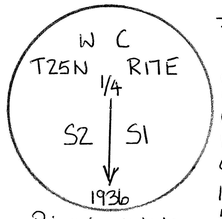
Guide Meridians (G.M.) + Standard Parallels (S.P.) SET

Break QUADRANGLE INTO TOWNSHIPS - RANGE + TOWNSHIP LINES

Division of a QUADRANGLE, or TRACT, INTO TOWNSHIPS is accomplished BY running RANGE LINES (NORTH) and TOWNSHIP LINES (EAST-WEST)
(R.) SOUTH (T) (TP)

RANGE LINES are True meridians started at the Standard corners



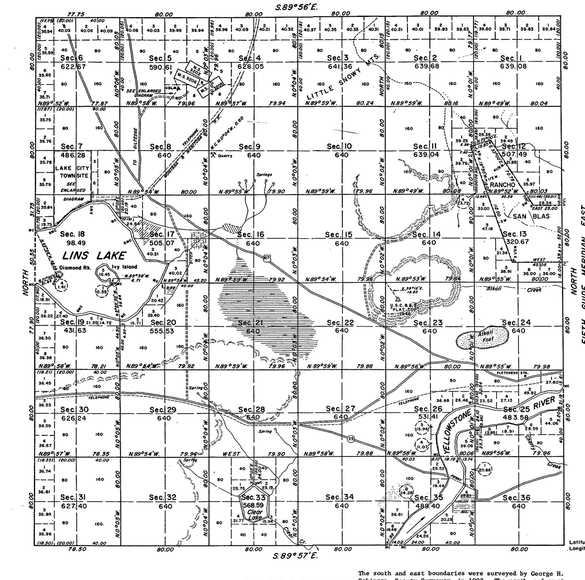
Pointing towards Corner.

WITNESS CORNERS - (WC) - Where a True corner Point falls within an unmeandered stream or lake, marsh, INACCESSIBLE PLACE, A WITNESS corner is established in a convenient location near by. Witness corners are set on all lines leading to the crn, UP TO 10 chains. IF A SUITABLE PLACE on a LINE can not be found then a witness corner can be placed in any direction UP TO 5 chains.

10 Chains = 660 feet
5 Chains = 330 feet

FALLING = 3-22 - The bearing of the True line is calculated from the falling of the random. The falling is the distance, on the normal, by which a line falls left or RIGHT of an objective corner. The temporary POINTS on any random line are REPLACED BY Permanent corners on the true line.

MANUAL
3-261 It is desirable that the alinement of a new LONGITUDINAL boundary shall not depart more THAN 14' From the true cardinal course. A Previously established boundary, every part of which is within 21' of cardinal....



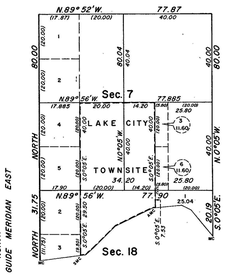
The southern portion of the Little Snowy Mountains is covered with a moderately heavy stand of pine, oak, and fir timber.

Area surveyed: 20,872.27 acres

The south and east boundaries were surveyed by George H. Robinson, Deputy Surveyor, in 1902. The north and west boundaries were surveyed by Robert Acres, Cadastral Surveyor, in 1970.

The survey of the subdivisional and meander lines of T. 15 N., R. 20 E., Principal Meridian, Montana, was executed by Robert Acres, Cadastral Surveyor, beginning June 1, 1972 and completed June 30, 1972, under Special Instructions dated April 1, 1972 for Group No. 123, Montana.

ENLARGED DIAGRAMS



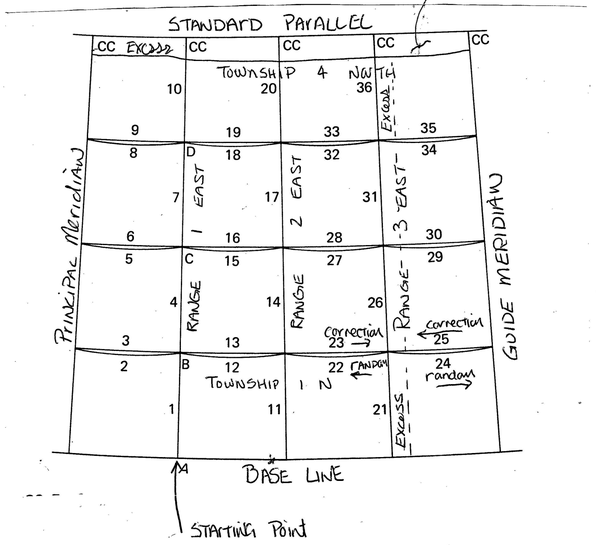
Latitude 45°46'02"N.
Longitude 107°54'13"W.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Washington, D.C. September 20, 1972

This plat is strictly conformable to the approved field notes, and the survey, having been correctly executed in accordance with the requirements of law and the regulations of this Bureau, is hereby accepted.

For the Director

Chief, Division of Cadastral Survey



1) Begin at the SOUTHEAST corner of the SOUTHWEST township, Point A, after checking the chain or TAPE AGAINST a 1-mile measurement on the Standard Parallel.

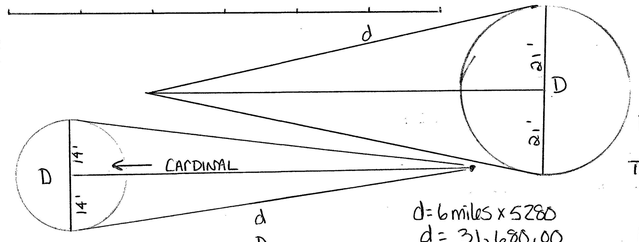
2) Run North on the True meridian for 6 miles (line 1), SETTING alternate section and QUARTER SECTION CORNERS every 40 chains. Set Township corner B.

3) From B, run a random line True West to intersect the PRINCIPAL meridian. Set TEMPORARY CORNERS every 40 Chains.

4) IF the random line has an excess of deficiency of 3 Chains or less ((Allowing for CONVERGENCE), AND A FALLING North or South of 3 Chains or less the line is accepted. It is then corrected back (LINE 3) and all corners are set in their PROPER POSITIONS. Any excess or deficiency is thrown into the most WESTERLY half-mile. The method of correcting a random line having an excess of 1 Chain and a North Falling of 2 Chains is shown Here → IF the random line misses the corner by more than the Permissable 3 Chains all 4 sides of the TOWNSHIP must be retraced.

6) The same Procedure is followed until the southeast corner, D, of the most northerly township is reached. From D, RANGE line 10 is continued as a true meridian to intersect the Standard PARALLEL or BASE LINE, where a closing corner is set. All of the excess or deficiency in the 24 miles is Thrown into the most NORTHERLY HALF-MILE.

7) The second AND THIRD RANGES OF TOWNSHIPS ARE run in the SAME WAY, BEGINNING AT THE SOUTH LINE OF THE QUADRANGLE.



With 21' of Arc
The linear = 2.93 Chains
Random must be within 3 Chains

d = 6 miles x 5280
d = 31,680.00

$\frac{D}{d} \times 206265 = Arc$

28' = 1680."

$\frac{D}{d}$ 206265" = 1680"

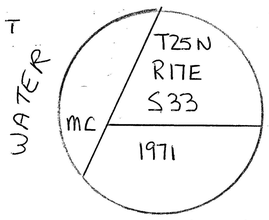
$\frac{14'}{1.95} = \frac{21'}{X}$

$\frac{D}{31,680} \times 206265 = 1680\ (31680)$

$D\ 206265 = \frac{53,222,400.00}{206265}$

D = 258.029
D = 258.029 Feet / 2

129.01 Feet = 1.95 Chains
14' of Arc = (129.01 Feet = 1.95 Chains in 6 miles)
21.50 feet = .32 Chains in 1 mile
= 32.57 Links in 1 mile or 80 Chains



MC marked on the 1/2 near the water

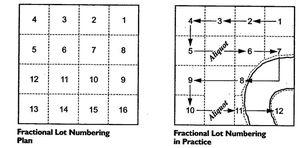
MEANDER CORNER (MC) - was established on SURVEY LINES intersecting THE BANK of a Stream having a Width Greater THAN 3 chains, 198 Feet, or a lake of 25 ACRES or more.

The ordinary mean-HIGH WATER LINE WAS used to set meander corners on NAVIGABLE streams. Meander Lines are run between meander Points Following the body of water on STRAIGHT LINES. Closure on a meander corner is 1/1280 in either LATITUDE or departure.

Meander Lines are not Boundaries but are Lines run for the PURPOSE of Locating the bodies of water, defining the SINUOSITIES of the banks of streams. They also control Area determination Where aliquot parts in a Section can not be established... FRACTIONAL LOTS ARE BOUSTROPHEDONICALLY Located around the water.

Meander corners can be used to control the direction of a line. They can also be used to Proportion LOST Corners

1 Chain = 66 feet
1 Chain = 100 LINKS
1 LINK = .66 Feet
1 LINK = 7.92 inches



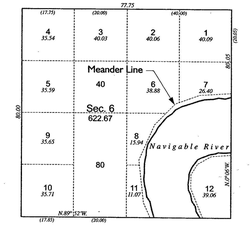


Figure 5.5 Fractional lots.

The particular lot 6 in Figure 5.5 is crossed by a navigable river. The northernmost tier of lots is numbered 1 through 4 from east to west. Then the second tier of lots is numbered west to east starting with lot 5, which is directly south of lot 4. East of lot 5 is an aliquot part, a quarter-quarter. East of that part is the fractional lot 6. It cannot be an aliquot part because a corner of it is inside the meander line that follows the northern bank of the river. East of lot 6 is lot 7, and it is also partially in the river. The east boundary of lot 7 is the section line, so the numbering of the fractional lots drops south to the next tier and proceeds east to west again. South of lot 7 the area is in the river, but directly west of the river is lot 8. West of lot 8 is an aliquot part

8) While the third RANGE is Being run, random lines are also Projected TO THE EAST and corrected Back. ANY excess or deficiency is thrown into the most WESTERLY HALF MILE. (ALL POINTS MAY HAVE TO BE MOVED DIAGONALLY TO THE corrected LINE, INSTEAD of JUST THE LAST POINT AS SHOWN Here →

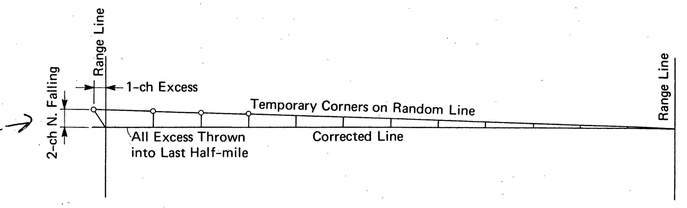


Figure 20-6. Double correction of random line for excess and falling.