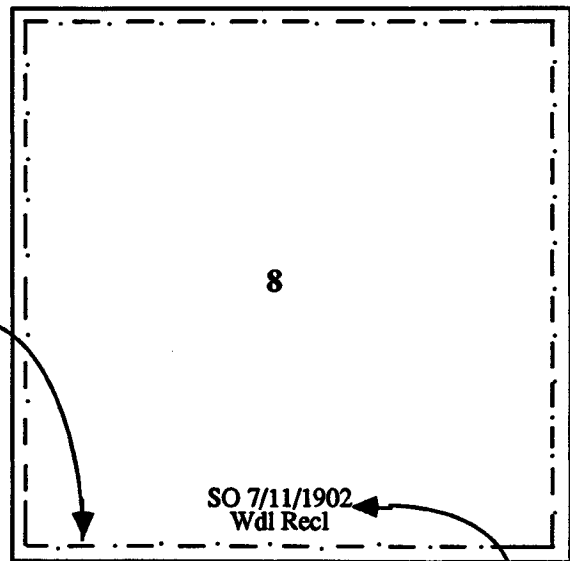
PL meaning Public Law

PLO meaning Public Land Order

CL meaning Classification

When the abbreviations EO and SO are used, they will be followed by a date indicating when the order was signed.

Withdrawal line
dash-dot-dash



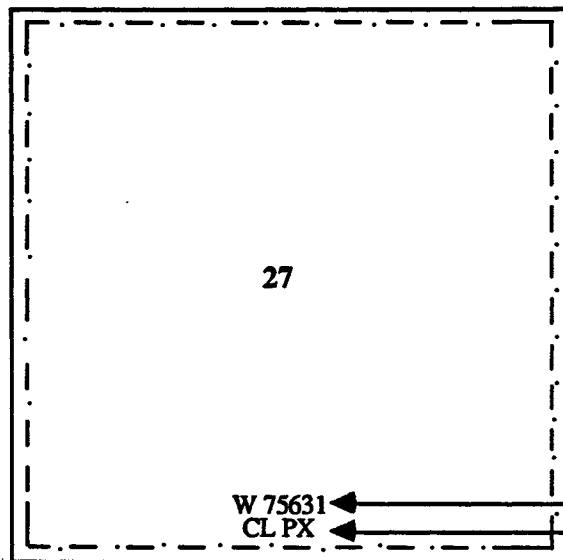
Kind of withdrawal,
authority, and date.

LESSON 2: Land Status

Assistance

Study Guide

The letters "PL" and "PLO" have the number of the law or order following the abbreviation. The letters "CL" will be followed by an abbreviation for the type of classification under which the land was withdrawn. For example, if the letters "PX" follow letters "CL", you would know that the area within the withdrawal line is classified for a Private Exchange (PX).



Serial number
CL = Classification
PX = Private Exchange

A review of the withdrawal document will provide information as to the extent of segregation afforded the land under the public land and mineral laws.

LESSON 2: Land Status

Read and Answer Questions

Let's review what we have just covered. Answer the following questions in the space provided.

7. The _____ line is drawn regardless of whether a section is surveyed or unsurveyed.
8. All patents issued after 1890 show ditches and canals are reserved to the United States. The abbreviation for this is _____.
9. After 1964, the numbering system for patents became _____ controlled.
10. Lands that are withdrawn from public domain are shown by _____ line on the Master Title Plat.
11. The withdrawal notation SO 7/11/1902 Wdl Recl is authorized by a _____.

The answers to the questions are found on the next page.

LESSON 2: Land Status

Read and Answer Questions

The following are answers to the questions on page 80.

7. The survey weight line is drawn regardless of whether a section is surveyed or unsurveyed.
8. All patents issued after 1890 show ditches and canals are reserved to the United States. The abbreviation for this is D/C.
9. After 1964, the numbering system for patents became state controlled.
10. Lands that are withdrawn from public domain are shown by dash-dot line on the Master Title Plat.
11. The withdrawal notation SO 7/11/1902 Wdl Recl is authorized by a secretarial order.

LESSON 2: Land Status

Assistance

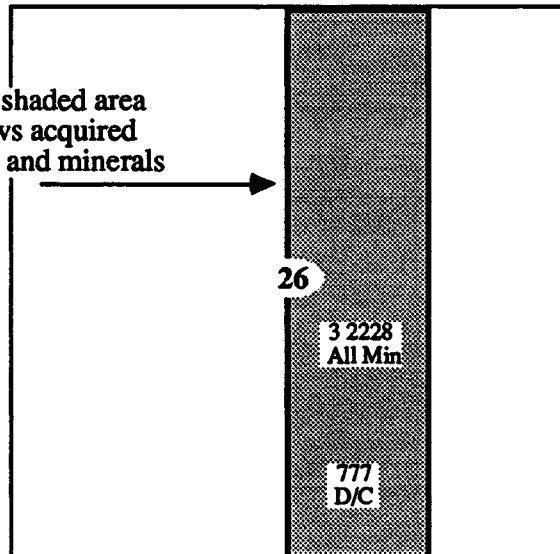
Acquired Lands

The Federal Government acquires lands and minerals that were formerly a part of the public domain. Those are called acquired lands. Acquired parcels of land or minerals are shown on the Master Title Plat by the use of a shaded dot pattern.

The notation above the original patent number indicates acquired surface only, acquired minerals only, or acquired surface and minerals. In some cases only fractional mineral interests are acquired. They will be shown by the notation "RSTD MIN," which means "restricted minerals."

Study Guide

The shaded area shows acquired land and minerals

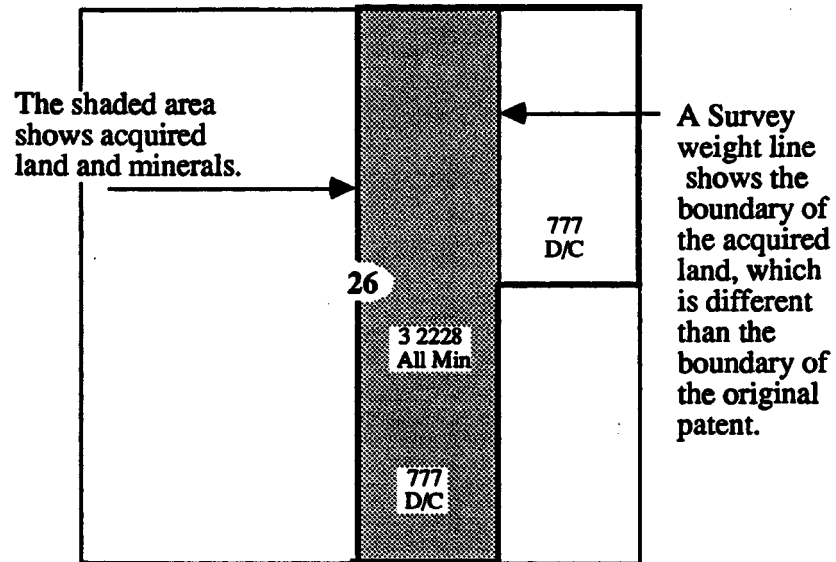


LESSON 2: Land Status

Assistance

Study Guide

No additional lines of information are required if the area of acquisition is identified to the original patented area. If the acquired area differs in some way from the original patented area, the deviation will be shown by the use of a survey weight line.



Plat Subtitle

Also, the words AND ACQUIRED LANDS will be added to the subtitle on plats that contain acquired lands.

**STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES
AND ACQUIRED LANDS**

Typical subtitle indicating acquired lands

LESSON 2: Land Status

Assistance

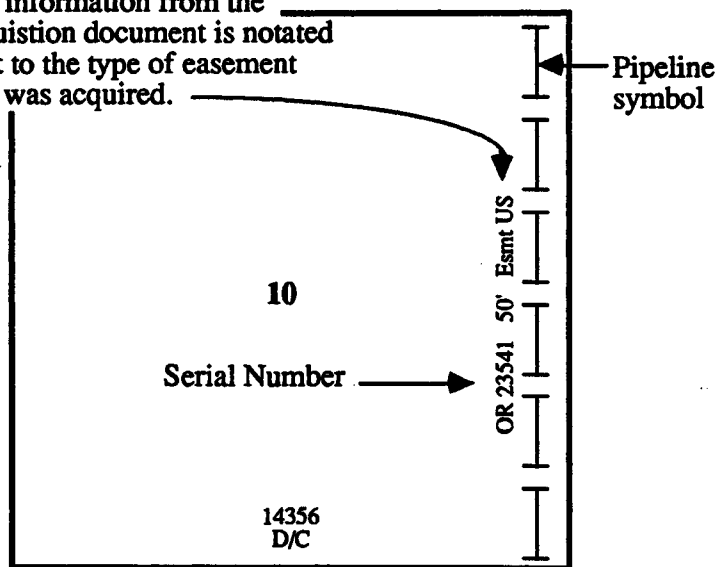
Study Guide

Easements

An easement is an interest or right in land owned by another that entitles its holder to a specific limited use; such as laying a sewer, crossing over property or putting up power lines.

Acquired easements are shown on the plat from the description in the acquisition document.

The information from the acquisition document is notated next to the type of easement that was acquired.



LESSON 2: Land Status

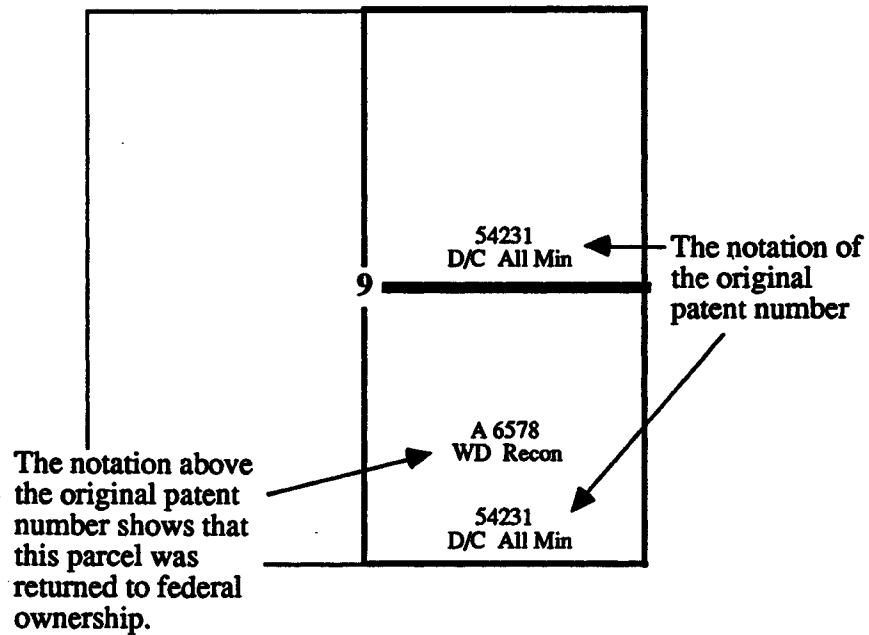
Assistance

Reconveyed Lands

Study Guide

Reconveyed lands are lands once patented or granted but later returned to federal ownership.

Reconveyed lands do not require the use of a shading pattern on the plats. When the area of reconveyance is less than the area in the original patent, the boundary will be shown with a patent weight line. The area not reconveyed will be annotated with the original patent information.



For both cases - acquired and reconveyed, the original patent lines are retained on the plats.

The notation above the original patent number shows which parcel and what right was returned to federal ownership. The serial number of the file that contains the record of the transaction will also be noted.

LESSON 2: Land Status

Assistance

Study Guide

Sample Acquisition Notations

The following are some examples of typical acquisition notations:

22	
M 1432	serial number
WD US	document designation
All Min	interest granted to federal government
54321	original patent number
D/C	original reservations

9	
M 2123	serial number
Condemn US	document designation
All Min	interest granted to federal government
44342	original patent number
D/C	original reservations

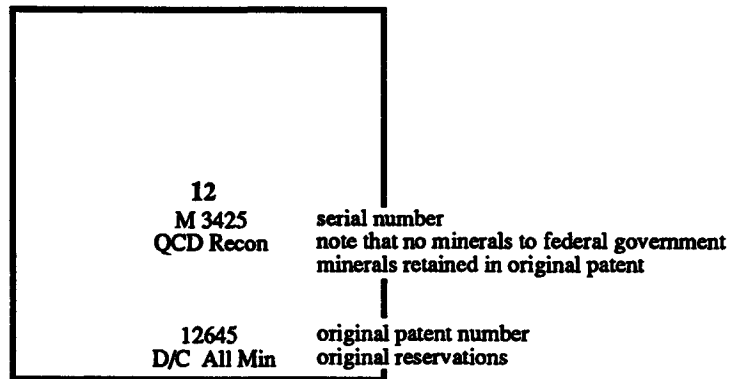
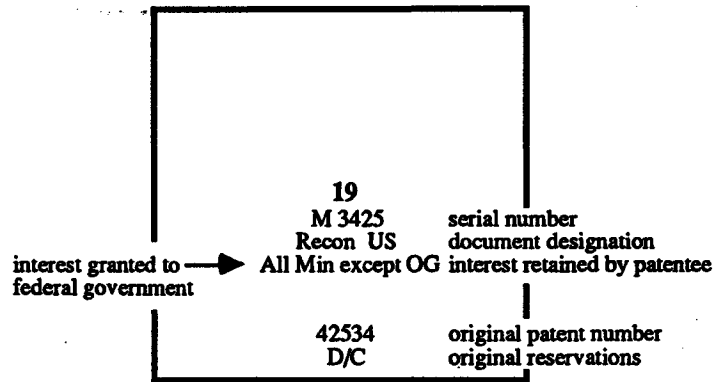
LESSON 2: Land Status

Assistance

Sample Reconveyance Notations

Study Guide

The following are some examples of typical reconveyance notations:



LESSON 2: Land Status

Assistance

Special Surveys

Homestead Surveys

Mineral Surveys

Study Guide

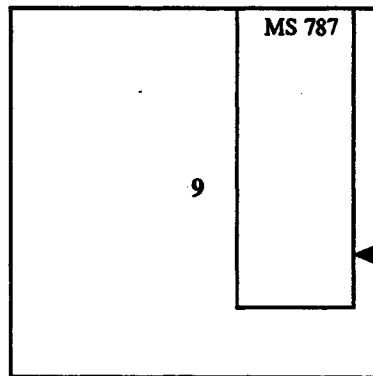
Special surveys are also noted on the Master Title Plat. Special surveys are surveys that involve unusual applications or departures from the rectangular system.

Homestead and mineral surveys are two types of special surveys:

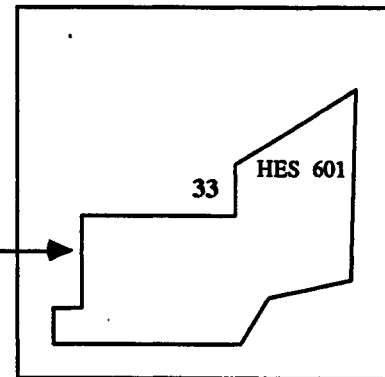
Homestead surveys are required when the land usable for agriculture could not be described in aliquot parts.

Mineral surveys are required for lode and mill site claims and occasionally for placer claims that cannot be described by aliquot parts.

Both types of special surveys are drawn onto the records using a survey weight line. Within the boundaries of the survey, the abbreviation for the survey along with the survey number is portrayed in the upper portion of the surveyed area.



This shows mineral survey 787 within the boundaries of section 9



This shows homestead survey 601 within the boundaries of section 33

LESSON 2: Land Status

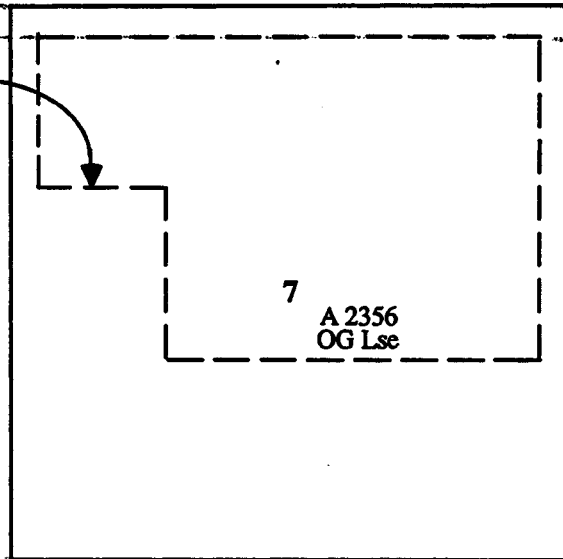
Assistance

Leases and Permits

Study Guide

When a lease or permit is shown on the Use Plat, a dash line is used.

Lease line
is a series
of dashes
around the
leased area



The serial number and the type of lease or permit will be shown in the lowest part of the leased or permitted area.

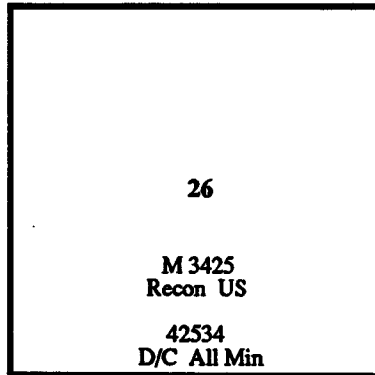
LESSON 2: Land Status

Read and Answer Questions

Now, as a review of this section of material, answer the following questions.

12. Acquired land is notated on a plat by _____.

13. If a document is noted like this:



the parcel of land has been _____.

14. _____ surveys are required when the land usable for agriculture can not be described in aliquot parts.

15. Special surveys are drawn onto the records using a _____ line.

16. A _____ or _____ is shown by a dash line on the Use Plat.

Now check your answers on the following page to see how you did!

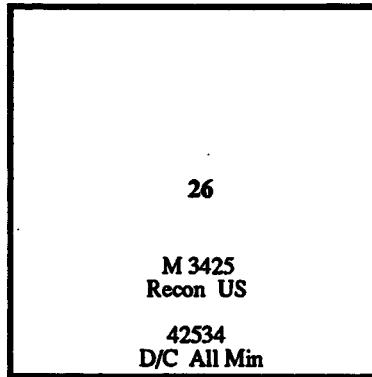
LESSON 2: Land Status

Read and Answer Questions

The following are the answers to the questions on the previous page.

12. Acquired land is notated on a plat by a shaded dot pattern.

13. If a document is noted like this:



the parcel of land has been reconveyed.

14. Homestead surveys are required when the land usable for agriculture can not be described in aliquot parts.

15. Special surveys are drawn onto the records using a survey weight line.

16. A lease or permit is shown by a dash line on the Use Plat.

Great! now continue with the lesson.

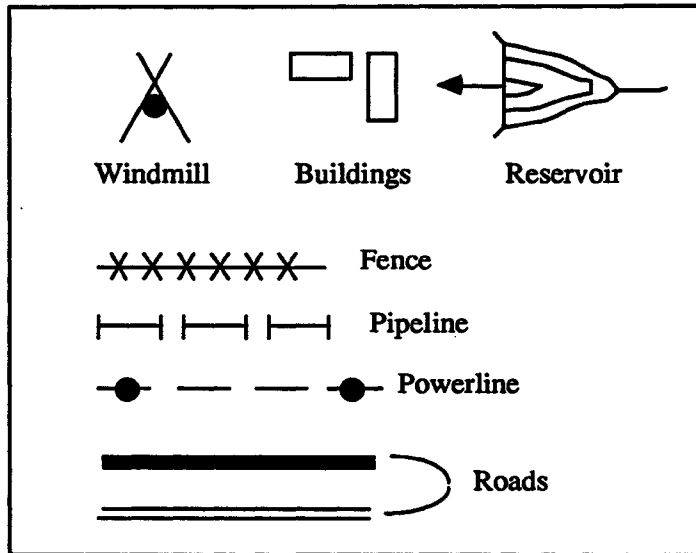
LESSON 2: Land Status

Assistance

Symbols
Also see
Resource Aid 5
Commonly
Used Symbols

Study Guide

Symbols are used to notate physical features and realty actions. Many of the symbols used on BLM Master Title Plats differ from the symbols used by the U.S. Geologic Survey (USGS) on their topographic maps. The symbols below represent objects frequently found on BLM Master Title Plats.



LESSON 2: Land Status

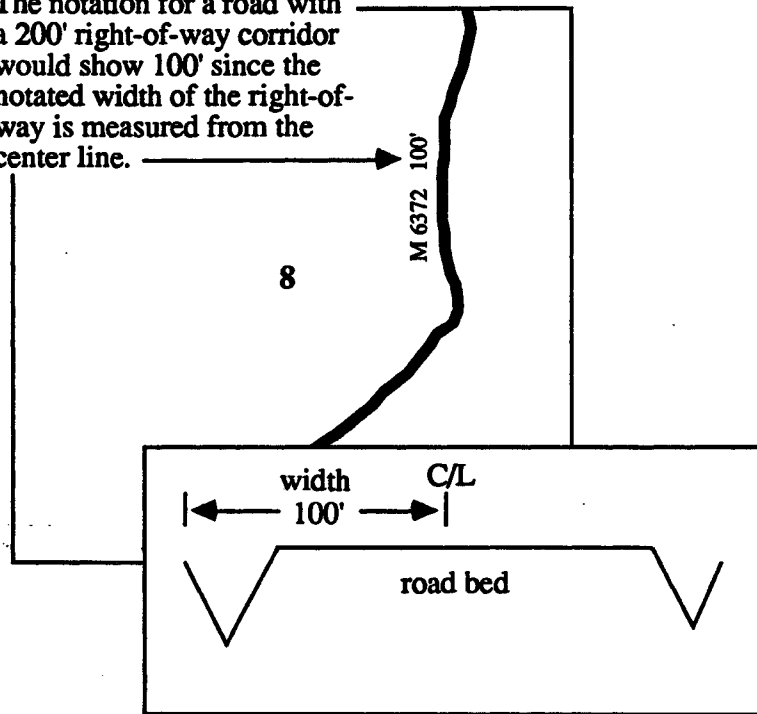
Assistance

Study Guide

Right-of-Way

When a right-of-way is approved, the notation to the plat includes the serial number and one-half the width of the right-of-way corridor as measured from the center line.

The notation for a road with a 200' right-of-way corridor would show 100' since the notated width of the right-of-way is measured from the center line.



LESSON 2: Land Status

Read and Answer Questions

Now let's see how you've done on this section. Please answer the following review questions before moving on to Part IV. Answers can be found on the pages following the questions.

Circle or write out the correct answer.

1. In the upper right hand corner of each Master Title Plat is a single line that designates the kind of plat. Which one of the following designations would not be found in the upper right hand corner?

A. MTP SUPPL

C. MTV PLAT

B. OG PLAT

D. USE PLAT

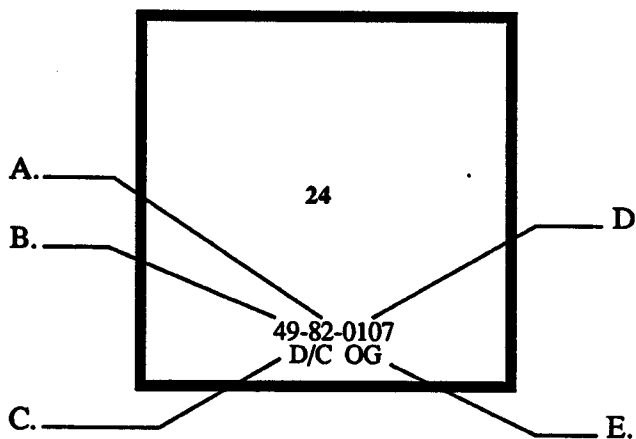
2. Lines of different "weights" or thicknesses are used to designate different types of boundaries. Look at the three lines drawn below and write in the correct name for each.

A.  _____

B.  _____

C.  _____

3. In 1964, BLM established a numbering system in which the states instead of the Washington Office issued patent numbers. Each set of digits in the patent number has specific meaning. In the section shown below, label what each part of the notation means.



Write answers on the following page.

LESSON 2: Land Status

Read and Answer Questions

- A. _____
- B. _____
- C. _____
- D. _____
- E. _____

4. The federal government has the authority to withdraw land from the public domain for several different purposes. Can you name three purposes for which the federal government can withdraw land?

- A. _____
- B. _____
- C. _____

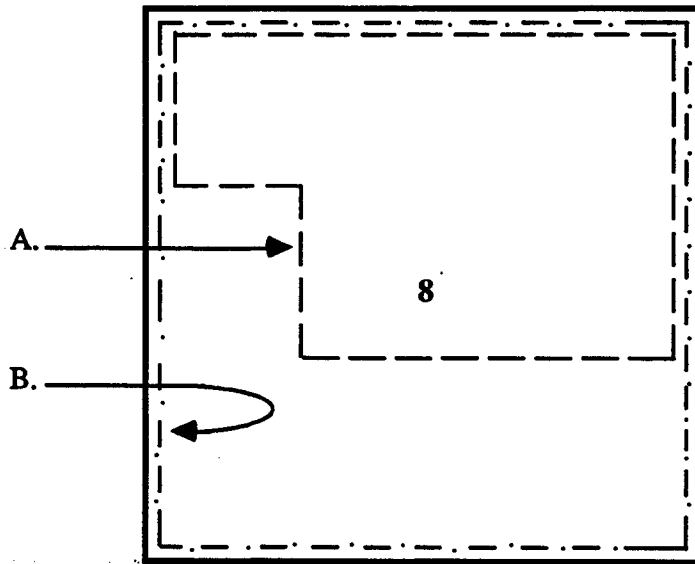
5. There are several ways in which the federal government can withdraw land. One of those ways is through an Executive Order, abbreviated EO. Can you name three other ways in which land can be withdrawn and identify the abbreviation for each.

	WAY	Abbreviation
A.	_____	_____
B.	_____	_____
C.	_____	_____

LESSON 2: Land Status

Read and Answer Questions

6. The boundaries of withdrawn lands and the boundaries of leases on the public lands are shown by the use of broken lines. In the section shown below, label the lines as either boundaries for leased land or withdrawn land.



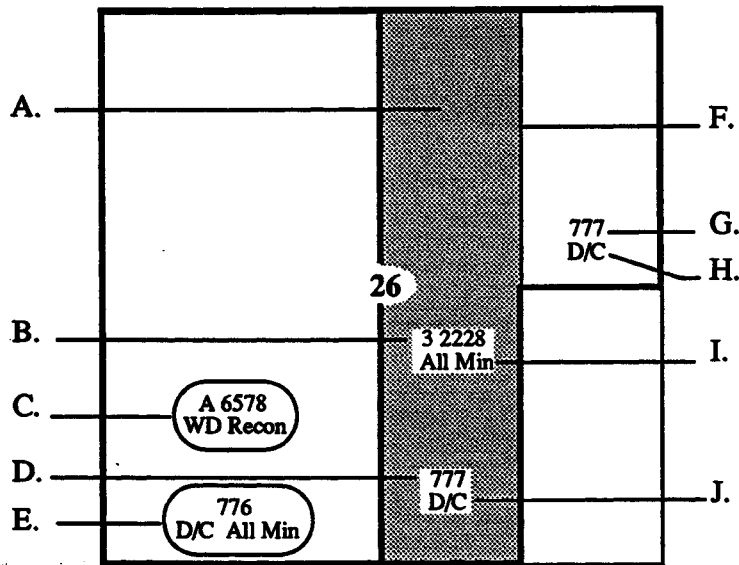
A. _____

B. _____

LESSON 2: Land Status

Read and Answer Questions

7. The federal government can acquire land and minerals that were formerly a part of the public domain as well as have reconveyed to it, lands that were a part of the public domain. What can you tell about the section shown below? This will be a pretty good test of your skill. Many of the answers will require a fairly lengthy answer.



A. _____

B. _____

C. _____

LESSON 2: Land Status

Read and Answer Questions

D. _____

E. _____

F. _____

G. _____

H. _____

I. _____

J. _____

LESSON 2: Land Status

Read and Answer Questions

Answers to the review questions for Part III:

1. C. MTV Plat
2. A = double weight patent line
B = survey weight line
C = single weight patent line
3. A = fiscal year of issuance
B = state office code
C = ditches and canals reserved
D = number of patent issued during fiscal year
E = oil and gas reserved
4. Any three of the following five answers are acceptable:
 - National Forests
 - Indian Reservations
 - Military Reservations
 - Reclamation withdrawals
 - Power site withdrawals
5. Any three of the following four answers and abbreviations are acceptable:

Secretarial Order	SO
Public Law	PL
Public Land Order	PLO
6. A. Lease Line
B. Withdrawal Line
7. A. The shaded dot pattern designates acquired land.
B. The record number for the federal government's acquisition of the land.
C. The W1/2 of Section 26 has been reconveyed to the federal government. The number A6578 is the serial number for the reconveyance.
D. The number 777 is the original patent number for the area acquired and recorded under record number 3 2228.
E. The number 776 is the original patent number. This notation shows that the federal government reserved the ditches and canals, and all minerals.
F. This survey weight line shows the boundary of the acquired land (E 1/2 NE 1/4) which is different than the boundary of the original patent.

LESSON 2: Land Status

Read and Answer Questions

G. Shows the original patent number.

H. Shows the original reservation.

I. Shows that the federal government has acquired the mineral rights.

J. Shows that under the original patent, the federal government had reserved the right to ditches and canals only.

If this all makes sense, move on to Part IV of Lesson 2. If you have questions about the preceding material or if you had problems answering these review questions, take time now to study the material more thoroughly.

LESSON 2: Land Status

Assistance

Study Guide

IV. Use Plats and Supplemental Plats

In addition to the MTP there are two plats that serve special purposes. They are the Use Plat and the Supplemental Plat.

Use Plat

Use Plat

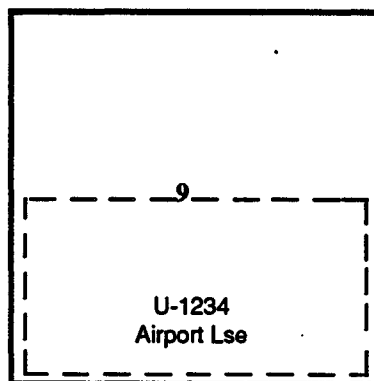
In addition to containing the same information that is on the MTP, the Use Plat is used for recording specific uses that effect the status of land and resources.

Some specific uses for which a separate use plat would be generated are:

<u>Use</u>	<u>Plat Designation</u>
R&PP lease	Use Plat
Coal lease	Coal Plat
Sodium lease	Sod Plat
Geothermal lease	Geo Plat
Oil and Gas lease	OG Plat

Two types of leases that are drafted on to both the MTP and the Use Plat are leases for recreation and public purpose (R&PP) and airport leases.

The following is an example of the notation of an airport lease:



LESSON 2: Land Status

Read and Answer Questions

At this point, answer the following questions to see how you're doing. Circle or write out your answers here:

1. The plat title OG Plat means _____.
2. The notation R&PP Lse means _____.
3. Name two special purpose plats:

Answers are on the following page.

LESSON 2: Land Status

Read and Answer Questions

Here are the answers to questions 1-3. See how you did.

1. The plat title OG plat means use plat for oil and gas leases.
2. The notation R&PP means a lease has been drafted for recreation and public purpose.
3. Use Plat
Supplemental Plat

LESSON 2: Land Status

Assistance

Supplemental Plat

Study Guide

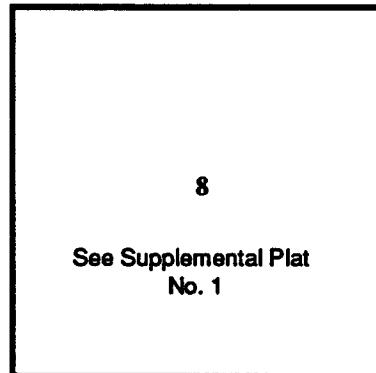
Supplemental Plat

The supplemental plat is a plat drawn to a larger scale than the MTP. It is usually drawn at a scale of 10 chains to 1 inch.

These plats are made when the information or action to be platted is in a congested area or is too complicated to show at the normal 30 chain scale.

When a plat is generated for this reason, all title and survey information will be removed from the section being supplemented. The words "See Supplemental Plat" are drafted below the section number on the MTP.

The following is an example of the notation for a supplemental plat.



LESSON 2: Land Status

Read and Answer Questions

Now to check your knowledge of supplemental plats answer the following questions:

4. Supplemental plats are used when _____

_____.

5. The scale used on a supplemental plat generally is _____ chains to 1 inch.

6. The supplemental plat is drawn to a larger/smaller scale than the MTP.

Now check the next page to see how you're doing. If you are having problems, take time now to go over the material again.

LESSON 2: Land Status

Read and Answer Questions

See how you did on the questions about supplemental plats.

4. Supplemental plats are used when the information or action to be platted is in a congested area or is too complicated to show at the normal 30 chain scale.
5. The scale used on a supplemental plat is 10 chains to 1 inch.
6. Larger

How did you do?

Great!

Proceed to Part V of Lesson 2.

LESSON 2: Land Status

Assistance

Historical Index

Study Guide

V. Historical Index

The Historical Index is a chronological listing of all actions that affect the use or title to public land and resources for each township. Applications are noted to the Historical Index only when they segregate the land.

It is a ledger-type document that consists of notations that elaborate on the information shown on the MTP.

There is a Historical Index for each MTP. It is placed in the plat book immediately before the MTP. The heading of the Index is identical to the heading of the MTP. The following is an example of a Historical Index.

TOWNSHIP 2 NORTH RANGE 1 EAST OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA										
SECTION	SUBDIVISION				ACRES	KIND OF ENTRY AND PURPOSE OF GRANT	SERIAL FILE OR ORDER NUMBER	DATE OF ACTION	DATE POSTED	REMARKS E.G. DATE CLOSED, TERMINATED, REJECTED OR RESCANNED
	SE 1/4	NW 1/4	SW 1/4	SE 1/4						
6					80.00	NE	7 482	5/14/1903		Cont. 3/29/1907
5					160.00	NE	788 0437	5/24/1903		Rel. 10/1/1909
4					160.00	NE 1/4	788 0437	5/24/1903		
3					160.00	NE 1/4	788 0437	5/24/1903		
2					80.00	NE	788 0437	5/24/1903		Rel. 12/11/1907
1					80.00	NE	788 0437	5/24/1903		Rel. 12/11/1907
10					160.76	NE	788 0437	5/24/1903		Rel. 4/26/1910
9					34.34	NE	788 0437	5/24/1903		Rel. 10/17/1910
8					80.00	NE	788 0437	5/24/1903		Rel. 4/26/1910
7					80.00	NE	788 0437	5/24/1903		Rel. 4/26/1910
6					34.34	NE	788 0437	5/24/1903		Rel. 4/26/1910
5					71.40	NE	788 0437	5/24/1903		Rel. 3/22/1911
4					34.34	NE	788 0437	5/24/1903		Rel. 3/22/1911
3					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
2					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
1					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
10					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
9					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
8					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
7					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
6					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
5					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
4					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
3					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
2					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
1					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
10					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
9					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
8					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
7					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
6					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
5					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
4					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
3					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
2					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
1					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
10					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
9					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
8					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
7					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
6					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
5					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
4					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
3					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
2					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911
1					160.00	NE	788 0437	5/24/1903		Rel. 3/22/1911

Index Columns

The Historical Index consists of a series of columns for entering land status information for the township. We will explain the columns starting with the left hand column.

LESSON 2: Land Status

Assistance

Study Guide

Section or Tract

Section or Tract

The first column lists the section(s) or tract number(s) involved in a case. When a case involves multiple sections, each section number is listed on a separate line in numerical sequence.

SECTION OR TRACT	SUBDIVISIO				
	NE 1/4				
	NE	NW	SW	SE	NE

Upper left corner of the Historical Index

Subdivisions

Subdivisions

The next column is titled subdivision. It is broken into three sub-parts: aliquot parts, lots and other descriptions.

SUBDIVISION																	
NE 1/4			NW 1/4			SW 1/4			SE 1/4			LOTS		OTHER DESCRIPTION			
NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	FOR ORDERS EFFECTING DISPOSAL OR	

The Subdivision Section of the Historical Index

Aliquot Parts

Aliquot parts are shown with an X in the column. Each X indicates a quarter-quarter, or 40 acres of a section and its location in the section.

Lots

The column titled LOTS is for denoting, by number, the lots within the section in the case.

LESSON 2: Land Status

Assistance

Other Descriptions

Acres

Kind of Entry

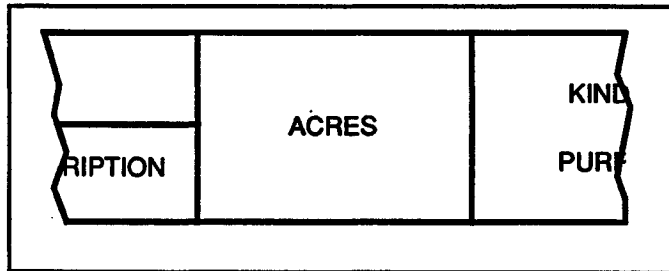
Abbreviations
See Resource
Aid 5

Study Guide

The column titled **OTHER DESCRIPTION** may contain the following information:

- a) see remarks
- b) Land descriptions which do not fit into aliquot parts or the lots column.
- c) A key township or other township citation.
- d) The word All referring to the section notation.

Acres



The Acres Column

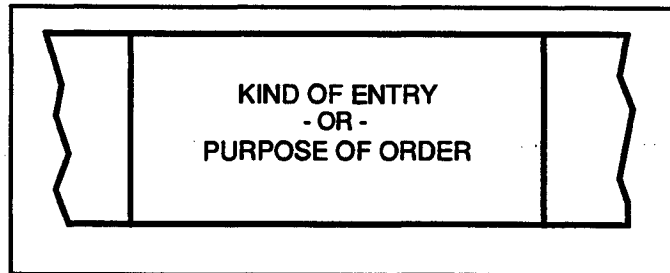
The acres column is a column for acreage of the case for the township.

Kind of Entry or Purpose of Order

The column for Kind of Entry or Purpose of Order explains the action that was taken. Abbreviations without periods are used whenever possible in the column.

The column contains information about the type of document filed. For example, such abbreviations in the column may include:

- SE Pat Section Entry Patent
- HE Pat Homestead Entry Patent
- CE Pat Cash Entry Patent
- OG Lse Oil and Gas Lease
- PX Apln Private Exchange Application



The Kind of Entry Column

LESSON 2: Land Status

Assistance

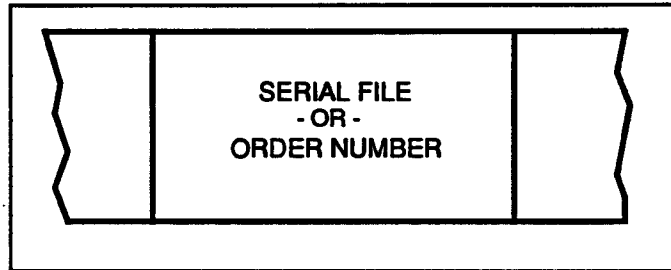
Serial File or
Order Number

Date of Action

Study Guide

Serial File or Order Number

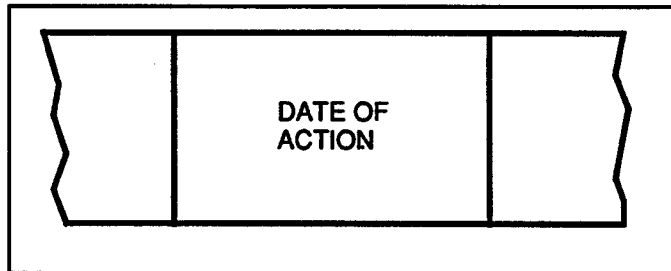
The next column is titled Serial File or Order Number. This column contains the patent number on title transfers from the U.S., warranty deed identifications and reconveyed lands. It also shows the order numbering when they are numbered.



The Serial File Column

Date of Action

The next column shows the date of action in chronological order. This date is the date the document was signed. When the order or document is not numbered then the date is used as the document identification. If two or more entries have the same date, enter them in document number order.



The Date of Action Column

LESSON 2: Land Status

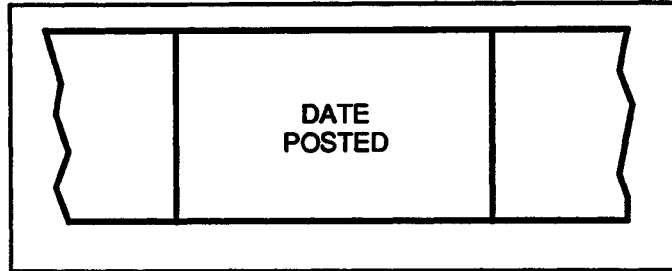
Assistance

Study Guide

Date Posted

Date Posted

The date posted column is used only if the date is pertinent to the case action, such as termination actions.



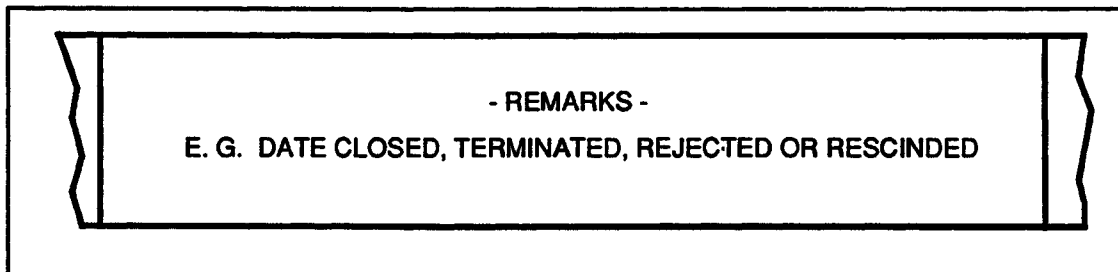
The Date Posted Column

Remarks

Remarks

The last column titled remarks contains miscellaneous information about the case. Notations of closings, terminations and rejections of the case will be cited here.

Also, information that was too extensive to be entered in other columns such as -- metes and bounds descriptions, lengthy aliquot parts descriptions, segregations and other land descriptions when the "other descriptions" column contains the notation "see remarks." The serial number of the case may also appear in this column.



The Remarks Column

LESSON 2: Land Status

Assistance

Study Guide

Some other things about the Historical Index:

- The Historical Index data is read from the back (latest) to the front (earliest) and from the bottom of the page (latest) to the top of the page (earliest).

There is a separate Historical Index for actions which affect the acquisition, uses or disposition of acquired lands. The addition of the words "Acquired Lands" is added to the heading for this Index.

Mineral Location and Contest Index is an index sheet that uses the same format as the Historical Index but is used to record mining claim litigation and contest actions.

LESSON 2: Land Status

Read and Answer Questions

Now let's take some time to see if you got all of that. Answer the following questions to test your knowledge.

1. The Historical Index is a chronological listing of all actions that affect _____.
2. Which of the following is not a column heading in the Historical Index:
 - A) Acres
 - B) Date Received
 - C) Kind of Entry
 - D) Tract or Section
3. An abbreviation of OG Lse in the "Kind of Entry" column stands for _____.
4. The serial file or order number column in the Historical Index contains the _____ number on title transfers.

Check your answers on the following page.

LESSON 2: Land Status

Read and Answer Questions

The following are the answers to the questions about the Historical Index found on page 113.

See how you did!

1. The Historical Index is a chronological listing of all actions that affect the use or title to public land and resources for each township.
2. B) Date Received
3. An abbreviation of OG Lse in the "Kind of Entry" column stands for oil and gas lease.
4. The serial file or order number column in the Historical Index contains the patent number on title transfers.

Great! Now go on to Section VI on the Control Document Index.

LESSON 2: Land Status

Assistance

Aperture
Cards

Study Guide

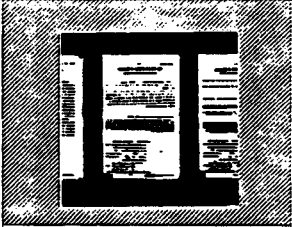
VI. Control Document Index

The control document index is a file of 35mm microfilm images mounted in aperture cards.

The images are copies of the original patents and other documents which conveyed title or interest in lands from or to the United States. The control document index also contains copies of public laws, proclamations, withdrawals which affect or have affected the right or title to use of public land.

The following is an example.

03 14		04N		01E		DLE Pat. (1109951)		12 9 1940	
MEM	OWN	GE	TWP. NO./VOL.-PAGE/LOC.		POLY. NO.		REF. NO./SEC. NO.		
S. PAT. NO.		SECTION	TOWN-	RANGE	MERIDIAN	STATE	ROLL NO.	VOLUME REFERENCE NUMBER	SEC. NO.
V. PAT. VOL. & PAGE			SHIP						
S. PAT. LIST & PAGE									
			15	01					
			9373						



The aperture cards are filed by range and township, and in chronological order by the actions occurrence within the township.

LESSON 2: Land Status

Read and Answer Questions

The following are questions to see how you did on Section VI, Control Document Index.

1. The Control Document Index is 35mm microfilm mounted on _____.
2. Which of the following does the control document index not contain?
 - A) Copies of original patents
 - B) Public laws affecting right or title to the land
 - C) Right of way grant.
3. Aperture cards are filed by _____ and by _____ in chronological order by the action's occurrence within the township.

LESSON 2: Land Status

Read and Answer Questions

Here are the answers to Section VI's questions on the Control Document Index. See how you did.

1. The control document index is 35mm microfilm mounted on aperture cards.
2. C) Right of way grant
3. Aperture cards are filed by range and by township in chronological order by the action's occurrence within the township.

~~How did you do?~~ If you got it all, go on to the next part. If you still aren't sure, go back and reread the material to clarify your questions.

LESSON 2: Land Status

Assistance

Index to
Miscellaneous
Documents

Serial Register
Page

Study Guide

VII. Index to Miscellaneous Documents

This index contains a chronological listing of public laws, acts of Congress, and Presidential orders. The listed documents are those that apply to lands not specifically described on which conditions may exist that would restrict the disposal or use of lands.

This index is usually placed in the front of every plat book or if microfilmed, it is often kept with the Control Document Index.

VIII. Serial Register Page

The serial register page is an individual document that contains:

- applicant's name
- applicant's address
- type of case
- legal descriptions
- and other information pertinent to the case.

This chronological record of the case is kept whether or not the transaction resulted in the disposal or authorization to use the public lands involved.

Each transaction is identified by a serial number that has been assigned to it.

Serial Number

C-30156

Typical Serial Number from
Serial Register Page

LESSON 2: Land Status

Assistance

Serial Numbers

The serial numbers are given to each transaction in sequential order. These numbers also contain one or two letters that show the issuing state or office.

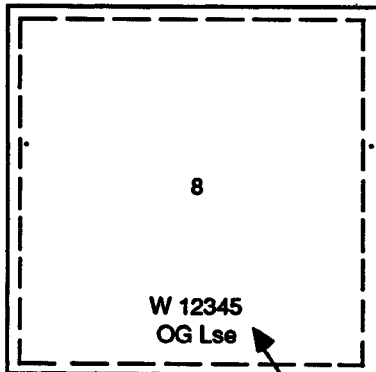
For example:

C-12345 is a serial number for Colorado and CA-5432 is a serial number for California.

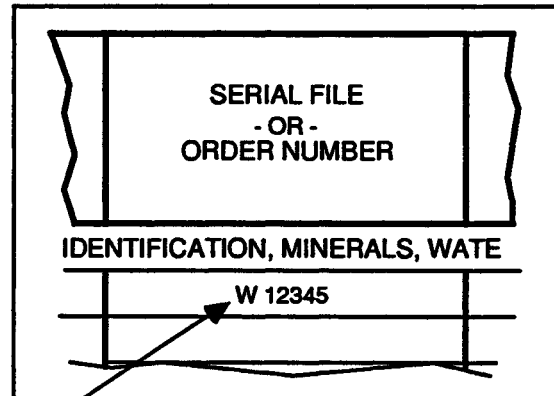
The serial number found in the register is also used to identify cases on both the Master Title Plats and the Historical Index.

Study Guide

From the Master Title Plat



From the Historical Index



Serial Number

Serial Prefixes

When reading the plats and indices you may find other serial prefixes that have been discontinued but are still used to identify cases that show on the records.

Some examples may include:

Serial Prefix

CC
GLO
H
PHX

Office

Central City or Carson City
General Land Office
Humboldt
Phoenix

LESSON 2: Land Status

Read and Answer Questions

Now lets see how you did on the part of the Serial Register Page. Answer the questions on this page.

1. True or False

Records of each case are kept in the serial register page whether or not the transaction resulted in disposal or authorization to use public lands.

2. The serial numbers are issued in:

- A) Chronological order
- B) Sequential order
- C) Random order

3. The serial number is also used to identify cases on both the _____ and the _____.

LESSON 2: Land Status

Read and Answer Questions

Here are the answers to the questions on page 120.

1. True
2. B) Sequential order
3. The serial number is also used to identify cases on both the Master Title Plat and the Historical Index.

LESSON 3

THE FINAL EXERCISE

Note:

The Final Exercise has been designed to incorporate all of the objectives from the first two lessons into a practical application of legal description and land status skills.

The graphics prepared for Lesson 3 will appear slightly different than those prepared for Lessons 1 and 2. The biggest difference will be in the depiction of the weight lines. The differences allow for the same graphics to be used in the video tape and in the study guide. The need for the use of same graphics in both the video and the study guide will become apparent as you work through this lesson.

LESSON 3: Final Exercise

Read and Answer Questions

**Legal Description and Land Status Records
Final Review Questions**

Please use the following questions as a final review to this self-study package. Mark your answers in the space provided. After you complete these questions, the last portion of the video tape will provide you with the answers and explanations.

1. Early surveys were done using what method of survey?

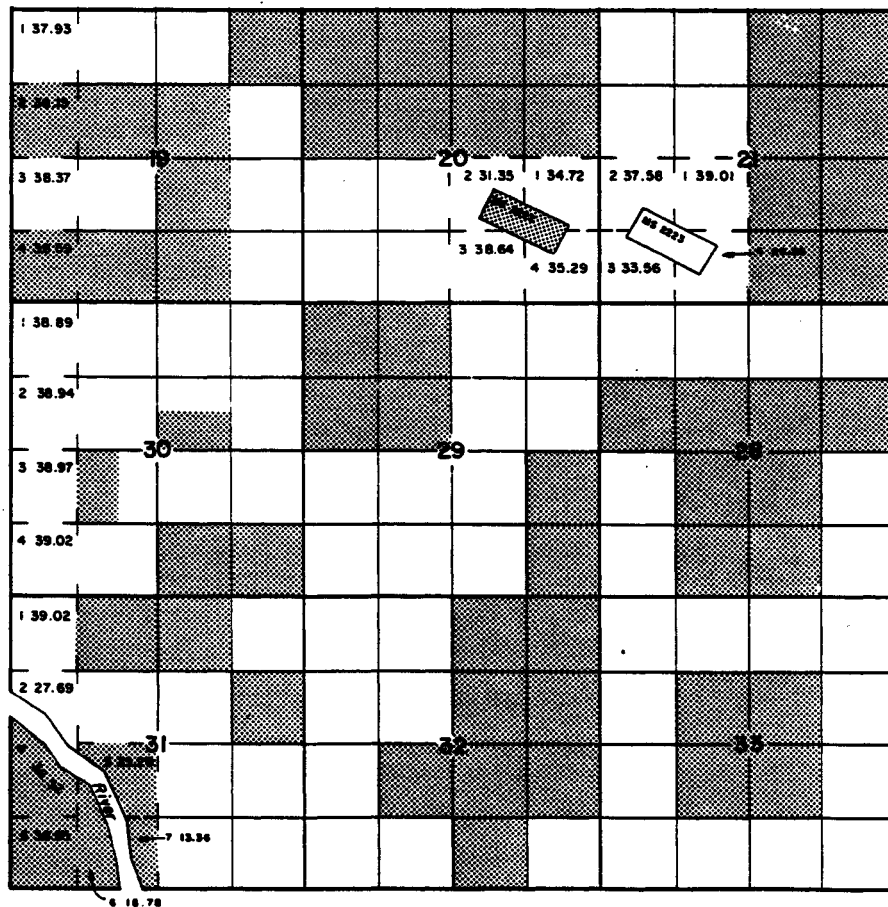
2. How many principal meridians have been established? _____
3. What survey monuments are set at one mile intervals? _____
4. Tract surveys are numbered starting with what number? _____
5. Explain the meaning of the omission or insertion of a comma in legal descriptions.
with a comma means _____
no comma means _____
6. Name 3 situations or conditions that would result in the lotting of a section.

LESSON 3: Final Exercise

Read and Answer Questions

7. Using diagram A, describe the shaded areas in the following sections.

- sec. 19 _____
- sec. 20 _____
- sec. 21 _____
- sec. 28 _____
- sec. 29 _____
- sec. 30 _____
- sec. 31 _____
- sec. 32 _____
- sec. 33 _____



LESSON 3: Final Exercise

Read and Answer Questions

8. Using diagram B, color in the following legal descriptions within the section.

sec. 4, SW 1/4;

sec. 5, lots 1-4 inclusive, S 1/2 NW 1/4, W 1/2 SE 1/4;

sec. 6, lots 5, 6, 7, SE 1/4 NW 1/4, E 1/2 SW 1/4, SE 1/4 SE 1/4;

sec. 7, E 1/2 NW 1/4, SE 1/4;

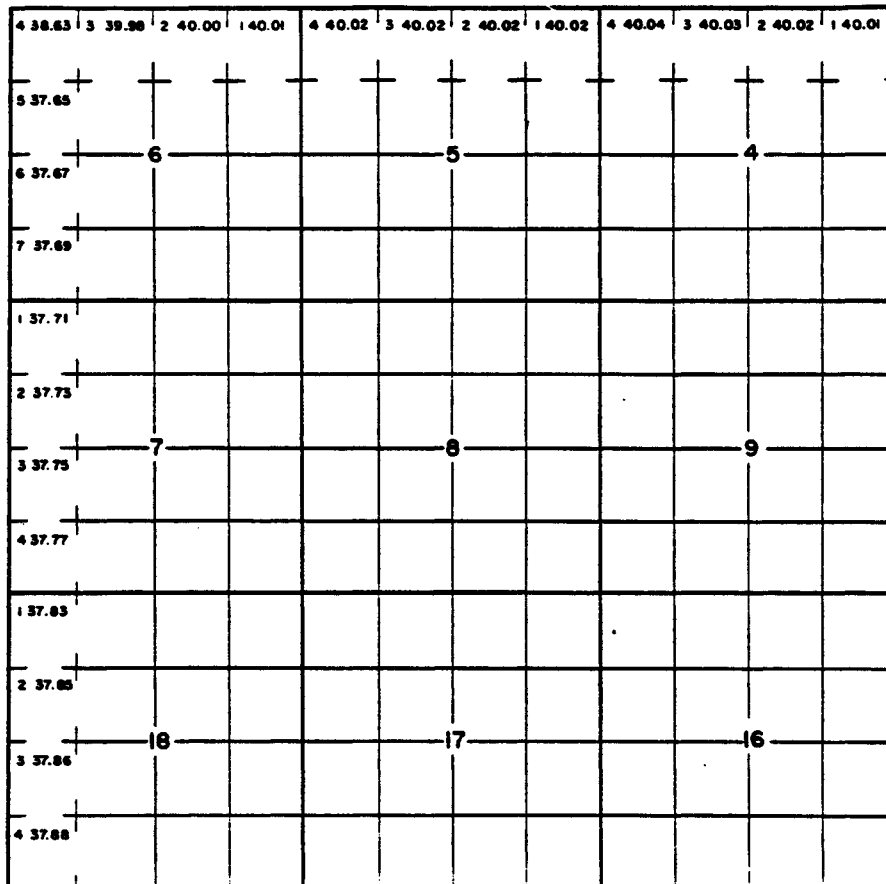
sec. 8, S 1/2 N 1/2, S 1/2 S1/2;

sec. 9, N 1/2 N 1/2, SW 1/4 NE 1/4, SE 1/4 NW 1/4;

sec. 16, All;

sec. 17, SW 1/4 NE 1/4, SE 1/4 NW 1/4, NE 1/4 SW 1/4, NW 1/4 SE 1/4;

sec. 18, NE 1/4, E 1/2 SE 1/4;



LESSON 3: Final Exercise

Read and Answer Questions

9. Name the six major parts of the current land status record system.

10. In 1800, what record system was established by an Act of Congress?

11. What are the numbers of the sections granted to the states for school purposes?

12. What do the following symbols represent when shown on the plats? Write the answers on the lines.

13. In patent number 02-68-0007, explain:

What 02 means _____

What 68 means _____

What 0007 means _____

14. All patents issued after 1890 have what reservation to the United States?

LESSON 3: Final Exercise

Read and Answer Questions

15. List four specific uses for which a separate Use Plat is generated.

16. What type of actions are listed on the Historical Index? _____

17. Where is the Historical Index usually located?

18. The correct way to read the Historical Index is "from the _____
to the _____ and from the _____ to the _____ of the page.

19. Where can you find the Index to Miscellaneous Documents?

20. Diagram C on page 128 will be used to answer the questions a-l.
Portion of Township 1 N, Range 2 W of the 6th Principal Meridian has been used.

a. Write the legal description of the land contained in patent no. 127765.

b. Does the US have reservations in this patent? _____

c. What do the symbols represent in Section 11? _____

d. The notation in Section 23 there is an Executive Order No. 956. What was the
EO made for? _____

e. What sections are involved in this Executive Order? _____

f. In Section 15 what was the right-of-way granted for and what is the R/W width?

g. In Sections 10 and 15, what type of lease has been issued?

LESSON 3: Final Exercise

Read and Answer Questions

h. Does the Federal Government own the minerals on the N 1/2 of Section 11? _____

i. Does the Federal Government own the minerals in Section 24? Who manages the surface rights? _____

j. What estate has the United States acquired in the E 1/2 of Section 12? _____

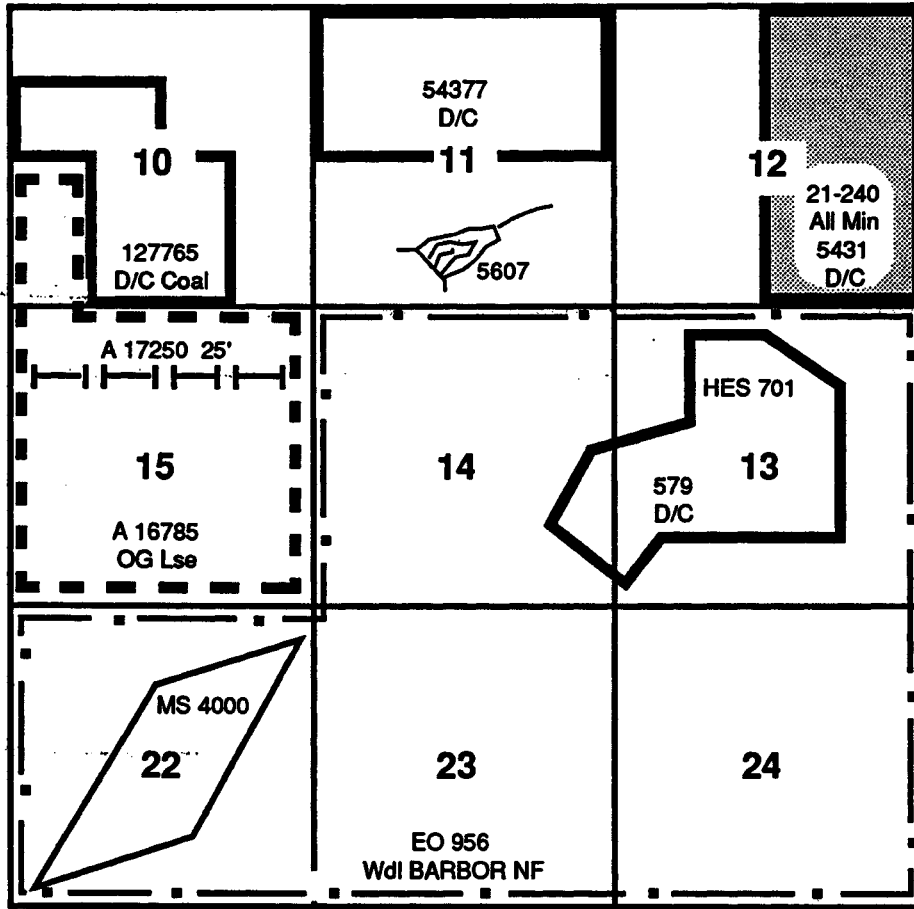
k. Is MS 4000 in Section 22 patented? _____

l. Is HES 701 patented? _____

LESSON 3: Final Exercise

Read and Answer Questions

T. 1N., R. 2W., SIXTH PM



After you have finished writing your answers, view the Answers to the Final Exercise segment of the video tape. If the video tape is not available, the written answers can be found starting on the next page.

IMPORTANT NOTE: After you have finished working through this guide, locate the evaluation form in the Overview Section, complete the form, and follow the directions on the form for returning it to your training officer and the Phoenix Training Center.

LESSON 3: Final Exercise

Read and Answer Questions

Legal Description and Land Status Records Final Review Answers to Questions

1. Early surveys were done using what method of survey?
Metes and bounds or pitches.
2. How many principal meridians have been established? 36
3. What survey monuments are set at one mile intervals? Corner monuments
4. Tract surveys are numbered starting with what number? 37
5. Explain the meaning of the omission or insertion of a comma in legal descriptions.
with a comma means and the
no comma means of the
6. Name 3 situations or conditions that would result in the lotting of a section.
(Any 3 of the 5 listed.)
Mineral surveys, homestead surveys, meandering of rivers and lakes, and convergence.
7. Using diagram A, describe the shaded areas in the following sections.

sec. 19, lot 2, 4, NE 1/4 NE 1/4, SW 1/4 NE 1/4, SE 1/4 NW 1/4, SE 1/4 SW 1/4, W 1/2 SE 1/4

sec. 20, N 1/2, MS 2222

sec. 21, E 1/2

sec. 28, S 1/2 N 1/2, E 1/2 SW 1/4, W 1/2 SE 1/4

sec. 29, NW 1/4, E 1/2 SE 1/4

sec. 30, S 1/2 SW 1/4 NE 1/4, W 1/2 NE 1/4 SW 1/4, S 1/2 SE 1/4

sec. 31, lot 3-7 inclusive, NW 1/4 NE 1/4, SE 1/4 NE 1/4, NE 1/4 NW 1/4

sec. 32, NE 1/4, NE 1/4 SW 1/4, N 1/2 SE 1/4, SW 1/4 SE 1/4

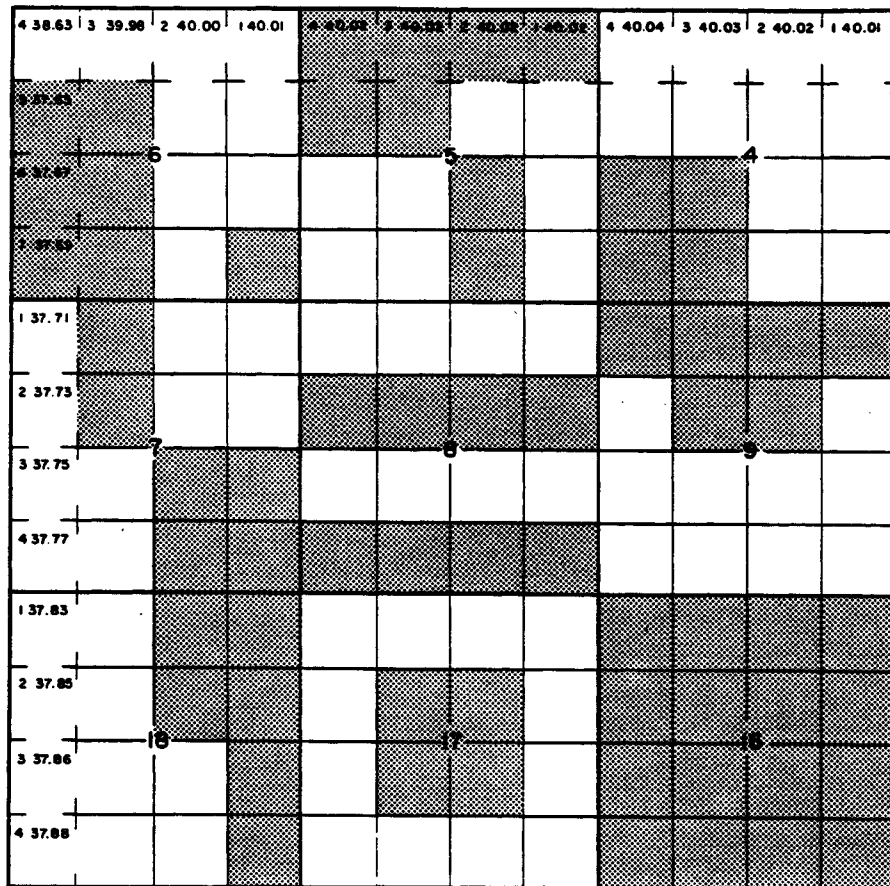
sec. 33, SW 1/4 NE 1/4, SE 1/4 NW 1/4, NE 1/4 SW 1/4, NW 1/4 SE 1/4

LESSON 3: Final Exercise

Read and Answer Questions

8. Using diagram B, color in the following legal descriptions within the section.

- sec. 4, SW 1/4;
- sec. 5, lots 1-4 inclusive, S 1/2 NW 1/4, W 1/2 SE 1/4;
- sec. 6, lots 5, 6, 7, SE 1/4 NW 1/4, E 1/2 SW 1/4, SE 1/4 SE 1/4;
- sec. 7, E 1/2 NW 1/4, SE 1/4;
- sec. 8, S 1/2 N 1/2, S 1/2 S1/2;
- sec. 9, N 1/2 N 1/2, SW 1/4 NE 1/4, SE 1/4 NW 1/4;
- sec. 16, All;
- sec. 17, SW 1/4 NE 1/4, SE 1/4 NW 1/4, NE 1/4 SW 1/4, NW 1/4 SE 1/4;
- sec. 18, NE 1/4, E 1/2 SE 1/4;



LESSON 3: Final Exercise

Read and Answer Questions

9. Name the six major parts of the current land status record system.

Master Title Plat

Use Plats

Historical Index

Control Document Index

Index to Miscellaneous Documents

Serial Register Page

10. In 1800, what record system was established by an Act of Congress?

Tract Book System

11. What are the numbers of the sections granted to the states for school purposes?

2 16 32 36

12. What do the following symbols represent when shown on the plats?

Survey Weight Line



Single Weight Patent Line



Double Weight Patent Line



Withdrawal



Lease or Permit Boundary



13. In patent number 02-68-0007, explain:

What 02 means state code

What 68 means fiscal year

What 0007 means seventh issued patent

14. All patents issued after 1890 have what reservation to the United States?

ditch and canal rights

LESSON 3: Final Exercise

Read and Answer Questions

15. List four specific uses for which a separate Use Plat is generated.
(Any 4 of the 7 listed.)

<u>coal</u>	<u>potassium</u>
<u>sodium</u>	<u>phosphate</u>
<u>oil and gas</u>	<u>bituminous</u>
<u>geothermal</u>	

16. What type of actions are listed on the Historical Index? use or title
17. Where is the Historical Index usually located?
In the plat book in front of the Master Title Plat.
18. The correct way to read the Historical Index is "from the latest to the earliest and from the bottom to the top of the page.
19. Where can you find the Index to Miscellaneous Documents?
In the front of every plat book or if microfilmed, with the Control Document Index.
20. Diagram C will be used to answer the questions a-l.
Portion of Township 1 N, Range 2 W of the 6th Principal Meridian has been used.
- a. Write the legal description of the land contained in patent no. 127765.
T. 1N., R. 2W., SIXTH PM., sec. 10, S 1/2 NW 1/4, E 1/2 SW 1/4, W 1/2 SE 1/4
- b. Does the US have reservations in this patent? Yes
- c. What does the symbol represent in Section 11? reservoir
- d. The notation in Section 23 there is an Executive Order No. 956. What was the EO made for? national forest withdrawal
- e. What sections are involved in this Executive Order? 13, 14, 22, 23, 24
- f. In Section 15 what was the right-of-way granted for and what is the R/W width?
pipeline, 50 feet
- g. In Sections 10 and 15, what type of lease has been issued? oil and gas lease
- h. Does the Federal Government own the minerals on the N 1/2 of Section 11? No

LESSON 3: Final Exercise

Read and Answer Questions

- i. Does the Federal Government own the minerals in Section 24? Who manages the surface rights? Yes, U.S. Forest Service
- j. What estate has the United States acquired in the E 1/2 of Section 12? Surface rights and all mineral rights
- k. Is MS 4000 in Section 22 patented? No
- l. Is HES 701 patented? Yes

RESOURCE

AIDS

GLOSSARY OF PUBLIC LAND TERMS

This glossary has been prepared to assist the employee giving the general meaning and is not meant to conflict with those in other glossaries.

A

ACCEPTED SURVEY: A survey for which the plat has been accepted for the Director by the officer having Cadastral Survey approval authority.

ACCESS TRANSPORTATION AND RIGHTS-OF-WAY (ATROW): The Bureau's program for acquisition of rights-of-way.

ACCRETION: The gradual and imperceptible accumulation of land, by natural causes, along the banks of a stream or lake.

ACQUIRED LAND: Lands in Federal ownership which were obtained by the Government through purchase, condemnation, gift, or by exchange.

ACRE: A unit of area measurement. An acre equals 10 square chains or 43,560 square feet. 640 acres equal 1 square mile.

ADJUDICATE: The legal processing of applications, entries, claims, etc., to assure compliance with the public land laws and the regulations. To judicially determine, judge, or decree. To sit in judgment.

ADMINISTRATIVE SITE: Lands used as a headquarters or administrative facility by a Federal agency.

AIR NAVIGATION SITE: A reservation of public lands for air navigation purposes.

AIRPORT LEASE: A lease authorizing the use of public lands for airport or aviation purposes.

ALASKA NATIVE CLAIMS SETTLEMENT ACT (ANCSA): The Act of December 18, 1971, which provides for the settlement of aboriginal land claims of the natives and native groups in Alaska.

ALIOQUOT PARTS: Legal subdivisions, except fractional lots, by an even division of land into quarters or halves leaving no remainder.

ALLOTMENT (Indian or Native): An allocation to a native of land of which he had made substantially continuous use and occupancy for a period of 5 years and which shall be deemed the "homestead" of the allottee and his heirs in perpetuity, and shall be inalienable and non-taxable except as otherwise provided by the Congress.

ALLOWED APPLICATION: An application to acquire title to public lands, which has been accepted and approved.

ANGLE POINT: A point in a survey where the alignment or boundary deflects from a straight line.

APPEAL: A process of civil law origin that entirely removes a controversy to an appellate court for the purpose of obtaining review and possible retrial.

APPLICANT: The individual or legal entity applying for use of, rights in, or title to public lands or resources.

APPLICATION: An acceptable formal request for rights in use of, or eventual title to, public lands or resources.

APPROPRIATION OR APPROPRIATED: Public lands covered by an entry, settlement, claim, location, classifications, withdrawal or reservation that sets the land apart for some particular use or disposal.

APPROVED SURVEY: The approved field notes and plat of a cadastral survey.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): Areas within the public lands where special management attention is required to protect and prevent irreparable damage to important resources.

ASSESSMENT WORK: Work required to be performed annually by the claimant, in order for him to maintain a possessory right to a mining claim for which a patent has not issued.

ASSIGNEE: A recipient or grantee. One to whom an interest is given or transferred, usually in writing.

ASSIGNMENT: A transfer or a making over to another of a whole or a part of property, either real or personal, or the giving to another of a right.

ASSIGNOR: A person who assigns a right.

AUXILIARY GUIDE MERIDIAN: Where guide meridians have been placed at intervals exceeding the distance of 24 miles, and new governing lines are required, a new guide meridian is established, and a local name is assigned, such as "Twelfth Auxiliary Guide Meridian West," or "Grass Valley Guide Meridian." Auxiliary guide meridians are surveyed, in the same manner as guide meridians.

AUXILIARY STANDARD PARALLEL: Where standard parallels have been placed at intervals exceeding the distance of 24 miles, and conditions require additional standard lines, an intermediate correction line is established, and a local name is assigned, such as "Fifth Auxiliary Standard Parallel North." Auxiliary standard parallels are surveyed, in the same manner as standard parallels.

AZIMUTH: The horizontal direction reckoned clockwise from the meridian plane.

B

BANK: The continuous margin along a river or stream where all upland vegetation ceases.

BASELANDS: In an exchange, the lands owned by the proponent; in a lieu selection, the lands to which the applicant relinquishes or has relinquished rights, or has lost rights through no fault of his/her own.

BASELINE: In cadastral survey, a line which runs in an east-west direction from an initial point.

BEARING: A bearing is identified by naming the end of the meridian from which it is reckoned, either north or south, and the direction of that reckoning, either east or west. Thus, a line in the northeast quadrant making an angle of 50° from the reference meridian will have bearing of N.50°E.

BOARD OF LAND APPEALS: Under the direction of a Board chairman, the board exercises jurisdiction over cases involving appeals from decisions rendered by departmental officials relating to the use and disposition of public lands and their resources and the use and disposition of mineral resources in certain acquired lands and in the submerged lands of the Outer Continental Shelf.

BOUNDARY LINE: A line along which two areas meet. A boundary line between privately owned parcels of land is usually termed a property line. If a boundary is a line of the United States public land surveys, it is given a particular designation, such as section line or township line.

BOUNDARY MONUMENT: A material object placed on or near a boundary line to preserve and identify the location of the boundary line on the ground.

C

CADASTRAL SURVEY: A survey which creates, makes, defines, retraces, or re-establishes boundaries and subdivisions of the public land of the United States.

CADASTRAL SURVEYOR: One who executes cadastral surveys.

CARDINAL DIRECTIONS: True north, south, east, or west.

CASH ENTRY: Lands for which the entryman paid cash or its equivalent.

CENTERLINE: The line connecting opposite corresponding quarter corners or opposite subdivision-of-section corners or their theoretical positions. Applied to a street, right-of-way or any other strip of land of uniform width "centerline" defines the line midway between the side lines of said strip.

CHAIN: The unit of length prescribed by law for the survey of the public lands of the United States. The chain is equivalent to 66 feet or 4 rods, poles or perches, 10 square chains equals one acre.

CLAIMANT: An individual or other entity asserting title to or rights in public lands.

CLASSIFICATION: The authority of the Secretary to examine land to see whether it is proper for entry, selection, or location.

CLASSIFICATION OF LANDS: The process of determining whether the lands are more valuable or suitable for transfer or use under particular or various public land laws than for retention in Federal ownership for management purposes.

CLEARLIST: The approved title document with certification that conveys title to public land selected as indemnity for school lands lost by natural deficiency or prior appropriation.

COLOR-OF-TITLE: A claim based on an erroneous but good faith claim of title.

COMMUNICATION SITE: An area of public land granted to an applicant under authority contained in the Act of October 21, 1976, and the regulations, to be used for a communication structure or facility.

COMPETITIVE LEASE: An oil or gas lease or geothermal lease covering public lands within a known producing oil or gas field, which is issued to the successful bidder at public auction or through sealed bids.

CONDEMNATION: In real property law, the process by which property of a private owner is taken for public use, without his consent, but upon the award of payment of just compensation.

CONTEST: Proceedings against a filing, claim, or entry alleging that it does not meet the requirements of the public land laws. It may be initiated by the Government or by an adverse claimant.

CONTIGUOUS LANDS AND CONTIGUOUS LEGAL SUBDIVISIONS: Lands or legal subdivisions having a common boundary.

CONTROL DOCUMENT INDEX: A reference file consisting of microphotographic copies of legal documents mounted in aperture tabulating cards arranged by State, Meridian, Range and Township.

CONVEYANCE: In real property law, a transfer of legal title to land. An instrument, such as a deed, by which interest in real property is created or by which title to real property is transferred from grantor to grantee.

COORDINATES: A set of numbers used in specifying the location of a point.

CORNER: The point or place where two converging lines, sides or edges meet.

CORNERING: Lands having a common survey corner but not a common boundary.

CURATIVE PATENT: An amended patent to correct a previously issued, defective patent.

D

DEED: A document which transfers title to real property.

DEPENDENT RESURVEY: A retracement and re-establishment of the lines of the original survey in their true original locations according to the best available evidence of the position of the original corners.

DESERTLAND ENTRY: An entry of irrigable, arid, agricultural, public lands under the Act of March 3, 1877, which entryman must reclaim, irrigate, and cultivate.

DESIGNATION: The official identification and naming of a general area or site on public land. No lands may be designated until they are either (1) withdrawn, or (2) given special status by Act of Congress.

DISTRICT: The specific area of public lands administered by a District Manager.

DISTRICT OFFICE: A local Bureau office under the jurisdiction and direction of the State Office.

DOCUMENT: An instrument on which is recorded, by means of letters, figures, marks or symbols, information which may be relied upon as the basis, proof or support of something. A deed, agreement, title paper, letter or other written instrument used to prove a fact.

E

EASEMENT: An interest or right in land owned by another that entitles its holder to a specific limited use; such as laying a sewer, crossing over property or putting up power lines.

ELONGATED SECTION: A section which exceeds 85 chains in either length or width as originally surveyed and platted.

EMINENT DOMAIN: The right of governmental agencies to take private property for public use.

ENABLING ACT: In reference to admission of new States into the Union, it is an act passed by Congress empowering the people of a territory to frame a constitution and lay down certain requirements that must be met prerequisite to statehood.

ENTRY: An allowed applications which permits the entryman to enter upon and commence the actions required to gain title to the land.

ENTRYMAN: The individual or legal entity which made an entry.

ESTATE: The interest which anyone has in lands or in any other property. "Estate" is used in conveyances in connection with the words "right," "title" and "interest."

EVIDENCE OF TITLE: A policy of title insurance; or a certificate of title issued by a title insurance company authorized by law to issue same; or an abstract of title prepared and authenticated by a licensed abstractor or abstract company or by the recorder of deeds or other proper officer of the State under his official seal.

EXCHANGE: A trading of public lands (surface and/or subsurface estates) that usually do not have high public value, for lands in other ownerships which do have value for public use, management and enjoyment. The exchange may be for the benefit of other Federal agencies as well as BLM.

EXECUTIVE ORDER 11593: The Bureau must take into account effect of our action on cultural resources. Must identify archaeological and historic sites for National Register of Historic Places; and assure that any Federally owned property during the interim is not altered, transferred or demolished.

F

FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA): BLM's organic Act of October 21, 1976 (PL 94-579), which established public land policy and established guidelines for administration.

FEDERAL POWER PROJECT RESERVATION: A reservation of public lands for use in a project developed under the jurisdiction of the Federal Power Commission.

FIELD NOTES: The official written record of a land survey, certified by the field surveyor, and approved by the proper authority, providing courses and distances of lines surveyed and descriptions of corner monuments.

FILING: An application or other proper document which has been submitted to the proper official or office or an application pursuant to the Mineral Leasing Act.

FINAL CERTIFICATE: A document which evidences that patent should issue. It alone is sufficient to vest title in the would-be patentee.

FRACTIONAL TOWNSHIP OR SECTION: A situation called "natural deficiency" caused by surveys creating fractional measurements due to presence of a large meanderable body, impassable objects, a State or reservation or grant boundary, or similar reserves.

FREE-USE PERMIT: A permit which allows the removal of timber or other resources from the public lands free of charge.

G

GENERAL LAND OFFICE: One of the predecessors of the Bureau of Land Management. It was charged with land disposal, record keeping, and cadastral survey.

GENERAL ORDERS OF WITHDRAWALS: Executive Orders No. 6910 of November 26, 1934, and No. 6964 of February 5, 1935, which withdrew for classification all vacant public lands in the eleven Western States plus certain other public land States.

GOVERNMENT CONTEST: A proceeding initiated by the Government to determine the validity of a claim.

GRANT: A gift of public lands either in quantity or in place. Also, the document or the action which conveys land or an interest in land.

GRANTEE: One to whom a grant is made. The recipient of the right-of-way, patent, deed, or other benefit.

GRANTOR: The person who makes the grant.

GRAZING ALLOTMENT: A specific area within which grazing use is authorized. It generally encompasses public lands but may include parcels of private and state lands.

GRAZING DISTRICT: A specific area of public land administered for grazing purposes under Section 3 of the Taylor Grazing Act. Public lands outside grazing district boundaries are administered under Section 15 of the Act or other applicable authority.

GUIDE MERIDIAN: An auxiliary governing line projected north along an astronomical meridian, from points established on the base line or a standard parallel, usually at intervals of 24 miles east or west of the principal meridian, on which township, section, and quarter-section corners are established.

H

HEARING, CONTEST: Formal proceedings for the taking of evidence from the parties to the contest and their witnesses.

HISTORICAL INDEX: A chronological summary of all actions which affect, have affected, or will affect the title to, disposition of, or use status of lands within a township.

HOLDER: Any state or local governmental entity, individual, partnership, corporation, association, or other business entity receiving or using a right-of-way under Title V of FLPMA.

HOMESTEAD ENTRY: An entry initiated under any of the homestead laws, that leads to patent for entrymen who settle upon and improve agricultural lands.

I

IMPROVEMENTS: Includes any structures of a permanent nature placed upon land, which tend to increase its value.

INDEMNITY LANDS: Alternate lands granted to states under the public land laws when granted lands were unavailable.

INDEMNITY SELECTION: A selection made to compensate for lands that were lost.

INDEPENDENT RESURVEY: An establishment of new section lines for the public land which are independent and without reference to the corners of the original survey, while, at the same time, preserving the boundaries of the alienated lands.

INDEX TO MISCELLANEOUS DOCUMENTS: A chronological listing of public laws, Acts of Congress and Presidential orders. The listed documents are those that apply to lands not specifically described on which conditions may exist that would restrict the disposal or use of lands.

INDIAN ALLOTMENT: An allocation of public lands or Indian reservation land to an Indian for his individual use.

INDIAN FEE PATENT: A patent which conveys fee title to qualified Indians to lands entered under an Indian allotment.

INDIAN RESERVATION: A reservation for the use of native Indians.

INDIAN TRUST PATENT: A patent issued to an Indian to lands that cannot be alienated or sold for a period of years and where legal title remains in the United States.

INITIAL POINT: A point which is established under the rectangular system of surveys and from which is initiated the cadastral survey of the principal meridian and base line that controls the cadastral survey of the public lands within a given area.

IRREGULAR BOUNDARY: Township or section lines not originally established as straight lines or which a retracement reveals as not having been surveyed as a straight line.

IRON POST: The iron post adopted by BLM for monumenting the surveys of the public lands evolved after passage of the 1908 act which provided for the purchase of metal monuments to be used for public-land survey corners wherever practicable.

L

LAND STATUS RECORDS: Those records maintained by the Bureau of Land Management, showing ownership of the public lands and the availability of the lands for use under the public land laws. The land status records include the Master Title Plat, Supplemental Master Title Plat, Use Plat, Historical Index, Control Document Index, Index to Miscellaneous Documents, Serial Register Page, also these records may include Mineral Location and Contest Index, Tract Books, Plat Books, Patents, Deeds, Name Index Card Files, and the Working and Reference Records.

LATITUDE: 1) The distance on the earth's surface, north or south of the equator, expressed in either linear or angular measurements. 2) The north-south component of a traverse course.

LEASE: An authorization (usually long-term) to possess and use public lands for a fixed period of time.

LEASEABLE MINERALS: Oil and gas, oil and shale, coal, potash, phosphate, sodium, sulphur in Louisiana and New Mexico, silica deposits in certain parts of Nevada, and certain minerals under special acts., i.e., the Acquired Lands Act, the Geothermal Steam Act.

LEGAL DESCRIPTION/LAND DESCRIPTION: The method of locating or describing land in relation to the public land survey.

LEGAL TITLE: Title enforceable in a court of law, which is apparently complete and perfect and is generally associated with record ownership.

LIEU SELECTION OR INDEMNITY SELECTION: A selection made to compensate for lands that were lost.

LODE CLAIM: A mining claim embracing public lands which contain minerals occurring in a vein or lode.

LONGITUDE: The distance on the earth's surface, east or west of a defined meridian, usually the meridian of Greenwich (0° Longitude), expressed in angular measure, such as 90° West Longitude.

LOT: A subdivision of an irregular portion of a section which cannot be described by aliquot parts.

M

MASTER TITLE PLAT: A composite of the survey plats of a township on which is shown the ownership and land status.

MATERIAL SITE: The public lands from which sand and gravel may be taken (with the proper permit and authorization) for construction or maintenance of state or federal-aid highways administered by the Forest Service, United States Department of Agriculture.

MEANDER OR MEANDER LINES: The traverse of the margin of a permanent natural body of water executed for the purpose of determining the quantity of land remaining after the segregation of the water area.

MERIDIAN: 1) A north-south line from which longitudes (or departures) and azimuths are reckoned; or a plane, normal to the geoid or spheroid, defining such a line. 2) A flag or sight near a survey camp used to test solar transits for adjustment.

METES AND BOUNDS: A method of describing a parcel of land by citing the owners of abutting lands and describing the length of each course of a boundary as "along" some apparent line, such as, "along a stream" or "along the road." In modern usage, a metes and bounds description includes the bearings and distances of each course.

MILITARY RESERVATION: A withdrawal for the use of the Department of Defense for military purposes.

MILLSITE ENTRY: A cash entry of non-mineral public lands which are to be used as a mill site for the reduction of ore or in the development of a lode claim.

MINERAL APPLICATION: An application to purchase public lands which are held as a mining claim or which are desired as a mill site.

MINERAL CLASSIFICATION: The classification of lands as being valuable for a specific mineral or minerals, also the public lands so classified.

MINERAL IN CHARACTER: Lands where the mineral is ordinarily in sufficient quantity to add to their richness and to justify expenditures for its extraction.

MINERAL LANDS: Public lands which have been designated as containing valuable minerals; or are known to contain valuable minerals.

MINERAL LEASE: A lease which authorized the development and production of leaseable minerals from public lands.

MINERAL LEASING ACT: Act of February 25, 1920, authorized leasing of public lands for extraction of oil and gas, coal, phosphate, sodium and other minerals.

MINERAL LOCATION AND CONTEST INDEX: A component of the land status records. It is a listing by township and range of mineral location notices filed under special mining claim recording laws, abandonments and relinquishments of mining claims secured by the Government, and of actions initiated to determine the validity of mineral, agricultural and other claims on national resource lands.

MINERAL MONUMENT: A monument which is established in connection with a mineral survey.

MINERAL PERMIT: A permit which authorizes prospecting for certain leasable minerals on public lands.

MINERAL RESERVATION: A clause in the conveyance document which reserves minerals on public lands.

MINERAL RIGHTS: The rights of one who owns the mineral estate (subsurface).

MINERAL SEGREGATION SURVEY: The measurements and corner restorations needed to define the boundaries between a mineral claim and other public lands for administrative purposes. Even though it also defines the boundaries of the mineral claim, in whole or in part, that is merely incidental and does not confer any rights to the mineral claimant.

MINERAL SURVEY: A survey of a mining claim. Performed either by cadastral survey or by an approved surveyor.

MINERAL WITHDRAWAL FOR CLASSIFICATION: A withdrawal of public lands which are potentially valuable for leasable minerals. This precludes the disposal of the lands except with a mineral reservation, or unless the lands are found to be not valuable for minerals.

MINING CLAIM: A possessory interest in land obtained by physically locating certain lands on the ground under the authority of the 1872 Mining Law on which a discovery of valuable locatable minerals has been made. A mining claim can be located on any vacant unappropriated public lands.

MINOR SUBDIVISIONS: A quarter-quarter section subdivided into quarter-quarter-quarter sections (1/64 or 10 acre units), or aliquot parts as small as 1/256 (2.5 acres).

MONUMENT: A physical structure, such as an iron post, marked stone, or tree in place, which marks the location of a corner point established by a Cadastral Survey. Objects, to be ranked as monuments, should have certain physical properties such as visibility, durability and stability, and they must define location without resorting to measurements. "Monument" and "corner" are not synonymous, although the two terms are often used largely in the same sense.

N

NATIONAL FOREST: A reservation of a forest or watershed which is administered by the Forest Service, United States Department of Agriculture.

NATIONAL FOREST HOMESTEAD ENTRY: A homestead entry initiated under the Act of June 11, 1906, which provided for homesteading within national forests of public lands classified as more valuable for agriculture than for forestry.

NATIONAL MEMORIAL: A reservation embracing memorials of national interest which is administered by the National Park Service.

NATIONAL MONUMENT: A reservation of lands embracing values of historic and/or scientific interest which is administered by the National Park Service.

NATIONAL PARK: A reservation embracing recreational areas which is administered by the National Park Service, United States Department of the Interior.

NATURAL AREA: An area set aside in an undisturbed state to preserve natural and environmental values.

NAVIGABLE WATERS: Waters which afford a channel for useful commerce or travel. The beds of navigable bodies of water are not public domain and are not subject to survey and disposal by the United States. Under the laws of the United States the navigable waters have always been and shall forever remain common highways. This includes all tidewater streams and other important permanent bodies of water whose natural and normal condition at the date of admission of a state into the Union was such as to classify the same as navigable water.

O

O & C LANDS: Public lands in western Oregon which were granted to the Oregon Central railroad companies (later the Oregon and California Railroad Co.) to aid in the construction of railroads, but which were later forfeited and returned to the Federal Government by Congressional revestment of title.

OCCUPANCY: Actual possession and use of land in something more than a slight or sporadic manner.

OFFERED LANDS: The lands owned by the proponent and being offered in exchange.

OFFICIAL CADASTRAL SURVEY: The public lands are deemed to be surveyed when the survey has been accepted and the plat thereof has been filed in the appropriate land office by direction of the Bureau of Land Management. No subdivisions of the public lands may be conveyed or in any way disposed of until so identified.

OPENING ORDER: The order which opens the lands to the operation or partial operation of the public land laws. May be a part of the revocation order. It need not be a separate documents.

ORDINANCE OF MAY 20, 1785: The first land ordinance, it was entitled "An ordinance for ascertaining the mode of disposing of lands in the western territory."

P

PATENT: As it relates to public land laws, a patent is the instrument (or deed) by which the Government conveys title to the public lands.

PATENT RESERVATION: A clause in a patent or instrument of conveyance by which the grantor creates and reserves to himself, some right or interest in the estate granted, which had no previous existence, but is called into being by the patent. The reservation is always in favor of and for the benefit of the grantor, thus a right-of-way grant which exists at the time of the patent is issued can never amount to a reservation unless the right-of-way is for the benefit of the United States. Otherwise, a valid existing right-of-way should be protected by issuing the patent, "subject to" the right-of-way.

PERMIT: A short-term (generally under 3 years), revocable authorization to use public lands for specific purposes.

PLAT: As used technically by the BLM, the drawing which represents the particular area included in a survey, such as a township, private land claim or mineral claim, and the lines surveyed, established, retraced or resurveyed, showing the direction and length of each such line; the relation to the adjoining official surveys; the boundaries, descriptions, and area of each parcel of land subdivided; and, as nearly as may be practicable, a representation of the relief and improvements within the limits of the survey.

POWERSITE CLASSIFICATION: A classification which in reality is a segregation against the operation of the land laws made by the Federal Power Commission for lands having potential for or needed for power projects and associated transmission lines. Lands classified to benefit transmission lines are open to the operation of the public land laws subject to the use for transmission lines.

POWERSITE RESERVE: A reservation of public lands which have potential value for water power development.

PRIVATE EXCHANGE: An exchange between the Federal Government and any landowner other than a State.

PRIVATE LAND CLAIM: A claim based on the assertion that the claimant (or his predecessors in interest) derived his right while the land was under the dominion of a foreign government.

PROTEST: A statement of objection to a proposed classification, application, claim, etc.

PROTRACTION DIAGRAM: It is prepared for the purpose of describing unsurveyed land areas.

PUBLIC DOMAIN: Vacant, unappropriated, and unreserved public lands, or public lands withdrawn by E.O. 6910 of November 26, 1934, or E.O. 6964 of February 5, 1935, and not otherwise reserved, or public lands within grazing districts established under the Act of June 28, 1934, and not otherwise withdrawn or reserved.

PUBLIC LANDS: Any land and interest in land owned by the United States within the several States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, except- 1. lands located on the outer Continental Shelf and 2. lands held for the benefit of Indians, Aleuts, and Eskimos.

PUBLIC LAND LAWS: The body of laws which regulates the administration of the public lands and the resources thereon.

PUBLIC LAND ORDER (PLO): An order effecting, modifying, or revoking a withdrawal or reservation which has been issued by the Secretary pursuant to his delegations of authority.

PUBLIC LAND STATES: The States which were created out of the original public domain: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Utah, Washington, Wisconsin, and Wyoming.

PUBLIC PURPOSE: A use in which the public has an interest, affecting the safety, health, morale, and welfare of the general public, but does not include use for habitation, cultivation, trade or manufacturing.

PUBLIC WATER RESERVES: Pursuant to and under the authority of Sec. 10 of the Act of December 29, 1916, and in aid of pending legislation, the President issued the Executive Order of April 17, 1926. This reserved for public use every vacant, unappropriated, and unreserved smallest legal subdivision which contains a spring or waterhole. If the lands are unsurveyed, the reservation covers all lands within 1/4 mile of the spring or waterhole.

Q

QUARTER SECTION: One-fourth of a section: 160 acres.

QUIT-CLAIM DEED (Bureau of Land Management): The type of deed used to relinquish all claims of the United States in lands which were conveyed to the United States in connection with some transaction. A deed which does not allege ownership.

R

RAILROAD GRANT: Usually, title to railroad grant lands passed under patent conveyances. These grants were made to railroads to aid in their construction, and covered designated sections within specified grant limits.

RAILROAD LIEU SELECTION: A lieu selection made by an applicant other than a railroad for lands to replace those lost or relinquished within a railroad grant.

RANGE: A north-south tier of townships or sections. A range of townships is described by its relationship to the principal meridian.

RECLAMATION HOMESTEAD ENTRY: A homestead entry (not exceeding 160 acres) under the Act of June 17, 1902, which provides for entry within reclamation projects.

RECLAMATION PROJECT: A water development and irrigation project of the Bureau of Reclamation.

RECLAMATION WITHDRAWALS:

first form: A reclamation withdrawal of public lands that are or may be needed in connection with the construction work and maintenance of a reclamation project.

second form: A reclamation withdrawal of public lands that are susceptible of irrigation from a reclamation project.

The distinction of first and second form withdrawals have been eliminated and now all such withdrawals are merely "reclamation withdrawals."

RECONVEYED LANDS: Lands once patented or granted but later returned to Federal ownership.

RECORD: 1) The approved field notes and plat of a survey. 2) A value of area, bearing or distance from the approved field notes. 3) The act of recording a document as in a county. 4) All of the documents pertaining to title and boundaries including status, group files, county surveyor information as well as field notes and plats, when used as "to search the record."

RECREATION AND PUBLIC PURPOSES ACT (R&PP): The Act of June 14, 1926, as amended, allows the disposal of public lands to any State, local, Federal, or political instrumentality or nonprofit organization for any recreational or public purpose, at the discretion of the authorized officer.

RECREATION SITES: Relatively small tracts of land which have value for concentrated and intensive recreation use that usually requires construction and maintenance of public facilities.

RECTANGULAR SYSTEM OF SURVEYS: The cadastral system of survey, used to subdivide the public lands into townships, sections, and sectional subdivisions.

REJECTION: The denial of an application because it is improperly filed, conflicts with the public land laws or conflicts with public policy.

RELICTION: Land that is uncovered by the gradual subsidence of water.

RESERVATION: A withdrawal of a permanent nature, dedicated to a specific public purpose.

RESERVATION LANDS: Includes national parks and monuments, or any other reservations of the United States for the use of or administration by the National Park Service, the Fish and Wildlife Service, the Bureau of Reclamation, or any agency outside the Department of the Interior.

RESURVEY: A term applied to the reestablishment or restoration of land boundaries and subdivisions by the rerunning and remarking of the lines that were represented in the field note record and on the plat of the previous official survey.

RESTORATION: Normally associated with and contemporaneous with the revocation of withdrawals. This is the restoring of the lands to the status of unreserved public lands and it opens them to the operation of the public land laws and mining and mineral leasing laws as appropriate.

REVERSIONARY CLAUSE OR REVERTER: A provision in a patent for the lands to return to United States ownership for failure of development or upon the happening of a prescribed event.

REVOCATION: The action which cancels a withdrawal. It need not necessarily "open" the lands to application or entry.

RIGHT-OF-WAY: An easement, license, or permit; does not grant an estate of any kind, only the right of use. May also include a site.

RIPARIAN RIGHTS: The rights of the owners of lands on the banks of watercourses or small lakes relating to the ownership of soil under the water and to accretions and relictions.

S

SCHOOL LAND DEFICIENCY: The amount of land lost by the State for which it is entitled to school land indemnity selections.

SCHOOL LAND INDEMNITY SELECTION: The selection made by a State to take the place of school lands the State could not receive.

SCHOOL LAND PATENT: A patent to give evidence of title to lands to the State. Title can automatically pass without issuance of a patent.

SCHOOL SECTION: A section granted to the State for the support of the common schools.

SCRIP: A certificate which allowed the owner to acquire a certain number of acres from vacant, unappropriated public lands.

SECTION: 640 acres, one mile square.

SEGREGATION: Any action such as a withdrawal or allowed application (exchange) which suspends the operation of the general public land laws. To separate or set apart; to remove lands from the operation of part or all the public land mineral laws.

SELECTED LANDS: The public domain lands sought by the proponent in an exchange.

SERIAL REGISTERS: Serial registers were instituted in 1908 as a digest of land case records. BLM maintains these individual chronological records of each public land transaction. Each transaction (case) appears as a page or pages in a serial register. Each one is identified by the serial number assigned to it. A running record of each case, its inception and any actions on it, is kept in book form in the land office of each public domain land state. Serial register pages are now microfilmed for ease in retrieval of information as well as to conserve space.

SMALLEST LEGAL SUBDIVISION: A quarter-quarter section; 40 acres.

SMALL TRACT: Public lands (5 acres or less) which have been found to be chiefly valuable for sale as a home, cabin, camp or business site under the Act of June 1, 1938.

STANDARD PARALLEL: Also called "correction line." A line extended east or west from the principal meridian, usually at intervals of 24 miles north and south of the base line, along a parallel of latitude. Standard parallels are established to correct for the convergence of range lines and to maintain a workable adherence to the requirement that each township be 6 miles square. They are surveyed in the manner prescribed for the survey of the base line.

STATE EXCHANGE: An exchange of lands between the Federal Government and a State.

STATEHOOD: The Thirteen Original States organized the Federal Union under the name of "The United States of America" by ratifying the Articles of Confederation, and later, the Constitution. They are: New Hampshire, New York, Maryland, Georgia, Delaware, Massachusetts, Pennsylvania, Virginia, Connecticut, Rhode Island, New Jersey, North Carolina and South Carolina.

STATUS (Land): The land title or use information concerning a specific piece of land. The information would include such things as: ownership; claims or applications outstanding; known minerals (if any); withdrawals; or in general, any information that might affect how the land laws would operate with respect to the land.

STOCKRAISING HOMESTEAD ACT: Western lands that were not suitable for cultivation but were suitable for stock grazing could be patented under the Act of December 29, 1916.

STOCKRAISING HOMESTEAD ENTRY: A homestead not exceeding 640 acres which unlike the general homestead laws provide for the homesteading of lands which were chiefly valuable for grazing and forage crops and not for agriculture.

SUBDIVISION: (verb) 1) Subdivision of a township into sections, 2) Subdivision of a section into half-sections, quarter-sections, sixteenth-sections or sixty-fourth-sections, or into lots, according to the Manual of Surveying Instructions. 3) The process of surveying such subdivisions. 4) In the private practice of land survey, subdivision is the division of an area into lots, streets, rights-of-way, easements and accessories, usually according to State law and local regulations.-(noun) A particular aliquot part, lot, or parcel of land described according to the official plat of its cadastral survey.

SUPPLEMENTAL PLAT: A plat which shows a revised subdivision of one or more sections without a change in the section boundaries or to the survey record.

SURFACE RIGHTS: All rights in the surface of the land except the oil, gas and other mineral or subsurface rights.

SURVEY MONUMENT: A physical object (iron post, stone, tree, etc.) which marks the location of a point which is established by cadastral survey.

SURVEY PLAT: A plat representing the lines surveyed, established, retraced or resurveyed, showing the direction and length of each line; the relation to adjoining official surveys; the boundaries, descriptions, and area of each parcel of land; and the topography, culture, and improvements within the limits of the survey.

T

TAYLOR GRAZING ACT: The Act of June 28, 1934, as amended. Primary purpose of this Act was to stop continuing injury to the public rangelands through over grazing and other misuse.

TIMBER AND STONE ENTRY: A cash entry for lands which were valuable for timber or stone and which were unfit for cultivation.

TOWNSHIP: The unit of survey of the public lands; normally a quadrangle approximately 6 miles on a side with boundaries conforming to meridians and parallels within established limits, containing thirty-six sections, some of which are designed to correct for the convergence of meridians or range lines.

TOWNSITE: An area of public land which is identified for disposal as an urban development.

TRACT BOOKS: The central land status records which originally depicted the status of the public domain. For the most part, replaced by the Master Title Plat.

U

UNAUTHORIZED USE (TRESPASS): Any occupancy or use of the public lands or resources of the United States without authority.

UNRESERVED PUBLIC LANDS: Those public lands not covered by a reservation or a withdrawal, except by the general orders of withdrawal.

UNSURVEYED LANDS: Lands not yet surveyed.

USE AUTHORIZATION: Approval of a proposed use for land or resources on the prescribed form or document designated for such use; a document showing permission to use land or the resources thereon; a formalized grant pursuant to a request to use land or resources.

USE PLAT: A copy of the master title plat and any supplemental master title plats of a township. Use plats show, in addition to the status shown on the master title plat, information concerning use of the lands, such as applications, leases and permits.

V

VACANT PUBLIC LANDS: Public lands which are unappropriated and unreserved and not within a withdrawal. Lands that are not reserved except by the general orders of withdrawal.

VALID CLAIM: A mineral or ore body of sufficient size and quantity to justify an ordinarily prudent man in the expenditure of his labor and means in an effort to develop a paying mine.

W

WATER RIGHT: The authority, whether by prior ownership, contract, purchase, or appropriation in accordance with State law, to use water for any beneficial use.

WILDERNESS: Areas in a native condition or reverted to a native condition, substantially free of man-made structures and human habitation.

WILDLIFE REFUGE: A reservation for the protection of wildlife.

WITHDRAWALS: Removal or withholding of public lands by statute or secretarial order, from operation of some or all of the public land laws (surface, mining and/or mineral leasing).

For additional assistance with definitions of public land terms, refer to *Glossary of BLM Surveying and Mapping Terms*, prepared by the Cadastral Survey Training Staff, Denver Service Center, 1978.

Glossary of Public Land Terms, Phoenix Training Center, Bureau of Land Management, U.S. Department of the Interior, January, 1983.

METES AND BOUNDS

What Are Metes and Bounds?

Metes and bounds is another way of saying distances (metes) and direction (bounds). The metes and bounds system of survey relies on the use of convenient natural or man-made objects as monuments (or markers) from which distances and direction are measured. The metes and bounds system served as the principal method of survey during America's early days.

In a metes and bounds survey description a stream might serve as one side of a parcel, an old oak tree as a corner, a road as another side of the parcel, a pile of rocks as a corner, a fence as another side and so on until all boundaries of the parcel are defined.

The method was handy, but it had two major drawbacks: (1) there might not be a convenient corner or boundary marker where one was needed and (2) over a period of time oak trees died, piles of rocks were moved, and roads became overgrown with vegetation from lack of use.

The following description in the Hartford Connecticut probate court records for 1812 provides a colorful illustration of this early method:

Commencing at a heap of stone about a stone's throw from a certain small clump of alders, near a brook running down off from a rather high part of said ridge; thence, by a straight line to a certain marked white birch tree, about two or three times as far from a jog in a fence going around a ledge nearby; thence by another straight line in a different direction, around said ledge and the Great Swamp, so called; thence, in line of said lot in part an in part by another piece of fence which joins on to said line, and by extension of the general run of said fence to a heap of stone near a surface rock; thence, as aforesaid, to the "Horn." So called, and passing around the same as aforesaid, as far as the "Great Bend," so called, and from thence to a squarish sort of a jog in another fence, and so on to a marked black oak tree with stones piles around it; thence, by another straight line in about a contrary direction and somewhere about parallel with the line around by the ledge and the Great Swamp, to a stake and stone bounds not far off from the old Indian trail; thence, by another straight line on a course diagonally parallel, or nearly so, with "Fox Hollow Run," So called, to a certain marked red cedar tree out on a sandy sort of plain; thence, by another straight line, in a different direction, to a certain marked yellow oak tree on the off side of a knoll with a flat stone laid against it; thence, after turning around in another direction, and by a sloping straight line to a certain heap of stone which is, by pacing, just 18 rods and about one half a rod more from the stump of the big hemlock tree where Phil Blake killed the bear; thence, to the corner begun at by two straight lines of about equal length, which are to be run by some skilled and competent surveyor, so as to include the area and acreage as herein before set forth.

From the description, drawbacks to the metes and bounds method are obvious. They can be resolved, however, by setting a permanent man-made monument at one corner of the parcel and then describing the parcel in distance (metes) and direction (bounds) from that point.

Metes or distances, are usually measured in feet, usually to the nearest tenth or one-hundredth of a foot. Metes may also be stated in chains or rods.

Bounds, or directions are shown in degrees; minutes and seconds. In legal land descriptions we deal in 90 degree segments. There are 60 minutes in each degree and 60 seconds in each minute. The symbols for degrees, minutes and seconds are as follows:

degree - °
minute - '
second - "

Special Surveys and the Use of Metes and Bounds

The metes and bounds method is used today when defining boundaries for irregularly shaped parcels of land that cannot be described, or would be impractical to describe, in any other way.

In order to describe a parcel of land using the metes and bounds method, a point of beginning is established. The location of a parcel of land may be defined by stating its position in relation to established monuments of known position or by stating its geographic position (latitude and longitude). In metes and bounds descriptions this is generally accomplished by a complete description of the point of beginning. The information furnished should be sufficient to enable a competent surveyor to locate and identify the initial point. Frequently a statement regarding nearby topographic or cultural features or objects is of great value.

If the point of beginning is an established corner of an official survey or is connected by survey to such a corner, the latter should be described by corner and survey number or other appropriate designation without detailed description of the monument itself. The latitude and longitude should be given unless the beginning point is a corner of the public-land rectangular surveys or connected by survey to such a corner.

After a point of beginning has been established, the description of the survey is written with the use of natural and artificial boundaries. Occasionally the boundaries of a parcel are defined entirely or in part by natural monuments, such as streams, lakes, divides, or straight lines connecting prominent features of topography. In such cases it is essential that each boundary be described so definitely and specifically that there is no uncertainty as to its identification.

In the case of a stream or river, the middle of the channel or one bank is usually specified. Facing downstream, the bank on the left hand is termed the left bank and that on the right hand the right bank. Where lakes, large rivers, or tidal waters are involved, the intended elevation or stage of water should be specified, such as low-water mark, mean high-water mark, or mean high tide.

Similarly, in referring to a natural monument such as a divide or peak, or to such permanent artificial monuments as highways, railroads, ditches, the specific line or point intended to be used should be described with sufficient particularity as to be capable of definite identification on the ground.

A statement of the area of the parcel usually follows the description and in most cases is expressed in acres. Approximate areas should be indicated as such and given in even acres.

Examples of Metes-and-Bounds Descriptions

Example No. 1

Beginning at corner No. 1, a hemlock post, 4 in. square, 24 in. above ground, located on the Takotna Highway about 1/4 mile southeasterly from its intersection with the left bank of Kuskokwim River and in approximate latitude $62^{\circ} 52' N.$, longitude $155^{\circ} 40' W.$ Corner No. 2 of U. S. Survey 999 bears $N. 26^{\circ} 59' W., 327.6$ ft.

From corner No. 1, by metes and bounds,

S. $25^{\circ} 43' W., 1900$ ft., to corner No. 2;
S. $57^{\circ} 30' W., 3000$ ft., to corner No. 3;
S. $32^{\circ} 30' E., 830$ ft., to corner No. 4;
N. $57^{\circ} 30' E., 4000$ ft., to corner No. 5;
N. $25^{\circ} 43' E., 1650$ ft., to corner No. 6;
N. $34^{\circ} 17' W., 550$ ft., to corner No. 7;
S. $85^{\circ} 38' W., 871.6$ ft., to corner No. 1, the place of beginning.

The parcel as described contains 121.66 acres

Example No. 2

Beginning at the confluence of the Chvilnuk and Yukon Rivers in approximate latitude $61^{\circ} 58' 15'' N.$, longitude $162^{\circ} 48' 20'' W.,$

Thence northeasterly upstream along the center of Chvilnuk River to its source in the Tundadula Mountains;

Easterly along the summit of the Tundadula Mountains to the source of the Bonasila River;

Southeasterly downstream along the middle of the main channel of the Bonasila River to its junction with the Stuyahok River;

Southerly upstream along the middle of the main channel of the Stuyahok River to a point due west of the source of Mountain Creek;

East to the source of Mountain Creek;

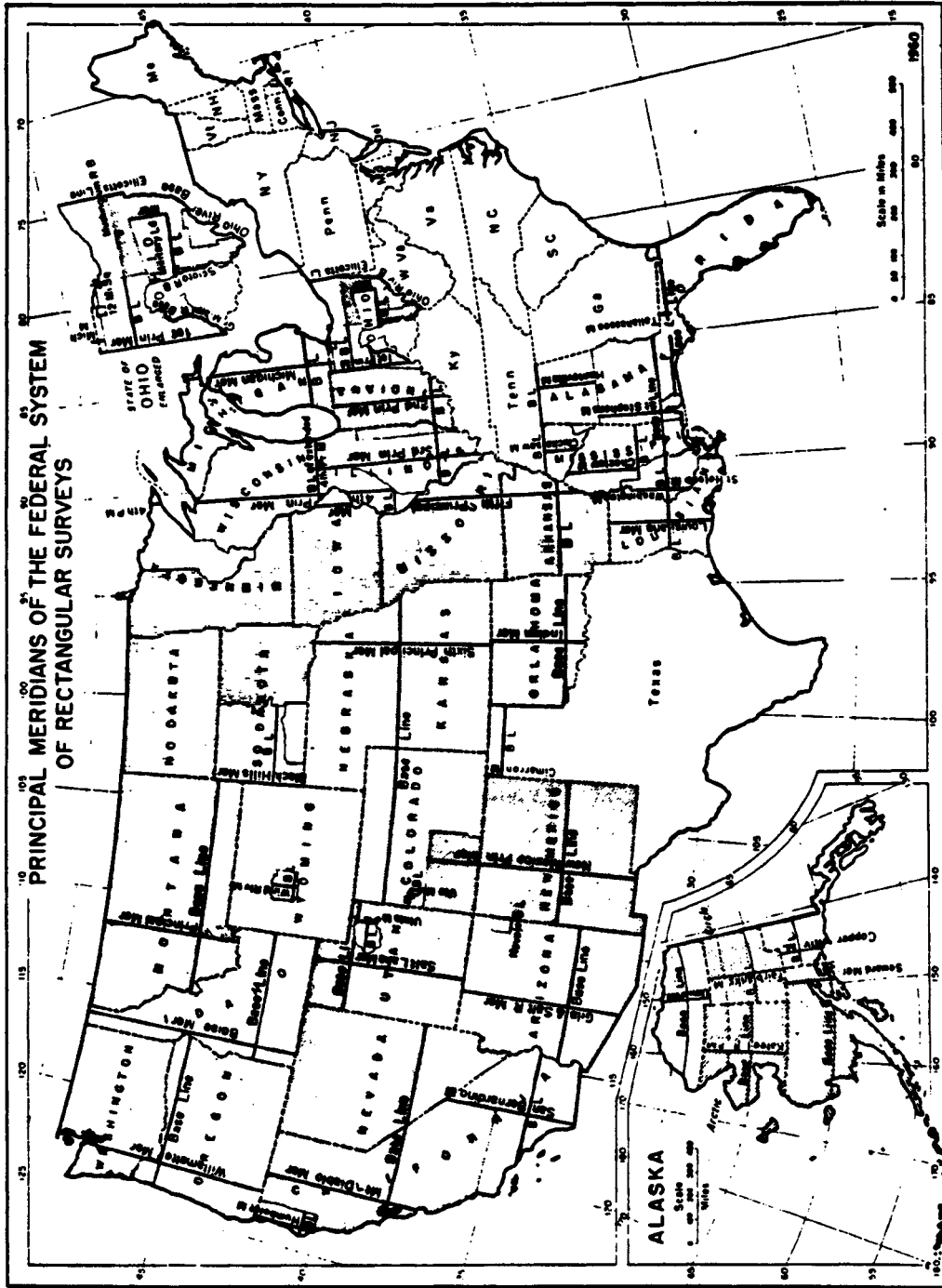
Southerly downstream along the center of Mountain Creek to its junction with Tucker's Slough;

Southerly along the center of Tucker's Slough to its junction with the Yukon River;

Southerly and westerly downstream along the right bank of the main channel of the Yukon River at mean high-water mark to the mouth of the Chvilnuk River and the place of beginning.

The parcel as described contains approximately 1,900,000 acres.

MAP OF PRINCIPAL MERIDIANS AND BASE LINES



	<u>MERIDIAN NAME</u>	<u>ADOPTED</u>	<u>IN STATE(S) OF</u>
1.	Black Hills	1878	South Dakota
2.	Boise	1867	Idaho
3.	Chickasaw	1833	Mississippi
4.	Choctaw	1821	Mississippi
5.	Cimarron	1881	Oklahoma
6.	Copper River	1905	Alaska
7.	Fairbanks	1910	Alaska
8.	Fifth Principal	1815	Arkansas, Iowa, Minnesota, Missouri, North Dakota, and South Dakota
9.	First Principal	1819	Ohio and Indiana
10.	Fourth Principal	1815	Illinois
		1831	Minnesota and Wisconsin
11.	Gila and Salt River	1865	Arizona
12.	Humboldt	1853	California
13.	Huntsville	1807	Alabama and Mississippi
14.	Indian	1870	Oklahoma
15.	Kateel River	1956	Alaska
16.	Louisiana	1807	Louisiana
17.	Michigan	1815	Michigan and Ohio
18.	Mount Diablo	1851	California and Nevada
19.	Navajo	1869	Arizona
20.	New Mexico Principal	1855	Colorado and New Mexico
21.	Principal	1867	Montana
22.	Salt Lake	1855	Utah
23.	San Bernardino	1852	Arizona and California
24.	Second Principal	1805	Illinois and Indiana
25.	Seward	1911	Alaska
26.	Sixth Principal	1855	Colorado, Kansas, Nebraska, South Dakota, and Wyoming
27.	St. Helena	1819	Louisiana
28.	St. Stephens	1805	Alabama and Mississippi
29.	Tallahassee	1824	Florida and Alabama
30.	Third Principal	1805	Illinois
31.	Uintah	1875	Utah
32.	Umat	1956	Alaska
33.	Ute	1880	Colorado
34.	Washington	1803	Mississippi
35.	Willamette	1851	Oregon and Washington
36.	Wind River	1875	Wyoming

COMMON ABBREVIATIONS

A	Acre(s)
Acq	Acquired
Act of Cong	Act of Congress
Adm S	Administrative Site
AEC	Atomic Energy Commission
Agri	Agriculture, Agricultural
Agri Exp Sta	Agricultural Experiment Station
AHE	Additional homestead entry
All Min	All Minerals
Allot	Allotment
Admt	Amendment, Amended, Amends
ANS	Air Navigaiton Site
Apln	Application
Apln Ext	Application for extension
Appvd	Approved
Aprt	Airport
Asgn	Assignment
Asph	Asphalt
ASRHE	Additional Stockraising Homestead Entry
Auth	Authorization
Bdy, Bdrs	Boundary, Boundaries
BIA	Bureau of Indian Affairs
Blk	Block
BLM	Bureau of Land Management
BR	Bureau of Reclamation
BSFW	Bureau of Sports, Fisheries and Wildlife (now Fish and Wildlife Service)
COE	Corps of Engineers
CA	Communitization Agreement
Cad	Cadastral
Canc	Cancellation, Cancelled
Cpg	Campground
CDI	Control Document Index
CE	Cash entry
Cert	Certificate
CFR	Code of Federal Regulations
Ch, Chs	Chain, Chains
CHE	Commutd Homestead Entry
Circ	Circular
Cl	Classification
C/L	Center Line
Comm P	Community Pit

Comm S
Condemn
Corp
C/T
Cur Pat

Communication Site
Condemnation
Corporation
Color of Title
Curative patent

D/C
Ded
Def
Dept of Agri
Dept of Int (DOI)
Des
Det
Dist
Div
DLE
DM
Doc

Ditches and/or Canal
Dedication
Deficiency
Department of Agriculture
Department of Interior
Designation or Designated
Determination
District
Division
Desert Land Entry
District Manager
Document

E
Eff
EHE
Elim
Enlgmt
EO
ES
Esmt
Excl
Exp
Ext

East
Effective
Enlarged Homestead Entry
Elimination
Enlargement
Executive Order
Exchange Survey
Easement
Excluding, excluded
Expire (d)
Extended, extension, extend

FAA
F&WS
FC
Fed
FHA
Fis
FLS
Fm U
FPA
FPC
FR
Frac
FS
FUP
FX

Federal Aviation Administration
Fish and Wildlife Service
Final Certificate
Federal
Farmers Home Administration
Fissionable materials
Forest Lieu selection
Farm unit
Federal Power Act
Federal Power Commission
Federal Register
Fractional
Forest Service
Free Use Permit
Forest Exchange

Gd
Geo
GLO
Geo Plat

Gold
Geothermal
General Land Office
Geothermal Resource Plat

Hdq S
HDS
HE
HES
HI
Hwy

Headquarters Site
Homestead declaratory statement
Homestead Entry
Homestead Entry Survey
Historical Index
Highway

IA
Iden
IL
Illus
Incl
Ind Fee
Ind Res
Ind Tr
Ind Tr Pat
Intpr
IS
IT

Indian Allotment
Identify, Identification
Indemnity list State
Illustration
Including, Inclusive
Indian Fee
Indian Reservation
Indian Trust
Indian Trust Patent
Interpretation
Indemnity Selection
Isolated Tract

Juris

Jurisdiction

KCLA
KGRA
KGS
KLA

Known Coal Leasing Area
Known Geothermal Resource Area
Known Geological Structure
Known Leasing Area

Lat
LD
Lic
LO
Loc
Long
LS
Lsbl
Lse
Ltr
LU

Latitude
Interior Land Decision
License
Land Office
Location
Longitude
Lieu Selection
Leasable
Lease
Letter
Land Utilization

Mat S
M&B
MCOA or MOA
ME
Mer, M
Mgmt
Mil Pur
Mil Res
Mill S
Min
Min Cert or MC
Misc
MLCI
Mod
Mon
MS
MTP
Mult Use (MU)

Material Site
Metes and Bounds
Mining Claim Occupancy Act
Mineral Entry
Meridian
Management
Military Purpose
Military Reservation
Millsite
Mineral
Mineral Certificate
Miscellaneous
Mineral Location & Contest Index
Modification
Monument
Mineral Survey
Master Title Plat
Multiple Use

N
NA
NE
nc
NF
N Mon
NOE

North
Native Allotment
Northeast
Noncompetitive
National Forest
National Monument
Not Open to Entry (Surface, Mining and Mineral Leasing)
Not Open to Lease
Not Open to Mining
National Park
National Park Service
National Resource Lands
Northwest
National Wildlife Refuge

NOL
NOM
NP
NPS
NRL
NW
NWR

O
OE
OG
Oper

Order
Open to Entry
Oil and Gas
Operator

Par
Part
Pat
PD
Per
Pet Res
Pho

Parcel
Partially
Patent
Public Domain
Permit
Petroleum Reserve
Phosphate

PL	Public Law
PLC	Public Land Claim
PLO	Public Land Order
Pot	Potassium
Pr Per	Prospecting permit
Pre	Pre-emption
Proc	Proclamation
Proj	Project
Prop	Propose, Proposed
Prot Wdl	Protective Withdrawal
PS	Public Sale
PU	Public Use
Pur	Purchase
PW Res	Public Water Reserve
Pwr Proj	Power Project
Pwr S	Power Site
PX	Private Exchange

QCD	Quitclaim deed
Qs	Quicksilver

R	Range
R&PP	Recreation and Public Purpose
Rcpl	Reciprocal
Rd	Road
Re-cl	Reclassification
Rec Lse	Recreation Lease
Recl Wdl	Reclamation Withdrawal
Recon	Reconveyed
Reg	Regional
Rej	Rejected, rejection
Rel	Relinquished or Relinquishment
Res	Reservation or Reserve
Resc	Rescind, Rescinded
Rest	Restoration or Restored
Resvr	Reservoir
Rev	Revocation or Revoked
Rfg	Refuge
Rgr Sta	Ranger Station
RHE	Reclamation Homestead Entry
RI	Range Improvement
RIP	Records Improvement Project
Rmks	Remarks
RR	Railroad
RRG	Railroad Grant
RRIS	Railroad Indemnity Selection
RRLS	Railroad Leiu Selection
RS	Revised Statutes
Rstd	Restricted
Rvst	Revested
R/W	Right-of-Way

S
SAH
SD
SDO
SDW Wdl
SE
sec.
Sec of Agri
Sec of the Int
Segr
Sel
SG
SHC
Si
Sim
SLUP
SO
Sod
Spec Per
SR
SRHE
SS
ST
Stat
ST Cl
ST Lse
Sta
Subdiv Und
Subj
Sul
Suppl
Sur
Sus
SW
SX

South
Soldier's Additional Homestead
State Director
State Director's Order
Stock Driveway Withdrawal
Southeast
Section
Secretary of Agriculture
Secretary of the Interior
Segregate or Segregated
Selection or Selected
State Grant
Small Holding Line
Silver
Simultaneous
Special Lnad Use Permit
Secretary's Order
Sodium
Special Permit
Serial Register
Stockraising Homestead Entry
State Selection
Small Tract
Statutes at Large
Small Tract Classification
Small Tract Lease
Station
Subdivision Undefined
Subject
Sulphur
Supplemental
Survey or Surveyed
Suspended
Southwest
State Exchange

T or Tps
TC
Tel
Teleg
Temp
Term
Tns
Tr
Trans
Trf
Trf Juris
Trfd
Tri Sta
Trsp
T/S
TUP

Township or Townships
Timber Culture
Telephone
Telegraph
Temporary
Terminate, Termination
Townsite
Tract
Transmission
Transfer
Transfer of Jurisdiction
Transferred
Triangulation Station
Trespass
Timber and Stone
Temporary Use Permit

UA
Unapprop
Undet
Undgd
US
USS
Unsur
Ur
USC
USGS

Unit Agreement
Unappropriated
Undetermined
Underground
United States
United States Survey
Unsurveyed
Uranium
United States Code
United States Geological Survey




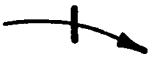
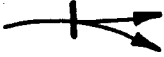


W
WAA
War Dept
WD
Wdl
Wdn
WP
Wp Des
WR
WS
Wt








West
War Assets Administration
War Department
Warranty Deed
Withdrawal
Withdrawn
Water Power
Water Power Designation
Water Rights
Watershed
Warrant





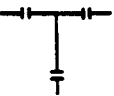


X








Exchange(d)

COMMONLY USED SYMBOLS

FEATURE	SYMBOL
Reservoir	
Land Treatment Area	
Check Dam	
Detention Dam	
Diversion Dam	
Improved Spring	
Well	

FEATURE	SYMBOL
Artesian Well	
Power Transmission Line	
Pipe Line Or Conduit	
Corridor (R/W's)	
Road	
Trail Or Firebreak	
Telephone Line	

FEATURE	SYMBOL
Telegraph Line	
Shelter	
Windmill	
Study Plot	
Cathodic Protection Station	
Reservoir or Lake Water Line	
River or Large Stream	

FEATURE	SYMBOL
Important Stream	
Trough	
Ditch or Canal	
Bridge	
Storage Tank	
Fence	
Cattleguard	

For more symbols, see BLM Manual 1275 - Land Status Records

STATE CODES FOR PATENT NUMBERING

<u>STATE OR OFFICE</u>	<u>CODE</u>
Alaska	50
Arizona	02
California	04
Colorado	05
Eastern States (for all states under its jurisdiction)	61
Idaho	11
Kansas	15
Montana	25
Nebraska	26
Nevada	27
New Mexico	30
North Dakota	33
Oklahoma	35
Oregon	36
South Dakota	40
Texas	42
Utah	43
Washington	46
Wyoming	49

Note: See Patent Preparation and Issuance Manual for Additional information.

PUBLIC EDUCATION LAND GRANTS

When states were admitted to the union, they were granted from one to four sections of land in each township to support the public school system.

The following states were granted one section (16):

Alabama	Louisiana
Arkansas	Michigan
Florida	Mississippi
Illinois	Missouri
Indiana	Ohio
Iowa	Wisconsin

The following states were granted two sections (16 and 36):

California	Nevada
Colorado	North Dakota
Idaho	Oklahoma
Kansas	Oregon
Minnesota	South Dakota
Montana	Washington
Nebraska	Wyoming

Alaska was granted two sections (16 and 36) and Section 33 in part in the Tanana Valley.

Three states Arizona, New Mexico and Utah were granted four sections (2, 16, 32 and 36).

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