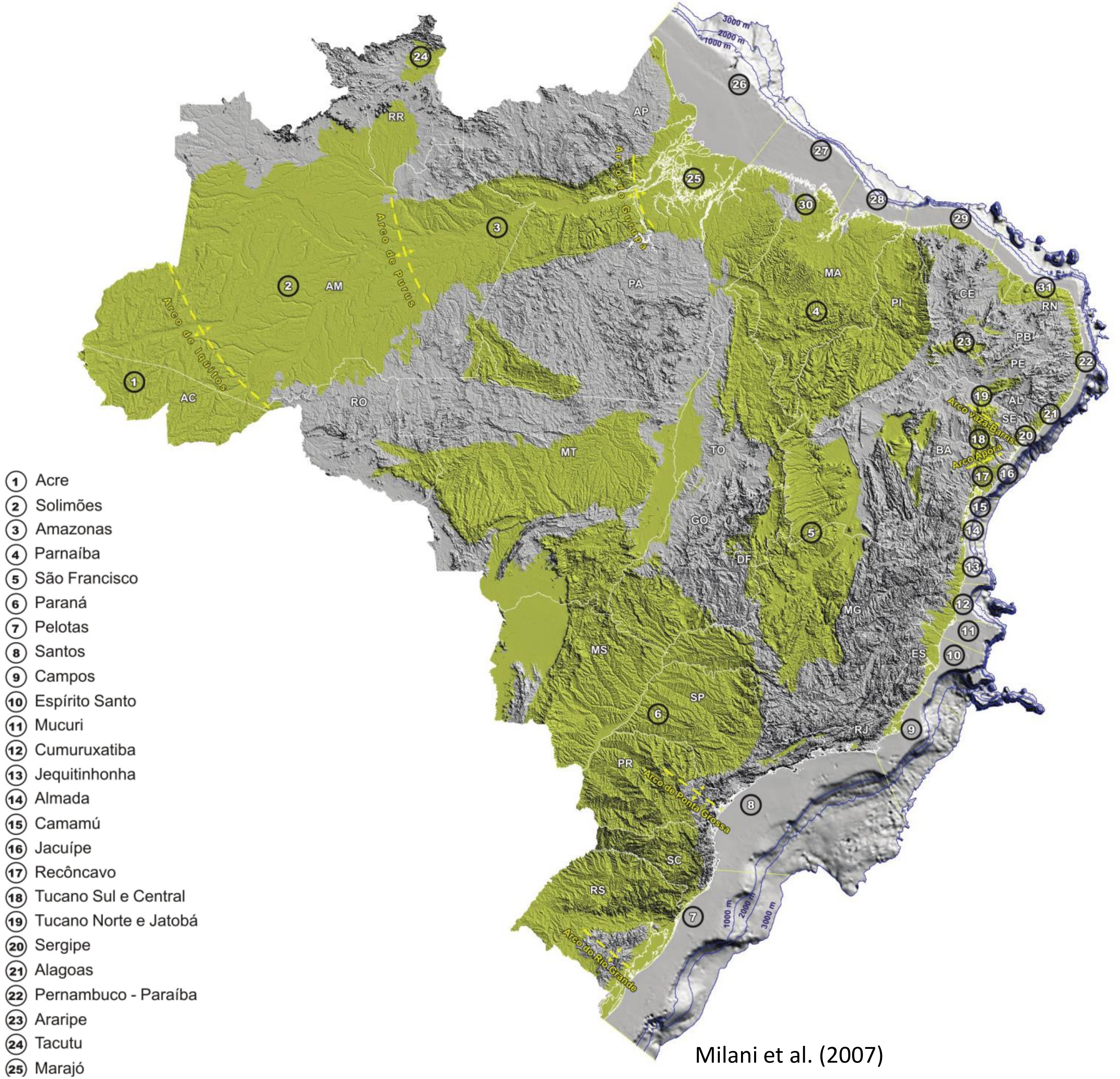
Arenitos: significado da composição do arcabouço

André Oliveira Sawakuchi

GSA0252-Sedimentologia



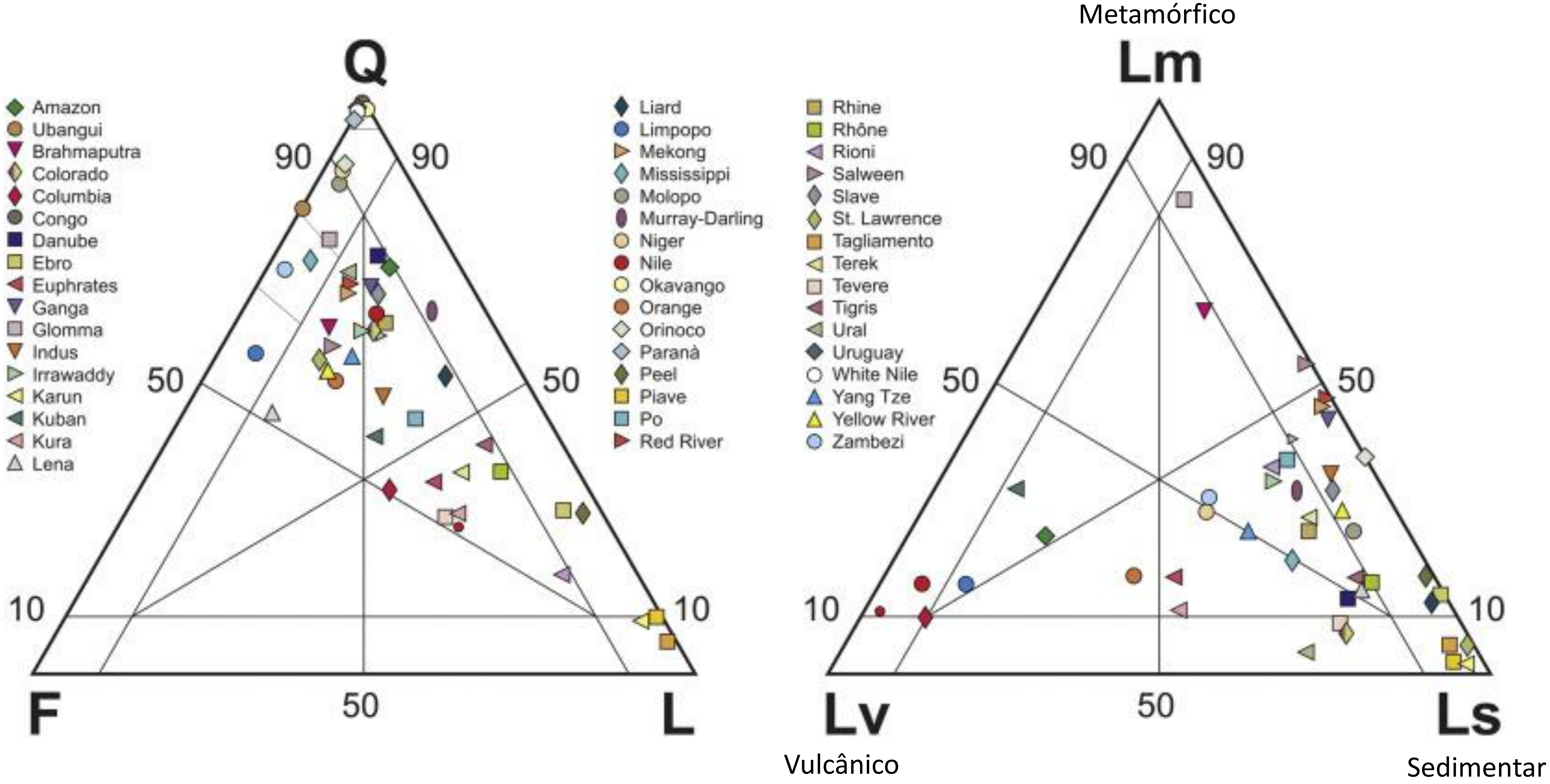
Milani et al. (2007)

Formação Cabeças
(Devoniano, Bacia
do Parnaíba)

Ferraz et al. (2017)

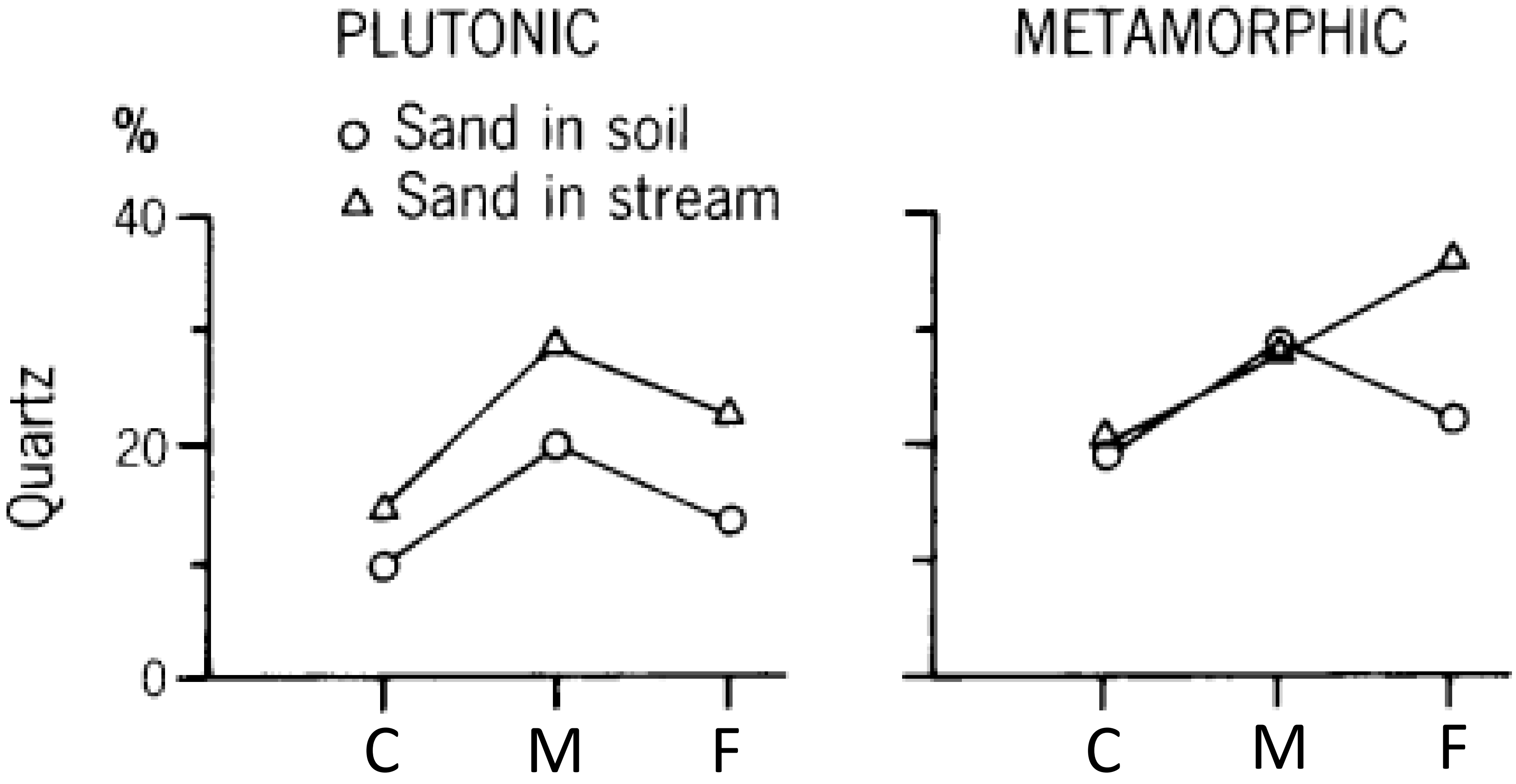

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus
Google E

Significado da composição do arcabouço



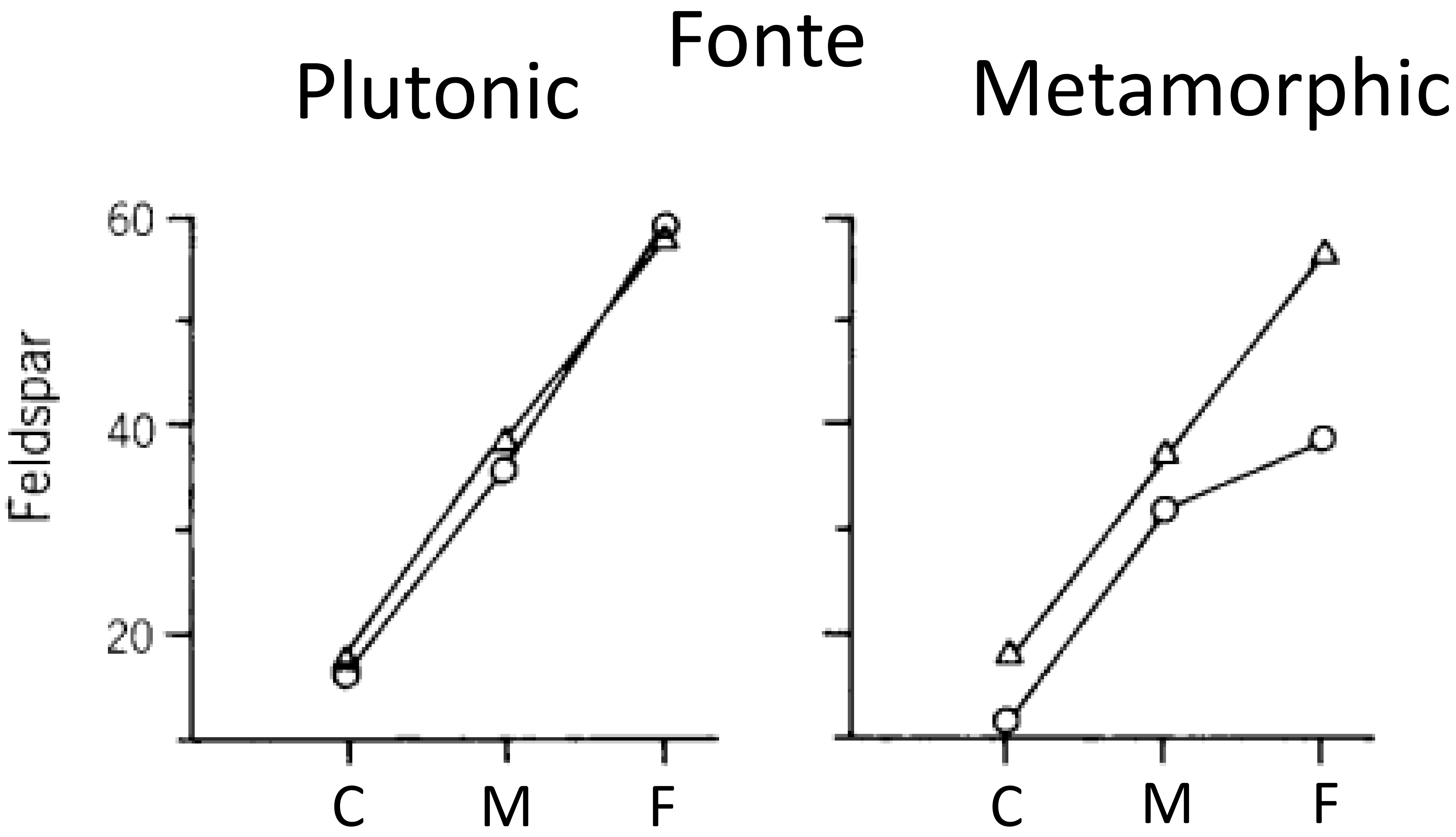
Garzanti (2019)

Fonte



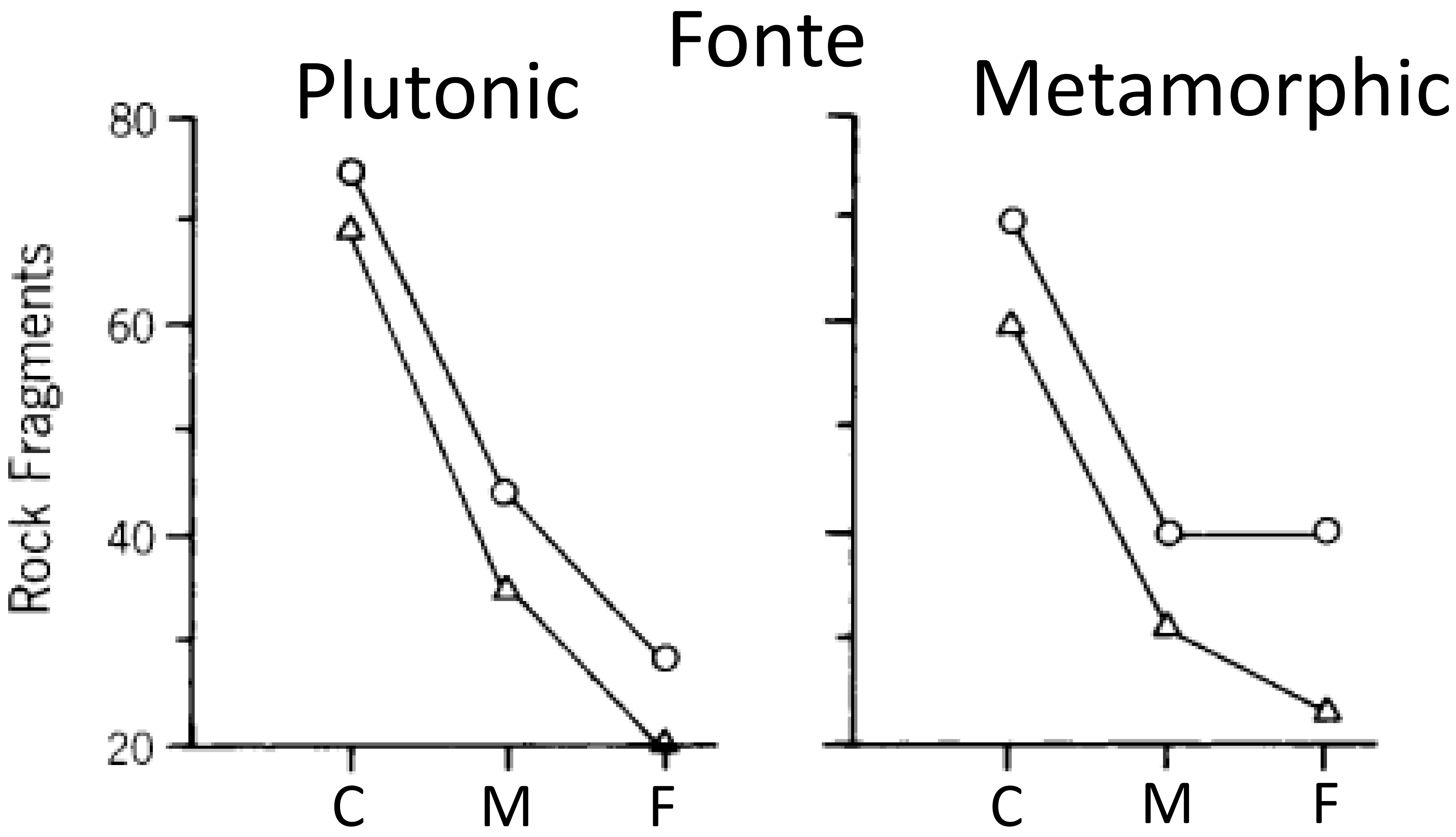
Basu (1985)

Granulação vs composição do arcabouço



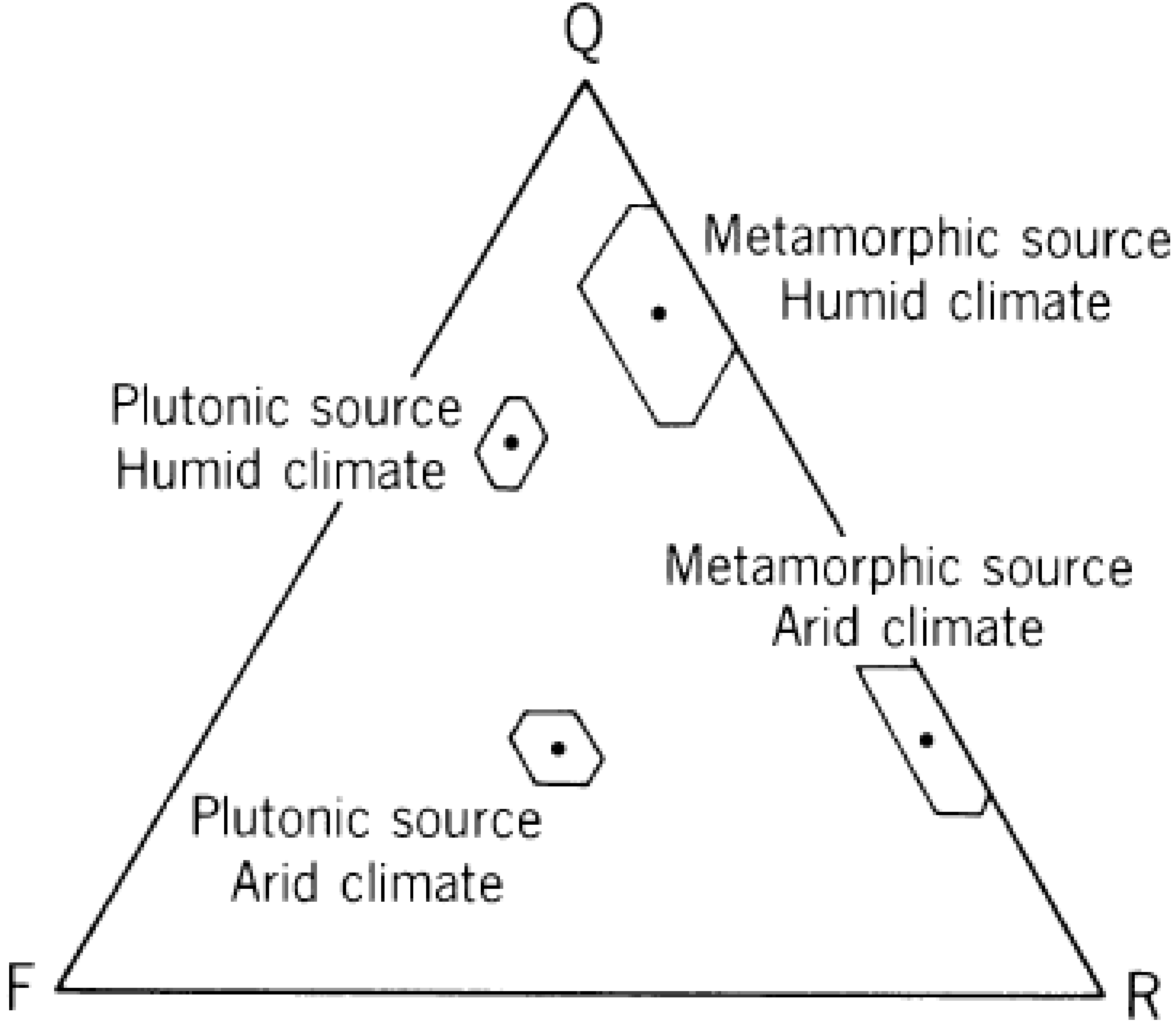
Basu (1985)

Granulação vs composição do arcabouço



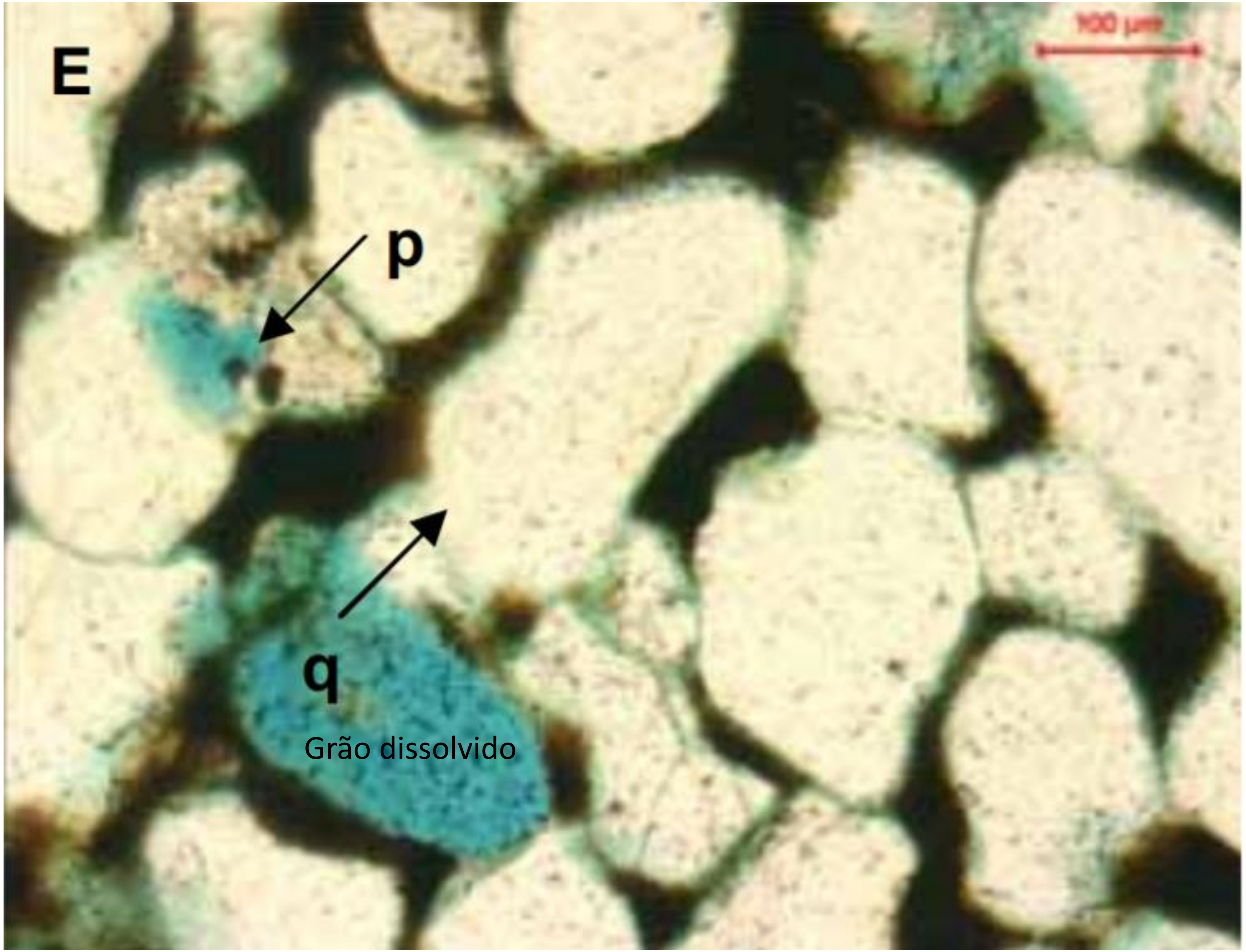
Basu (1985)

Clima vs rocha fonte

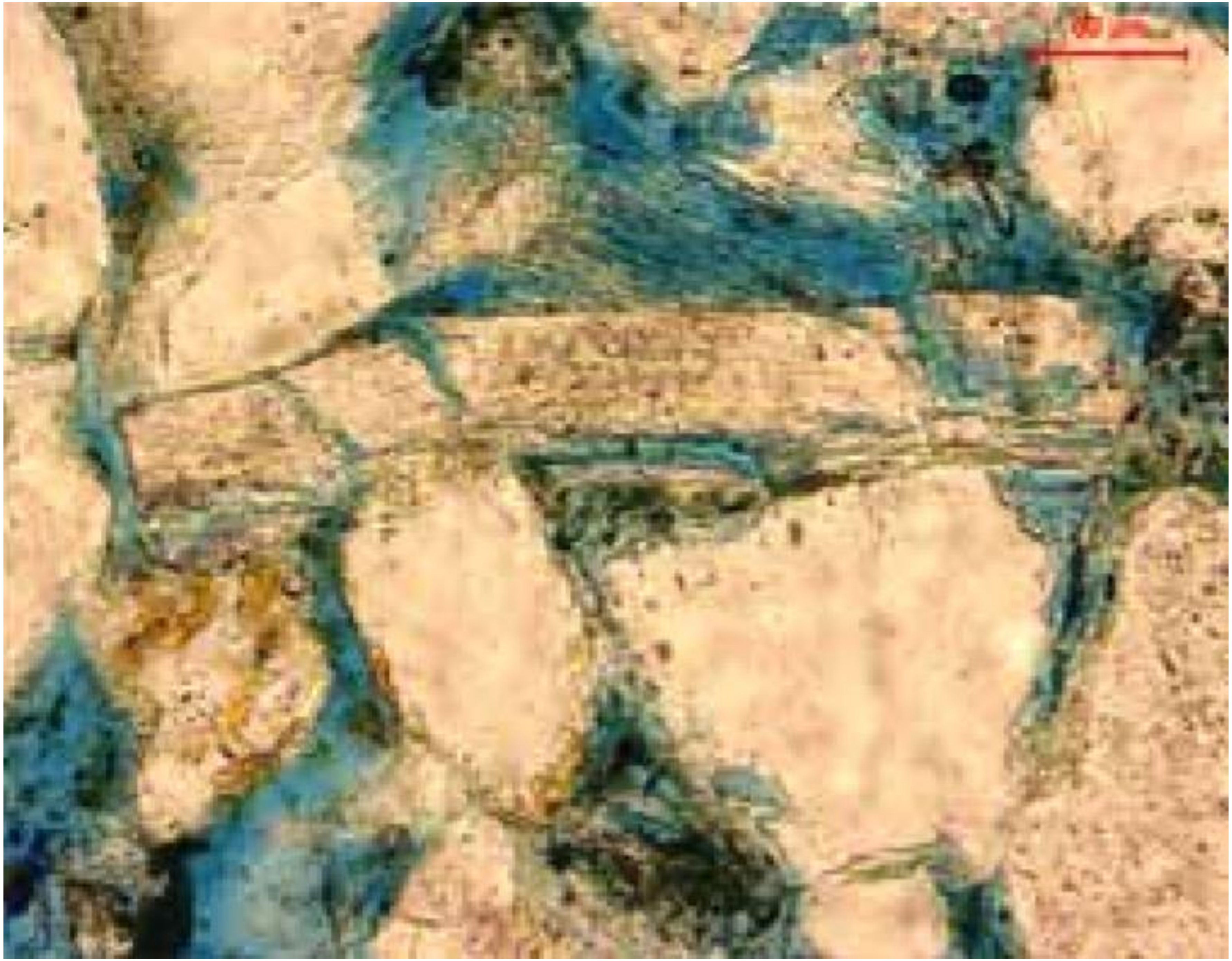


Basu (1985)

Cuidado!

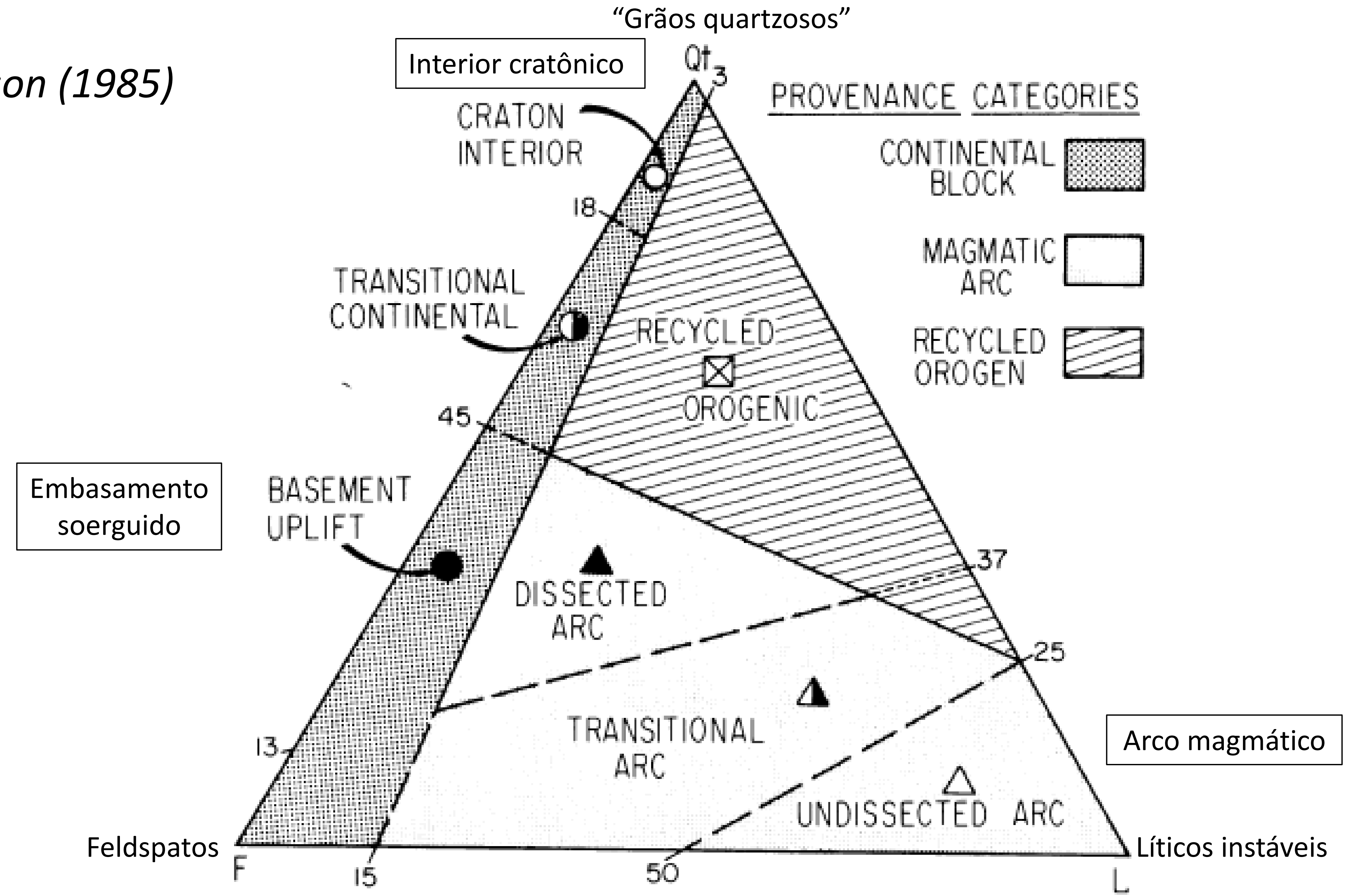


Gesicki (2003)



Gesicki (2003)

Dickinson (1985)



Componentes do arcabouço (Dickinson, 1985)

“Lítico quartsozo”

TABLE 1. CLASSIFICATION AND SYMBOLS OF GRAIN TYPES

A. Quartzose Grains (Qt = Qm + Qp)
- Qt = total quartzose grains
- Qm = monocrystalline quartz (>0.625 mm)
- Qp = polycrystalline quartz (or chalcedony)

B. Feldspar Grains (F = P + K)
- F = total feldspar grains
- P = plagioclase grains
- K = Kspar grains

C. Unstable Lithic Fragments (L = Lv + Ls)
- L = total unstable lithic fragments
- Lv = volcanic/metavolcanic lithic fragments
- Ls = sedimentary/metasedimentary lithic fragments

D. Total Lithic Fragments (Lt = L + Qp)
- Lc = extrabasinal detrital limeclasts (not included in L or Lt)

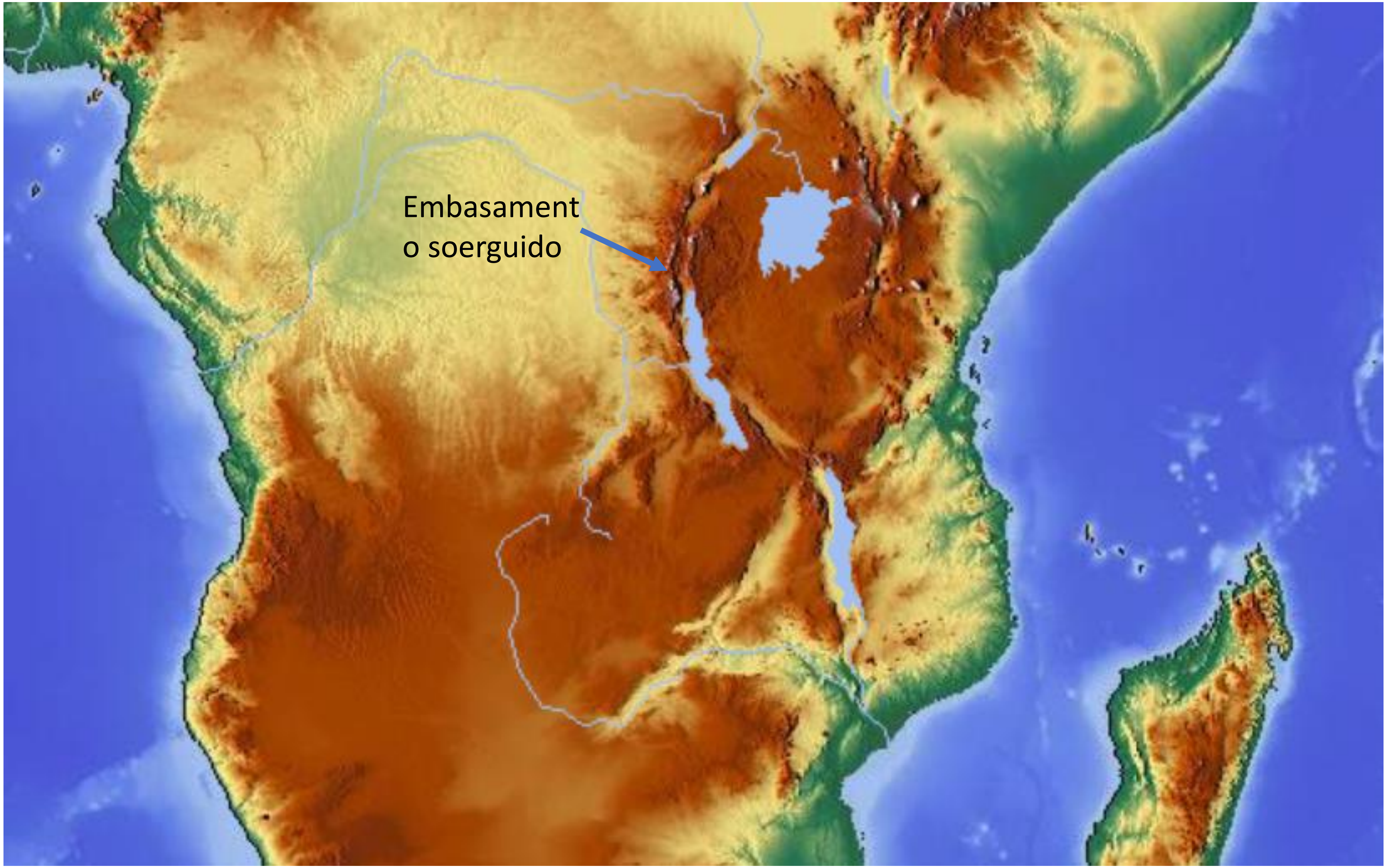
Proveniência (ambiente tectônico da área fonte)

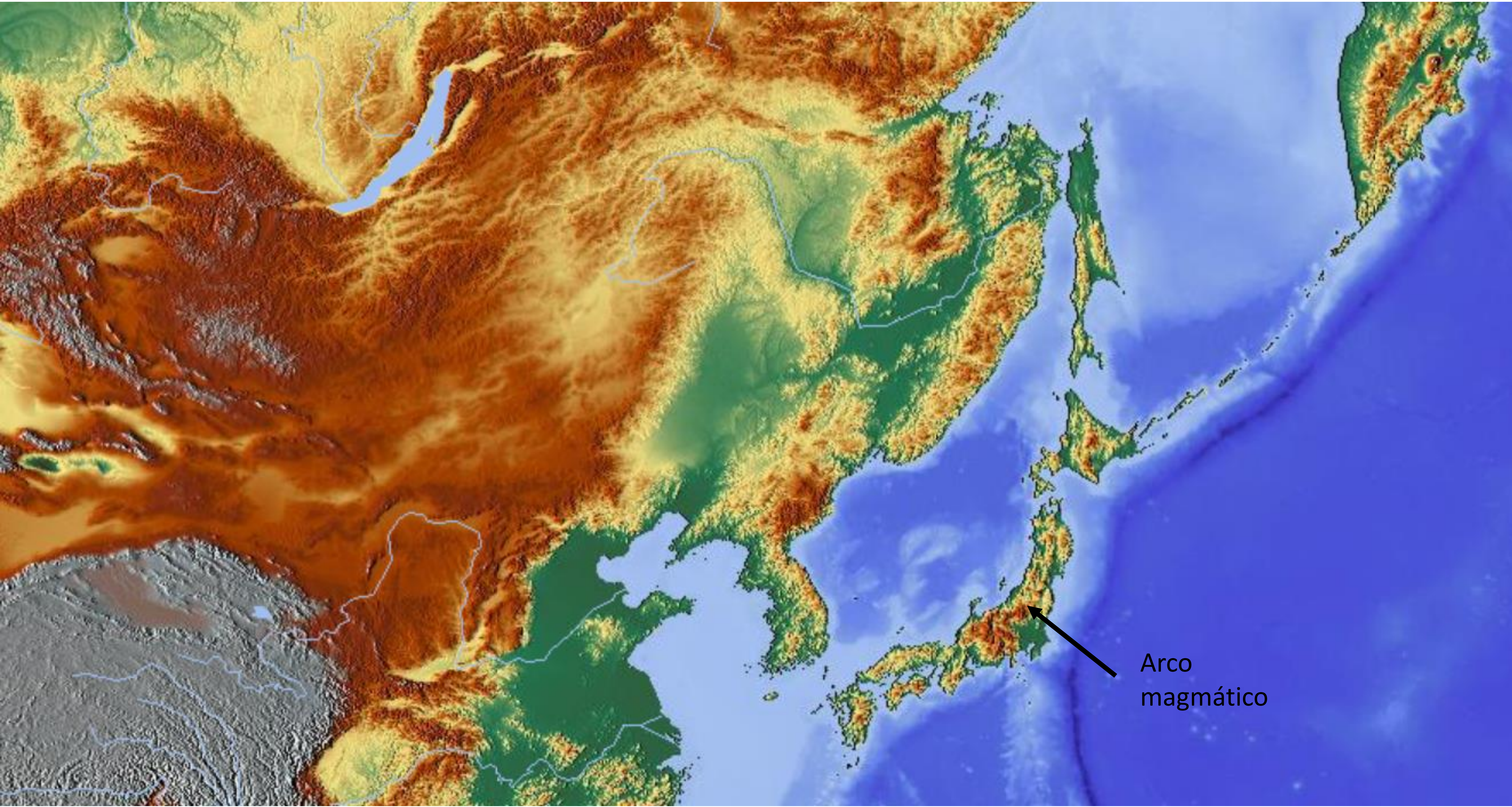
TABLE 2. MAJOR PROVENANCE TYPES AND KEY COMPOSITIONAL ASPECTS OF DERIVATIVE SANDS

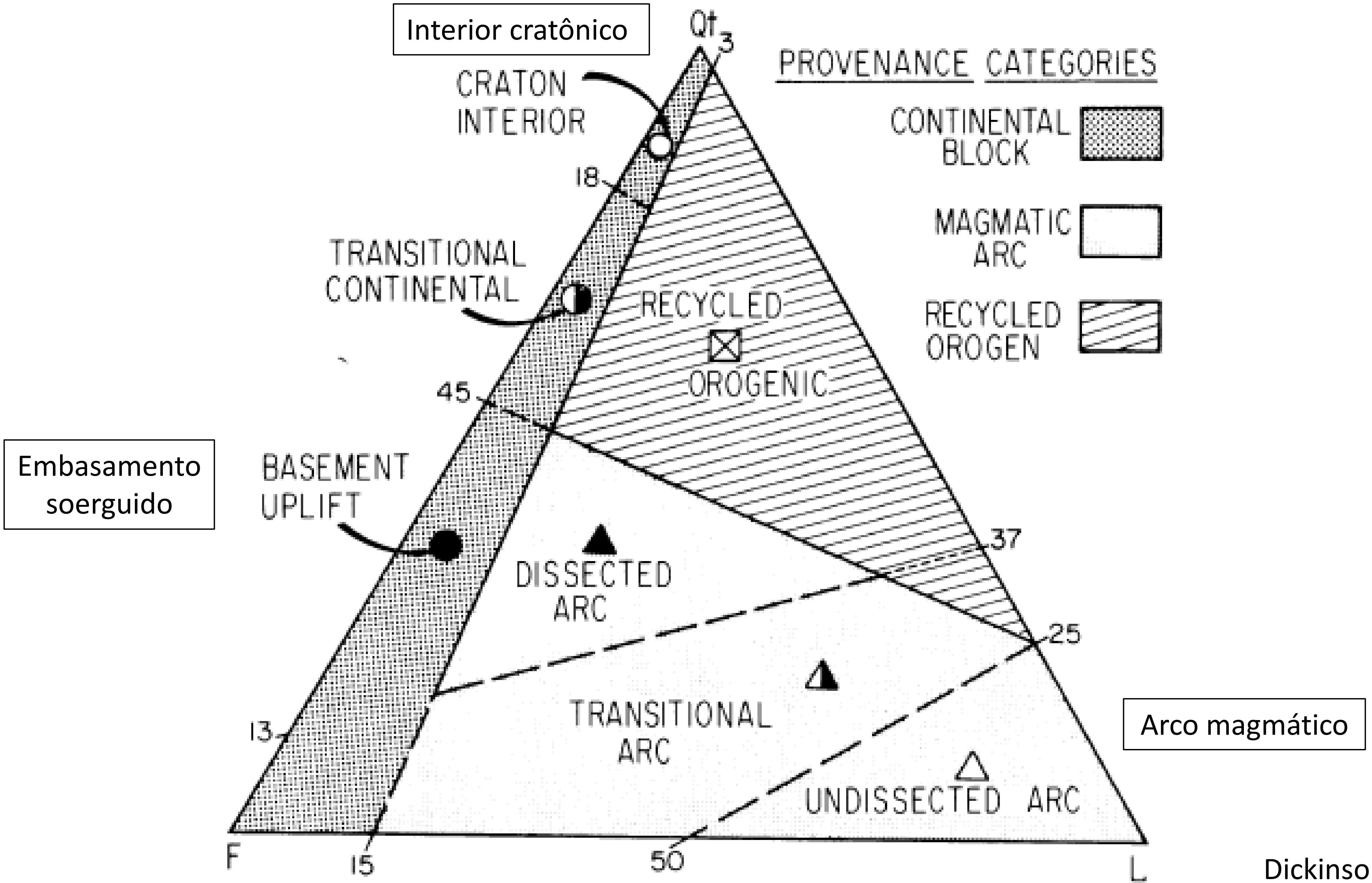
Provenance Type	Tectonic Setting	Derivative Sand Composition
stable craton	continental interior or passive platform	quartzose sands (Qt-rich) with high Qm/Qp and K/P ratios
basement uplift	rift shoulder or transform rupture	quartzofeldspathic (Qm-F) sands low in Lt with Qm/F and K/P ratios similar to bedrock
magmatic arc	island arc or continental arc	feldspatholithic (F-L) volcaniclastic sands with high P/K and Lv/Ls ratios grading to quartzofeldspathic (Qm-F) batholith-derived sands
recycled orogen	subduction complex or fold-thrust belt	quartzolithic (Qt-Lt) sands low in F and Lv with variable Qm/Qp and Qp/Ls ratios

Dickinson (1985)


Interior
cratônico
Orógeno


Embasament
o soerguido


Arco
magmático

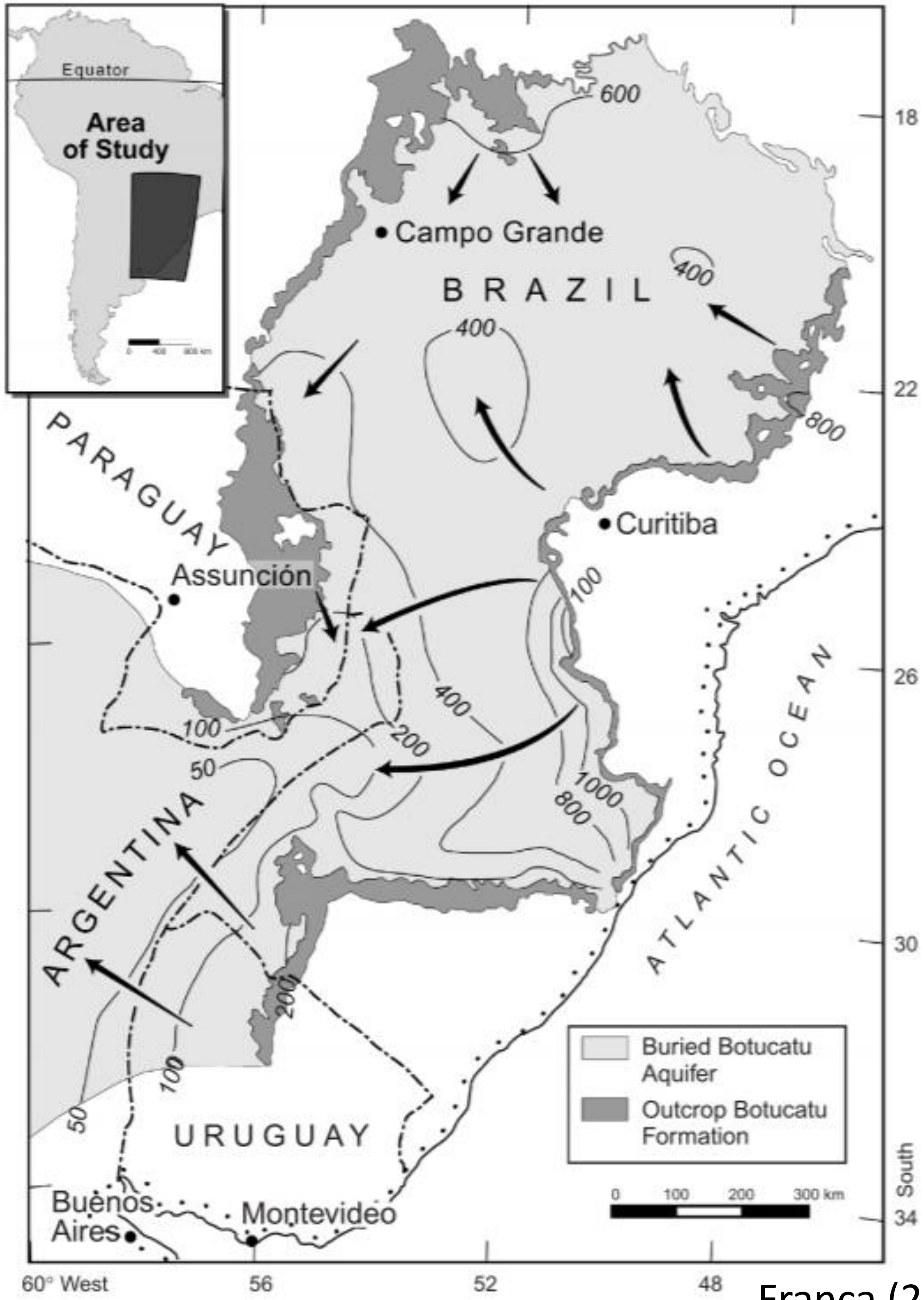


Dickinson (1985)

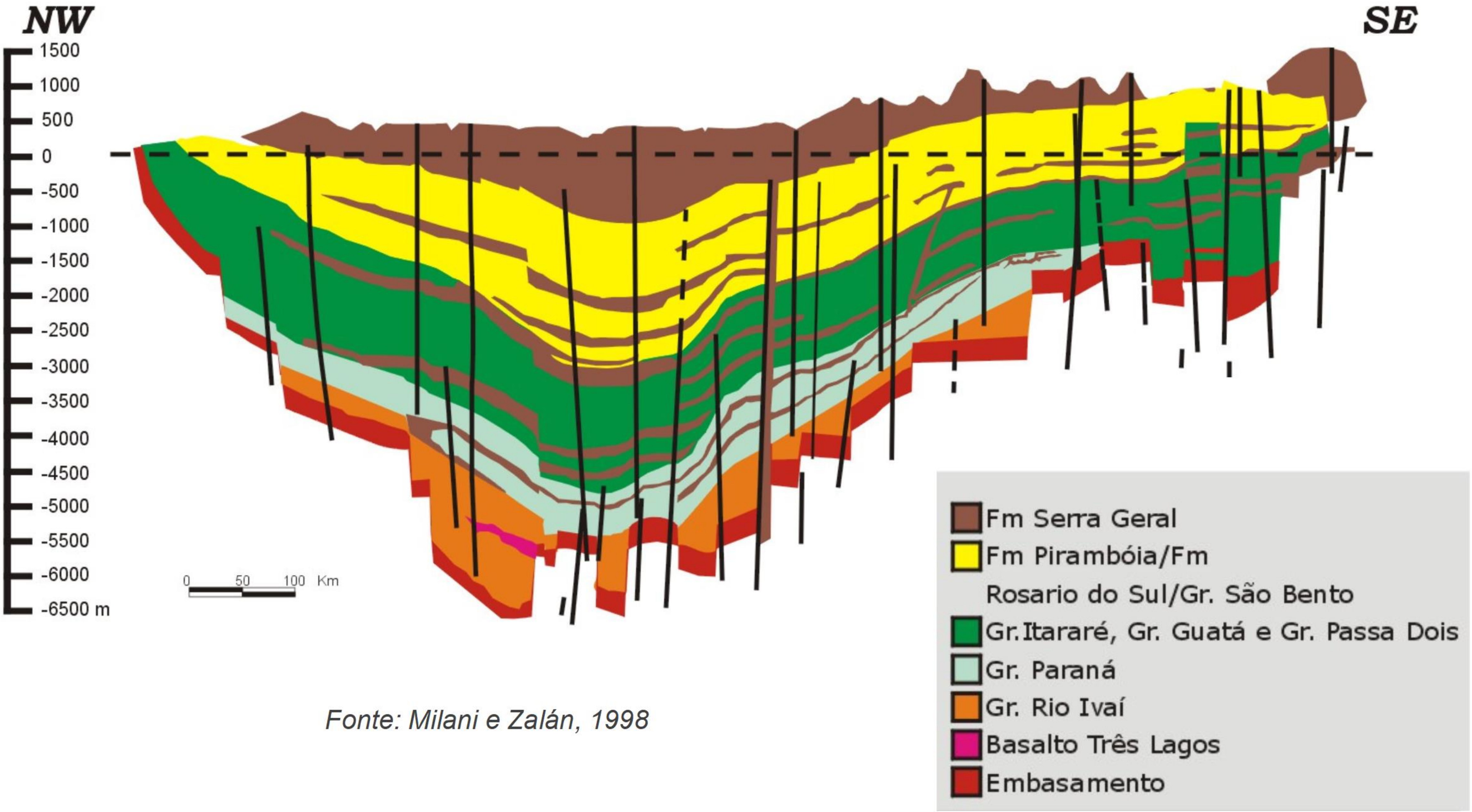
Interpretação

Composição	Interpretação	Tipo litológico dominante
Quartzo-arenito	Interior cratônico	Rochas sedimentares
	*Dissolução intempérica ou diagenética	Rochas sedimentares, metamórficas e plutônicas
Arenito feldspático/arcóseo	Embasamento soerguido	Rochas plutônicas e metamórficas
Arenito lítico	Arco magmático	Rochas vulcânicas
	Orógeno reciclado	Rochas sedimentares, metamórficas e vulcânicas

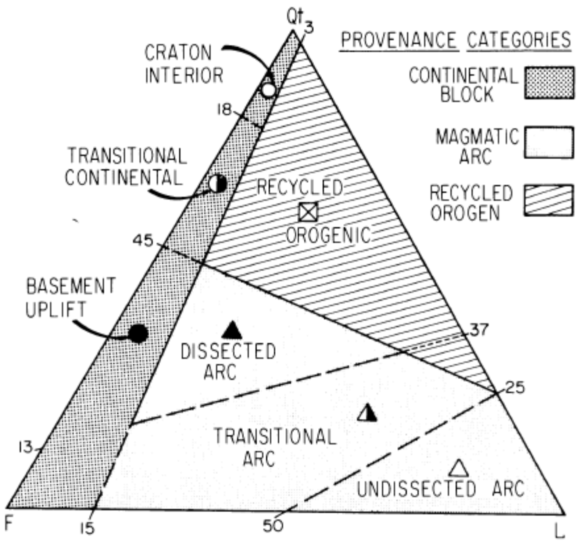
Formação Botucatu



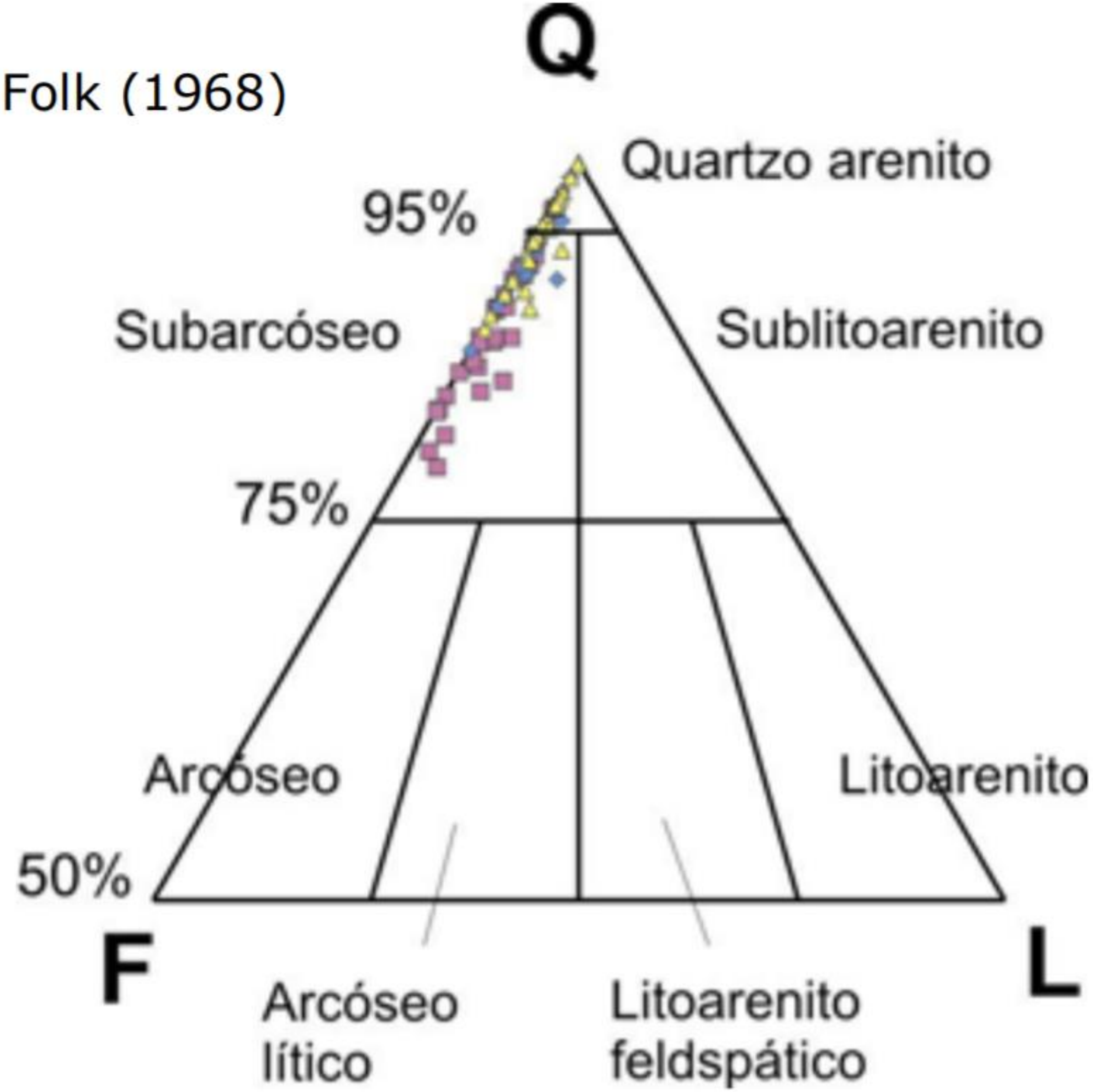
França (2003)



Fonte: Milani e Zalán, 1998



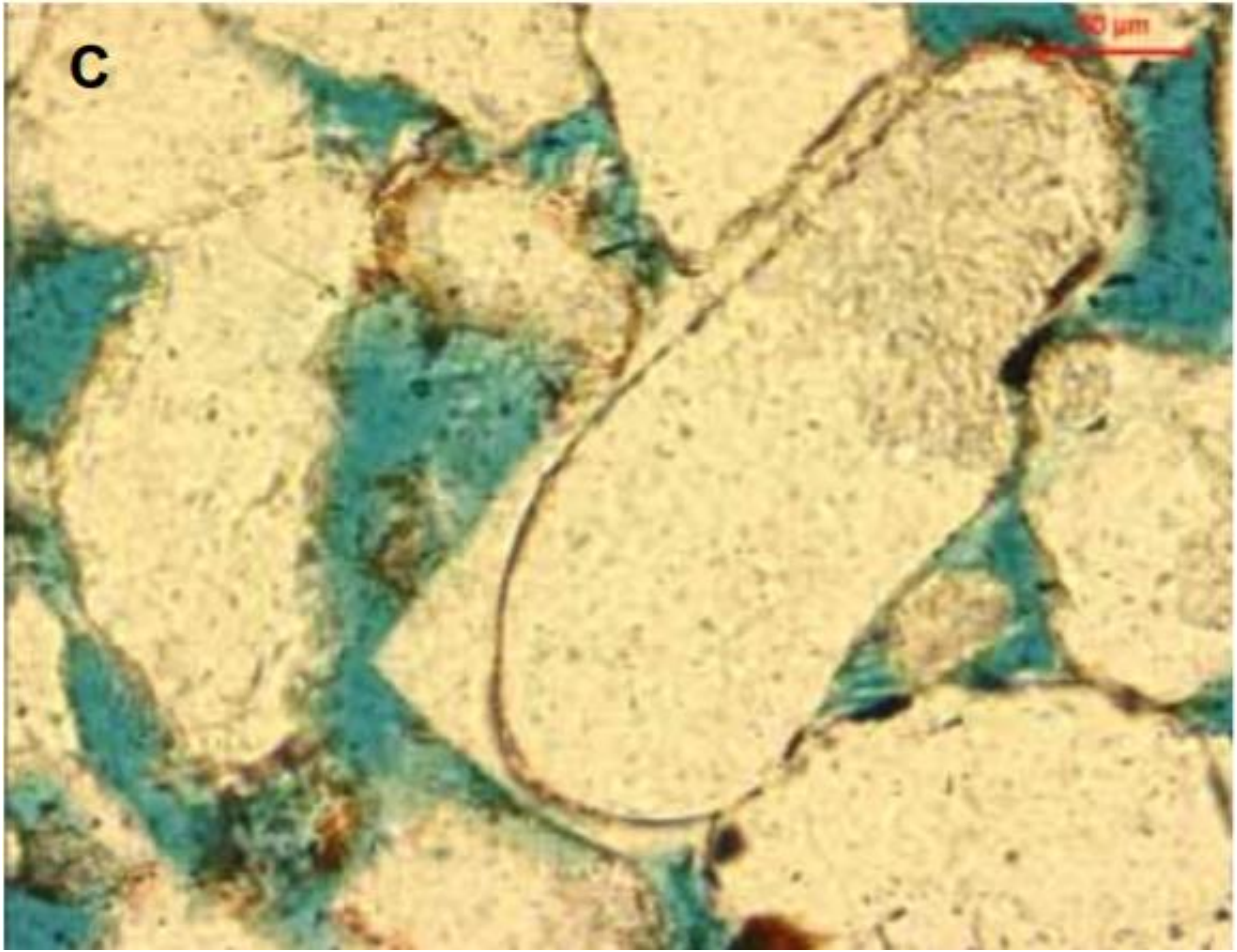
Folk (1968)



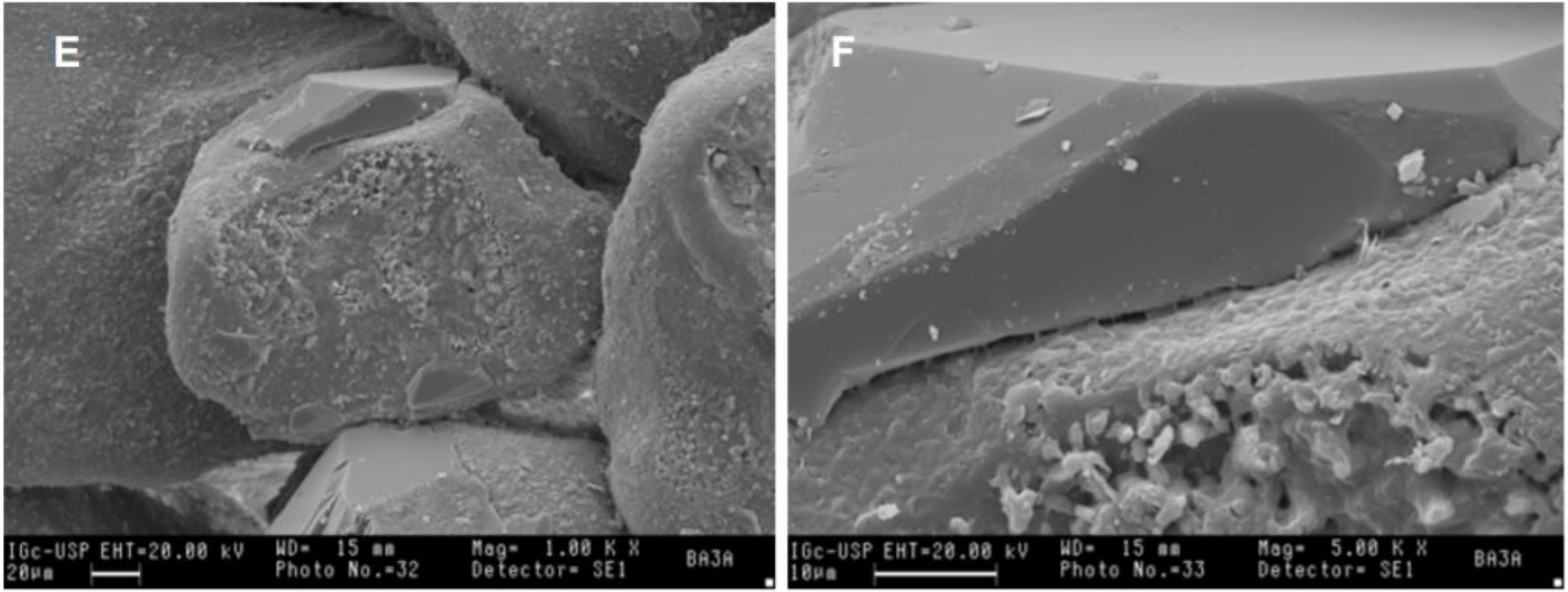
Fm. Pirambóia

Fm. Botucatu

Gesicki (2003)



Gesicki (2003)



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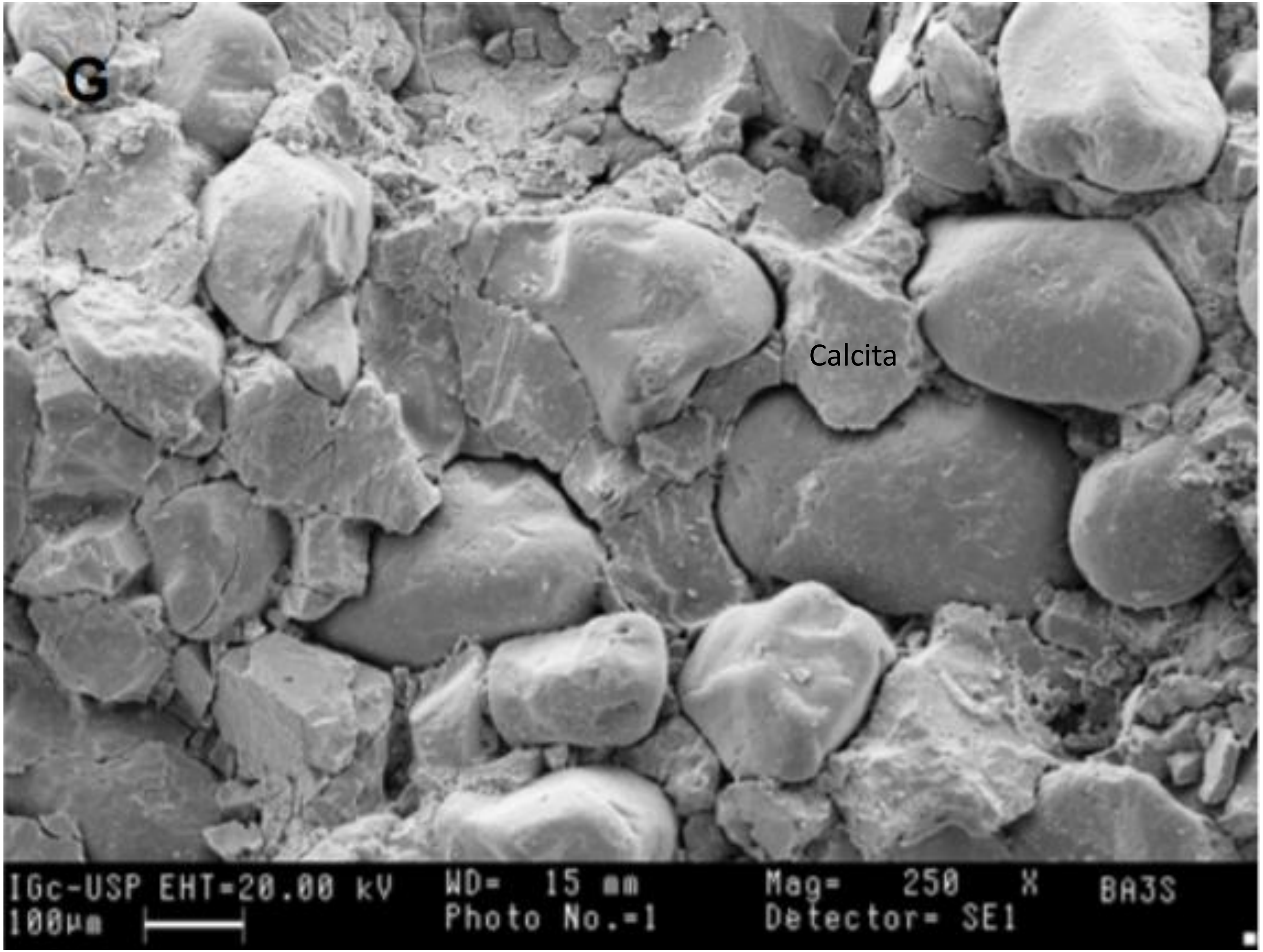

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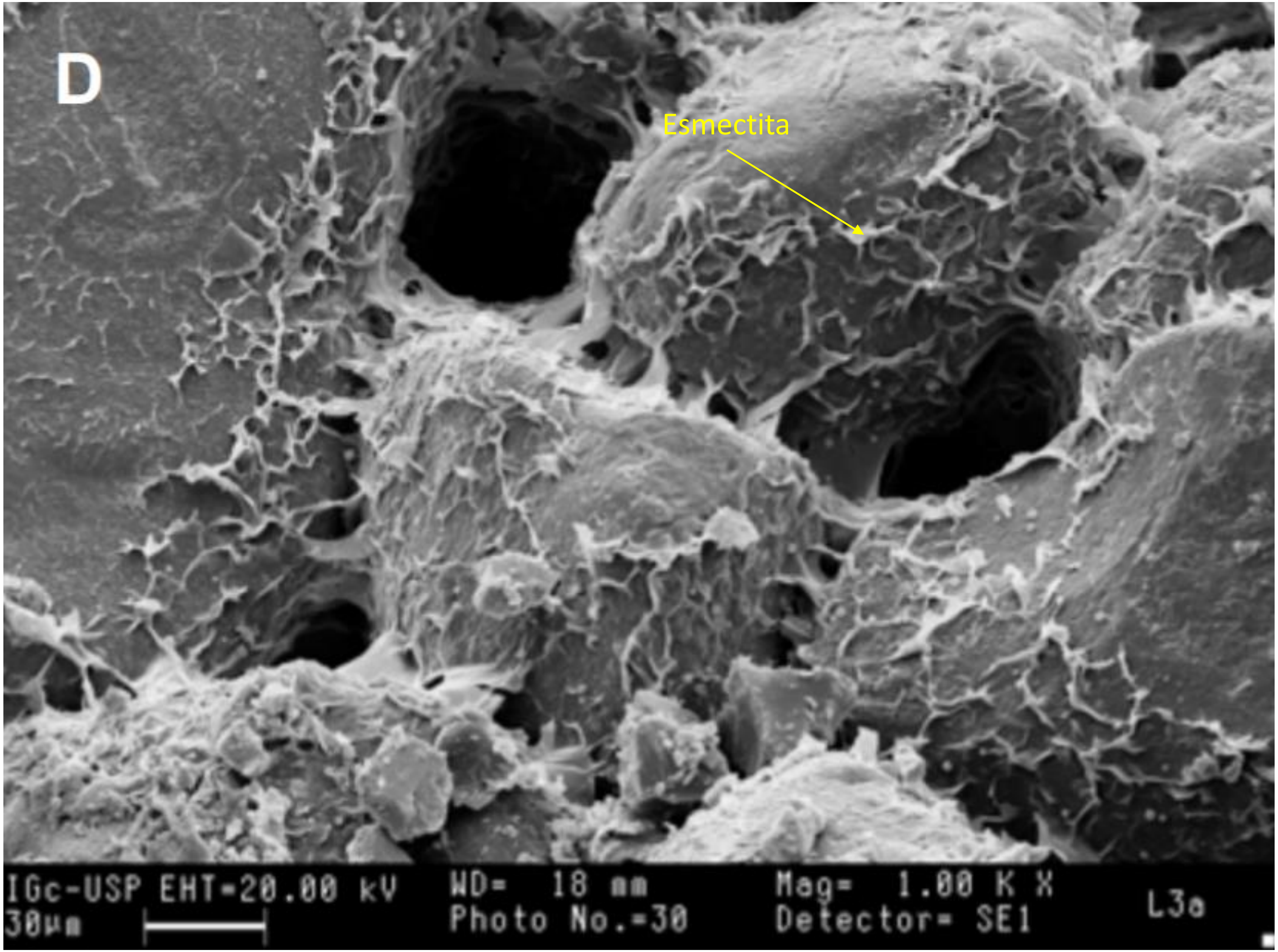

Gesicki (2003)