PLAINTIFF'S EXHIBIT

UC-3699

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MAR 21 1977

STATUS OF INVESTIGATION OF ALTERNATE SUPPLY OF ASBESTOS ORE FROM THE MISTAKE MINE

Introduction

Since early January, Earl Shortridge, Roger Hopper, and myself have been talking with Keith Jones, former manager of the old Johns-Manville Asbestos set-up in Coalinga, but now superintendent of the Mistake Chromite Mine in the same area. The discussions have concerned the possibility of Union Carbide's King City Mill utilizing the asbestos ore which is overburden at the Mistake Chromite Mine.

Summary

Simple lab tests and visual examinations indicate that the asbestos "OVERBURDEN" overlying the chromite ore body is of considerably higher fiber content that the ore from our Joe 5 Pit. A sizeable tonnage of this ore could be run through the King City Mill to verify the indicated mill recovery of fiber, and the possible unwanted effects on any CALIDRIA products.

If a mill recovery of 76½% could be obtained (VS 54% for Joe 5 ore), a savings might be realized equal to one dollar per screened dry ton of Joe 5 ore, based on $7.50 per screened wet ton from the Mistake Mine to our mill. In a normal year of 27,000 tons production, this would be $50,000. This possible savings, due to not hauling as many tons of ore for the same fiber feed to the mill, is the only bright spot in the picture.

The Mistake Mine, while a "going" concern per Mr. Jones, has the appearance of requiring much immediate capital input in order to continue in operatiion. The permanence of this operation is questionable in our minds, and the logistics of getting ore from the pit to the King City Mill at the required delivered cost and insured fiber content will be difficult, if not impossible. To shut down the UCC ore supply, and thus possibly lose our regular ore trucker and perhaps our mining department organization, does not seem good. I feel that Mr. Jones may be trying to insure a job for himself, so that he won't have to move from Coalinga if the Chromite mining stops.

We looked at the possibility of trucking unscreened ore from the Mistake Mine to the Joe 5 Pit, via the existing dirt roads, but costs of going this route were way too much.

Magnetite content and reflectance seem to be comparable, according to lab tests.

Assumptions and Figures

A. Cost of UCC Joe 5 ore, per SDT (screened dry ton), delivered to the plant, per 1977 Budget:

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Acct.	781	Mining	$0.68
	813	Stripping	0.68
	021	Screening	0.88
	022	Trucking	5.67
	022	Weighing	0.09
		TOTAL	$8.00

There is no allowance for overhead, maintenance, taxes, etc. in this figure.

B. UCC ore gives 55% mill recovery. (The last six mill stockpiles averaged 54.3%).

C. UCC ore and Mistake ore will run 18% moisture in 1977. (In 1976, UCC ore was 18.3% moisture for the haulage season.)

D. Weighing each truck in and out of the plant will be $2.00, or $0.08 per SWT hauled.

E. Lab tests for ultimate fiber yield (UFY) on both ores give 53.2% for 13 Joe 5 ore samples, and 79.8% for 6 Mistake ore samples. This is interpreted to indicate that no better mill recovery than 75 to 80% could be expected from Mistake ore. An actual mill test is required to obtain a true recovery figure.

F. Keith Jones "thinks" he could furnish screened ore to King City for $7.50 per wet ton, not including scale tickets. Since the round trip mileage is about 26 miles more than the run to Joe 5 Pit, and since his access road is not a high-speed road like ours, I don't believe he can make the $7.50 figure.

Historical

The Mistake Mine (also known as the Butler Estate Mine, and James-Thickstun Mine) was investigated by Milton Genes (UCC) in February 1963.

Chambers and Russell (Southwest Oil Company) operated it in the late 1950's. Russell is deceased, but Earl Chambers and 3 lawyers now control it as "MAREGO", Marmac Resources Co., 552 W. 127th St., Los Angeles, CA 90044. The address of the plant is P O Box 571, Coalinga, CA. 93210, Telephone 209-935-0152.

The Mistake Mine is approximately 6½ miles from our Joe 5 Pit, via a rudimentary series of steep, twisting, and narrow dirt roads.

The old Johns-Manville Asbestos Mill Building, with assorted crushing, grinding, and wet classifying equipment, is now the concentrating plant for the Mistake Mine. One ton of 48% concentrate sells for "$100 - 110", and requires 2½ tons of ore feed. The chromium-to-iron ratio of the appox. -20 mesh concentrate is 2.8:1.

The horseshoe shaped pit is some 300 feet deep, with steeply sloping walls. The pit bottom slopes steeply toward the chromite exposure in the face. There are

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several continuous benches, and it is from one such bench the asbestos overburden ("ore") would come from. No further mining of chromite is possible until an enormous amount of stripping is accomplished.

Stripping, mining, and hauling are done by a contractor. Water for the mill operations is pumped 7 miles uphill.

Current Status of Negotiations

Mr. Jones has proposed a $7.50 price for delivering screened ore to King City, in a total amount of some 25000 SWT's. He indicates that his bosses go along with this figure. He will furnish a written proposal within the next few days, which will probably incorporate some kind of bonus-penalty clause, for our consideration. In any event, we are proceeding with plans for the usual screening and hauling from stockpile at the Joe 5 Pit. There should be no insurmountable problems if we want to try a 2000 ton or so sample of screened Mistake ore, to run through the mill this summer. (Without dependable scales on mill feed, we need to run all the ore brought in by individually weighed trucks.) Keith Jones has agreed to furnish this for $7.00 per SWT; we would pay for scale tickets.

R. O. Marsten

R. O. Marsten
Mine Superintendent
March 17, 1977

/smp

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ORE COMPARISON TESTS — JOE 5 & MARECO

		% UFY (1)	% MAG	% H_2O (2)	REFLECTANCE
1/13/77	MARECO — PICKED BY JONES	82.5	6.67	—	—
2/15/77	" #1 — " " UCC	80.8	4.5	17.3	56.3
"	" #2 — " " "	65.8	5.0	16.3	58.3
"	" #3 — " " "	84.6	4.8	16.0	64.5
"	" #4 — " " "	85.4	6.0	13.9	57.9
"	" #5 — " " "	79.8	5.3	22.4	61.2
	AVG'S OF MARECO →	79.8	5.4	17.2	59.6
2/15/77	K.C. (N. STOCKPILE) DAY COMPOSITE, ORE FED TO MILL	57.8	7.0	17.3	62.8
3/4/77	K.C. #1 — FR. S STOCKPILE	—	—	—	60.8
"	" #2 — " " "	—	—	—	62.9
"	" #3 — " " "	—	—	—	59.4
JAN & FEB '75	KC AVG OF 12 SAMPLES	52.8	6.67	—	—
	AVG'S OF JOE 5 ORE →	53.2	6.7	17.3	61.5

(1) ULT. FIBER YIELD TEST MAY OR MAY NOT DIRECTLY RELATE TO MILL RECOVERY.

(2) MOISTURE CONTENT DEPENDS ON MANY VARIABLES.

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SOTS OF OTHER ORE
REQ'D TO EQUAL
30,000 SOTS OF UCC ORE @ SS% UF1
UCC 026
27500
23383
23571
22000
20625
19112
18338
17369
16500
55% 0.1 30000 SOT
THIS IS FIBER CONTENT RECEIVED BY MILL
10 X 10 TO THE INCH
KEUFFEL & ESSER CO.
46 0700

UCC 006211

SDT's OF OTHER ORES
Read To Equal Odds SDT's OF UCC ORES @ 55% UFY
46 0700
27500
25333
23571
22000
20625
19412
18333
17369
16500
Cl 71% FIBER Content 12 Ec'd By Mine
55% UFY
UCC 006212

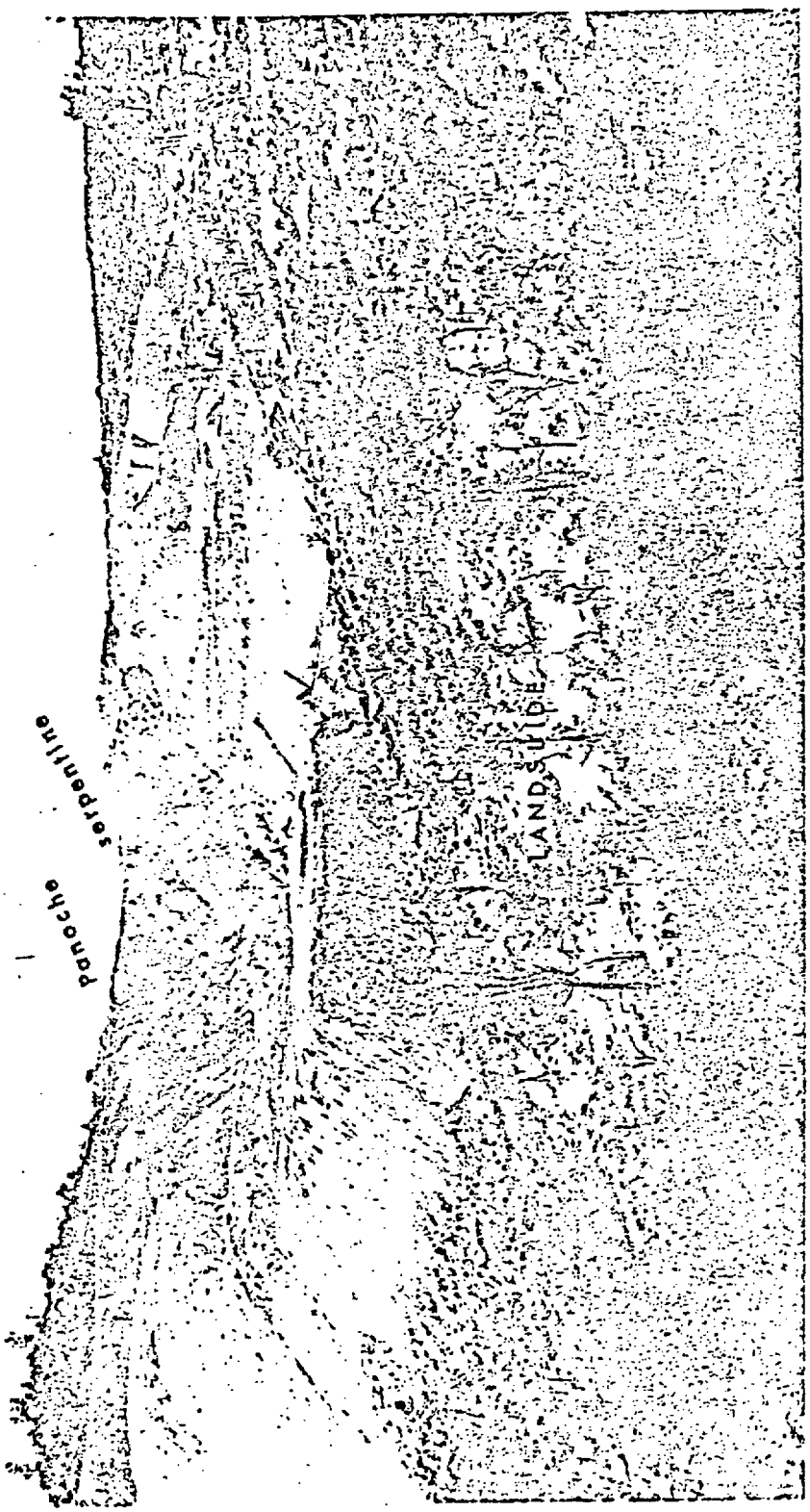
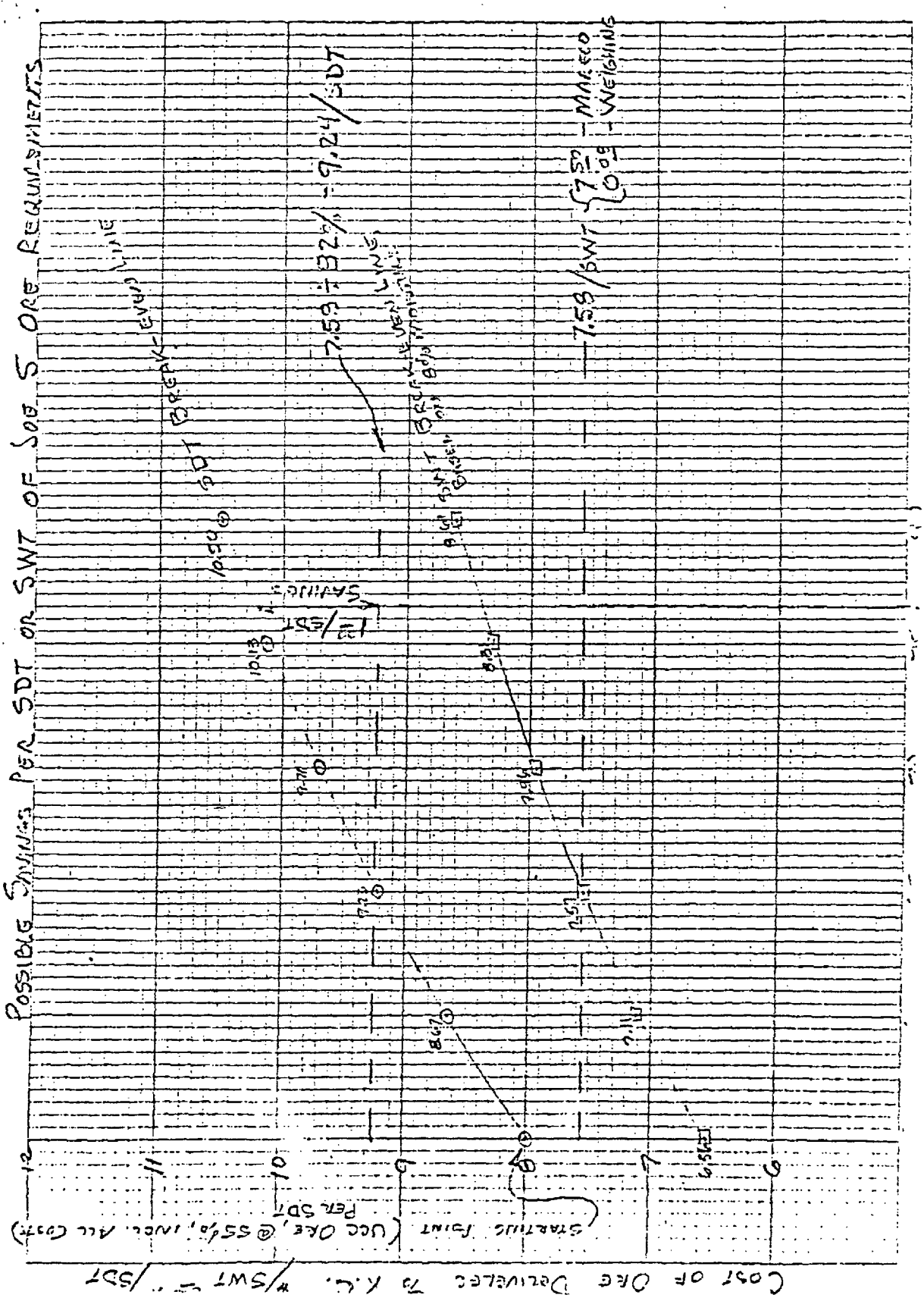


Photo 4. View southeast toward the Butler Estate chromite mine. In the center left of the picture is the sharp fault contact between the Panoche shale and serpentine. The old power shovel in the center of the photo is about 20 feet high.

THIS IS AN OLD PHOTO, PROBABLY VINTAGE 1961. BUT THE MINE APPEARS ABOUT THE SAME TO-DAY (1977)

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Possible Shipments Per SDT or SWT of Job's Ore Requirements
Cost of Ore Delivered To K.C. $/SWT — $/SDT
Start-up Point (Use Ore @ 55%, incl. All Costs) Per SDT
7.59 ± 32% - 9.24/SDT
7.59/SWT — 7.5% Mn Ore — Weights
Brokerage Limit
Brokerage Limit
12/SDT Savings
46 0700

UCC 006214