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Interpret and Write Descriptions of Land. Metes-and-Bounds

#### MODULE OVERVIEW



This module introduces the learner to the elements and proper construction of metes-and-bounds descriptions of land, an overview of the different types of natural and artificial boundaries that can be used in metes-and-bounds descriptions, and an overview of the associated primary writing parts.

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This module introduces the learner to the elements and proper construction of metes-and-bounds descriptions of land, an overview of the different types of natural and artificial boundaries that can be used in metes-and-bounds descriptions, and an overview of the associated primary writing parts.



The objectives of this module are to help you: define the types of monuments and measurements used in metes-and-bounds descriptions, compare and contrast natural vs. artificial boundaries, and identify the primary writing parts of descriptions of land for metes-and-bounds types.



Lesson 1: Metes-and-Bounds

#### Objectives

After completing this lesson, you should be able to:

- Identify special survey types
- Identify elements in a metes-and-bounds survey
- Comprehend the basics of reading and writing bearings
- Comprehend the basics of reading and writing a statement of quantity



After completing this lesson, you should be able to: identify special survey types, identify elements in a metes-and-bounds survey, comprehend the basics of reading and writing bearings, and comprehend the basics of reading and writing a statement of quantity.



Land surveys of the metes-and-bounds type were incorporated in the PLS as special surveys and are commonly used to buy and sell land in the private sector. The description of land parcels in the private sector by this method should be prepared from surveyed information (map, plat, or notes of the survey) or record information that has been verified, is locatable on the ground, and can be written without ambiguity.



- Reservations
- Mineral Surveys
- Forest Homestead Entries
- Small Holding Claims
- U.S. Surveys
- Donation Land Claims
- Congressionally Designated Areas



Special surveys of nonrectangular parcels, including reservations, mineral surveys, forest homestead entries, small holding claims, U.S. surveys, donation land claims, and congressionally designated areas were created by a unique need to depart from the rectangular system.



For Federal land, almost all special survey descriptions will be a description by reference to an official government survey. In this example, the Homestead Entry Survey Number 345 is H.E.S. No. 345. The exact formatting for inclusion in official documents will be discussed in Module 4.

#### Federal Register

- Copied from official records
- Written by land surveyor
- Referred to land surveyor for review

Specifications Reference: Metes-and-Bounds Surveys, Chapter III

This plat, in 7 sheets, constitutes the map of the Mount Trumbull Wilderness Boundary, as required by Public Law 101-628-Nov. 28, 1990, Section I. – Title I through III of this Act may be cited as the "Arizona Desert Wilderness Act of 1990" TITLE I, SEC. 101. (c), and the survey in Townships 35 North, Ranges 7 and 8 West, and Township 34 North, Range 8 West, Gila and Salt River Meridian, Arizona, is in compliance with the provisions as set forth in said act.

For the history of surveys refer to the survey record of the individual townships.

The lottings and areas are as shown on the individual township plats, accepted under this Group.

This survey was executed by Gordon R. Bubel, Cadastral Surveyor beginning August 13, 1996, and completed July 16, 1997, pursuant to Special Instructions dated July 30, 1996, for Group No. 806, Arizona.

#### Wilderness Area



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Other metes-and-bounds land descriptions published in the Federal Register either should be copied from official records, written by a land surveyor, or referred to a land surveyor for review of the accuracy and sufficiency of the description. For additional information, refer to Chapter III of the Specifications.

#### Natural



#### Artificial



Let us first cover the elements that create a metes-and-bounds land description. The metes-andbounds survey generally includes the use of physical monuments. The monument may be a natural object, such as a river, lake, rock ledge or ridge; or man-made, such as a wall, ditch, or road, which defines and delimits the location of a boundary line.

Man-made, or artificial monuments, like marked stones, posts or pipes with marked caps set by the surveyor are most often used to identify the terminus point (beginning or ending point) of a surveyed line.



Thence S 60° 05' E with the line common to land of Mrs. Mary Olbum 23.07 chains to corner 5, the corner common to land of Mrs. Mary Olbum, in the line 4-5 of the Grandin & Slater Tract (224), in line common to Warrants 5275-5248, in a second growth of oak, maple

The metes-and-bounds survey may also reference previously surveyed or described boundary lines. An example of this in a description of land would be "along the west boundary of the Jones parcel", or as shown here "with the line common to the land of Mrs. Mary Olbum."



Thence S 44° 05' W with part of the line 4-5 reversed of the Grandin & Slater Tract (224), with the line common to Warrants 5275-5248, 13.68 chains to the Place of BEGINNING, containing forty-two and six tenths (42.6) acres of land be the same more or less.

Typically, the survey will show or list out the directions and distances measured along the boundary lines.

The surveyor then uses these measurements to calculate the area within the surveyed parcel of land. Take a few moments to review the description. When completed, select the Forward button to continue and we will discuss how to interpret and read bearings.



Bearings are an expression of direction by dividing the Earth's sphere into quadrants and expressed in terms of NE, SE, SW, and NW by angles measured from True North or South. Bearings in descriptions of land are formatted almost like how you would say it in a sentence "From North, this line goes 57 degrees towards the East, and is written as: "North-space-57-space-degrees-space-East" or in abbreviated format: "N-period-space-57-degree symbol-space-E-period".

Here are a few more examples: S. 20° E., S. 40° W., and N. 30° W. Distances can be presented in various units of measure, but typically are shown in feet or chains in federal land descriptions.



A statement of quantity of the delimited land, or area, usually follows the boundary line measurements. In most cases, area is expressed in acres. Where justified by the accuracy of the survey measurements, the value may be carried to the nearest hundredth of an acre or be expressed by square footage.



**Protraction Diagram** 

Approximate areas should be indicated as such and given to the nearest full acre, as shown here in parentheses with in protraction blocks. Whole sections are considered to contain 640 acres.



Lesson 2: Natural and Artificial Boundaries

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#### Objectives

After completing this lesson, you should be able to:

- · Compare and contrast natural vs. artificial boundaries
- Identify ambulatory descriptions



After completing this lesson, you should be able to; compare and contrast natural vs. artificial boundaries and identify ambulatory descriptions.

#### **Natural Boundaries**

thence northeasterly on said hydrographic divide and the hydrographic divide separating drainage from the west into Willow Creek upstream and downstream of elevation 5,140 feet passing through a summit with an elevation of 5,492 feet, 0.8 mile to the intersection of 5,440 foot contour;



Occasionally, boundaries of land are defined entirely or in part by natural monuments, such as divides or straight lines connecting prominent features of topography.

In referring to a natural monument such as a divide or peak, the specific line or point intended to be used should be described with sufficient particularity as to be capable of definite identification and susceptible to only one interpretation.

#### **Natural Boundaries**



#### Legally Defined by:

- Location of feature
- Words "along" or "with" the feature

Boundaries of this sort, are normally winding, and they legally define by the location of the feature and not by the straight lines between angle points. The intent should be clear if the boundary is described by words like "along or "with" the feature.



When referring to permanent artificial monuments such as highways, railroads, or utility lines, the specific line must be described with sufficient particularity as to be capable of definite identification and susceptible to only one interpretation. The description should specify whether a right-of-way line, center line, or another location is intended.



Note: The following is based on the center line of the east bound track of the Burlington Northern and Santa Fe Railway, (Seligman Subdivision), as measured. An unrecorded document, obtained from the Burlington Northern and Santa Fe Railway, titled: No. 220-11975, BNSF RAILWAY Right of Way and Track Map Line Segment 7200 M.P. 372 to M.P. 376 Formerly AT&SF RY, was used as a supporting document. Burlington Northern and Santa Fe Railway, is hereinafter abbreviated B.N. & S.F. Railway.

#### **Consult with Agency Surveyor**

Specifications Reference: Natural and Artificial Boundaries, Chapter III

Also, over time, roadways and utility lines can move via official actions or unofficial activity; typically, the location on the date of the description will be considered the best available evidence of the party's intent. Here again, consulting with an agency surveyor is advisable.

#### **Referenced as Specific Line Along:**

- High water mark
- Medial line
- Thread
- Line of mean high tide

#### ...to Point 24;

Thence to the confluence of North Fork Crooked River with Deep Creek, and thence up the thread of Deep Creek to the east line of the described wild and scenic river boundary corridor;



Ambulatory descriptions are those that contain references to described limits that do not have fixed positions or positions that are subject to change over time. An example is describing land to limits on water boundaries.

These descriptions are generally referenced to a specific line along a water body such as the ordinary high water mark, medial line, thread, line of mean high tide, etc. For example "...to Point 24; Thence to the confluence of North Fork Crooked River with Deep Creek, and thence up the thread of Deep Creek to the east line of the described wild and scenic river boundary corridor;"



Investigation of the South Fork of the Snake River

Water boundaries are always subject to change by natural forces and may add or take land away from an upland owner. Describing such boundaries would be is similar to, if not the same as, the format used in writing a metes-and-bounds description. The example shown here is "Investigation of the South Fork of the Snake River." On the map, the following areas are marked: changes in meanders due to normal erosion and accretion, avulsion, channel moved westerly, accretions to avulsed upland, and accretions to upland. However, descriptions written along the meanders of a water body probably are not describing a fixed boundary line but courses and distances in the near vicinity of the water body.

SkillCheck						
Identify if the element is a natural or artificial boundary.						
•	Mountain Divide	А.	Natural			
•	Stone Wall	В.	Artificial			
•	Road					
•	Numbered Post					
•	Medial Line					
•	Shoreline					
	River					
•	Ditch					
Correct An	swers:					

A. Mountain Divide, Medial Line, Shoreline and River

B. Stone Wall, Road, Numbered Post, Ditch



# Lesson 3: Primary Writing Parts

#### Objectives

#### After completing this lesson, you should be able to:

• Describe the primary writing parts of descriptions of land for metes-and-bounds surveys



After completing this lesson you should be able to: describe the primary writing parts of descriptions of land for metes-and-bounds surveys.



When writing a metes-and-bounds description of land, you will always begin with the caption or preamble. The caption provides the general location of the lands to be described, such as city, county, and state. The description can include the section, township, and range; principal meridian; county and state; or subdivision or map reference with the city, county, and state.

It may also be a combination of any of these. The caption is used to locate the general vicinity of the land being described. The details of the location of the lands being described are contained within the body of the description, which we will cover next.

COMMENCING at Angle Point No. 1, on the section line between sections 11 and 12, marked with an anchored galvanized rod with aluminum cap marked as described in the BLM official field notes filed June 12, 2014 and the POINT OF BEGINNING of the herein described parcel; Thence, North 43°56'18" East, on line 1-2 of a portion of Parcel A, a distance of 99.80 feet to Angle Point No. 2, marked with an anchored galvanized rod with aluminum cap marked as described in the BLM official field notes filed June 12, 2014; Body Specifics for locating Thence, North 69°25'18" East, on line 2-3 of a portion of Parcel A, a distance of 161.10 feet to Angle Point No. 3, marked with an anchored galvanized rod with aluminum cap the land or space marked as described in the BLM official field notes filed June 12, 2014; Avoid abbreviations Thence, North 38°48'18" East, on line 3-4 of a portion of Parcel A, a distance of 287.90 feet to Angle Point No. 4, marked with an anchored galvanized rod with aluminum cap marked as described in the BLM official field notes filed June 12, 2014; Thence, North 51°53'48" East, on line 4-5 of a portion of Parcel A, a distance of 161.80 feet to Angle Point No. 5, marked with an anchored galvanized rod with aluminum cap marked as described in the BLM official field notes filed June 12, 2014;

The body of a description contains all the specifics for locating the land or space it delineates. Abbreviations within the body should be avoided whenever possible.

#### **Body Elements**



The body is a combination of all or portions of the following elements used to describe the land and to reference its location to the surrounding lands: point of commencement, point of beginning, course (bearing or direction), and distance.

#### **Body Elements**

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Thence, on line 5-6 of a portion of Parcel A, the following two (2) courses: 1. North 14°21'30" East, a distance of 162.50 feet to a point on the east and west center line of the SW1/4 of section 12, 2. North 14°21'30" East, a distance of 116.10 feet to Angle Point No. 6, marked with an anchored galvanized rod with aluminum cap marked as described in the BLM official field notes filed June 12, 2014;

- Calls for monuments
- Bounds or adjoining lands
- Qualifying terms and descriptions
- Calls by reference

Calls for monuments and bounds or adjoining lands with qualifying terms and descriptions, and calls by reference.

#### **Body Elements**

Thence, North 00°56'18" West, along a portion of Parcel A, identical with a portion of the section line between sections 11 and 12, a distance of 266.10 feet to Angle Point No. 1., hereinbefore described, being the POINT OF BEGINNING, containing 39.78 acres of land.

Basis of Bearings: Are based upon the Bureau of Land Management (BLM) official plat of survey, officially filed June 12, 2014. Note: All reported distances are horizontal ground distances rounded to the nearest one tenth of a foot and the directions (bearings) are referenced to the true meridian and rounded to the nearest one tenth of a minute.

- Closing call to the point of beginning
- Area of land contained
- Basis of bearings

Closing call to the point of beginning or other known locatable point or line, area of land contained (if applicable), and basis of bearings

#### Body Elements

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This is the final land description of the White Canyon Wilderness boundary as required in section 101(c) of the Desert Wilderness Act. It describes the boundary for White Canyon Wilderness.

All lines of the Public Land Survey System referenced in this description are according to the latest official survey plats and notes unless otherwise specified. Descriptions for parallel offsets are measured from the apparent road center lines of the traveled way and are intended to follow the general configuration of the feature. All courses in this description are true mean bearings and ground elevation distances.

• Information that can assist with the accurate location

Any additional information that can assist with the accurate location of the land being described or its clauses, which we will discuss next.

#### Clauses

- Follow the body of land description
- Clarify, add, or restrict

Meaning and intending to convey a portion of the land acquired by the grantor from Joe Smith as shown on Barrett County Record of Survey No. 12534.

Qualifying Clause	Example
Updated by Survey	Exhibit "A": Attached hereto and made a part of
Use or Ownership Right	<ul> <li>Reserving all minerals; except coal or</li> <li>Together with an easement for ingress and egress</li> </ul>
Severed from Subject Property	Subject To a 66 foot wide road parcel, Document No. 652, filed February 01, 1906, in the official records of Sherburne County, Minnesota.
Terms and Conditions (Reversionary rights or reverters)	Used for health facilities only

Clauses usually follow the body of a land description and are for the purpose of clarifying, adding, or restricting some ownership or use to the land being described. A clarifying clause can clearly define the intent of the party(s). For example, when a land description has been updated by survey: Meaning and intending to convey a portion of the land acquired by the grantor from Joe Smith as shown on Barrett County Record of Survey No. 12534.

A qualifying clause can specify reserving some use or ownership right for a previous owner and an augmenting clause adds some right or privilege to the land described. Clauses also identify land right s of use or ownership right that has already severed from the subject property. Often these types of clauses refer to legal documents of record. And a clause may specify what happens if certain terms and conditions of use and ownership rights are not met. These are referred to as reversionary rights, or reverters.

#### Words Have Legal Significance Proper Usage Is Extremely Important

Words	Definition
Except	Excluding from the area
Reserving	Taking back a part of something granted
Subject to	Reservation already exists, such as subordinate to, subservient to, limited by, or charged to
Exception or Reservation	Used together, certain property withdrawn from description and/or independent right is created and vested in the grantor

Specifications Reference: The Parts of Metes-and-Bounds Descriptions, Chapter III

The words in clauses have legal significance and proper usage is extremely important.

Here are definitions of some of the most common:

*Except* means excluding from the area or cutting off a portion of the whole area that has just been described, or withdrawals from the description of the property conveyed. *Reserving* means keeping a certain right from the area just granted or taking back a part of something granted.

Subject to refers to a reservation already existing; when used in a conveyance it means "subordinate to," "subservient to," "limited by," or "charged to,"

When *exception* and *reservation* are used together, the customary meaning holds that certain property is both withdrawn from the description of what is conveyed and/or an independent right to an interest in the land is created and vested in the grantor.

You must be sure of the intent and therefore applicability of the words used in the clauses when interpreting or writing descriptions of land.

Refer to Chapter III of the Specifications, under The Parts of Metes-and-Bounds Descriptions for additional details.

SkillC		
Match the pr	imary writing parts to its descriptors. Body Clauses Caption	<ul> <li>A. General location of lands / city, county, state</li> <li>B. Specifics for locating the land or space</li> <li>C. Clarifies, adds to or restricts from</li> </ul>
Correct Ans A: Caption B. Body C. Clauses	wers:	
-	SkillCheck When writing a clause, which of the following "Reservation"? (Select all that apply.)	correctly describes an "Exception" or a
	<ul> <li>A. Certain property withdrawn from deathe grantor.</li> <li>B. Adding to the area</li> <li>C. Excluding from the area</li> <li>D. Previously granted</li> </ul>	scription and independent right is created and vested in

Correct Answers:

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A. Certain property withdrawn from description and independent right is created and vested in the grantor C. Excluding from the area



Having completed this module you should now be able to: define the types of monuments and measurements used in metes-and-bounds descriptions, compare and contrast natural vs. artificial boundaries, and identify the primary writing parts of descriptions of land for metes-and-bounds types.

#### Quiz Answer Key

1. True or False: Metes-and-bounds surveys, where incorporated into PLS, may be referred to as special surveys, and the land description is a reference to the survey designation.

Correct Answer: True

#### 2. Identify if the monuments are natural or artificial.

Correct Answers: A. Wall, Ditch. Road. Marked Stone B. River, Lake, Rock Ledge, High Water Mark

# 3. True or False: The metes-and-bounds survey generally includes the use of physical and/or natural monuments.

Correct Answer: True

4. Which of the following bearing examples are written correctly? (Select all that apply.)
A. N. 57° E.
B. S 20 E
C. E forty degree S
D. N. 30° W.

Correct Answers: A. N. 57° E, D. N. 30° W.

5. True or False: A statement of quantity of delimited land usually follows the boundary line measurements. In most cases, area is expressed in quadrants.

Correct Answer: False

6. True or False: Ambulatory descriptions are those that contain references to described limits that include fixed positions.

Correct Answer: False

7. Which of the following is the correct order of the three primary writing parts for special surveys?

A. Caption, Body, Clause

B. Body, Caption, Clause

- C. Clause, Body, Caption
- D. Clause, Caption, Body

Correct Answer: A. Caption, Body, Clause

8. Which of the following is a legal clause type? (Select all that apply.)

- A. Except
- B. Reserving
- C. Subject
- D. Exception and reservation
- E. Verified

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F. Official action

Correct Answers A. Except, B. Reserving, C. Subject, D. Exception and reservation

9. "Thence N 87 degrees 15 minutes W" is an example of which of the following?

- A. Body
- B. Caption
- C. Clause

Correct Answer: Body

10. "Subject to a 66 foot wide road parcel, Document No. 652, filed February 01, 1906, in the official records of Sherburne County, Minnesota" is an example of which of the following? A. Body

- B. Caption
- C. Clause

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Correct Answer: Clause