Appendix E

Tables from Plett and Kennell

Table 3.1: Summary of lab derived dolostone physical property values

Statistic	Dry Bulk Density (g/cm^3)	Wet Bulk Density (g/cm^3)	Particle Density (g/cm^3)	Porosity (%)
No. of Samples	246	246	246	246
Minimum	2.22	2.43	2.74	1.2
Maximum	2.87	2.89	2.93	20.9
Mean	2.57	2.67	2.85	9.8
Standard deviation	0.12	0.08	0.03	4.3

Table 3.2: Fraction of organic carbon by type of sample

Sample Type	Number of samples	Average	Min	Max
Fracture Surface	15	2.31	0.08	6.36
Stylolite Layer	1	3.50	NA	NA
Shale Transition	6	0.06	0.03	0.11
Dolostone Matrix	74	0.02	0.01	0.10

Table 3.3: Summary of core and geophysical method correlations

Geophysical Method	Parameter	Equation	R^2
Neutron	Dry Bulk Density	$y = 844.9x - 1208$	0.572
Neutron	Porosity	$y = -22.35x + 1182$	0.526
Gamma-Gamma	Dry Bulk Density	$y = -29.44x + 127.4$	0.43
Gamma-Gamma	Porosity	$y = 0.811x + 43.72$	0.428
ACTV Max Amplitude	Dry Bulk Density	$y = 0.441x - 0.341$	0.564
ACTV Max Amplitude	Porosity	$y = -0.012x + 0.913$	0.547

Table 2.3: Physical property measurements, which include matrix porosity, matrix permeability,and wet and dry bulk densities, for the nine lithologic units. Adapted from Burns (2005).

Unit ID		Number of Samples Analysed	Lab-Measured Physical Properties									
			Matrix Porosity (%)		Permeability (cm^2)		Wet Bulk Density (g/cm^3)		Dry Bulk Density (g/cm^3)		f_{oc} (%)	
Plett (2006)	Burns (2005)		*Range*	*Average*	*Range*[a]	*Average*	*Range*	*Average*	*Range*	*Average*	*Range*	*Average*
a	G	5	4.1–12.0	8.0	8.4E-13–1.1E-10	2.5E-11	2.62–2.69	2.66	2.53–2.62	2.58	0.005–0.030	0.014
b	E	8	2.5–10.1	5.5	9.9E-15–9.8E-10	1.6E-10	2.33–2.79	2.62	2.26–2.78	2.56	0.003–0.030	0.010
c	A	4	3.6–15.3	6.7	9.9E-15–5.0E-11	1.5E-11	2.55–2.72	2.64	2.40–2.67	2.54	0.005–0.014	0.008
d	B	7	5.8–12.5	9.0	9.9E-15–4.3E-12	9.7E-13	2.58–2.75	2.68	2.46–2.70	2.61	0.006–0.018	0.012
e	I	4	5.5–10.4	8.6	9.9E-15–9.6E-11	2.5E-11	2.59–2.92	2.69	2.47–2.82	2.59	0.003–0.015	0.010
f	C	5	1.2–7.4	4.7	9.9E-15–1.2E-11	4.9E-12	2.20–2.74	2.60	2.15–2.70	2.52	0.003–0.027	0.013
g	F	4	4.1–11.0	6.1	9.9E-15–1.3E-9	3.3E-10	2.61–2.75	2.67	2.52–2.70	2.61	0.005–0.017	0.012
h	H	4	0.8–4.2	2.6	9.9E-15–2.8E-12	7.1E-13	2.66–2.82	2.75	2.56–2.78	2.69	0.023–0.125	0.056
i	D	5	2.3–16.7	9.7	9.9E-15–1.3E-9	1.5E-11	2.39–2.78	2.65	2.43–2.67	2.60	0.059–0.132	0.089
DOLOSTONE			0.8–15.3	6.8	9.9E-15–1.3E-9	1.6E-10	2.20–2.92	2.67	2.15–2.82	2.59	0.003–0.125	0.017
SHALE			2.3–16.7	9.7	9.9E-15–1.3E-9	1.5E-11	2.39–2.78	2.65	2.43–2.67	2.60	0.059–0.132	0.089

[a]The indicated low-end detection limit of the permeability equipment is 9.9E-15 cm^2.