Well locations, geologic logs, and geochemical analyses of the Bee Creek 1976 holes of Chignik C2 Quadrangle (B-1, 265'; B-2, 500'; B-3, 500'; B-4, 300'; and B-5, 300').

Received April 2006 Total of 16 pages in report

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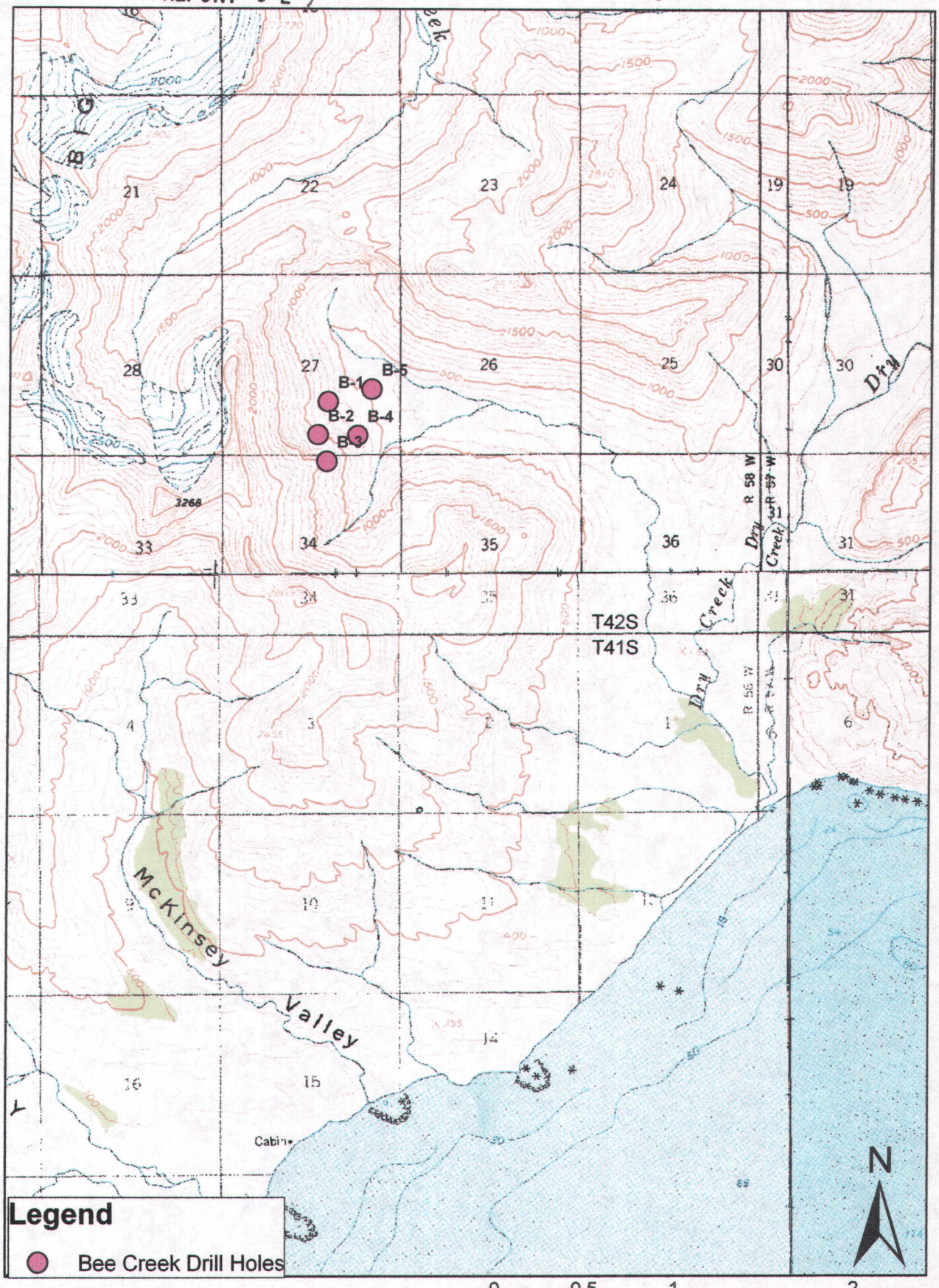

Bee Creek Project Area

Chignik C-2 Quadrangle Map

1:50,000 Scale

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BEAR CREEK MINING CO. SPOKANE OFFICE

Project: Bee Creek - Chignik, Alaska | County: Chignik AMS Quad | State: Alaska | Drill Hole No.: B-1 | Page 1 of 2

Objective: To test near surface mineralization in diorite intrusive of Bee Creek porphyry copper system | Bearing: -- | Dip: 90°

Drilled by: Sprague & Henwood | Started: 7/2/76 | Completed: 7/9/76 | Coords: N -- E -- | Collar Elev.: 600 | Total Depth: 265'

Scale: 1"=20' | Logged by: E. D. Fields

DEPTH & SIZE	Graphic Geology	ALTERATION: clay	chlorite	biot.	K-spar	Musc.	silica	MINERALIZATION: Py	Cpy	Mo	Mg	Barite	EST. TOT. SULF. Vol.%	Int.	GEOLOGY Description	NOTES	CORE REC.	ANALYSES (PPM) Int.	Cu	Mo	Zn	Pb	Ag	Au	Sample No.
		3	-	1	-	-	-	-	-	-	-	-			Diorite - Overburden mix. clay and rounded frag. Ox Cn Casing to 25' No core		-	-							
		3	-	1	-	-	-	-	-	-	-	-			Diorite - Highly weathered No core		-	-							
20																									No sample
		3	-	1	-	-	-	tr	-	-	-	-	1		Diorite - lt brown, eglig, mg. 1-2% sub. qtz phenos 2-3 mm 1-3% brown lim grains after magnetite? wkly frac 2-3/ft lim frac, wk blk mn on frac strongly weathered, minor remnant sulfides		90	22-30	280	6	35	5	<.2	<.01	38301
		3	-	-	-	2	-	1	-	-	-	-	1		Diorite - Lt. gry eglig, mg as above, strong clay alter of feld. and matrix (weathered?) Remnant py diss.										
40													5-7		Fault zone - strg frac. wkley. v. stg diss py 5-7% ca. py cubes + earthy vuggy calcite. strg. ser.		95	30-40	510	<2	40	5	.4	.01	38302
		-	-	3	-	-	-	1	tr	-	5	-	1		Diorite - Dk gry-blk, mg eglig, mg diss. biot, mg, fg, diss. cpy + hairline cpy frac, fg biot mg walls, thin py walls 1-2/ft cut qtz walls w/ biot selvages, NO sulf.	Average 22-58 ft. Cu-446 Mo-3 Au-.01	395	40-50	555	<2	50	5	<.2	.02	38303
		-	-	3	-	-	-	1	tr	-	5	tr	1		Diorite - As above, hairline biot walls w/o sulfides; biot selvedges on frac. w/ qtz. walls 1-2/ft; Hairline frac. w/ cpy-biot-mg. Lt blue ppl borate or covellite on mag grains. V. wk diss. py.		95	50-60	600	12	50	5	<.2	<.01	38304
60																									
		-	-	3	-	-	-	1	tr	-	5	tr	1		Diorite - As above, wk porphyritic w/ 3-7% feld. Phenos to 2-3 mm wk frac. py walls 1-2/ft, v. wk diss py; fg mag grains + clots to 2 mm		95	60-70	1100	4	45	5	.2	.03	38305
		-	-	3	-	-	-	1	tr	-	5	-	1		Diorite - As above; discont. mg walls cut barren qtz vnlts, Thin hairline py-cpy frac; Tr diss cpy		100	70-90	730	8	45	5	<.2	.03	38306
80																									
		-	-	3	-	-	-	1	½	-	3	-	1-2		Diorite - lt gry, mg, 2-3% hornb laths alter to biot felsic matrix, mix contact w/ eglig dior, probably same intrusive. ½% cpy on hairline frac.		100	80-90	400	4	35	5	<.2	<.01	38307
		-	-	3	-	-	-	1	½	-	5	tr	1-2		Diorite - Dk gry-blk, mg eglig, biot-mg-cpy hairline walls 1-2/ft lt blue mg on frac, 2-3 qtz walls w/o sulf w/ biot-mg selvedges: most sulf. on hairline frac, subparallel to c.a.	Average 58-100 ft. Cu-496 Mo-6 Au-.018	100	90-100	650	<2	50	25	<.2	<.01	38308
100																									
		-	-	3	-	1	-	2	½	-	5	-	2		Diorite - As above, increase w hairline py walls 1-2/ft cutting barren qtz walls, biot walls w/o sulf. diss. mg. Most sulf. on hairline frac. Walls of sericite		100	100-110	220	6	45	15	<.2	<.01	38309
		-	-	3	-	1	-	1	tr	-	5	-	1		Diorite - As above; pervasive sericite of gm and hornb cut by biot+mg walls, wk biot-cpy-mg walls 1/ft. subparallel to c.a.		95	110-120	270	4	50	20	<.2	<.01	38310
120																									
		-	-	3	-	1	-	1	-	-	5	-	1		Diorite - As above - Pervasive sericite of gm and fe-Mg cut by biot-mg walls 1-2/ft; qtz vns w/o sulf cut and displaced by mg walls @ 1-2 vns decrease to 1/ft.		100	120-130	1050	<2	50	20	<.2	.04	38311

Project [illegible] Logged by [illegible]

DEPTH & SIZE	Graphic Geology	ALTERATION: Clay	[illegible]	Biot	Kspar	Seric	Silica	MINERALIZATION: Py	Cpy	Mo	Mg	Born	Gyps	EST. TOT. SULF. Vol.%	Int.	GEOLOGY Description
130		-	-	5	-	tr	-	2	tr	-	5	-	-	1-2		Diorite - Dk gry-blk mg equig, biot fg in gm and in thin hairline vnlts w or w/o mg, py or cpy. Thin py vnlts w/sericite selvedge cuts biotite altered rock, minor qtz-cp py vns 1-2" w/sericite envelope at 90° to c.a.
		-	-	3	-	1	-	2	tr	-	5	-	-	1-2		Diorite - As above, thin py vnlts w/sericite selvedges, biot vnlts w and w/o mag 2-3/ft. Rk strng frac w/open vuggy py and lim stains on frac. [illegible] w/weak covellite on py grains
150		-	-	3	-	1	-	2	tr	-	5	-	-	1-2		Diorite - As above, Thin py vnlts in sericite; minor pervasive sericite cut by biot-mg vnlts. Rk mod frac w/biot-py vnlts 2-3/ft. Wk lim stain on frac. Minor 1-2" qtz ± py vnlts w/sericite envelope.
		-	-	3	-	1	-	1	tr	-	5	-	-	1		Diorite - As above - Pervasive lt grn sericite cut by biot vnlts. Rk mod frac 1-2/ft w/biot-mg vnlts, wk py-biot vnlts. Strng qtz vnlts 2-3/ft w/o sulf.
170		-	-	3	-	tr	-	2	tr	-	3	tr	tr	1-2		Diorite - Drk gry-blk mg equig biot fg in gm and in thin hairline vnlts, mg vnlts, stockwork qtz vnlts w/o sulfides w/cg biot or biot-mg selvedges; discont. sericite in gm and as vnlts cutting diorite. Thin wht gypsum vnlts w/py.
		-	-	3	-	tr	-	2	tr	-	5	-	tr	1-2		Diorite - As above, stockwork qtz vnlts w/o sulfides 2-3/ft cut by qtz py vnlts w/sericite selvedges; mg vnlts and clots thin wht gyp. vnlts w/o py at 90° to c.a.
190		-	-	3	-	-	-	2	tr	-	5	-	1	1-2		Diorite - As above, thin gyp vnlts later than all other vnlts; decrease in stockwork qtz vnlts.
		-	-	2	-	-	-	1	tr	-	5	-	1	1		Diorite - As above, looks less altered w/distinct grains decrease in biot. vnlts, diss mg or mg vnlts, decrease in sulfides, mainly restricted to frac. Thin wht gyp vnlts at 90° to c.a. late stage cuts all other sulfide and mg min.
210		-	tr	2	-	tr	-	1	tr	-	5	-	1	1		Diorite - As above, wkly altered w/cg diss. biot, minor vnlt biot fe-mg wk altered to greenish sericite or chlorite. Gypsum vnlts 90° to c.a. Decrease in mg.
		-	tr	3	-	tr	-	1	tr	-	5	-	1	1		Diorite - As above, biot in vnlts w/minor patches of pervasive sericite minor clots of chl in fe-Mg w/occassional epidote. Py-biot vnlts 1/ft.
230		-	tr	3	-	tr	-	1	tr	-	5	-	1	1		Diorite - As above.
		-	tr	3	-	tr	-	1	tr	-	5	-	1	1		Diorite - As above. Hairline py vnlts, very little diss suf. Gyp vnlts to 2/ft at 90° to c.a.
250		-	tr	3	-	tr	-	1	tr	-	5	-	1	1		Diorite - As above. Drk gry-blk mg equig biot on vnlts and diss. w/Mg. Minor py vnlts, gyp vnlts at 90° to c.a.
															257'	Fault - Strong frac clay and rock 80° to c.a.
260																Diorite - As above.
265																Total depth, 265'

NOTES	CORE REC.	Int.	Cu	Mo	Zn	Pb	Ag	Au	Sample No
			ANALYSES (PPM)						
	100	130-140	1400	<2	50	20	1.0	.04	38312
Average 100-150 ft. Cu-828 Mo-13 Au-.022	95	140-150	1200	2	45	15	.4	.01	38313
	95	150-160	1900	20	45	15	.4	.05	38314
	95	160-170	265	<2	30	15	<.2	.02	38315
	100	170-180	225	<2	50	15	<.2	<.01	38316
	100	170-190	140	<2	35	15	<.2	<.01	38317
	100	190-200	160	<2	35	10	<.2	<.01	38318
Average 150-200 ft. Cu-538 Mo-6 Au-.02	100	200-210	295	<2	35	10	<.2	<.01	38319
	100	210-220	850	10	30	15	<.2	<.01	38320
	100	220-230	1300	8	40	5	.4	.02	38321
	100	230-240	295	<2	50	10	<.2	<.01	38322
	100	240-250	560	<2	35	5	.2	<.01	38323
Average 200-250 ft. Cu-660 Mo-5 Au-.012	100	250-260	450	10	45	5	<.2	<.01	38324
	100	260-265	575	<2	40	5	<2	.01	38325

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BEAR CREEK MINING CO. SPOKANE OFFICE

Project: Alaska Search - Chignik, Bee Creek County: Chignik AMS Quad State: Alaska Drill Hole No. B-2 Page 1 of 4

Objective: Test porphyry copper mineralization in grit and sandstone units Bearing -- Dip 90°

Drilled by: Sprague and Henwood Started 7/11/76 Completed 7/20/76 Coords: N -- E --

Scale: 1" = 20' Logged by E. D. Fields Collar Elev. 1000 feet Total Depth 500 feet

DEPTH & SIZE	Alteration: biot.	serc.	clay	chlor.	epid.	silica	Mineralization: Py	Cpy	MoS_2	Mag	Ox Cu	Gyps	EST. TOT. SULF. Vol. %	Int.	Geology	Description	NOTES	CORE REC.	Int.	Cu	Mo	Zn	Pb	Ag	Au	Sample No.
0-25	3	2	2	-	-	-	5	1	-	-	tr to ½	-	5-7		Biotite Hornfels -	Hybrid-mg equig, thin bedded @ 30° to CA @ 24 ft f.g. diss biot in gm, minor 2-3 mm biot vnlts; Thin serc vnlts w/sulf. Strg frac 20-30/ft, wk calcite in matrix, Biot/py vnlts w/cpy, tr-wk Ox Cu (malachite + tenorite) Total Sulf. 5-7% w 4-5/1 py/cpy, 4/1 diss sulf/frac sulf.		95	5-25	2150	30	15	5	.4	.04	3832
35	3	2	1	-	-	-	5	½	-	-	½	-	5-7		Biotite Hornfels -	with 1-2% interlay f.g. hornfels beds - m.g. equig with amorphous clay rich hornfels beds 1-2" thick, 30-40° to CA Stockwork frac w/py vnlts, 8/1 py/cpy, 4.8/1 diss sulf/frac Sulf in biot hornfels, 2/1 in bedded hornfels, biot-serc vnlts w/Ox Cu (malachite ± tenorite)		100	25-35	2800	12	15	5	.6	.01	3832
45	3	2	1	-	-	-	5	1	-	-	½	-	5-7		Biotite Hornfels -	Drk gry, m.g.-c.g. hornfels or grit, banding 30° to CA. Strg diss. biot in gm, minor vnlt biot, cut by thin qtz-serc-py vnlts. 4-5/1 py/cpy, 5/1 diss/vein sulf. Minor qtz-serc-py-py vnlts w MoS Ox Cu on frac. Stockworks frac.		100	35-45	1900	10	10	5	.6	.01	38328
55	2	3	3	-	-	tr	7	½	tr	-	tr	-	7-10		Biotite Hornfels -	to 51 ft. grades into strg clay-serc sandstone, Min. in biot hornfels as above. Increase in qtz-serc-py vnlts near 51 ft, grades into very strg clay-serc with 7-10% f.g. diss py, cut by minor qtz-py ± cpy vnlts. Minor thin qtz-py-MoS vnlts.	Average 0-55 ft. Cu - 2100 Mo - 17 Au - .017	100	45-55	1550	16	5	30	<.2	.01	3832
65	-	3	3	-	-	tr	7	tr	tr	-	-	-	7-10		Sandstone -	Lt gry, f.g. equig. strg clay-serc 10/1 py/cpy 5/1 diss/vnlt sulf. Serc-py vnlts stockworks cut by a few late gry-qtz-MoS_2 vnlts w/MoS_2 as minor flakes thru matrix of vein.		100	55-65	1000	16	10	5	.2	<.01	3833
75	-	3	2	-	-	tr	7	tr	tr	-	-	-	7-10		Sandstone -	As above, minor covellite on few frac. 10/1 py/cpy, 8/1 diss/vn sulf, minor stockworks vuggy qtz vnlts 1-2 mm w/discontinuous MoS_2 grains.		100	65-75	1900	80	10	15	.2	<.01	3833
85	-	3	2	-	-	tr	7	tr	½	-	-	-	7-10		Sandstone -	As above, minor remnant biot or phlog patches, 1-2" cut by qtz-serc-py vnlts and surrounded by serc. Minor 1-2 mm qtz-py-MoS_2. Minor clay gouge and slices at 82'		100	75-85	1300	50	10	5	<.2	.02	3833
95	-	3	2	-	-	tr	5	tr	½	-	-	-	5-7		Sandstone -	As above, qtz-serc-py ± cpy vnlts cut clay-serc altn of gm. Minor late stage vuggy qtz-MoS_2 veins 5-7/1 py/cpy, 3/1 diss/vn sulf		100	85-95	1500	65	5	5	<.2	<.01	38333
105	-	3	2	-	-	tr	5	tr	½	-	-	-	5-7		Sandstone -	As above 5-7/1 py/cpy, 3/1 diss/vnlt sulf. Mod stockworks qtz-MoS_2 vnlts + MoS_2 on frac, strg clay frac, slices 103-104	Average 55-105 ft. Cu - 1440 Mo - 51 Au - .012	100	95-105	1500	46	10	5	.2	.01	3833
115	-	3	2	-	-	tr	7	tr	½	-	-	-	7-10		Sandstone -	As above 7/1 py/cpy, 5/1 diss/vnlt sulf. Stockwork qtz-py-MoS_2 vnlts + minor diss f.g. MoS_2 in gm Strg pervasive serc-clay		100	105-115	2000	120	50	10	1.8	.01	38335
	-	3	3	-	-	1	7	tr	tr	-	-	-	7-10		Breccia -	115-118 qtz-serc-ss frag 5-10 mm in wht qtz matrix. Strg diss f.g. py in frac, minor c.g. py. Rock strg frac w/clay may be diss MoS_2										
125	2	2	-	-	-	-	4	1	-	-	-	-	5		Biotite Hornfels -	DK gry, f.g. equig. Strng diss biot cut by qtz-serc-py vnlts.		100	115-125	2950	85	75	5	1.0	<.01	38336
135	3	2	-	-	-	-	4	1	-	-	tr	tr	5		Biotite Hornfels -	Dk gry-brn f.g. equig, strng diss biot + biot vnlts cut by qtz-serc-py vnlts + cpy. 4/1 py/cpy, 2/1 diss/vnlts sulf Diss + vnlt cpy. Strg stockwork frac w wk lim + wk Ox Cu Tr of gyp vnlts to 1mm cut all other vns.		160	125-135	3900	80	30	5	.8	.11	3833
145	3	2	-	-	-	-	4	1	-	-	-	tr	5		Biotite Hornfels -	As above, strg diss biot 4/1 py/cpy 1-1 diss/vnlt sulf. Cut by strg stockwork gyps vnlts, cuts all other veins.		100	135-145	2350	160	20	5	<.2	.05	3833

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Project [illegible] Logged by [illegible]

DEPTH & SIZE	ALTERATION biot	sericite	clay	chlor	epid	silica			MINERALIZATION Py	Cpy	MoS2	Mag	Ox Cu	Gypsum	Born	EST. TOT. SULF. Vol. %	Int.	GEOLOGY Description
145–155	2	2	-	-	-	tr			4	½	½	-	-	2	-	5		Biotite Hornfels - Diss f.g. biot in gm, Biot layer in bedding? 45° to CA 4-5/1 py/cpy, 5/1 diss sulf/vein, strg frac. ± 20/ft. Sere-py ± cpy vnlts, cut by stockwork gyp vnlts ± f.g. MoS_2
155–165	1	3	-	-	-	tr			5	½	½	-	-	2	-	5-7		Sericite Hornfels - Remnant patch of biot hornfels indicates major rock types, strg diss serc and serc-py vnlts, strg stockwork serc-py ± cpy vnlts, 4/1 py/cpy, 3-4/1 diss/vn sulf. Strg stockwork gyp vnlts ± f.g. MoS_2, qtz-MoS_2 c.g. vn 1" at 152.
165–175	2	3	-	-	-	tr			4	½	tr	-	-	2	-	5		Biotite Hornfels - As above, with increase in diss biot in gm, cut by stockwork serc-py ± cpy vnlts, 4/1 py/cpy, 3-4/1 diss/vn sulf. bedding 45° to CA
175	5	1	-	-	-	-			3	2	tr	-	-	2	-	5		Grit - Dk gry m.g. equig. strg diss f.g. biot, 1/1 py/cpy, 5/1 diss/vn sulf cut by stockwork gyp vnlts.
175–185	2	2	-	-	-	-			4	2	½	-	-	-	-	5-6		Grit - Dk. gry m.g. w/wht subh feld, minor f.g. biot hornfels. Lt brn biot or phlog in matrix, cut by serc vnlts w/qtz envlopes ± py, ± cpy. Strg stockwork vns ± 20/ft. Strg gyp vnlts ± MoS_2. 2/1 py/cpy 2-3/1 diss/vn sulf.
185–195	2	2	-	-	-	-			4	2	½	-	-	2	-	5-6		Biotite Hornfels - m.g. equig. w/feld grains f.g. biot and occ. rounded qtz grain. Grit grades into hornfels, 2/1 py/cpy, 2/1 diss/vn sulf. qtz-serc-py ± cpy grains cut by gyp vnlts of qtz-MoS_2 vnlts. Strat stockworks on frac 20/ft.
195–205	2	2	-	-	-	tr			5	1	tr	-	-	1	tr	4-5		Biotite Hornfels - As above, strg frac w/wk lim stain on frac. Qtz-serc-py vnlts w/tr of born on frac. Strg stockwork vn frac. bedding 45° to CA 3/1 py/cpy, 3-4/1 vn/diss sulf. Strg frac 200-205 w/lim and sulf on frac.
205–215	1	2	-	-	-	tr			4	1	-	-	-	2	-	3-4		Siliceous Hornfels - Lt gry f.g. dense w/layer of biot hornfels. Strg frac zone as above w/lim vns and sulfs. Minor biotite cut by thin serc-py vnlts ± cpy. 4/1 py/cpy, 4-5/1 vn/diss sulf.
215–225	1	2	1	-	-	tr			4	tr	-	-	-	1	-	3-4		Siliceous Hornfels - As above to 220 ft. strg frac w/FeOx on frac, 5-10% oxidation. Grit - Lt gry f.g. interlay w/silic hornfels. 4/1 py/cpy 4-5/1 diss/vn sulf. Mod FeOx on frac.
225–235	1	2	1	-	-	-			4	tr	-	tr	-	2	-	3-4		Grit - As above, strg frac w/FeOx on frac, 5-10% oxidation on frac. 4-5/1 py/cpy, 3/1 diss/vn sulf, magnetite vns on frac w/py
235–245	1	2	1	-	-	-			4	1	tr	tr	-	1	tr	3-4		Grit - Hybrid - As above to 239 ft, c.g. w/tr diss born or cov. Lt gry m.g. equig w/subh feld to 1-2 mm in lt gry gm, diss biot cut by serc-py ± cpy vnlts as above, 3/1 diss/vn sulf.
245–255	1	2	-	1	-	-			3	½	tr	-	-	-	tr	3-4		Hybrid - As above, w/diss biot partially replaced by chlor, strg frac w/biot-serc/py ± cpy ± born, 4/1 py/cpy, 3/1 diss/vn sulf, minor diss MoS_2
255–265	2	1	-	½	-	-			3	2	tr	-	-	-	1	3-4		Hybrid - As above, strg diss biot + vnlt biot, w/minor serc. 1/1 py/cpy + born, 1 diss f.g. born or cov. 1-2% occ diss mag, 5-10/1 diss/vn sulf. Minor actinolite in matrix.
265–275	2	1	-	½	-	-			3	2	tr	-	-	-	1	3-4		Hybrid - As above, strg diss biot + vnlt biot, 1/1 py/cpy + born. 1-2% diss f.g. born or cov, 5-10/1 diss/vnlt sulf.
275–285	2	1	-	-	-	tr			3	1	-	tr	-	-	½	3-4		Hybrid - As above, to 280', strg diss biot + vnlt. Very wk serc-py vnlts, f.g. diss born, 2-3/1 py/cpy + born, 5-10/1 diss/vnlt sulf. Siliceous Hornfels - Drk gry-blk f.g. 2-3 sulf w/4/1 py/cpy. W.K. qtz vnlts w/o sulf.
285–295	2	1	-	-	-	-			2	1	-	-	-	-	½	2-3		Siliceous Biotite Hornfels - As above, f.g. diss biot cut by qtz-serc-py vnlts; strg frac. 2/1 py/cpy, 2-3/1 diss/vn sulf.

NOTES	CORE REC.	Int.	Cu	Mo	Zn	Pb	Ag	Au	Sample No.
Average 145-155 ft. Cu - 2740 Mo - 127 Au - .052	100	145-155	2500	190	15	5	<.2	.04	38339
	95	155-165	2500	350	15	5	.2	.03	38340
	100	165-175	4100	70	15	5	.4	.07	38341
	100	175-185	1300	300	15	15	<.2	.03	38342
Average 155-205 ft. Cu - 2850 Mo - 188 Au - .054	100	185-195	3000	100	15	5	.2	.06	38343
	100	195-205	2750	120	10	30	.4	.08	38344
	100	205-215	2000	90	10	10	.2	.05	38345
	100	215-225	1250	160	15	10	2.0	.03	38346
	100	225-235	1550	120	20	5	.6	.12	38347
Average 205-255 Cu - 2670 Mo - 132 Au - .058	100	235-245	2850	140	15	5	.2	.05	38348
	100	245-255	2700	150	10	5	.2	.04	38349
	100	255-265	4750	110	15	5	.8	.11	38350
	100	265-275	2300	60	20	5	<.2	.02	38351
	100	275-282	3450	18	30	5	.4	.05	38352
	100	282-290	3900	20	35	10	.4	.10	38353

ANALYSES (PPm)

Project Alaska Search - Chignik, Bee Creek Logged by [illegible]

Depth & Size	Graphic Geology	Alt. Biot	Alt. Sericite	Alt. Clay	Alt. Chlor	Alt. Epid	Alt. Silica	Min. Py	Min. Cpy	Min. MoS2	Min. Mag	Min. Ox Cu	Min. Gyps	Min. Born	Est. Tot. Sulf. Vol.%	Int.	Geology Description	Notes	Core Rec.	Int.	Cu	Mo	Zn	Pb	Ag	Au	Sample No.
295–305		2	1	-	-	-	-	2	1	-	-	-	-	tr	2-3		Siliceous Hornfels - As above 2/1 py/cpy, 2-3/1 diss/vn sulf	Average 255-300 Cu - 3430 Mo - 61 Au - .076	100	290-300	2750	100	20	10	.2	.10	38354
315		3	1	-	-	-	-	3	1	-	-	-	-	tr	3-4		Biotite Hornfels - Lt gry-blk, f.g. equig, diss/vn biot, cut by qtz-serc-py vnlts ± cpy 3/1 py/cpy, 2-3/1 diss/vn sulf.		100	300-310	2700	48	20	15	.2	.10	38355
325		3	1	-	-	-	-	3	1	tr	-	-	tr	-	3-4		Biotite Hornfels - as above, cut by qtz-biot vnlts w/o sulf. Bedding 40° to C.A. 3/1 py/cpy, 2-3/1 diss/vn sulf.		100	310-320	1950	50	20	10	<2	.08	38356
335		3	1	-	-	-	-	3	1	tr	-	-	1	-	3-4		Biotite Hornfels - As above, 3/1 py/cpy, 2/1 diss/vn sulf. Cut by late gypsum vnlts ± MoS_2		100	320-330	2500	240	15	15	.2	.10	38357
345		3	2	-	-	-	-	3	1	tr	-	-	1	-	3-4		Biotite Hornfels - As above 3/1 py/cpy 2/1 diss/vn sulf. Qtz serc. vnlts in stockworks.		100	330-340	2250	55	15	15	.2	.08	38358
355		3	2	-	-	-	-	3	1	-	-	-	2	-	3-4		Siliceous Biotite - Hornfels, as above w/aphan gm 3/1 py/cpy, 2/1 diss/vn sulf Strg gouge and broken rock at 342'	Average 300-350 ft. Cu - 2140 Mo - 86 Au - .088	100	340-350	1300	40	10	10	<.2	.10	38359
365		3	2	-	-	-	-	3	1	-	tr	-	2	-	3-4		Siliceous Biotite - Hornfels, as above 3/1 py/cpy 2/1 diss vn sulf minor qtz-mag vnlts		100	350-360	2250	65	20	10	.2	.05	38360
375		3	1	-	-	-	-	3	½	-	-	-	2	-	3		Biotite Hornfels - dnk gry, f.g. equig diss biot and vnlt biot. Bedding 45° to CA 3-4/1 py/cpy, 3-4/1 diss/vn sulf, stockwork gyp vnlts.		100	360-370	2150	65	20	5	.2	.06	38361
385		3	1	-	-	-	-	3	2	tr	-	-	2	-	3-4		Biotite Hornfels - as above interlay w/ Lt gry-brn silic hornfels beds at 40-50° to C.A. Cut by stockwork qtz-serc. vnlts and late gyp vnlts. 3/2 py/cpy, 2-3/1 diss/vn sulf		100	370-380	2500	180	25	10	<.2	.08	38362
395		3	1	-	-	-	-	3	1	tr	tr	-	2	-	3-4		Biotite Hornfels - As above, c.g. grit vnlt w/minor rounded pebbles at 392, cut by minor stockwork serc. vnlts 3/1 py/cpy, 3-4/1 diss/vn sulf.		100	380-390	4350	300	25	10	.3	.10	38363
405		3	1	-	-	-	-	3	1	-	1	-	2	-	3-4		Biotite Hornfels - As above, grades into siliceous hornfels at 398' Bedding 45° to C.A. diss/vnlt biot, minor diss mag 3/1 py/cpy, 2-3/1 diss/vn sulf, stockwork serc py/cpy vnlts	Average 350-400 ft. Cu - 2660 Mo - 152 Au - .070	100	390-400	2050	150	40	10	.4	.06	38364
415		3	1	-	-	-	-	3	1	-	1	-	2	-	3-4		Biotite Hornfels or Hybrid - As above, grades in grit w/ 1-2% pebbles at 414'. Diss/vnlt biot, minor mag vns 3/1 py/cpy, 3-4/1 diss/vn sulf.		100	400-410	2300	140	25	10	.2	.08	38365
425		3	1	-	-	-	-	3	½	-	1	-	2	-	3-4		Grit - Lt gry, as above w/minor rounded pebbles, strg diss and vnlt biot cut by serc-py ± cpy vnlts 3-4/1 py/cpy 3-4/1 diss/vn sulf, minor mag vnlts. Minor x-bddg 36-40° to C.A.		100	410-420	1600	140	40	10	<.2	.06	38366
435		3	1	-	-	-	-	3	½	-	1	-	2	-	3-4		Biotite Hornfels + Grit - As above + minor grit layers, grades back into grit at 432' w/ c.g. pebbles to ½" strg diss + vn biot, cut by stockwork serc-py + cpy vnlts. 3-4/1 py/cpy, 3-4/1 diss/vn sulf		100	420-430	2100	44	20	10	<.2	.05	38367
445		3	1	-	-	-	-	3	1	-	1	-	2	-	3-4		Grit - c.g. grit as above, grades into biot hornfels. No increase in diss sulf in gm, minor biot vnlts. 3/1 py/cpy, 3-4/1 diss/vn sulf		100	430-440	3500	140	25	10	.4	.09	38368

Project [illegible] Logged by [illegible] Drill Hole No. [illegible] Page [illegible] of [illegible]

DEPTH & SIZE	Graphic Geology	ALTERATION Biot	Seric	clay	chlor	epid	silica			MINERALIZATION Py	Cpy	MoS2	Mag	OxCu	Gyps	Born	EST. TOT. SULF. Vol.%	Int.
445																		
455		3	1	-	-	-	-			3	2	1	1	-	2	-	4-5	
465		3	1	-	-	-	-			3	2	-	-	-	2	-	3-4	
475		3	1	-	-	-	-			3	2	-	tr	-	2	-	4-5	
485		3	1	-	-	-	-			4	1	tr	1	-	2	-	3-4	
495		3	1	-	-	-	-			4	1	tr	1	-	2	-	3-4	
500		3	1	-	-	-	-			3	½	-	1	-	2	-	2-3	

GEOLOGY

Description

Biotite Hornfels - Hybrid - Drk gry f.g. mag equig, strg diss/vn biot strg stockwork serc-py vnlts, strg diss py in gm 1-2/1 py/cpy, 5/1 diss/vn sulf cut by coarse gyps-MoS_2-cpy vnlts.

Biotite Hornfels - to 460' as above, Ctc w/dior por is about 30° to C.A.

Diorite Porphyry - Lt gry m.g. 1-2% feld phenos to 2 mm in f.g. gm. strg align of biot or hornblend grains near ctc. Min. similar to wallrock w/minor c.g. cpy clots, strg diss-vn biot cut by gyps vnlts.

Diorite Porphyry - As above to 470' align biot gran 30-40° to C.A. on ctc. 2-3/1 py/cpy, 3-4/1 diss/vn sulf.

Biotite Hornfels - As above, Lt gry f.g. 2-3/1 py/cpy, 3-4/1 diss/vn sulf

Biotite Hornfels - As above, cut by stockworks serc-py vns, strg stockworks gyps vns. 4-5/1 py/cpy 4-5/1 diss/vn sulf

Biotite Hornfels - As above, diss + vn biot, strg stockworks serc-py ± cpy minor vn mag. stockworks gyps vns 3/1 py/cpy 4-5/1 diss/vn sulf

Silicious Hornfels - 490-492' weak mineralization

Biotite Hornfels - As above, m.g. strg stockworks serc-py ± cpy vnlts diss py in gm. Cut by gypsum vnlts. Diss + vn biot, minor mag vns 4-5/1 py/cpy 4-5/1 diss/vn sulf.

Total Depth 500 ft.

NOTES	CORE REC.	Int.	Cu	Mo	Zn	Pb	Ag	Au	Samp No
Average 400-450 ft. Cu-2540 Mo-116 Au-.074	100	440-450	3200	120	15	10	.4	.09	3836
	100	450-460	3000	130	15	10	.2	.10	3837
	100	460-470	2500	260	30	15	.2	.09	3837
	100	470-480	4350	120	20	10	.4	.18	3837
Average 450-500 ft. Cu-3260 Mo-204 Au-.134	100	480-490	3050	290	20	10	.4	.11	3837
	100	490-500	3400	220	30	10	.4	.14	3837

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BEAR CREEK MINING CO. SPOKANE OFFICE

Project: Alaska Search - Chignik, Bee Creek | County: Chignik AMS Quad | State: Alaska | Drill Hole No.: B-3 | Page: 1 of 4

Objective: Test porphyry copper mineralization within hornfels and grit units | Bearing: -- | Dip: 90°

Drilled by: Sprague & Henwood | Started: 7/23/76 | Completed: 8/4/76 | Coords: N -- E --

Scale: 1" = 20' | Logged by: E. D. Fields | Collar Elev.: 1260 | Total Depth: 500 feet

DEPTH & SIZE	Graphic Geology	ALTERATION: biot	bleach	clay	chlor	epid	silica	K-feld	MINERALIZATION: py	cpy	MoS2	mag	Ox Cu	EST. TOT. SULF. Vol.%	Int.	GEOLOGY Description	NOTES	CORE REC.	ANALYSES: Int.	Cu	Mo	Zn	Pb	Ag	Au	Sample No.
0														-	-	No core - Overburden - talus										No sample
10	o:o:o	5	tr	-	-	-	-		2	½	-	tr	tr	2-3		Grit + Hybrid - Drk gry-blk m-g, w/subhedral feld grains 1-2 mm w/round pebbles of qtz-feld. Bddg 30° to C.A. f-g. biot + vnlts biot in gm, cut by minor qtz-sericite-py vnlts. 2-3/1 py/cpy, 5-7/1 diss/vn sulf. f-g. cut by stockwork qtz-mag vnlts 1-2 mm. Wk Oxfe on frac										
20	o:o:o	3	tr	-	-	-	-		2	½	-	tr	tr	2-3												
	o:o:o	-	3	-	-	-	-	5	1	2	-	-	tr	2-5		Grit + Hybrid - As above, minor cong lenses										
30																Sandstone - Lt brn f-g equig minor x-bedding. Strg diss sericite f-g. in gm w/pervasive anxfeld, minor pink feld vnlts. 1/1 py/cpy f-g. diss, 5-7/1 diss/vn sulf. Color may be due to Oxfe		90	20-30	650	32	30	5	<.02	.04	383
		-	3	-	-	-	-	3	1	2	-	tr	tr	2-3		Sandstone - As above w/minor patches of drk gry ss w/diss mg. Cut by minor qtz-mg vnlts w/o sulf. Strg frac and bdd at 31°										
40																		95	30-40	700	20	35	5	<.02	.03	383
		-	3	-	-	-	-	-	2	1	-	tr	tr	2-3		Sandstone - As above, w/minor qtz-mg vnlts, w/o sulf.	Average 0-50 ft. Cu-912 Mo-31 Au-.045									
	o o o	2	2	-	-	-	-	-	2	1	-	½	tr	3-4		Conglomerate - Lt gry, c-g. qtz-feld pebbles round 5-10 mm diss biot + biot vnlts in matrix, diss sericite in matrix cut by qtz-mg vnlts w/o sulf, f-g. diss mg in matrix. 1-2/1 py/cpy, 5-10/1 diss/vn sulf.		80	40-50	1500	38	30	5	<.02	.07	383
50	o o o																									
	o o o	2	2	tr	-	-	-	-	1	2	-	½	tr	2-3		Conglomerate - As above, c-g. pebbles, strg diss mag in matrix, cut by sericite-py vnlts, minor qtz-mg vns w/o sulf, 1/1 py/cpy, 10/1 diss/vn sulf cut by mg qtz-biot ± py vnlts.		70	50-60	1500	46	25	5	<.02	.06	383
60	o o o																									
		2	2	-	-	-	-	-	1	2	-	½	tr	2-3		Diorite Hornfels - Drk gry, f-g. equig diss biot + biot vnlts. Minor cong. lenses; cut by qtz-mg vns w/o sulf. Wk diss mg. 1 m gm, diss sericite, qtz sericite vnlts. 1/1 py/cpy, 10/1 diss/vn sulf. f-g. diss cpy.		70	60-70	2200	50	30	5	.2	.09	383
70																										
	+ + +	2	1	1	tr	-	-	-	1	1	-	tr	tr	1-2		Diorite - Lt gry, mg equig w/5-7% hornblende lathes 1-2 mm, replaced by biot, f-g. feld-bm amphibole gm, Ctc zone is strng oxid + frac w/inclusions of ss + grits; align of hornblende 70-90° to C.A. Cut by minor mg vnlts w/subord. qtz. 1/1 py/cpy 10/1 diss/vn sulf.		50	70-80	2650	70	50	5	.2	.07	383
80	+ + +																									
	+ + +	2	1	1	tr	-	-	-	1	1	-	tr	tr	1-2		Diorite - As above patch of clay alt'n of feld + gm w/diss py, cpy. Discontinuous oxide of 30% of rock, diss mg in gm, cut by minor qtz-sericite vnlts. Fe-mg replaced by biot, f-g. diss sulf in gm & fe-mg. 1/1 py/cpy 10/1 diss/vn sulf.		70	80-90	1450	<2	35	5	<.2	.04	383
90	+ + +																									
	+ + +	2	1	1	1	-	-	-	2	½	-	tr	tr	1-1½		Diorite - As above, diss biot in hornblende, wk. diss mg in matrix, minor mg vnlts w/o qtz. Clots of mg align at hornblende phenos 70-90° to C.A. 2/1 py/cpy, 10/1 diss/vn sulf. Wk 30% ox on frac, minor 1" qtz-cg py vns at 30° to C.A.	Average 50-100 ft. Cu-1730 Mo-34 Au-.062	100	90-100	750	<2	25	5	.4	.05	383
100	+ + +																									
	+ + +	1	2	1	1	-	-	-	2	½	-	tr	tr	1-1½		Diorite - As above, mod-strg oxid 80-90% w/diss lim, minor qtz-lim vns diss mg, wk mg vnlts w/o sulf, strg frac w/clay + slicks at 15°. 2/1 py/cpy 10/1 diss/vn limon		95	100-110	625	6	25	5	<.2	.02	383
110	+ + +																									
	+ + +	1	1	2	1	-	-	-	2	tr	-	tr	tr	1-1½		Diorite - As above, strg oxid 80-90% w/patch of f-g. diss py in biot alt'd matrix w/clay. Stockwork qtz-lim vnlts strg frac. Minor round inclusions of biot hornf w/wk Ox Cu		100	110-120	325	4	20	5	<.2	<.01	383
120	+ + +																									
	+ + +	2	1	1	1	-	-	-	2	tr	tr	tr	tr	1-1½		Diorite - As above, diss biot, biot replaces fe-mg, w/s incipient chloritiz of biot, f-g. diss mg, cut by minor ¼" qtz vns w/c-g. py and minor cpy.										
130																Fault - Strg frac w/clay, gouge, c-g py, minor MoS2 at 90° to C.A		100	120-130	370	10	20	15	<.2	<.01	383

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Project Alaska Search - Chignik, Bee Creek Logged by E. D. Fields Drill Hole No. B-3 Page 2 of 4

DEPTH & SIZE	Graphic Geology	Alteration: biot	serc	clay	chlor	Epid	silica	K-spar	Mineralization: Py	Cpy	Moly	Mag	[illegible]	EST. TOT. SULF. Vol.%	Int.	Geology Description	NOTES	CORE REC.	Int.	Cu	Mo	Zn	Pb	Ag	Au	Sam No
130–140	+ +	2	1	-	1	-	-	-	2	½	-	½	Tr	1-1½		DIORITE – as above, drk gry, mg equigran, w/o hornblende grains biot in groundmass, altered to chlor. or serc. minor c.g. biot units, diss mag., cut by minor qtz-py-cpy units 3-4/1 (py/cpy). 10/1 (diss/vn sulf).	Average 100-150 ft. Cu-536 Mo-5 Au-.014	100	130-140	1150	2	25	5	<.2	.02	3838
140–150	+ +	1	1	-	1	-	-	-	1	Tr	-	½	-	1		DIORITE – as above, minor biot units, diss biot and mag. in matrix. 3-4/1 (py/cpy). 10/1 (diss/vn sulf).		100	140-150	210	<2	20	5	<.2	<.01	8
150–160	+ +	2	½	-	-	-	-	-	1	Tr	-	1	-	1		DIORITE – as above, wkly frac., diss clots of biot and minor vn biot w/o sulfide. Metal ratios as above.		100	150-160	280	<2	20	5	<.2	<.01	8
160–170	+ +	2	½	-	-	-	-	-	1	Tr	-	2	-	1		DIORITE – as above, mod frac., biot units w c.g. biot and no sulfides, minor mag. 3-4/1 (py/cpy). 10/1 (diss/vn sulf)		100	160-170	160	<2	25	5	<.2	.02	9
170–180	+ +	2	½	Tr	-	-	-	-	½	-	-	2	-	1		DIORITE – as above.		100	170-180	105	<2	20	5	<.2	<.01	9
180–190	+ +	2	1	-	-	-	-	-	½	-	-	2	-	1-2		DIORITE – as above, wkly frac., clots and units of biot, diss mag., minor qtz-biot-py units to ¼ inch at 90° to C.A. 3-4/1 (py/cpy) 10-1 (diss/vn sulf).	Average 150-200 ft. Cu-217 Mo-2 Au-.012	100	180-190	180	<2	20	5	<.2	<.01	9
190–200	+ +	2	1	-	-	-	-	-	1	Tr	-	2	Tr	1-2		DIORITE – as above, clots and veins biot, diss serc partial replace biot in gm., wk oxidized w/ weak limonite/qtz-sulf. frac. w/ minor py and cpy remaining. wk ox cu. 4-5/1 (py/cpy) 10-1 (diss/vn sulf)		100	190-200	560	<2	25	5	<.2	<.01	9
200–210	+ +	2	1	-	-	-	-	-	1	Tr	-	2	-	1-2		DIORITE – as above, wk oxidized 208-210 ft.		100	200-210	375	<2	25	5	<.2	<.01	9
210–220	+ +	2	1	-	-	-	-	-	1	Tr	-	2	-	1-2		DIORITE – as above		100	210-220	130	2	25	5	<.2	<.01	9
220–230	+ +	1	2	-	-	-	-	Tr	1	Tr	-	2	-	1-2		DIORITE – as above, serc replace biot in gm., cut by minor qtz-py vns up to ½ inch wide.		100	220-230	65	<2	25	5	<.2	<.01	9
230–240	+ +	2	1	-	-	-	-	Tr	1	Tr	-	2	-	1-2		DIORITE – as above, clots of fg biot cut by biot units, serc. replac biot in gm., minor qtz-py±cpy vns up to ¼ inch at 90° to C.A.	Average 200-250 ft. Cu-173 Mo-2 Au-.01	100	230-240	180	2	25	5	<.2	<.01	9
240–250	+ +	2	1	-	-	-	-	Tr	1	Tr	-	2	-	1-2		DIORITE – as above 5/1 (py/cpy), 10/1 (diss/vn sulf).		100	240-250	115	2	25	5	<.2	<.01	98
250–260	+ +	2	1	-	½	-	-	Tr	1	Tr	-	2	Tr	1-2		DIORITE – as above, wk chlor gm., cut by minor qtz-py units, wk oxid w/ minor [illegible]		100	250-260	265	14	25	5	<.2	<.01	9
260–270	+ +	2	1	-	½	-	-	-	1	Tr	-	3	Tr	1-2		DIORITE – as above, thin chlorite frac. 5° to C.A., wkly oxid.		100	260-270	325	4	30	10	<.2	<.01	40
270–280	+ +	2	1	-	-	-	-	-	1	Tr	-	2	Tr	1-2		DIORITE – as above, weak frac., minor qtz-py vns 0-5° to C.A., lt blue, botryoidal mineral on brown resinous veinlet at 275 ft. May be Zn mineral		100	270-280	75	<2	20	6	<.2	<.01	3840

Project ______ Logged by ______ Drill Hole No. ______ Page ___ of ___

Depth & Size	Alt. Biot	Alt. Sric	Alt. Clay	Alt. Chlor	Alt. Epid	Alt. Silica	Alt. K-spar	Min. Py	Min. Cpy	Min. Mol	Min. Mag	Min. Dis Cu	Est. Tot. Sulf. Vol.%	Geology Int.	Geology Description	Notes	Core Rec.	Int.	Cu	Mo	Zn	Pb	Ag	Au	Sample No.
280–290	2	1	1	-	-	-	-	2	Tr	-	1	Tr	1-2		DIORITE – as above, wk frac w/ minor biot units, clay altn of feldspars increases from wk to strg 285-290 ft. 10/1 (py/cpy), 10/1 (diss/vn sulf), v wk hairline py-cpy chlts.	Average 280-300 ft. Cu - 202 Mo - 6 Au - .01	100	280-290	255	<2	20	5	<.2	<.01	3840
290–300	-	-	3	-	-	-	-	2	Tr	-	-	Tr	2-3		FAULT ZONE - DIORITE – strg frac w frac of dior. in gouge, qtz vugs w. aq. py cubes cut by late blue-gry qtz vns w/ minor f.g. py.		100	290-300	90	6	15	5	<.2	<.01	0
300–310	-	-	3	-	-	-	-	2	Tr	-	-	Tr	2-3		FAULT ZONE – as above, strg gg 80° to C.A. mod oxid., wk limon, neotocite, strg clay altn of feldspars and gm.		100	300-310	775	2	45	5	<.2	<.01	0
310–320	-	-	3	-	-	-	-	2	Tr	-	-	Tr	2-3		FAULT ZONE – as above, strg clay, f.g. mass. gyps. at 320 ft.		100	310-320	170	<2	10	5	<.2	<.01	0
320–330	-	-	3	1	-	-	-	2	Tr	-	1	Tr	2-3		FAULT ZONE – strg clay and gg. to 326 ft., wkly oxid.		100	320-330	225	<2	15	5	<.2	<.01	0
330–340	3	1	-	1	-	-	-	2	Tr	-	2	Tr	1-2		DIORITE – f.g., equigran, biot clots and units, v. wk frac., wk chlor. of biot. diss mag. 10/1 (py/cpy) 5/1 (diss/vn sulf). Align of hornblende grains 0-5° to C.A.	Average 300-350 ft. Cu - 316 Mo - 2 Au - .01	100	330-340	190	<2	15	5	<.2	<.01	0
340–350	3	1	-	1	-	-	-	2	Tr	-	2	-	1-2		DIORITE – as above, wk frac, wk chlor biot, biot replac. hornblende.		100	340-350	220	<2	15	5	<.2	<.01	08
350–360	3	1	-	1	-	-	.	1	Tr	-	2	-	1		DIORITE – v wk frac, as above, wk chlor of biot., biot vns w/o sulf, minor qtz/cpy units, 10/1 (py/cpy) 5/1 (diss/vn sulf).		100	350-360	415	<2	15	5	<.2	<.01	09
360–370	3	1	-	1	-	-	-	1	Tr	-	2	-	1		DIORITE – as above, diss and vn sulf but w/o sulf cut by minor clear qtz units w/o sulf, 10/1 (py/cpy), 5/1 (diss/vn sulf)		100	360-370	210	<2	15	5	<.2	<.01	10
370–380	3		-	1	-	-	-	1	Tr	-	2	-	1		DIORITE – as above		90	370-380	155	<2	15	5	<.2	<.01	11
380–390	3	1	1	1	Tr	-	-	1	Tr	-	2	-	1		DIORITE – as above, mod frac w/ clay and gg. at 389 ft., Tr epid. in feld.	Average 350-400 ft. Cu - 286 Mo - 2 Au - .01	98	380-390	115	<2	20	5	<.2	<.01	12
390–400	3	1	1	1	-	-		1	Tr	-	2	-	1		DIORITE – as above, wk. frac.		100	390-400	315	<2	25	5	<.2	<.01	13
400–410	3	1	1	1	-	-		T	Tr	-	2	-	1		DIORITE – as above, wk. frac.		100	400-410	270	<2	25	5	<.2	<.01	14
410–420	2	1	2	1	-	-		1	-	-	2	-	1		Diorite – as above, wk frac., strg clay and gg. 410-420.		100	410-420	215	<2	15	5	<.2	<.01	15
420–430	1	2	2	-	-	.		1	-	-	2	-	1		Diorite – as above, strg. frac. w clay and gg.		100	420-430	175	<2	15	5	<.2	<.01	3841

Project: Alaska Search - Chignik, Bee Creek — Logged by: E. D. Fields — Drill Hole No.: B-3 —

GEOLOGY

Depth & Size	Description
430	DIORITE – strg frac., strg clay and qq as above.
440	Diorite – as above, strg clay zones w qq, cut by barren w qtz vnlts w/o sulf, 10/1 (py/cpy), 5-1 (diss/vn sulf).
450	Diorite – as above, strg clay w/qq.
460	Diorite – as above, strg clay w. qq., cut by blu-gry qtz vnlts w/ o.g. py cubes.
470	Diorite – as above
480	Diorite – as above, w wkly frac. 10/1 (py/cpy) 10/1 (diss/vn sulf).
490	Diorite – as above, w wkly frac., but vnlts and clots w/ sulf.
500	TOTAL DEPTH 500 ft.

ALTERATION / MINERALIZATION

Depth	Biot.	Seric.	Clay	Chlor.	Epid.	Silic.	K-spar	Py	Cpy	Moly	Mag.	Cu Ox.	Est. Tot. Sulf. Vol. %
430–440	-	2	2	-	-	-	-	1	-	-	-	-	1
440–450	1	2	2	-	-	-	-	1	-	-	-	-	1
450–460	-	2	2	-	-	-	-	1	Tr	-	-	-	1
460–470	-	2	2	-	-	-	-	1	Tr	-	-	-	1
470–480	-	2	2	-	Tr	-	-	1	Tr	-	-	-	1
480–490	1	2	2	-	Tr	-	-	1	Tr	-	-	-	1
490–500	1	2	2	-	Tr	-	-	1	Tr	-	-	-	1

ANALYSES (ppm)

Notes	Core Rec.	Int.	Cu	Mo	Zn	Pb	Ag	Au.	Sample No.
Average 400-450 Cu - 305 Mo - 2 Au - .01	100	430-440	550	<2	35	5	1.0	<.01	38417
	80	440-450	315	<2	40	5	0.2	<.01	18
	90	450-460	800	<2	50	5	0.8	<.01	19
	100	460-470	650	<2	45	5	0.6	<.01	20
	100	470-480	215	4	15	5	<.2	<.01	21
Average 450-500 ft. Cu - 414 Mo - 2 Au - .01	100	480-490	195	<2	15	5	<.2	<.01	22
	100	490-500	210	<2	20	5	<.2	<.01	38423

BEAR CREEK MINING CO. SPOKANE OFFICE

Project: Alaska Search - Chignik, Bee Creek | County: Chignik AMS Quad | State: Alaska | Drill Hole No. B-4 |

Objective: Test porphyry copper mineralization near valley floor | Bearing: -- | Dip: 90°

Drilled by: Sprague and Henwood | Started: 8/5/76 | Completed: 8/8/76 | Coords: N -- E --

Scale: 1" = 20' | Logged by: E. D. Fields | Collar Elev. 700 | Total Depth: 300 feet

GMC DATA REPORT 329

Alteration / Mineralization log

Depth & Size	biot	seric	clay	epid	chlor	silica	Py	Cpy	Moly	Mag	Ox Cu	Gyps	Est. Tot. Sulf. Vol.%
0–10													—
10–20													—
20–30	2	1	1	-	-	-	5	Tr	-	-	-	-	4-6
30–40	2	1	1	-	-	-	5	Tr	-	-	-	-	4-6
40–50	2	1	-	-	-	-	5	Tr	-	-	-	-	4-6
50–60	2	1	-	-	-	-	6	Tr	-	-	-	-	5-7
60–70	2	1	-	-	-	-	6	Tr	-	-	-	Tr	5-7
70–75	2	1	2	-	-	-	6	Tr	-	-	-	Tr	5-7
75–80	-	3	3	-	-	-	6	Tr	-	-	-	Tr	5-7
80–90	-	3	3	-	-	-	6	Tr	-	-	-	Tr	5-7
90–100	-	3	3	-	-	-	6	Tr	-	-	-	Tr	5-7
100–110	-	3	3	-	-	-	6	Tr	-	-	-	Tr	5-7
110–120	-	3	3	-	-	-	6	Tr	Tr	-	-	Tr	5-7
120–130	1	3	1	-	-	-	6	Tr	Tr	-	-	1	5-7

Geology – Description

Unit	Description
Talus -	no core
Talus -	no core
Biotite Hornfels -	Drk gry-blk, f.g. white feld and biot. Strg frac. w/ limon., 25% oxid. Stckwrks qtz-py units 2-3 mm, f.g. diss py, Bddg 45° to CA. 5-7% (py/cpy), 2-3% diss/un sulf.
Biot. Hrnfls -	as above w. lenses of wht qtzt, Diss f.g. biot. in hornfels, seric. in qtzt, stckwrk qtz-py units w tr of py 5% oxid. 5-7% (py/cpy) 2-3% (diss/un sulf).
Biot Hrnfls -	grit - lenses of grit w qtzt and hrnfls pebbles in biot. hrnfls matrix. Bddg 30° to CA, Stckwrks qtz-py-seric units.
Conglomerate -	Drk gry-blk, c.g. pebbles of qtzt and hrnfls to 10 mm. f.g. biot in matrix. Stckwrks qtz-py-seric uns, minor c.g. py uns. 5-7% (py/cpy) 1-2% (diss/un sulf.).
Conglomerate -	as above, strg frac., strg diss py, qtz-py-seric uns cutting f.g. diss biot in gm. 5-7% (py/cpy) 1-2% (diss/un sulf.)
Conglomerate -	as above 70-75 ft.
Fault -	strg gg and clay 75-80 ft.
Diorite -	lt gry, mg equigranular, strg clay altn of feld, seric. in gm. 5-7% (py/cpy) 1% (diss/un sulf.) occurs as massive and also frag in fault
Fault Zone -	mixed zone of diorite, as above, and grits all w/ strg clay altn, strg clay seams 90° to C.A. Slicks on py units, 10-20° to CA frag of grit, qtzt, diorite in clay matrix w/ slicks
Fault Zone -	as above, strg clay and slicks 0-10° to CA.
Diorite -	lt gry, m.g. equigran. clay altn of feld. Strg mineralization w/ py.
Fault Zone -	as above
Qtzt and grit -	lt gry, f.g. w. minor qtzt pebb. strg frac. w stckwrks qtz-py-seric units, cut by late vuggy gyps-moly-py units, strg diss py in gm. 5-7% (py/cpy) 3-4% (diss/un sulf).
Conglomerate -	lt gry, c.g. w. pebbles of all rock types, diss f.g. biot in gm. Strg stckwrks qtz-py-seric uns, have gyp. + moly at 90° to C.A. 7-10% (py/cpy) 1-2% (diss/un sulf.).

Notes / Core Rec. / Analyses (ppm)

Notes	Core Rec.	Int. ft	Cu	Mo	Zn	Pb	Ag	Au	Samp No.
	—								—
	—								—
Average 23-50 ft. Cu - 608, Mo 20, Au .01	97	23-30	675	24	15	10	<.2	<.01	3842
	100	30-40	600	26	20	10	<.2	<.01	2[illegible]
	100	40-50	550	10	15	5	<.2	<.01	2[illegible]
	100	50-60	700	14	60	10	<.2	<.01	3[illegible]
	100	60-70	430	30	35	5	<.2	<.01	2[illegible]
	100	70-80	550	4	25	5	0.2	<.01	2[illegible]
Average 50-100 ft. Cu - 541, Mo - 56, Au - .01	100	80-90	600	24	50	5	0.6	<.01	3[illegible]
	100	90-100	425	210	30	10	0.2	<.01	3[illegible]
	100	100-110	535	32	25	10	0.2	<.01	3[illegible]
	100	110-120	375	380	15	10	<.2	<.01	3[illegible]
	100	120-130	700	8	20	5	<.2	<.01	3843

Project: Alaska Search – Chignik, Bee Creek   Logged by: ______   Drill Hole No. ______   Page ____ of ____

DEPTH & SIZE	ALTERATION biot	sec	clay	qtz	chlor	silica	MINERALIZATION Py	Cpy	Moly	Mag	Hem	Gyps	EST. TOT. SULF. Vol.%	CORE REC.	Int.	Cu	Mo	Zn	Pb	Ag	Au	Sample No.
130–140	1	3	-	-	-	-	6	Tr	Tr	-	-	1	5-7	100	130-140	700	38	15	5	<.2	<.01	38435
140–150	1	3	-	-	-	-	4	Tr	-	-	-	1	3-4	100	140-150	700	4	10	5	<.2	<.01	36
150–160	2	2	-	-	-	-	2	Tr	-	-	-	1	1-2	100	150-160	650	12	10	5	0.4	<.01	37
160–170	2	2	-	-	-	-	2	Tr	-	-	-	1	1-2	100	160-170	1450	24	45	5	<.2	<.01	38
170–180	-	3	1	-	-	-	4	Tr	Tr	-	-	Tr	3-4	100	170-180	620	8	155	10	<.2	<.01	39
180–190	-	3	1	-	-	-	4	Tr	-	-	-	Tr	3-4	100	180-190	445	14	20	15	0.8	<.01	40
190–200	1	3	1	-	-	-	4	Tr	-	-	-	1	3-4	100	190-200	850	10	15	5	<.2	<.01	41
200–210	1	3	1	-	-	-	4	Tr	-	-	-	1	3-4	100	200-210	445	6	10	5	<.2	<.01	42
210–220	1	3	1	-	-	-	4	Tr	-	-	-	1	3-4	100	210-220	1000	16	70	5	0.4	<.01	43
220–230	1	3	1	-	-	-	4	Tr	-	-	-	1	3-4	100	220-230	570	10	15	5	<.2	<.01	44
230–240	1	3	1	-	-	-	4	Tr	Tr	-	-	1	3-4	100	230-240	445	22	25	5	<.2	<.01	45
240–250	1	3	1	-	-	-	4	Tr	-	-	-	1	3-4	100	240-250	340	8	25	5	<.2	<.01	46
250–260	1	3	1	-	-	-	4	-	-	-	-	1	3-4	100	250-260	370	12	15	15	<.2	<.01	47
260–270	1	3	1	-	-	-	4	-	-	-	-	1	3-4	100	260-270	440	24	15	15	<.2	<.01	48
270–280	1	3	1	-	-	-	4	-	Tr	-	-	1	3-4	100	270-280	270	6	20	10	<.2	<.01	38439

ANALYSES ppm.

GEOLOGY – Description

- Conglomerate – c.g. pebb. of qtzt, biot hrnfls in drk gry-blk matrix, diss biot and sec. in matrix stockworks qtz-py-sec vns. Cut by gyps. vns. 90° to C.A. 10/1 (py/cpy) 3-4/1 (diss/vn sulf)
- Biot Hornfels – drk gry, f.g. equigranular w minor Congl. layers, stockworks qtz-py-sec. units, late gypsum units, 7/1 ~~diss/~~ py/cpy 1-2/1 (diss/vn sulf)
- Conglomerate – c.g. w pebbles of all rock types in hrnfls matrix diss biot, stockworks qtz-py-sec. units 10/1 (py/cpy) 1-2/1 (diss/vn sulf).
- Conglomerate – as above.
- Arkosic qtzt – lt gry, f.g.-m.g., clay and diss sec. in matrix, f.g. diss py, mod frac w qtz-py units, minor gyps. units.
- Arkosic qtzt – as above, strg clay-sec in matrix, clay altn of f.g. feld. strg stockworks uns, 10/1 (py/cpy) 1/1 (diss/vn sulf).
- Fault – strg clay and gge. 180-182.
- Arkosic qtzt as above, lenses of biot hrnfls strg clay-sec-altn of matrix. Stockworks vns of qtz-py-sec w sericite envelopes, late gyps. units.
- Arkosic qtzt – as above, lenses of biot hrnfls. up to 50% of unit. qtz-py-sec units w sericite envelopes up to 2-4 mm. 10/1 py/cpy, 1/1 diss/vn sulf.
- Arkosic qtzt – as above
- Arkosic qtzt – as above 220-225 ft.
- Conglomerate – c.g. Cong. w rounded pebbles of qtzt-biot hrnfls in sandy matrix, clay-sec altn of matrix, strg stockwork qtz-py-sec vns. 10/1 (py/cpy) 2/1 (diss/vn sulf).
- Conglomerate and Arcosic qtzt – interbedded layers as above late gypsum vns.
- Conglomerate and Arkosic Qtzt, as above.
- Arkosic Qtzt – as above, strg clay-sec in matrix strg stockworks units. Minor lenses of biot hrnfls. 10/1 (py/cpy) 1/1 (diss-vn sulf).
- Biot Hrnfls and Arkosic Qtzt – as above. Bdd'g 30° to C.A. Stockworks qtz-sec-py units w envelope of sericite 10/1 ((py/cpy) 90°/1 (diss/vn sulf) Cut by late gyps. vns 90° to C.A.
- Ark. Qtzt. – as above, cut by late gypsum vns w c.g. moly.

NOTES

- Average 130-150 ft. Cu - 594, Mo - 92, Au - .01
- Average 150-200 ft. Cu - 803, Mo - 13, Au - .01
- Average 200-250 ft. Cu - 554, Mo - 12, Au - .01

Project: Alaska Search - Chignik, Bee Creek Logged by: E. D. Fields Drill Hole No. B-4 Page 3 of 3

DEPTH & SIZE	Graphic Geology	ALTERATION: biot	serc	clay	epid	chlor	silica	MINERALIZATION: py	cpy	moly	mag	sphal	gyps	EST. TOT. SULF. Vol.%	Int.
280	. . .														
290	. . .	1	3	1	-	-	-	4	-	Tr	-	-	1	3-4	
300	. . .	1	3	1	-	-	-	4	-	-	-	-	1	3-4	

GEOLOGY Description	NOTES	CORE REC.	Int.	Cu	Mo	Zn	Pb	Ag	Au	Sample No.
Arkosic Qtzt and Grit - interbedded layers. Strg Clay-serc altn of matrix / stockworks qtz + py-serc units, late qvs, vrs 90° to CA. 10/1 (py/cpy) 1/1 (diss/vn sulf).	Average 250-300 ft.	100	280-290	190	.12	15	10	<.2	<.01	384[illegible]
Arkosic Qtz and Grit - as above.	Cu - 373 Mo - 18 Au - .01	100	290-300	595	38	15	10	<2	<.01	384[illegible]
Total Depth 300 ft.										

ANALYSES (ppm)

GMC DATA REPORT 329

BEAR CREEK MINING CO. SPOKANE OFFICE

Project: Alaska Search – Chignik, Bee Creek County: Chignik AMS Quad State: Alaska Drill Hole No.: B-5 Page 1 of 2

Objective: Test any extension of porphyry copper mineralization beneath valley floor Bearing: -- Dip: 90°

Drilled by: Sprague and Henwood Started: 8/9/76 Completed: 8/12/76 Coords: N -- E --

Scale: 1" = 20' Logged by: E. D. Fields Collar Elev. 500 Total Depth 300 feet

GMC DATA REPORT 329

DEPTH & SIZE	ALTERATION: biot	seric	clay	chlor	epid	MINERALIZATION: py	cpy	Moly	Mag	Cu-ox	Gyps	EST. TOT. SULF. Vol.%
0												
70	2	1	-	-	-	4	Tr	-	1	-	-	4-6
80	3	1	-	-	-	4	Tr	-	1	-	-	4-6
90	3	1	-	-	-	4	Tr	-	Tr	-	-	4-6
100	3	1	-	1	-	3	Tr	-	1	-	-	3-5
110	3	1	-	1	-	3	Tr	-	1	-	-	3-5
120	3	1	-	1	-	3	Tr	-	2	-	-	3-5
130	3	1	-	1	-	3	Tr	-	2	-	1	3-5
140	3	1	-	1	-	3	Tr	-	2	-	1	3-5
150	3	1	-	1	-	3	Tr	-	2	-	1	3-5
160	3	1	-	1	-	3	Tr	-	2	-	1	3-5
170	3	1	-	-	-	3	Tr	-	2	-	2	3-5
180	3	1	-	-	-	3	Tr	Tr	2	-	2	3-5
190	3	1	-	-	-	3	Tr	Tr	2	-	3	

GEOLOGY – Description

- Overburden – Clay and sand – rock, no sample.
- Grit – drk gry to blck, c.g. arkosic ss to grit w pebbles of qtzt, hnfls in hnfls matrix, mass. – poorly bdd. Mag units, stockwrks, qtz-py-sec units w envelopes of clay. 10/1 (py/cpy) 1/1 (diss/vn sulf.)
- Grit – as above, clots and veins mag., stockwrks qtz-py vns w sericite envelope 1-2 mm wide.
- Grit – as above, minor biot hornfels layers 20-30° to C.A., stockwrks qtz-py-sec. vns, minor hairline py-cpy units, mag-chlor vns 10/1 (py/cpy) 1/1 (diss/vn sulf).
- Grit – as above. Conglomerate layer [illegible] ft. w pebb. of qtzt and hornfels. Strg stockwrks chlor-mag vns, hairline py-cpy units. 10/1 (py/cpy) 1/1 (diss/vn sulf)
- Grit – as above, Conglomerate layers. Bddg 20-30° to C.A.
- Biot Hornfels – Drk gry, fg equigranular, diss mag, stockwrks mag vns w/o sulf. Strg late gyps. vns a 90° to C.A., up to 1 inch wide. 10/1 (py/cpy) 2/1 (diss/vn sulf.)
- Biot Hornfels – as above, stockwrks qtz-py-sec ± cpy units.
- Biot. Hornfels – as above w layers of f.g. congl. Bddg 30-40° to C.A. Strg clots and vns of mag w/o sulfides. Stockwrks qtz-py-sec ± cpy units.
- Diorite – 1 ft. dike 30° to C.A., wk altered, no sulfides, cut by mag
- Biot. Hornfels and Conglomerate – as above, strg stockwrks mag units w chlorite matrix, stockwrks qtz-py-sec ± cp/ units, late gypsum vns 80-90° to C.A. 10/1 (py/cpy) 1/1 (diss/vn sulf).
- Biot Hornfels and Conglomerate – as above, fg diss biot, no biot vns.
- Biot Hornfels and Conglomerate – as above, Bddg 70-80° to C.A.
- Biot Hornfels and Conglomerate – as above. Mag vns cut by sulf. vns, stockwrks qtz-py-sec vns ± cpy, cut by late gypsum vns, 80-90° to C.A.

ANALYSES ppm

NOTES	CORE REC.	Int. ft.	Cu	Mo	Zn	Pb	Ag	Au	Samp No.
	-	-	-	-	-	-	-	-	-
--	90	71-80	1500	26	25	15	<.2	.04	3845
Average 71-100 ft. Cu-1583 Mo-20 Au-.04	100	80-90	1400	10	25	15	<.2	.03	5
	100	90-100	1850	26	15	10	0.2	.04	5
	100	100-110	1700	36	15	15	<.2	.05	5
	100	110-120	2050	24	20	10	<.2	.04	5
	100	120-130	1650	12	15	15	0.2	.04	5
Average 130-150 ft. Cu-1990 Mo-23 Au-.06	100	130-140	1250	22	20	15	<.2	.03	5
	100	140-150	3300	24	20	10	0.4	.07	5
	100	150-160	1400	44	15	15	<.2	.04	6
--	100	160-170	1100	34	10	10	<.2	.02	6
	100	170-180	920	36	10	15	<.2	.02	6
	100	180-190	1250	44	10	14	<.2	.02	3846

GMC DATA REPORT 329

Project Alaska Search - Chignik, Bee Creek Logged by E. D. Fields Drill Hole No. B-5 Page 4 of 4

DEPTH & SIZE	Graphic Geology	ALTERATION biot	seri	clay	chlor	epid	MINERALIZATION py	cpy	Moly	Mag	Ox Cu	Gyps	EST. TOT. SULF. Vol.%	Int.	GEOLOGY Description	NOTES	CORE REC.	Int.	ANALYSES (ppm) Cu	Mo	Zn	Pb	Ag	Au	S
190																									
200		3	1	-	-	-	5	Tr	-	1	-	3	5-6		Biot. Hornfels - as above, strg stockwrks qtz-py-sericite vns cut by strong gyps/5cm veins. Minor mag vns. 7-10/1 (py/cpy) ½/1 (diss/vn sulf.)	Average 190-200 ft. Cu - 1114 Mo - 26 Au - .02	100	190-200	900	26	10	15	<.2	<.01	38
210		3	1	-	-	-	5	Tr	-	Tr	-	3	5-6		Biot. Hornfels - as above Fault - 210-211 ft., clay gge slicks @ 70-80° to CA.		100	200-210	855	22	10	15	<.2	<.01	
220		3	1	-	-	-	5	Tr	-	Tr	-	3	5-6		Biot Hornfels - as above, moderate bddg 30° to CA. Strg stockwrks qtz-py-sericite hairline fracs. Cut by late stockwrks gyps. vns 90° to CA. 7-10/1 (py/cpy) ½/1 (diss/vn sulf.).		97	210-220	1200	2	15	15	<.2	.02	
230		3	1	-	-	-	5	Tr	-	Tr	-	3	5-6		Biot Hornfels and quartzite - as above. Fault 224-225 ft, clay, gge and slicks.		100	220-230	725	14	10	15	<.2	.01	
240		3	1	-	-	-	3	Tr	-	Tr	-	3	3-4		Quartzite and Biot. Hornfels - lt gry, fg. equigran w/o diss biot. Stockwrks qtz-py-ser vns and stockwrks gypsum-py vns. Cut by late gyps. vns. 10/1 (py/cpy) ½/1 (diss/vn sulf)	Average 200-250 ft. Cu - 773 Mo - 18 Au - .01	90	230-240	485	44	40	55	<.2	<.01	
250		3	1	-	-	-	3	Tr	-	Tr	-	Tr	3-4		Quartzite and Biot Hornfels - as above.		100	240-250	600	10	10	20	<.2	<.01	
260		3	1	-	-	-	3	Tr	-	Tr	-	Tr	3-4		Biot Hornfels - as above; diss biot in gm. but no vein biot. minor mag vns w/o sulf. 10/1 (py/cpy) ½/1 (diss/vn sulf).		100	250-260	880	12	15	20	<.2	.01	
270		3	1	-	-	-	3	Tr	-	Tr	-	Tr	3-4		Biot Hornfels - as above.		100	260-270	880	130	10	10	<.2	.02	
280		3	1	-	-	-	3	Tr	-	Tr	-	Tr	3-4		Biot Hornfels - as above, 10/1 (py/cpy) ½/1 (diss/vn sulf)		100	270-280	910	55	10	15	<.2	.01	
290		3	1	-	-	-	3	Tr	-	-	-	Tr	3-4		Biot Hornfels - as above.	Average 250-300 ft. Cu - 926 Mo - 45 Au - .01	100	280-290	745	14	15	10	<.2	.01	
300		3	1	-	-	-	3	Tr	-	-	-	Tr	3-4		Biot Hornfels - as above 10/1 (py/cpy) ½/1 (diss/vn sulf)		100	290-300	715	14	10	10	<.2	.01	38

TOTAL DEPTH - 300 ft.