

1667¹ Hard, dark olive gray band in middle of chalk laminae.
Contains tiny pyrite crystals seen under binocular scope.

#3 X 3000, C 310, BR 270 Area of acicular crystals,
possibly silica?

#4 Same X 1500 to show larger area.

There is much of this crystalline material in the sample,
I have not seen this in the chalk from any of my localities.

#5 X 3000, C 310, BR 270. And much of the rock
has this metamorphic texture.

1650¹#6 Chalk. Non-pellet area, i. e., not a "white speck" area (matrix), X 3000, C 310 BR 270. This is typical chalk matrix, esp. of type which is bistratified. Few coccoliths preserved.

#7 Chalk. Pellet area. Note abundance of well-preserved coccoliths. This is typical of "white specks" in the chalk. The white specks are fecal pellets. X 3000, C 310, BR 270.

1629 # 8 Non-pellet area (=matrix area). X 3000 C 310 BR 270
Note abundance of non-coccolith material, which is typical for chalk.

#9 Pellet area. Typical pure, coccolith-rich "white speck". X 3000
C 310 BR 270

Murfin cont'd.

1608' #10 Pellet area. Typically rich in coccoliths, X3000
C310 BR 270.

#11 Non pellet area (=matrix). Fewer coccoliths than
usual, but still a rather typical non-pellet area.
X3000, C310, BR 270

Hatten's previous forms

Murfin 1-36 Hilt

1608 Granular, light-colored,
much speckled chalk.

1629 Somewhat granular, med-
colored chalk, much speckled,
one surface w/ many frags

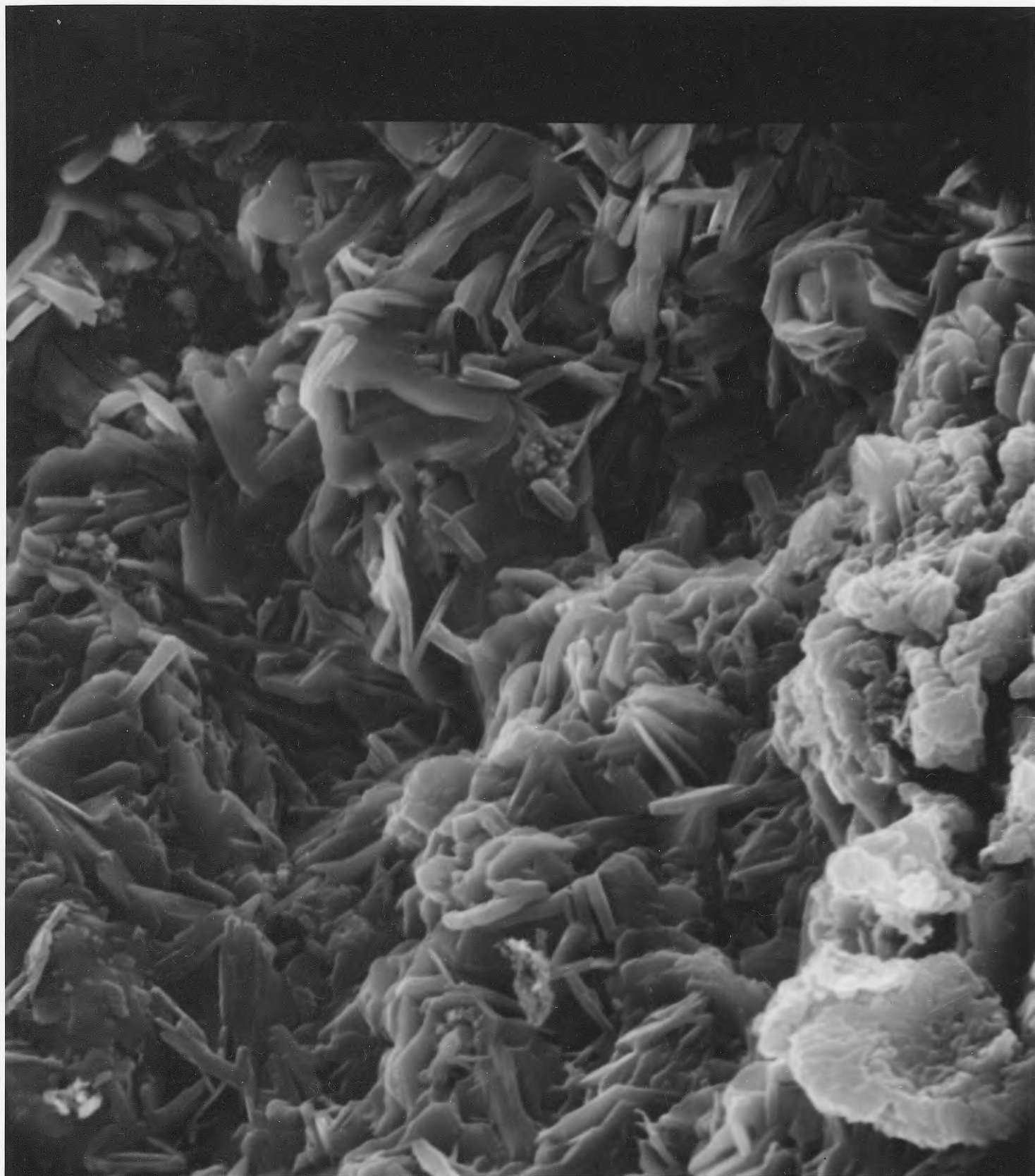
1650 Dark chalk, with few, small
specks. fissile. Like
chalk in upper part of
Kansas section, about 50-60'
below top of Member

1667 Hard, very dark lamina.
Siliceous? Not typical.
Has pyrite. Bordered by
soft, fissile, speckled chalk.

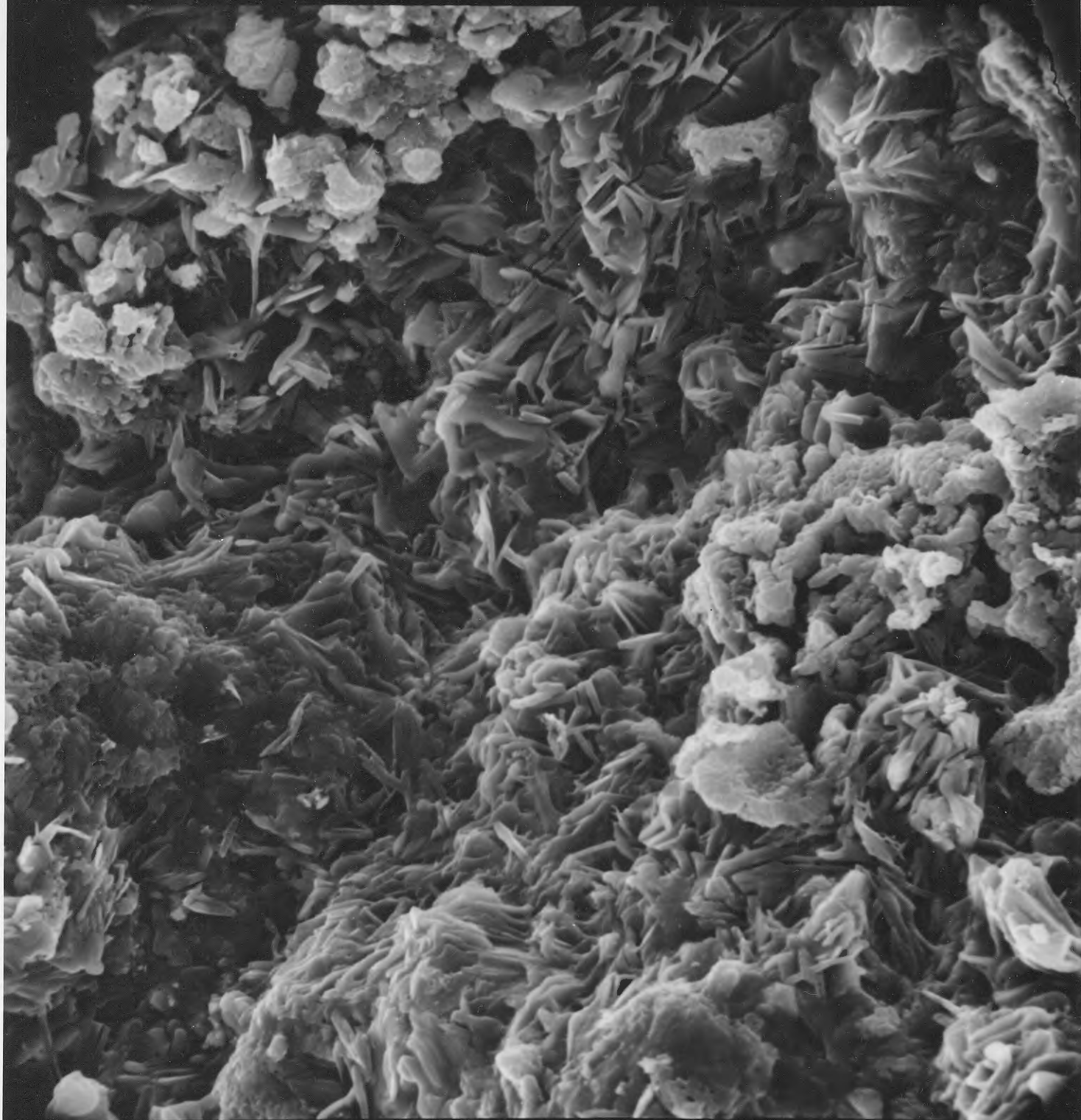
Sample:

MH-1

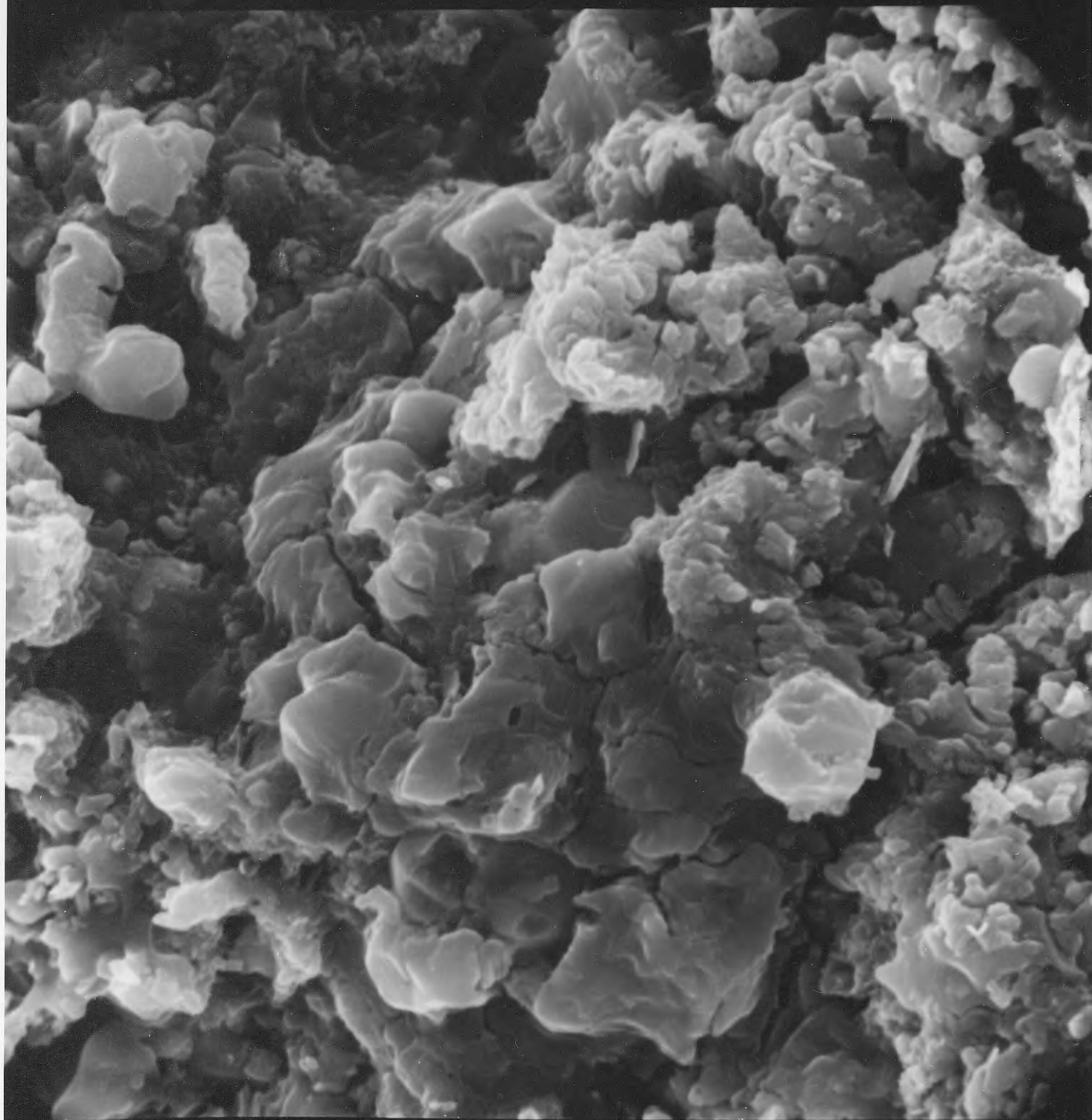
(Murfin 1-36 Hilt 1629')
Compare these to
SEM photos taken at
M. 1629 Hilt.



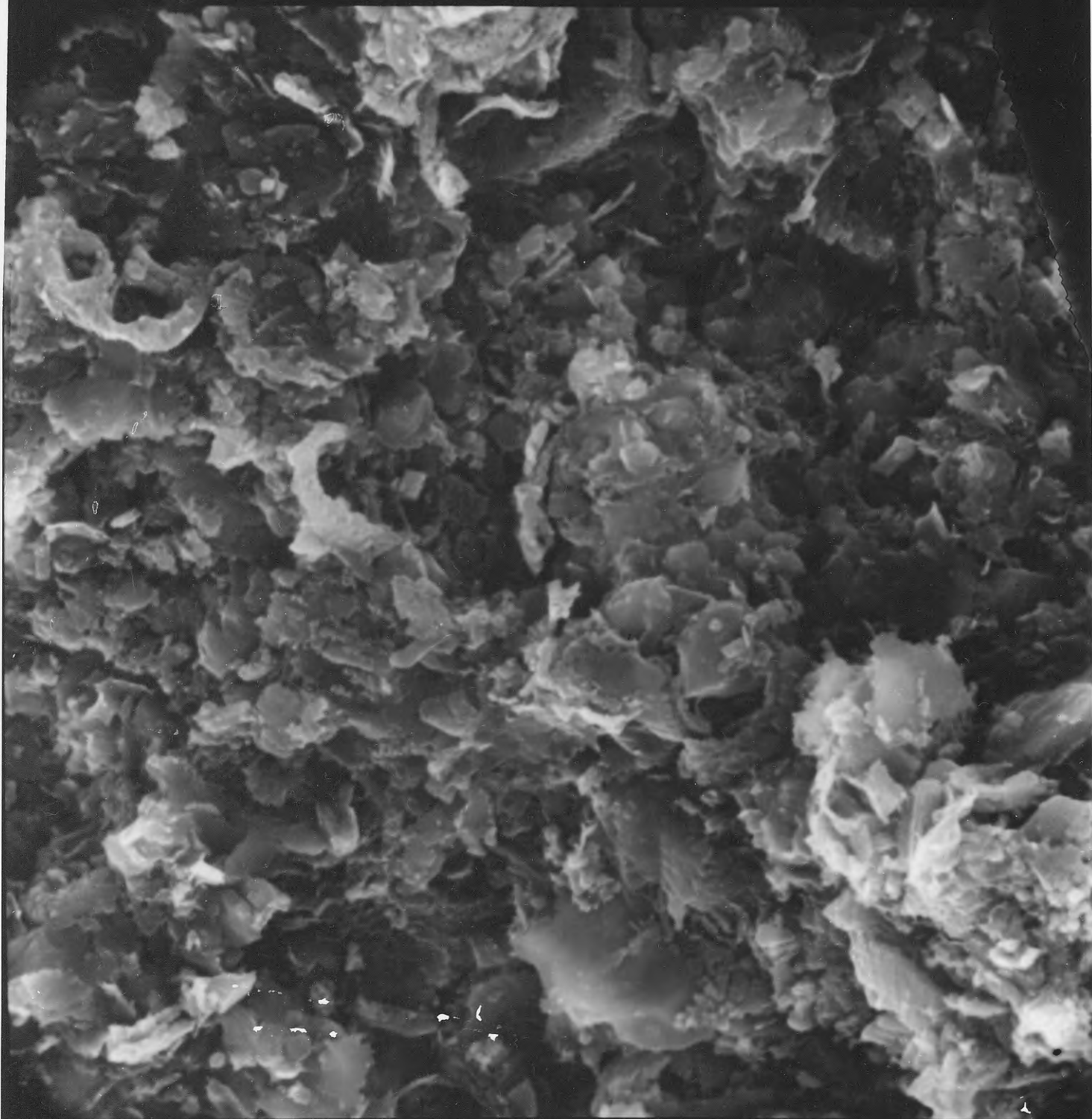
6/11/79 Murfin 1-36 Hilt 1667' x 3000
3 C310 BR270



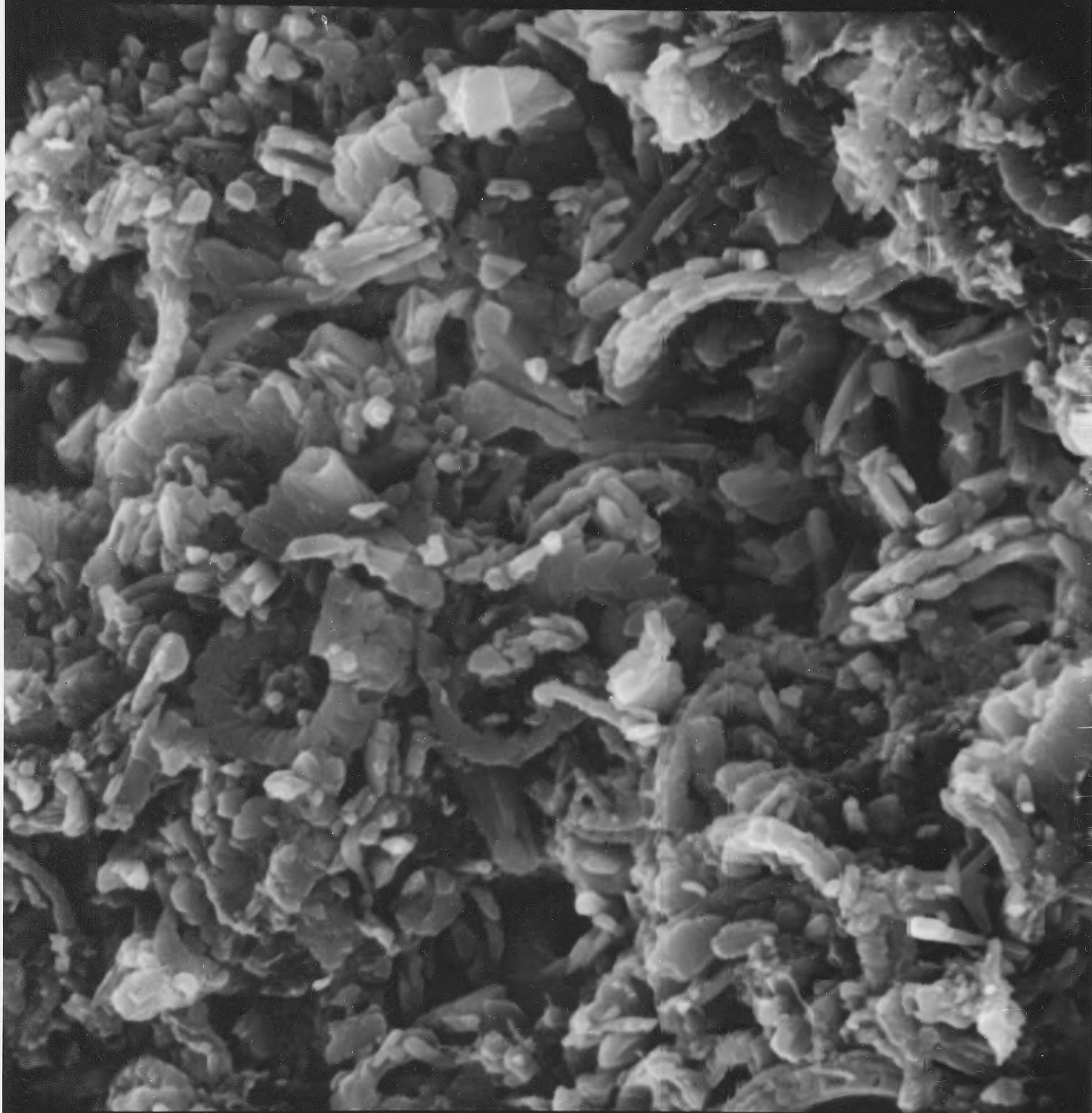
6/11/79 Murfin 1-36 Hilt 1667' x 1500
4 C310 BR270



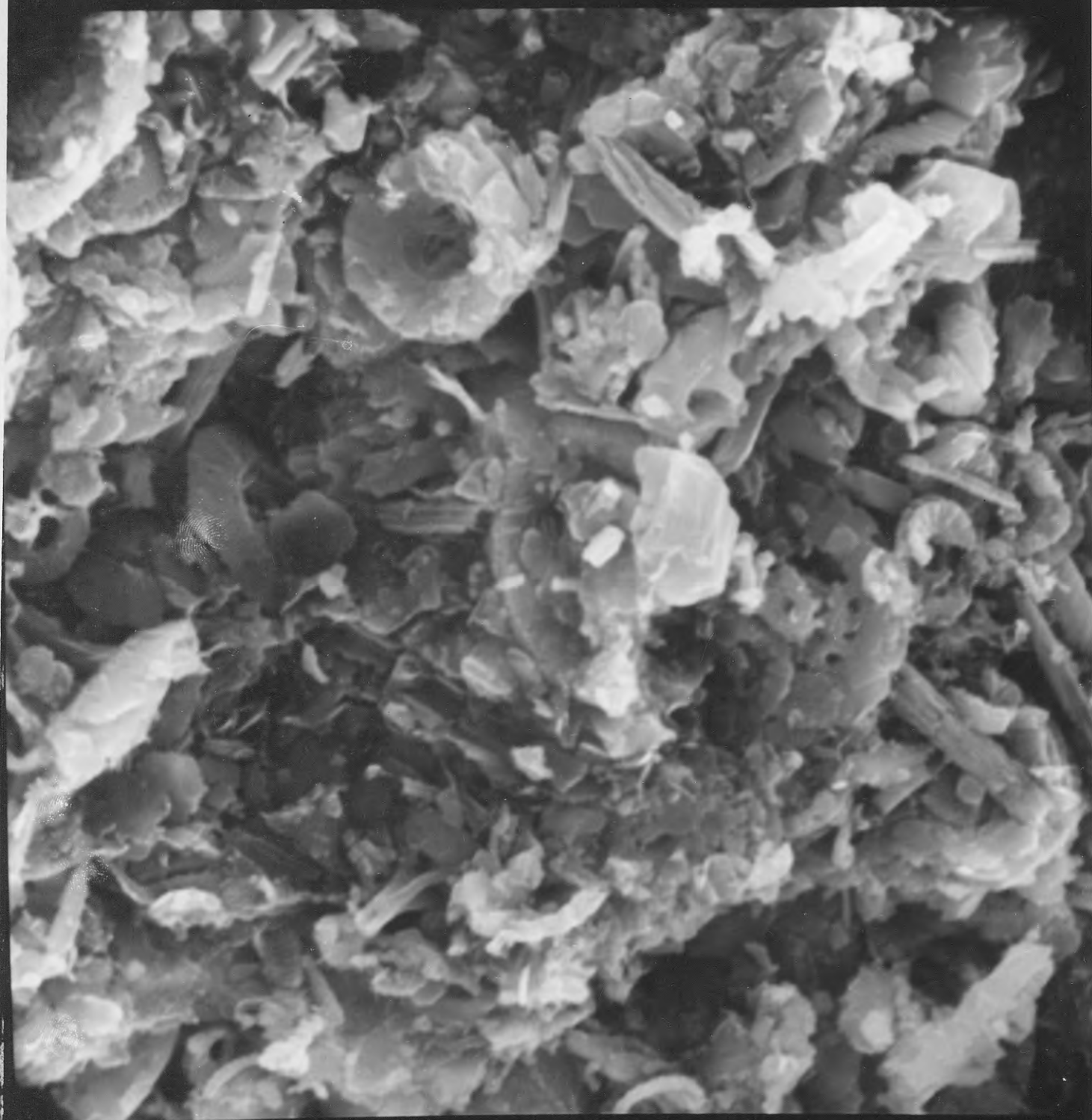
6/11/79 Murfin 1-36 Hilt 1667' x 3000
5 C310 BR270



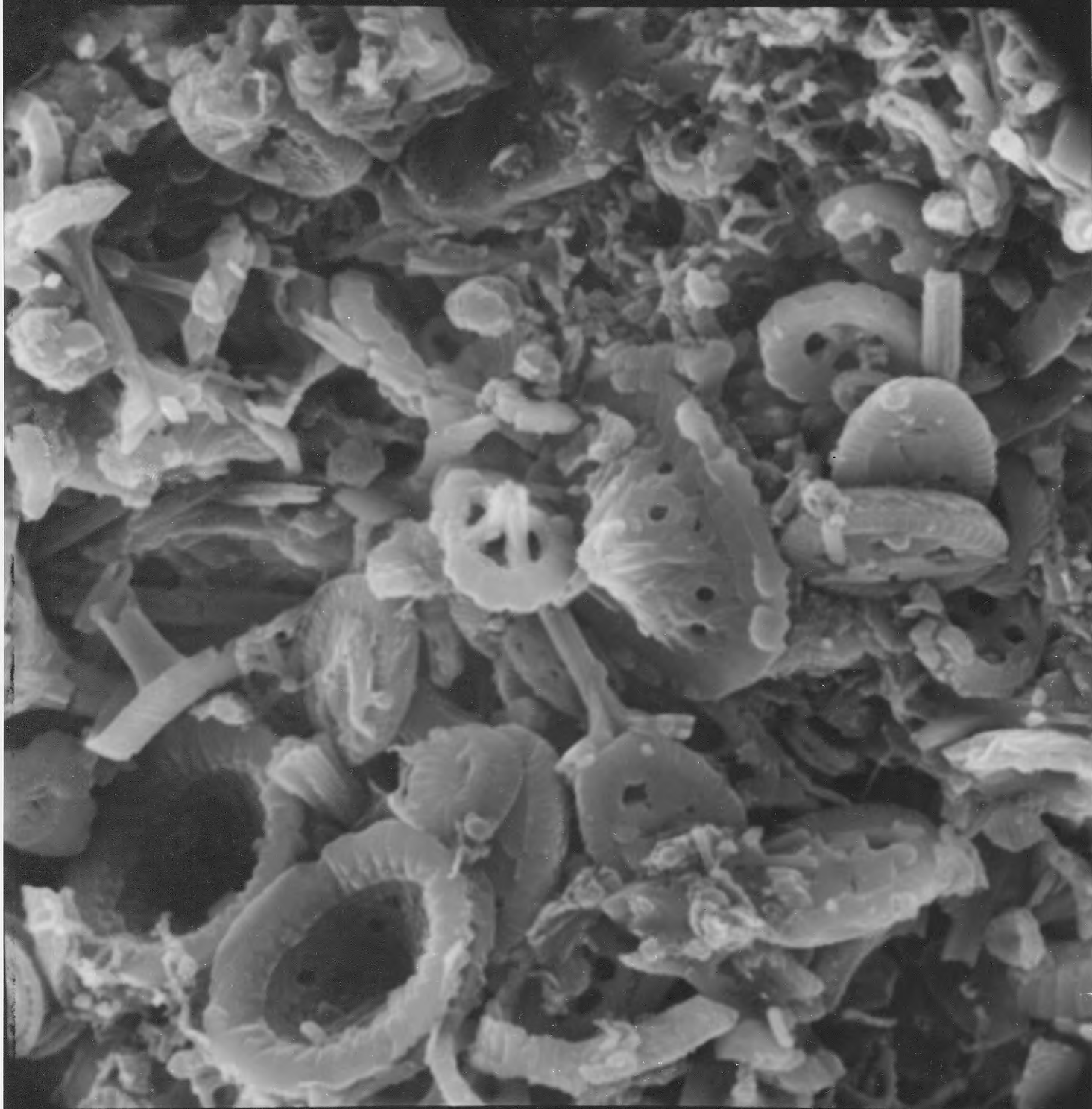
6/11/79 Murfin 1-36 Hilt 1650' x 3000
6 Matrie Area C310 BR270



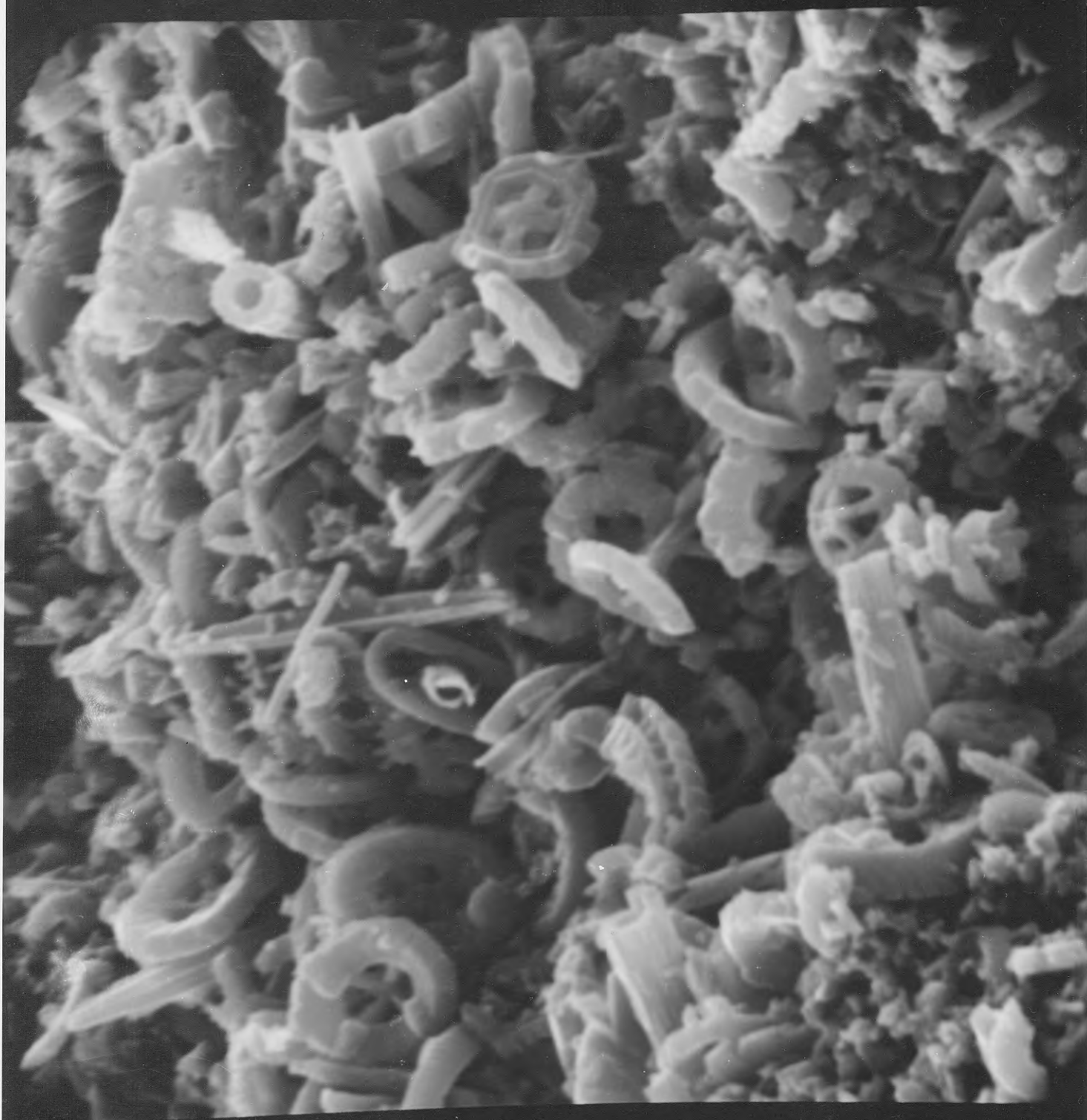
6/11/79 Murfin 1-36 Hilt 1650' x 3000
7 Pellet Area C310 BR270



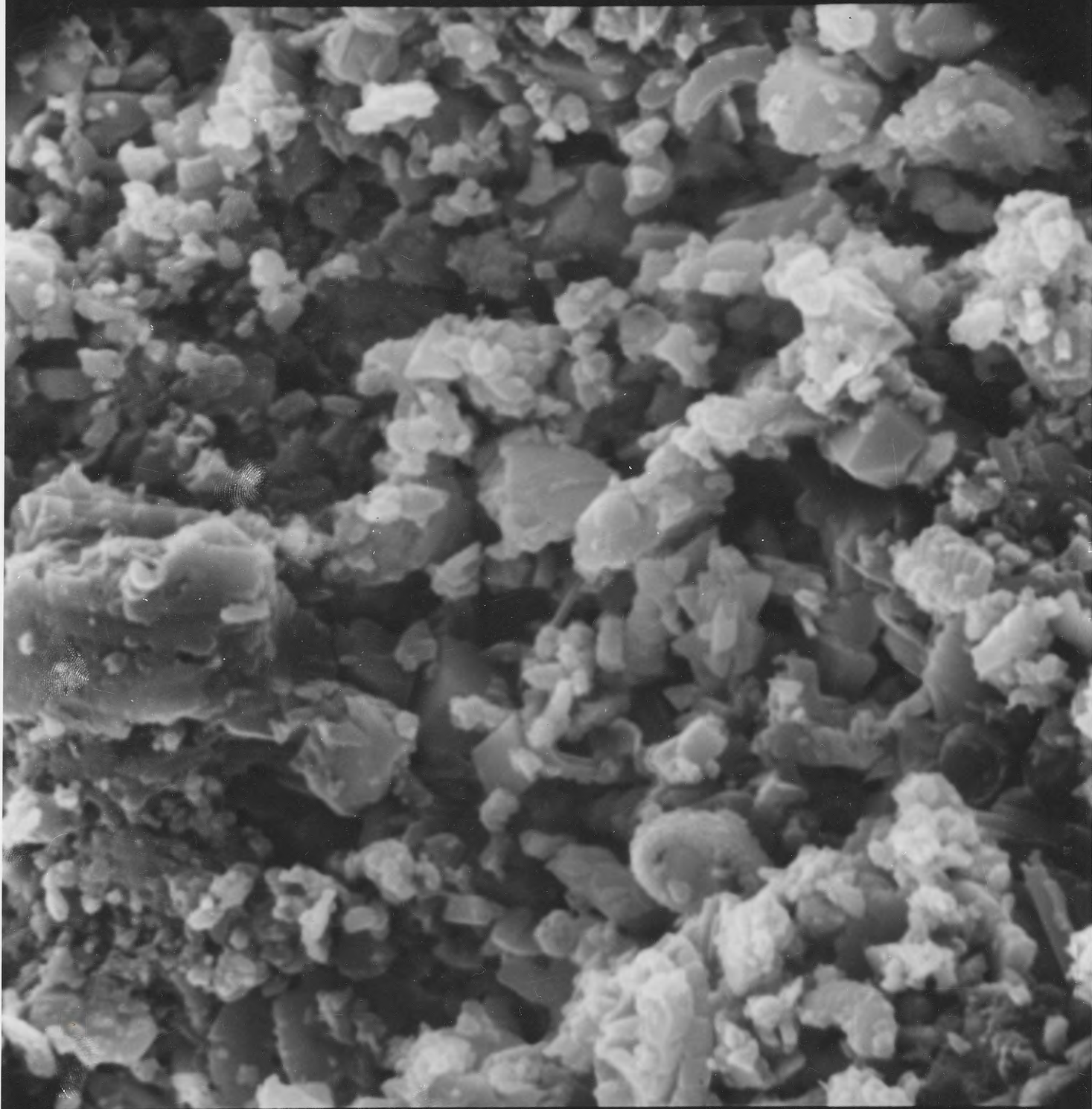
6/11/79 Murfin 1-36 Hilt 1629' x 3000
8 Typical Matrix C310 BR270



6/11/79 Murfin 1-36 Hilt 1629' x 3000
#9 Typical Pellet C310 BR270



6/11/79 Murfin 1-36 Hilt 1608' x 3000
10 Pellet Area C310 BR270



6/11/79 Murfin 1-36 Hilt 1608' x 3000
11 Non Pellet Area (Matrix) C310 BR270

		Murfin 1-36 Hill,	
6 (P-1)	MH-1	Mag. 2500/1.0 tilt 0°, KV15, 200 spot	— abund. of cocc. — v. porous
7 (P-2)	MH-1	Mag. 2500/1.1 (ditto)	— few cocc. — less pot.
8 (P-3)	MH-1	Mag. 2500/1.1 (ditto)	— abund. cocc. — v. pot., adj. to P2

MH-1 = Murfin 1-36 Hill
 CSWNE 36-18-42 W, Cheyenne Co., Ks.

Niobrara - Smoky Hill Mbr.

