

Supporting information (2 pages) for the manuscript:

# Equilibrium Studies for the System Methane + Carbon dioxide + Neohexane + Water.

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**Table 1. Hydrate-liquid-liquid<sub>aq</sub>-vapor equilibrium Temperature  $T$ , Pressure  $p$ , and vapor-phase mole fraction of carbon dioxide  $y_I$ , for the system methane + carbon dioxide + neohexane + water.**

$T/K$	$p/MPa$	$10^2y_I$
275.28	1.37	32.0
275.29	1.61	62.3
275.32	1.63	69.9
275.49	1.37	12.9
277.14	1.63	16.3
277.20	1.93	52.0
277.25	1.79	41.6
277.34	2.15	63.2
279.42	2.85	51.5
279.44	2.65	44.6
279.45	2.92	66.2
279.51	2.39	20.7
281.02	3.17	44.9
281.03	3.50	54.0
281.05	2.92	21.4
281.23	3.64	65.9
282.72	3.75	21.8
282.83	4.18	40.5
282.85	4.43	51.7
284.77	5.78	46.6
284.90	5.93	56.1
285.30	5.69	23.1
285.35	6.10	35.4

**Table 2. Hydrate-liquid-vapor equilibrium Temperature  $T$ , Pressure  $p$ , and vapor-phase mole fraction of carbon dioxide  $y_1$ , for the system methane + carbon dioxide + water.**

$T/K$	$p/MPa$	$10^2y_1$
275.14	2.36	15.6
275.24	1.92	38.5
275.29	2.05	28.4
275.38	2.19	21.5
277.01	2.28	38.0
277.13	2.54	27.4
277.32	2.91	19.5
277.43	3.20	13.3
278.96	2.79	37.3
279.19	3.24	26.5
279.35	3.64	18.7
279.48	3.93	13.1
281.12	4.41	14.6
281.20	3.75	35.1
281.22	4.08	25.0
282.74	4.74	34.7
282.97	5.17	22.1
282.97	4.52	45.5
283.38	6.16	13.6
284.73	5.63	44.4
284.74	5.88	33.6
285.33	6.56	21.3
285.34	7.47	15.1