3. The distinguishing letter of the particular rod used, viz., after the printed words "To Rod."

4. The point or station at which the rod is put up.

5. The series of continuous levellings to which the sight belongs, if deemed necessary.

Columns 2 and 3 are required for entering :-

1. Rod readings in feet A, B, C, D, which are obtained with the long lever successively abutted against pins a, b, c, d.

In column 4 are to be entered :-

1. Rod intervals \triangle in feet determined by readings A, B, C, D, such as \overline{AB} , \overline{AC} , \overline{AD} ; \overline{BA} , \overline{BC} , \overline{BD} , etc., with the long lever arm abutted against pins a, b, c, d.

3. The sum $\Sigma \Delta$, of the rod intervals Δ just described, which are determined in each case, viz.: in feet.

4. The sum $\Sigma \delta$, of the scale intervals δ , which are determined as just stated, viz. : in decimals of radius $r = \frac{2}{3}$ foot.

Column 5 contains :---

1. The collimation or height of the optical axis of the tacheometer above datum, which is represented by C. In each one of the series of continuous levellings, A, B, of a double rodded line the collimation is equal to the sum of the backsight and the elevation of the zcro point of the rod; but for intermediate sights, the height of the optical axis of the instrument is assumed to be equal to the mean value of the two sets of collimations of the continuous series of levellings, such as: $\frac{1}{2}$ (11.05562+11.04760) = 11.05061 on field book page 49 in accompanying pocket.

2. The rise or full I_0 to the zero of the rod from the transverse axis of the telescope, viz: $I_0 = R \{ (n) - c \} \} - N$, where (n) denotes the scale reading cor-

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