D1-2 : L5 - 82 - SP

photo 3

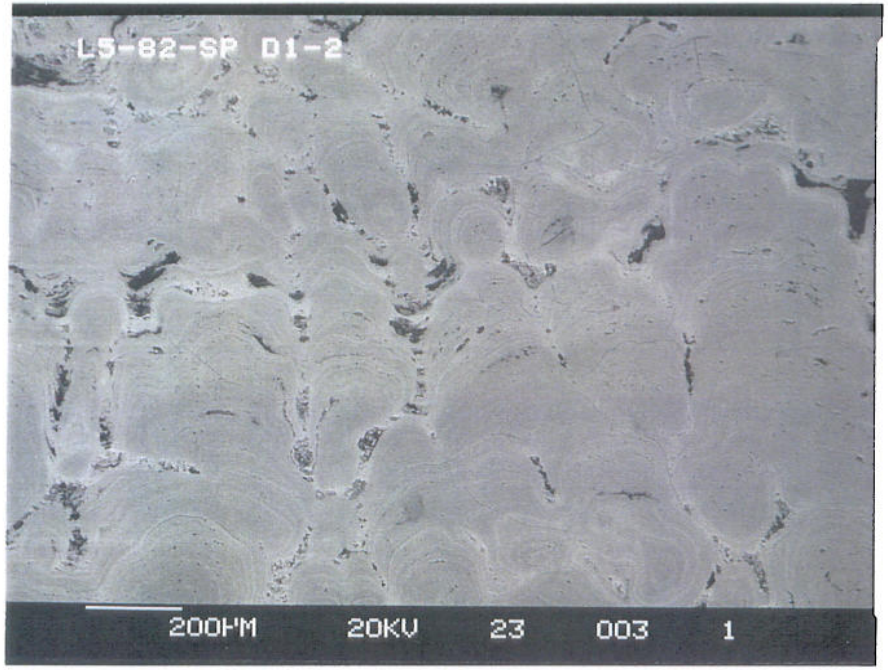


photo 2

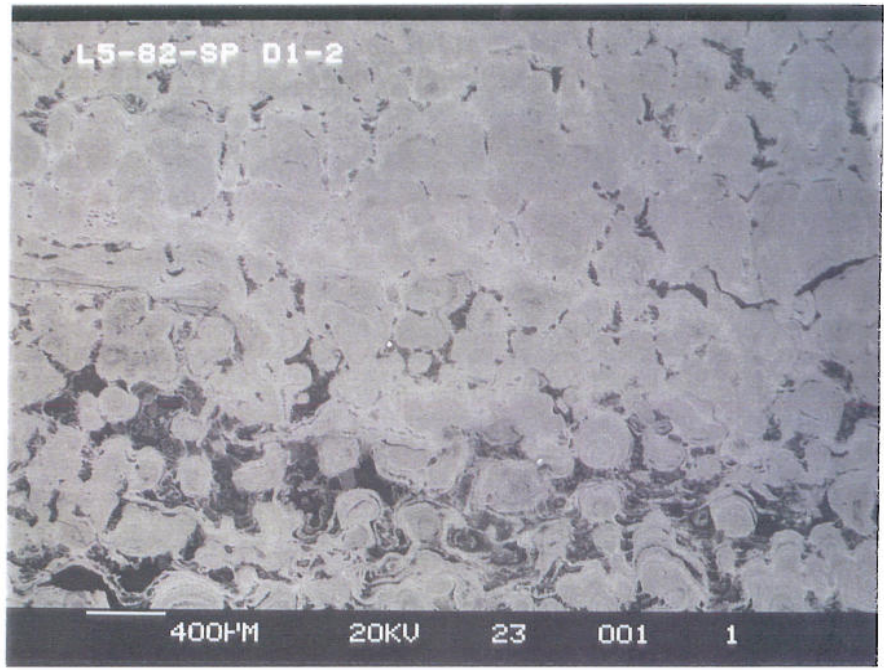


photo 4

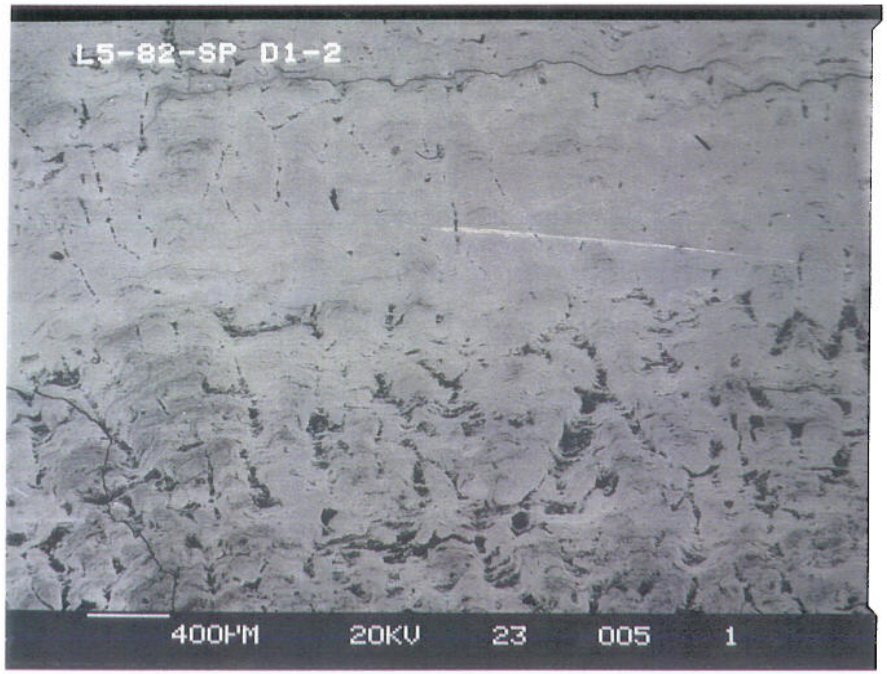


photo 1

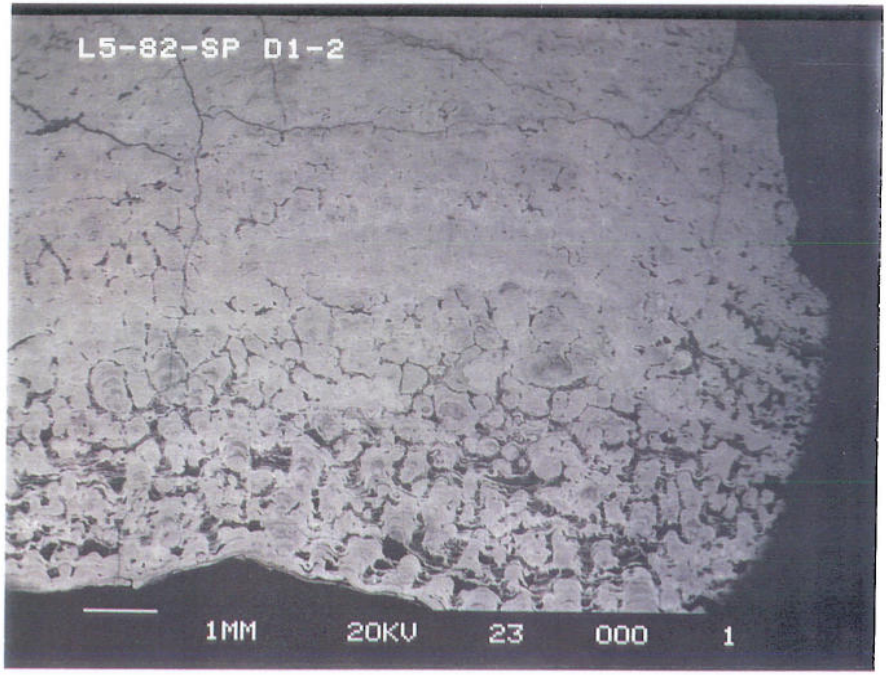


Photo 5

7-26-1988.

L5-82-SP. D1-2

photo 1 : General photo (right side)
chem. Mn, Fe, CA, Si, Ti, Si
upper one / lower
Fe ≃ Mn, CA, Ti, Si.
bright line / botryoid's core
Fe ≃ Mn, Ti, CA, Mg, Si.
lowest line / Fe >> Mn (Ti) CA, Si.
upperest line / Mn, Fe, CA, Ti Si, Mg.

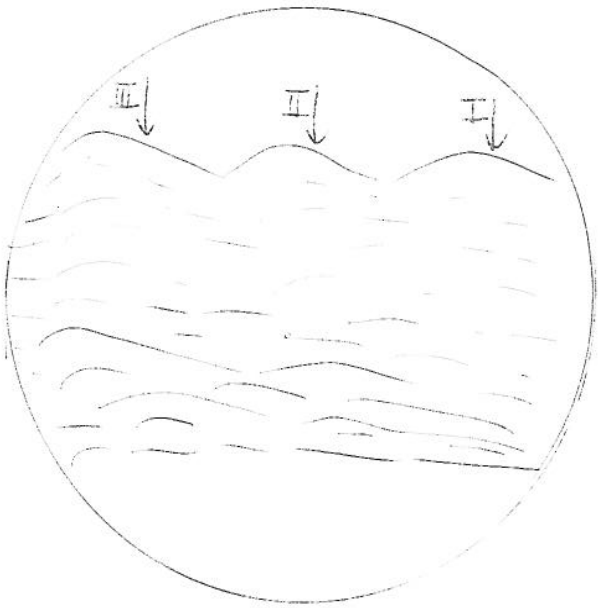
photo 2 : center. boundary between 2 generation

photo 3 : Mag. photo 2.
botryoidal connection.

photo 4 : left side : boundary upper and lower
chem.
grain : Fe. (Mn), Ti. C
chem : Mn, (Fe). CA. thickness < 2μm

photo 5 : Mn layer / bottom.
Mn layer has acicular / fibrous

P1-2



I: two sequence change / by porosity distribution

II: two sequence change / by erosion base

III: two sequence change / by chemical property.
upper (Fe-rich) ?

SEM

I : two sequence shape
by porosity distribut
(papulet)

I : two sequence shape
by erosion line

II : two sequence shape
by chemical properties
upper (Fe-rich) 2.

- Two quite different botryoidal population in Mn crust with indistinction boundary
- SEM investigation
  - high, dense botryoids
  - high porosity, weak population of botryoids
  - discontinuity (main)
  - cavity filling substances caracteristics (organisms / grains / etc) in lower part.

→ different seawater environments evidences

/ ≈ 2

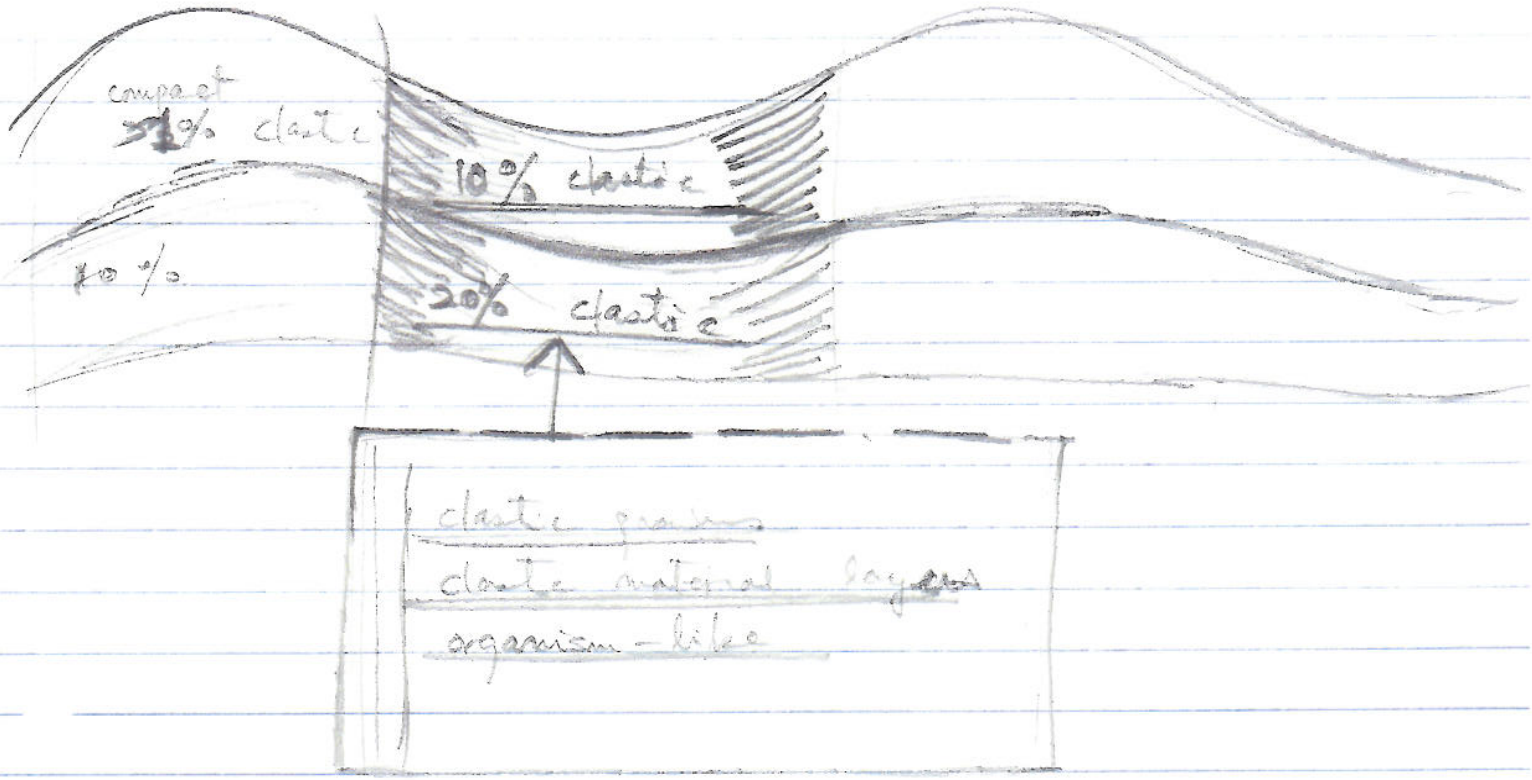
* gradually ... from disc... recent l... ...ee times ...ithout any

~~discontinuity~~

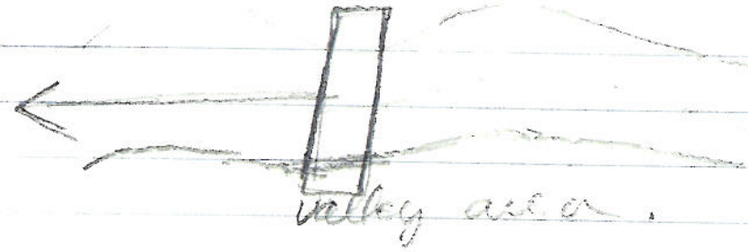
* give different optical properties upper show more white (Fe or Mn)

← discontinuity without any changes exist several times discontinuity ^ valley area fill with clastic materials ; silicate grains, organism-like forms, sometime clastic materials present ~~show seems like~~ as layer and irregularly alternate with Fe-Mn layer and clastic layer

However, deposits formed in the environments of highly deposits of clastic materials, even in the each layer of Fe-Mn deposit (botryoids).


compact
10% clastic
10% clastic
20% clastic
clastic grains
clastic material
organism-like

5x10x0.8 . L5-82-SP. D1-2



botryoidal growth
compact
small porosity

← ? (unclear boundary).

botryoidal growth
high porosity

L5-82-SP. D1-2

thick 8-9 mm