

SUPPLEMENTARY TABLE 2. MINERALS ENCOUNTERED IN AND NEAR
THE POLYMINERALIC MICRO-INCLUSIONS IN FLUORAPATITE
IN THE CALCITE–FLUORITE DIKE

	Early minerals	Late minerals
Dwyer mine 1		
#1	Ap, Fl globule, Cal + Fl matrix	Qtz at rim of globule, Hem
#2	Ap, the same globule of Fl	Cal at rim of globule, Hem, Syn-(Ce)
#3	Ap, Cal, Fl, Xnt-(Y), Hem	Ap*, localized dissolution
#4	Ap, Cal, Fl, Qtz, "Bri-(Y)"	
#5	Ap, Cal, Hem, Bri-(Y)	Syn-(Ce)
#6	Ap, Fl	Qtz, Hem, Syn-(Ce)
#7	Ap, Cal, Fl, Amp, Tho, Bri-(Y)	Syn-(Ce), Po, localized dissolution
#8	Ap, Fl	Syn-(Ce), Pst-(Ce), Thr
#9	Ap, Cal, Fl, Bsn-(Ce), Xnt-(Y)	Hem
#10	Ap, Cal, Fl, Bsn-(Ce), Xnt-(Y), Thr, Hem	Syn-(Ce), Py
#11	Ap, Cal, Fl	Syn-(Ce), Ytt-(Y), Hem
#12	Ap, Cal, Qtz, Bsn-(Ce)	Syn-(Ce), Hem, localized dissolution
#13	Ap, Cal, Fl	Hem
#14	Ap, Cal, Thr, Hem	Syn-(Ce)
#15	Ap, Cal, Fl, Bri-(Y), Hem	
#16	Ap, Cal, Fl, Hem	Ytt-(Y), Hem
Dwyer mine 2		
#21	Ap, Cal	Syn-(Ce)
#22	Ap, Cal, Qtz	
#23	Ap, Qtz, Wo	
#24	Ap, Cal, Fl, Bsn-(Ce)	
#25	Ap, Cal, Fl	Syn-(Ce), Bri-(Y)
#26	Ap, Qtz, Wo	Syn-(Ce), Bri-(Y), Py
#27	Ap, Cal, Fl	Syn-(Ce), Bri-(Y), Hem, Qtz
#28	Ap, Cal, Fl, Bsn-(Ce)	Syn-(Ce), Pst-(Ce), Thr
#29	Ap, Cal	Syn-(Ce)
#30	Ap, Cal, Fl	
#31	Ap, Cal, Fl, Hem, Thr	
#32	Ap, Cal	Syn-(Ce), Pst-(Ce), Hem
#33	Ap	Cch
#34	Ap, Cal, Fl, Bsn-(Ce)	Syn-(Ce), Hem
#35	Ap, Cal, Bsn-(Ce)	Syn-(Ce), Pst-(Ce)
#36	Ap, Cal, Hem	Syn-(Ce), localized dissolution
#37	Ap, Cal, Bsn-(Ce)	Syn-(Ce), Pst-(Ce)
#38	Ap, Cal, Hem	Syn-(Ce), Py
#39	Ap, Bri-(Y)	Syn-(Ce)
#40	Ap, Cal, Fl, Qtz, Bsn-(Ce)	Syn-(Ce), Py

#41	Ap, Fl, Qtz	
#42	Ap, Fl, Qtz	Syn-(Ce), Hem
#43	Ap, Cal, Fl, Bri-(Y)	
#44	Ap, Cal, Bri-(Y), Hem	
#45	Ap, Cal, Fl	Syn-(Ce), Bri-(Y), Py
#46	Ap, Cal, Fl	Syn-(Ce), Bri-(Y), Hem
#47	Ap, Cal, Fl, Hem	Syn-(Ce), Bri-(Y)
#48	Ap, Cal, Qtz, Hem	Syn-(Ce), Bri-(Y)
#49		Syn-(Ce), Hem
#50	Ap, Cal, Fl, Qtz	Pst-(Ce), Hem
#51	Ap, Cal, Bri-(Y), Hem	Syn-(Ce)
#52	Ap, Cal, Fl	Syn-(Ce), Bri-(Y)
#56	Ap, Fl, Bsn-(Ce)	Syn-(Ce)
#57	Ap, Cal, Hem	Syn-(Ce), Pst-(Ce)

Dwyer mine 2B

#29	Ap, Cal, Fl	Bri-(Y), Py
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Except for #1 and #2, these micro-inclusions are in the range 10–30 μm across; the globule in #1 is 2 mm across. The early minerals are considered to have crystallized from a globule of melt incorporated in the fluorapatite crystal as it grew. The late minerals are considered to be secondary, *i.e.*, crystallized from an aqueous fluid phase. Symbols: Amp: amphibole, Ap: fluorapatite, Bsn-(Ce): bastnäsite-(Ce), Bri-(Y): britholite-(Y), Cal: calcite, Fl: fluorite, Hem: hematite, Pst-(Ce): parisite-(Ce), Py: pyrite, Qtz: quartz, Syn-(Ce): synchysite-(Ce), Tho: thorianite, Thr: thorite, Wo: wollastonite, Xnt-(Y): xenotime-(Y), Ytt-(Y): yttrialite-(Y). “Bri-(Y)”: the P EDS peak is marginally stronger than the Si peak. Ap*: an apatite-supergroup mineral containing Ca, Pb, P and Si.