

JULY 22/76

DDH 73-6--QUINTANA--FISH LAKE

	Rock	Fs ALTN	% Py	Cu SULPH	EPID	CHL	SEC. BIO	FL. SER	COMMENTS
186	vfg to ppytic dk on bleached Hfls	dk grn to tan matrix phenos wh (1-2)	py-chl-black halo pods 0.3	v. minor	-	w. pyr pers ?	possibly pervasive - not sure	-	variably ppytic Hfls
240	yell-bleached ppytic plug (to 6mm) ppy matrix fg halos	Hfls → mafic phenos 40% phenos yell-wh (1-2) matrix gray yellow both rocks	fr, in chl mafes 0.4	-	-	fr + after mafes	a bit of py-chl fr	Fair no. of veins have seen halos	coarser plug ppy
289	coarser plug ppy	matrix predom green with local yell-tan zones	fr, veins diss. 0.3	v. minor 0.05	-	after mafes (chl-ironoxide-pyr)	"	qtz-py veins w. qtz-ser halos ~2' apart	"
341	phenos loc → small-grn ser (2)	phenos wh → yell-wh (1-2) matrix dk grn	dis, fr vein 0.7	v. minor	-	after mafes	minor on chl-py fr	around veins loc gray zones may be perv	NO Q72 EYES SEEN qtz-ser actn
393	back to hfls fg to finely ppytic	dk grn to 415 yell-white then after	fr + vein diss 0.2	NIL?	-	loc after mafic	-	mafic-ser in bleach zones minor halos	Possible Ksp on envelope @ 458
458	tan ppytic (phenos to 3mm) bleached hfls	matrix yell to tan loc gray phenos yell wh (1-2)	diss fr, vein 0.3	minor dis, vein 0.1	-	local fr w bi, chl	local remnants	1/2 chl halos act. of mafic	some suggestion that the rock was brotite ppytic Hfls initially
514	bleach → ppytic br. Hfls	bleached yell zone to dk gray-grn	fr, vein, dis 0.25	diss + minor fr 0.2	-	fr	Pervasive, strong in mafic boxes fr chl, ppy	uncommon	
504	ppytic Hfls	dk gray → grayish to tan at 600	fr vein diss 0.3	minor 0.05	-	fr w. qtz-py	"	"	
612	"	var. dk gray →	diss, fr vein 0.3	minor 0.05	-	fr w bi py	minor fr pervasive loc	-	
146	CORE NOT SPLIT	matrix gray-green to bleached pale tan phenos yell-wh to wh	Locally ppytic pyrite fr + in chl mafes	NIL	-	after mafes	-	mafic → ser. in yellow alt zones	Hb meddle ppy in part elsewhere chl like plug ppy
846 to 762	dyke → ppytic Hfls (EON) 792	dk bleached adj to dyke	dis fr vein 0.3	fr, diss 0.1	-	fr and after mafes	bi-ser. Epy-py fr loc perv	minor on fr loc perv adj to vein	some sphal on qtz vein

Samples 192, 230, 213, 237, 243, 262, 272, 273, 300, 305, 349, 370, 381, 462, 481, 507, 526, 548, 553, 567, 612, 622, 638, 769, 789

666, 683, 699, 717, 726,

DDH 74 - 2 ... QUINTANA ... FISH LAKE

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	ROCK	Fs Altn	% Py	Cu Sulph	Epidote	Chlorite	Second. Biotite	Flakey Sericite	Comments
	9B								
PRE-ORE DYKE	230 Spotted HFIs to 250 then vfg, loc ppytic HFIs then mafic play ppy → 310	matrix bleed to gray	fr 0.1	fr 0.1	-	fr w. py qtz ser	-	a few fr	mafic play ppy - matrix gray → gray green phenos yellowish (1-2)
	330 pppy → spotted HFIs	matrix pinkish to salmon pink	very little present 0.05	NONE SEEN	-	after perv bio?	perv. locally fr	-	330 onward - variably spotted HFIs (vfg before that)
	390 HFIs	mostly dk gray loc bleed tan	fr 0.1	dis, fr 0.2	-	chl. bi?	with chl?	loc perv.	variably vfg to fragmental (lapilli tuft?)
POST ORE DYKE	472 HFIs → Hb needle play ppy → vfg pinkish HFIs (?)	mostly bleached after 500 HFIs (?)	fr, dis 0.05	fr, dis fr 0.1	-	-	-	after mafics?	fr → finely frag (?) HFIs cut by post-ore dyke 505 to ~550 chill margin?
	577 Ppy dyle (?) to 587 then ppytic HFIs?	Bleached to 575 (tan) locally thereafter gray-green dks	fr, veins 0.15	fr 0.15	-	after mafics on fr	-	qtz-ser halos on veins & fr	Finely ppytic sericitized (?) HFIs after 587 (?)
various HFIs types I think	627 vfg to crystalline	gray white pink salmon (Kiper?)	fr, vein 0.2	fr 0.1	-	chl after biotite?	replaced?	on fract.	420 locally spotted HFIs initially I think
	686 E0H								

Samples 240, 280, 307, 329, 350, 355⁴²¹, 447, 450, 472^{473, 504}, 522, 535, 549, 558, 574, 600, 620, 630, 642⁶⁵³, 686

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DDH 74-1: QUINTANA --- FISH LAKE

	Rock	Fs Atn	% Py	Ca Sulph	Epid	Chl	Sec. Bio	Fl. Ser.	Comments
	0/8								
magic-chl	100 vuggy plag (to 8mm, 30%) ppy	phenos yell-wh → wh (1-2)	fr + veins 0.3	dis + loc with PY 0.1	-	magics → chl	-	local packets + adj to veins	vugs loc filled with sulphides Matrix looks green
occasional qtz eyes to 5mm	167 ppy cont's	matrix gray to grn occ. + tan phenos wh → yell wh (1-2)	fr + veins + vugs 0.25	fr + veins + vugs 0.1	-	chl + mag after magics	possibly some in vugs	"	"
"	248 same but no vugs now	same	fr + veins 0.2	fr + veins 0.05		chl fr + after magics in grn zone	occasional bi-chl - py fr	none seen	250-300 about half the ppy is bleached tan mag fr
NO LONGER VUGGY HFIS	327 ppy to magic plag (to 3mm 15%) ppy ~400'	mainly grn matrix - loc tan phenos loc grn, smatic	dis, fr vein 0.25	dis, fr, vein 0.2	-	partly after magics fr	fr w. chl, qtz, py och. hem	partly after magics	mag dissemin. also
goes to qtz ppy at 467	407 dt green to bleached mag plag (to 3mm) ppytic HFIS (plag phenos)	more than half is bleach ed yell-wh Bt-ppy also yell-wh → green	veins, fr 0.2	veins, fr 0.1	-	magic-chl (in matrix) loc fr w. py-bi	loc fr	zones adj to veins after magic	dissemin. magnetite (3%) in HFIS
qtz eyes ~ 5% most 3-5mm	508 green qtz plag ppy to 5/5 then bleached PY	bleached to yell. wh or tan after 5/5	veins, fr 0.3	veins, fr. 0.15	-	loc after magics	-	adj to veins after magics?	ppy cracked + veined loc in bleach zone
	507 qtz-eye ppy has loc grn ser. after, gen- erally yell-wh → see notes	ppy 0.25 HFIS 0.05	ppy 0.1 minor dis + fr cpy in hfis 0.1		-	local after magics	-	very minor or NIL	ppy has fq zone adj. to hfis HFIS var. dk gray, or bleached tan, phenos
	669 variably pytic HFIS	matrix dk gray to gray to green	fr 0.1	dis fr 0.15	-	after magics loc perv	loc perv u 750	-	loc. the rock is quite magnetite u 750

Samples 407, 415, 455, 480, 519, 540, 567, 600, 601, 625, 654, 660,
100, 129, 153, 164, 167, 182, 248 258, 261, 308, 327, 340, 405.

Cu Sulphide est low?

July 19/76

FISH LAKE Q 73-13 (see also Ken's Notebook)

Rock	F ₂ Aitn	Pyrite	Cu Sulphides	Ep	Chl	Second B ₁	Flakey ser	Comments
	%							
87 Chl mafic plag PPy	phenos wh → yellow-wh (1-2) matrix gray → chalky yell-wh (2-3)	fr + vein cont'd 1/4%	fr + vein out'd after 125 .05	-	after mafic in grn zones	local?	-	matrix fg mafic - plag - magnetite one chl/bi next to vein frag
143 phenos 20% aplite → qtz plag PPy vtg matrix	yell-white actn	fr + veins 1/2%	some in qtz-py veins .01	-	local after fragments	?	aplite?	wh, lg to dk grn, fg, chlorite zones bleached & cemented by carbonate
198 as earlier where not bleached, is qtz mafic plag PPY	phenos wh (1-2) to yell-wh (1) matrix wh (grayish) to yell wh	-	very minor L.01	-	- in PPy	-	-	local zone has fg dk gray rock - Quintana's hemfels - it is chlorite
256 PPY	phenos yell- wh → wh 1-2 matrix grn to gray to tan	-	-	-	after mafic in grn zones	hb in part	-	occasional frags (chl)
310 qtz eyes PPY → "aplite" at ~325	PPY green to tan, apsite	mainly veins, loc dis 1/4%	v. minor L.01	-	after mafic in grn zones	-	-	aplite may be an altn or dyke
364 aplite → "hornfels" at 364	white (1-2) to gray	minor fr 1/8%	minor L.02	-	after mafics & fr cont'd	-	-	

397
"hornfels" - de green finely pyritic with zoned plag + mafic (chl) xls 35% matrix feldspathic

87-143 altn mottled - zones ~35° to core

locally the matrix of the PPy looks foliated

after 125 the rock is bleached out, veined & would prob still PPy tho

-198 veins (qtz, py) have grn sericite halos + pink outside that

LOTS OF THIS CORE NOT SPLIT.

Samples 105, 113, 140, 175, 185, 225, 238, 250, 293, 345, 384, 392

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DDH 73 -9 -- QUINTANA --- FISH LAKE

	Rock	Fs Atn	% Py	Cu Sulph	Epid	Chl	Sec Bio	Flakey Ser or Kspen	Comments
	0/B								
	68 vfg, altered rock	pale gray grn	fr, veins, 0.3	dissem, fr, veins 0.1	-	fr w. py	possibly locally	qtz-ser pervasive	only locally do you see plag phenos - they are to 3mm, ser. altn
	110 variably vfg to finely ppytic Hornfels	biotized to yellowish (carbonate?) to gray (silic)	vein + fr 10c dis 0.5	vein + fr 10c dis 0.1	-	loc fr	"	qtz-ser + bleaching adj to qtz-py veins	
	162 vfg Hf15	biotized to green	" 0.3	" 0.1	-	qtz-py chl veins some fr	variably biotized	adjacent to qtz-py veins	Later green altn destroys bi altn
	216 mostly vfg altered rock loc. ppytic	spotted greenish yell to yell, loc perv ser	fr, veins, dis 0.1	uncommon 0.05	-	abot on fr	maybe abot on fr	on slip faces in shear zones in perv ser altn zones	Nature of altered rock unclear
	270 "Hf15" to 310 then hb needle play ppy 324	orange to yell (2) to green	fr veins dis 0.2	uncommon 0.05	-	mpic - chl above chl grn	-	mpic altn not common	"aprite" 281-283 rusty colored chl w. grn or bleached out
post-ore dyke has dis. py + mpic aet. to ser + carb. play + occ. qtz phenos	350 pppy matrix greenish to tan phenos yell w/ (1-2)		" 0.1	uncommon 0.05	-	loc after mpics	-	after mpics w. carbonate	after 350 rock variably gray to greenish, fs xls yell wh or absent (qtz-play ppy dykes?) (on CR)
after 375 rock is v. red, silic, ser. aet. + K feldspathized	379 qtz-play ppy dyke to 395	yell (2)	diss, fr, vein 0.4	uncommon 0.05	-	-	None but Kspen? altn	local around veins	375- vfg tan CR Dyke has qtz-py veins
	431 fg to ppytic pink rock	matrix pale to salmon pink	fr vein dis 0.3	vein w. cpy py Hfs 0.1	-	mpic schl	adj to some veins	local salmon pink Kspen? altn	Called Diorite by Quintana
	487 starts in qtz play ppy goes to ser. rock then Hf15 at 533-541	variable	mainly veins 0.3	uncommon	-	local fr + perv	Local perv in Hf15	local perv ser-qtz altn + on veins	Hf15 vfg to loc. ppytic (or is it x1 buff?)
574-588 then spotted	611 Fragmental volcanic rock play ppy dyke bio Hf15 to 611	variable	esp in diss, fr vein 0.3	Hf15 Mostly fr 0.15	-	fr, loc	loc. perv.	not much	The frag. nature is not easy to see because of extensive altn
	657 683	Post-ore ppy dyke							

800

cont'd

Samp Co 73, 80, 91, 96, 118, 145, 160, 180, 190, 199, 222, 250, 269, 274, 283, 300, 317, 318, 336, 359, 368, 384, 402, 430, 435, 473, 461, 467, 498, 518, 537, 539, 550, 553, 564, 605

10350 E

SECTION A

73-6 74-2

73-13 74-1

73-9