

the elevation on the transit line, making 63.4. The same is done on the left, and at each station the operation is repeated. The notes are thus made complete in the field and a large number of levels can be taken and recorded on a section. Although some time is saved in the long

circles with the rod reading tell the distance out to the right or left of the transit line. With this method the notations necessary in Fig. 1 are eliminated by the columns and the elevations except for the turning points, bench marks, and instrument heights, can be marked

1. Sta.	B.S.	M. of I.	F.S.	Rod.	Elev.	Left	Right 2
B.M.					62.314	on Root of Spruce Tree 50' left of Sta. 0	
	5.142	67.456					
0				6.2	61.3		
1				5.8	61.7		
1+50				4.8	62.7		
2				3.2	64.3		
3				1.2	66.3		
T.P.			0.912		66.544	on Rock	

1. Sta.	B.S.	M. of I.	F.S.	Rod.	Elev.	Left	Right 2
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2				3.2	64.3		
3				1.2	66.3		
T.P.			0.912		66.544		

Fig. 2.—Two Different Methods of Keeping Level Notes.

run, yet in cold weather it is difficult to do this in the field, and the chance of errors being made is considerable.

Fig. 3 shows a method of keeping level notes that is less work than that shown in Fig. 1, is very accurate, and can be used by a leveller of limited experience. A

up in the office. The writer is a firm believer in keeping the elevations mentioned marked up in the field, and checking them each night by addition and subtraction.

It is evident that plotting the notes shown in Fig. 3 any line or profile can be plotted with little trouble. The

1	Sta.	B.S.	M. of I.	F.S.	Elev. Bench	TRANSIT LINE Rod Elev	LEFT Rod Elev.	RIGHT Rod Elev.
	B.M.				62.314	(Spruce Tree 50' left of Sta. 0)		
		5.142	67.456					
	0					6.2 61.3		
	1					5.8 61.7	6.5 61.0 6.2 61.3 6.4 61.1 4.1 63.4	
	1+50					4.8 62.7	5.2 62.1 5.7 61.8 5.5 62.0 5.3 62.2	
	2					3.2 64.3	4.8 62.7	
	3					1.2 66.3	2.9 64.4 3.1 64.4 3.0 64.5	
	T.P.			0.912	66.544	(on Rock)	1.2 66.3	
	4	10.865	77.409			9.8 68.6	9.5 68.9 9.7 68.7 9.6 68.8	

Fig. 3.—Showing Note Book With Level Notes.

cross-section book for plotting contours can be used and ruled up in any manner desired. For standard use the writer uses the ruling shown in Fig. 3. The columns for rod readings are made narrower than for elevations for two reasons, as so much space is not needed, and the recorder can find them more easily. The figures in

elevations of the transit line, the centre line of the road, the sides, etc., are all in single columns, except where the transit line coincides with the centre of the road only the elevation of the transit line is shown.

Each night, or on stormy days, all elevations should be marked up and the notes plotted.