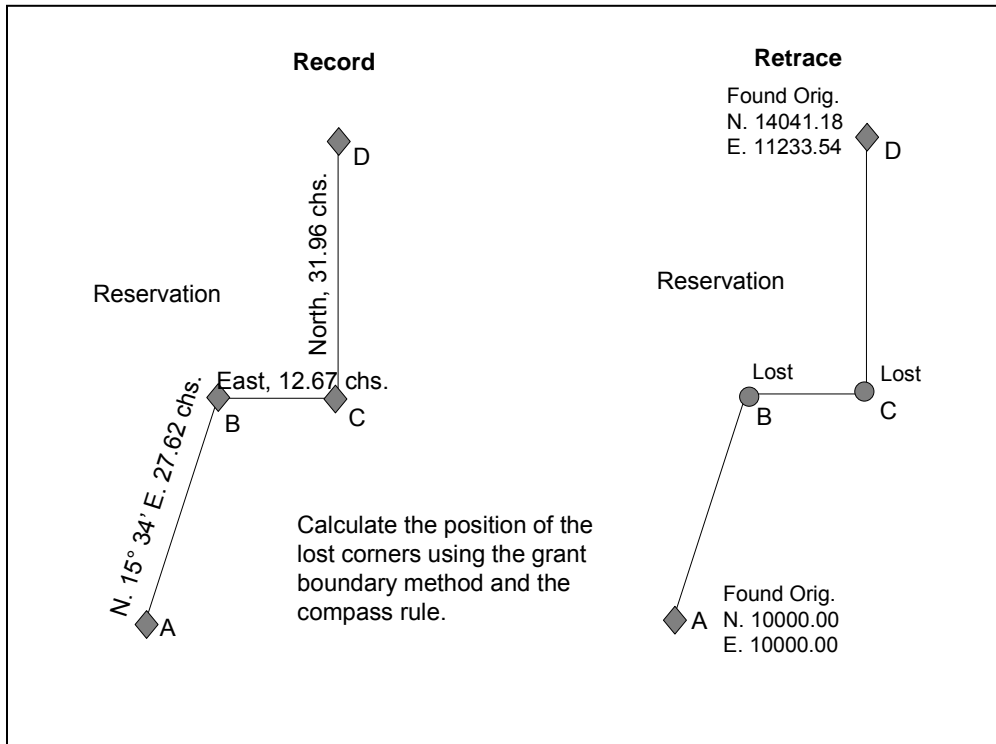


Grant Boundary and Compass Rule



Grant Boundary Calculation

Inverse between controlling corners: **Record** = N. 3865.42 ft., E.1325.41 ft.
 N. 18° 55’ 35” E., 4086.33 ft.
 Retrace = N. 4041.18 ft., E. 1233.54 ft.
 N. 16° 58’ 28” E., 4225.25 ft.

Angular rotation: 1° 57’ 07” counter-clockwise (from record to retrace)

Line A-B: N. 15° 34’ E. - 1° 57’ 07” = **N. 13° 36’ 50” E.**

Line B-C: N. 90° 00’ E. - 1° 57’ 07” = **N. 88° 02’ 53” E.**

Line C-D: N. 0° 00’ W. - 1° 57’ 07” = **N. 1° 57’ 07” W.**

Proportion: 4225.25 ft.(retrace) ÷ 4086.33 ft.(record) = 1.033996

1.033996 x 1822.92 ft. (27.62 chs.) = **1884.89 ft.**

“ x 836.22 ft. (12.67 chs.) = **864.65 ft.**

“ x 2109.36 ft. (31.96 chs.) = **2181.07 ft.**

Lat. and Dep. of each course:

Line A-B: N. 13° 36’ 50” E., 1884.89 ft N.1831.93 ft., E.443.66 ft.

Line B-C: N. 88° 02’ 53” E., 864.65 ft. N.29.45 ft. E.864.15 ft.

Line C-D: N. 1° 57’ 07” W., 2181.07 ft. N.2179.80 ft. W.74.29 ft.

Proportionate Position Corners B and C

Corner B: N.10000.00 + 1831.93 ft. = **N.11831.93** E.10000.00 + 443.66 ft. = **E.10443.66**

Corner C: N. 11831.93 + 29.45 ft. = **N. 11861.38** E.10443.66 + 864.15 ft. = **E.11307.81**

Compass Rule Calculation

Misclosure Record vs. Retrace

Record coordinates at D: Lat. N. 3865.41 ft., Dep. E. 1325.42 ft.

Retrace coordinates at D: Lat. N. 4041.18 ft. Dep. E. 1233.54 ft.

N. 175.77 E.-91.88

Length of all the courses: 4768.50 ft.

Correction to course AB: 1822.92 ft. (27.62 chs.) ÷ 4768.50 = 0.382284

0.382284 x N.175.77 = N.67.19

0.382284 x E. -91.88 = E. -35.12

Correction to course BC: 836.22 ft. (12.67 chs.) ÷ 4768.50 = 0.175363

0.175363 x N.175.77 = N.30.83

$0.175363 \times E. -91.88 = E. -16.11$

Correction to course CD: $2109.36 \text{ ft. (31.96 chs.)} \div 4768.50 = 0.442353$

$0.442353 \times N. 175.77 = N. 77.75$

$0.442353 \times E. -91.88 = E. -40.64$

Record Lat and Dep. of each course plus correction

Course A-B: $N.1756.05 + 67.19 = N. 1823.24$
N. 13° 59' 06" E., 1878.93 ft.

$E. 489.20 - 35.12 = E. 454.08$

Course B-C: $N. 0.00 + 30.83 = N. 30.83$
N. 87° 50' 50" E., 820.69 ft.

$E. 836.22 - 16.11 = E. 820.11$

Course C-D: $N.2109.36 + 77.75 = N.2187.11$
N. 1° 03' 52" W., 2187.49 ft.

$E. 0.00 - 40.64 = E. -40.64$

Proportionate Position Corners B and C

Corner B: $N. 10000.00 + 1823.24 \text{ ft.} = N. 11823.24$

$E. 10000.00 + 454.08 \text{ ft.} = E. 10454.08$

Corner C: $N. 11823.24 + 30.83 \text{ ft.} = N. 11854.07$

$E. 10454.08 + 820.11 \text{ ft.} = E. 11274.19$

