Table 7 - Summary of X-ray and Staining Data for Vein Carbonates

Prop. No.	Sample No.	$d_{(211)}$ spacing ± .002A	Calcite Stain	Iron Stain	Occurrence
	Calcites				
1	65-78	3.020	purple	strong	Type II py,mo,mus,gyps,carb,qz veinlet
	65-98	3.030	purple	strong	post-mo,qz,carb vein
	67-181	-	purple	faint	post-mo qz,carb vein
	DDH18-1482'	-	purple	faint	Type II mo,qz veinlet
	DDH21-1551'	3.022	purple	strong	coarse py,ccp,mus,kspar,carb,qz veinlet
	DDH29-561½'	3.018	purple	moderate	coarse py,mus,qz,carb veinlet
	DDH29-1172'	3.012	purple	strong	Type II mo,mus,carb,qz veinlet
	DDH29-1556'	3.025	purple	moderate	Pegmatitic,Type II ab,carb,mus,qz,mo, py veinlet
9	65-3	3.028	purple	strong	sulfide vein
43	65-62	3.028	red	faint	late crustiform carb veins
48	66-80	3.012	red	faint (anomalous)	sulfide vein
Calcite Reagent		3.034	-	-	x-ray calibration sample
	Ferroan Dolomites-Ankerites				
1	65-78	2.912	purple	strong	Type II py,mo,mus,gyps,carb,qz veinlet
	65-98	2.914	purple	strong	post-mo qz,carb vein
	65-138A	2.907	dark purple	faint	post-mo qz,carb vein
	67-181	-	purple	strong	post-mo qz,carb vein
	DDH22-1983	2.8985	negative	strong	coarse py,mus,qz,carb vein
9	65-3	2.9085	-	-	sulfide vein
43	65-62	2.901	faint red	strong	late crustiform carb veins
5	65-91	2.9025	purple	strong	ccp,sp,tn,carb vein
	Siderites				
9	65-3	2.794[1)]	very faint	negative	sulfide vein
20	65-113	2.81(+?)	negative	very faint	sulfide vein
40	65-39	2.81(+?)	negative	very faint	sulfide vein
59	65-105	2.80	very faint	negative	sulfide vein

Abbreviations - ab-albite; carb-carbonate; ccp-chalcopyrite; DDH-diamond drill-hole; gyps-gypsum; kspar-potash-feldspar; mo-molybdenite; mus-muscovite; py-pyrite; qz-quartz; sp-sphalerite; tn-tennantite

1 The $d_{(211)}$ spacings of the siderites are not accurate because the peaks overlap the $NaCl_{(200)}$ peak.

-6" →

Table 3 - Summary of Assay Data for the Hudson Bay Mountain Mining District

Property No.	Au			Ag			Pb			Zn			Cu			S			As		
	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
1	5	.02	.01	6	.4	.7	1	.01	-	2	.81	.80	8	.48	1.22	7	1.95	4.11	-	-	-
3	1	.04	-	1	.1	-	1	.11	-	1	.13	-	1	.30	-	1	12.08	-	-	-	-
4	7	.21	.18	5	.2	.2	-	-	-	3	1.03	.42	1	.21	-	-	-	-	-	-	-
6	1	.01	-	1	.7	-	1	.75	-	1	5.60	-	1	.02	-	1	7.79	-	-	-	-
7	13	4.60	7.07	13	1.4	2.1	-	-		-	-	-	-	-	-	1	.18	-	-	-	-
8	6	.12	.12	5	55.9	70.7	3	14.20	10.68	3	18.73	11.76	3	.28	.22	-	-	-	-	-	-
9	5	.06	.04	5	21.3	4.6	5	3.97	3.26	5	6.11	5.10	1	.25	-	1	19.25	-	1	1.59	-
10	1	.24	-	1	.1	-	1	.01	-	1	2.80	-	1	.34	-	1	23.40	-	1	.50	-
11	1	.36	-	1	.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	1	.26	-	1	.1	-	-	-	-	-	-	-	1	.05	-	-	-	-	1	27.90	-
14	1	.01	-	1	.2	-	1	.11	-	1	6.00	-	1	.05	-	1	15.11	-	-	-	-
15	1	.01	-	1	7.3	-	1	5.24	-	1	12.90	-	1	.15	-	1	25.56	-	-	-	-
16	8	.15	.11	8	4.0	3.4	1	.08	-	3	8.43	5.27	3	.98	.53	1	12.81	-	1	9.01	-
17	1	.10	-	1	.5	-	-	-	-	1	3.40	-	-	-	-	-	-	-	-	-	-
18	6	.26	.07	6	8.1	9.7	6	6.00	8.22	6	9.02	2.97	2	.49	.26	2	13.16	3.84	2	9.20	4.80
19	5	.24	.12	5	2.3	2.3	4	20.04	8.58	1	8.80	-	1	.14	-	1	20.08	-	1	8.30	-
20	6	.10	.07	6	97.3	59.3	6	22.24	17.16	5	11.09	3.27	4	.79	.46	2	17.36	3.56	2	1.87	.47
21	3	.08	-	3	7.1	1.4	2	2.65	.55	-	-	-	1	.75	-	-	-	-	-	-	-
22	2	.53	.23	2	6.5	.5	1	25.20	-	1	23.40	-	2	1.00	-	-	-	-	-	-	-
23	12	.14	.20	13	64.0	86.5	12	21.14	13.73	11	16.37	5.98	3	.73	.38	1	25.95	-	-	-	-
24	2	.38	-	2	3.8	-	-	-	-	2	6.20	-	-	-	-	-	-	-	-	-	-
26	2	.06	.04	2	3.3	1.6	2	.38	.26	2	1.75	1.45	2	.82	.16	2	22.74	.60	2	1.50	1.10
27	1	.01	-	1	.1	-	1	.01	-	1	.03	-	1	.02	-	1	4.69	-	1	12.00	-
28	1	.04	-	1	.2	-	1	.02	-	1	7.40	-	1	.15	-	1	15.97	-	1	5.80	-
29	2	.24	.04	2	1.5	.5	1	.11	-	2	7.74	2.27	1	.70	-	1	10.17	-	1	6.16	-
30	259	.36	.41	259	7.5	14.2	-	-	-	240	8.00	7.80	80	.89	.98	-	-	-	-	-	-
31	1	.22	-	1	2.0	-	1	.12	-	1	3.80	-	1	.30	-	1	16.55	-	1	20.15	-
32	106	.15	.12	106	12.1	12.1	98	8.63	7.37	99	8.25	4.97	-	-	-	-	-	-	-	-	-
33	13	.05	.05	14	15.4	22.5	13	14.78	21.86	11	3.78	3.16	2	.12	.08	2	7.22	1.74	2	7.55	.95
34	400	.13	.12	410	10.6	14.3	344	7.23	9.15	404	7.43	7.06	-	-	-	-	-	-	-	-	-
35	1	.04	-	1	.9	-	1	.42	-	1	6.20	-	1	.03	-	1	14.18	-	1	3.80	-
36	85	.18	.16	86	15.0	58.5	64	8.40	11.43	83	5.64	6.71	2	1.20	.30	-	-	-	-	-	-
37	16	.27	.16	16	30.1	31.2	15	14.48	11.42	15	16.78	9.12	-	-	-	-	-	-	-	-	-
38	5	.20	.16	5	32.8	17.4	4	21.29	9.70	4	15.36	4.93	1	1.11	-	1	16.61	-	1	3.10	-
39	44	.03	.04	428	34.7	102.6	214	4.01	6.78	211	4.72	5.84	-	-	-	-	-	-	-	-	-
40	164	.11	.48	951	51.5	121.8	727	6.32	10.74	723	6.33	7.38	-	-	-	-	-	-	-	-	-
41	1	.01	-	1	.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	2	.02	-	2	12.0	4.4	2	10.89	1.59	2	6.89	.99	1	.96	-	1	11.83	-	-	-	-
44	1	.02	-	1	3.0	-	-	-	-	-	-	-	1	2.70	-	1	2.05	-	-	-	-
46	1	.02	-	1	.6	-	1	.17	-	1	.03	-	1	10.73	-	-	-	-	-	-	-
47	-	-	-	1	.1	-	-	-	-	-	-	-	1	.22	-	1	.14	-	-	-	-
48	77	.25	.55	77	22.8	28.0	72	10.47	18.14	70	14.59	14.45	20	7.63	14.65	5	13.59	4.69	1	3.40	-
49	29	.07	.05	39	12.9	14.3	25	7.43	6.45	38	10.06	6.50	2	.51	.29	3	20.16	7.18	-	-	-
51	1	.15	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	1	.32	-	1	14.9	-	1	.75	-	1	.24	-	1	1.26	-	1	27.53	-	1	14.84	-
53	3	.01	.01	3	1.4	.9	-	-	-	1	.16	-	3	2.92	.59	-	-	-	-	-	-
54	1	.41	-	1	3.3	-	-	-	-	-	-	-	1	.68	-	1	23.61	-	1	8.60	-
55	1	.05	-	1	.1	-	-	-	-	-	-	-	1	.13	-	-	-	-	1	22.20	-
56	4	.18	.13	4	6.1	3.0	1	6.00	-	-	-	-	-	-	-	-	-	-	-	-	-
57	2	.04	.01	2	63.8	47.8	2	60.09	12.91	1	.20	-	1	.33	-	1	8.36	-	-	-	-
58	1	.01	-	1	53.7	-	1	.02	-	1	1.60	-	1	6.69	-	1	4.17	-	1	1.29	-
59	13	.01	.01	13	28.1	44.8	8	6.68	8.71	2	2.40	1.60	2	.19	.12	2	3.36	.42	2	.60	.01
61	2	.01	-	2	104.0	-	-	-	-	-	-	-	2	.82	.68	-	-	-	-	-	-
62	2	.01	-	4	3.6	1.18	-	-	-	-	-	-	4	3.38	1.67	-	-	-	-	-	-
63	3	.01	-	3	2.8	1.13	-	-	-	-	-	-	3	1.53	.38	-	-	-	-	-	-

n = number of assays

$\bar{x}$ = mean value

s = standard deviation

Au and Ag - in ounces per ton

Pb, Zn, Cu, S, and As - in per cent

6" wide 5190

6" wide

Table 9 - Summary of Pyrrhotite Data

Prop. No.	Property Name	Sample No.	1) Structure Types	2) Atomic % Metals	Main Associated Minerals in Sample
10	Unnamed	64-60A,64-60B	H T	47.5[5]	asp,sp,ccp
8	Glacier Gulch N. Side	63-104	H M	47.2	sp,asp,ccp
16	Iron King	65-20	H M	47.5	sp,asp,ccp
30	Mamie	65-23	H M	47.2	sp,asp,ccp
49	Iron Vault	64-110,64-111,66-83 & 4 drill core samples	H M	47.6[6]	py,sp,ccp,asp,gn
5	Unnamed	65-74	H M		asp,ccp
26	Mayflower #2 claim - Hend. vein system	64-26	H M	47.5 [7]	sp,ccp
52	"T" Fraction	65-85	H M		asp,py,ccp,sp,gn
50	Mammoth Claim	65-101	H M		py,asp,sp,ccp,gn
14	Josie Claim	65-94	H M		sp,py,ccp
1	Glacier Gulch Molybdenum (surface)	64-78 65-99	H, M H,M		py,ccp
24	Neepawa	65-137	H,M		sp,ccp,gn,ms
1A	Glacier Gulch Molybdenum 3500 Level [3]	66,68,66-69,66-70,66-71	H,M		
52	Copper Queen Claim	63-206,65-121	M H		asp,sp,py,ccp
1A	Glacier Gulch Molybdenum 3500 Level [4]	66-76	M H		shee,ccp,sp,bm,ty,mo
1	Glacier Gulch	DDH39-990'	M H		mo,py
5	Unnamed	65-73	M H		ms
12	Unnamed	64-43	M H		asp,ccp

Symbols - T-troilite; H-hexagonal; M-monoclinic; asp-arsenopyrite; bm-bismuthinite; ccp-chalcopyrite; gn-galena; mo-molybdenite; ms-marcasite; py-pyrite; shee-scheelite; sp-sphalerite; ty-tetradymite

1) arranged in approximate order of increasing percentage of monoclinic pyrrhotite

2) -determined by $d_{(102)}$ spacing method after Arnold and Reichen (1962) and Arnold (1966)

-combined hexagonal-monoclinic peaks were measured below the point separation

-None of the samples were heated; therefore, the composition has not been given for samples containing much monoclinic pyrrhotite. However, from Arnold's work (1967) and Carpenter and Desborough's work (1964), it can be expected that the bulk composition for hexagonal-monoclinic mixtures varies from about 47.5 to 46.5 atomic per cent metals with increasing monoclinic pyrrhotite content.

3) pyrrhotite that occurs disseminated (up to 20% of the rock) in black argillites and metavolcanic rocks

4) in a tungsten-rich vein near the limit of molybdenum deposition

5) $d_{(102)}$ spacing of the troilite phase was found to be 2.0930A which, as shown by Toulmin and Barton (1964), is very close to Stoichiometric FeS.

6) Carpenter and Desborough's Silver Creek Sample (p. 1355,1964)

7) Arnold's Henderson Mine sample (p. 35, 1967)

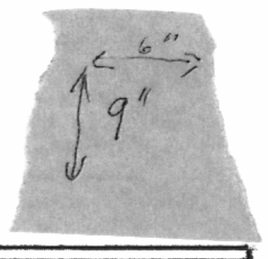


Table 13 - Summary of Electron Microprobe Data for Sphalerite

1 Prop No	2 Sample No	Mole % FeS 3 Sample[1] Av	4 Observed[2] Range	5 Adjacent[3] Fe Sulf	6 Est[4] Prop Av	7 Occurrence	8 Main Assoc Ore Minerals in Sample
1	64-87	12.3	8.0-16.0	8.0-16.0?		mainly barren post-mo qtz-carb vn	py,ccp
	65-98	0.4	0.1- 0.9			"	py,ccp,bo?
	65-138	1.25	0.5- 2.0		15.3[5]	"	py,gn,bo?
1A	66-76A	15.3	13.7-16.7			W-rich vn at fringe of Mo dep	shee,po,ccp,bm,ty,mo
	66-76B	15.8	12.5-17.8	17.0-17.8[8]		"-sp adj po	"
2	65-71	12.9	11.0-15.4		12.9	probably a late carb vn	ccp,bo,asp
3	65-68	19.1	17.0-19.7	19.0-19.7	19.1	mainly barren qtz vn	asp,po,ccp
4	65-67	20.7	18.0-22.3		20.7	"	alt po?,asp,py,bo
6	65-77	10.25	0.5-25.0[9]		10.0	probably late carb veinlets	py,gn
8	63-104	28.5	24.8-30.5	24.8-30.5	27.0	sulf vn[6]	po,asp,gn,ccp
	65-41A	0.7	0.4- 1.6			sulf lense-h s l sp	asp,po
	65-41B	9.6	6.0-11.2			" -h s m sp	asp,po
	65-41C	10.8	11.5-26.4	? -26.4		" -h s d sp	asp,po
9	65-3	4.0[10]	1.0- 7.0?		4.0	probably a late carb vn	gn,asp,bo
10	64-58	26.0	20.3-28.0		26.5	sulf vn	asp,py,ccp
	64-58A	27.6	25.4-29.2	25.4-29.2		"	po,ccp,ms
	64-60A	26.1	22.8-27.5	22.8-27.5		"	po,asp
	64-60B	25.9	18.3-26.0	25.8-26.0		"	po,ccp
11	65-116	22.7	18.3-26.0	24.0-26.0	24.0	"	po,ccp
	65-117	25.4	22.7-27.6	22.7-27.6		"	asp,po
13	64-66	22.0	21.3-23.5	21.3-23.5	22.0	sulf veinlets	po+py in wall rock
	64-132A	19.5	18.8-21.2		21.5	sulf vn	po
	64-132B	21.3	20.7-22.0	19.0-22.0		"	po
	65-94	22.2	20.0-24.0	20.0-24.0	17.5	"	po,py,ccp
15	65-93	12.9	12.3-13.5		17.5	"	gn,ccp
	65-114	21.7	21.4-24.0	21.4-24.0		"	po,gn,ccp
16	65-16	21.6	19.2-23.1	19.2-23.1	23.0	sulf veinlets	asp,po
	65-17	23.5	21.9-25.0	21.9-25.0		widely scattered veinlets in meta rks	asp,po
	65-20	23.1	21.0-25.4	21.0-25.4		sulf vn	po,asp,ccp
17	65-64	19.4	18.9-19.8		19.4	sulf vn	asp,ccp,py
18	64-39	19.6	19.0-19.7	19.0-19.7	19.4	"	asp,py,gn,ccp
	64-39C	19.3	18.8-19.7	18.8-19.7			
19	63-181	12.1	9.5-13.7	11.0-13.7	15.0	"	py,asp,gn
	64-35	16.2	15.3-19.2	15.3-19.2			asp,py,gn,ccp
20	65-113	5.2	0.3- 8.8		7.0	sulf vn	asp,py,gn
	66-77	9.9	5.4-12.4	5.4-12.4		"	gn,ccp,py,asp,td
	66-78	11.7	7.0-17.4			sulf frag in late qtz	py,gn
	66-79	7.7	7.4- 8.4	7.4- 8.4		sulf vn	gn,ccp,py,asp,td
22	61120[11]	9.1	8.0-10.3			carb vn	gn,ccp,py
23	63-195	5.5	1.2-10.1		12.0	sulf vn	gn,py,asp
	65-111	14.9	11.0-21.1	11.0-21.1		"	py,gn,asp,ccp
	665-112	6.4	4.9- 8.2	4.9- 8.2		frag in late qtz	py,gn
24	65-136	19.4	18.3-20.8	18.3-20.8	19.7	sulf vn	po,ccp,gn,ms,asp
	65-137	20.0	19.0-21.8	19.0-21.8		"	po,ccp,gn,ms

Table 13 - continued

1 Prop No	2 Sample No	Mole % FeS 3 Sample Av	4 Observed Range	5 Adjacent Fe Sulf	6 Est Prop Av	7 Occurrence	8 Main Assoc Ore Minerals in Sample
25	63-189	20.9	20.2-21.7		19.5	sulf vn	asp,py
	65-26	18.5	17.3-19.1	17.3-19.1		" -asp+py in separate veinlets	po,ccp
26	63-188	10.7	7.5-12.7	10.0-12.7	20.0	sulf vn (poor sample)	asp,ccp,py
	64-26	21.1	20.0-21.9	20.0-21.9		sulf vn	po,ccp,py?,asp
	64-27	18.7	18.1-20.0	18.1-20.0		"	po,py,ccp,asp
28	64-30	21.8	20.7-23.4	20.7-23.4[7)]	21.8	"	py,asp
29	65-14	20.25	19.0-21.0		20.3	"	py,asp
30	65-22	20.4	19.7-20.9		19.7	"	asp
	65-23	20.2	19.5-21.1			"	asp,ccp,po,py
	65-24	18.2	17.9-18.7			"	asp,ccp
	65-25	20.7	19.8-21.4			"	asp
31	65-21	16.7	15.0-20.0	15.0-20.0	16.7	"	asp,py,ccp
32	65-13	16.8	16.2-17.6	16.2-17.6	17.0	"	gn,py,asp,ccp
33	63-28	18.2	12.5-20.0	12.5-20.0	16.5	"	py,asp,ccp,gn,bo?
	64-2	14.8	9.7-19.7	? -19.7		"	asp,gn
	64-3	16.9	14.0-18.1	? -18.1		"	asp,gn,cpy,py
	64-34	16.8	16.2-17.5	16.2-17.5		"	asp,gn,cpy,py
34	64-17	23.5	21.9-25.0	21.9-25.0	18.5	"	py,gn,po
	64-21	19.0	18.7-19.6	18.7-19.6		"	py,gn,asp,ccp
	64-154C	18.8	18.0-19.7	18.0-19.7		"	py,asp
	64-154D	18.8	18.2-19.5	18.2-19.5		"	py,asp
	64-154E	18.5	18.3-19.3			"	py,asp
	64-155	18.2	17.6-18.7	17.6-18.7		"	gn,asp,ccp,py
	64-155C	17.7	16.9-18.1	16.9-18.1		" -h s d sp	gn,asp,py,ccp
	64-155D	15.1	8.1-16.9			" -h s d sp	gn
35	64-5	18.7	18.2-19.4		18.5	"	asp,py,gn,ccp
36	63-26	18.5	15.4-20.7	? -20.7	15.0	"	asp,gn,ccp,py
	65-32A	7.1	0.4- 7.6			" -h s m sp	asp,gn,py,ccp
	65-32B	15.3	13.1-19.0	? -19.0		" -h s d sp	asp,gn,py,ccp
	65-33	24.7	19.2-27.8			"	asp,gn,po
37	63-36	17.3	14.6-22.5	? -22.5	10.0	"	asp,ccp,gn,py
	65-34A	5.2	0.5-10.3			" -h s m sp	gn,asp,ccp
	65-34B	11.7	9.7-13.5			" -h s d sp	gn,asp,ccp
38	65-30	14.4	13.7-15.0		13.0	"	gn,ccp,bo,asp
	65-31A	1.2	1.0- 1.4			" -h s l sp	gn,asp,ccp,bo
	65-31B	6.6	0.7-15.7			" -h s m sp	gn,asp,ccp,bo
	65-31C	11.7	6.9-16.7			" -h s d sp	gn,asp,ccp,bo
39	64-6	16.0	13.2-18.6	13.2-18.6	16.5	"	asp,py,gn,ccp
40	64-7	16.8	16.0-17.5	16.0-17.5	14.0	"	asp,py,gn,ccp
	64-152C	11.0	10.6-15.1			" -h s d sp	asp,py
	64-152D	9.0	5.4-10.7			" -h s m sp	asp,py
	64-157A	0.7	0.1- 3.7			" -h s m sp	py,asp
	64-157B	10.3	9.2-11.5	? -11.5		" -h s d sp	py,asp
	65-38	15.0	7.5-19.8			"	gn,asp
	65-39	15.3	12.8-16.2			"	gn
	65-40A	9.7	3.7-17.9			" -h s m sp	gn,asp
	65-40B	14.4	11.7-16.0			" -h s d sp	gn,asp
41	64-10	7.4	2.8-17.8	? -17.8	7.4	carb vn	py,gn,asp,ccp
42	63-176	18.3	3.9-18.9		18.3	carb-sulf veinlets	gn,py

Table 15 - Summary of X-ray Data for Arsenopyrite

Prop. No.	Sample No.	$d_{(131)}$	Indicated Atomic % As (±15) [1]	Main Assoc. Ore Minerals in Sample [2]	Indicated P.T. Limits [3]
1	65-144	1.6332-1.6338	33.25-33.9	mo,py?	
2	65-71	1.63087	30.9	sp,ccp,bo-mo nearby	
4	65-66	1.6331	33.15	sp,py-po nearby	0-1000 bars <450°C
5	65-74	1.63235	32.4	po,ccp	>1400 bars >500°C
8	65-41	1.63095	31.0	sp,po	
10	64-58	1.63112	31.2	sp,py,ccp-ms+po nearby	
11	65-117	1.63112	31.2	sp+po nearby	
12	64-43	1.63124	31.8	ccp-po nearby	
16	65-20	1.6316	31.6	po,sp,ccp	>2200 bars > 520°C
17	65-64	1.6312	31.2	sp,ccp,py	
18	64-39	1.6305	30.5	py,sp,gn,ccp	>500 bars 470°C [4]
19	63-181		31.0 [5]	sp,py,gn	0-2000 bars >320°-500°C [4]
20	65-113	1.6303	30.3	py,gn,sp	
27	64-28	1.6326	32.65 32.1 -33.25		
28	64-30	1.63167	31.7	py,sp	<2200 bars 360°-420°C
30	65-23,	1.63098	31.0	sp,ccp,po,py	
	65-25	1.63112	31.2	sp	
31	65-21	1.6305	30.5	sp,py,ccp	>400 bars < 470°C
33	64-2	1.63042	30.4	sp,gn-ccp,py nearby	>500 bars < 470°C [4]
51	65-121	1.63087	30.9	po,sp,py,ccp	0->2000 bars 310°-520°C
52	65-85	1.6310	31.0	po,py,ccp,sp,gn	0->2000 bars 320°-520°C [4]
55	64-48	1.6320	32.0	ccp	

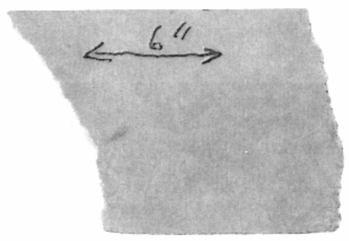
1)-from the relationship $d_{131} = 1.6006 + 0.0098x$, after Morimoto and Clark, 1961
-x is the atomic per cent arsenic (the equation is misprinted in the original paper)

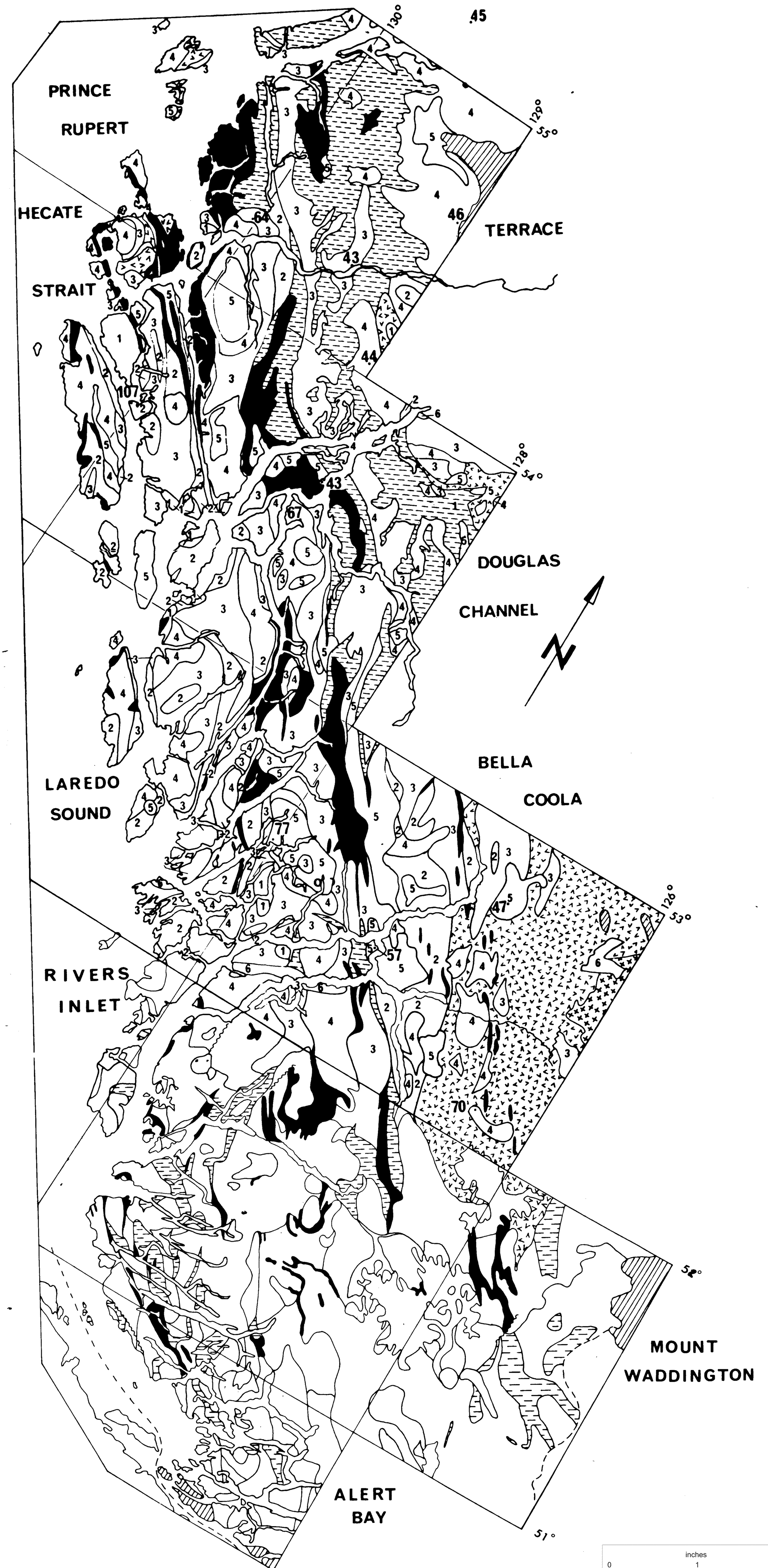
2)-abbreviations same as Table 13,
-Underlined iron sulfides are intimately intergrown with the arsenopyrite.

3) The assumption has been made that the arsenopyrite in question crystallized in equilibrium with the associated iron sulfides.

4) -for reasonable pressures

5) -electron microprobe analysis





.46 K–A date in m.y.

50 MILES

inches
0 1 2
0 1 2 3 4 5
centimetres

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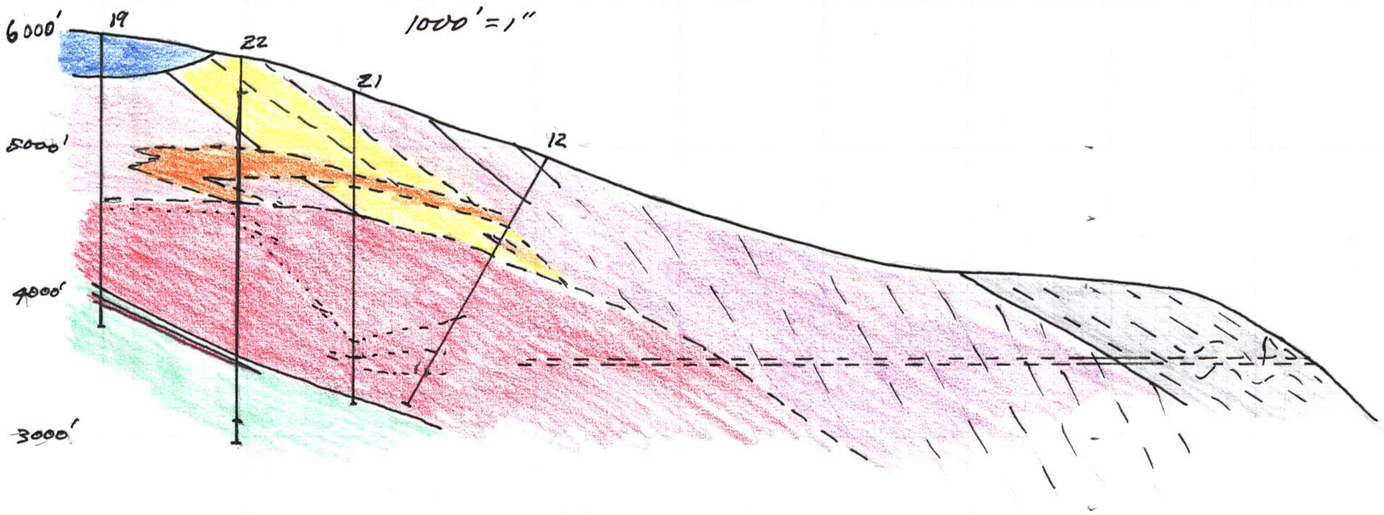
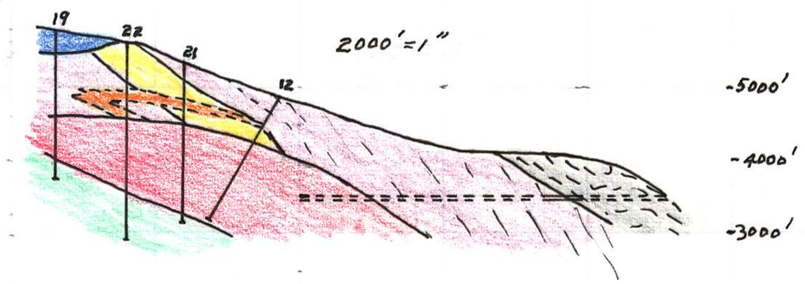
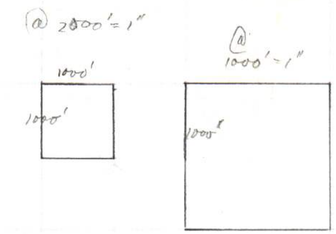

6000'
5000'
4000'
3000'
19
22
21
12
1000' = 1"


19
22
21
12
2000' = 1"
-5000'
-4000'
-3000'


@ 2000' = 1"
1000'
1000'
@
1000' = 1"
1000'

½ mi = 1"

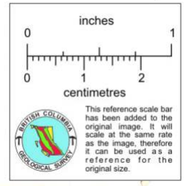

inches
0
1
0
1
2
centimetres
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FIGURE 13 - GENERALIZED DIAGRAM OF THE MINERAL ZONING

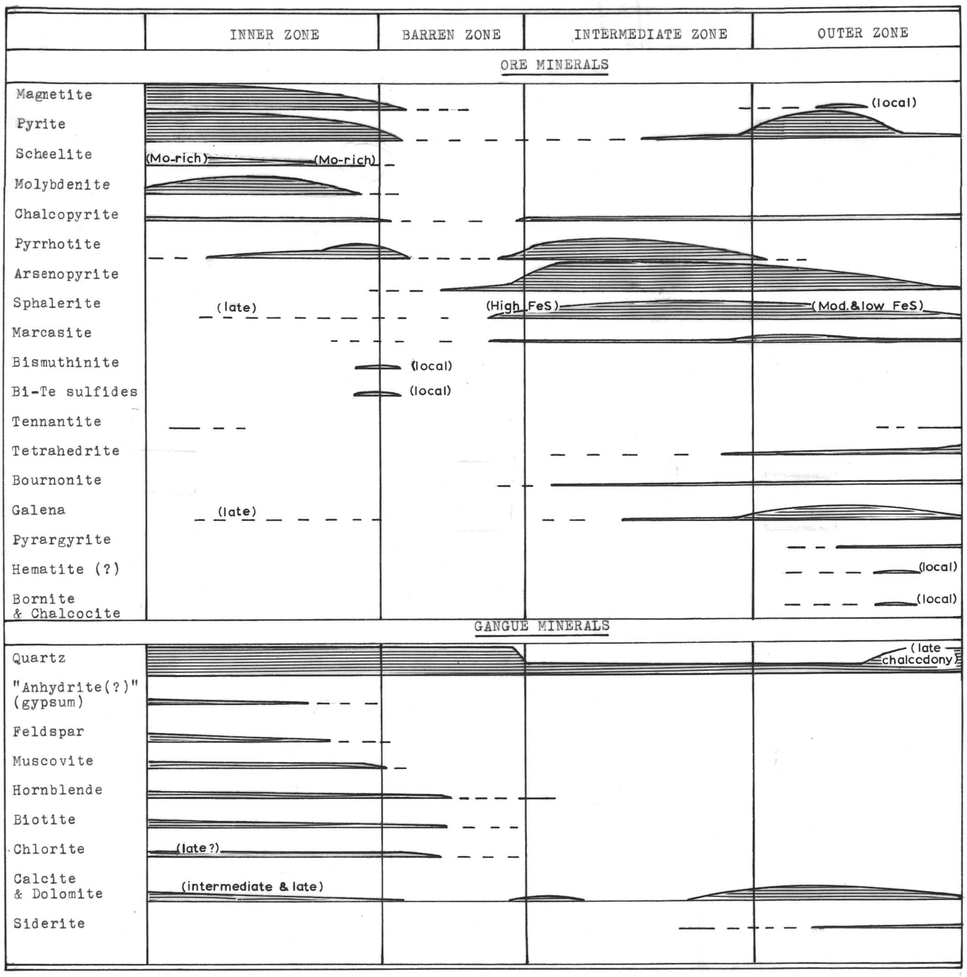
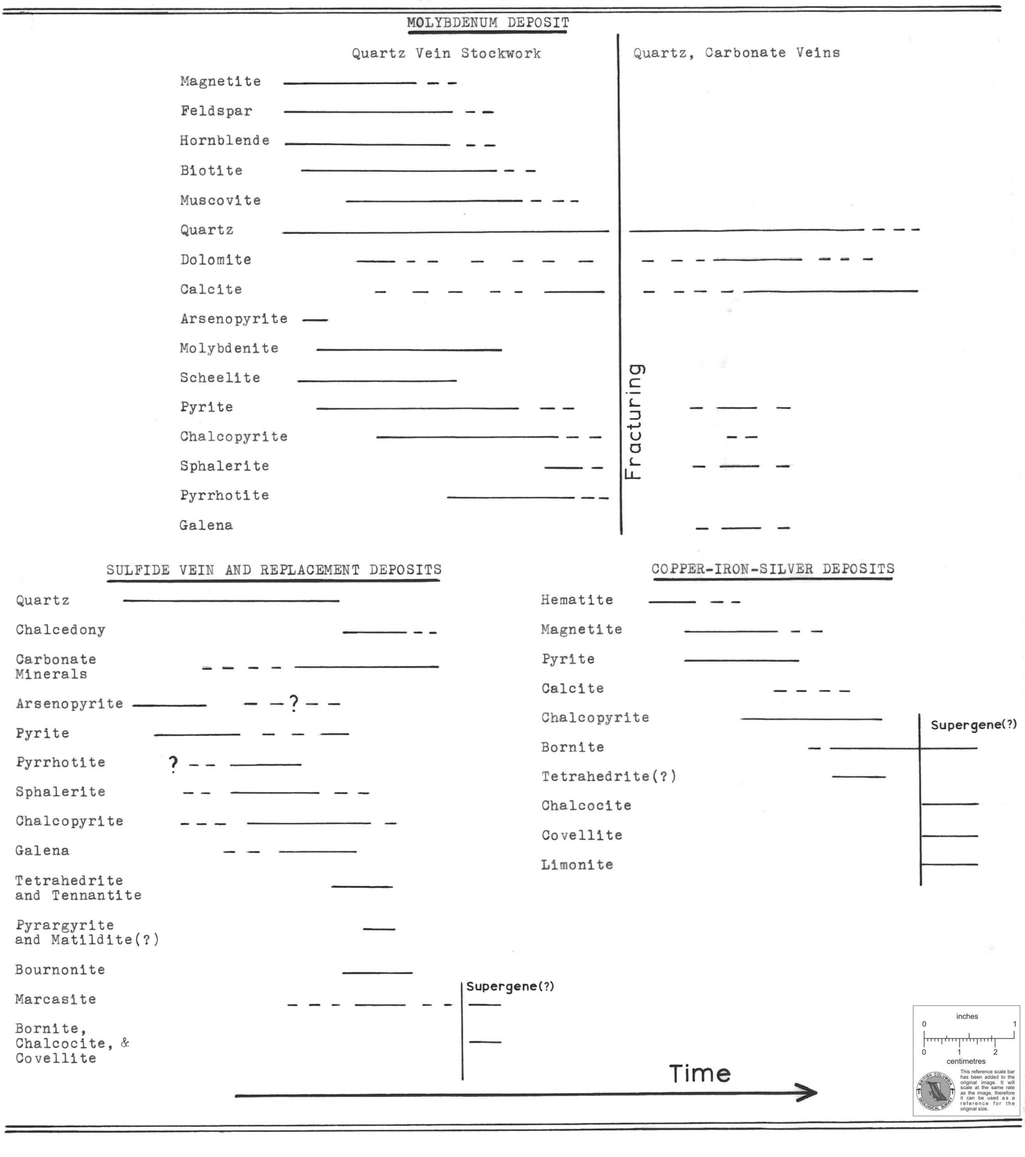


FIGURE 27 - PARAGENETIC DIAGRAMS



5 3/4" wide

for Figures 20, 22, & 23

+ – small sample (< 10 assays)

⊕ – intermediate-sized & large samples (>10 assays)

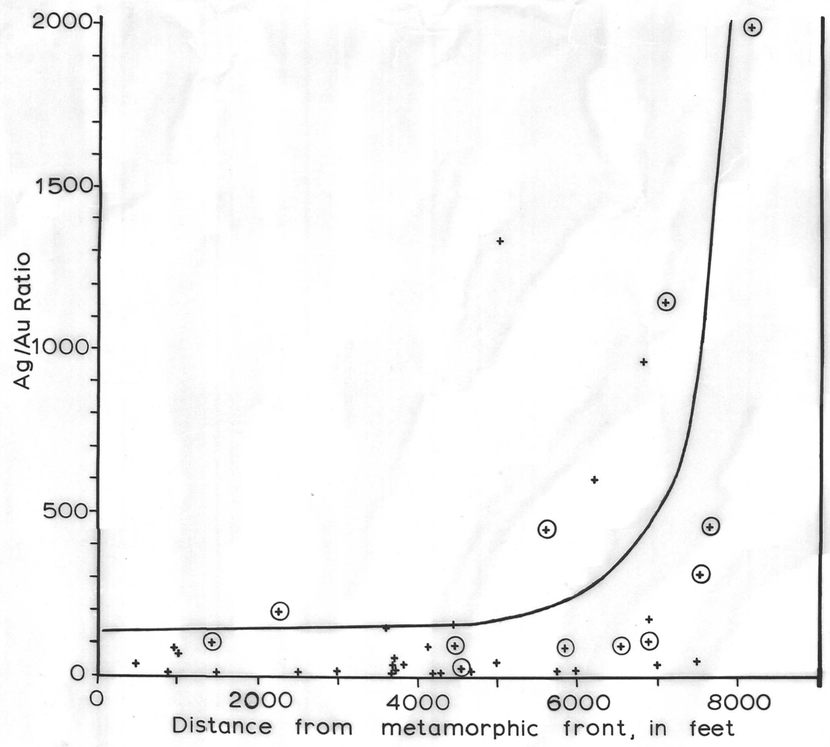


FIG. 20 - SILVER-GOLD RATIOS CALCULATED FROM ASSAY MEANS

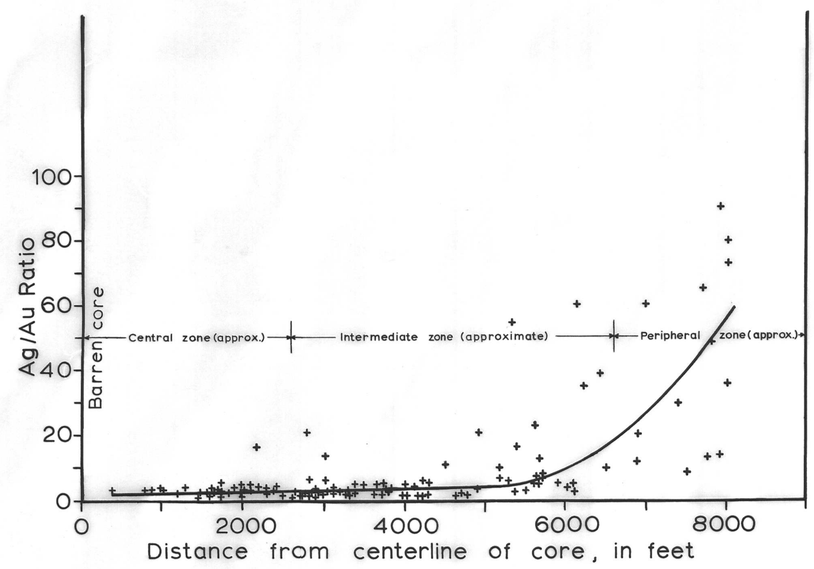


FIG. 21 - SILVER-GOLD RATIOS OF ORES SHIPPED FROM THE CENTRAL CITY DISTRICT (after Sims & Barton, 1962)

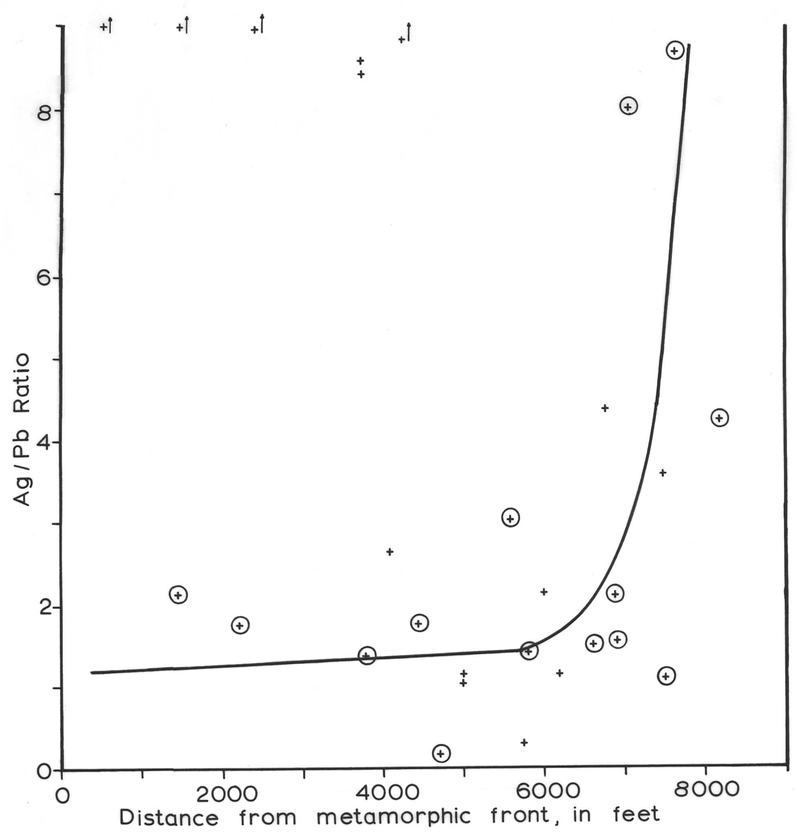


FIG. 22 - SILVER-LEAD RATIOS CALCULATED FROM ASSAY MEANS

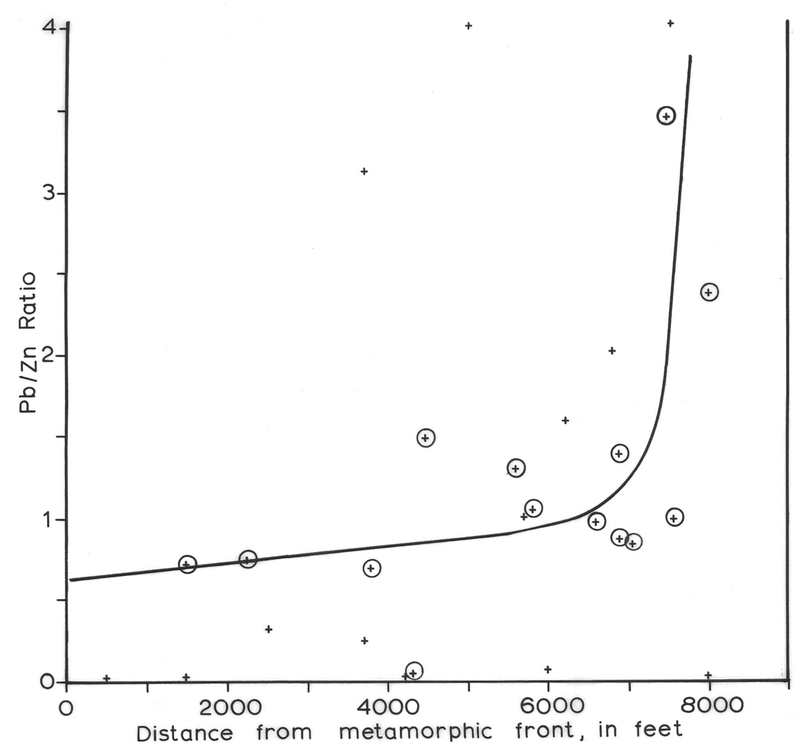


FIG. 23 - LEAD-ZINC RATIOS CALCULATED FROM ASSAY MEANS

inches
0 1 2
0 1 2 3 4 5
centimetres
BRITISH COLUMBIA GEOLOGICAL SURVEY
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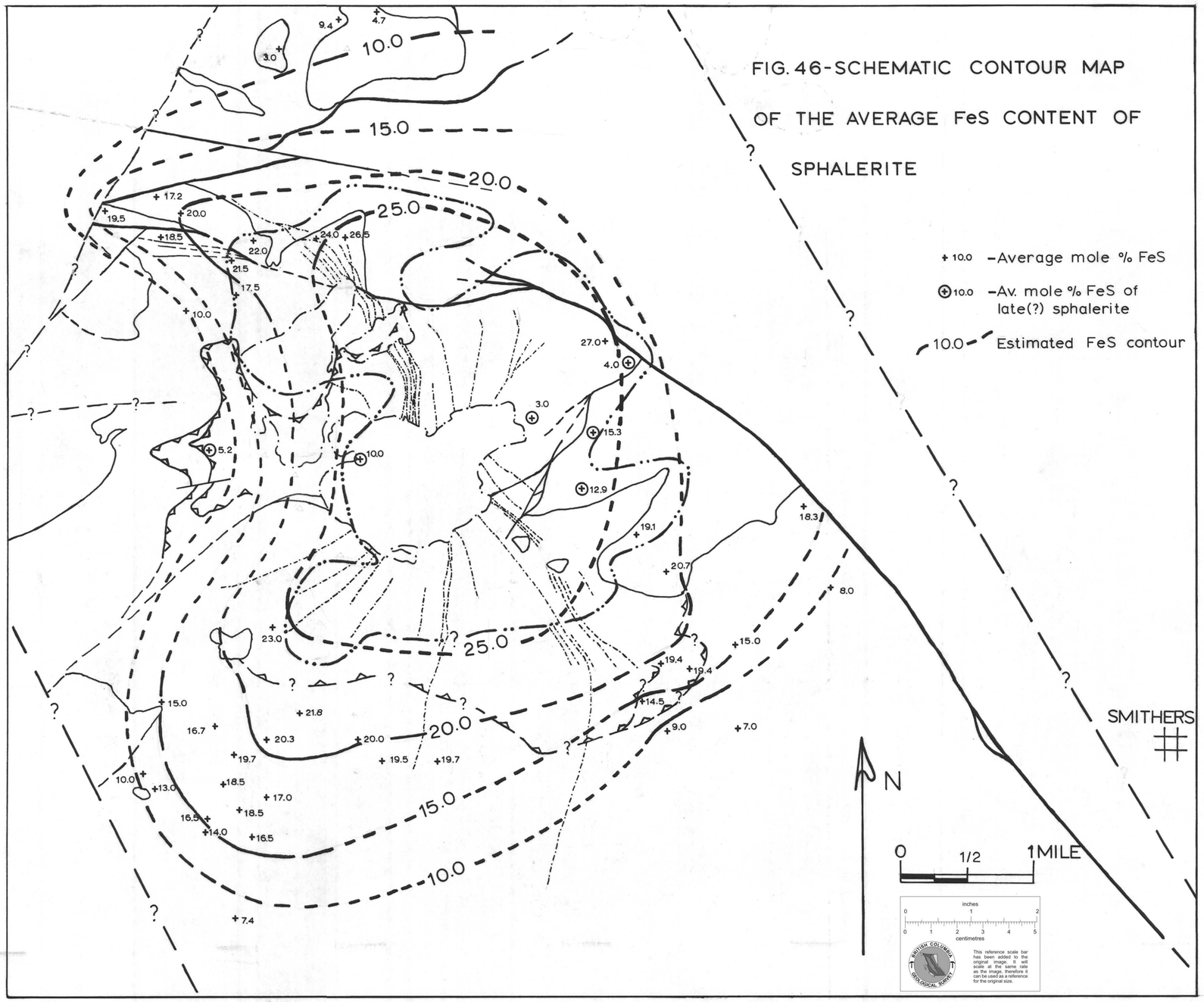
FIG. 46-SCHEMATIC CONTOUR MAP
OF THE AVERAGE FeS CONTENT OF
SPHALERITE
+ 10.0 -Average mole % FeS
⊕10.0 -Av. mole % FeS of late(?) sphalerite
10.0 Estimated FeS contour
SMITHERS
N
0
1/2
1 MILE
inches
centimetres
BRITISH COLUMBIA GEOLOGICAL SURVEY
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10.0
15.0
20.0
25.0

Make lined-in area exactly 6 9/10" long

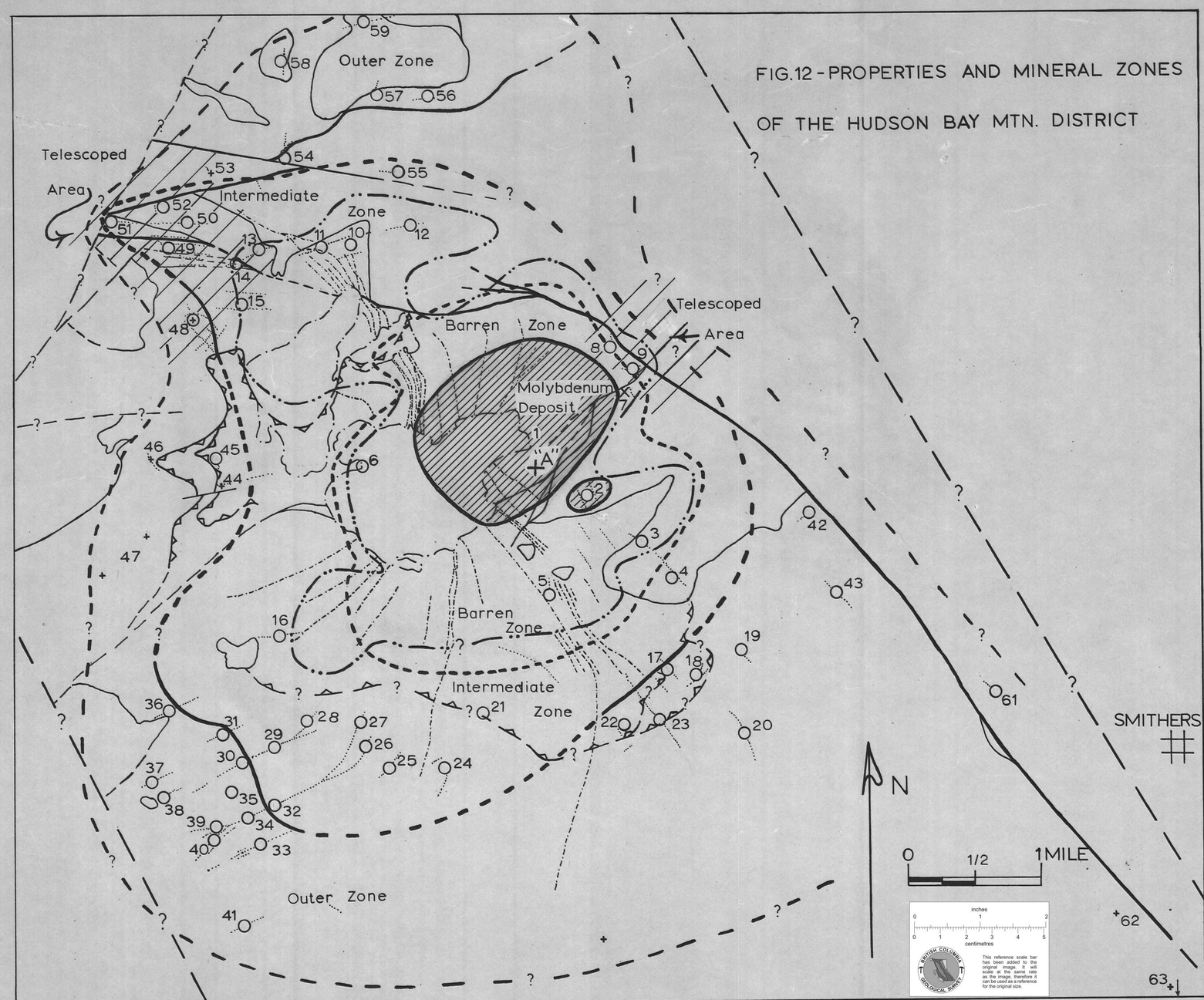

FIG.12 - PROPERTIES AND MINERAL ZONES OF THE HUDSON BAY MTN. DISTRICT

LEGEND

-Tertiary porphyry dike

-Limit of thermal metamorphism

-Vein

"Sulfide" mineralization

-Cu-Fe-Ag mineralization

-Au-Bi-Te deposit

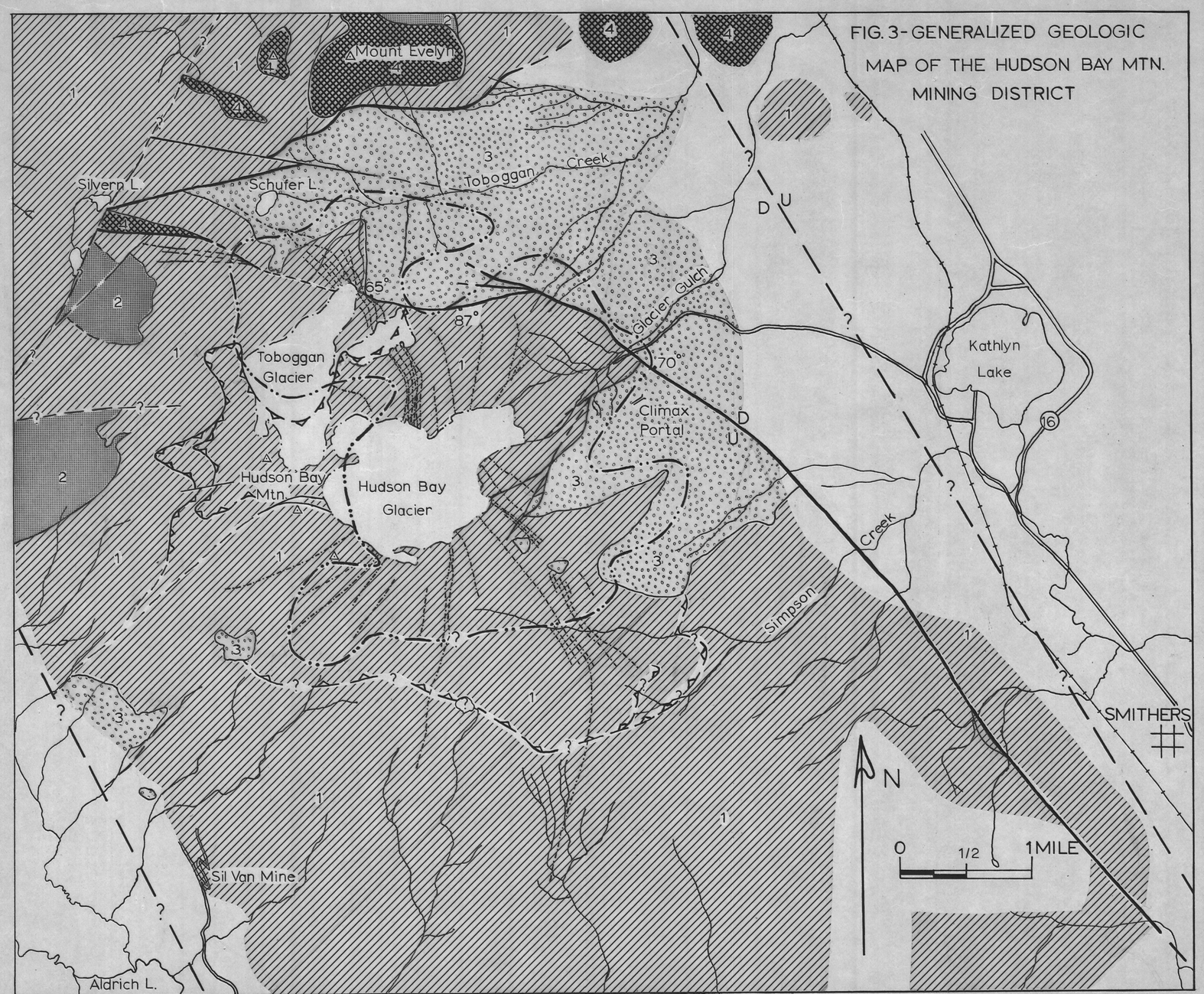

FIG. 3 - GENERALIZED GEOLOGIC MAP OF THE HUDSON BAY MTN. MINING DISTRICT

LEGEND

- 4 – Granodiorite
- 3 – Bowser sedimentary rocks
- 2 – Hazelton sedimentary rocks
- 1 – Hazelton volcanic rocks
- – Tertiary porphyry dike
- – Limit of thermal metamorphism

inches
0 1 2
0 1 2 3 4 5
centimetres
BRITISH COLUMBIA GEOLOGICAL SURVEY
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

5 3/4" wide

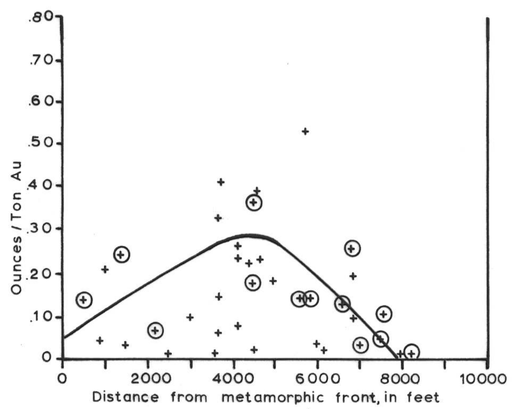

FIG.16-GOLD CONTENT OF DEPOSITS FROM ASSAY DATA

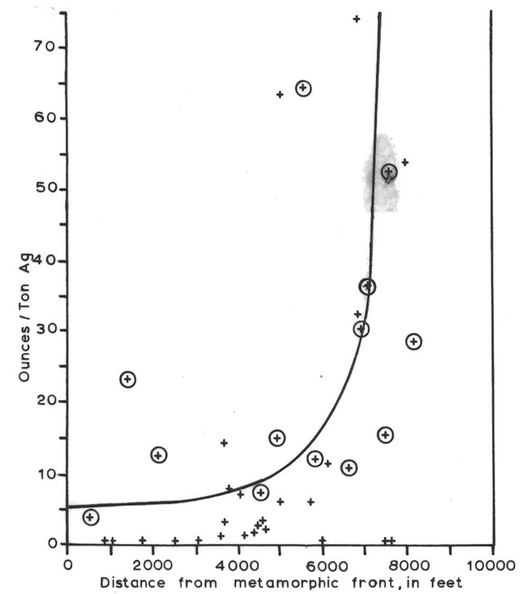

FIG.17-SILVER CONTENT OF DEPOSITS FROM ASSAY DATA

+ — small sample (<10 assays)

⊕ — intermediate-sized & large samples (>10 assays)

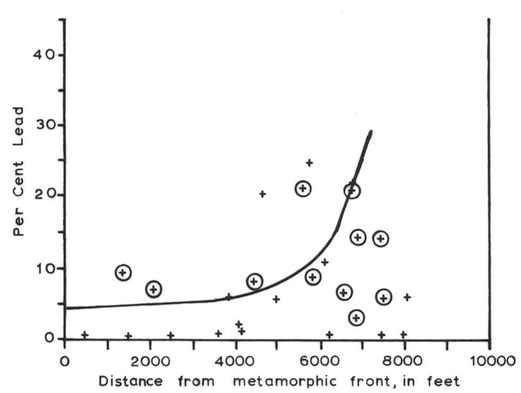

FIG.18-LEAD CONTENT OF DEPOSITS FROM ASSAY DATA

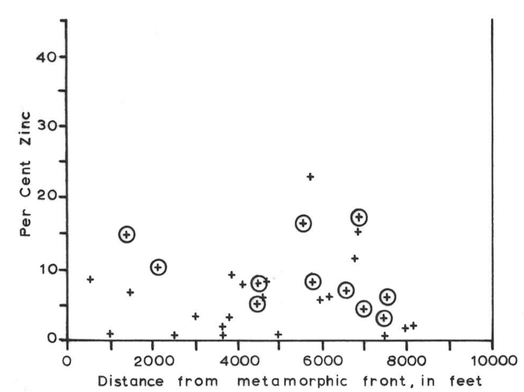

FIG.19-ZINC CONTENT OF DEPOSITS FROM ASSAY DATA

inches
0 1 2
0 1 2 3 4 5
centimetres
BRITISH COLUMBIA GEOLOGICAL SURVEY
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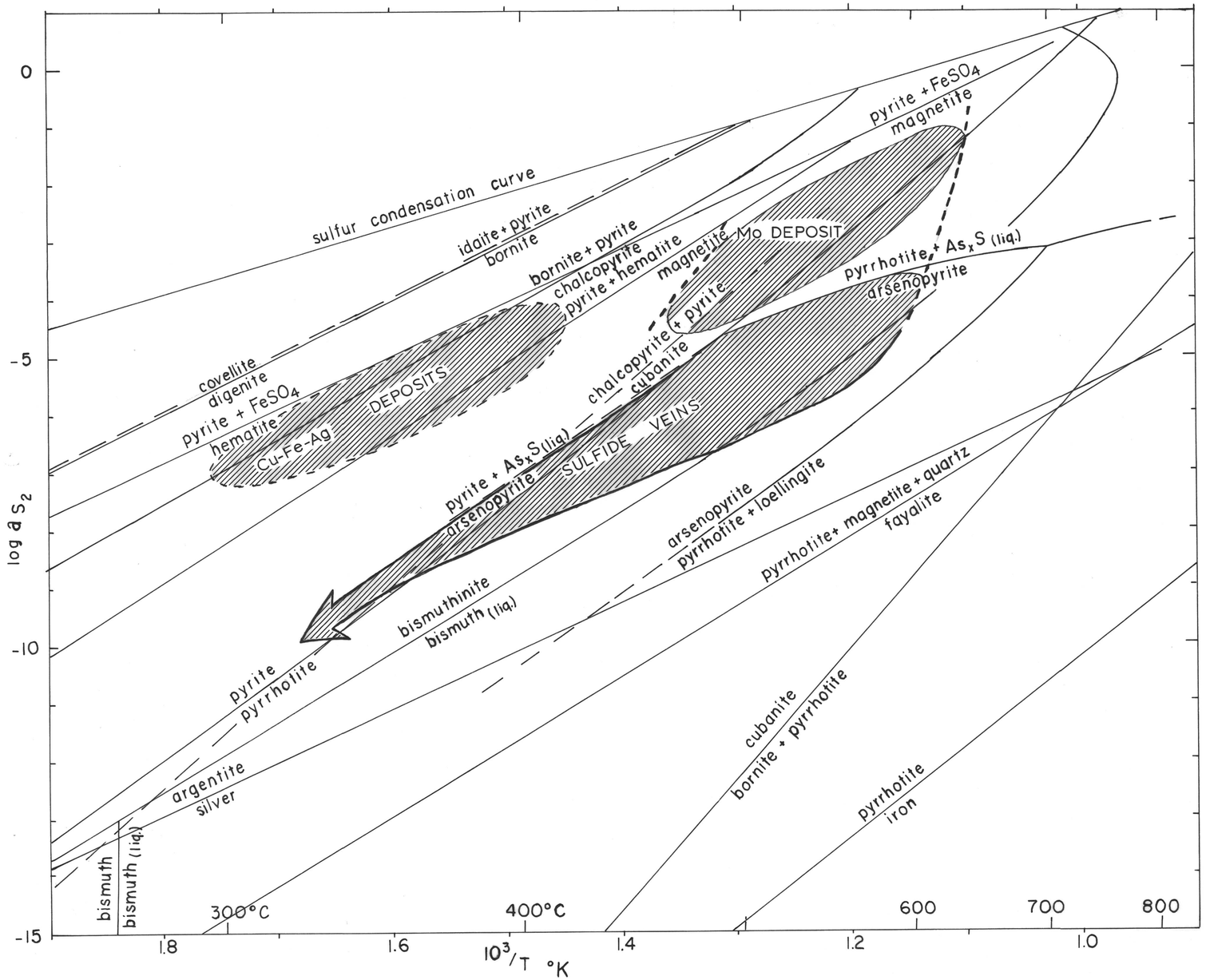

FIG.54-ACTIVITY OF S_2-TEMPERATURE DIAGRAM FOR SELECTED SULFIDATION REACTIONS (after Barton & Skinner,1967)

Shaded areas are the most probable aS_2-T regions for ores of the Hudson Bay Mtn. district.

inches
0 1 2
0 1 2 3 4 5
centimetres
BRITISH COLUMBIA GEOLOGICAL SURVEY
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.