FIG. 1 [SWARTZ]. Photograph of Face 3, StB-1 AS-KCM, Yocum Valley, Oregon, August 21, 1960, using aluminum powder. 29 x 50 inches. KCM Neg. No. 1549.

photographically recording petroglyphs with the aid of an aluminum powder application.

A small quantity of this powder mixed with water is applied over the petroglyph design with a marking brush (Fig. 1). It is best to start work at the top of the panel, using a downward brush stroke to control spillage. Aluminum powder can be removed from a petroglyph face by dousing with water or sweeping off with a brush when dry.

Experiments have shown that grade MD 2100 aluminum powder, manufactured by the Metals Disintegration Division, Martin Marietta Corporation, Elizabeth, New Jersey, and Berkeley, California, is well-suited for this purpose, though aluminum powder of most any type is satisfactory.

A mixture of aluminum powder and water will emit hydrogen gas, and thus such a mixture should not be kept in a sealed container for any length of time. The use of distilled water might be advisable, since the Martin Marietta Corporation recommends that water above a pH factor of from 5.0 to 7.5 should not be employed. Common city tapwater has a pH factor of about 6.5.

Chalk is the usual petroglyph marking material. There is, however, some question as to whether it is wise to chalk petroglyphs. Its principal drawback is permanency. Chalk can adhere to a petroglyph for years and thus call the design to the attention of vandals who may deface or destroy it. If petroglyphs are rendered on a soft material, volcanic mud tuff having been utilized in the Klamath basin area, the application of chalk may disfigure the markings. Aluminum powder, however, suffers from none of these limitations. In addition, chalk marking is not nearly as distinct and clear as that provided by aluminum powder, which enhances the qualities of the design by its light-reflecting characteristics.

With sufficient time and care, using extreme depth of focus, long time exposure and filters, photographs can be produced that will record extremely fine surface detail. However, certain petroglyphs are so faint as to defy satisfactory photographing without the aid of additives. Continual revisiting of isolated petroglyphs cannot be accomplished without a large expenditure of time and effort. A quality photograph must be produced on the first attempt in many cases. The carrying of bulky camera accessories, such as a tripod, may not be feasible. With good judgment aluminum powder can be used as a time- and labor-saving aid. The photographing of a petroglyph with and without aluminum powder will provide necessary documentation.

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AN UNFINISHED METATE FROM PANAMA

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ABSTRACT

A complete but unfinished four-legged metate from a shaft- and chamber-grave near Cienegal, Panama, is described. Unbroken metates in a halted stage of manufacture are rare in Panama.

METATES ARE common in the pre-Columbian graves of the Republic of Panama. However, it has been very unusual to encounter one which has not been completed and which is unbroken. Such an example was discovered in a typical shaft- and chamber-grave located on the ranch of Señor Don Enrique Martinelli near the poblado of Cienegal, in the Corregemiento of Guarumal, District of Sona, Province of Veraguas. There is no report of associated artifacts.

This metate (Fig. 1) is four-legged and is made of the gray volcanic tuff that is so commonly used for Panamanian metates. It has been pecked out of a block of the raw material. Possibly the sharp point of a stone celt was used as the pecking tool for this purpose. Dr. Alejandro Mendez, Director of the Museo Nacional, has demonstrated that such could be the case. He used a medium-sized, black basaltic celt and produced the same finish by this method. On the metate described here the upper surface, the sides, and the ends have been finished, but the material has not been pecked out from between the legs and from the lower part of the platform. It may have been that this was not removed because the finished metate was to have been transported, and the long, deli-

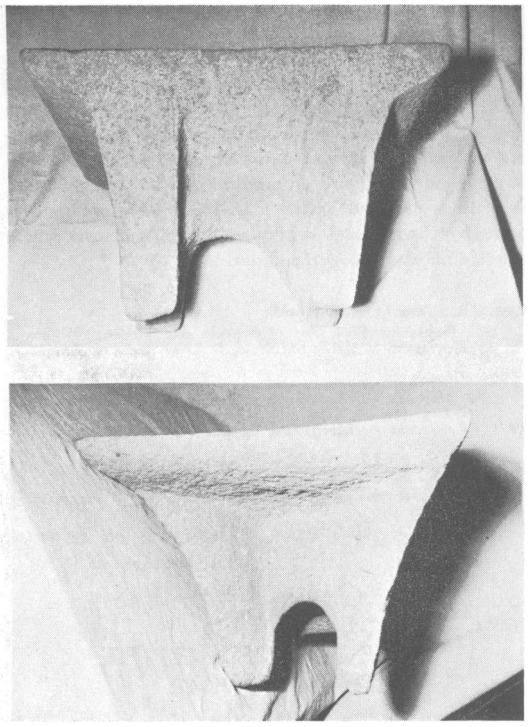

FIG. 1 [MITCHELL]. Lateral and end views of a four-legged metate from Panama.

cate legs were too fragile. If such were the case, then it would appear logical that the manufacture of the metate would be completed at the home site. What occurred to prevent the ultimate finishing touches is purely a matter of conjecture.

The metate has a height of 34 cm. The platform surface is slightly concave in both dimensions of width and length, the highest points being at the four corners. The legs are slightly tapered and slope inward. The specimen has a length of 56.5 cm. down the midline of the platform, and in the same dimension the legs cover a distance of 31.5 cm. The width across the midline of the platform is 43.5 cm., and the legs cover a distance of 18 cm. in this dimension. Lothrop (1950: 30–1; Fig. 32) describes and illustrates a finished metate of this type and states that it is a common form of Veraguas metate.

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