

THE THREE MILE METHOD OF SURVEYING IN THE UTE MERIDIAN

Mesa County, Colorado

Mesa County, located at the confluence of the Grand (Colorado) and Gunnison Rivers on the Western Slope, is a very unique area for land surveying. The original GLO surveys are based on three meridians: 6th Principal Meridian, New Mexico Principal Meridian and the Ute Meridian. Therefore, it is very important to know and understand, which method of surveying is required for any given township in the county. Townships based on the 6th and New Mexico meridians, use the standard BLM section retracement and breakdown methods. Surveying in the Ute meridian however, is unique, and very different from a standard section retracement or breakdown; and adhering to the 3-Mile Method is required.

Basically the Ute Meridian covers the Grand Valley from the east end in Palisade to the west end of Mack through Grand Junction, Fruita, and Loma. It also covers the area south of Grand Junction to Whitewater. The Ute Meridian was established in 1880 to provide 40 acre tracts for the Uncompahgre Utes. The survey had to be done quickly in order to layout a reservation for the Indians. For this purpose the Special Instruction, sent out by the Department of the Interior, General Land Office (The Three Mile Method), created a very different type of section. However, once the reservation was established the decision was made to move the Indians to another location. Therefore, the area was never used as a reservation. The Three Mile Method, however, turned out to be very good for creating 40 acre tracts for agriculture and farming in the Valley; and for establishing a network of control, which included all of the 1/16 corners of each section.

The Three Mile Method requires running 3 additional lines for each section. Instead of the traditional layout of a section, all 1/16 corners are set along the perimeter of the section; interior lines are then run from East to West, from the opposing 1/4 corners or 1/16 corners in the Section lines. Running the 3 additional lines from East to West across the section (lines 5, 6, 7 in Fig1) is the major difference between the 3-Mile Method survey and a traditional section layout.

In retracing the interior lines of a Three Mile section in the Ute, if the surveyor determines that a 1/16 corner is truly lost, the surveyor must re-established the corner by single proportion from the nearest found corners to the East and West within the section. In other words, the 1/16th corners North or South of a line are not to be used to establish the interior 16th corners.

Figure 2 shows how to re-establish the SW 1/16 corner if it is lost. The corner would be set on a straight line between the S 1/16 corner on the East line of the section and the

SECTION 15

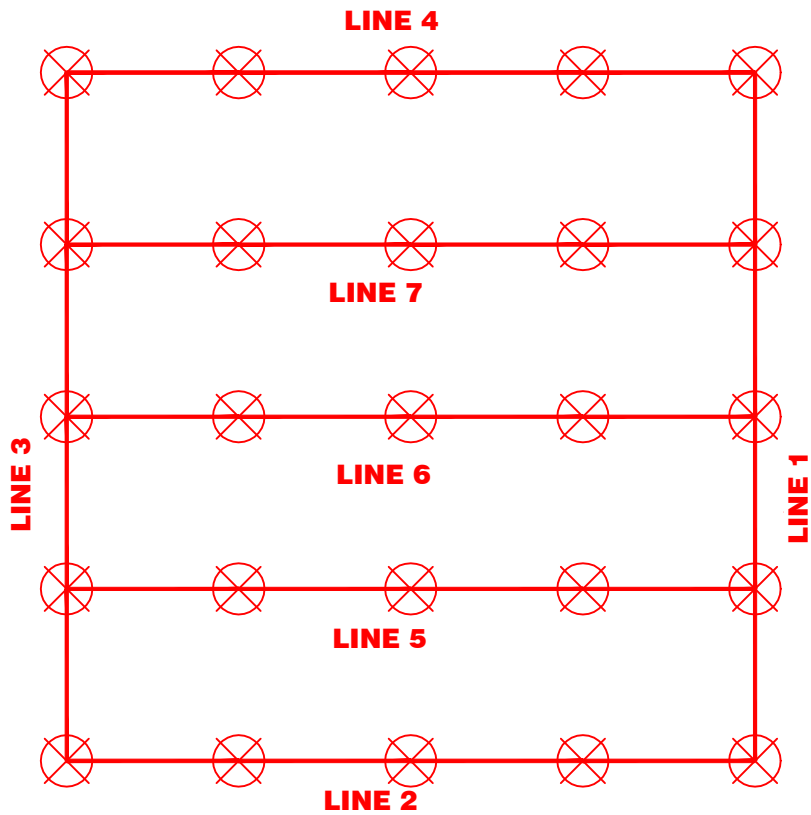
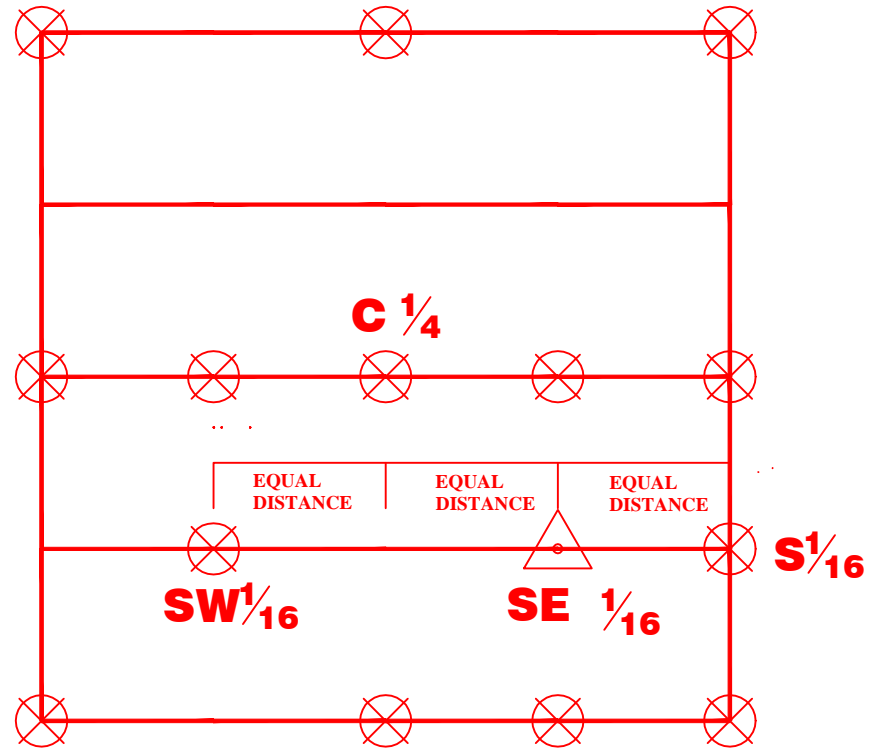


Fig 1



S 1/4
Fig 2

SW 1/16 corner using an equal distance spacing for the 1/16 corners. No other corners to the North or South would be used to establish the corner.

After establishing the 1/16 corners by the 3-Mile Method , the BLM Survey Manual standard section breakdown is used to create any divisions, less than 40 acres, that require aliquot corners smaller than 1/16th corners.

There are exceptions to the Three Mile method in the Ute Survey in which a surveyor would use a standard section breakdown. As with any retracement, a surveyor must obtain the original township plat and field notes before starting a survey in the Ute Meridian

See next page for figures and original instructions.

SPECIAL INSTRUCTIONS

TO

Daniel G. Major Surveyor

December 20, 1880

For survey of lands assigned to the Uncompahgre Utes in the State of Colorado

Department of the Interior

January 6th, 1881

Approved

Recorded in Contract Book No 6 page 293

Secretary

For card see Colorado Vol. 3 page 396

Special Instructions
Department of the Interior
General Land Office
December 20th 1880

Sir:

Having been designated by the Secretary of the Interior, as surveyor of that part of the Agricultural lands (recently ceded to the United states by the confederated Band of Ute Indians in Colorado) which under the agreement, has been assigned to the Uncompahgre Utes on Grand River near the mouth of the Gunnison River as mentioned in your contract of even date, and to which, under the provisions of an Act of Congress approved June 15, 1880, the said land is to be removed by the Commissioners appointed under the Act, and having been directed by the Department to proceed at once into the field of your operations, with a view of exploring the country and establishing Initial Point of the contemplated surveys as well as running and marking an independent Base and Meridian lines, it will now be your duty to survey the necessary Standard parallels, Guide Meridians, township interiors and subdivisional lines. The foregoing surveys being requested the proper descriptions of the lands allotted to the Uncompahgre Utes conformity with the rectangular system of the public land surveys, and

these instructions, and in accordance with the printed Manual of Surveying Instructions of February 22, 1885, so far as the same may be applicable to this work. As the provisions of the first section of the Act contemplate the allotments to be made in severalty of agricultural and grazing lands, you will subdivide each section of land surveyed by you into quarter-quarter sections or forty acre tracts as near as may be conformably to the accompanying diagram of a section which illustrates the method to be observed by you in the subdivision of a section into forty acre legal subdivisions. It will be seen that in order to provide all the corners to each subdivision, so that each allottee may see the boundaries of his land, the system will require three additional East and West lines to each section besides those called for by the printed Manual of Surveying Instructions. The additional lines will be run in random and true lines, from the quarter section and quarter-quarter section corners to the opposite corresponding corners within each section as is shown on the diagram in yellow color. In running these lines you will erect permanent corners on the true lines at the equidistant points of the character required for quarter section corners, marking the corners 1/16 with the exception of the centre section corners which shall be marked 1/4 . Stone corners of not less size than are required by the Manual should be preferred to posts, with two pits where practicable, in the direction of the cardinal points, so as to indicate the course of the lines.

You will provide yourself with appropriate instruments, and a chain of standard measure. You will be furnished by this office with field books necessary to mote your operations in the form prescribed in the Manual and in these instructions. You will also be supplied upon application to this office, with the requisite field note paper and blank township plats for the purpose of making your returns of the survey in triplicate. The original field books and plats of your surveys will be delivered by you to the Ute Commissioners for their use in carrying out the provisions of the Act under which they hold their commissions, such books and plats to be submitted by then to the Secretary of the Interior with necessity and the scope thereof is not now apparent for want of the information in required to the number of the Uncompahgre Indians entitled to the lands in severalty, a nominal sum of eighty thousand dollars being the double of the estimated amount which may be due to you under the contract, is inserted in the Bond which you are required to furnish, so that your contract may be acted on by this office and submitted to the Secretary of the Interior for his approval, and when so approved, your own copy will accompany these instructions, the receipt of which you will duly acknowledge.

J. A. Williamson
Commissioner

Daniel G. Major Esq.
Surveyor of the Uncompahgre Ute land in Colorado