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**EXAMINATION OF SIGATOKA SANDS DUNES,
FIJI**

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by

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INTRODUCTION

This work constituted a brief addition to the research for metalliferous sediments at the mouth of the Sigatoka River (under CCSP-1/FJ.18). Previous work had identified metalliferous sediment offshore. The purpose of this work was to examine onshore sands to see if metalliferous sands had been blown into the Sigatoka dune field.

PERSONNEL, EQUIPMENT AND METHODS

These field investigations were conducted by D. Rubin (UNDP-USGS Marine Geologist) and R. Holmes (Fiji MRD-BGS Marine Geologist). Dunes and internal sediments were examined by air photos, by digging pits, and measuring stikes and dips of excavated strata. Field vehicle was provided by the Fiji Mineral Resources Department.

RESULTS

No metal-rich deposits of economic interest were discovered at the surface or within the pits excavated into the dunes. The direction of sediment transport in the dune field was determined (from slip face orientations and crossbed dip directions) to be toward 3150 (Table 1). Dune sand was transported onshore for distances exceeding 1 Km.

INVESTIGATIONS OF CUVU GROUP CARBONATE ROCKS

After it seemed apparent that economic metal deposits were not likely to occur within the dune sands, the decision was made to spend one day examining the carbonate rocks of the Cuvu Group, west of Sigatoka. This work comes under CCSP-1/FJ.1.

The rocks that were examined displayed a variety of facies: relatively horizontal cross-stratified beds, prograding sets of inclined beds tens of meters thick and horizontal beds. Future detailed study of these beds would be useful; the cross-stratified sands might be porous enough to act as petroleum reservoirs.

TABLE 1. DIRECTIONAL DATA FROM SIGA TOKA DUNES

Dune Lee Surface Dip Azimuths	Crossbed Dip Azimuths
320 ⁰	340 ⁰
320 ⁰	300 ⁰
300 ⁰	340 ⁰
320 ⁰	020 ⁰
340 ⁰	320 ⁰
280 ⁰	000 ⁰
260 ⁰	040 ⁰
310 ⁰	020 ⁰
010 ⁰	350 ⁰
280 ⁰	340 ⁰
240 ⁰	350 ⁰
340 ⁰	000 ⁰
290 ⁰	300 ⁰
270 ⁰	270 ⁰
000 ⁰	350 ⁰
350 ⁰	000 ⁰
310 ⁰	000 ⁰
320 ⁰	300 ⁰
350 ⁰	300 ⁰
320 ⁰	290 ⁰
300 ⁰	320 ⁰
320 ⁰	280 ⁰
310 ⁰	290 ⁰
300 ⁰	350 ⁰
330 ⁰	260 ⁰
300 ⁰	350 ⁰
300 ⁰	000 ⁰
330 ⁰	020 ⁰
010 ⁰	320 ⁰
310 ⁰	000 ⁰
350 ⁰	270 ⁰
315 ⁰ Mean	331 ⁰ Mean