

Supplementary Information

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ABSTRACT

This supplementary material contains detailed data from pore network analysis of the subvolumes within each 3D image.

Keywords: Digital Rock Physics, Porosity, Sandstone, Microfluid, Petrophysics

REFERENCES

Table 1. Sub volume analysis of porosity in the sandstone samples along the Z-axis. Total porosity (ϕ_T), macroporosity (ϕ_M), microporosity (ϕ_m), total connected porosity (ϕ_{TC}), connected macroporosity (ϕ_{MC}), and connected microporosity (ϕ_{mC}).

Slice Range (voxels)	ϕ_T	ϕ_M	ϕ_m	ϕ_{TC}	ϕ_{MC}	ϕ_{mC}
Doddington						
0-166	18.6	16.6	1.9	18.5	16.5	0
166-332	18	16.1	1.8	17.8	16	0
332-500	19.2	17.4	1.8	19.1	17.3	0.1
Knorringfjellet						
0-200	7.5	4.2	3.3	6.1	2.0	2.4
200-400	7.0	3.9	3.1	5.4	1.7	2.1
400-600	7.6	4.3	3.4	5.7	2.4	2.2
600-800	7.2	3.9	3.3	5.5	1.6	2.3
800-1000	7.2	3.8	3.4	5.8	1.6	2.5
1000-1200	8.0	4.4	3.7	6.3	1.8	2.7
1200-1400	8.7	4.7	4.0	7.4	2.7	3.2
1400-1600	8.8	5.0	3.9	7.4	3.1	3.0
Wilcox						
0-200	6.6	2.9	3.7	2.1	0.4	1.1
200-400	7.1	3.2	3.9	0	0	0
400-600	7.4	3.5	3.9	2.7	0	1.2

Table 2. Sub volume analysis of porosity in the carbonate samples along the Z-axis. Total porosity (ϕ_T), macroporosity (ϕ_M), microporosity (ϕ_m), total connected porosity (ϕ_{TC}), connected macroporosity (ϕ_{MC}), and connected microporosity (ϕ_{mC}).

Slice Range (voxels)	ϕ_T	ϕ_M	ϕ_m	ϕ_{TC}	ϕ_{MC}	ϕ_{mC}
Estailades						
0-233	18.6	10.9	7.7	17.8	9.9	7.1
233-466	15.8	8.6	7.2	15	7.5	6.7
466-700	22.7	15.5	7.2	22.2	14.7	6.8
Massangis Jaune						
0-210	15.2	4.8	10.4	13.1	0.3	8.9
210-420	17.2	5.4	11.8	16.5	1	11.3
420-630	16	4.6	11.4	14.2	2.4	10
Savonnières						
0-233	33.2	23.6	9.5	28.4	18.4	8.1
233-466	31.7	18.8	12.8	27.8	14.4	10.6
466-700	32.8	20.3	12.4	29.2	16.6	10.6