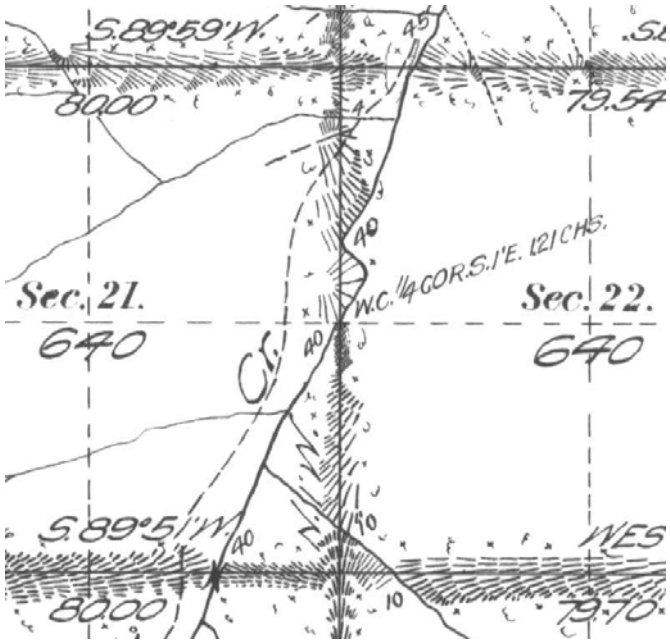
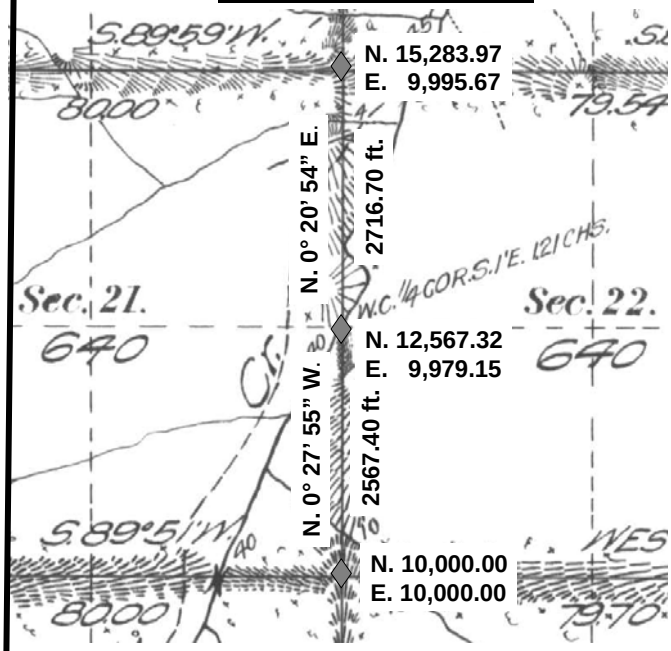
# Supplemental Exercise #3

**Original Record**



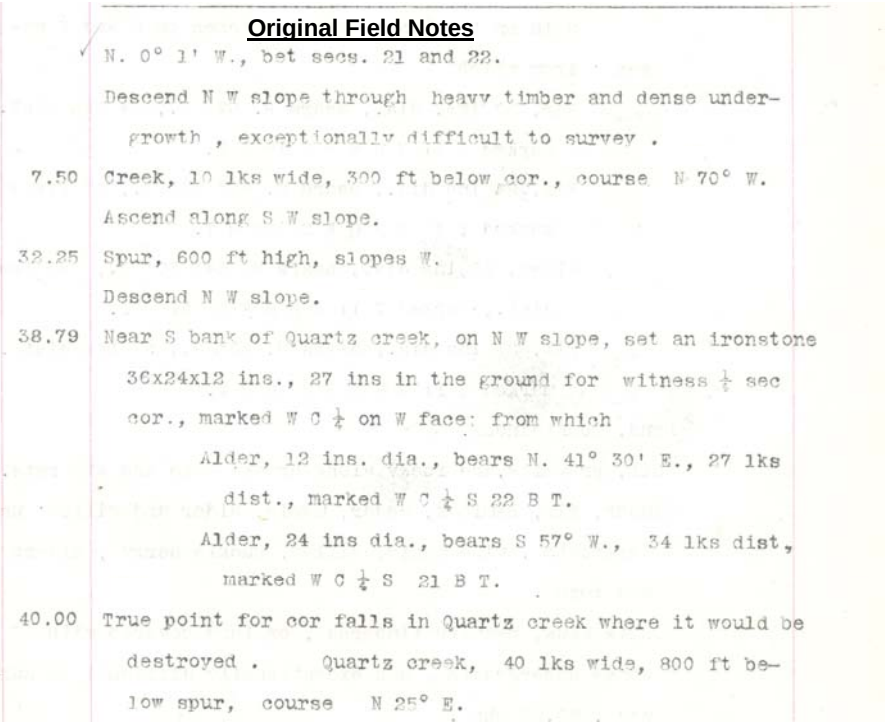

**Retracement Information**




**You have recovered the original cor. of secs. 15, 16, 21 and 22, the original cor. of secs. 21, 22, 27 and 28, and the original witness ¼ sec. cor. of secs. 21 and 22. Calculate the position of the true point for the ¼ sec. cor. of secs. 21 and 22.**

# Answer

1. **The original plat reports the bearing and distance from the true point for the corner to the Witness Corner. In this problem the Witness Corner is S. 0° 01' E., 1.21 chains (79.86 ft.) from the true point.**



**Original Field Notes**

N. 0° 1' W., bet secs. 21 and 22.
Descend N W slope through heavy timber and dense under-
growth , exceptionally difficult to survey .
7.50 Creek, 10 lks wide, 300 ft below cor., course N 70° W.
Ascend along S W slope.
32.25 Spur, 600 ft high, slopes W.
Descend N W slope.
38.79 Near S bank of Quartz creek, on N W slope, set an ironstone
36x24x12 ins., 27 ins in the ground for witness ¼ sec
cor., marked W C ¼ on W face: from which
Alder, 12 ins. dia., bears N. 41° 30' E., 27 lks
dist., marked W C ¼ S 22 B T.
Alder, 24 ins dia., bears S 57° W., 34 lks dist,
marked W C ¼ S 21 B T.
40.00 True point for cor falls in Quartz creek where it would be
destroyed . Quartz creek, 40 lks wide, 800 ft be-
low spur, course N 25° E.

2. **On north-south lines the distance is not normally shown on the original plats when it is an even 80.00 chains.**

3. **For corners that would be reestablished by single proportionate measurement, the true point for the corner will be determined by single proportionate measurement between the witness corner and opposite controlling corner. Therefore the true point for the ¼ sec. cor. of secs. 21 and 22 will be determined at single proportion between the cor. of secs. 15, 16, 21 and 22 and the W.C. ¼ sec. cor. of secs. 21 and 22.**

**2716.70 ft. (retracement) ÷ 2719.86 ft. (record) = 0.998838**

**0.998838 x 79.86 ft. (record W.C. to true point) = 79.77 ft.**

**Sin N. 0° 20' 54" E. (true bearing) x 79.77 ft. = 0.48 ft. East**

**Cos N. 0° 20' 54" E. (true bearing) x 79.77 ft. = 79.77 ft. North**

**E. 9,979.15 + 0.48 = E. 9,979.63**
**N. 12,567.32 + 79.77 = N. 12,647.09**

4. **Due to rounding, the inversed bearings between the coordinates shown will result in a slight bearing break (0° 00’ 14”) at the true point. The bearing break does not actually exist and your plat should, of course, report a straight line.**