

which the topography is well known and correctly indicated on existing maps, and where therefore, accurate measurements of distances and angles with the tachometer for locating the line or for any other similar purpose, would be superfluous, the ordinary run of field operations required from any of the tachometer stations—such as Nos. 49 and 50 of the supposed operations recorded above on sample pages 46 to 49 of the proposed field book—can be limited to those entered on sample double field book pages 5 and 6 to be found in the pocket which accompanies this Memo. On these two double pages, the observations, entries and computations which have to be made on the ground are, as heretofore, indicated in black, they are moreover numbered in blue in the order in which they should be taken, the office work required also is shown, viz. in red, and the mental calculations in green, as before.

From the indications given on sample double pages 5 and 6 in accompanying pocket just referred to, it will be seen that the rod readings from each station, sixteen in number, are to be taken in the following manner; to be ever being invariably supposed to be abutted against that particular pin of the series *a, b, c, d*, which permits of the greatest number of standard readings determined by these pins being made without changing the position of the clamp on the prismatic guide rod, according to the directions given above to that effect, viz. :—

(a) *With the telescope in the erect position—milled head of the slide pinion on top—and the attached double faced level in the direct position, or on the right hand side looking towards the objective :—*

(1) A level foresight pointing (1.686). See Ill. numbered 5-B, in pocket together with an adjacent distance reading (11.310) on the rod furthest ahead of the station occupied (50).

(2) A level backsight pointing (10.617) and a distance reading (0.800) on the furthest rod in the rear.

(3) A level foresight pointing (8.534) and a distance reading (12.827) on the nearest rod ahead.

(4) A level backsight pointing (3.663) together with a distance reading (8.181) on the nearest rod in the rear of the tachometer station.

(b) *With the the telescope in the inverted position—milled head of the rack pinion which works the slide underneath the tube—and the attached chambered level in the reverse position, or on the left hand side :—*

(5) A level foresight pointing (8.531) together with an adjacent distance reading (12.827) on the nearest rod ahead.

(6) A level backsight pointing (3.657) and a distance reading (12.687) on the nearest rod in the rear.

(7) A level foresight pointing (1.683) and a distance reading (11.307) on the furthest rod ahead.

(8) A level backsight pointing (10.612) and a distance reading (5.730) on the furthest rod in the rear of the station occupied.

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