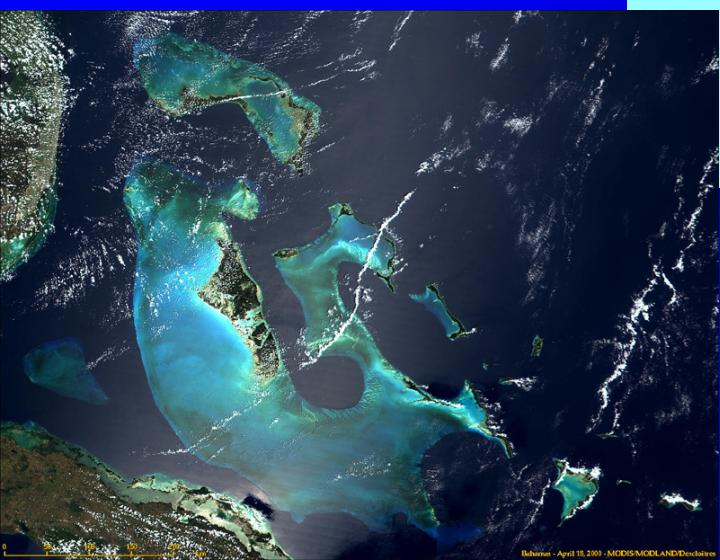
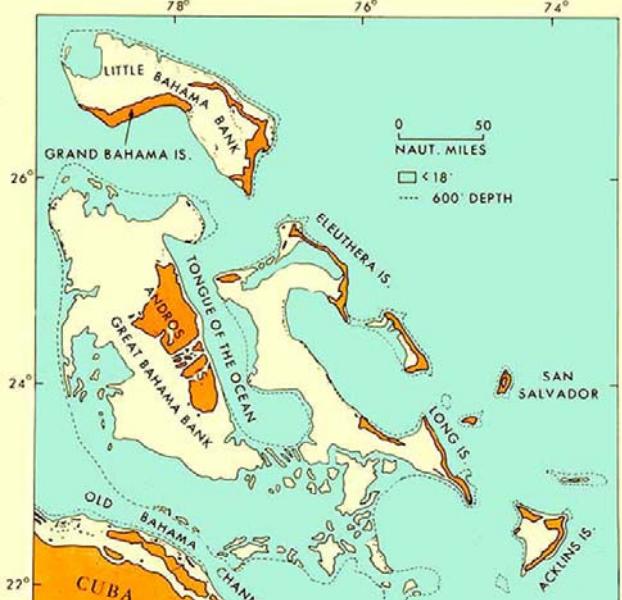
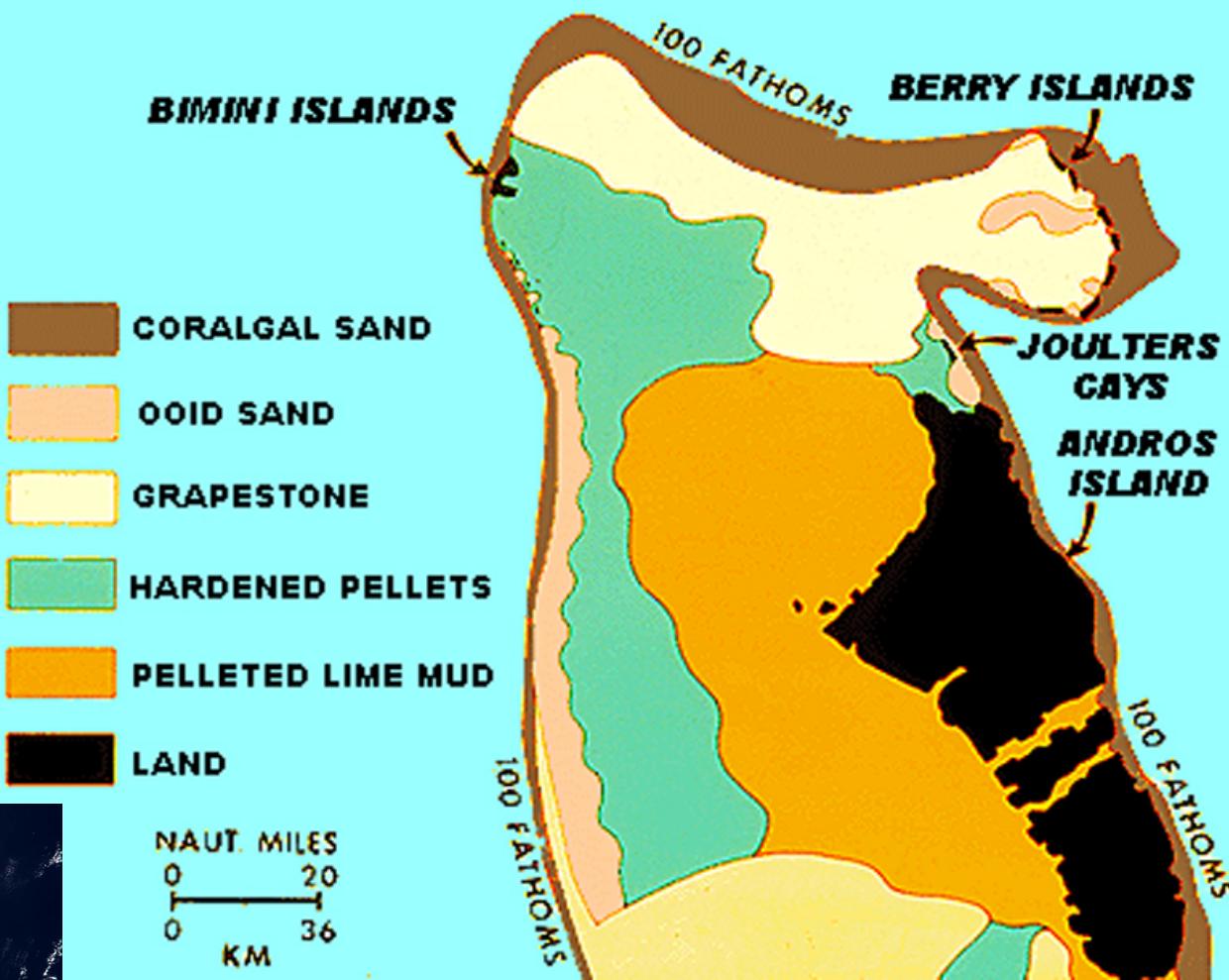


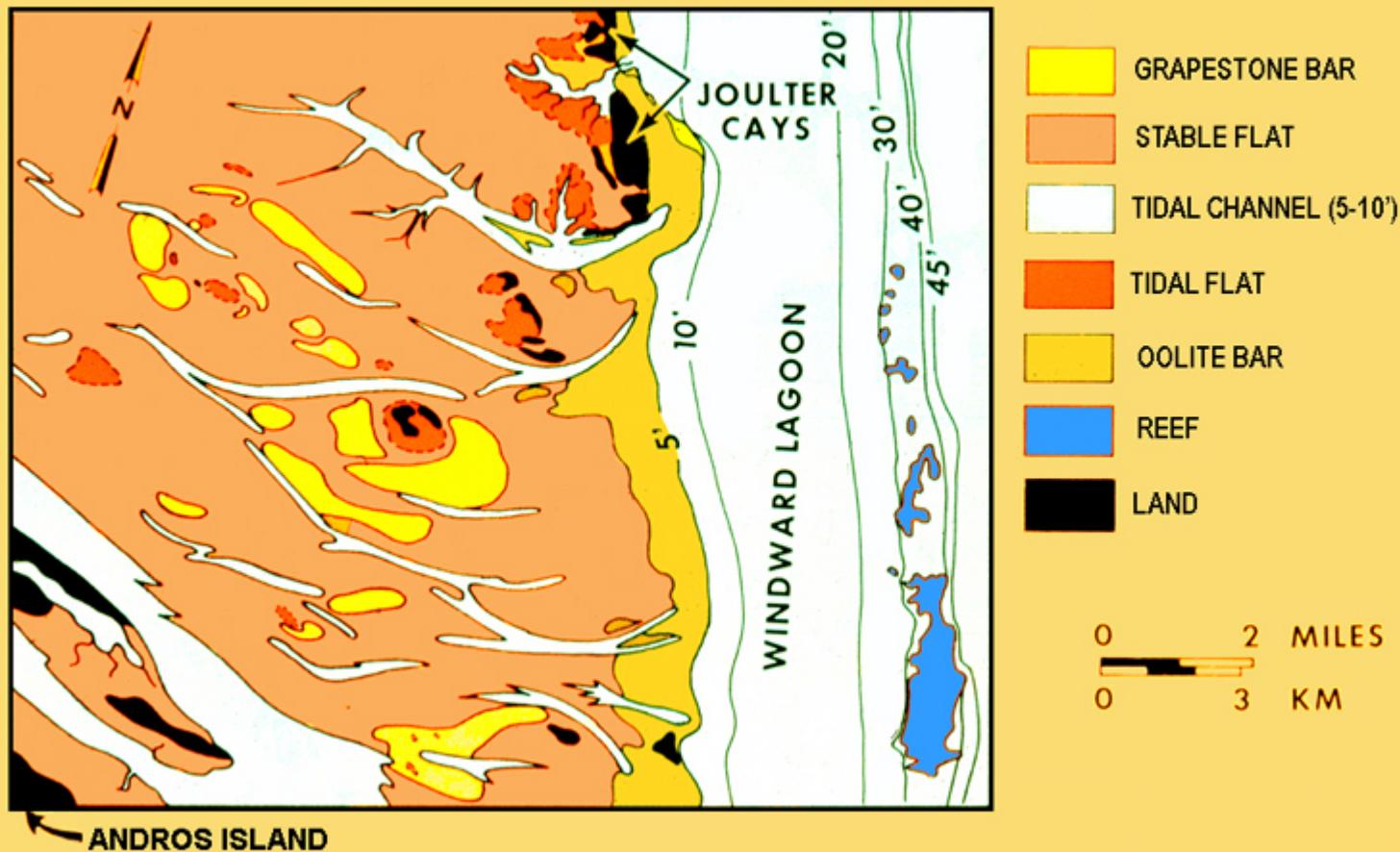
BATHYMETRIC CHART - BAHAMA BANKS



CARBONATE FACIES - ANDROS PLATFORM



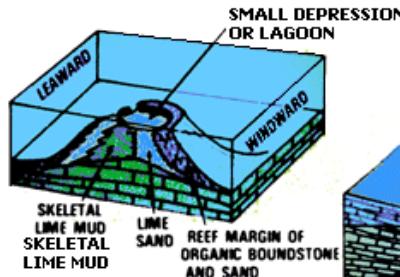
FACIES DISTRIBUTION - JOULTER CAYS AREA GREAT BAHAMA BANK



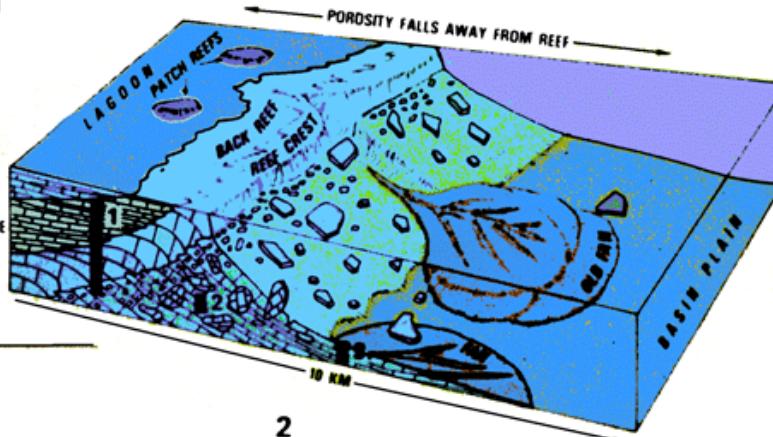
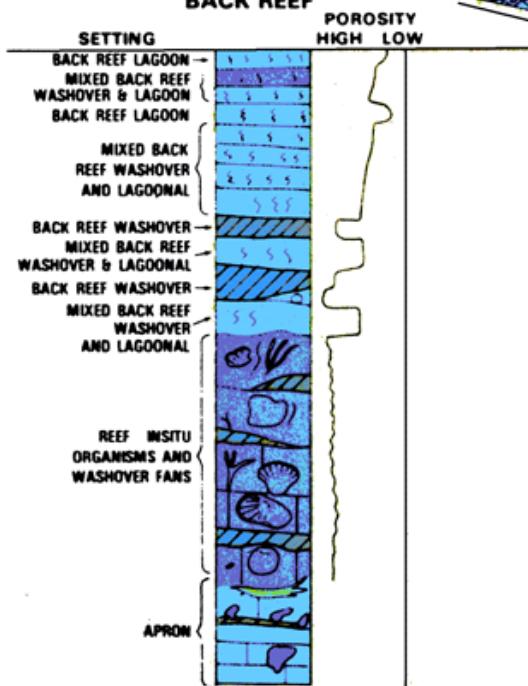
Slope and Margin Carbonates

PATCH REEF

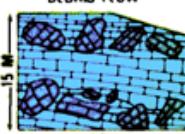
**POROSITY FALLS TOWARDS CENTER OF PATCH
BEST ON WINDWARD SIDE WHERE WAVES
WINNOW SEDIMENTS**



1

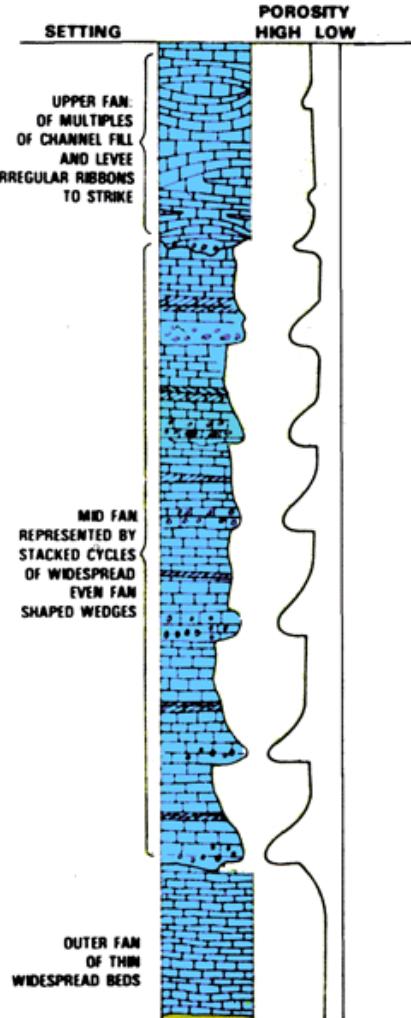


2



| | |
|-----------|---|
| GEOMETRY | IRREGULAR CHANNEL FILL ALSO SMALL TO ENORMOUS BLOCKS |
| LITHOLOGY | THAT LOOK <u>IN SITU</u> BLOCKS ARE VARIABLE MATRIX IS LIME MUD |
| B & K | POOR SINCE SEDIMENT MATRIX IS MILLI-SIZED AND POORLY SORTED |

3





Sierra El Mulato

Cañon El Alamo

Formaciones

Foramación
Difunta

Lutita
Parras

Fm. Indidura/
San Felipe
Fm. Indidura/
Agua Nueva

Cuesta del Cura

Caliza Tamaulipas

Formación
La Peña
Caliza Cupido

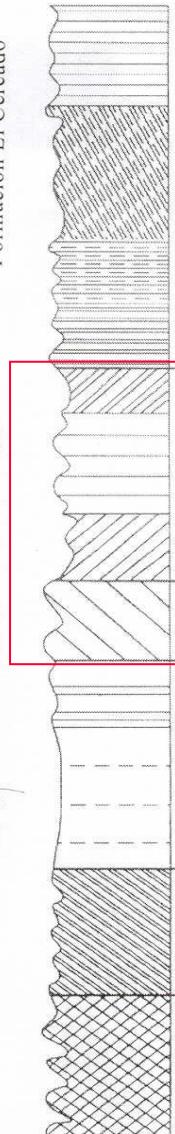
Taraises

La Casita

Formaciones
La Gloria, Zuloaga
Minas Viejas

Formación
Nazas

Formación El Cercado



CAÑON EL ALAMO

Monterrey



Longoria et. al. (1998).



Formación Cupido.
Eje de Anticlinal San Juan Bautista.



Caliza Tamaulipas, calizas con pedernal Cañón el Álamo, Sierra San Juan Bautista Nuevo León.

CAÑÓN EL ÁLAMO

| FORMACIÓN | LITOLOGÍA | INTERVALOS | MUESTRAS | DESCRIPCIÓN |
|---|--|--|---|--|
| Caliza Tamaulipas | <p>E 10</p> <p>E 9</p> <p>E 8</p> <p>E 7</p> <p>E 6</p> <p>E 5</p> <p>E 4</p> <p>E 3</p> <p>E 2</p> <p>E 1</p> | <p>E 10</p> <p>E 9</p> <p>E 8</p> <p>E 7</p> <p>E 6</p> <p>E 5</p> <p>E 4</p> <p>E 3</p> <p>E 2</p> <p>E 1</p> | <p>— CA 9+11</p> <p>— CA 7+10</p> <p>— CA 7+4</p> <p>— CA 6+30</p> <p>— CA 6+25</p> <p>— CA 6+20</p> <p>— CA 6+15</p> <p>— CA 6+10</p> <p>— CA 6+5</p> <p>— CA 5+12</p> <p>— CA 5+9</p> <p>— CA 5+7</p> <p>— CA 5+6</p> <p>— CA 5+5</p> <p>— CA 5+4</p> <p>— CA 5+2</p> <p>— CA 4+22</p> <p>— CA 3+30</p> <p>— CA 3+15</p> <p>— CA 2+17</p> <p>— CA 2+14</p> <p>— CA 1+30</p> <p>— CA 1+21, CA 1+21A</p> <p>— CA 1+10</p> <p>— CA 1+0</p> | <p>Caliza delgada a media color negro</p> <p>Cubierto</p> <p>Cubierto por arroyo</p> <p>Caliza con pedernal</p> <p>Caliza sin pedernal.</p> <p>Caliza delgada a media con lentes y nódulos de pedernal estratificación continua ondulada con capas de 5 cm de margas.</p> <p>Caliza delgada a media con lentes y nódulos de pedernal estratificación continua y paralela.</p> <p>Caliza con pedernal</p> <p>Caliza delgada y margas lajeadas</p> <p>Estratos de caliza gruesa y pedernal</p> <p>Caliza gruesa gris claro con nódulos y bandas de pedernal</p> <p>Caliza gruesa</p> <p>Caliza gruesa masiva bien estratificada con belemnites estratos paralelos y continuos.</p> <p>Caliza masiva.</p> <p>Calizas con moluscos</p> <p>Calizas delgadas tectonizadas con estratificación continua y paralela.</p> <p>Calizas gruesas masivas con estratos definidos por estilolitas estratificación continua con nódulos de pedernal.</p> |
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| | | | | |
| <p>Caliza gruesa Caliza mediana Caliza delgada</p> <p>Caliza con pedernal Lutita Intervalo cubierto</p> <p>Escala 1: 1000</p> | | | | |

MICROFACIES

| MICROFACIES | | MF1 | MF2 | MF 3 | MF 2 | MF4 | | | | | MF5 | | | | |
|-------------------|-------------------------|------------------|-------|------|-------|-------|------|------|------|------|------|--------------|-----|-----|-------|
| FORMACIÓN | | Formacion cupido | | | | | | | | | | C.Tamaulipas | | | |
| NUMERO DE MUESTRA | | 1-0 | 1-10 | 1-21 | 1-21A | 1-30 | 2-14 | 2-17 | 3-15 | 3-30 | 4-22 | 4-30 | 5-2 | 5-4 | 5-4.5 |
| T | MUDSTONE | | float | X | X | float | | | | | | | X | | |
| U | WACKESTONE | | X | sto | | sto | | X | X | X | X | | | X | |
| E | PACKSTONE | | | ne | | ne | | | | | | | X | X | |
| L | GRAINSTONE | | | | | | X | | | | | | | | |
| S | INTRACLASTOS | | S | S | | S | S | F | | F | S | | | S | |
| O | OOLITAS | | | | | | | | | | | | | | |
| C | PELETS | | S | S | S | S | ? | ? | | S | S | | | S | |
| M | CORTOIDES | | | | | | | | | | | | | | |
| P | CALCIESFERAS | S | | | | | | | S | R | A | F | A | A | A |
| Q | CALPIONELIDOS | | | | | | | | F | F | F | F | | S | S |
| A | RADIOLARIOS | A | | | | | | | | | | | | | |
| S | ESPONGAS | | | | | | | | | | | | | | |
| O | CORALES | | | | | | | | | | | | | | |
| C | ANELIDOS | | R | | | | | | | | | | | | |
| M | BRIOZOARIOS | | | | | | | | | | | | | | |
| E | EQUINODERMOS | | F | S | S | S | S | S | S | S | S | S | F | S | |
| D | ESPINAS DE EQUINODERMOS | | S | R | R | R | R | S | | | | | | | |
| Q | CRINOIDES | | S | R | | | | | S | S | | | | | |
| A | PK CRINOIDES | | | | | | | | | | | | | | |
| A | BRAQUIOPODOS | | S | S | S | F | F | S | | S | S | S | | S | S |
| FORAM. | ROTALIDO PK | S | | R | R | | | | F | F | F | F | A | F | F |
| | ROTALIDO BT | S | F | S | S | F | F | F | R | S | | R | R | R | R |
| | MILIOLIDOS | | F | F | S | R | F | | | | | | | | |
| | ORBITOLINIDOS | | | | | | | | | | | | | | |
| | OSTRACODOS | | S | F | F | R | S | F | F | A | S | S | S | S | S |
| | MOLLUSCOS | | | | | | | | | | | | | | |
| | BIVALVOS | | | | | | | | | | | | | | |
| | GASTEROPODOS | | | | | | | | | | | | | | |
| | CEFALOPODOS | | | | | | | | | | | | | | |
| | ALGA ROJA | | | | | | | | | | | | | | |
| | ALGA VERDE | | R | | | | | | | | | | | | |
| | PARTICULAS TERRIGENAS | | | | | | | | | | | | | | |
| | MINERALES AUTIGENICOS | | | | | T | T | | | | T | T | | | R |

| MICROFACIES | | MF 5 | | MF 1 | | MF6 | | | | MF1 | | | | | |
|-----------------------|-------------------------|-------------------|------|------|-----|------|-----|------|------|------|------|------|-----|------|------|
| FORMACIÓN | | Caliza Tamaulipas | | | | | | | | | | | | | |
| NUMERO DE MUESTRA | | 5-6 | 5-7A | 5-8 | 5-9 | 5-12 | 6-5 | 6-10 | 6-15 | 6-20 | 6-25 | 6-30 | 7-4 | 7-10 | 9-11 |
| TEXTURA | MUDSTONE | | | | | | X | X | X | X | X | X | X | X | X |
| | WACKESTONE | X | X | X | X | X | | | | | | | | | |
| | PACKSTONE | | | | | | | | | | | | | | |
| | GRAINSTONE | | | | | | | | | | | | | | |
| | INTRACLASTOS | F | S | | | | | | | | | | | | |
| | OOLITAS | | | | | | | | | | | | | | |
| | PELETS | F | S | | | | | | | | | | | | |
| | CORTOIDES | | | | | | | | | | | | | | |
| | CALCIESFERAS | F | A | F | S | F | | | | | | | F | A | A |
| | CALPIONELIDOS | S | S | S | | | | | | | | | | | |
| SISTEMAS | RADIOLARIOS | | | | | A | S | R | R | A | A | A | F? | F | S |
| | ESPONGAS | | | | | | | | | | | | | | |
| | CORALES | | | | | | | | | | | | | | |
| | ANELIDOS | | | | | | | | | | | | | | |
| | BRIOZOARIOS | | | | | | | | | | | | | | |
| | EQUINODERMOS | S | | S | R | R | | | | R | | | | | |
| | ESPINAS DE EQUINODERMOS | | | | | | | | | | | | | | |
| | CRINOIDES | | | | | | | | | | | | | | |
| | PK CRINOIDES | | | | | | | | | | | | | | |
| | BRAQUIOPODOS | F | R | S | R | R | | | | | | | | | |
| FORAM. | ROTALIDO PK | A | F | S | R | R | S | S | S | S | S | S | S | R | S |
| | ROTALIDO BT | S | S | R | T | T | | T | | S | | | | | |
| | MILIOLIDOS | | | | | | | | | | | | | | |
| | ORBITOLINIDOS | | | | | | | | | | | | | | |
| OSTRACODOS | | F | R | R | | | | | S | R | S | S | S | S | |
| MOLLUSCOS | | | | | | | | | | | | | | | |
| BIVALVOS | | | | | | | | | | | | | | | |
| GASTEROPODOS | | | | | | | | | | | | | | | |
| CEFALOPODOS | | | | | | | | | | | | | | | |
| ALGA ROJA | | | | | | | | | | | | | | | |
| ALGA VERDE | | | | | | | | | | | | | | | |
| PARTICULAS TERRIGENAS | | | | | | | | | | | | | | | |
| MINERALES AUTIGENICOS | | S | S | S | S | R | R | R | F | S | S | S | R | R | |

Microfacies 1

Wackestone y mudstone de calciesferas y radiolarios calcificados.

foraminíferos planctónicos, ostrácodos y foraminíferos bentónicos.

Nerítico externo a pelágico.

Globigerinoides ferreolensis

Microfacies 2

Wackestone y grainstone de foraminíferos bentónicos, miliólidos y braquiópodos. Ostrácodos, equinodermos, pelets e intraclastos y espinas de equinodermos.

Nerítico medio con desarrollo de lagunas y bancos.

1

2

3

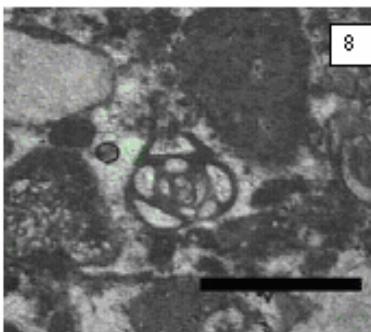
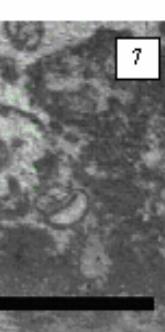
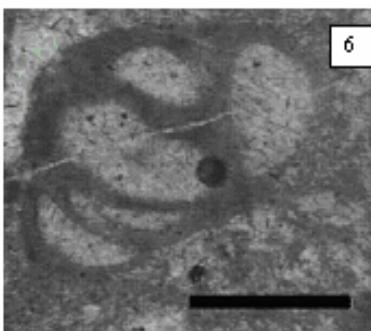
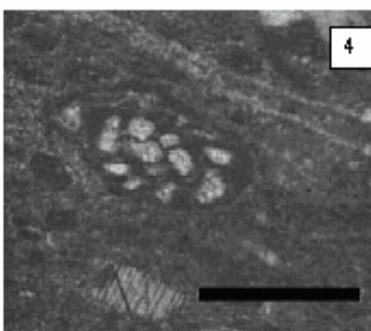
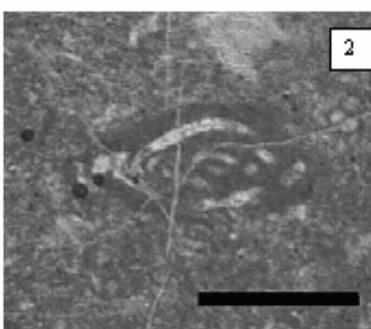
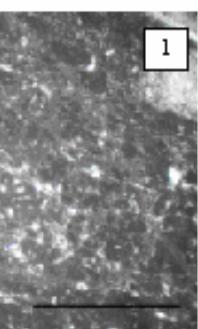
4

5

6

7

8



Microfacies 3

Mudstone de miliólidos y ostrácodos,
Foraminíferos bentónicos,
braquiópodos, equinodermos,
pelets e intraclastos,
foraminíferos planctónicos,
crinoides, espinas de
equinodermos.

Nerítico medio con
desarrollo de lagunas.

1

2

3

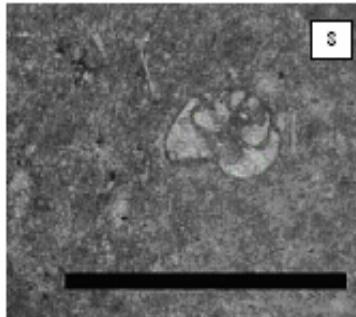
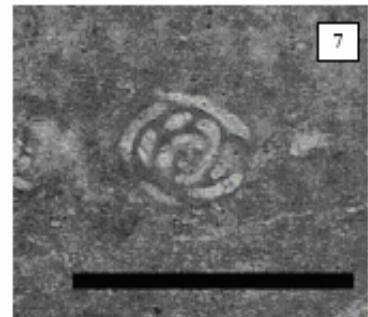
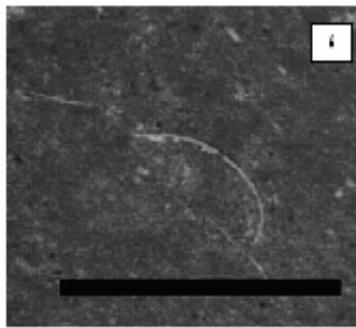
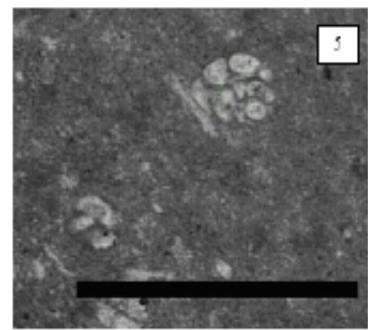
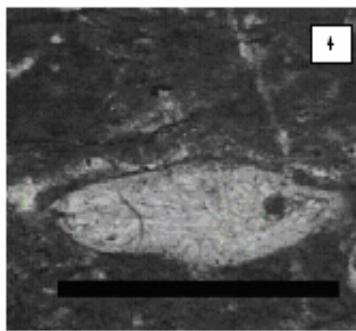
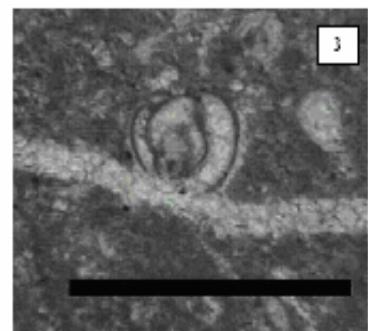
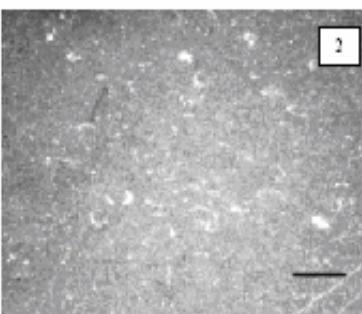
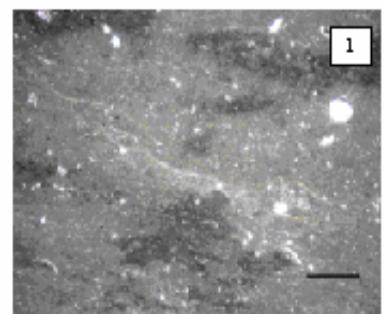
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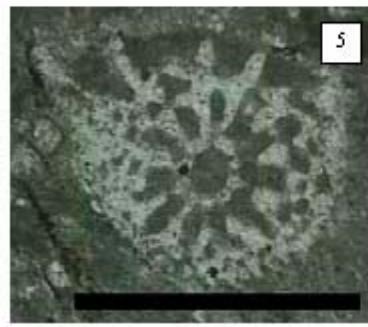
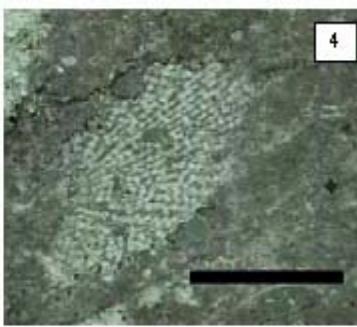
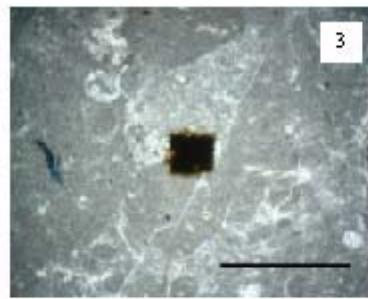
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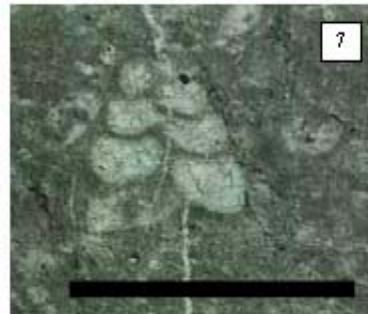
Microfacies 4

Wackestone de
foraminíferos planctónicos,
calpionelidos y ostrácodos.
Pelets e intraclastos,
foraminíferos bentónicos,
calciesferas, braquiópodos,
crinoides, equinodermos y espinas
de equinodermos.

Nerítico externo.



(*Colomiella mexicana*),



Microfacies 5

Wackestone-packstone de calcisferas y foraminíferos planctónicos.

Calpionelidos, ostrácodos, equinodermos, braquiópodos, pelets e intraclastos y foraminíferos bentónicos.

Nerítico externo.

1

2

3

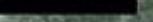
4

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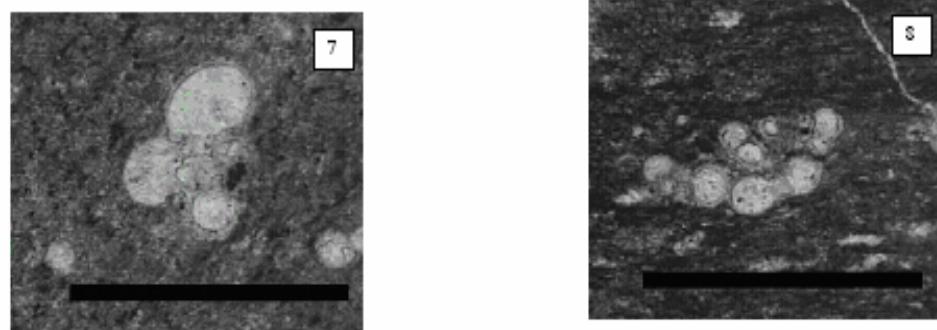
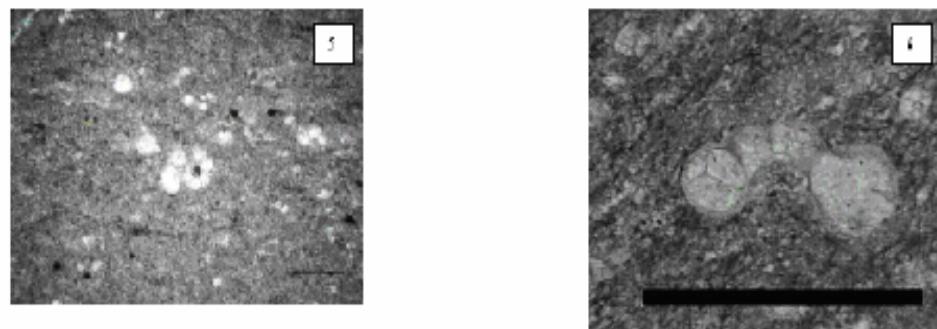
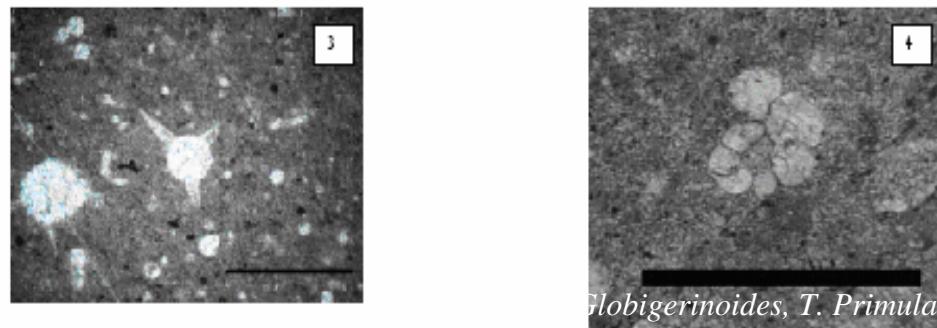
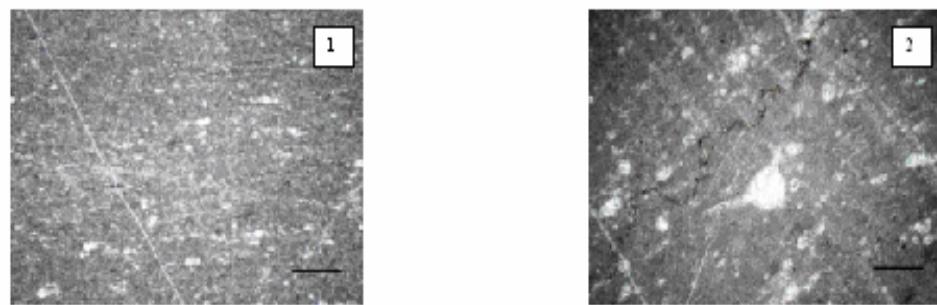
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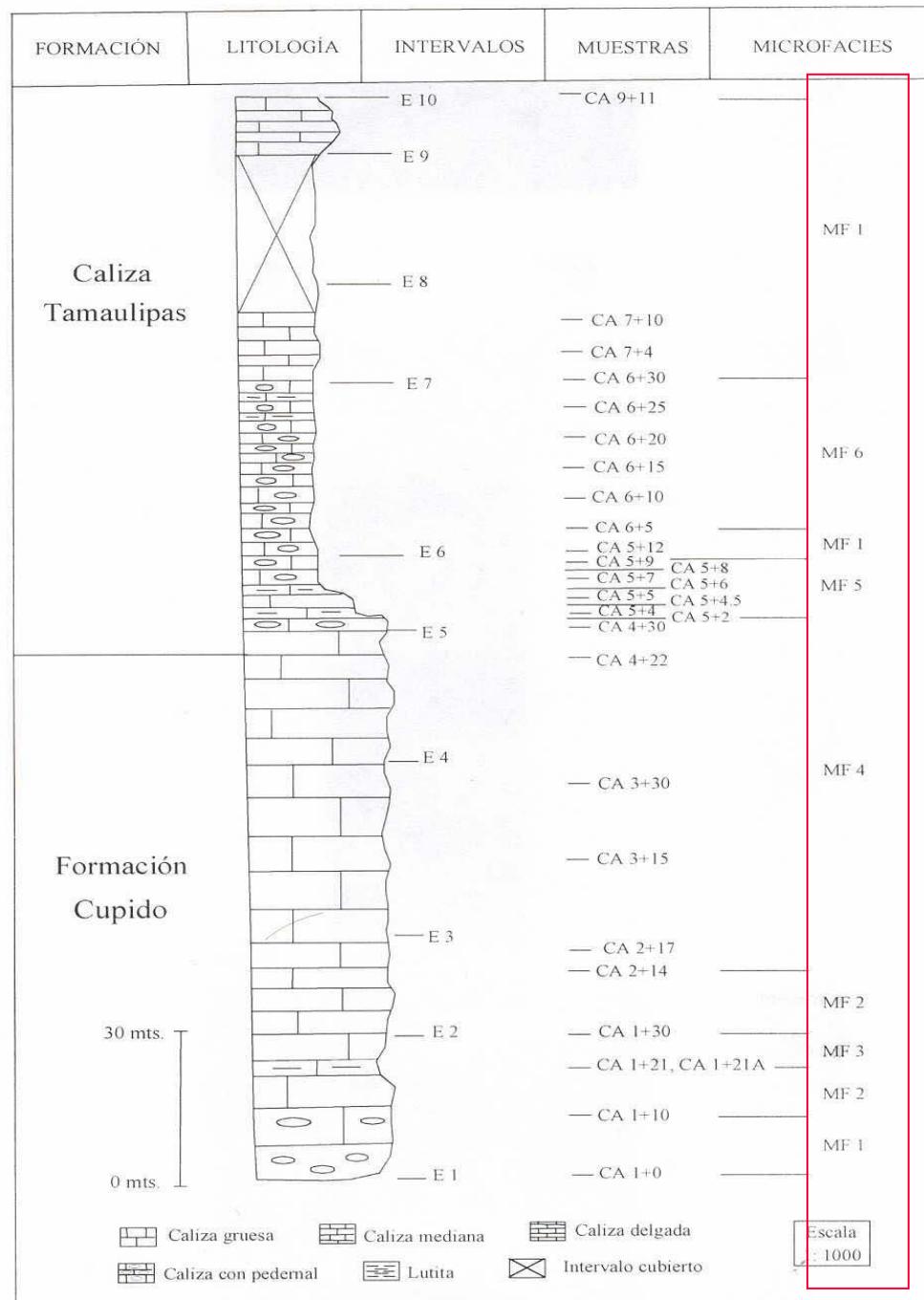
Microfacies 6

Mudstone de radiolarios.
Foraminíferos planctónicos
ostrácodos, equinodermos de
foraminíferos bentónicos.

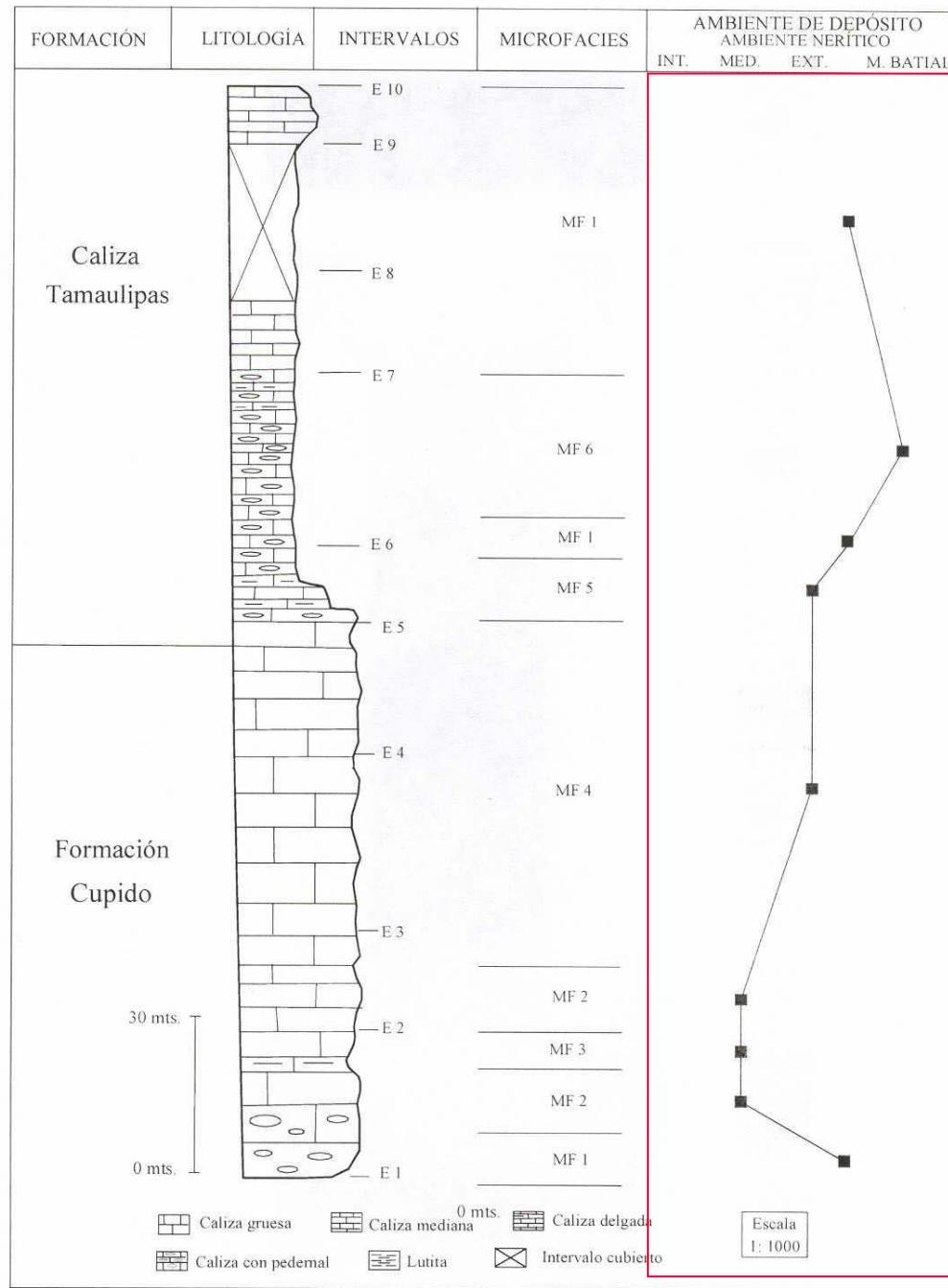
Nerítico externo a marino
batial.

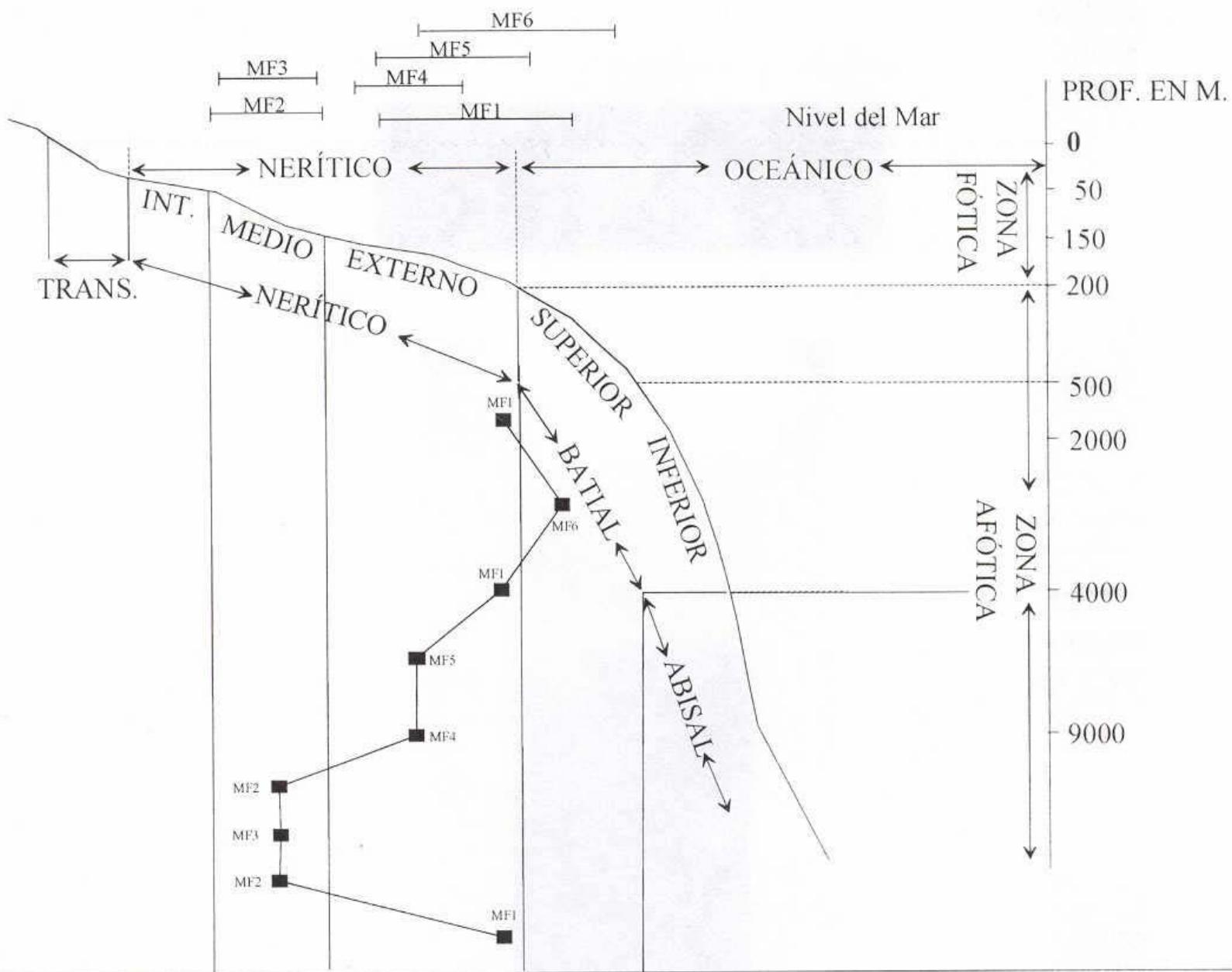


CAÑÓN EL ÁLAMO



CAÑÓN EL ÁLAMO



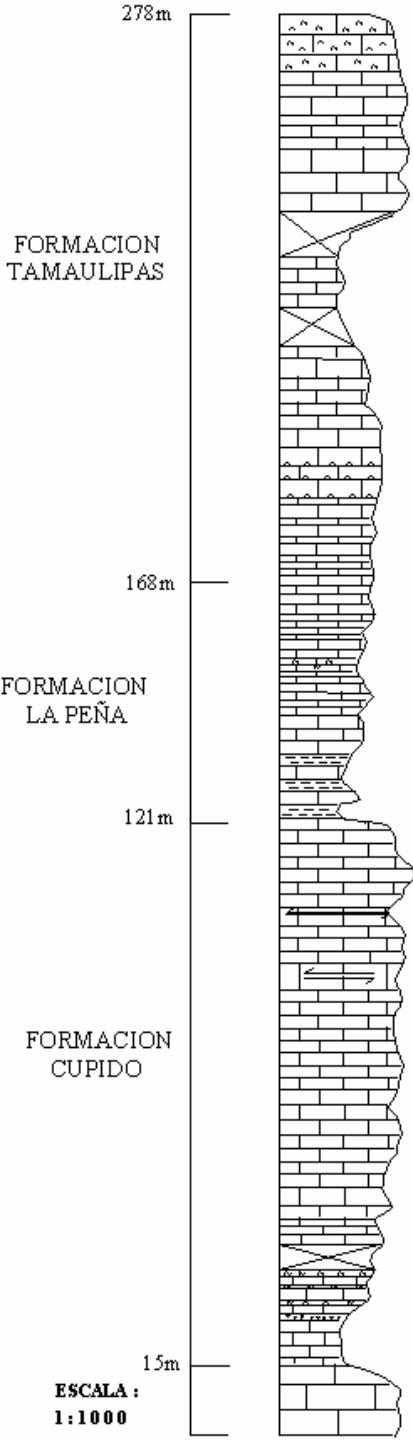


SECCIÓN EL MULATO

Caliza gruesa a masiva intercalada con caliza delgada margosa.

Lutita alternando con capas de marga y caliza nodular.

Caliza gruesa a masiva intercalada con caliza delgada margosa.



A photograph of a large, rocky mountain slope. The upper portion of the slope is covered in dark, craggy rock, while the lower portion shows distinct horizontal sedimentary layers with varying shades of brown and tan. A dark tunnel entrance is visible at the base of the slope. In the foreground, a paved road leads towards the tunnel, with some utility poles and a white pickup truck on the right side.

Formacióm Tamaulipas

Formación La Peña

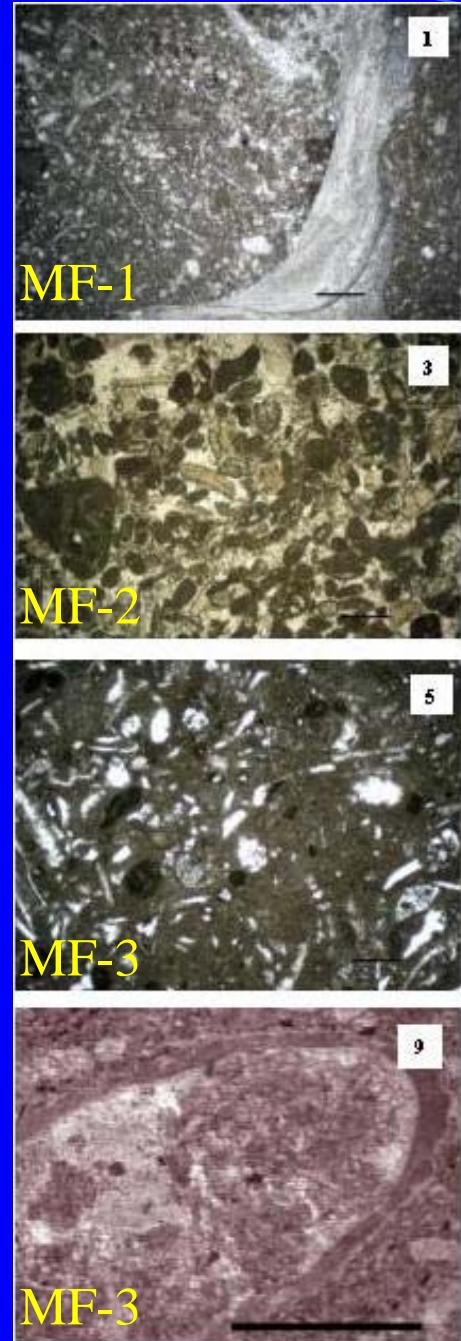
MICROFACIES

| MICROFACIES | | MF1 | MF2 | MF3 | MF4 | | MF5 | MF6 | | MF7 | | | | | |
|-----------------------|-------------------------|------------------|------|------|-----|-----|-----|-----|------|------|------|------|------|------|------|
| FORMACIÓN | | FORMACION CUPIDO | | | | | | | | | | | | | |
| NUMERO DE MUESTRA | | 0+1 | 0+24 | 0+30 | 1+0 | 1+2 | 1+7 | 1+9 | 1+13 | 1+19 | 1+30 | 2+17 | 2+30 | 3+18 | 3+30 |
| TEXTURA | MUDSTONE | | | | X | X | | | | | | | | X | |
| | WACKESTONE | X | X | X | | | | | X | X | X | X | X | | |
| | PACKSTONE | | | | | | | | | | | | | | |
| | GRAINSTONE | X | | | | B | | D | | | | | | X | |
| | INTRACLASTOS | A | S | | | R | A | F | I | F | | | R | | |
| | OOLITAS | | | | | E | | | S | | | | | A | |
| | PELETS | | R | | C | A | M | A | S | S | | | | | |
| | CORTOIDES | R | | | H | | | I | | | | | | | |
| | CALCIESFERAS | S | | | A | | C | | | | | | | | |
| | CALPIONELIDOS | | | | | | R | | | | | | | | |
| ALGALIMICOS | RADIOLARIOS | | | | R | | | I | | | | | | | |
| | ESPONGAS | | | | E | | T | | | | | | | | |
| | CORALES | | | | C | | A | | | | | | | | |
| | ANELIDOS | R | R | | R | T | | | | | | | | | |
| | BRIOZOARIOS | | T | | I | | | | | | | | | | |
| | EQUINODERMOS | S | R | S | R | S | R | | | | | | | | |
| | ESPINAS DE EQUINODERMOS | T | R | R | T | R | T | R | | | T | | | | |
| | CRINOIDES | S | S | S | | A | | R | | | | | | | |
| | PK CRINOIDES | | | | | L | | | | | | | | | |
| | BRAQUIOPODOS | R | S | | | I | | | | | | | | | |
| FORAM. | ROTALIDO PK | | | | Z | | | | | | | | | | |
| | ROTALIDO BT | | S | R | | A | F | | R | S | T | | | | |
| | MILIOLIDOS | | R | S | | D | S | | R | R | R | | | | |
| | ORBITOLINIDOS | | | | A | | | | | | | | | | |
| | OSTRACODOS | T | S | S | R | S | S | S | R | R | S | | | | |
| MOLLUSCOS | MOLLUSCOS | S | F | R | R | T | R | | | | | | | | |
| | BIVALVOS | | | | | | | | | | | | | | |
| | GASTEROPODOS | T | T | | | | | | | | R | | | | |
| | CEFALOPODOS | | | | | | | | | | | | | | |
| | ALGA ROJA | | | | | | | | | | | | | | |
| PARTICULAS TERRIGENAS | ALGA VERDE | | | | | | | | | | | | | | |
| | MINERALES AUTIGENICOS | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| MICROFACIES | | MF8 | | | | | | MF9 | | | | | | | |
|-----------------------|-------------------------|------------------|------|------|------|------|------|-------------------|------|-----|-----|------|------|------|------|
| FORMACIÓN | | FORMACION CUPIDO | | | | | | FORMACION LA PEÑA | | | | | | | |
| NUMERO DE MUESTRA | | 4+16 | 4+30 | 4+40 | 5+15 | 5+20 | 5+30 | 6+16 | 6+28 | 7+0 | 7+5 | 7+10 | 7+15 | 7+20 | 7+25 |
| TEXTURA | MUDSTONE | | | | | | | | | | | | | X | X |
| | WACKESTONE | X | | | | | | | | | X | X | X | | X |
| | PACKSTONE | | | | X | X | X | | | | | | | | X |
| | GRAINSTONE | | | | | | | R | | | | | | | |
| | INTRACLASTOS | | S | F | F | E | | F | R | | | | | | |
| | OOLITAS | | | | | | C | | | | | | | | |
| | PELETS | | | | T | R | T | S | S | T | | | | | S |
| | CORTOIDES | | | | | I | | | | | | | | | |
| | CALCIESFERAS | | | | | | S | | | | | | | | |
| | CALPIONELIDOS | | | | | | T | | | | | | | | |
| ALGALIMICOS | RADIOLARIOS | | | | A | | | | | | | | | | |
| | ESPONGAS | S | S | S | L | | | | | | R | R | | | |
| | CORALES | | | | | I | | | | | R | | | | |
| | ANELIDOS | R | | | | Z | | | | | | | | | |
| | BRIOZOARIOS | | | | | | R | A | T | R | | | | | |
| | EQUINODERMOS | S | | | | | D | R | F | | | | | | |
| | ESPINAS DE EQUINODERMOS | S | R | S | R | A | S | R | S | R | T | S | R | R | |
| | CRINOIDES | S | S | S | | R | | | | | | | | | |
| | PK CRINOIDES | | | | | | | | | | | | | | |
| | BRAQUIOPODOS | R | R | | | | S | S | | S | R | | | | R |
| FORAM. | ROTALIDO PK | | | | | | | | | | | S | S | S | S |
| | ROTALIDO BT | S | S | R | F | | S | T | S | S | R | T | R | R | R |
| | MILIOLIDOS | R | F | S | A | | S | R | F | | | | | | |
| | ORBITOLINIDOS | S | R | T | T | | T | | | | | | | | |
| | OSTRACODOS | | | | | R | | S | R | | | | | | R |
| MOLLUSCOS | MOLLUSCOS | F | S | R | | | | | | | | S | S | S | R |
| | BIVALVOS | S | | | | | F | | | | | F | | | |
| | GASTEROPODOS | T | | | | | T | | | | | S | S | R | R |
| | CEFALOPODOS | | | | | | | | | | | | | | |
| | ALGA ROJA | | | | | | | | | | | | | | |
| PARTICULAS TERRIGENAS | ALGA VERDE | | | | | | | | | | | | | | |
| | MINERALES AUTIGENICOS | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| PARTICULAS TERRIGENAS | PARTICULAS TERRIGENAS | | | | | | | | | | | | | | |
| | MINERALES AUTIGENICOS | X | X | | | | | | | | | X | X | X | X |

| MICROFACIES | | MF10 | MF9 | MF10 | MF11 | | MF12 | MF13 | MF12 | MF11 | | | | |
|-------------------------|-------------|-------------------|-----|------|------|------|------|------|------|------|------|------|------|------|
| FORMACIÓN | | FORMACIÓN LA PEÑA | | | | | | | | | | | | |
| NUMERO DE MUESTRA | | 7+30 | 8+5 | 8+10 | 8+18 | 8+27 | 9+0 | 9+0A | 9+5 | 9+10 | 9+15 | 9+20 | 9+25 | 9+30 |
| TEXTURA | MUDSTONE | | | | | | | | | | | X | | |
| | WACKESTONE | X | X | X | X | X | X | X | X | X | X | X | X | |
| | PACKSTONE | | | | | | | | | | | | | |
| | GRAINSTONE | | | | | | | | | | | | | |
| INTRACLASTOS | | | | | | | | | | | | | | |
| OOLITAS | | | | | | | | | | | | | | |
| PELETS | | | | | T | F | T | | R | | | | T | |
| CORTOIDES | | | | | | | | | | | | | | |
| CALCIESFERAS | | S | | | S | | | | | | F | F | | |
| CALPIONELIDOS | | | | | | | | | | | | | | |
| RADIOLARIOS | | | | | | A | A | A | A | | F | F | A | |
| ESPONGAS | | | | | | | | | | | | | | |
| CORALES | | | | | | | | | | | | | | |
| ANELIDOS | | | | | | | | | | | | | | |
| BRIozoarios | | | | | | | | | | | | | | |
| EQUINODERMOS | | | | | | | | | | | | | | |
| ESPINAS DE EQUINODERMOS | | R | S | S | R | | | | | | | | | |
| CRINOIDES | | | R | | | | | | | | | | | |
| PK CRINOIDES | | | | R | | | | | | | | | | |
| BRAQUIOPODOS | | | T | | | | | | | | | | | |
| FORAM. | ROTALIDO PK | S | S | F | S | F | F | F | S | F | R | S | F | |
| | ROTALIDO BT | R | R | | S | | | | | | | | | |
| MILIOLIDOS | | | | | | | | | | | | | | |
| ORBITOLINIDOS | | | | | | | | | | | | | | |
| OSTRACODOS | | R | R | S | | | | | | | | | R | |
| MOLLUSCOS | | S | R | R | S | R | | | R | R | T | | T | |
| BIVALVOS | | | | | | | | | | | | | | |
| GASTEROPODOS | | R | R | | T | | | | | | R | | | |
| CEFALOPODOS | | | T | | | | | | | | | | | |
| ALGA ROJA | | | | | | | | | | | | | | |
| ALGA VERDE | | | | | | | | | | | | | | |
| PARTICULAS TERRIGENAS | | | | | | | | | | | | | | |
| MINERALES AUTIGENICOS | | X | X | X | | X | X | | X | | | | | |

| MICROFACIES | | MF15 | | | | | MF16 | | | | | MICROFACIES | | MF16 | | | | | MF15 | | | | | MF17 | | | | | | | | | |
|-------------------------|-------------------------|----------------------|-------|-------|-------|-------|-------|------|------|------|-------|-------------|------|------|-------|-------------------------|-------------------------|-------|----------------------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|-------|---|--|
| FORMACIÓN | | FORMACION TAMAULIPAS | | | | | | | | | | | | | | | FORMACIÓN | | FORMACION TAMAULIPAS | | | | | | | | | | | | | | |
| NUMERO DE MUESTRA | | 12+5 | 12+10 | 12+15 | 12+20 | 12+25 | 12+30 | 13+5 | 15+0 | 15+5 | 15+10 | 15+19 | 18+0 | 18+5 | 18+10 | NUMERO DE MUESTRA | | 18+15 | 18+20 | 18+25 | 18+30 | 19+5 | 19+10 | 19+15 | 19+20 | 20+5 | 20+10 | 20+15 | 20+20 | 20+25 | 20+30 | | |
| TEXTURA | MUDSTONE | | | | | | | | | | | | | | | TEXTURA | MUDSTONE | | | | | | | | | | | | | | | | |
| | WACKESTONE | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | WACKESTONE | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| | PACKSTONE | | | | | | | | | | | | | | | | PACKSTONE | | | | | | | | | | | | | | | | |
| | GRAINSTONE | | | | | | | | | | | | | | | | GRAINSTONE | | | | | | | | | | | | | | | | |
| SOLUCIONES | INTRACLASTOS | | | | | | | F | A | S | F | F | F | F | R | SOLUCIONES | INTRACLASTOS | S | | | | | | | | | | | | | | | |
| | OOLITAS | | | | | | | | | | | | | | | | OOLITAS | | | | | | | | | | | | | | | | |
| | PELETS | | | | | | | | | A | F | F | R | R | R | | PELETS | | | | | | | | | | | | | | | | |
| | CORTOIDES | | | | | | | | | | | | | | | | CORTOIDES | | | | | | | | | | | | | | | | |
| ALLOCRONICOS | CALCIESFERAS | | | | | | | | | | | | | | | ALLOCRONICOS | CALCIESFERAS | | F | F | F | S | S | F | A | A | A | A | | | | | |
| | CALPIONELIDOS | S | R | R | R | R | R | R | R | R | R | R | R | R | R | | CALPIONELIDOS | R | R | T | T | R | R | R | R | T | T | T | | | | | |
| | RADIOCARIOS | S | S | F | F | F | A | F | F | A | F | F | S | F | F | | RADIOCARIOS | S | S | A | A | ? | ? | S | A | T | R | R | S | R | | | |
| | ESPONGAS | | | | | | | | | | | | | | | | ESPONGAS | | | | | | | | | | | | | | | | |
| SOLUBILICOS | CORALES | | | | | | | | | | | | | | | SOLUBILICOS | CORALES | | | | | | | | | | | | | | | | |
| | ANELIDOS | | | | | | | | | | | | | | | | ANELIDOS | | | | | | | | | | | | | | | | |
| | BRIozoarios | | | | | | | | | | | | | | | | BRIozoarios | | | | | | | | | | | | | | | | |
| | EQUINODERMOS | | | | | | | | | | | | | | | | EQUINODERMOS | | | | | | | | | | | | | | | | |
| ESPINAS DE EQUINODERMOS | ESPINAS DE EQUINODERMOS | R | R | R | R | R | | S | | | | | | | R | ESPINAS DE EQUINODERMOS | ESPINAS DE EQUINODERMOS | R | R | R | R | | | | | | | | | | | | |
| | CRINOIDES | S | S | S | S | S | S | S | S | | | | | | | | CRINOIDES | | | | | | | | | | | | | | | | |
| | PK CRINOIDES | | | | | | | R | S | R | T | R | S | F | F | | PK CRINOIDES | S | F | F | F | F | F | F | F | F | S | F | S | | | | |
| | BRAQUIOPODOS | | | | | | | | | | | | | | | | BRAQUIOPODOS | | | | | | | | | | | | | | | | |
| FORAM. | ROTALIDO PK | F | F | F | F | F | F | F | S | R | F | F | S | F | F | FORAM. | ROTALIDO PK | F | F | F | F | S | S | F | F | F | S | S | S | F | S | | |
| | ROTALIDO BT | R | R | R | S | R | R | R | R | R | R | R | R | R | R | | ROTALIDO BT | T | T | | | R | T | T | T | T | T | T | | | | | |
| | MILIOLIDOS | | | | | | | | | | | | | | | | MILIOLIDOS | | | | | | | | | | | | | | | | |
| | ORBITOLINIDOS | | | | | | | | | | | | | | | | ORBITOLINIDOS | | | | | | | | | | | | | | | | |
| OSTRACODOS | OSTRACODOS | | | | | | | | | | | | | | | OSTRACODOS | OSTRACODOS | S | F | S | S | S | S | S | F | S | S | S | S | S | S | | |
| | MOLLUSCOS | S | S | S | S | S | F | S | S | R | S | S | F | F | S | | MOLLUSCOS | | T | T | R | | | | | | | | | | | T | |
| | BIVALVOS | | | | | | | T | T | T | T | | | | | | BIVALVOS | | | | | | | | | | | | | | | | |
| | GASTEROPODOS | | | | | | | | | | | | | | | | GASTEROPODOS | | | | | | | | | | | | | | | | |
| CEFALOPODOS | CEFALOPODOS | | | | | | | | | | | | | | | CEFALOPODOS | CEFALOPODOS | | | | | | | | | | | | | | | | |
| | ALGA ROJA | | | | | | | | | | | | | | | | ALGA ROJA | | | | | | | | | | | | | | | | |
| | ALGA VERDE | | | | | | | | | | | | | | | | ALGA VERDE | | | | | | | | | | | | | | | | |
| | PARTICULAS TERRIGENAS | | | | | | | | | | | | | | | | PARTICULAS TERRIGENAS | | | | | | | | | | | | | | | | |
| MINERALES AUTIGENICOS | MINERALES AUTIGENICOS | X | X | X | X | X | X | | X | | | | X | | | MINERALES AUTIGENICOS | MINERALES AUTIGENICOS | | X | | | X | X | X | | X | | | X | | | X | |



MF-1

Wackestone de Braquiópodos, calciesferas y moluscos. Espinas de equinodermos, ostrácodos, crinoides y gasterópodos.

- Marino somero nerítico medio

MF-2

Grainstone de intraclastos. Equinodermos, crinoides, braquiópodos, Cortoides, anélidos y espinas de equinodermos. miliólidos incluidos en intraclastos.

- Marino somero nerítico interior a medio

MF-3

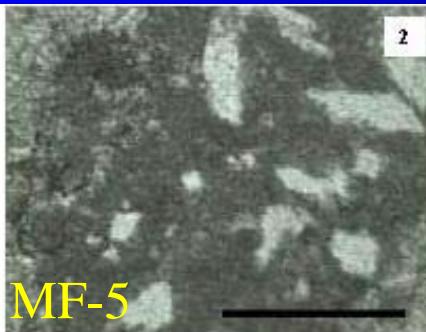
Mudstone-Wackestone de Moluscos. Intraclastos, formainíferos bentónicos, ostrácodos, espinas de equinodermos y miliólidos, briozoarios y gasterópodos.

- Marino somero nerítico lagunar

MF-4

Wackestone de equinodermos y crinoides. Ostracodos Moluscos y espinas de equinodermos.

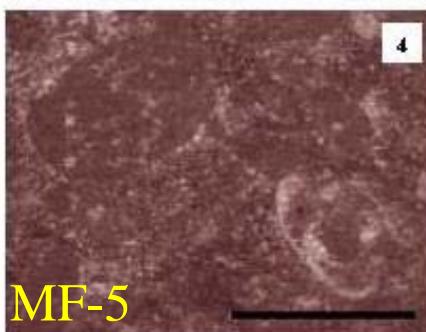
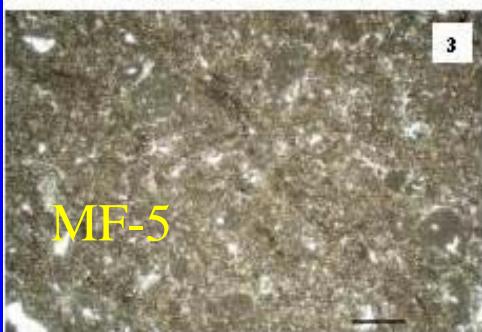
- Marino somero nerítico medio



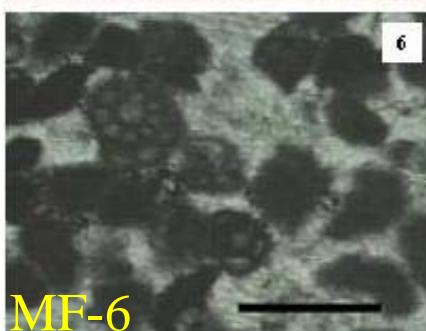
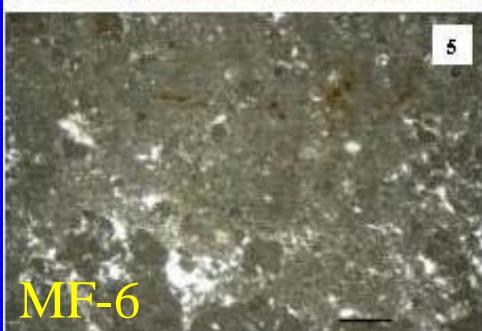
MF-5

Wackestone de intraclastos.

Ostrácodos, fragmentos y espinas de equinodermos, moluscos, y Anélidos



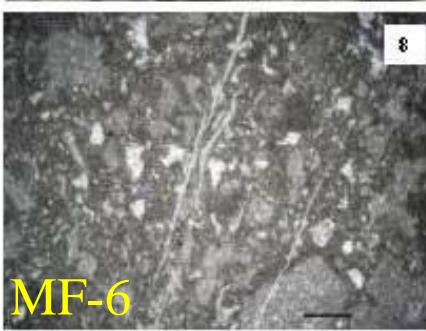
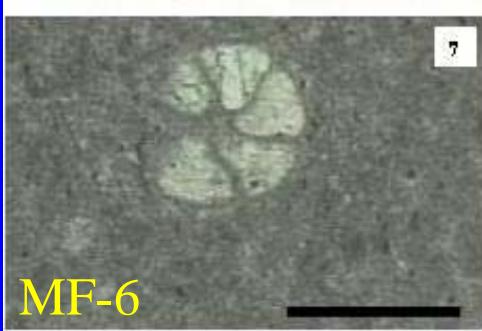
Marino somero nerítico medio



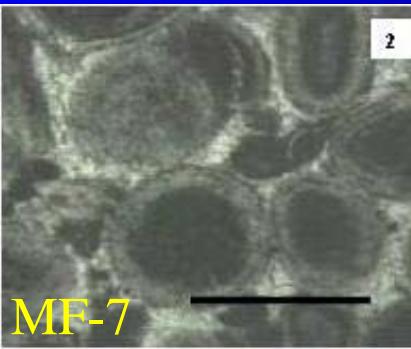
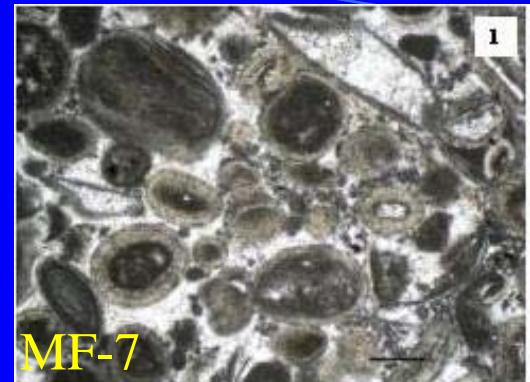
MF-6

Mudstone-Wackestone de
Pellets e intraclastos

Foraminíferos bentónicos, miliólidos,
ostrácodos, y espinas de equinodermos

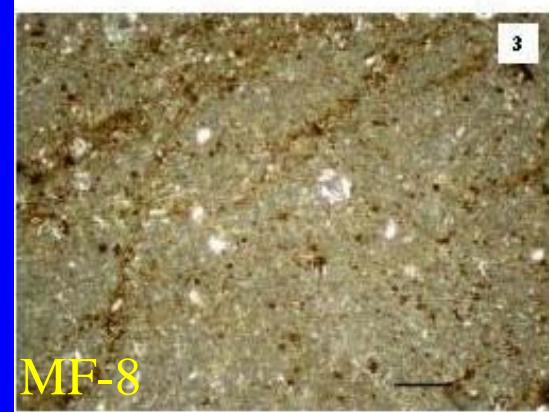


Marino somero lagunar



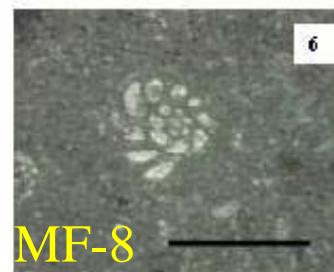
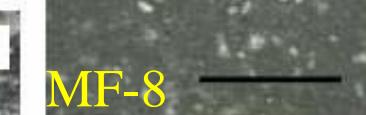
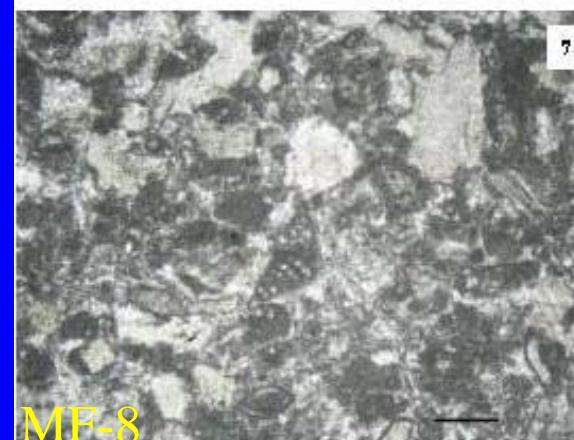
MF-7

Grainstone de Oolitas.
Pellets, intraclastos, gasterópodos

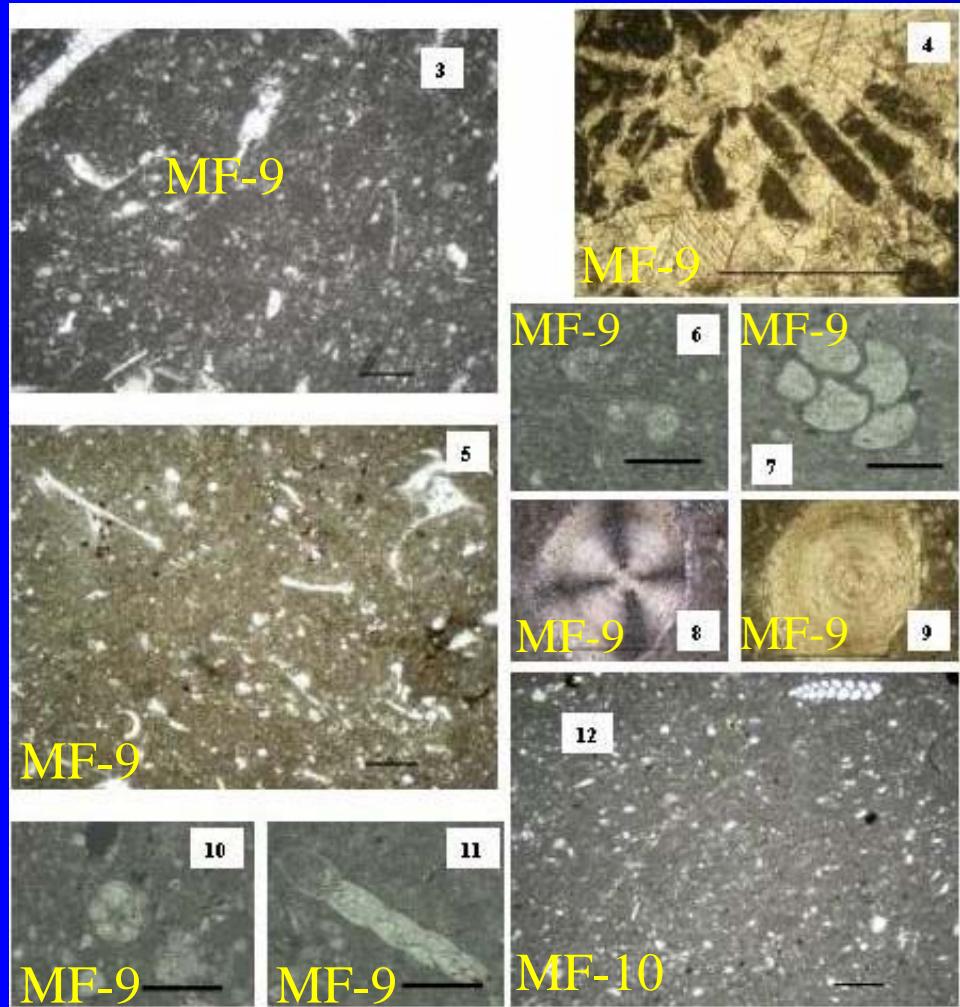


MF-8

•Marino somero nerítico medio
Wackestone-Packestone de orbitolínidos
y miliólidos



•Marino somero a nerítico medio
Fragmentos y espinas de equinodermos, moluscos,
fragmentos de corales, espinas de esponjas

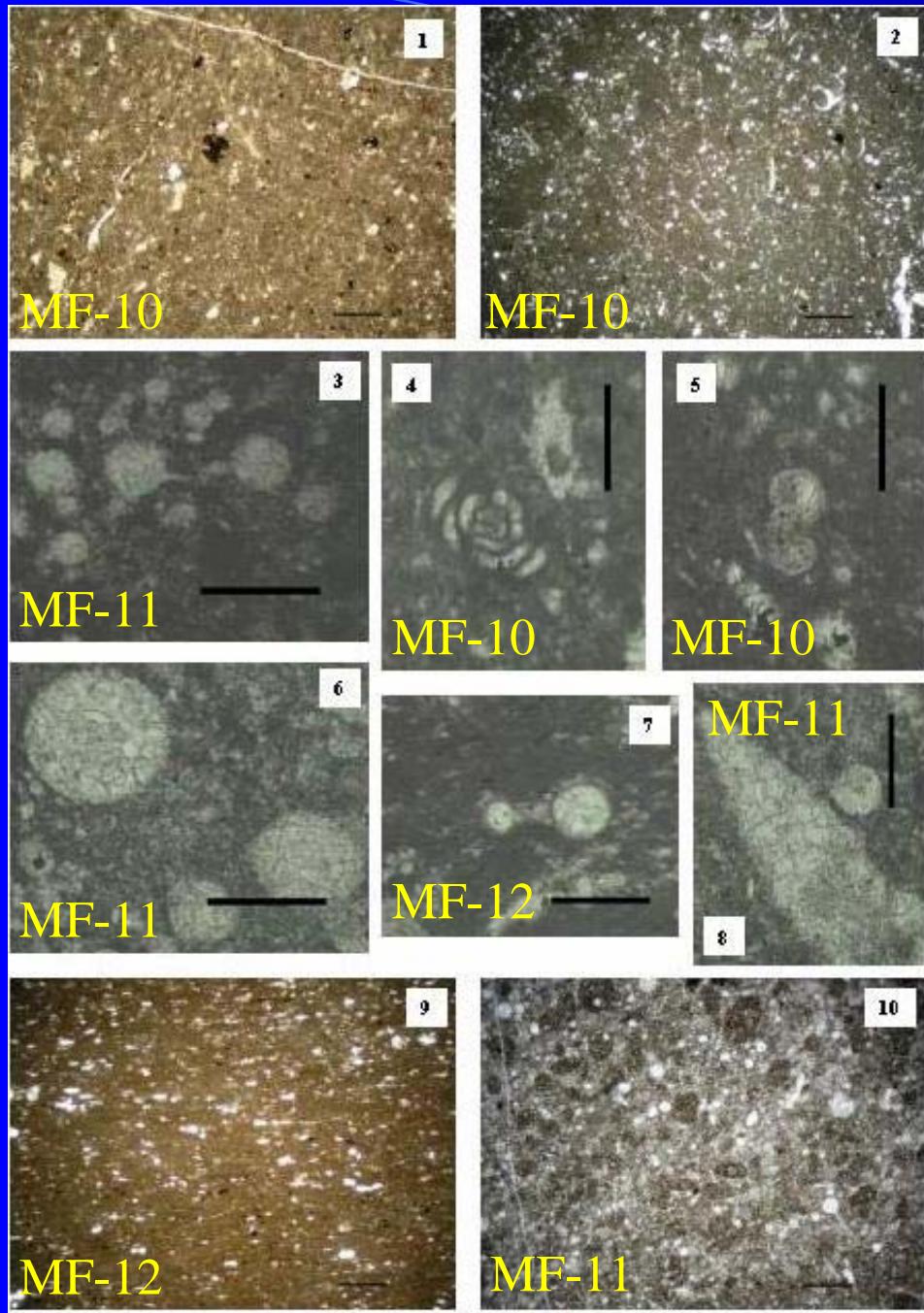


MF-9

Mudstone-Wackestone de
moluscos y equinodermos.

Foraminíferos planctónicos y bentónicos,
ostrácodos, gasterópodos y crinoides.

- Marino somero nerítico



MF-10

Wackestone de Pellets.

Foraminíferos planctónicos y bentónicos, calciesferas, espinas de equinodermos, moluscos, ostrácodos y gasterópodos.

- Marino somero nerítico medio a exterior

MF-11

Wackestone de foraminíferos planctónicos.
Moluscos, ostrácodos, calciesferas, espinas de equinodermos.

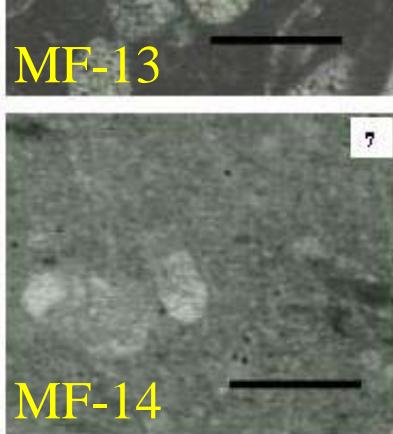
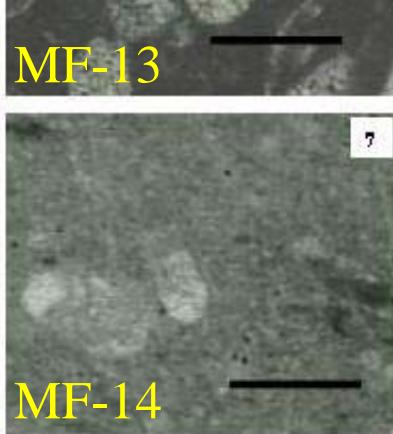
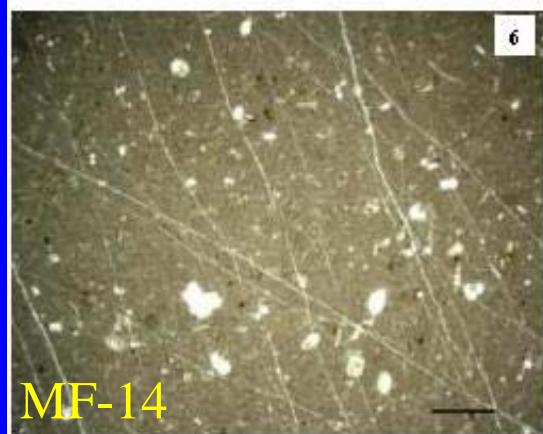
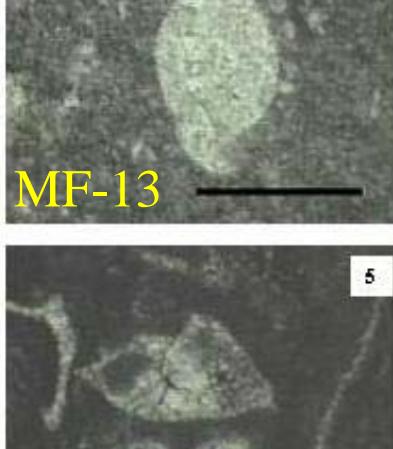
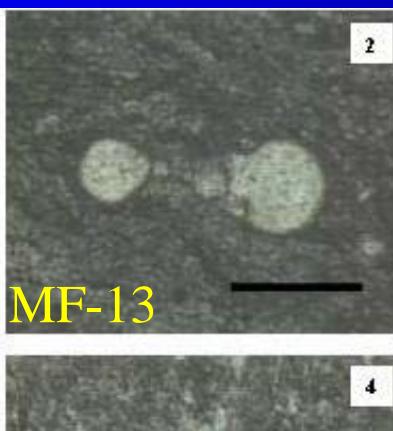
- Marino nerítico exterior

MF-12

Wackestone de Radiolarios.

Foraminíferos planctónicos, moluscos, ostrácodos, espinas de equinodermos.

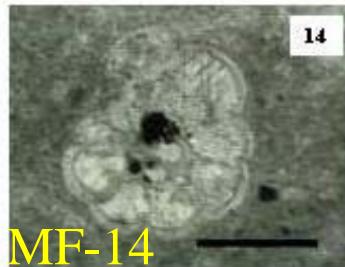
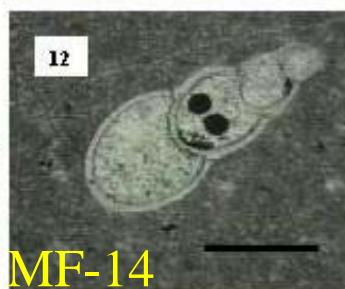
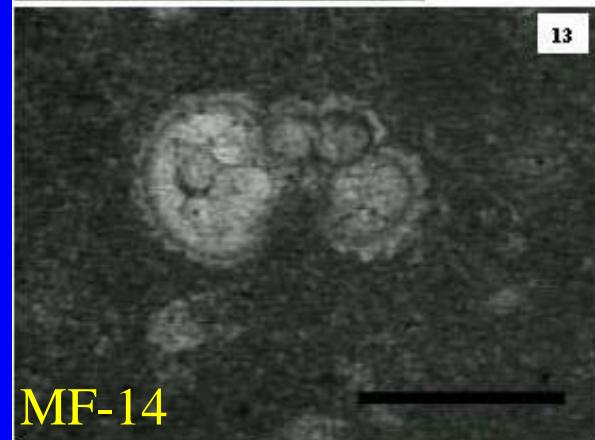
- Marino nerítico exterior a pelágico



MF-13

Wackestone de foraminíferos
planctónicos.
Ostrácodos y moluscos.

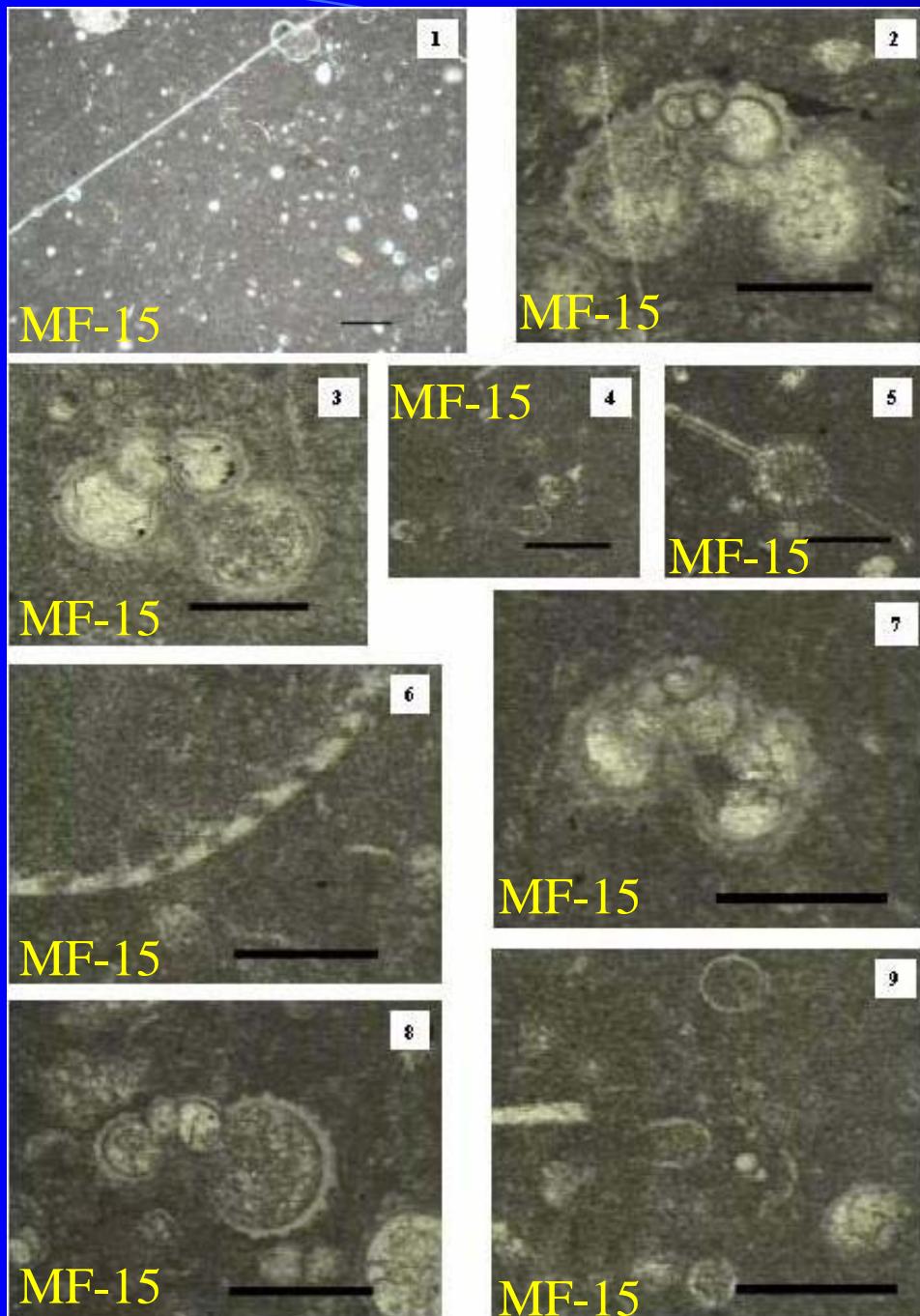
- Marino nerítico exterior a mar abierto pelágico



MF-14

Mudstone-Wackestone de
foraminíferos y calcionélidos
Ostrácodos, moluscos, espinas de
equinodermos y radiolarios.

- Marino nerítico exterior a pelágico de mar abierto.

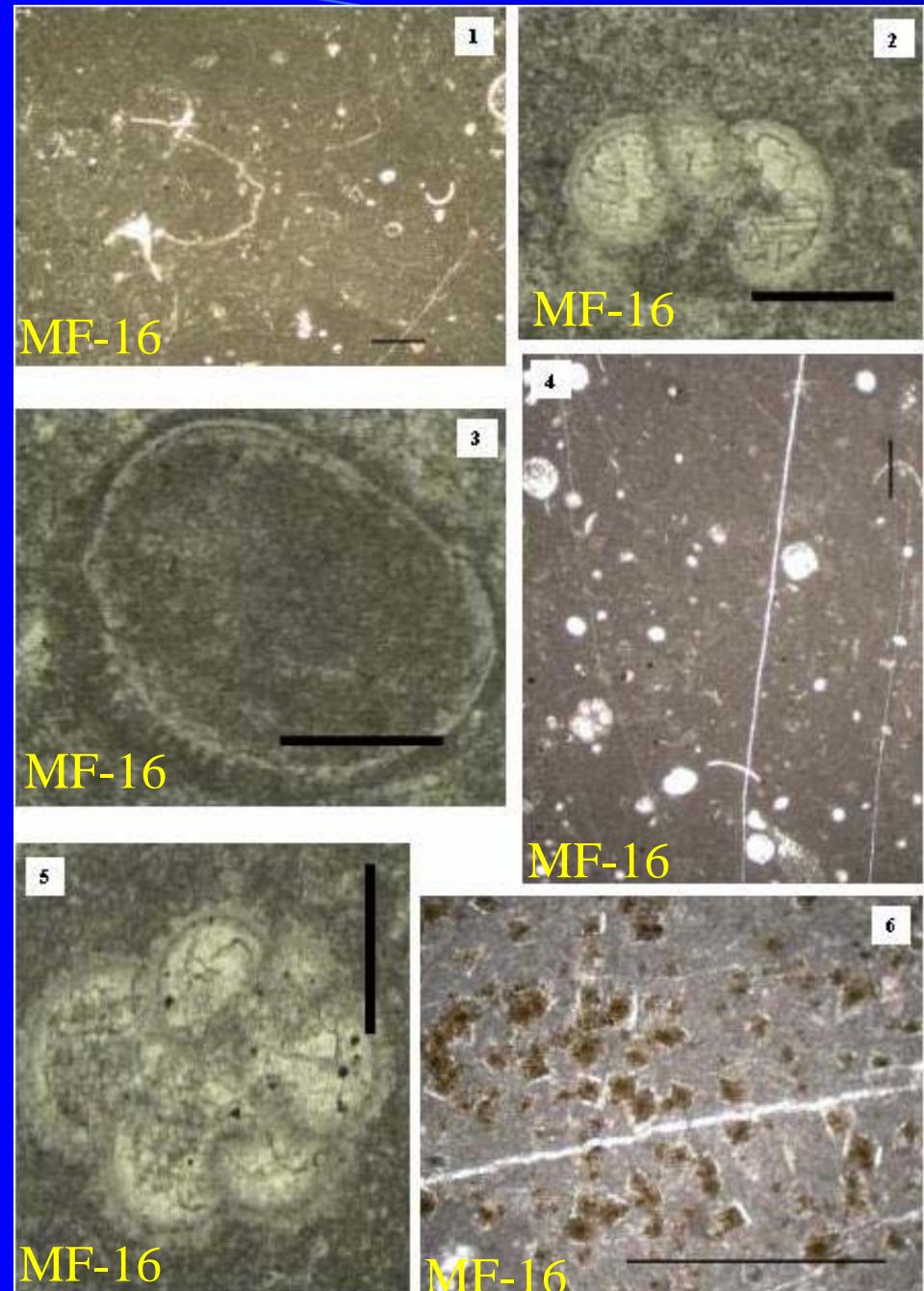


MF-15

Wackestone de foraminíferos
planctónicos

Moluscos, crinoides calpionélidos, espinas de
equinodermos, radiolarios, y ostrácodos.

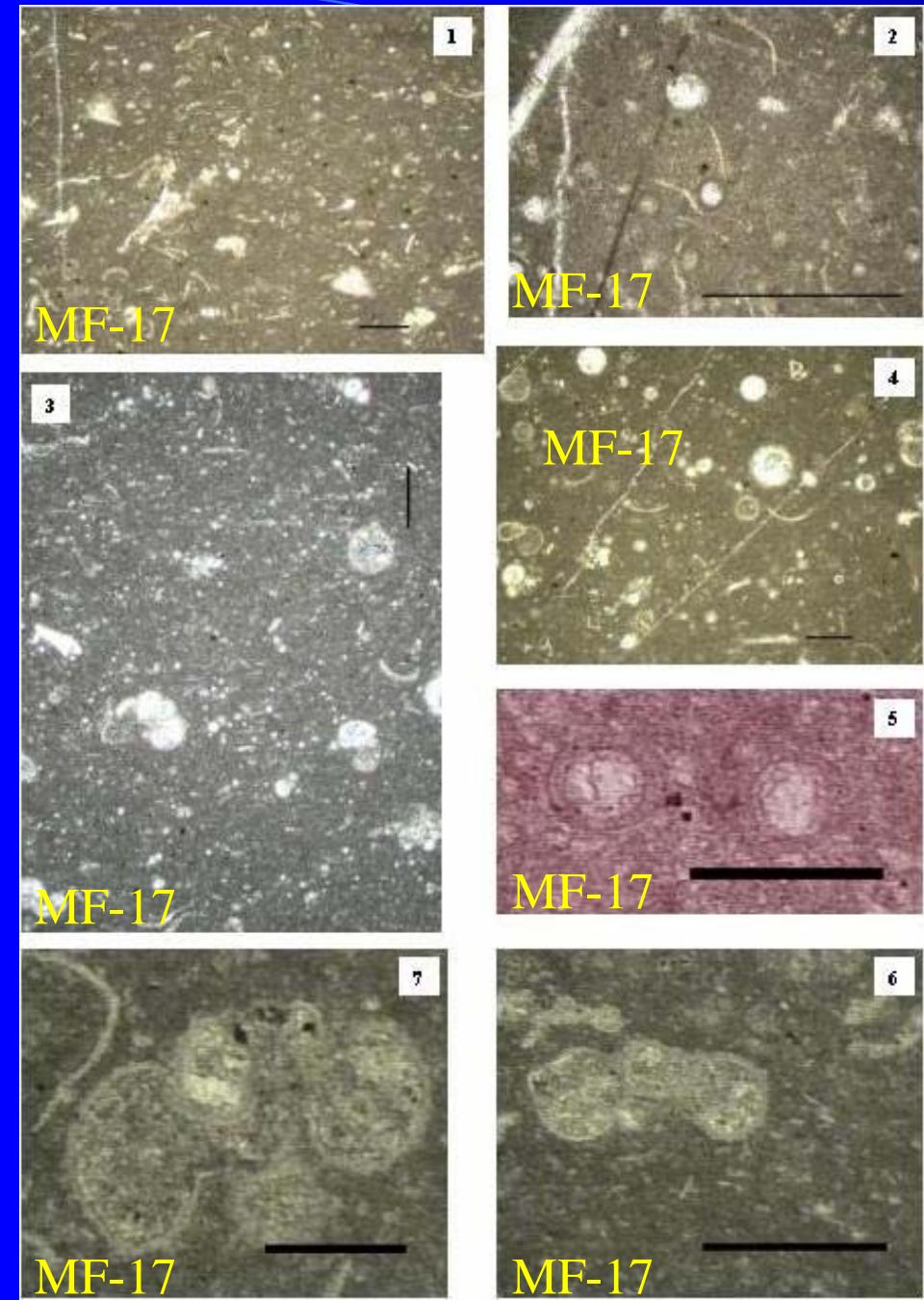
- Mar abierto pelágico



MF-16

Wackestone de intraclastos y
Foraminíferos planctónicos
Pellets, crinoides planctónicos,
radiolarios, ostracodos, moluscos,
calpionélidos, espinas de equinodermos y
bivalvos.

- Marino nerítico exterior a mar abierto pelágico

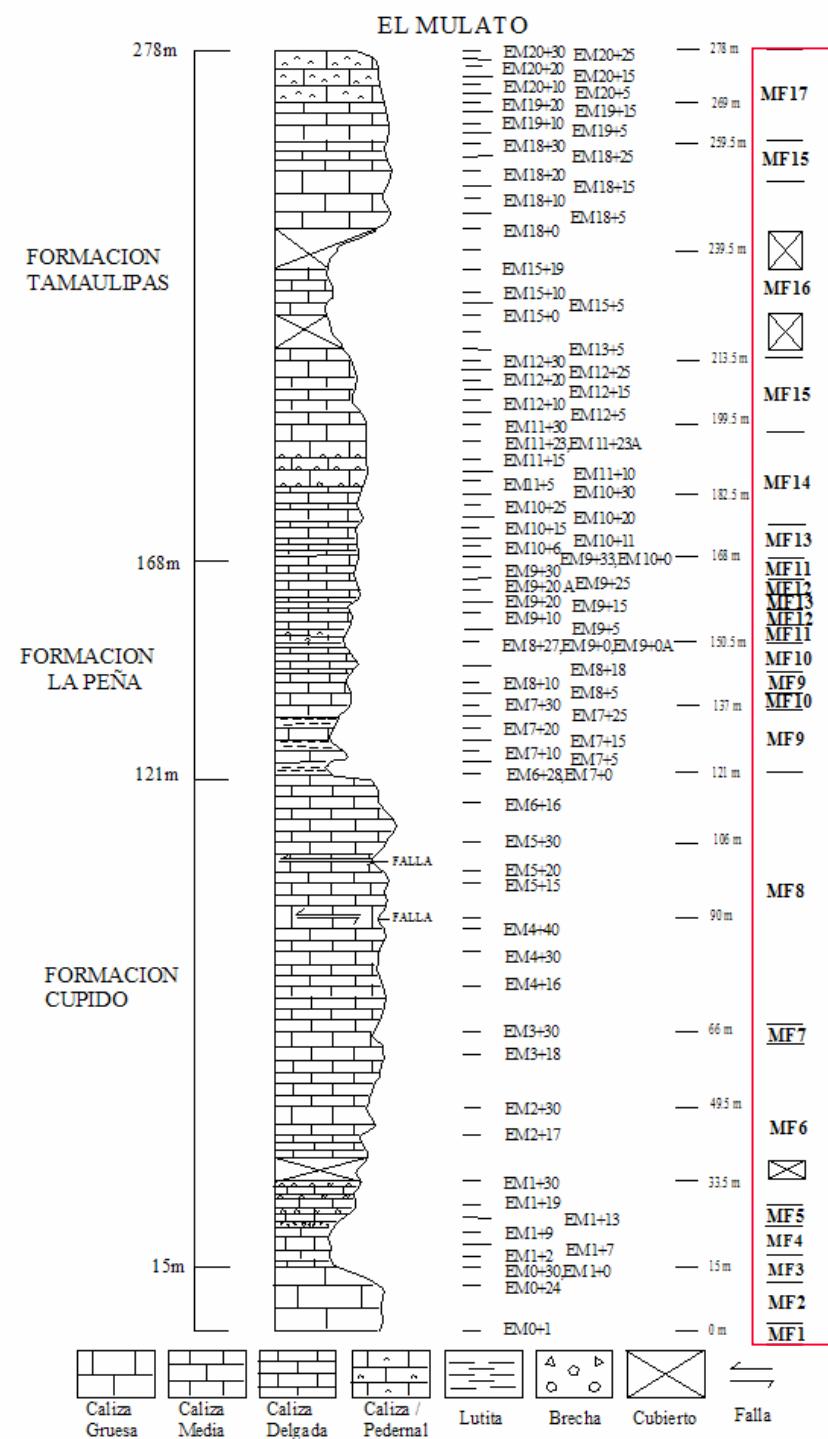


MF-17

Wackestone de calciesferas y
crinoides planctónicos

Foraminíferos planctónicos, radiolarios,
ostrácodos, calpionélidos, foraminíferos
bentónicos.

- Marino nerítico exterior pelágico



ESCALA: 1:1000

MF17

MF16

MF15

MF14

MF13

MF12

MF11

MF10

MF9

MF6

MF5

MF4

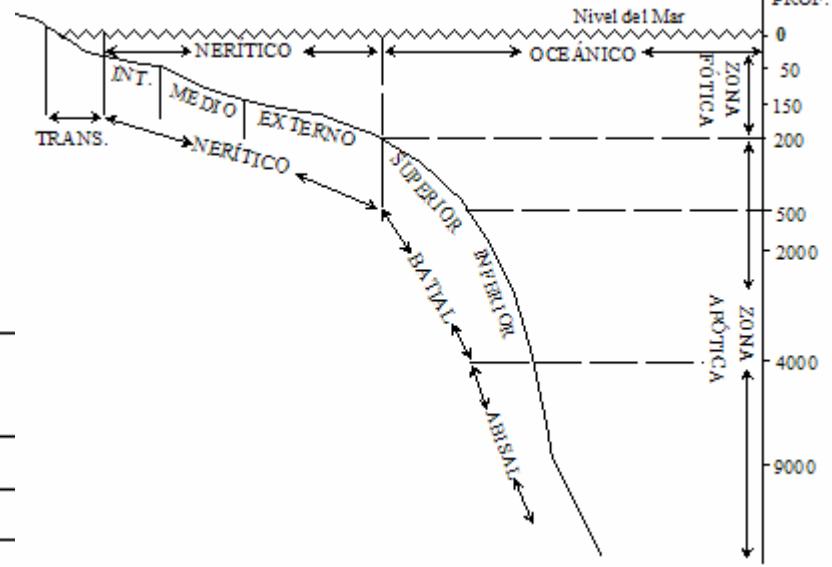
MF3

MF2

MF1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------|--------------------|----------------------|---------------|----------|-----------------|----------------|------------------------------------|------------|------------|
| Cuenca | Plataforma externa | Margen de Plataforma | Arte-arrecife | Arrecife | Bancos de arena | Laguna costera | Plataforma restringida evaporítica | Plataforma | Continente |

Nivel del mar



Cañon El Alamo

Sierra El Mulate

