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P.O. Box 5747
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Re: Placer Gold Submittal
Lochiel Area
Santa Cruz Co., AZ

The Lochiel placer gold prospect submitted by Clay Mays, Claremore, Oklahoma does not have sufficient potential to be of interest to ASARCO. The prospect is located approximately two miles west of Lochiel and only several hundred feet from the Mexican border. It has not been systematically explored and there is no data on the extent or grade of placer gold values. Mr. Mays best "guess" on grade was .02 oz Au/yd but he had not processed enough material to have any definitive data on gold values. Surface gravels and resistant float similar to those at the prospect occur over an area of approximately 300 acres between San Antonio Canyon and Duquesne Wash but it is not known if the placer gold values are this extensive.

Mr. Mays and his associate, Jack Burdette, own unpatented claims covering approximately 3 sections and are just starting their placer operation. Equipment consists of a front end loader, generator, small trommel, table and sluices. Water is pumped through a 4 inch pipeline from a well 1/2 mile away in Paradise Canyon. They believed that if the equipment didn't break down they could process approximately 100 yds/day.

The placer gold occurs as small flakes and grains and begins at grass roots. The thickness of gold bearing gravels is unknown, but shallow "diggings" on the Mexican side of the border suggest that the better values are relatively thin. Bedrock exposures along San Antonio Canyon and the gentle topography at the prospect indicate that the present surface is probably an exhumed Late Tertiary erosion surface. The placer gold values reflect gold concentration on the Late Tertiary surface supplemented by values concentrated later during Quaternary removal of the overlying alluvial fan material between San Antonio Canyon and Duquesne Wash. Poor exposures suggest that the bedrock may be a poorly-cemented Tertiary conglomerate similar to the basin-fill conglomerates on the west side of the San Rafael Valley north of Washington Camp.


The placer prospect is 1500 to 2000 feet east of exposures of propylitic-pyritic altered Mesozoic volcanic rocks that are part of the alteration pattern exterior to Cu-Mo mineralization at the Line Boy and Benton breccia pipes. Although no prospects were noted near the edge of cover, the area had been staked during the 1970's as a porphyry copper prospect. Mr. Mays described altered granodiorite float with oxide copper minerals that was probably derived from the mineralized area to the west. The placer gravels contain numerous cobbles and boulders of altered and silicified granodiorite, quartz, magnetite and garnet eroded from the altered and mineralized areas near Duquesne and the Line Boy-Benton breccias. Although the source of the placer gold is not definitely known, it was probably derived either from exterior gold-bearing veins and breccias or from eroded, higher-level mineralization at the exposed Line-Benton and Duquesne centers of mineralization.

ASARCO Incorporated

APR 2 1991

SW Exploration

Respectfully submitted,



Russell M. Corn

