

L3-84-SP D11-3A

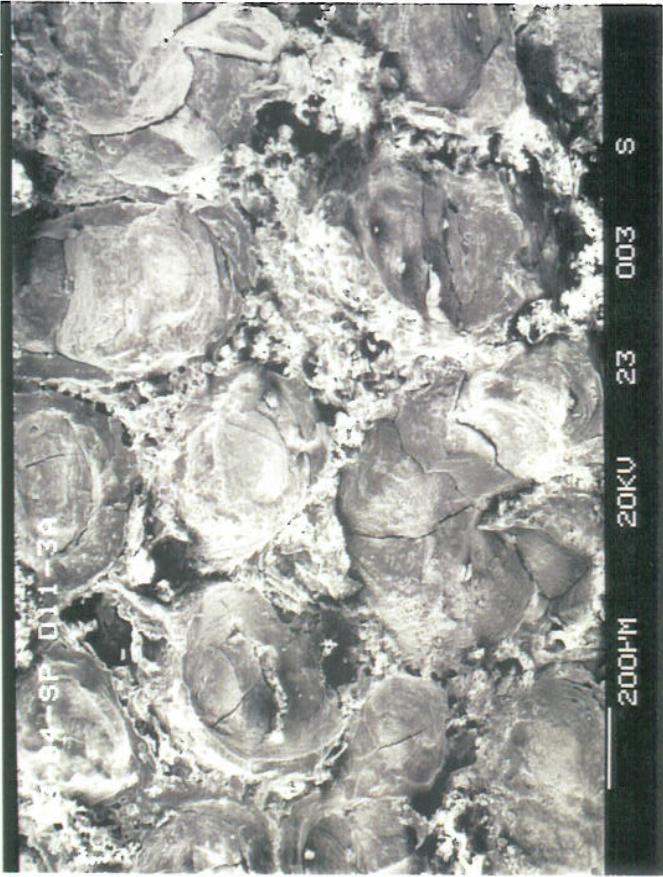


Photo 3

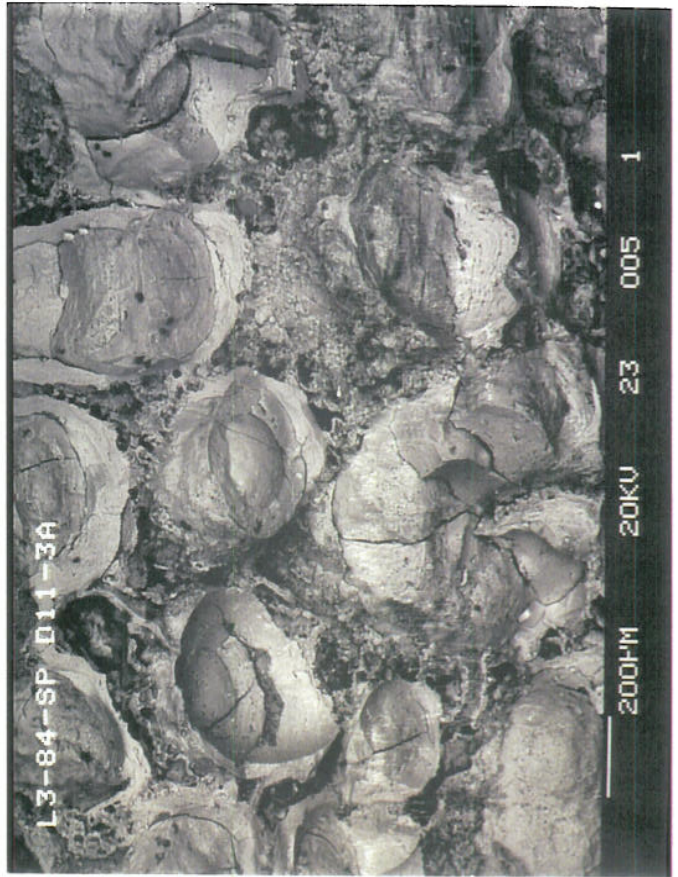


Photo 4 Backscatter



Photo 1  
General view

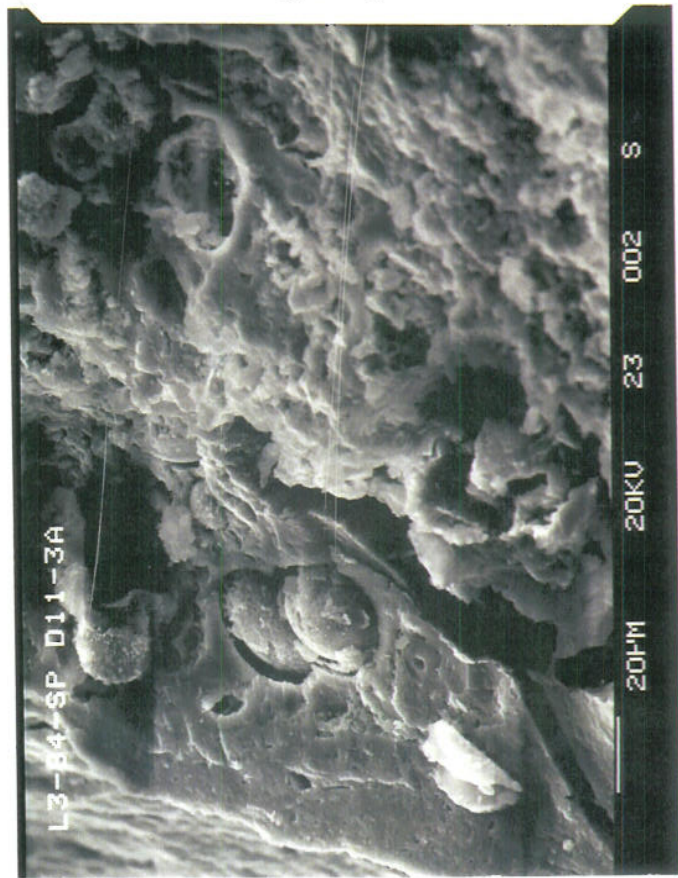


Photo 2



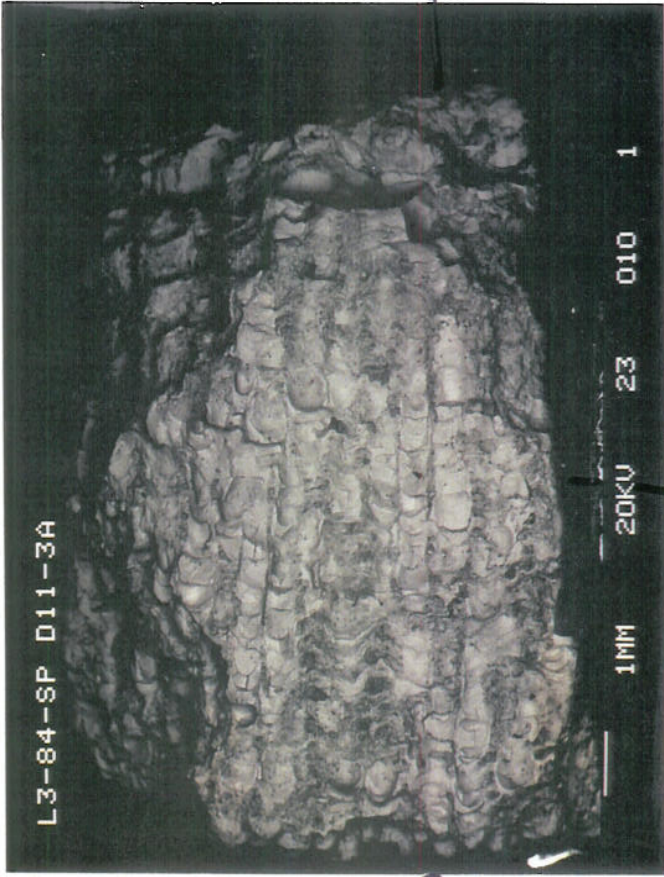


Photo 7

Top



Photo 8

Top

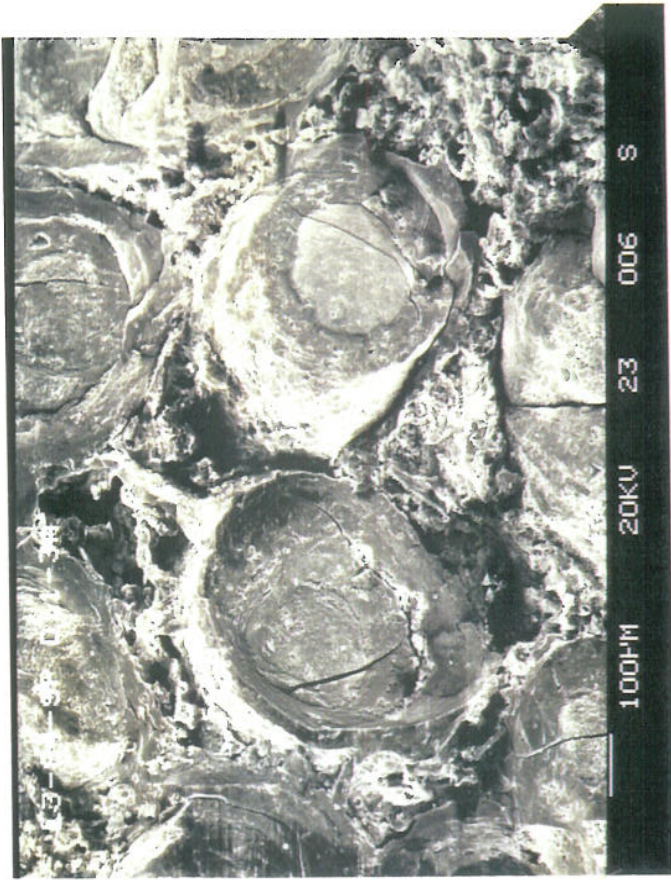


Photo 5

stereo pair

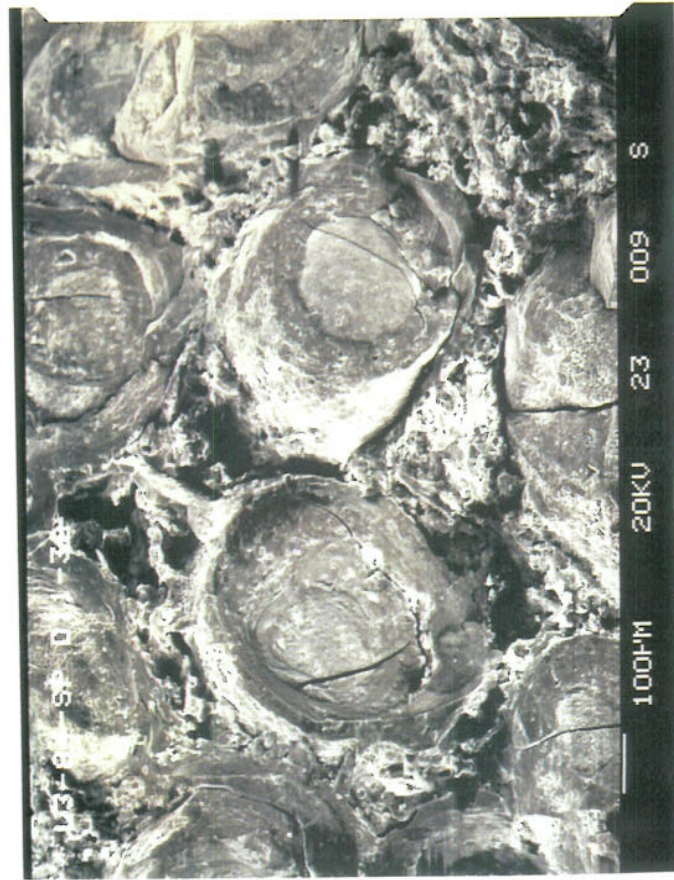


Photo 6

stereo pair





Photo 10

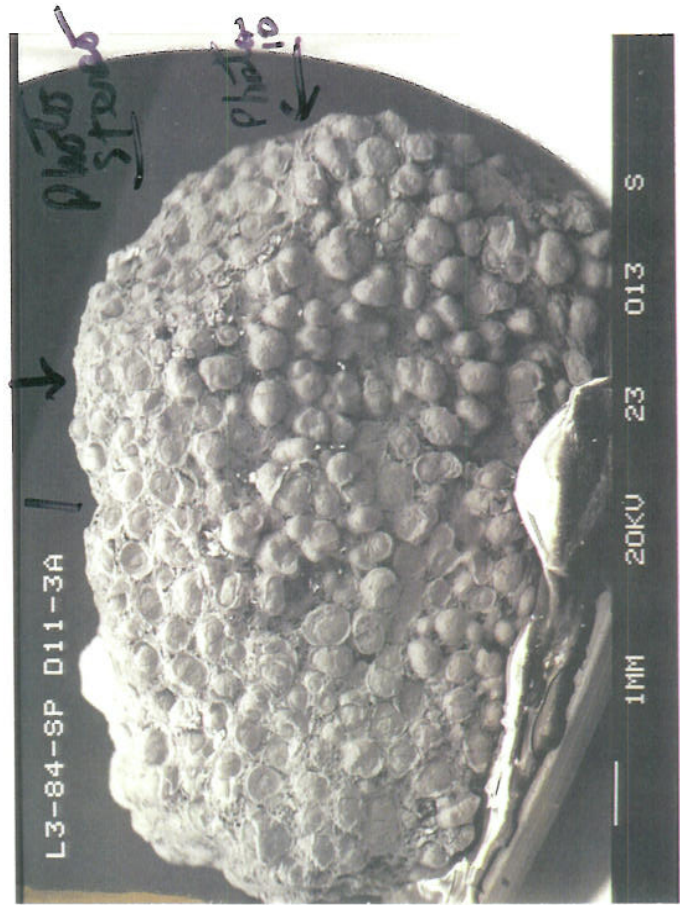


Photo 9

L3-84-5P; D11-3A - hydrogenetic + hydrothermal vertical columns  
leiba, columnar basalt

chemistry

Massive column:  $Mn \approx Fe$ ; Ca, Si, Ti, K

~~Massive~~ <sup>granular</sup> area:  $Mn < Fe$ ; Si, Ca, Al, Ti, K, Mg - <sup>more</sup> detrital

Porous area:  $Mn < \underline{Fe}$ ; Si, K, Ti, Ca, ~~Al~~ Al,

Photo 1 - General

Photo 2 - Contact of massive + granular areas

Sphere in Photo 2 =  $Mn < Fe$

Massive next to sph -  $Mn \approx Fe$

Top of sample - growth surface  
End View -

Photo 3 - General, several columns

Chemistry

Center of column:  $Mn \approx Fe$ ; Si, Al, Ca, Ti, K,

outer rim:  $Mn \approx$  or little less of Fe, Ca, Si, Ti

much less Si, more Ca

Photo 4 - back scattered electrons of Photo 3

Photo 5 - More columns, 1<sup>st</sup> of stereo pair; 4° change

Photo 6 - other half of stereo pair

Chem of column on RT -

center =  $Mn \approx Fe$ , Si, Ca

middle layer =  $Mn \approx Fe$ , Ca, Ti, no Si

outer layer =  $Mn < Fe$ , Si, Ca, but less low -

D11-7A Cont

side of Sample showing continuous columns

Photo 7  $\nearrow$  back-scattered ~~photo~~ electrons -

columns on To side were not apparently continuous because -  
Photo E Close-up of columns in lower Rt. Center -  
of Photo E -

Photo 9 - general view Top

Photo 10 - close up of fresh column tops -

cellular structure in interstitial areas -  
evacuating forams?

Chem. of interstitial area = Mn-Fe, hi CA; Si, Al,  
interstitial area filled w/ nanos - still,  $\text{CaCO}_3$

Surface of columns are clean of debris -

Some interstitial areas more porous -

Small barite grains - interstitial

L3-84-SP, D1-71 - X-ray Amorphous xstals - block glass??

Photo 1 - general medium view of glass shards -  
chemistry Si, Al, Ca, Fe, Mg, Ti,

L3-84-SP, D26-1 - Wouldn't pump down

Large blade

~~BG, BG, BG~~

BG 8+9 Fe-oxide

BG 10 -