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Supplement of

Precipitation of dolomite from seawater on a Carnian coastal plain (Dolomites, northern Italy): evidence from carbonate petrography and Sr isotopes

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Table S1. Petrographic summary including sedimentary structures from thin section analysis of dolomites from the Travenanzes Fm. at the Dibona section.

Macroscopic Description	Height	Samples		Matrix			Allochems						Sedimentary structures				Porosity		Deformation		SMF**	
		2014	2016	Aphano- topic	Micro- spar	Cavity-filling cement	Undeform. mud clasts*	Deformed mud clasts	Flat pebbles	Packed peloids	Ooids	Quartz clasts	Bioclasts	Lamination	Graded Bedding	Pseudo- Teepee	Erosion surfaces	Fenestral Porosity	Moldic porosity	Soft sediment deformation		Brittle deformation
dolomite with pyrite	120.0		TZ16-22	+	+	+	++	+	-	+	-	-		+	-	-	+	+	+	+	++	25
laminated dolomite/clay	111.0	TZ14-11	TZ16-20	++	+	+	+	±	+	±	-	-		++	+	+	±	-	-	+	++	25
laminated dolomite	107.0	TZ14-10	TZ16-21/St-3	+	+	+	+	±	-	+	-	-		++	+	+	++	+	-	+	+	25
laminated dolomite	107.0		TZ16-17	++	+	-	+	+	+	-	-	+		±	±	-	-	+	++	+	+	25
dolomite nodule	105.0		TZ16-St-2	++	+	-	+	+	±	-	-	-		-	-	-	-	-	-	+	+	diag.
homogeneous dolomite	104.0		TZ16-St-1	++	+	±	+	±	-	±	-	-		-	-	-	-	-	-	+	+	23
nodular dolomite	100.0	TZ14-13		++	+	-	+	±	-	-	-	-		-	-	-	-	-	-	±	+	diag.
dolomite nodule	96.0		TZ16-15	++	±	+	++	±	±	±	-	-		-	-	-	-	-	-	++	++	diag.
laminated dolomite	95.0	TZ14-9		+	-	+	+	+	±	±	-	-		++	+	+	+	+	-	+	+	25
porous dolomite	89.0	TZ14-12		+	±	-	+	±	-	-	-	-	Forams Biocl.	-	-	-	-	+	++	+	+	23
nodular bed	80.0		TZ16-13	++	+	+	+	±	-	-	-	-	(+)	-	-	-	-	±	+	+	-	diag.
palaeosol, nodule	79.0		TZ16-12	+	±	±	+	±	-	-	-	-		-	-	-	-	-	+	++	++	diag.
sandy dolomite (congl.)	75.0	TZ14-5	TZ16-11	++	±	±	++	±	++	-	-	+	Ostracods (+)	-	-	-	-	±	±	-	-	23
sandstone	74.0		TZ16-10	+	±	-	++	-	-	-	-	+		-	-	-	-	-	-	-	-	25
brittle porous dolomite	65.0	TZ14-4		+	-	+	±	-	-	±	+	-	Forams +	(-)	+	-	-	+	+	+	+	15
porous dolomite	43.0		TZ16-7	++	±	+	±	±	-	-	-	-	Ostracods ±	-	-	-	-	±	+	++	+	23
nodules of dolomite	35.0	TZ14-3		++	+	-	-	±	-	-	-	-		-	-	-	-	-	-	+	+	diag.
dolomite nodule	35.0	TZ14-2		+	±	-	-	±	-	-	-	-		-	-	-	-	-	-	+	+	diag.
arenite	33.5		TZ16-8	+	±	-	+	-	-	++	-	++		-	+	-	-	-	-	+	+	Sst.
homogeneous dolomite	33.0	TZ14-1		++	±	-	±	+	-	±	-	±		±	±	-	-	-	-	+	+	23
laminated dolomite	31.5		TZ16-2	+	-	-	+	-	-	-	-	++		+	+	-	+	+	-	±	±	Sst.
palaeosol, dolomit	30.1		TZ16-3	++	-	±	+	±	-	-	-	-		-	-	-	-	-	-	+	+	diag.
red mottled dolomite	26.0	TZ14-7		-	-	-	±	±	-	-	-	-		-	-	-	±	-	-	±	±	23
dolomite with clay	21.0	TZ14-8		++	±	-	±	±	-	-	-	-		±	-	-	-	-	-	-	-	23
homogeneous dolomite	4.0	TZ14-6		++	+	±	+	±	-	±	-	-	Forams +	+	+	+	+	-	+	+	±	25

- not present ± rare + common ++ very abundant (+) putative

** Nodules are most likely diagenetic and can thus not be associated to a microfacies

* Needs to be further subdivided into peloids, intraclasts, flat pebbles and clast of brittle deformation

Homogeneous dolomite
 Laminated dolomite
 Nodular dolomite
 Oolitic dolomite
 Sandstone