

proximately 2'40" of vertical arc, for the 127 mm. focal length lens, providing the paper print is undistorted. The upper and lower fiducial lines seen in Figure 4 afford a check on the print scale. Readings to clearly defined features in the landscape can be interpolated to the nearest minute of vertical arc and are closely equivalent in value to field readings made with the standard telescopic alidades which have one minute verniers.

A simple comparator is now being designed to facilitate the reading of vertical and horizontal angles on the contact prints of the camera exposures. Film positive prints will probably be used on an illuminated ground glass surface about 2 inches wide and 33 inches long, which will cover the usable area of the exposures. Figure 9 shows the general arrangement contemplated for this comparator which will utilize a 20X microscope with micrometer control of movement in the *Y* direction, while movement of the microscope carriage in the *X* direction will be afforded by a rack and pinion. Vertical angles will be determined from the *Y* distances while horizontal angles will be converted from distances read on the *X* scale and vernier. The latter scale will be graduated in four sections since the take-up drum used in the camera will make four revolutions during the 360° circuit and will have a diameter increment of approximately .015" with each revolution, with a proportionate effect upon horizontal angular values.

It is hoped that the instruments and procedures which have been described will expedite the use of high oblique aerial photographs for the preparation of reconnaissance maps in other parts of the world as well as Alaska. Many other uses may develop for this type of equipment—particularly where it is desirable to simplify field operations and relegate the ferreting of detail to office procedures. However, for requirements of higher order, a longer focal length lens should be employed and the field control instrument should have a vertical arc of correspondingly higher reading value.

NOTES ON RECENT LITERATURE

H. T. U. Smith

Eardley, A. J., Aerial Photographs and the Distribution of Construction Materials: Proc. 23rd Ann. Meeting Highway Research Board, Nov., 1943, pp. 557-568.

This paper points out that skilled interpretation of aerial photos may provide valuable information on the distribution of sand, gravel, and rock for road construction and other engineering uses. The correlation of photos with available geologic and soil maps is discussed, and detailed examples from Schoolcraft County, Michigan, and Weber County, Utah, are given.