

Table 3: Characterization of key rock petrophysical data of the platy stromatoporoid-*Renalcis* reef facies and the detrital stromatoporoid-coral foreslope facies.

	PLATY STROMATOPOROID- <i>Renalcis</i> REEF FACIES		DETRITAL STROMATOPOROID-CORAL FORESLOPE FACIES
	Samples with Pendent <i>Renalcis</i>	Associated Shelter-Cavity and Intervening Sediment	
Porosity (%)	1.5 – 11.6	1.5 – 12.0	2.5 – 25.0* 2.5 – 13.5 (Excluding *)
Mean Porosity (%)	6.70	4.92	8.91
Matrix Replacement Dolomite	Very Minor	Rare	Very common (In all but one thin-section sample)
Routine Air Permeability – Range (md)	0.00002 – 8.77	0.00004 – 110.9	0.00002 – 48.7
Routine Air Permeability – Mean (md)	1.18	7.46	3.80
Routine Air Permeability in samples with no or no significant fracturing – Range (md)	0.00002 – 1.53	0.00004 – 2.06* 0.00004 – 0.751 (Excluding *)	0.00002 – 12.3
<i>In situ</i> Klinkenberg Permeability – Range (md)	0.000006 – 7.67	0.000004 – 101.4	0.000006 – 29.2
<i>In situ</i> Klinkenberg Permeability – Mean (md)	0.99	6.70	2.33
<i>In situ</i> Klinkenberg Permeability in samples with no or no significant fracturing – Mean (md)	0.000006 – 0.928	0.000004 – 2.12* 0.000004 – 0.573 (Excluding *)	0.000006 – 7.86
Fracture Occurrence	Majority	Majority	Common
Fracture Effect	Improves permeability in some samples	Significantly improves permeability in some samples	Commonly adds to permeability
Critical Brine Saturation (%)	26 – 68	28 – 89<	24 – 75<
Effective Gas Permeability (<i>In situ</i> Klinkenberg Permeability) at Critical Brine Saturation – Range (md)	0.0004 – 0.053	0.000002 – 4.8	0.000002 – 3.97
Relative Gas Permeability at Critical Brine Saturation in samples with no or no significant fracturing	0.0004 – 0.053	0.000002 – 0.08	0.000002 – 3.97
Approximate Threshold Gas Column (m)	9 – 11	3 – 198	4 – 539
Shape of Air-Mercury Capillary Pressure Curve	Rounded L to L	Moderately concave-upward arcuate to L	Straight line to L
Coarsest Pore-Throat Size Distribution (μm)	≈75% between 1.00 – 4.00 μm	≈70% between 0.4 – 10.00 μm	≈80% between 0.6 – 8.5 μm