FILE NAME: Reichhold (REI)

DATE: 1978 Oct 9

DOC#: REI033

DOCUMENT DESCRIPTION: Unpublished Testing Report with Cover Letter

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New York, New York 10038
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THE HARTFORD

October 9, 1978

Mr. Raymond Clark, Technical Director
Reichhold Chemicals, Inc.
Middlesex Avenue - P.O. Box 38
Carteret, New Jersey 07008

Dear Mr. Clark:

Attached is a copy of Dr. Arthur N. Rohl's (Environmental Sciences Laboratory, Mount Sinai Medical Center), report and photographs.

The following samples correspond to the report of September 28, 1978, as follows:

Sample Number	Line in Operation
1-1 = HT-1	A
2-2 = HT-2	C
3-3 = HT-3	B

Note: Sample 2-2 = HT-2, Line C. This line was not using asbestos during the survey, yet the filter showed 65% total number of mineral fiber.

Please review this report and advise me of your comments.

Very truly yours,

Warren Towns
Technical Consultant
Loss Control Department

WT:bt

Attach.

Distribution:

Mr. E. Boruszkowski, Molding Compound Manager
cc: Mr. C. D'Emery, Plant Manager
cc: Mr. C. Fiscina, Vice President
cc: Mr. T. Madden, Vice President
cc: Mr. John Weinmann, Sr. Vice President
cc: Mr. H. Dolbear, Personnel Director
cc: Mr. John Hopkins, Johnson and Higgins

THE MOUNT SINAI MEDICAL CENTER
ONE GUSTAVE L. LEVY PLACE • NEW YORK, N.Y. 10029
Mount Sinai School of Medicine • The Mount Sinai Hospital

Environmental Sciences Laboratory
Cummings Basic Sciences Building
10 East 102 Street
New York, New York 10029
(212) 650-6173

Mr. Louis Press, Lab Supervisor
Hartford Insurance
Loss Control Department
Hartford Plaza
Hartford, Ct. 06115

September 26, 1978

Dear Mr. Press:

This will report the results of our analyses of three air samples taken on membrane filter for their asbestos content. Cleared segments of the knitters were first analyzed by polarized light microscopy at 500x magnification. Fibers 5 um or more in length were identified on the basis of differences in external and internal morphology, indices of refraction, relief, extinction angle and other optical properties. Two hundred fields were scanned for each sample. The results are as follows:

	HT1	HT2	HT3
Total # of fields scanned	200	200	200
Total # of mineral fibers (includes asbestos	20(56%)	30(65%)	68(62%)
Total # of non mineral fibers (includes cotton)	16(44%)	16(35%)	42(38%)
Total # of fibers	36	46	110
Number of fibers per ml of air	0.63	0.81	1.93

The fibers counted generally had aspect ratios considerably greater than 3 to 1. The usual length to width ratio was 5 to 1 or greater. In addition to fibers there was particulate of indeterminate nature particularly on HT-3, which had the heaviest loading.

In order to more definitively characterize the proportions of asbestos fibers, the filters were prepared for transmission electron microscopy (TEM) using a direct transfer technique (carbon coating, clearing with acetone), that does not change the original size distribution. TEM analysis showed the presence of cotton, chrysotile and amphibole asbestos fibers (crocidolite and/or amosite) and diatoms. Fiber counts of representative fields at 10,000 x magnification showed that the proportions of mineral fibers of 5 um or greater was essentially the same as those found by optical microscopy. The mineral fibers includes a small amount of diatom spicules and filaments, calcined to form the mineral cristobalite. The proportion of fiber-form diatoms, however is not greater than 5%, of the

[redacted]

[redacted] fiber population. Thus TEM analysis essentially confirms the optical microscopic results. I am enclosing TEM photographs, illustrating the result.

[redacted] contact me if there are any questions.

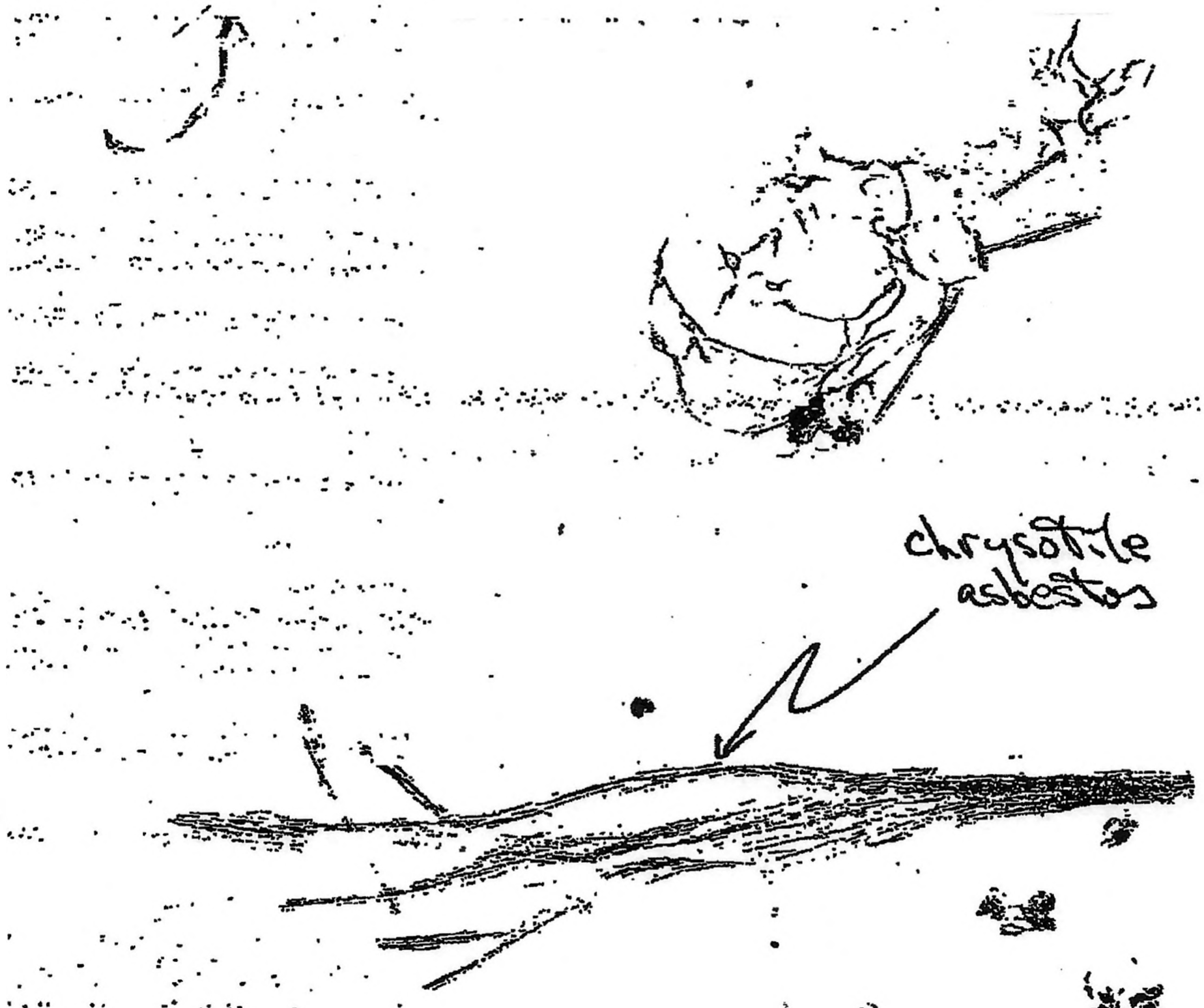
Sincerely,

Arthur N. Rohl, Ph.D.

Enc.

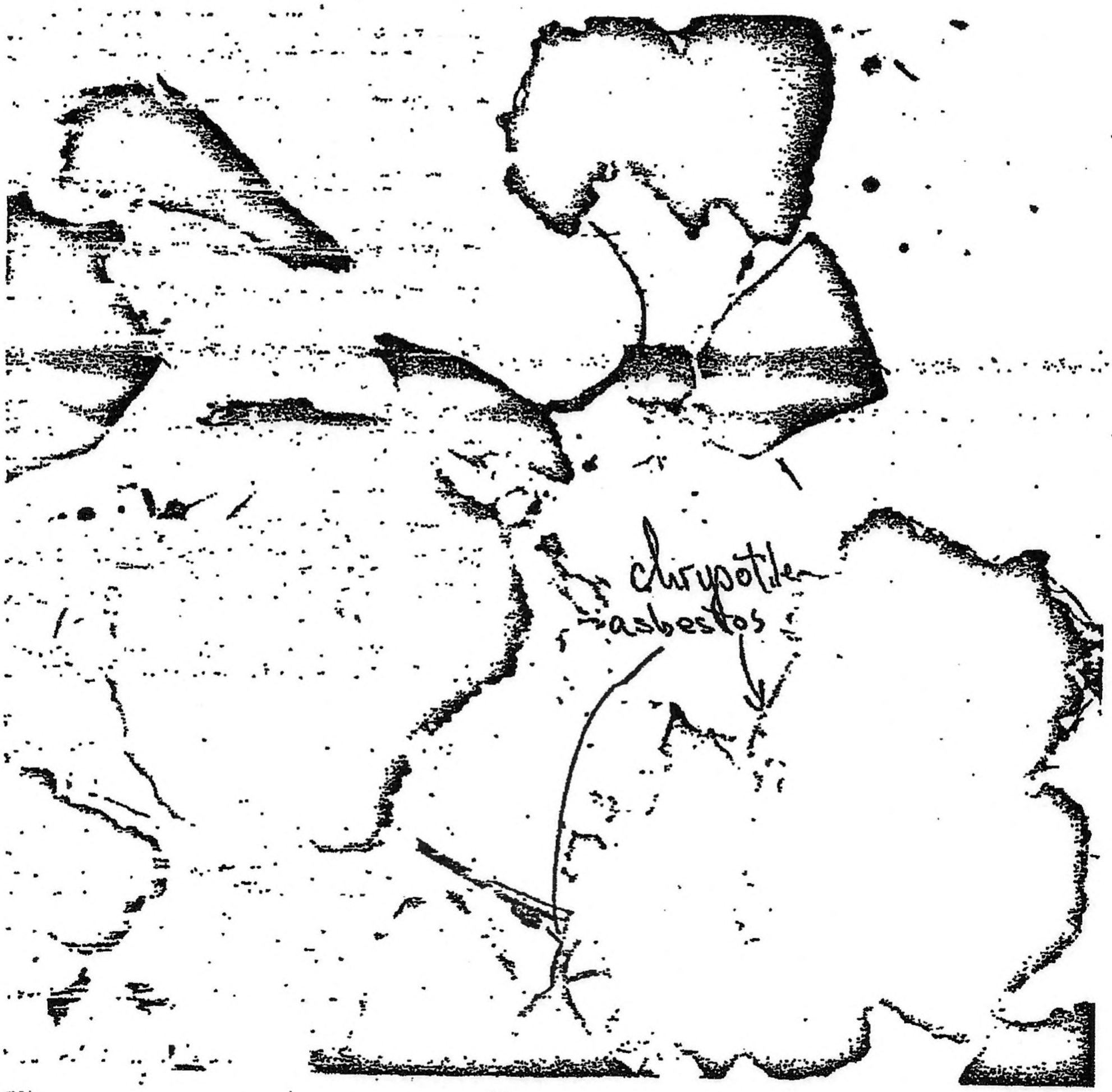
Sample FT-1

ITEM — 25,000 total mg.



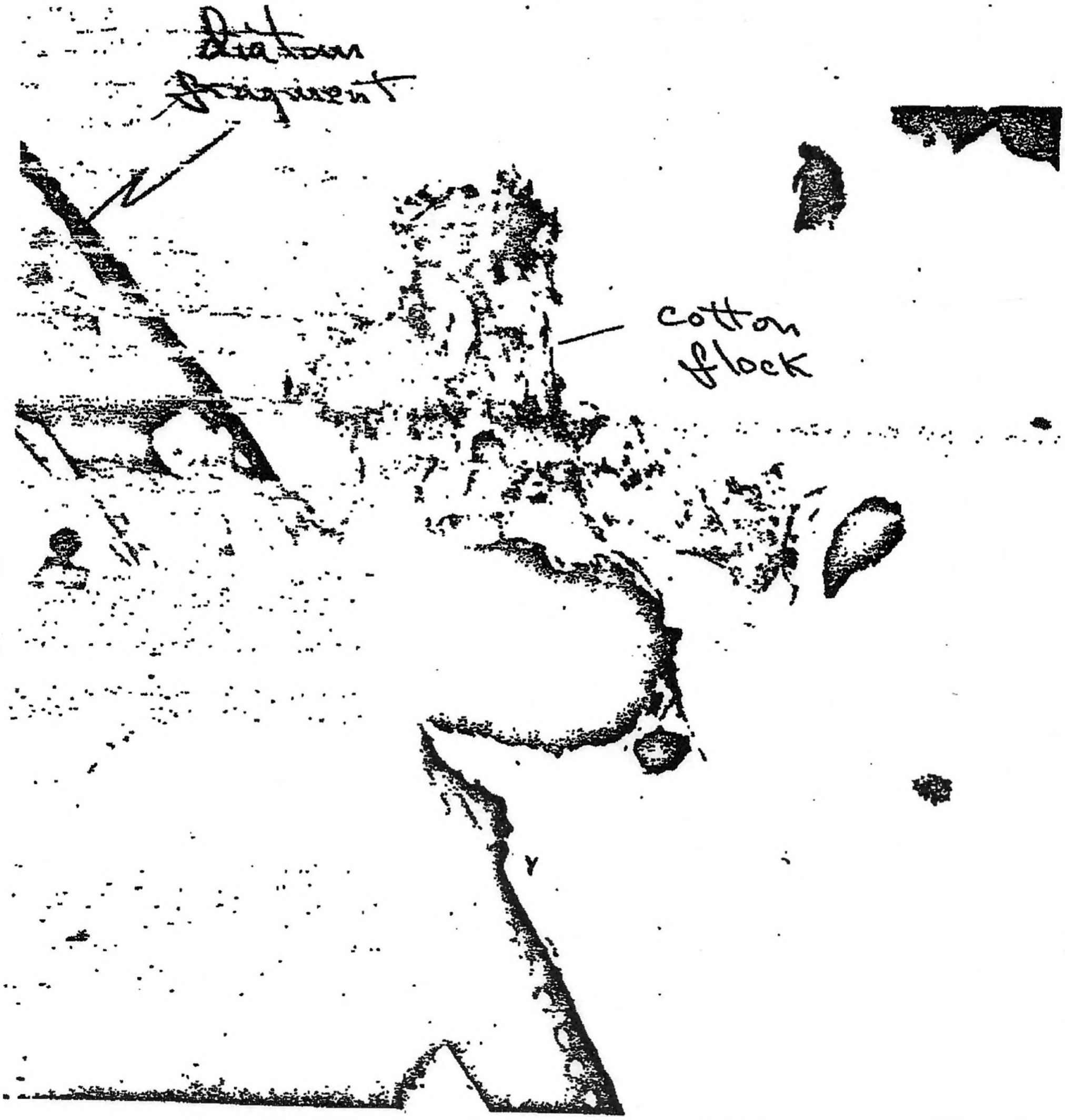
Sample HF-3

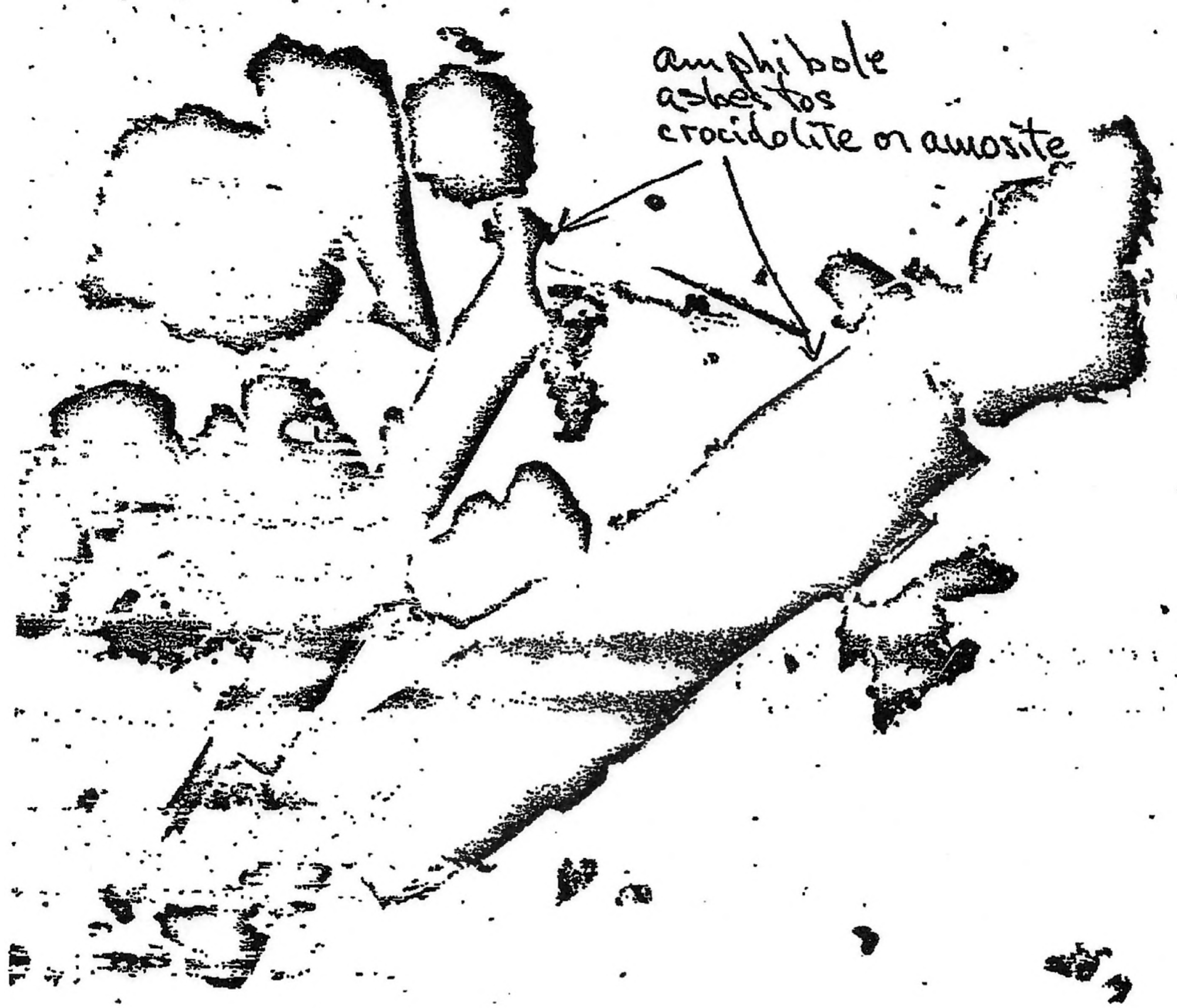
Tem—25,000 mg



Sample AT-2

~~TFM~~ — 25,000 TOTAL MAG.





Sample HT-3

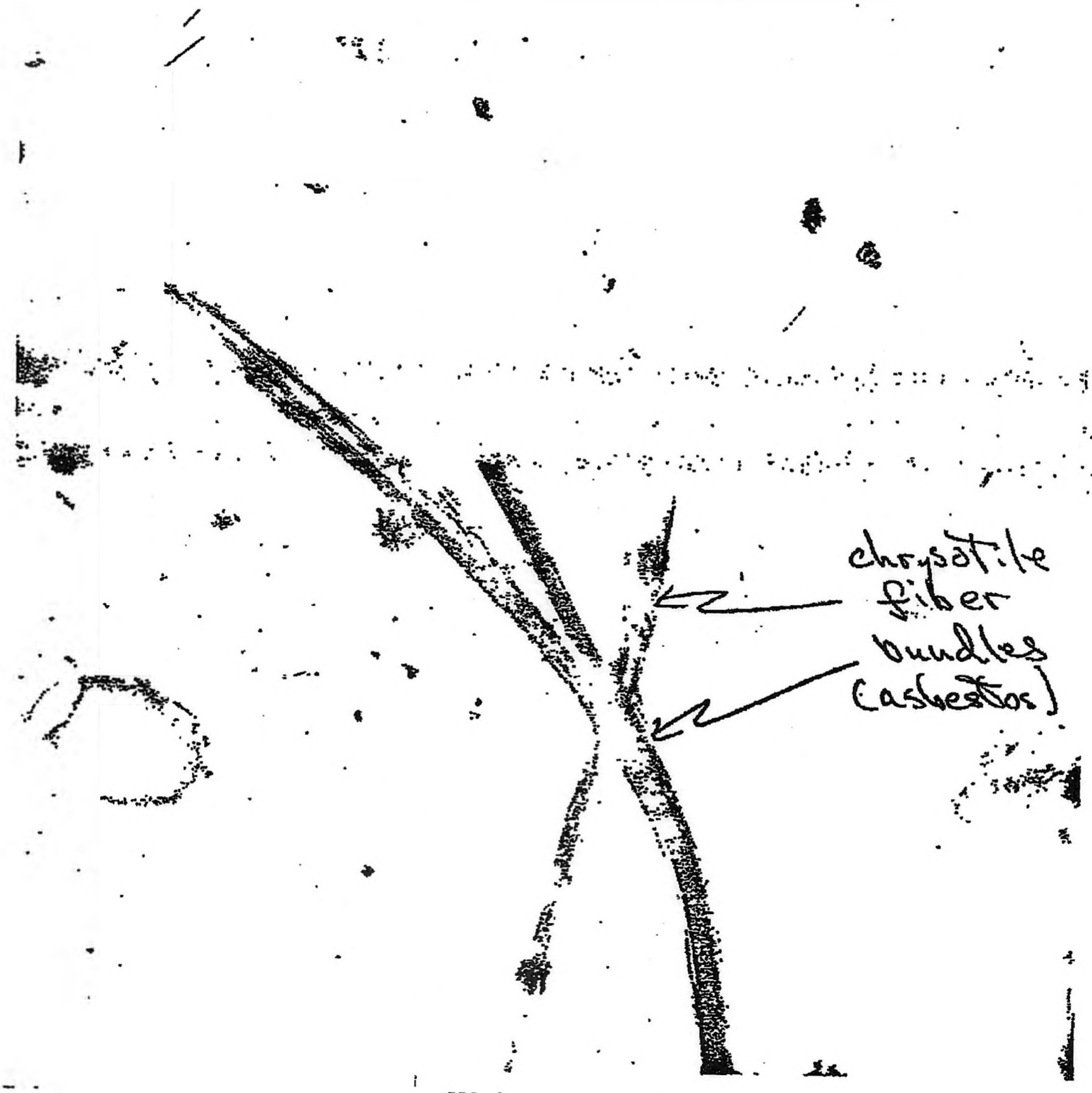
TEM — 25,000 total mag.

Sample AT-2

TEM — 25,000 total mag.

Sample HT-1

TEM - 25,000 total MAG.



RI-00261

Sample HT-3

TEM – 25,000 total mag.

MOLDING COMPOUNDS
PHENOLIC

MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET
(APPROVED BY U.S. DEPARTMENT OF LABOR "ESSENTIALLY SIMILAR" TO FORM LSB-005-4)

NPVLA 6-70

1/80

Section I

MANUFACTURER'S NAME: REICHHOLD CHEMICALS, INC.

STREET ADDRESS: 525 North Broadway

CITY, STATE AND ZIP CODE: White Plains, New York 10603

EMERGENCY TELEPHONE NO.: 914-682-5700

CHEMICAL NAME AND SYNONYMS	TRADE NAME
Phenolic Molding Compound	Phenolic Molding Compound
CHEMICAL FAMILY: Phenol/Formaldehyde	FORMULA: Nos. 25-310,25-346,25-347,25-388 25-398,25-397,25-506 All Colors

Section II—HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS

PIGMENTS	%	TLV (Units)	SOLVENTS	%	TLV (Units)
N O T A P P L I C A B L E					
CATALYST			ADDITIVES		
N O T A P P L I C A B L E					
VEHICLE			OTHERS		
N O T A P P L I C A B L E					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
This compound may contain up to 51% by weight bound asbestos fibers.		
While it would not be expected that under normal handling and use of		
this compound free asbestos fibers would be released, subsequent processing such as drilling, sanding, milling and filing may release asbestos fibers. Refer to Section Asbestos 1910.1001 of the Occupational Safety & Health Reg.		

Section III—PHYSICAL DATA

BOILING POINT (°F.)	None	SPECIFIC GRAVITY (H_2O=1)	
VAPOR PRESSURE (mm Hg.)	Nil	PERCENT VOLATILE BY VOLUME (%)	Nil
VAPOR DENSITY (AIR=1)	Nil	EVAPORATION RATE (.....=1)	Nil
SOLUBILITY IN WATER	Nil		
APPEARANCE AND ODOR	Granular solid. Odor is nil		

Section IV—FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used) Not Applicable	FLAMMABLE LIMITS	Lel	Uel

EXTINGUISHING MEDIA: Water, CO_2, chemical foam

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus if fighting fire in a confined area, such as a warehouse.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Dust/air mixtures are explosive.

THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, REPRESENTATION, INDUCEMENT OR LICENSE OF ANY KIND, EXCEPT THAT IT IS ACCURATE TO THE BEST OF REICHHOLD CHEMICALS, INC.'S KNOWLEDGE, OR OBTAINED FROM SOURCES BELIEVED BY REICHHOLD CHEMICALS, INC. TO BE ACCURATE, AND REICHHOLD CHEMICALS, INC. DOES NOT ASSUME ANY LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON SAME. CUSTOMERS ARE ENCOURAGED TO CONDUCT THEIR OWN TESTS. BEFORE USING ANY PRODUCT, READ ITS LABEL.

MOLDING COMPOUNDS
PHENOLIC

MATERIAL SAFETY DATA SHEET

Section V—HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: Resin not listed by ACGIH. Unknown TLV. Nuisance dust is 10 mg/m3 For asbestos - 2 fibers per cc air.

EFFECTS OF OVEREXPOSURE: None known. Fine dust may occur when handling. Use a respirator at all times when handling to avoid breathing dust. Wear gloves when handling. Wash before smoking or eating.

EMERGENCY AND FIRST AID PROCEDURES: In contact with skin, wash with soap and water at first opportunity. Flush eyes with plenty of water for at least 15 minutes.

Section VI—REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY (Materials to avoid): None known.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide, phenol (s), ammonia

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID: None known
	WILL NOT OCCUR	X	

Section VII—SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Vacuum or sweep up. Use sweeping compound to avoid generating dust. Ventilate area well. Wear respirator if dust is generated.

Waste Disposal Method

1. Incinerate.
2. Land fill in accordance with State and Federal regulations.

Section VIII—SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type): Respirator for nuisance dust and if asbestos fibers released.

VENTILATION	LOCAL EXHAUST	Yes	SPECIAL
	MECHANICAL (General)	Yes	OTHER

PROTECTIVE GLOVES: Chemical resistant plastic or rubber gloves recommended.

EYE PROTECTION: Chemical goggles at all times.

OTHER PROTECTIVE EQUIPMENT: Dust collection should be included as part of mechanical ventilation.

Section IX—SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Avoid exposure to temperature extremes and moisture. Both affect product performance. Do not breath heated vapors from molding process.

OTHER PRECAUTIONS:

LOAD QUANTITY	4998			
YIELD	4798	96.0 %		$
		ROYALTY COST		
		OUTSIDE PROCESSING CHARGES		

RAW MATERIAL COST $

COST CENTER	PROCESS HOURS 1	2	3	4	5	TOTAL	RATE PER HOUR	CONVERSION COST	
033-0	2.2					2.2			$
				ROLL UP CONVERSION COST					

CONVERSION COST $

BULK COST $

CONTAINER DESCRIPTION	CODE	LOAD	COST		
1S 1/2X22 1/2 PMC	00343-90	50			$

CONTAINER COST $

WAREHOUSING & HANDLING	
BULK HANDLING CHARGE	$
BULK WAREHOUSING & HANDLING CHARGE	$
CONTAINER WAREHOUSING & HANDLING CHARGE	$

REPORT 100

D/C CODE

PRODUCT MGR. C

GROUP CODE 11

IND. CODE 100

R.P.I. COST STANDARD

FORMULATION DATE - 04-77

STANDARD FORMULA IDENTITY

PHENOLIC MOLD COMP LBS

PRODUCT CODE 25310-00

PRODUCING PLANT 017

SOLIDS % 100

EFFECTIVE DATE 01-01-78

RAW MATERIAL DESCRIPTION	FORMULA					UNIT COST	MATERIAL COST	YIELD PER UNIT
	MATERIAL CODE	B/C	PROD. PLT.	LOAD	UNIT			
FURFURAL	00061-00			140	LBS			
HEXA TECH	00342-00			242	LBS			
CAL STEARATE PT 55	00385-00			61	LBS			
HYDROFOL ACID 150	00548-00			8	LBS			
HYDRATED LIME S28	00551-00			90	LBS			
STEARYL ALCOHOL	00552-00			52	LBS			
RESIN NUBIAN BLACK	00553-00			80	LBS			
ASBESTOS FLOATS	00555-00			1650	LBS			
CARBON FILLER OXIDE	00557-00			280	LBS			
QUEENS CLAY	02312-00			380	LBS			
ALPHA CELLULOSE	09003-00			175	LBS			
FLOCK #907	09223-00			175	LBS			
PUMICE GROUND	09608-00			12	LBS			
PHENOLIC INTERMEDIATE	44326-00	B	017	1428	LBS			
PHENOLIC INTERMEDIATE	95037-00	B	017	225	LBS			

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REPORT 100

D/C CODE

PRODUCT MGR. C

GROUP CODE 11

IND. CODE 320

R.P.I. COST STANDARD

FORMULATION DATE - 05-77

STANDARD FORMULA IDENTITY

POLYESTER MOLD COMP LBS

PRODUCT CODE 30003-10

PRODUCING PLANT 017

SOLIDS % 100

EFFECTIVE DATE 01-01-78

RAW MATERIAL DESCRIPTION	FORMULA MATERIAL CODE	B/C	PROD. PLT.	LOAD	UNIT	UNIT COST	MATERIAL COST	YIELD PER UNIT
ZINC STEARATE TEC-G	00106-00			7	LBS			
DI-ALLYL PHTHALATE	00215-00			8	LBS			
HYDROFOL ACID 560	00550-00			7	LBS			
ASBESTOS FLOATS	00555-00			100	LBS			
ADOL 63	09007-00			7	LBS			
DICUP R	09133-00			11	LBS			
HYDR ALUMINA RH31F	09282-00			600	LBS			
1/4 CHOP STRND K832	09396-00			440	LBS			
METH DISACRYLAMIDE	09496-00			39	LBS			
NEOSPECTRA MARK IV	09528-00			9	LBS			
POLYESTER RESIN	44365-00	B	007	300	LBS			

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M

LOAD QUANTITY	1528		
YIELD	1452	95.0 %	

ROYALTY COST

OUTSIDE PROCESSING CHARGES

RAW MATERIAL COST $

COST CENTER	PROCESS HOURS 1	2	3	4	5	TOTAL	RATE PER HOUR	CONVERSION COST
034-0	1.2					1.2		

ROLL UP CONVERSION COST

CONVERSION COST $

BULK COST $

CONTAINER DESCRIPTION	CODE	LOAD	COST
47 GAL 20X34 1/2 PHC	00135-90	300	

CONTAINER COST $

WAREHOUSING & HANDLING

BULK HANDLING CHARGE	$
BULK WAREHOUSING & HANDLING CHARGE	$
CONTAINER WAREHOUSING & HANDLING CHARGE	$