

## EVEREST: THE CHINESE PHOTOGRAPH

BY HUGH MERRICK

ON seeing the two photographs reproduced in last November's *Alpine Journal*, my first strong impression was that the Chinese picture was taken at a considerably lower altitude than Hillary's summit photograph. Months of meticulous study of somewhat clearer reproductions and of the Everest map have not diminished my feeling.

Unfortunately, my 'hunch' was at first only based on a general sense of angle and the relative position of objects as seen and photographed from Alpine peaks over forty years. An overwhelming brilliance of experts, including my good friends Professor Dyhrenfurth and Basil Goodfellow, the latter of whom has throughout refuted all my amateur calculations with infinite good-humour and patience, agree on mathematical grounds that the Chinese photograph was taken at about 8,700 m. (c. 28,540 ft.); that is, only 188 m., or c. 600 ft., below the summit. Mathematics, alas, have I none, so that the scientific calculations of the pundits are as Chinese to me as the photograph. Painfully, I now realise that 'Greats' should include Geometry to a reasonably advanced level and that Aristotle's views on Kharta Changri would merely have produced the mean height.

With all due deference, and hobnailing where angels fear to crampon, I should none the less like to concentrate in detail on a single, specific, *visual* argument. This concerns the relationship, in the two photographs, of a specific point on the great Shoulder of Kharta Changri to a given point in the snowy 'Distant Range', immediately above it.

Drawings A and B are accurate tracings from the two photographs, subsequently brought up to exactly the same scale (*which the photographs are not*). They show the respective relationships of the Col (C), situated between peaks A and B in the 'Distant Range', with the crest of Kharta Changri's rocky Shoulder (X).

It will be seen that in Hillary's summit photograph, C appears well clear of X; in the Chinese, X overlaps and completely masks C.

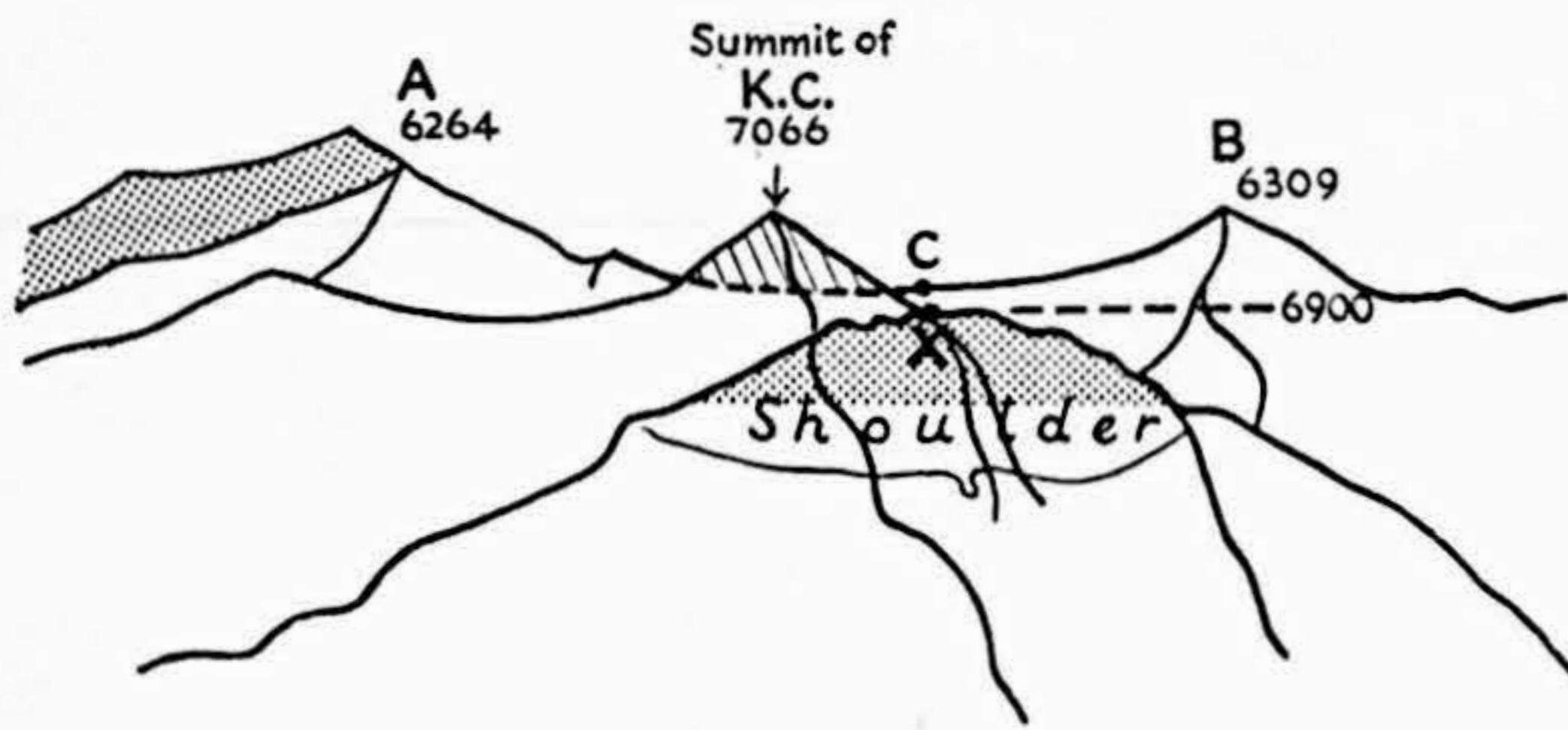
Now the map shows that the Col (C) is bounded north and south by the 6,000 m. contour, so its height is firmly established at between 6,000 and 6,100 m. I therefore propose to take it as 6,050, which Goodfellow agrees.

A careful study of the map contours through a strong lens reveals that a direct line drawn on the map from the summit of Everest to the Col (C)

# DRAWING A

## Hillary's Summit Photo

(6000?) 6050 Col C well clear of Shoulder X (6900)



(Drawn to same scale from tracings of the photographs)

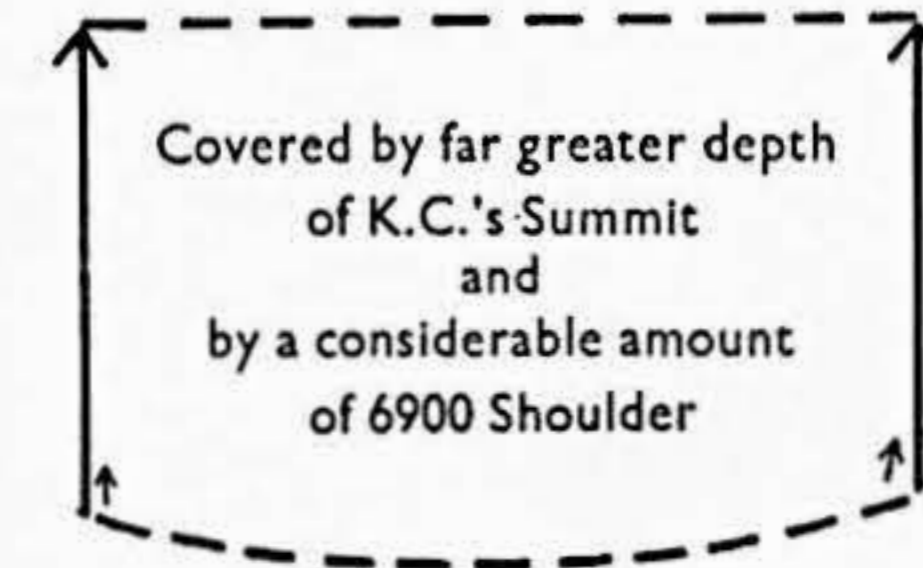
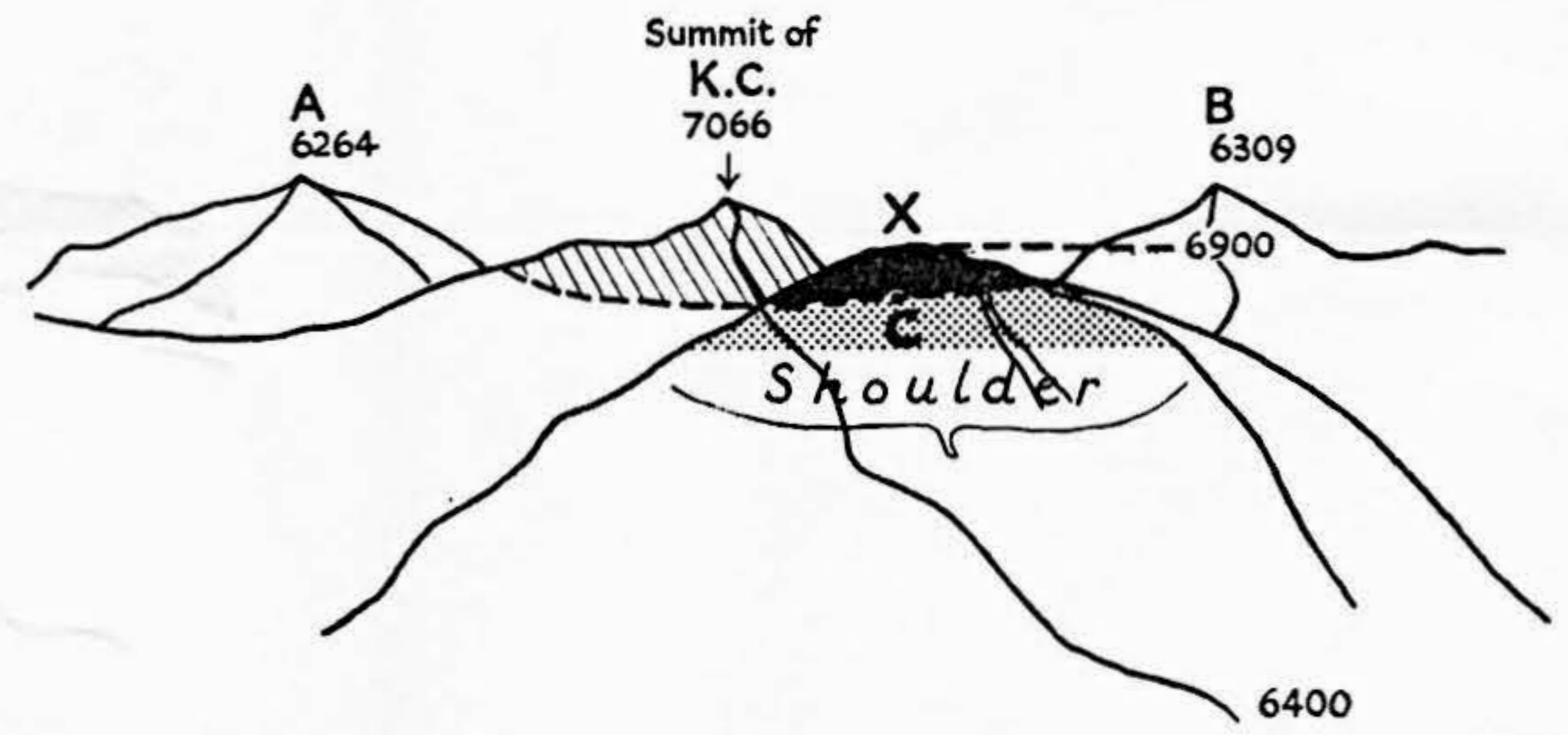


Masked portion of 'Distant Range'

# DRAWING B

## Chinese Photo

Shoulder X (6900) masking Col C (6000?) 6050 by a considerable amount  
(Twice the amount of dominance in A?)

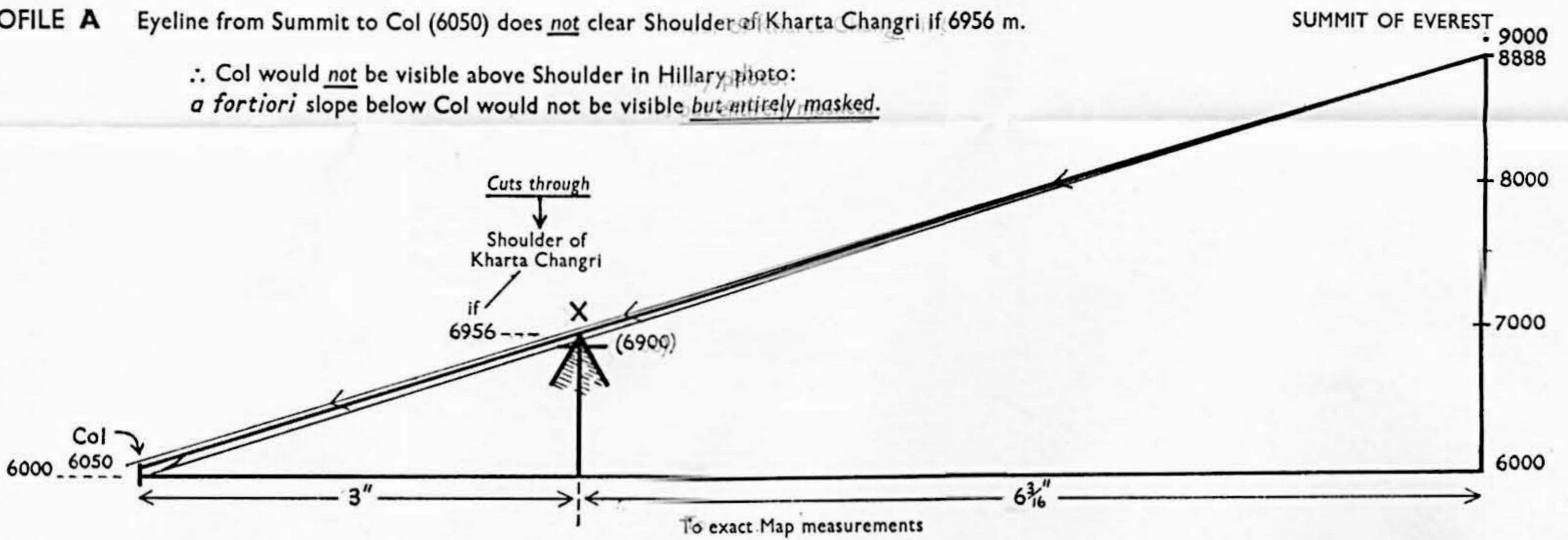


Masked portion of 'Distant Range'

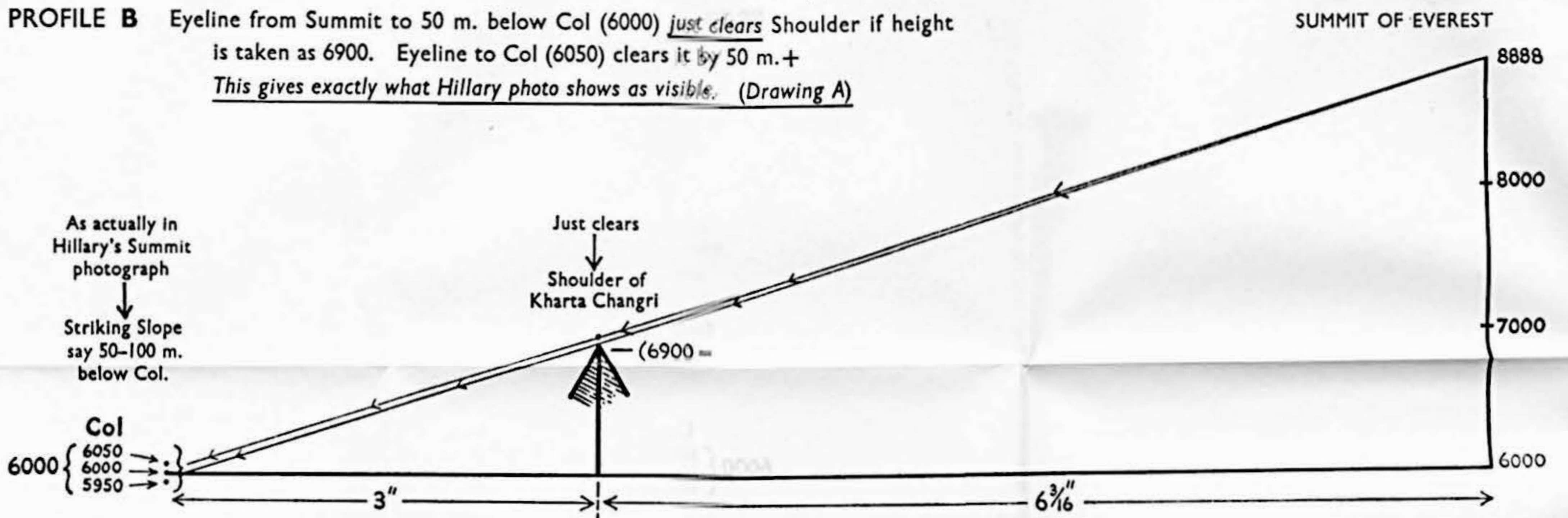
Sketches transferred to Profiles B and C

**PROFILE A** Eyeline from Summit to Col (6050) does not clear Shoulder of Kharta Changri if 6956 m.

∴ Col would not be visible above Shoulder in Hillary photo:  
*a fortiori* slope below Col would not be visible but entirely masked.



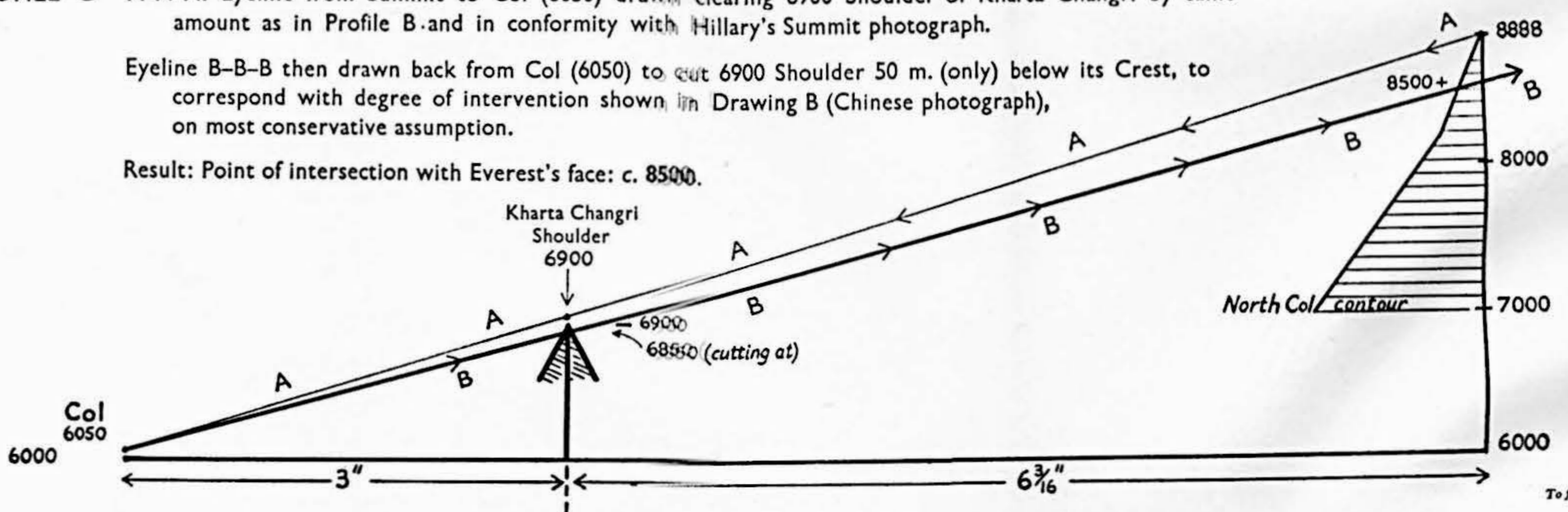
**PROFILE B** Eyeline from Summit to 50 m. below Col (6000) just clears Shoulder if height is taken as 6900. Eyeline to Col (6050) clears it by 50 m. +  
This gives exactly what Hillary photo shows as visible. (Drawing A)



**PROFILE C** A-A-A: Eyeline from Summit to Col (6050) drawn clearing 6900 Shoulder of Kharta Changri by same amount as in Profile B. and in conformity with Hillary's Summit photograph.

Eyeline B-B-B then drawn back from Col (6050) to cut 6900 Shoulder 50 m. (only) below its Crest, to correspond with degree of intervention shown in Drawing B (Chinese photograph), on most conservative assumption.

Result: Point of intersection with Everest's face: c. 8500.



cuts across the Shoulder (X) between the 6,900 and 7,000 m. contours. But, as the Hillary photograph shows conclusively, the eye-line clears the crest of the Shoulder by enough to show a considerable strip of the slope below the Col beyond. This clearance could well be anything from 50 to 100 m.

Moreover, a line drawn from the generally assumed map *position* of the Chinese, some way down the North-east ridge or face, to the same point on the Col, cuts across the Shoulder exactly on the 6,900 contour.

However, the conclusive argument for this height is that an eye-line drawn from Everest's summit to the 6,050 m. Col would hardly clear the Shoulder if it were any higher, while in Hillary's photograph it obviously does so by a considerable margin. So, while the Col itself *might* just be visible over the Shoulder the whole area of snow-slope appearing in Hillary's photograph below (50–100 m. at a conservative estimate) would be hidden. (See sketch A and profiles A and B.)

Goodfellow's mathematical calculations originally arrived at 6,956 for this important point, but he now accepts my 6,900 as the approximately correct height for the Shoulder.

On all these grounds I have therefore adopted 6,900 m. as the correct figure for the development of my argument, which follows.

We have seen that in the Hillary photograph the eye-line freely clears the Shoulder at X and shows a part of the slope below the 6,050 Col in the distant Range (sketch A). In the Chinese photograph, the same point X on the Shoulder (6,900) masks the Col, plus the slope below it, to at least as great an extent as the corresponding 'domination' shown in the Hillary picture (sketch B). In other words, the eye-line passes through the Shoulder *well* below X. Having regard to the fact that the base of the steep face falling from the Shoulder is 6,400 according to the map-contours it would not seem excessive to assess the amount as  $\frac{1}{10}$  of the face or 50 m. below the 6,900 Shoulder (see drawing B). It could well be more.

These assumptions have been converted as accurately as possible into a further profile (profile C).

The eye-line A–A–A has been drawn from Everest's summit (I have worked to Dyhrenfurth's 8,888 m.<sup>1</sup>), clearing the Shoulder at 6,900 and striking the Col at 6,050 and embracing the slope below it down to 6,000 (as in profile B). This is exactly what it should do, by the map and the Hillary photograph.

The eye-line B–B–B has then been drawn back, cutting the Shoulder 50 m. below its crest, in accordance with the assumption made three paragraphs back.

<sup>1</sup> Goodfellow has used a lower figure, so that I am giving away a small but significant bonus to him.

*The point at which it strikes Everest's face will be seen to be about 8,500 m.*

If the argument based on these figures and diagrams is accepted as reasonably convincing, the Chinese photograph would seem to have been taken somewhere between 8,450 and 8,550 m. (1,000–1,200 ft. below Everest's summit and at a height some 600 ft. lower than that arrived at by mathematics). This is what I should have expected from my first sight of the photographs. Moreover, a number of similar drawings I have taken from other features in the two photographs seem invariably to support a similar result.

Incidentally, if we take the mean, 8,500 m. (27,888 ft.), those who entertain equally mean doubts whether the Chinese reached the summit will note with interest that this is approximately the height of the First Step in the North-east ridge (27,950 ft.).