

## Township, Range and Section

Much of Arizona is divided according to a rectangular coordinate system called the United States System of Surveying the Public Lands, or more commonly, the Public Lands Survey. Through a system of land subdivision based on east-west and north-south lines, land in Arizona is divided into squares called townships, ranges and sections.

Under the Public Lands Survey, all tracts of land are related to one “point” in Arizona. The point is the intersection of an east-west “baseline” and a north-south “meridian.” The baseline and meridian meet in Arizona where the Gila and Salt Rivers meet.

The Public Lands Survey divides the land into “townships.” A township is a square parcel of land that is six miles on each side. Its location is established as being so many six-mile units, called Townships, north or south of its baseline, and so many six-mile units, called Ranges, east or west of its meridian.

Each township is further divided into 36 parts called “sections.” Each section contains 640 acres or one square mile. Because of the Earth’s curvature, not all townships are square, not all townships contain 36 sections and not all sections contain 640 acres.



## Public Land Survey: Understanding Cadastral Location/ Legal Description

The logo for the Arizona Department of Water Resources, featuring the letters "ADWR" in a bold, blue, sans-serif font.

**ARIZONA DEPARTMENT OF  
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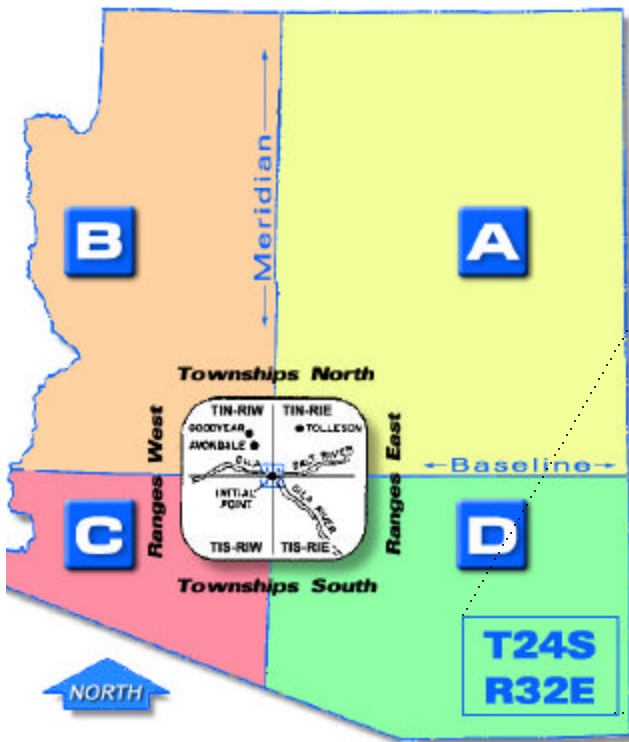


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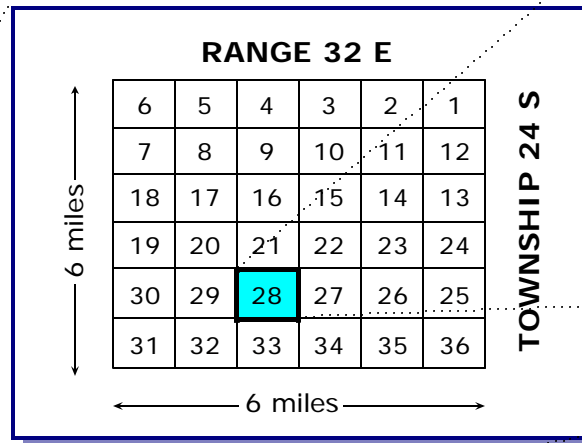
# Legal Description of Well Location

The terms *cadastral location* and *legal description* both refer to a method of locating land according to a rectangular coordinate system commonly known as the Public Lands Survey. Much of Arizona has been mapped according to this system. The initial point of reference was arbitrarily chosen as the confluence of the Gila and Salt Rivers. From this initial point, a north-south *meridian*, and an east-west *baseline*, divide the state into four unequal **quadrants** (A, B, C, D). (Baseline Road in Phoenix is named for our state's baseline. See the map below.)



Each quadrant was surveyed and subdivided into congressional *townships*, with each square-shaped township typically six miles on each side, or 36 square miles in all. (Not all townships are exactly the same size due to landform variations and the curvature of the earth.) Beginning at the initial point and the number 1, each township is designated as being so many six-mile units – called **Townships** (capital T) – north or south of the baseline, and so many six-mile units – called **Ranges** – east or west of the meridian. The Township and Range together define a particular township.

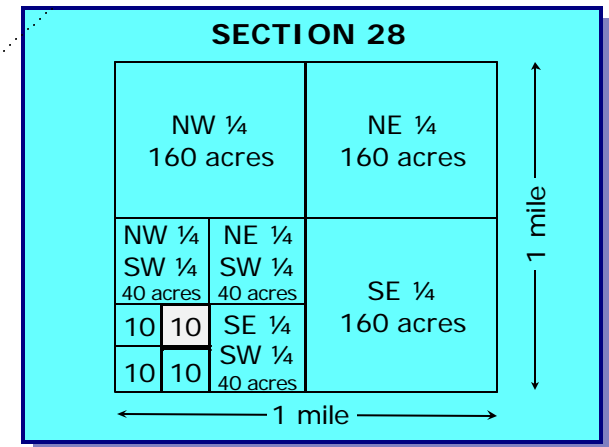
Each township is divided into 36 equal parts called **sections**. Each section is approximately one square mile, about 640 acres. Each 640-acre section can be subdivided into four 160-acre quarters. Each 160-acre quarter is further subdivided into four 40-acre quarters, and each 40-acre quarter is further subdivided into four 10-acre quarters. Each 160-, 40- and 10-acre quarter is designated as the northeast, northwest, southwest, or southeast quarter (a, b, c, d respectively).



In the example here, the property for a well is in the southeastern-most township in the state, 24 townships south of the baseline, and 32 ranges east of the meridian, i.e., **T24S, R32E**. Within this township, the property lies in Section 28. The 10-acre white area where the well is located is in the southwest 160-acre quarter, then the southwest 40-acre quarter, and finally, the northeast 10-acre quarter. The legal description would be written as follows:

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
<b>24S</b>	<b>32E</b>	<b>28</b>	<b>SW ¼</b>	<b>SW ¼</b>	<b>NE ¼</b>

The cadastral location would be written as follows: **D (24-32) 28 cca**



Township and Range data can be found on U.S. Geological Survey maps, and many metropolitan street atlases.