

Petrographic description:

Thin section of clastic limestone, brownish white, clastic texture, grain supported, with detritus composed by lithic and opaque minerals, grain size of 0.05 to 1.25 mm .

Most of cavity porosity (inter and intrapartikel) filled by sparite .

Composition:

Fossil (65%), colorless (already recrystallization) - brown, moderate relief, mostly in the form of intact condition, 0.2 to 1.25 mm grain size, double refraction extreme, composed by a mixture of planktonic forams (genus *Orbulina*) and benthonic, large forams (genus *Nummulites*) and fractional algae / coral, evenly present in the incision.

Lithic (9%), gray, brown, in the form of carbonate rock fragments, 0.3-0.5 mm grain size, grain shape angled responsibility .

Opaque minerals (1%), black, isotropic, high relief, 0.05 to 0.08 mm grain size.

Sparite (25%), colorless, moderate relief , 0.02 to 0.3 mm grain size, double refraction extreme, equally present in the incision. Most present to fill the cavity porosity rocks .

Naming petrographic :

Recrystallized Mixed Forams lime packstone (Classification of Dunham , 1962)

Biosparite (Classification of R.L. Folk , 1962)

Limestone (Classification of Gilbert , 1954)

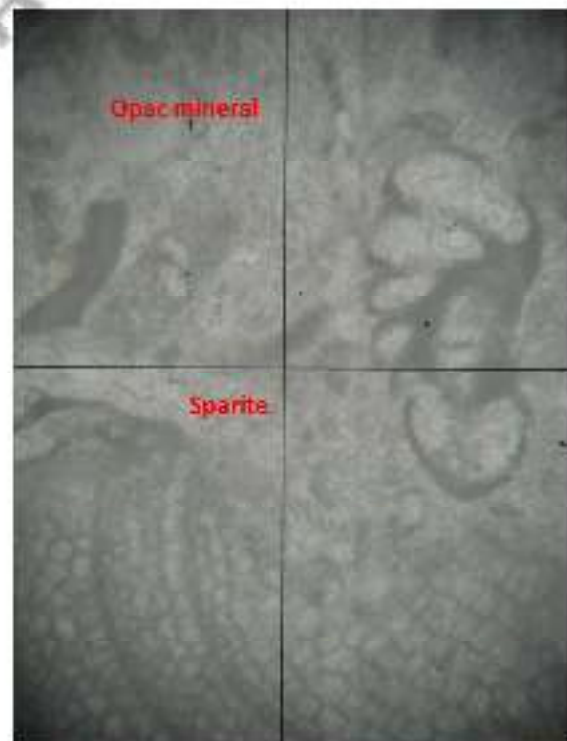
Thin Section Number: 1

Code : Cream, Besole Tulungagung

Magnification : 30 x



Cross Nicol



Parallel Nicol

0 0,5 mm

Petrographic Analysis

Petrographic description:

Thin section of crystalline limestone, cream - reddish brown, the composition is dominated by calcite minerals, minerals size 0.05 to 0.35 mm.

Appears in the incision Fe oxide minerals filling cavities and fracture porosity rocks

Composition:

Calcite (95%), colorless, moderate relief, 0.02 to 0.3 mm grain size, double refraction extreme, equally present in the incision.

Opaque minerals (5%), black, isotropic, high relief, 0.05 to 0.08 mm grain size. Fe oxide minerals are present in the form of limonite

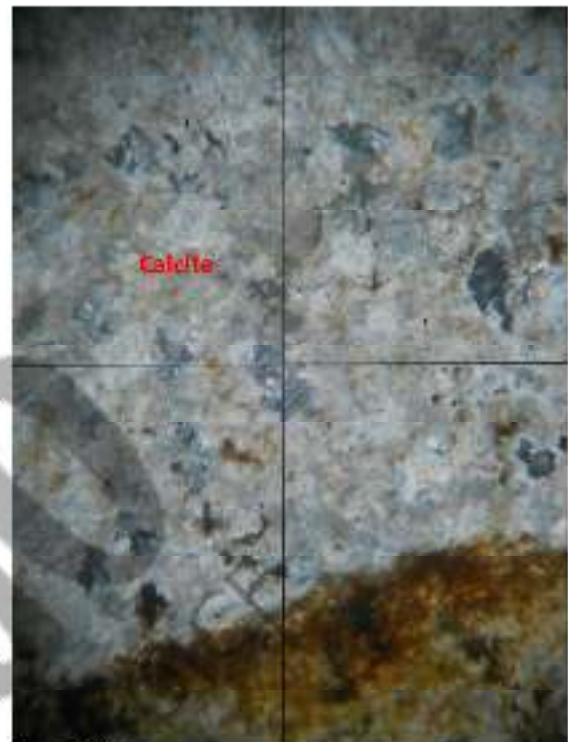
Naming Petrographic :

Crystalline Carbonate (Classification Dunham, 1962)

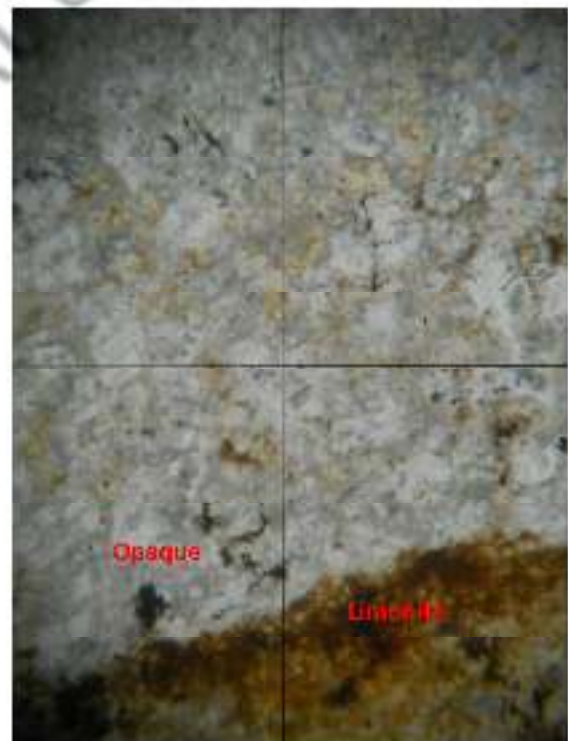
Thin Section Number: 2

Code : Pastel Grey, Besole Tulungagung

Magnification : 30 x



Crossed Nicols



Parallel Nicols

0 0,5 mm

Petrographic Analysis

Petrographic description:

Thin section of clastic limestone, brownish white, clastic texture, supported mud, detritus composition lithic and opaque minerals, grain size of 0.05 to 1.5 mm.

Most of cavity porosity (inter and intrapartikel) filled by sparite.

Composition:

Fossil (45%), colorless (already recrystallisasi) - brown, moderate relief, mostly in the form of intact condition, 0.1-1.5 mm grain size, double refraction extreme, a mixture of planktonic forams (genus *Orbulina*, *Globigerina*) and benthonic, large foram (genus *Nummulites*, *discocyclina*) and fractional algae / coral, evenly present in the incision.

Lithic (4%), gray, brown, in the form of carbonate rock fragments, with 0.3 to 0.35 mm grain size, grain shape angled responsibility.

Opaque minerals (1%), black, isotropic, high relief, from 0.05 to 0.08 mm in grain size.

Micrite (20%), colorless, relief varies, measuring less than 0.02 mm, color interference is very high - extreme, equally present in the incision.

Sparite (30%), colorless, moderate relief, 0.02 to 0.3 mm in grain size, double refraction extreme, equally present in the incision. In part present to fill the cavity porosity rocks.

Naming Petrographic :

Recrystallized Mixed Forams lime Wackstone (Classification of Dunham, 1962)

Biosparite (Classification of R.L. Folk, 1962)

Limestone (Classification of Gilbert, 1954)

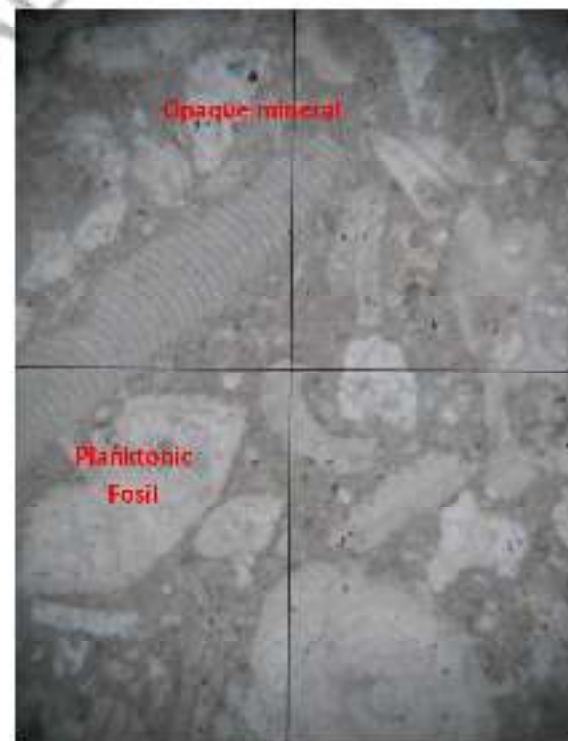
Thin Section Number: 3

Code : Grey Blue, Trenggalek

Magnification : 30 x



Cross Nicol



Parallel Nicol

0 0,5 mm

Petrographic Analysis

Petrographic description:

Thin section of clastic limestone , brownish white - reddish brown, clastic , mud supported , with opaque mineral detritus, with a grain size of 0.05-0.5 mm.

Most of cavity porosity (inter and intrapartikel), filled by sparite and fe oxide.

Composition:

Fossil (45%), colorless (already recrystallization) - brown , moderate relief , mostly in the form of the intact condition, the grain size of 0.1-0.5 mm, double refraction extreme, a planktonic forams (genus *Orbulina*, *Globigerina*) and bentonic , uniformly present in the incision.

Opaque minerals (1 %), black, isotropic, high relief, from 0.05 to 0.08 mm in grain size .

Micrite (24%), colorless, relief varies, measuring less than 0.02 mm , color interference is very high - extreme , equally present in the incision .

Sparite (30 %), colorless, moderate relief , 0.02 to 0.3 mm in grain size, double refraction extreme, equally present in the incision . In part , comes to fill the cavity porosity rocks .

Naming Petrographic :

Recrystallized Small Forams lime Wackstone (Classification of Dunham , 1962)

Biosparite (Classification of R.L. Folk , 1962)

Limestone (Classification of Gilbert , 1954)

Thin Section Number: 4

Code : Terracota, Malang

Magnification : 30 x



Cross Nicol



Parallel Nicol

0 0,5 mm

Petrographic Analysis

Petrographic description:

Thin section of clastic limestone, brownish white, clastic, grain supported, with detritus lithic and opaque minerals, grain size of 0.05 to 1.5 mm.

Most of cavity porosity (inter and intrapartikel), filled by sparite and Fe oxide.

Composition:

Fossil (55%), colorless (already recrystallization) - brown, moderate relief, mostly in the form of intact condition, 0.1-1.5 mm in grain size, double refraction extreme, a mixture of planktonic forams (genus globorotalia) and benthos, foram large (genus Nummulites) and fractional algae / coral, evenly present in the incision.

Lithic (4%), gray, brown, in the form of carbonate rock fragments, with a grain size of 0.3-0.5 mm, angled shape responsibility.

Opaque minerals (1%), black, isotropic, high relief, from 0.05 to 0.08 mm in grain size.

Micrite (15%), colorless, relief varies, measuring less than 0.02 mm, color interference is very high - extreme, equally present in the incision.

Sparite (25%), colorless, moderate relief, 0.02 to 0.3 mm in grain size, double refraction extreme, equally present in the incision. In part comes to fill the cavity porosity rocks.

Naming Petrographic :

Recrystallized Mixed Forams lime packstone (Classification of Dunham, 1962)

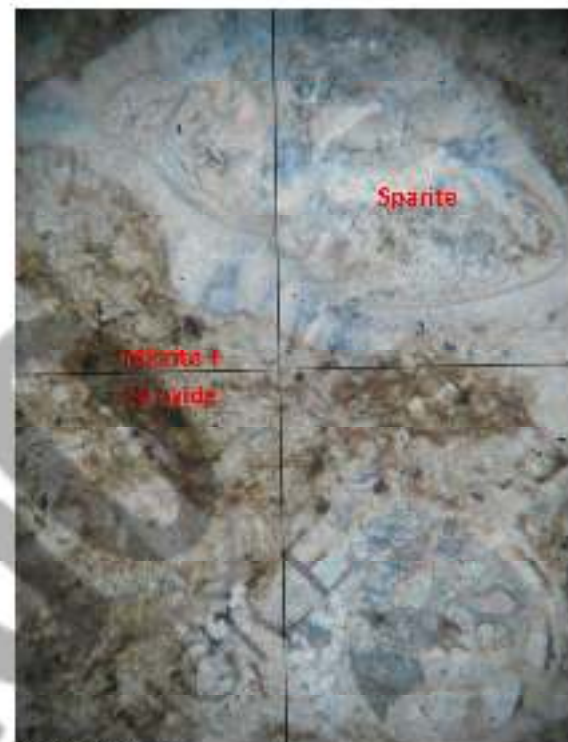
Biosparite (Classification of R.L. Folk, 1962)

Limestone (Classification of Gilbert, 1954)

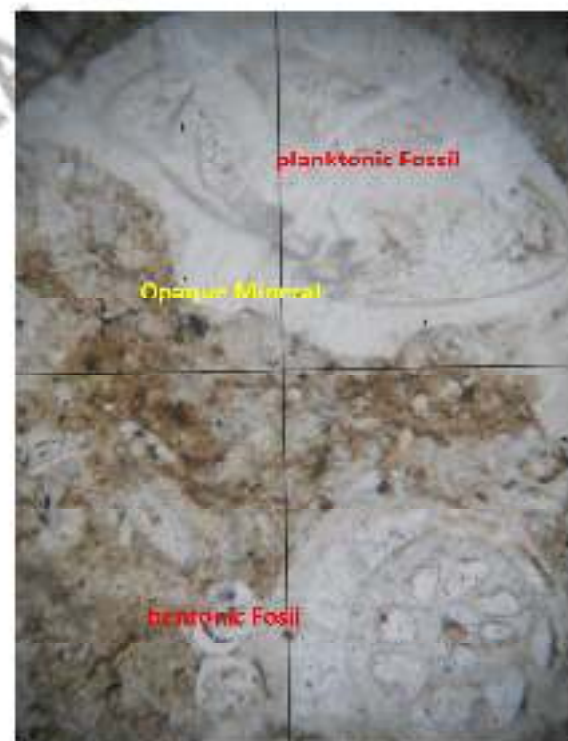
Thin Section Number: 5

Code : Grey, Trenggalek

Magnification : 30 x



Cross Nicol



Parallel Nicol

0 0,5 mm

Petrographic Analysis

Petrographic description:

Thin section of volcanic igneous rock, gray - green, pilotaxitic texture (flow texture) subhedral - anhedral shape, mineral composition consists of mineral plagioclase, pyroxene, opaque minerals and glasses.

Composition:

Plagioclase (60%), white - gray, the refractive index $n > n_{kb}$, moderate relief, Karlsbad - albite twinning, as phenocrysts (25%) mineral size 0.8 - 2.5 mm, subhedral - anhedral form, An_{42} (type andesine), as mass basis (35%) measuring 0.1 - 0.5 mm, An_{42} (andesine type), spread evenly in the thin section. On the basis of past shows flow texture.

Pyroxene (15%), pale green, pale gray, medium relief, pleochroism weak no, subhedral shape - anhedral, mineral size 0.05 - 1mm. Present as klinopyroxen (augite) Most of the minerals altered into chlorite. Uniformly present in the rock.

Opaque minerals (5%), black, isotropic high relief, mineral size of 0.05-0.1 mm.

Glass (20%), colorless, cross nicol observations with dark colored, with Gip Chips misty mauve colored plaster. The majority have suffered alteration into clay.

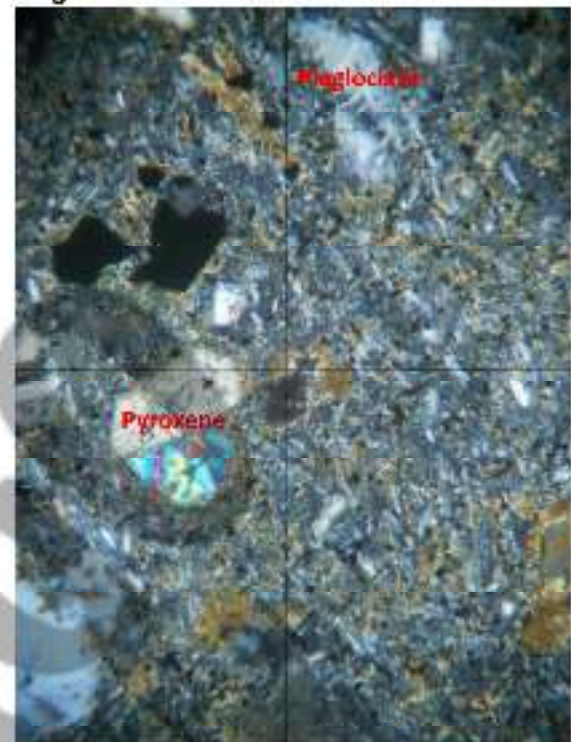
Naming Petrographic :

Pilotaxitic Andesite (classification of Williams, 1982)

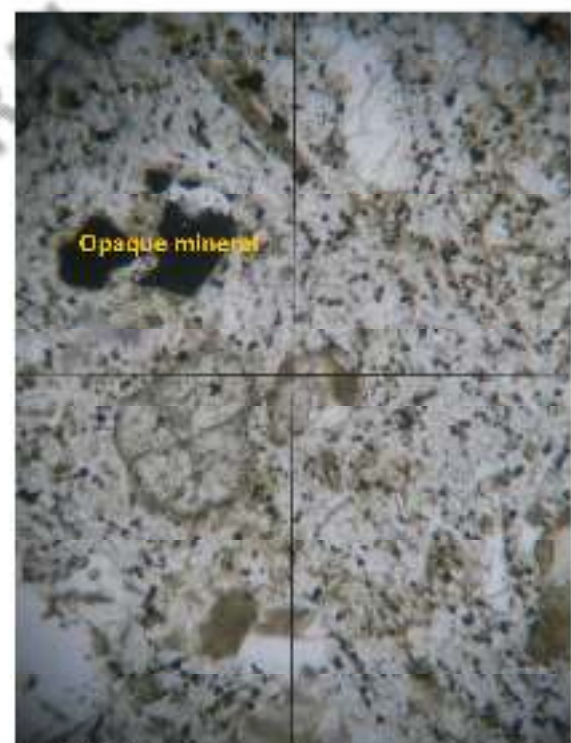
Thin Section Number: 6

Code : Black Gray Andesite Tulungagung

Magnification : 30 x



Cross Nicol



Parallel Nicol

0 0,5 mm

Petrographic Analysis

Petrographic description:

Thin section of crystalline limestone, brownish-beige white, rock composition is dominated by calcite mineral, with mineral size from 0.05 to 2.5 mm.

Composition:

Calcite (100%), colorless, moderate relief, mineral size 0.02 to 2.5 mm, double refraction extreme, equally present in the incision.

Naming Petrographic :

Crystalline Carbonate (Classification of Durham, 1962)

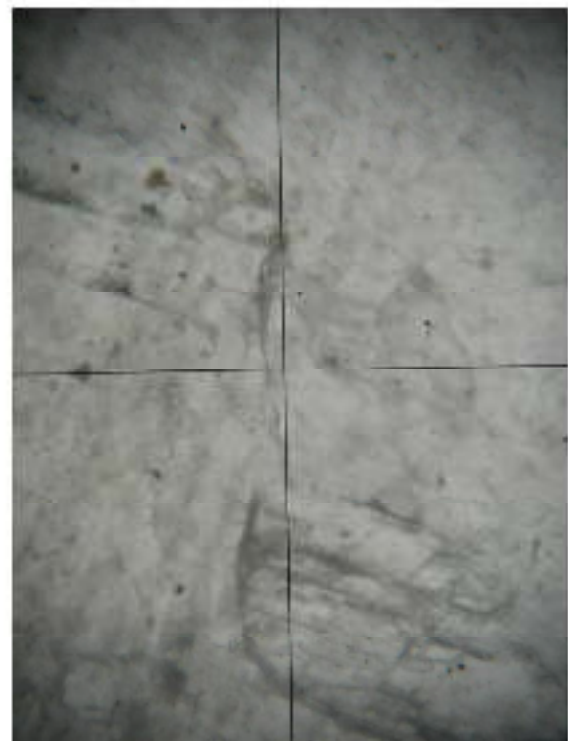
Thin Section Number: 7

Code : Crystall Onyx Blitar

Magnification : 30 x



Cross Nicol



Parallel Nicol

0 0,5 mm