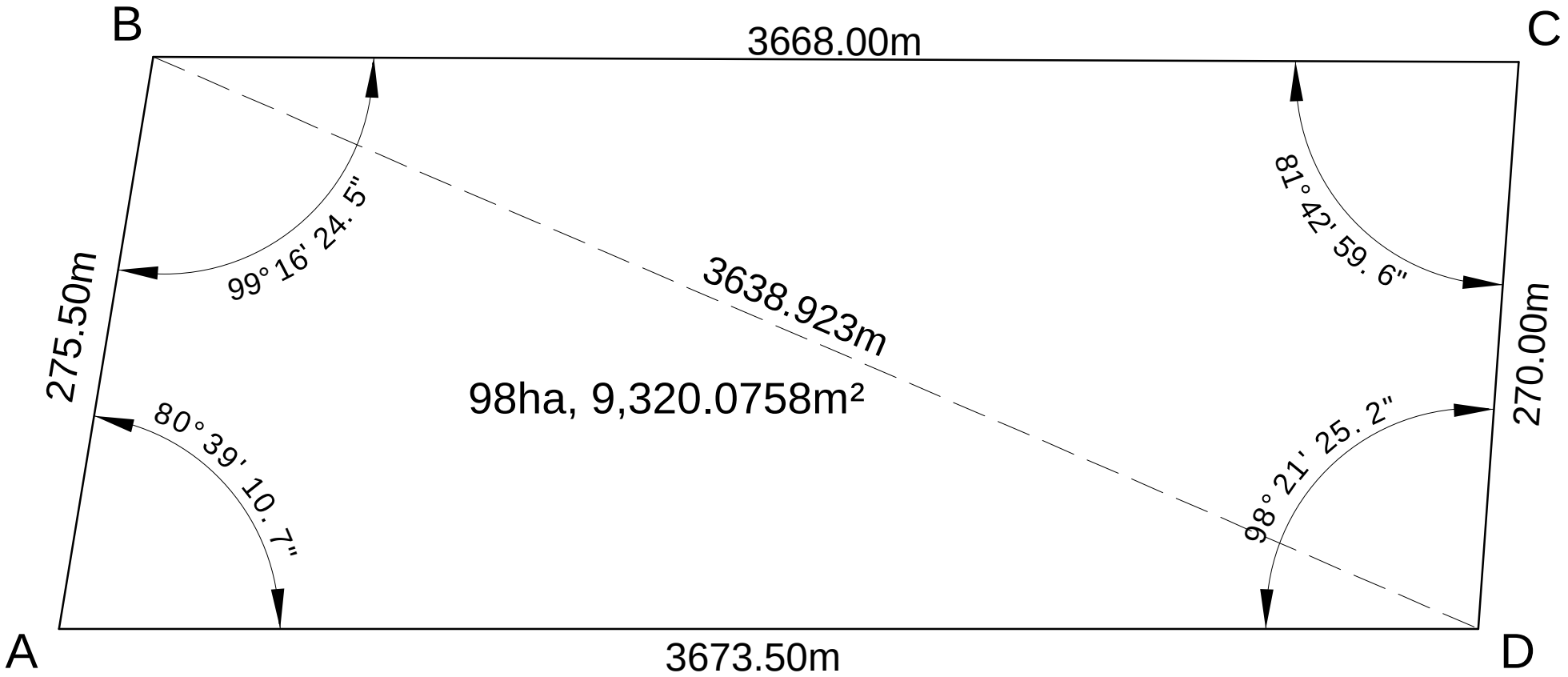
B
3668.00m
C
99° 16' 24. 5"
81° 42' 59. 6"
275.50m
3638.923m
270.00m
98ha, 9,320.0758m²
80° 39' 10. 7"
98° 21' 25. 2"
A
3673.50m
D

(NOT TO SCALE)

Straight Out of Argentina

My solution was to set up an Excel file that computed the following:

At point "A" the interior angle was first set to be 90°. This was to be the variable. (The angle could be converted to radians at this step or at the end.)

With a given angle at "A" the diagonal BD was computed by the Law of Cosines:

$BD^2 = AB^2 + AD^2 - 2 \cdot AB \cdot AD \cdot \cos A$

The computed diagonal length and sides AB and AD were used to compute area ABD by Heron's formula:

$\sqrt{(s)(s-AB)(s-AD)(s-BD)}$, where s = $\frac{AB+AD+BD}{2}$

Area BCD was then computed using sides BC, CD, and the calculated diagonal, BD.

The sum of the areas was compared to the known area and noted as over/under.

Angle A was varied, first by increments of 5° to determine a range, and then by increments of 1° to narrow the range. It converged rapidly to obtain 80°39'10.7"

Angles ABD, ADB, CBD, and CDB were computed from the triangle sides to get the interior angles.

(As a check, the same was done at corner "C" and corner "B" to check the data and see if the solution was unique. It appears to be.)