

**Budd et al. 2012 - SYNDEPOSITIONAL DEFORMATION FEATURES IN HIGH-RELIEF CARBONATE PLATFORMS: LONG-LIVED**

Fracture plug sample	chip #	map #	pic #	FI #	Fluid Inclusion		Fluorescence					size (um)	
					Assemblage	Inclusion Type	Color	Th1	Th2	Tm1	Tm2		Te
6603	1	1	1	1	1	2 phase aqueous		79	80	0.9	1	indistinct	3x2
6603	1	1	1	2	1	2 phase aqueous		70	71	-1	-0.9	indistinct	5x3
6603	1	1	1	3	1	2 phase aqueous		70	71			indistinct	3x2
6603	1	1	1	4	1	2 phase aqueous		73	74	-7	-7.1	-48	10x5
6603	1	1	1	5	1	2 phase aqueous		70	71	0.1	0.2	indistinct	10x4
6603	3	1	1	1	1	2 phase aqueous		64	65	-12.2	-12.3	indistinct	4x3
6603	3	1	1	2	2	2 phase aqueous		78	79				13x9
6603	3	1	1	3	2	2 phase aqueous		93	94				12x7
6603	3	1	1	4	2	2 phase aqueous		94	95				9x6
6603	3	1	2	1	NA	2 phase aqueous		59	60	-7.4	-7.3	-48	12x10
6603	3	1	2	2	NA	2 phase aqueous		127	128	-7.4	-7.5	-48	13x2
6603	3	1	2	5	NA	2 phase aqueous		60	61	-7.3	-7.4	-48	8x7
6603	3	1	2	6	NA	2 phase aqueous		90	91	-12.4	-12.5	-48	17x3
6610	4	1	1	1	NA	HC 2 phase	blue	71	72				8x4
6610	4	1	1	2	NA	HC 2 phase	blue	73	74				8x3
6610	4	1	1	3	NA	HC 2 phase	yellow	75	76				6x4
6610	4	1	1	4	NA	HC 2 phase	yellow	76	77				7x13
6610	4	1	2	3	NA	2 phase aqueous		80	81				8x6
6610	4	1	2	4	NA	2 phase aqueous		89	90	-0.1	0	indistinct	9x5
6610	4	2	1	1	NA	HC 2 phase	yellow	150	151				21x7
6610	4	2	1	3	NA	2 phase aqueous		83	84	-1.2	-1.3	obvious @ -20	10x3
6610	4	2	1	4	NA	2 phase aqueous		100	101	0.3	0.2	indistinct	8x3
6610	4	2	1	5	NA	HC 3 phase	dark yellow	75	76				8x12
6610	4	2	2	1	NA	2 phase aqueous		85	86	-0.1	0	obvious @ -20	18x7
6610	4	2	2	2	NA	2 phase aqueous		85	86				7x4
6610	4	2	2	4	NA	2 phase aqueous		82	83	-2.8	-2.9	obvious @ -20	14x8
6610	4	2	2	5	NA	2 phase aqueous		84	85	-2.2	-2.3	indistinct	12x8
6610	4	2	3	1	NA	2 phase aqueous		70	71	-3.1	-3	-45	15x9
6610	4	2	3	2	NA	2 phase aqueous		144	145	-1	-0.9	indistinct	13x4
6610	4	2	4	1	NA	2 phase aqueous		74	75	-1.8	-1.9	-40	8x4
6610	4	2	4	2	NA	2 phase aqueous		143	144	0.2	0.1	indistinct	13x8
6610	4	2	4	4	NA	2 phase aqueous		83	84	-1.8	-1.9	-40	14x4
6610	4	2	5	1	NA	HC 2 phase	dark yellow	95	96				8x5
6610	4	2	5	2	NA	2 phase aqueous		69	70	-5.3	-5.4	-50	13x6
6617	1	1	1	1	1	2 phase aqueous		75	76				7x6

6617	1	1	1	2	1	2 phase aqueous		70	71					12x4
6617	2	1	1	2	1	HC 2 phase	yellow-green	69	70					13x8
6617	2	1	1	3	1	HC 2 phase	yellow-green	57	58					6x3
6617	2	1	1	4	1	HC 2 phase	yellow-green	56	57					8x5
6617	2	1	1	5	1	HC 2 phase	yellow-green	55	56					4x3
6617	2	1	1	6	1	HC 2 phase	yellow-green	51	52					7x3
6617	2	1	2	1	NA	2 phase aqueous		85	86					15x7
6617	2	1	2	2	NA	2 phase aqueous		85	86	-6.8	-6.9		-42	15x2
6617	2	1	2	3	NA	2 phase aqueous		71	72					16x7
6617	2	1	2	5	NA	2 phase aqueous		134	135	-3.2	-3.3		-40	12x3
6617	2	1	2	6	NA	2 phase aqueous		70	71	-0.5	-0.6		indistinct	2x3
6107Ba	1	1	1	1	NA	2 phase aqueous		67	68				indistinct	13x6
6107Ba	1	1	1	3	NA	HC 3 phase	pale blue	91	92					14x5
6107Ba	1	1	2	1	NA	HC 2 phase	yellow	85	86				indistinct	13x7
6107Ba	1	1	3	4	NA	2 phase aqueous		71	72	-13.6	-13.5		-50	4x2
6107Ba	1	1	3	5	NA	HC 2 phase	yellow	87	88					7x3
6107Ba	1	1	3	6	NA	HC 2 phase	dark yellow	70	71					15x7
6107Ba	1	1	6	1	NA	HC 3 phase	dark yellow	78	79	-9	-8		-50	12x6
6107Ba	1	1	6	2	NA	empty								14x11
6107Ba	1	1	6	3	NA	HC 2 phase	pale blue	81	82					9x3
6107Ba	1	1	6	4	NA	HC 2 phase	blue	72	73					8x3
6107Ba	1	1	6	6	NA	HC 2 phase	dark yellow	67	68					9x3
6107Ba	1	1	7	4	NA	HC 2 phase	dark yellow	77	78					4x3
6107Ba	1	1	7	5	NA	HC 3 phase	dark yellow	79	80					10x4
6107Ba	1	1	9	1	NA	HC 2 phase	yellow	91	92					41x15
6107Ba	1	2	5	1	1	2 phase aqueous		70	71	-0.1	-0.2		indistinct	5x3
6107Ba	1	2	5	2	1	2 phase aqueous		81	82					19x3
6107Ba	1	2	5	3	1	2 phase aqueous		70	71	-1.7	-1.8		-22.4	6x3
6107Ba	1	2	5	4	1	2 phase aqueous		78	79					15x2
6107Ba	1	2	5	5	1	2 phase aqueous		79	80					8x5
6107Ba	1	2	5	6	1	2 phase aqueous		82	83					9x2
6107Ba	2	4	1	1	NA	2 phase aqueous		69	70					6x5
6107Ba	2	4	1	2	NA	2 phase aqueous		65	66	-11.5	-11.6		-48	8x5
6107Ba	2	4	1	3	NA	HC 3 phase	yellow	77	78					17x12
6107Ba	2	4	1	4	NA	2 phase aqueous		58	59	-13.3	-13.4		-48	9x3
6107Ba	2	4	1	5	NA	HC 2 phase	yellow-green	79	80					19x12
6107Ba	2	4	1	6	NA	HC 2 phase	yellow	74	75					15x10
6107Ba	2	4	1	7	NA	HC 2 phase	yellow	69	70					7x6
6107Ba	2	4	1	8	NA	HC 2 phase	dark yellow	60	61					9x3
6107Ba	2	4	1	9	NA	2 phase aqueous		83	84	-14	-14.1		-48	12x4
6107Ba	2	4	1	10	NA	2 phase aqueous		77	78	-13.4	-13.5		-48	7x4
6107Ba	2	4	1	11	NA	HC 2 phase	yellow-green	61	62					8x4
6107Ba	2	4	1	12	NA	HC 2 phase	blue	82	83					8x5
6107Ba	2	4	1	13	NA	2 phase aqueous		83	84	-1.9	-2		-20	6x7
6107Ba	2	4	1	14	NA	2 phase aqueous		65	66	-1.9	-2		-20	9x4
6107Ba	3	1	1	2	NA	HC 2 phase	no fluor	73	74					9x5
6107Ba	3	1	1	3	NA	HC 2 phase	yellow	84	85					13x12
6107Ba	3	1	2	1	NA	HC 2 phase	pale blue	62	63					22x9

6107Ba	3	1	3	4	NA	HC 2 phase	yellow	54	53						10x9
6107Ba	3	1	3	5	NA	HC 3 phase	yellow	72	73						20x17
6107Ba	3	1	3	6	NA	2 phase aqueous		90	91	-1.5	-1.6	indistinct			16x23
6107Ba	3	1	4	2	NA	2 phase aqueous		83	84	-13.1	-13.2	-40			7x2
6107Ba	3	1	4	3	NA	2 phase aqueous		78	79	-3.3	-3.4	obvious @ -20			7x5
6107Ba	3	1	4	5	NA	2 phase aqueous		79	80	-3.3	-3.4	obvious @ -20			6x7
6107Ba	3	1	4	6	NA	2 phase aqueous		81	82						11x6
6107Ba	3	1	5	2	NA	2 phase aqueous		65	66						11x11
6107Bb	3	1	1	1	NA	HC 3 phase	yellow-green	56	57	-1.1	-1	indistinct			17x7
6107Bb	3	1	1	2	NA	HC 3 phase	yellow-green	71	72						6x5
6107Bb	3	1	1	3	NA	2 phase aqueous		78	79						10x5
6107Bb	3	1	1	5	NA	HC 2 phase		59	60						13x6
6107Bb	3	1	1	6	NA	HC 3 phase	no fluor	74	75						15x11
6107Bb	3	1	1	7	NA	HC 2 phase	yellow	58	59						12x6
6107Bb	5	1	2	1	1	2 phase aqueous		78	79	-0.3	-0.2	indistinct			4x7
6107Bb	5	1	2	2	1	2 phase aqueous		81	82	-0.3	-0.2	indistinct			4x4
6107Bb	5	1	2	3	1	2 phase aqueous		80	81	-0.3	-0.2	indistinct			8x3
6107Bb	5	1	2	4	1	2 phase aqueous		81	82	-0.3	-0.4	indistinct			10x6
6107Bb	5	1	3	1	1	2 phase aqueous		72	73	-10.7	-10.8	-50			6x6
6107Bb	5	1	3	2	1	2 phase aqueous		73	74	-12.7	-12.8	-50			6x5
6107Bb	5	1	3	4	NA	2 phase aqueous		65	66						12x5
6619B	2	1	1	1	1	2 phase aqueous		59	60	-5.5	-5.4	-44			11x6
6619B	2	1	1	2	1	2 phase aqueous		57	58	-1.8	-1.7	-44			13x4
6619B	2	1	1	3	1	2 phase aqueous		57	58	-5.5	-5.4	-44			11x5
6619B	2	1	1	4	1	2 phase aqueous		57	58	-4.9	-4.8	-44			10x6
6619B	2	1	1	5	1	2 phase aqueous		56	57	-4.9	-4.8	-44			8x5
6619B	2	1	1	6	1	2 phase aqueous		51	52	-5.4	-5.5	-44			7x4
6619B	2	1	1	7	1	2 phase aqueous		62	63	-3.7	-3.8	-44			12x4
6619B	2	2	1	1	NA	2 phase aqueous		107	108	-5.7	-5.6	-40			14x9
6621A	2	1	1	1	NA	2 phase aqueous		64	65	0	0.1	indistinct			6x2
6621A	2	1	1	2	NA	2 phase aqueous		75	76	0	0.1	indistinct			10x9
6621A	2	1	1	3	NA	HC 2 phase	yellow-green	66	67						7x6
6621A	2	1	1	4	NA	HC 2 phase	dark yellow	73	74						8x6
6621A	2	1	3	4	NA	2 phase aqueous		98	99	3.2	3.1	indistinct			12x9
6621A	2	1	3	6	NA	2 phase aqueous		149	150						12x4
6626Ba	1	1	1	3	NA	HC 3 phase	blue	64	65						7x4
6626Ba	1	1	2	2	NA	2 phase aqueous		79	80	-1.8	-1.9	obvious @ -20			8x5
6626Bb	1	1	1	1	1	HC 2 phase	yellow-green	73	74						6x5
6626Bb	1	1	1	2	1	HC 2 phase	yellow-green	80	81						6x6
6626Bb	1	1	1	3	1	HC 2 phase	yellow-green	74	75						5x3
6626Bb	1	1	1	4	1	HC 2 phase	yellow-green	75	76						13x6
6626Bb	1	1	2	1	NA	2 phase aqueous		70	71	-2.7	-2.6	indistinct			14x6
6626Bb	1	1	2	2	NA	2 phase aqueous		73	74						12x6
6626Bb	1	1	2	3	NA	2 phase aqueous		73	74	0.1	0.2	indistinct			8x5

6626Bb	1	1	2	4	NA	2 phase aqueous	75	76					8x10
6626Bb	1	1	2	5	NA	2 phase aqueous	86	87					9x4
6626Bb	1	1	2	6	NA	2 phase aqueous	104	105					8x5
6626Bb	1	1	2	7	NA	2 phase aqueous	62	63					10x2
6626Bb	1	1	2	8	NA	2 phase aqueous	79	80					18x7
6626Bb	1	1	2	9	NA	2 phase aqueous	75	76					9x6
6626Bb	1	1	2	10	NA	2 phase aqueous	57	58	1.2	1.3	indistinct		6x3
6626Bb	1	1	2	11	NA	2 phase aqueous	83	84	-2.9	-3	indistinct		16x9
6626Bb	1	1	2	13	NA	2 phase aqueous	73	74	-1.1	-1	indistinct		6x5

## CONDUITS FOR DIAGENETIC FLUIDS

rejected - length:width ratio >3	rejected - area > 80 um <sup>2</sup>	Notes	Luminescence
		Submicron sized HC inclusions oriented with the crystal face (hexagonal pattern) either formed during crystal growth or represent later migration of fluids along structural weakness in the calcite	non-luminescent
			non-luminescent
			non-luminescent
		although the inclusions appear to be along the same plane, thus belonging to a single FIA the high salinity inclusion likely represents an earlier fluid	non-luminescent
			non-luminescent
	111		non-luminescent
	84		non-luminescent
	120		non-luminescent
>3			non-luminescent
			non-luminescent
>3			non-luminescent
			non-luminescent
			non-luminescent
			non-luminescent
			non-luminescent
			non-luminescent
>3	147		non-luminescent
>3			non-luminescent
		metastable behavior, nucleation of the bubble has been suppressed	non-luminescent
	96		non-luminescent
	126		non-luminescent
			non-luminescent
	112		non-luminescent
	96		non-luminescent
	135		non-luminescent
>3			non-luminescent
			non-luminescent
	104		non-luminescent
>3			non-luminescent
			non-luminescent
		bubble did not renucleate, hosted in a calcite vein that is clearly later than HC inclusions, based on cross cutting relationship	luminescent

	101	luminescent luminescent luminescent luminescent luminescent luminescent
>3	105	luminescent
>3	112	luminescent luminescent luminescent non-luminescent non-luminescent non-luminescent
	91	the smaller size negatively crystal shape and orientation elongate to growth suggest a possible primary origin non-luminescent
	105	non-luminescent non-luminescent
	154	non-luminescent non-luminescent non-luminescent non-luminescent non-luminescent non-luminescent non-luminescent non-luminescent
>3	600	non-luminescent non-luminescent non-luminescent
>3		non-luminescent
>3		non-luminescent
>3		non-luminescent non-luminescent non-luminescent
	204	rapid melting of ice in this temperature range, true Tm could not be determined due to conflicting phase changes with the hydrocarbons non-luminescent
	226	non-luminescent
	150	non-luminescent non-luminescent non-luminescent non-luminescent non-luminescent non-luminescent non-luminescent non-luminescent non-luminescent non-luminescent
	156	inclusion did not freeze, likely a nonfluorescent HC non-luminescent
	198	non-luminescent



>3

126

non-luminescent  
non-luminescent  
non-luminescent  
non-luminescent  
non-luminescent  
non-luminescent

metastable behavior,  $T_m$  represents  
nucleation of the bubble

144

non-luminescent  
non-luminescent