

SECTION 45 – PRELIMINARY SURVEY

1005. Outline of procedure:

- a. Traverse the proposed route in a series of straights. Measure the length of each straight with a chain or steel tape. Determine the angles between adjoining straights, preferably with a theodolite.
- b. Locate all important features relative to the traverse line.
- c. Fix levels along the traverse line either by spot-heighting or by taking readings at each 100 foot point and at changes of gradient. In hilly country make cross sections at intervals of 100 or 200 feet, extending outwards from 100 to 600 feet on either side of the center line.
- d. Plot the field work and prepare a contoured map.

1006. A typical preliminary traverse is shown in Figure 10.1. The preliminary contoured map produced from it is shown in Figure 10.2. Recommended scales are given in Table 10.1.

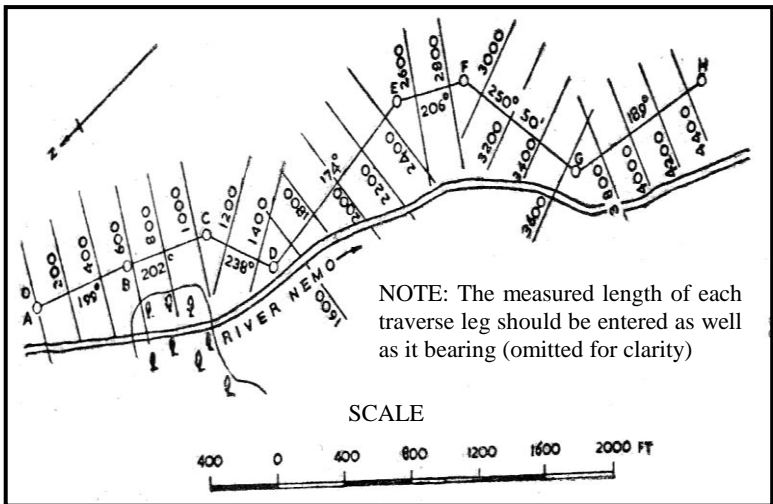


Figure 10-1: Typical Preliminary Travers

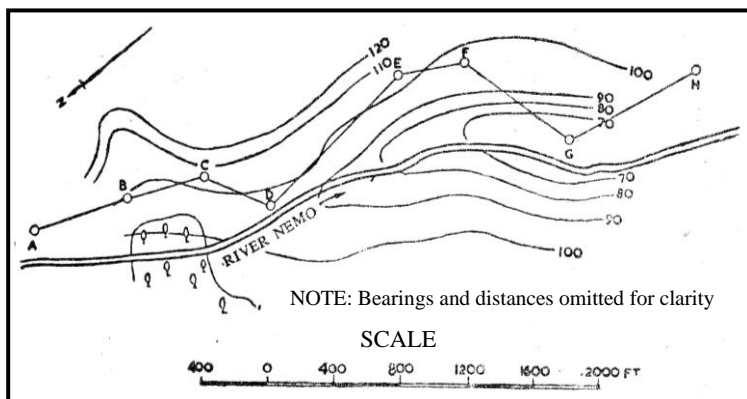


Figure 10-2: Preliminary Contoured Map Produced From the Traversed in Figure 10.1

TABLE 10.1: SCALE OF MAPS AND SKETCHES

(This table is intended only as a guide)

Serial No	Type of map or sketch	Feet scal* in common use	RF* in common use
1.	Index plan	4,000 ft to 1 in	$\frac{1}{50,000}$
2.	Preliminary survey and location Open country	400 ft to 1 in	$\frac{1}{5,000}$
3.	Enclosed country	200 ft to 1 in	$\frac{1}{2,500}$
4.	Difficult country	100 ft to 1 in	$\frac{1}{1,250}$
5.	Longitudinal sections: Open country Longitudinal scale	400 ft to 1 in	$\frac{1}{5,000}$
6.	Vertical scale	20 ft to 1 in	$\frac{1}{250}$
7.	Longitudinal section: enclosed country Longitudinal scale	200 ft to 1 in or 100 ft to 1 in	$\frac{1}{250}$ $\frac{1}{1,250}$
8.	Vertical scale	10 ft to 1 in	$\frac{1}{125}$
9.	Cross sections	10 ft to 1 in (natural scale)	$\frac{1}{125}$

*Either feet or RF scales may be used, those in this table do not exactly correspond.