

CHAPTER 5 COMPREHENSIVE DISCUSSION

5-1. Drilling

Since the conditions such as labor, rocks and supply in the explored areas are different from each other direct comparison is difficult. However, it was realized that a penetration rate of more than 20 metres could be achieved regardless of drilling depth, if the conditions were favorable. The average efficiencies were 7.91, 10.27 and 9.88 metres a shift (day) for the A3, C2 and E1 areas, respectively. More than 14 metres a day was achieved where the rock conditions were favorable.

In the A3 area, the fine open fractures, having been formed within basalt in the shallow depths, were negative to the efficiency of the drilling. Technical discussions and measures taken were insufficient until the completion of all the holes.

The common conditions in the E1 area were the deep oxidation zone and seriously fractured rocks. The casing operation and occasional cementing were unable to decrease the frequency of pulling the rods.

About parts and consumables should be mentioned since they effect to the supply conditions. The problems like short supply of imported goods caused by insufficient foreign currencies, superannuation of rigs, rods and batteries, shortage of parts such as diamond bits, coreprings and bearings and shortage of consumables such as cement and bentonite together with poor administration, resulted in decrease of the penetration rate.

5 -2. Geology

Area A3

It has been found that this area is underlain by basalt lava, dolerite, mafic tuff, basaltic lapillistone, basaltic lava, pelitic-felsic tuff alternations, basaltic lava in apparent ascending order, although the drill cores presented poor evidence on the stratigraphic succession. The sequences strike approximately east to west and dip south with an angle changing from 90 to 60 degrees. Intrusive rocks include biotite granite, plagioclase (quartz) porphyry and quartz porphyry, and the former two have emplaced concordant with the structure of the greenstone. The quartz porphyry seems to stretch north to south because it is limited to the deep part of the hole A3-2. (Fig.II-5-4 5)

Area C2

Dolerite, believed to be a facies of the basalt, occurs in holes and trenches and the relation between the two is intergradational. The inferred trend of the greenstone is NS strike and dip to the west at 50, approximately. The quartz porphyry dyke runs with a strike of N 60 to 70 E and a dip of 80 degrees to the NW. (Fig. II-5-5)

Area E1

The area drilled is underlain by andesite, green dacite with intercalated thin layer of BIF, andesite, green dacite, felsic tuff and alternations of andesite and green dacite. Identification of this sequence was based on eight drilling profiles including 12 holes.

The mineralization, identified by the surface investigation and encountered in the holes, is restricted to the upper part of the andesite formation, which forms the lowermost horizon of the sequences. The general strike and dip of these formations are N 50 E and 70 SE, respectively. However, the dip reverses locally to 80 NW. (Fig.II-5-6~8)

5 -3. Mineralization

Area A3

The mineralization of this area characterizes an assemblage of sulphide of pyrrhotite, arsenopyrite, marcasite instead of pyrite. The pyrrhotite was identified as a primary mineral under the microscope.

Au mineralization is sporadic. The quartz and silicified zone of 23.56 to 23.76 metres depth in the Hole A3-7 contained the maximum amount of gold, 41.21 g/t. Ag content varies from 1.5 to 6.5 g/t, regardless of the Au values. The arsenopyrite and low Ag contents are conformable with that of the As geochemical anomaly zone occurs directly below the south of the Au-anomaly zone. The weak Ag-anomaly zone has been formed separate to that of Au. The projected maximum gold yield on the surface coincides with the maximum value of 1.02 g/t of gold in the soil. (Fig.II-5-4~5)

Area C2

Ag- and As-anomalies are separated spatially from the Au-anomaly. The only mineralization intersected was a 3 cm wide quartz vein with pyrite and chalcopyrite. It gave an anomalous value of 1.87 g/t of Au. A sample from a quartz veinlet in the trench contained 1.59 g/t of Au. (Fig.II-5-5)

Area E1

The assay, resulted from the samples of gossan in the largest Au-anomaly zone C, gave the maximum 0.56 g/t of Au with an average of 0.2 g/t. No other geochemical anomalies were occurred in the zone. The network pyrite mineralization, encountered in the drill holes, gave mostly less than 0.10 g/t. Two samples from E1-8 and E1-9 were the only ones with more than 1 g/t of Au.

Three samples of gossan from Zone B gave high gold values. The drilling encountered a subsurface mineralization with the highest contents of Au and Ag, 53.37 g/t and 63.16 g/t, respectively. In the Zone B, the Au anomaly overlaps with those of As and Ag. Assay values of more than 1 g/t of Au came from the two holes E1-3 and E1-4, located in the east end of the zone.

No arsenopyrite was identified in the polished sections of core samples under the microscope and therefore, the source of As geochemical anomaly could not be identified.

Ag content varies with the Au content when the former is

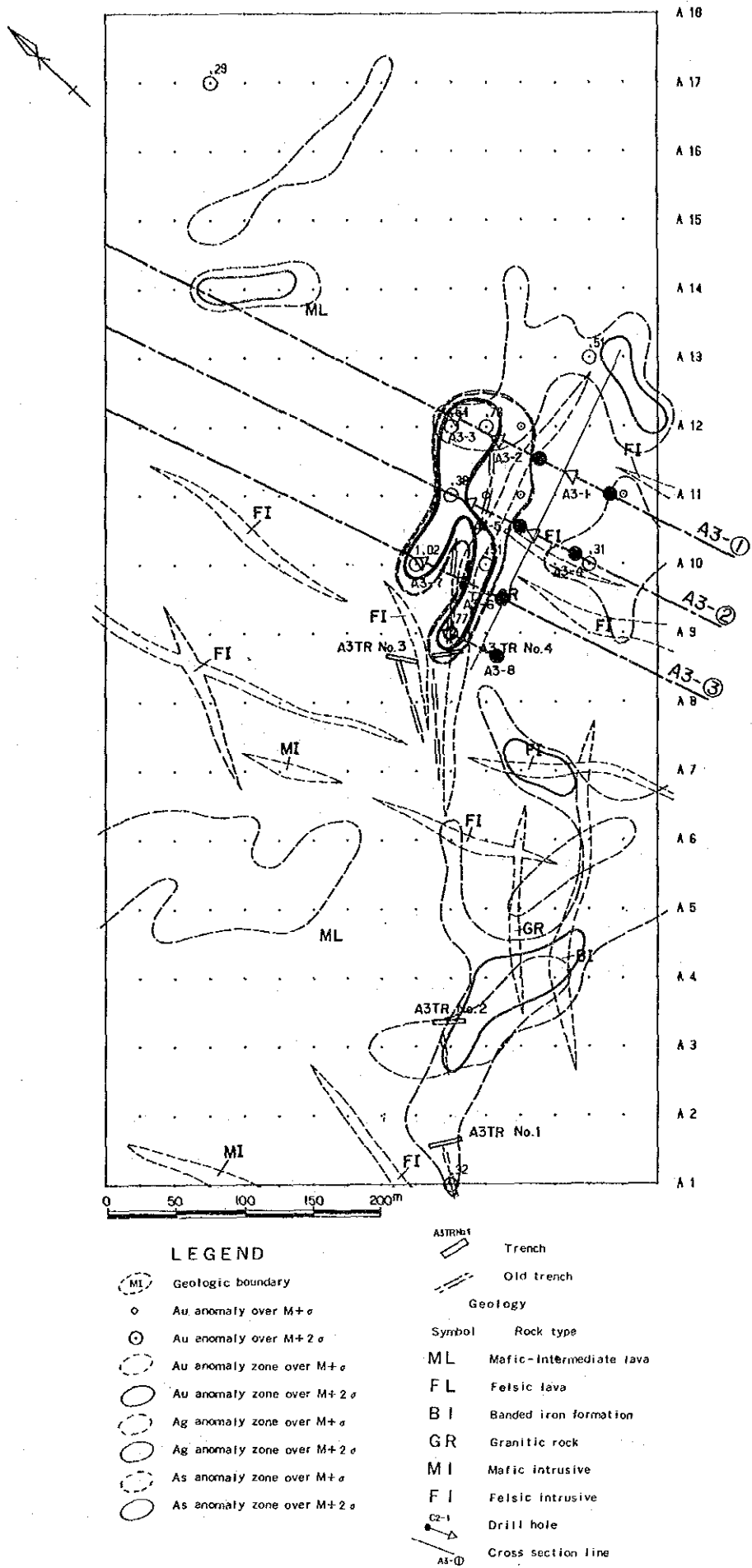
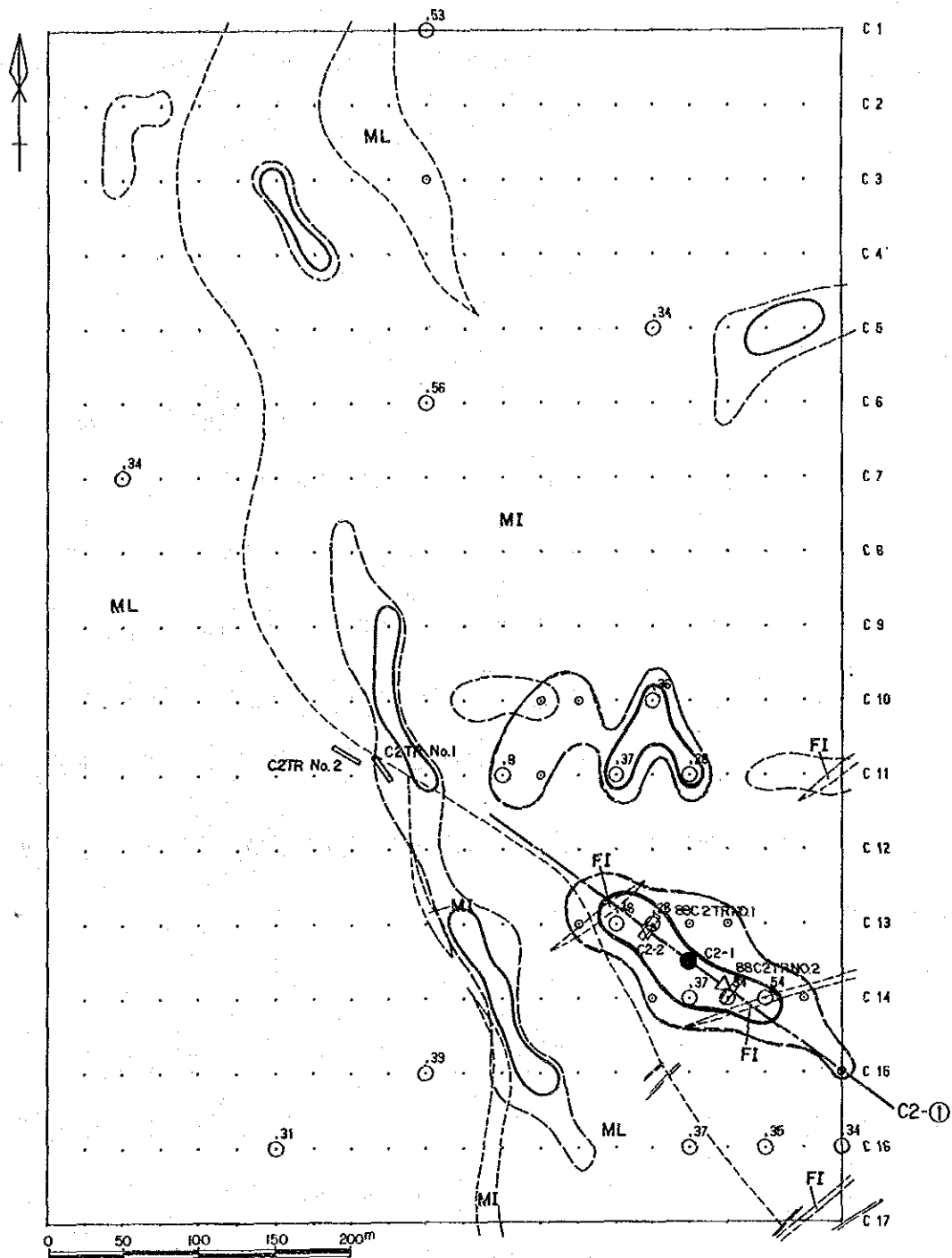
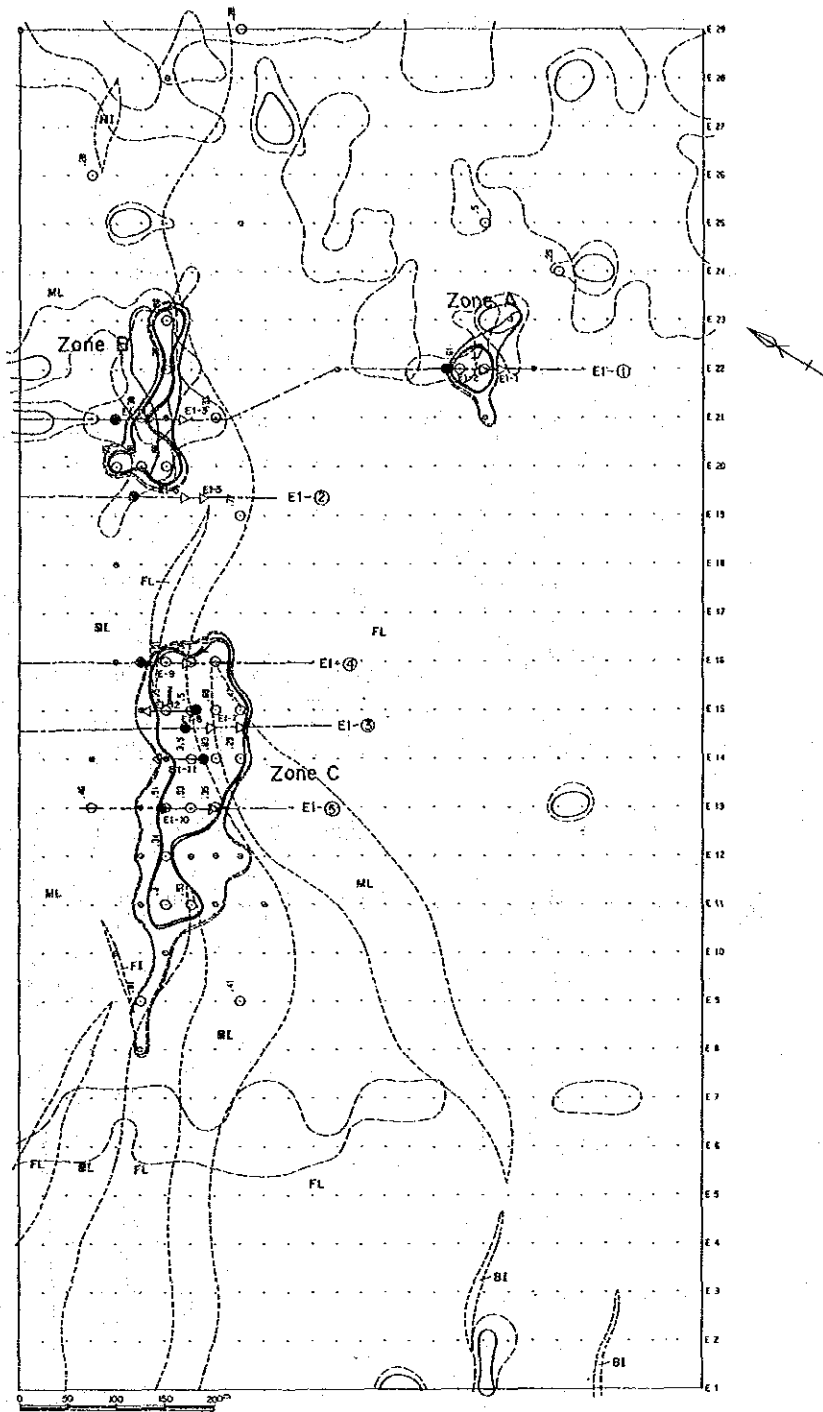


Fig. II-5-1 Location of Drill Hole and Cross Section of Geochemical Anomalies in Area A3



LEGEND	
	Geologic boundary
	Au anomaly over $M+\sigma$
	Au anomaly over $M+2\sigma$
	Au anomaly zone over $M+\sigma$
	Au anomaly zone over $M+2\sigma$
	Ag anomaly zone over $M+\sigma$
	Ag anomaly zone over $M+2\sigma$
	As anomaly zone over $M+\sigma$
	As anomaly zone over $M+2\sigma$
	Trench
	Old trench
Geology	
Symbol	Rock type
ML	Mafic-Intermediate lava
FL	Felsic lava
BI	Banded iron formation
GR	Granitic rock
MI	Mafic intrusive
FI	Felsic intrusive
	Drill hole
	Cross section line

Fig. II-5-2 Location of Drill Hole and Cross Section of Geochemical Anomalies in Area C2



LEGEND	
	Geologic boundary
	Au anomaly over M+σ
	Au anomaly over M+2σ
	Au anomaly zone over M+σ
	Au anomaly zone over M+2σ
	Ag anomaly zone over M+σ
	Ag anomaly zone over M+2σ
	As anomaly zone over M+σ
	As anomaly zone over M+2σ
	Trench
	Old trench
Geology	
Symbol	Rock type
ML	Mafic-Intermediate lava
FL	Felsic lava
BI	Banded iron formation
GR	Granitic rock
MI	Mafic intrusive
FI	Felsic Intrusive
	Drill hole
	Cross section line

Fig. II-5-3 Location of Drill Hole and Cross Section of Geochemical Anomalies in Area E1

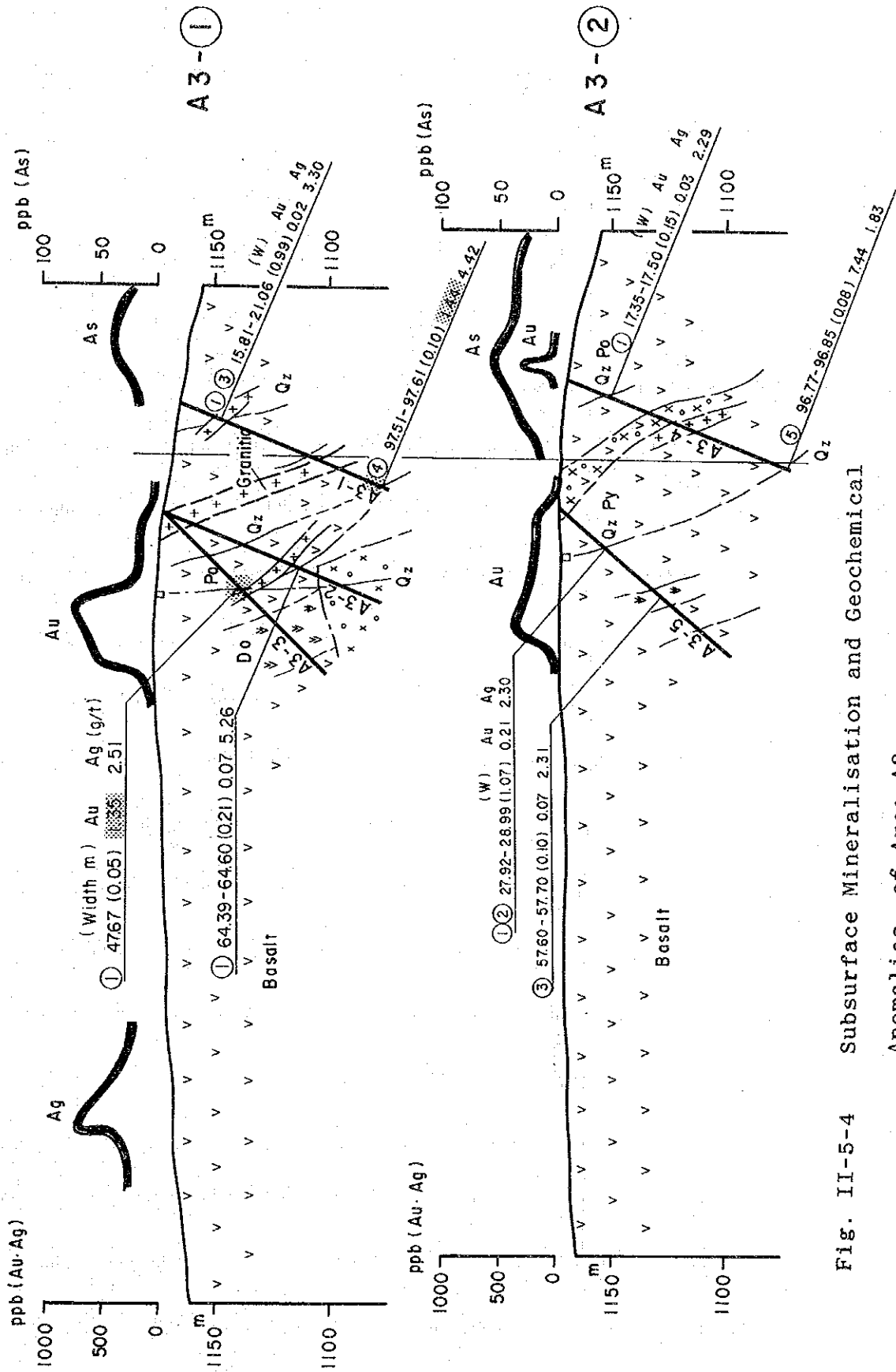


Fig. II-5-4 Subsurface Mineralisation and Geochemical Anomalies of Area A3

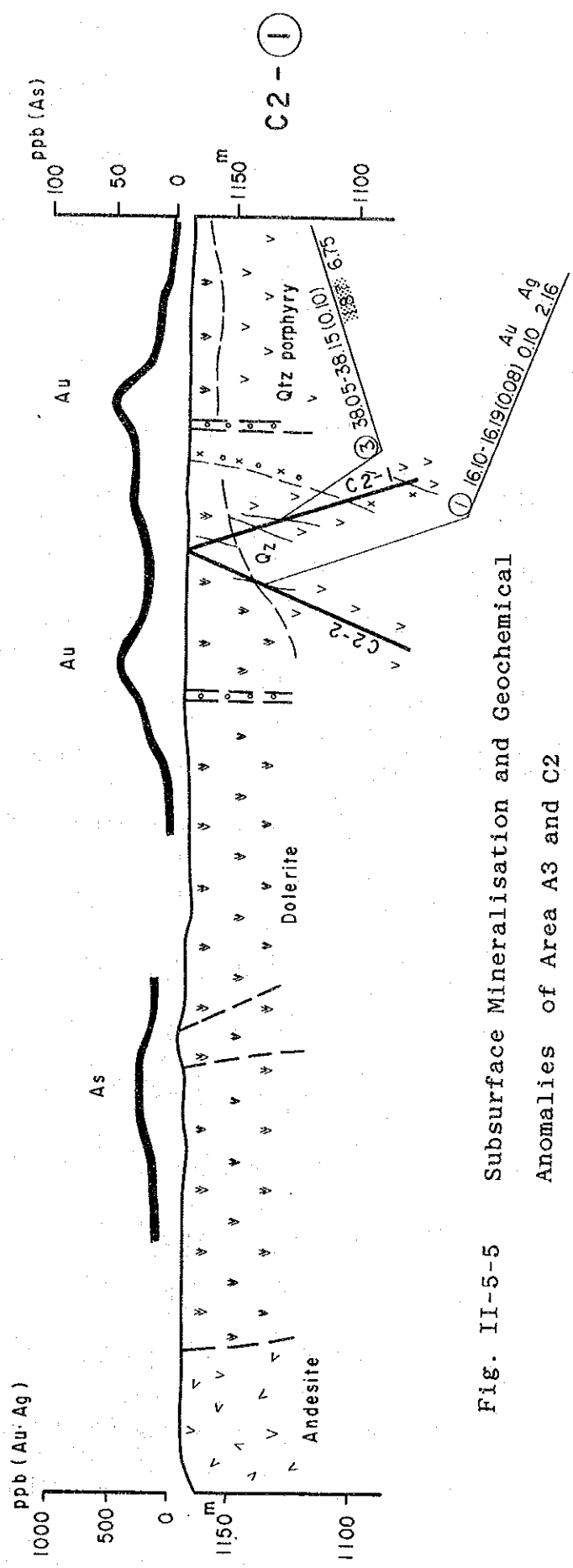
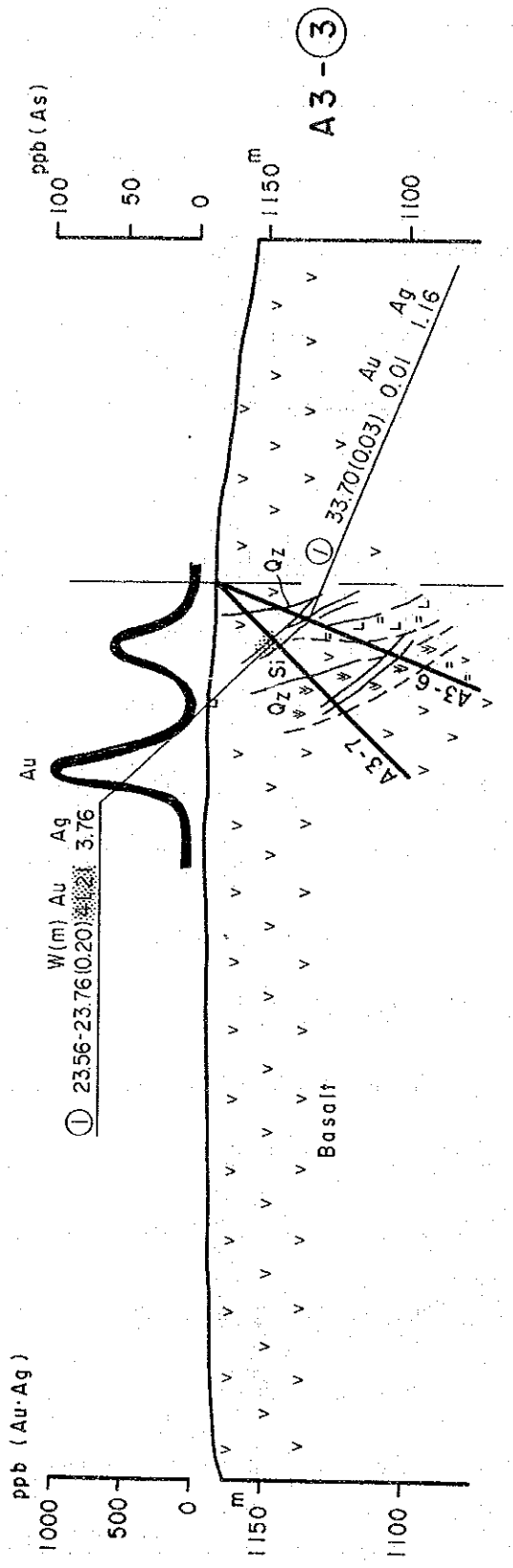


Fig. II-5-5 Subsurface Mineralisation and Geochemical Anomalies of Area A3 and C2

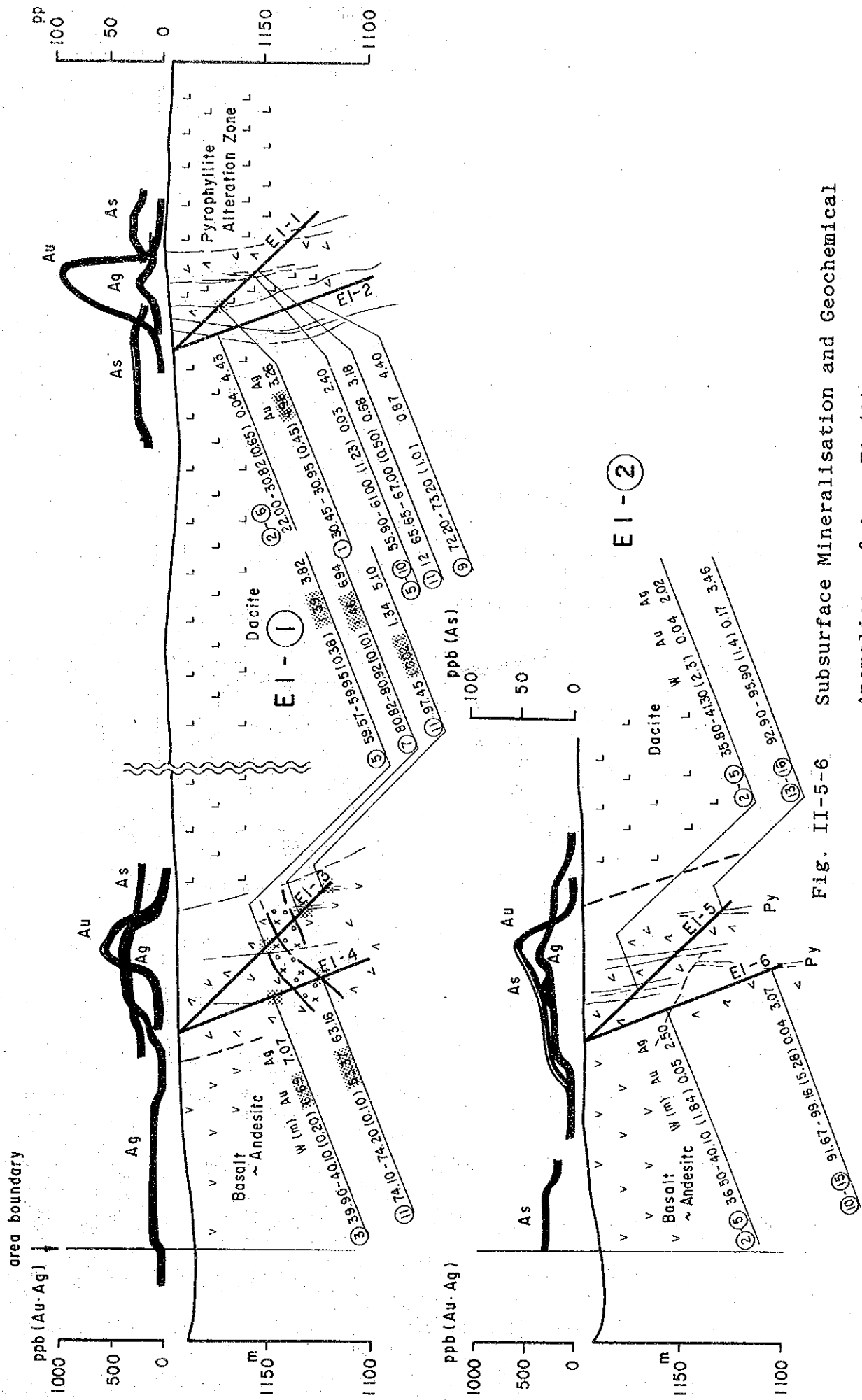


Fig. II-5-6 Subsurface Mineralisation and Geochemical Anomalies of Area E1 (1)

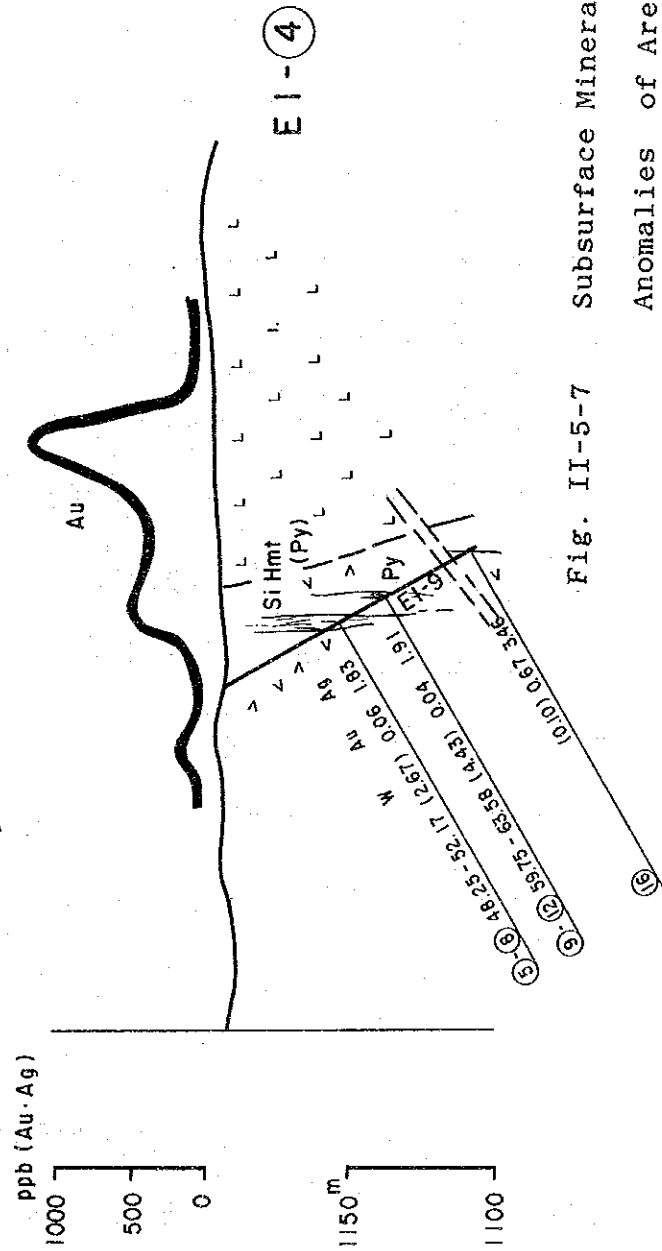
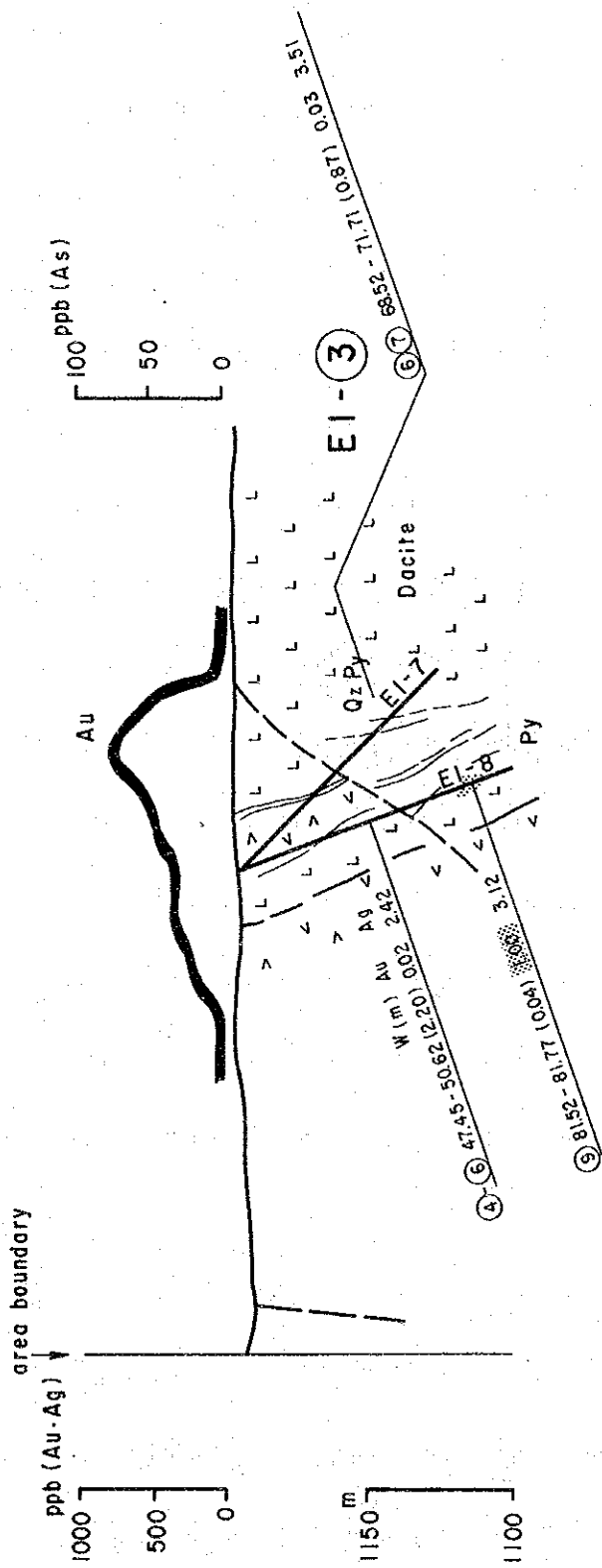


Fig. II-5-7 Subsurface Mineralisation and Geochemical Anomalies of Area E1 (2)

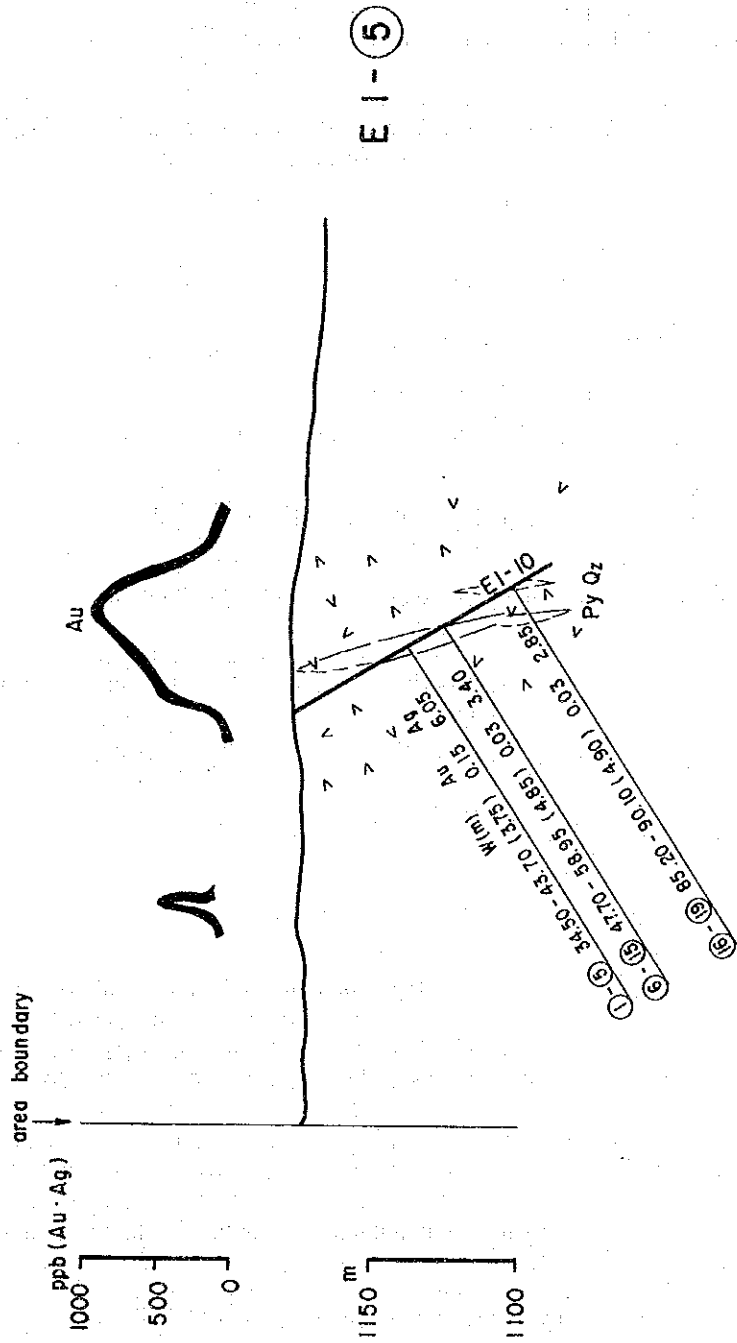


Fig. II-5-8 Subsurface Mineralisation and Geochemical Anomalies of Area E1 (3)

high.

Geochemical environment of the Zone A is similar to that of the Zone B. Zone A is small but the anomalies of three indicative elements overlap each other. No mineralized outcrops were mapped there. However, a core sample over 45 centimetres thick contained 4.96 g/t of Au. As a result, it was realized that the soil geochemical exploration is effective for the type of Au deposits which exist in the E1 area and the coincidence of anomalies of the indicative elements other than the Au is a favorable criteria for exploratory drilling. (Fig. II-5-6~8)

Table II-5-1 Gold Mineralisation Intersected by Drill Holes

Hole No.	Depth(m)	Type of Mineralisation	Assay Values(g/t)	
			Au	Ag
A3-2	97.51-97.61	Chl+Py,Po	1.44	4.42
A3-3	47.67-47.72	Qz,Cal+Po	1.35	2.51
A3-4	96.77-96.85	Qz+Py	7.44	1.83
A3-7	23.56-23.76	Qz+Si	41.21	3.70
C2-1	38.05-38.15	Qz+Py,Cp	1.87	6.75
E1-1	30.45-30.95	Hmt,Py	4.96	3.26
E1-3	59.57-59.95	Hmt	1.39	3.82
E1-3	97.45-97.47	Cal+Py	1.34	5.10
E1-4	39.90-40.10	Qz+Hmt	6.69	7.07
E1-4	74.10-74.20	Si+Py	53.37	63.16
E1-8	81.52-81.77	Py	1.00	3.12
E1-9	20.07	Si+Qz	1.28	4.25

5 -4. Homogenization Temperature of Fluid Inclusions

The homogenization temperatures of fluid inclusions contained in quartz and calcite from the drill core. Twenty seven polished samples were prepared out of twenty four core samples and fourteen of which, were available for temperature measurement. No fluid inclusions were found in the rest.

Appendix 6 shows the results of the measurement and Figure II-5-9 and 10 illustrate histogram of the temperatures. The histograms indicates comparatively low temperatures; not exceeding 200° C. Even in the case of small number of measurement the histograms show normal distribution.

The average temperature of Area A3, C2 and E1 is 155° C, 134° C and 138° C respectively. These are much lower than those of Dalny and Globe & Phoenix mine which gave the temperatures ranging from 210° to 300° C. The samples of the Rise Up mine lying on the extension of Area A3 gave 194° C in the laboratory test of Phase I.

The homogenization temperatures of the mineralization zones encountered in the drill holes are lower than those of the known ore deposits.

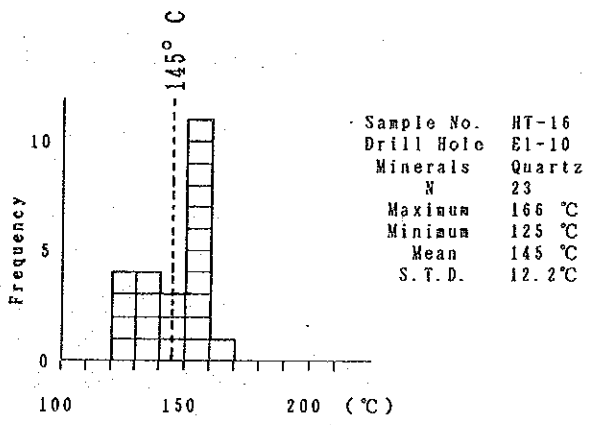
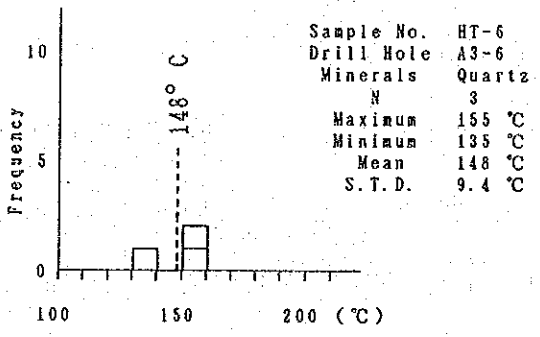
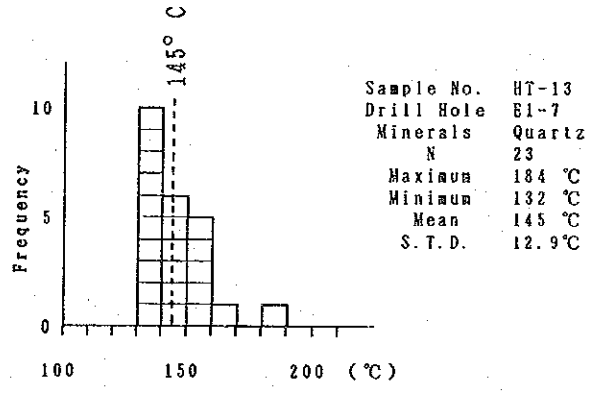
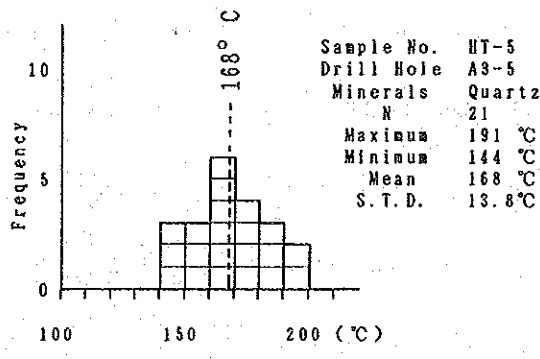
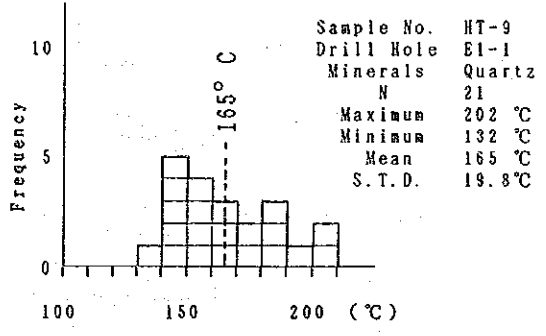
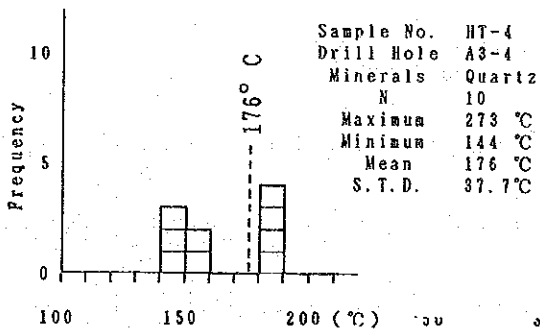
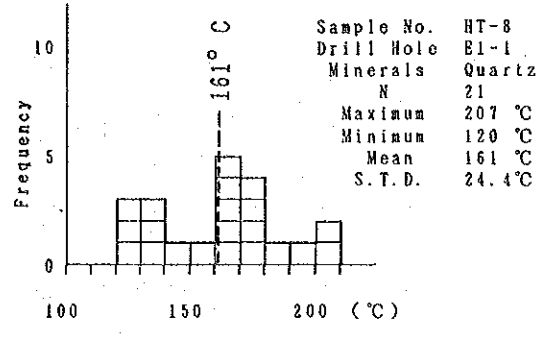
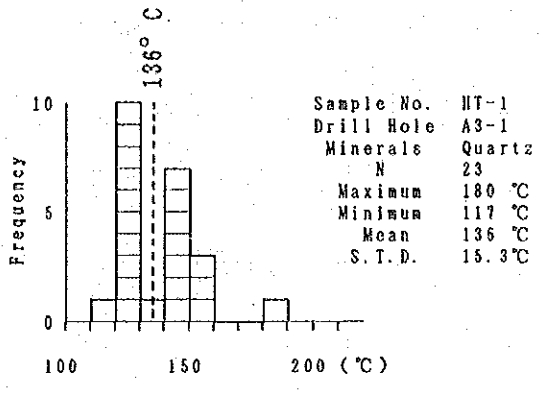


Fig. II-5-9 Histogram of Homogenization Temperatures of Fluid Inclusions (1)

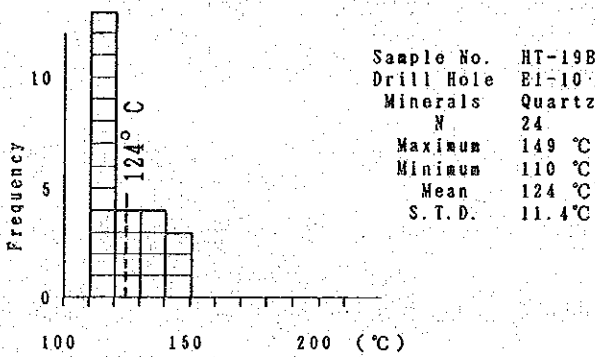
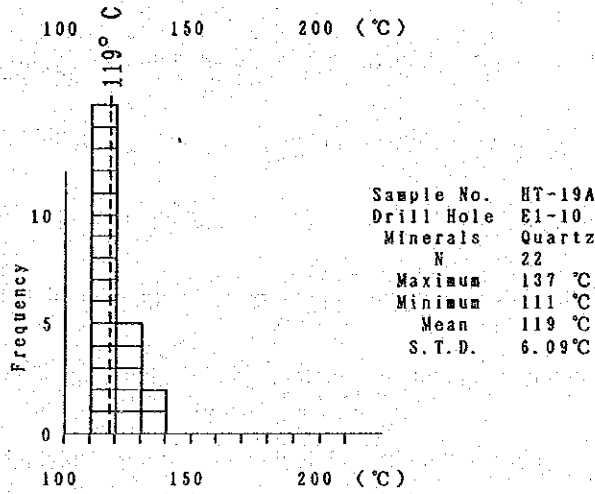
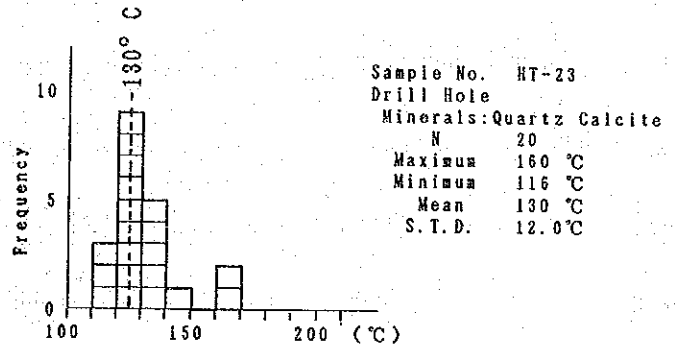
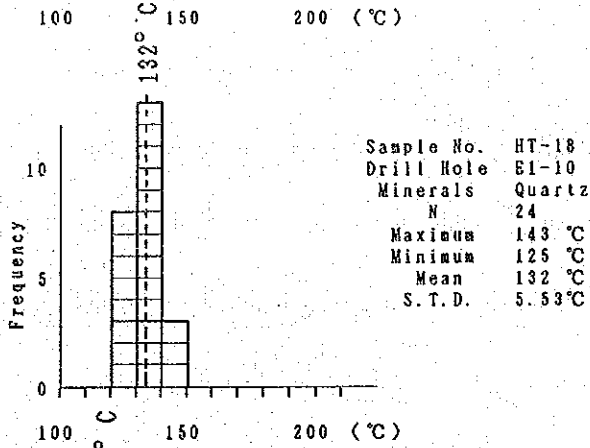
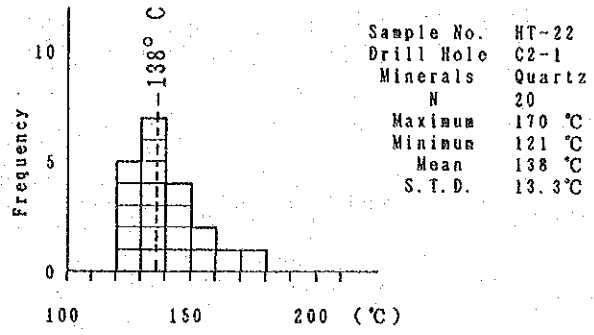
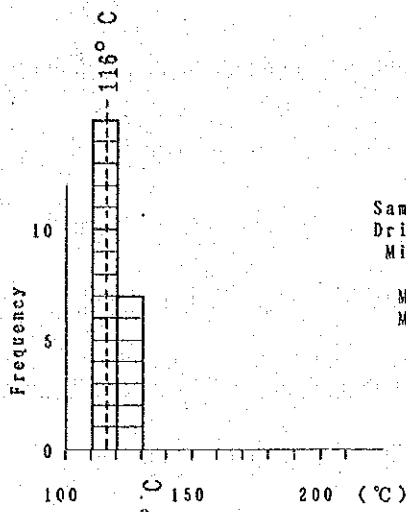
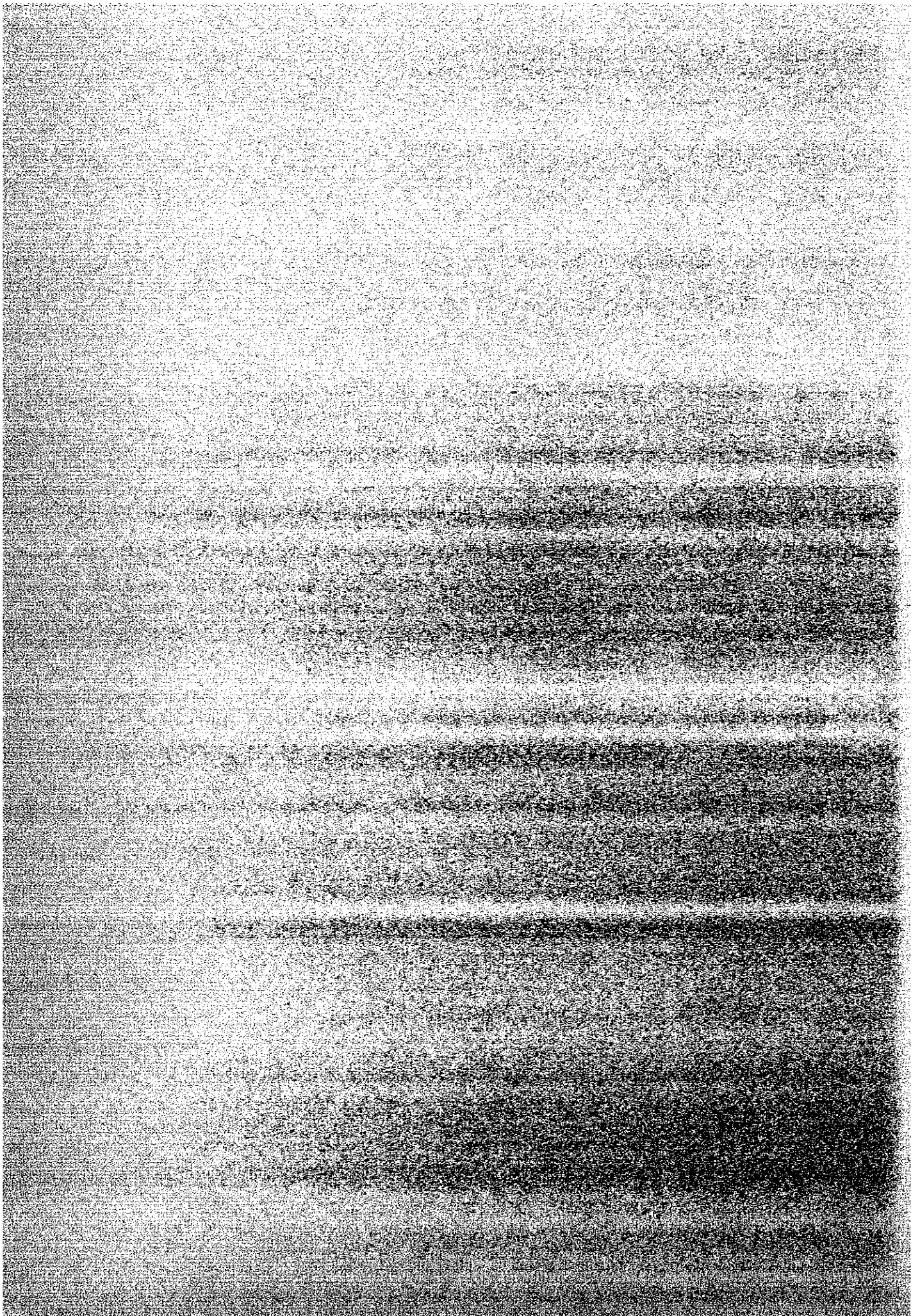


Fig. II-5-10 Histogram of Homogenization Temperatures of Fluid Inclusions (2)

PART III

CONCLUSIONS AND RECOMMENDATIONS



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CHAPTER 1 CONCLUSIONS

The exploration programme of this year included trenching and drilling in the three areas selected on the basis of the geochemical prospecting programme of the second year. The aim of this survey was to test the mineral potential of the areas which are dominated in vein or disseminated type gold ore. The results obtained from the programme are as follows. The drilling of 22 holes of totally 2,202.9 metres intersected gold bearing quartz veins in the A3 Area and gold bearing pyrite network mineralization in the E1 Area.

In Area A3 the quartz and silicified zones of the holes A3-7 and A3-4 contained 41.21 g/t and 7.44 g/t of Au, respectively. Microscopic examinations revealed the mineral assemblage, including arsenopyrite, and the relation between the soil geochemical anomalies of indicative elements and the subsurface mineralization.

Economic mineral potential was not evaluated to be very high because the encountered mineralized sections were as thin as 20 centimeters.

In Area E1 the network mineralization with moderate amount of sulphide, or hematite occurred in the oxidation zone. The maximum assay value was 53.37 g/t of Au. Fundamental statistics for the 176 samples, except for the maximum value, are as follows.

	Au of g/t	Ag of g/t
Arithmetic Mean :M	0.176	2.872
Standard Deviation :	0.659	1.889
M +	0.834	4.761
M + 2	1.493	6.651
Geometric Mean :M	0.044	2.592
Standard Deviation :	0.562	0.175
M +	0.161	3.874
M + 2	0.588	5.791

Only eight statistically anomalous values of more than 0.834 g/t Au, (M +), were found in the samples. Economic mineral potential of this area is still low because the low average grade. However, the survey indicated that the gold bearing mineralization was closely related to Au soil geochemical anomalies overlapped with Ag and As anomalies.

CHAPTER 2 RECOMMENDATIONS FOR FUTURE WORK

Based upon the results of the this year's investigation and the conclusions derived through discussions, the following guidelines are recommended for gold exploration in the future.

Soil geochemical exploration method for gold is effective and should be conducted jointly with outcrop mapping and in-situ panning. Selection of indicative elements is usually accompanies the technical problems such as analytical accuracy.

However, gold, antimony, arsenic and mercury are believed to be good pathfinders in geochemical prospecting for gold.

The problem of geochemical anomalies with multiple overlapping should be discussed during the area evaluation, prior to drilling.

A deeper drill hole to Area A3 and E1 will assist in the better establishment of the criteria for area selectin when the Au assay values and homogenization temperature from the deep, are collected.

ABBREVIATION

st	structure	Ser	sericite
Cal	calcite	car	carbonitization
Qz	quartz	Si	silicification
v	vein	seg	segregation
vl	veinlet	w=	width
spd	sulphide	calc	calcareous
irg	irregular	alt	alternation
Py	pyrite	Pl	plagioclase
imp	impregnation	Po	pyrrhotite
diss	dissemination	Chl	chlorite
ntw	network	brc	breccia
wht	white	pheno	phenocryst
grn	green	ppl	purple
gry	gray	fin	fine
blk	black	comp	compact
brn	brown	msv	massive
argil	argillization	homog	homogeneous
Pyr	pyrophyllite	hetr	heterogeneous
Lim	limonite	vert	vertical
gsn	gossan	fract	fracture
amyg	amygdal	drk	dark
sed	sediment	Mus	muscovite
intercal	intercalation		

Ap	aplite
Ad	andesite
Bs	basalt
Af	acid tuff
BIF	banded iron formation
Bt	basic tuff
Dc	dacite
Gr	granite
Qp	quartz porphyry
P	porphyrite
Ch	chert
Sch	pelitic sediment
Do	dolerite
La	laterite

AREA KADOMA Drill No. A3-3

AREA KADOMA Drill No. A3-4

AREA KADOMA Drill No. A3-3						AREA KADOMA Drill No. A3-4							
Depth (m)	Column	Geology				Sample No.	Depth (m)	Column	Geology				Sample No.
		Rock Name	Description	Alteration	Mineralization				Rock Name	Description	Alteration	Mineralization	
10	V V V V + + + +	Bs	Dk Gr Fe Comp			10	V V V V + + + +	Bs					
14.5	V V V V	Gr	Weathered Bt			17.0	V V V V	Bs	Dk Gr Fe Cal Ntw				
20	V V V V	Bs	Dk Gr Comp Partly Porous			20	V V V V	At	Fin Sintered Spotted Pt Cal Ntw			①	
27.0	V V V V	Bs	Cracked Filled with Cal Covered along Cal Ntw			23.95	V V V V	Bs					
28.0	V V V V		New Calcose		28.88 Dr Py V Widom 25°	29.95	V V V V						
30	V V V V		Periodic Layers exposed by Cal Seg V Sometimes Pt+Op			30	+ + + +	Gr	Fin-Med Gr Bt			②	
40	V V V V	Bt	Amyg Filled with Cal Calc Banding 240-30°			34.50	+ + + +		250° Ppl Contact Facies				
40	V V V V		Mass Comp Honey		02 V kg 270°	37.50	X O X O	Op	Grv Acid Intrusive Pl Qtz 1-2 m/m @ Porphyritic				
49.2	V V V V	Bt			4577 Gr VI 20°	40	X O X O						
50	+ + + +	Gr	Dk Gr Bt 23-30°		4767 Gr Cal V 1470 W 25cm 250°	49.50	X O X O	Op	270° Shad Contact Composite Dyke?				
51.60	V V V V	Bs				50	L = L	At	Dk Gr Br Pt Rich 250°				
54.32	V V V V	Bt	Shear Zone Fin Cal Ntw		5332 Gr VI 240°	50.14	+ + + +						
56.10	V V V V	Bs			3730 58.20 Cal V 250°	56	+ + + +	Gr					
57.0	V V V V	Bs			5877 Gr VI 260°	57	+ + + +						
60	V V V V	Bs	Bt Gr Bt - Fragmentary Tht 230° (Chart 7)		5575 Cal Qtz Py VI 260°	59.87	L = L	At	260° Gr Intw Partly Gr Seg by Ppl-Gn Pt Rich				
63.10	V V V V				6443 Qtz 4 Op 1750 6547 Gr Qtz 4 Pt V W 2 cm	60	L = L					③	
70	V V V V	Dc			7070 Gr VI 220° 7157 Gr V 240° W 1 m	63.40	L = L		270-60°			④	
80	V V V V		Vert Fract		7400 Gr Cal V W 1 cm 250°	70	V V V V						
87.0	V V V V				8330 Gr 4 Pt 39 m 250-60°	80	V V V V	Bs	Comp Cal Ntw				
88.5	V V V V	Bs	Boundary Feather Joint			87.0	V V V V						
90	V V V V	Sch	Ext Bt Sediment Pt Spotted		Op Film	88.5	V V V V						
92.0	V V V V	Bs				90	V V V V						
97.0	V V V V					93.55	+ + + +	Gr	245°				
98.5	V V V V					96.77	+ + + +						
100	V V V V	Bs	Music Orientation 250°		9828 Gr VI 230° 9900 Gr V W 1 m 265°	100	L = L	At	Dk Gr Banded Str 230° Ppl-Gn Site	Sl		⑤	

Fig. II-2-8 Drilling Log of Area A3 (2) A3-3, A3-4

AREA KADOMA Drill No. A3-7 m - m AREA KADOMA Drill No. A3-8 m - m

Depth (m)	Column	Geology				Sample No.	Depth (m)	Column	Geology				Sample No.
		Rock Name	Description	Alteration	Mineralization				Rock Name	Description	Alteration	Mineralization	
10	V V V V V V V V V V V V V V V + +	Bs	Dk Grn Fin Compost Poor Core Recovery Vert Jointing Filled with Carbonate $\angle 60^\circ$ Bl		-900 Oz V $\angle 30^\circ - 40^\circ$ W=0.5-10 cm	10	V V V V V V V V V V V V V V V + +	Bs	Massive Partly Foliated Dark Green Massive 9.57-9.92M Vainng Oz		-9.57-9.92 Py V 9.92-9.95 Oz $\angle 35^\circ$	①	
12.20	V V V V V V V V V V V V V V V V V V	Bs				12.22	V V V V V V V V V V V V V V V + +	Gr	Light Gry Bl, Mus Fin Grained Vain/Fractures $\angle 70-80^\circ$		-12.22 Fin Vainng		
20	V V V V V V V V V V V V V V V V V V	Bs				15.57	V V V V V V V V V V V V V V V + +	Bs	Marginal Faces Silicified Contact $\angle 40^\circ$ Gr-Grn		-17.23-27 St Band Spd		
23.76	X O X O X O X O X O X O O X O V V V	Op	Pt Porphyry 40% Pheno, Matrix 2%		-23.56 23.76 Gr V+Si Zone $\angle 0-30^\circ$	20	V V V V V V V V V V V V V V V + +	Bs	Fault				
28.13	X O X O X O X O X O X O V V V	Bl			-28.13-28.20 Oz V W=7 cm $\angle 15^\circ$	23.76	V V V V V V V V V V V V V V V + +	Gr	Fractures $\angle 70^\circ-80^\circ$				
30	V V V V V V V V V V V V V V V V V V	Bs	Gr, Brn Banded Pt Pheno(?) Partly Contained		-35.20 35.76 V+V+St +Est	30	V V V V V V V V V V V V V V V + +	Ap	Silicified Zone Spd Imp $\angle 40^\circ$ Contact Metamorphosed Bn-Grk Gr/Banding		-Gr V Imp Py Imp	②	
40	V V V V V V V V V V V V V V V V V V	Bl	Recrystallized Bl?		-36.90 36.95 Oz V W=1 cm $\angle 0^\circ$	33.00	V V V V V V V V V V V V V V V + +	Bs	Bs Disappears. Weak Thermal Effect				
46.06	V V V V V V V V V V V V V V V V V V	Bs	Pt Spotted Basic Tuff		-46.00-08 Oz V + St W=5 cm $\angle 50^\circ$	35.90	V V V V V V V V V V V V V V V + +	Bs	Horizontal Ap Vain				
47.30	V V V V V V V V V V V V V V V V V V	Bs/Do	Recrystallized Mafic Remnants Local Interbed of Brn Bl Layers			40	V V V V V V V V V V V V V V V + +	Bs	Banded St $\angle 45^\circ$ Bl Rich Layer $\angle 45^\circ$		-Pt Vt		
56.90	V V V V V V V V V V V V V V V V V V	Gr	$\angle 5-10^\circ$ Bl Rich, Oz Pheno Rare			41.10	V V V V V V V V V V V V V V V + +	Bs	Med, Oleritic				
59.50	V V V V V V V V V V V V V V V V V V	Do	Boundary Not Defined			43.84	V V V V V V V V V V V V V V V + +	Bs	Occasional Thin Vainng No Mineralized				
64.66	V V V V V V V V V V V V V V V V V V	Bs				50	V V V V V V V V V V V V V V V + +	Bs	Coarser Facies of Do Non Magnetic				
70	V V V V V V V V V V V V V V V V V V	Bs				56.05	V V V V V V V V V V V V V V V + +	Do/Bs	Fine Vainng		-Oz V W=1 cm $\angle 45^\circ$ Py		
80	V V V V V V V V V V V V V V V V V V	Bs	Pillow Bre Like Lava St		-69.90 Oz V $\angle 20^\circ$	60	V V V V V V V V V V V V V V V + +	Do/Bs					
90	V V V V V V V V V V V V V V V V V V	Bs			-78.14 Col Vt + Spd -80.60 Col V 80.80 $\angle 20^\circ$	67.50	V V V V V V V V V V V V V V V + +	Bs	Oz V At The Contact Gr/In $\angle 30^\circ$ Hb Gr Mafic Parallel to Contact		-Oz V Zone W=1.5 cm $\angle 50^\circ$ -Vain Crack (Py)		
100	V V V V V V V V V V V V V V V V V V	Stop			-86.85 Vainng Col V -88.25 -93.85 Col V	70	V V V V V V V V V V V V V V V + +	Gr			-74.57 Etc Oz Vt $\angle 50^\circ-90^\circ$ -76.22 W=4 cm Oz V $\angle 30^\circ$		
						73.40	V V V V V V V V V V V V V V V + +	Br			-74.57 Etc Oz Vt $\angle 50^\circ-90^\circ$ -76.22 W=4 cm Oz V $\angle 30^\circ$		
						74.00	V V V V V V V V V V V V V V V + +	Do/Bs			-88.87 Oz Zone -89.00 W=2 cm $\angle 25^\circ$ W=1.5 cm $\angle 25^\circ$		
						74.50	V V V V V V V V V V V V V V V + +	Bs			-92.05 Pt Vt -92.83 Oz Pt Py -93.70 Oz Pt Py -97.58 Oz Py W=2 cm $\angle 50^\circ$		

Fig. II-2-10 Drilling Log of Area A3 (4) A3-7, A3-8

AREA KADOMA Drill No. C2-1

AREA KADOMA Drill No. C2-2

Depth (m)	Column	Geology				Sample No.	Depth (m)	Column	Geology				Sample No.
		Rock Name	Description	Alteration	Mineralization				Rock Name	Description	Alteration	Mineralization	
0-10	Soil					1	Soil						
10-16.50	Do					1	Gravel						
16.50-20	Do					1	Weathered						
20-24.90	Bs					1	Dk Gr Med Do/Bs						
24.90-30	Do		240°			1	Do						
30-33.30	Do		Py Dissected			2	Do						
33.30-40	Do		Forty Crs Do No Obvious Boundary			3	Do						
40-50	Bs		Mgt Rch			3	Do						
50-56.30	Do		Es VI			3	Bs						
56.30-60	Do		240° Oxidic			3	Do						
60-63.30	Bs					3	Do						
63.30-66.75	Op		260°			3	Do						
66.75-67.92	Bs		250°			3	Do						
67.92-69.30	Op		230°			3	Do						
69.30-70.50	Op		250°			3	Do						
70.50-72.25	Bs					3	Do						
72.25-77.50	Bs					3	Do						
77.50-78.75	Op		250°-70°			3	Do						
78.75-80.34	Bs					3	Do						
80.34-86.64	Op		240°			3	Do						
86.64-87.25	Bs		Dk Gr Fm			3	Do						
87.25-90	Op		25°			3	Do						
90-94.75	Bs		230°			3	Do						
94.75-95.00	Op		260°			3	Do						
95.00-99.20	Bs		Light Gy			3	Do						
99.20-100	Op		Fine Chilled Margh			3	Do						
100	Stop		245°			3	Do						
			95.50-96.60 Col. Or VI			3	Do						
			Stop			3	Do						

Fig. II-3-2 Drilling Log of Area C2 C2-1, C2-2

AREA KADOMA Drill No. E1-1

AREA KADOMA Drill No. E1-2

AREA KADOMA Drill No. E1-1					AREA KADOMA Drill No. E1-2						
Depth (m)	Column	Geology			Sample No.	Depth (m)	Column	Geology			Sample No.
		Rock Name	Description	Alteration				Mineralization	Rock Name	Description	
10		Soil					Soil				
10		Dc	Grn Altered	Py		337		Weathered Red Brn Oz Pheno Visible			
11.75											
20		At		Py+Oz Vi		10	Dc	Dk - Light Grn Mx	966-86 Si No Py	①	
22.5						11.50		260°			
30		Ad	Lim Partly			14.90	At	Red Cream Pyr	Py		
32.15						19.20	Dc	Hst Nte			
40						20					
40		Dc	Milky Wn - Cream Yelow With Cal Nte			30	At	Lim Band 260° Si Fe			
50						31.80		270°			
53.75						40	Ad	Grn Reddish Ordized Ad			
60		Ad	Brnsh Grp			44.60		Grn Grn Fin Cal Vi	Cor		
70						50		Brn Tex locally			
76.36		Ad	Dk Spotted Grn			53.40		275°			
78.97						56.40					
80		Dc	Oz Pheno	Chr Vi		60					
86.30						61.10					
90		Ad				70					
93.35		Dc				76.36					
96.50						78.97					
100		De	Stop			80	Ad				

Fig. II-4-11 Drilling Log of Area E1 (1) E1-1, E1-2

AREA KADOMA Drill No. E1-3

AREA KADOMA Drill No. E1-4

Depth (m)	Column	Geology				Sample No.	Depth (m)	Column	Geology				Sample No.
		Rock Name	Description	Alteration	Mineralization				Rock Name	Description	Alteration	Mineralization	
100								Soil					
7.53	Lo						220	Ad					
8.20	Soil						600	Stlime					
10	Lo	Weathered Ad					10						
		Ad					180						
20		Silt					1755						
							20	Ad					
							2499						
30		Reddish Brn Weathered Oxidation Zone					30				Red Nm		
		Ad									Nm1 Nm		
40							40						
50							40						
52.0							4500						
52.5							4575						
54.00							50	Ad					
54.50													
60							60						
100													
55.66													
70							70						
76.8													
80							80						
90							90						
100							100						

Fig. II-4-12 Drilling Log of Area E1 (2) E1-3, E1-4

AREA KADOMA Drill No. E1-7

AREA KADOMA Drill No. E1-8

Depth (m)	Column	Geology				Sample No.	Depth (m)	Column	Geology				Sample No.
		Rock Name	Description	Alteration	Mineralization				Rock Name	Description	Alteration	Mineralization	
3.00		Soil						Soil	Reddish Br.				
10.00		Ld	Reddish-Bk. Iron Stripe Microsh. Lim. Mat.					Ld	Weathered Completely to Laterite With Black Iron Oxide				
12.00		Soil	Slime						Weathered Brown Red Poros. Basalt/Andesite				
20.00		Bs (Ad)	Altered/Weathered Basalt or Andesite, Grn-Reddish Dk Grn with Small Vesicles 250° Ven.	White Clay Mineral Ven.				Bs/Ad	Grnsh Poros. Facies				
32.80			Andesite Poros. Vesicles 2.0cm Ø Non Magnetic										
34.30			Sheared Zone	Clay Mineral									
35.20		At	Reddish Brn. with Whit Spot Bk Iron Stripe 240°-60°	Py		1			Sheared Mafic Altered to Chl Gry-Red Brn + Chl Spots	Appl CN			
37.80			Poros. Filled with Fe-Ox Dk Pheno 0.5cm Ø Distinct Boundary 20-10°		37.80 Py Film in Cracks 39.40	2			Boundary 220° Dk Grn Poros.				
39.40			Small Laths of Si-Rock Mineraloid with Py Dk Grn-Gry Ox Pheno Visible Pl Altered		43.88 Col Ven 44.88	3			Gry Grn Ox Pheno Visible				
40.00		Dc	Vert Col Veining Oxidized	Si	43.85 45.05 46.16 47.23 47.65 48.82	4			Intercal. Perona Andesite Facies				
40.33			Fault / Veining Intensely Oxidized			5							
49.41			Grysh Grn Mat, Silicified			6							
50.00					54.5 Col Ven	7							
59.80			Si-Veining Frac Filled With Oxidized Mineral		59.25 Py 61.70 Py Cracks 62.41 Py Ox Wh W/O.05 cm	8							
60.20						9							
68.32						10							
70.00		Br St	Ox Veining Ntw		70.39 Ox Wh Ch 71.71 Ox Py 72.80 Silicified W/Fe 74.88 Ox Py 240°	11							
71.71						12							
80.00		Dc		Si + Chl Nat Work	79.20-25 Col Ven 250°	13							
80.00						14							
86.40						15							
87.20						16							
90.00		Si + Py		Si	94.15 260° Wt Clay Zone	17							
90.00					95.50-55 Col Ven 250°	18							
100.00		Carbonate Cut Ox V Slip				19							
100.00						20							

Fig. II-4-14 Drilling Log of Area E1 (4) E1-7, E1-8

AREA KADOMA Drill No. E1-9

AREA KADOMA Drill No. E1-10

Depth (m)	Column	Geology				Sample No.	Depth (m)	Column	Geology				Sample No.
		Rock Name	Description	Alteration	Mineralization				Rock Name	Description	Alteration	Mineralization	
0	Soil						0	Soil					
10	Ad	Laticite		Argl in Por (fak)		1	10	La	Weathered Rock / Laticite, Bot Work of Py Mineralization				
20	Ad	Strong Qt Zone			2007 ug Qz V	1	20	Ad	Partly Sheared Argl Laticite Hnt Grn Argl, Whi Pl Oz Pheno Porc	White Clay Oz Vining Oxidized Zone			
30	Ad	Red Sh - Grn Pl Phenol Hntw, Porc		Whi Arg Along Cracks		2	30	Ad	Brn Grn Andesite Lath - Pyll Lithoface Grnsh Gry		Py Dis 28.40 Fe-Ox V 260° Witen		
40					3951 514 Py (Ox to Nov)	2	40						
50					Py Imp + Si 4580 Hnt V W-1-2cm 4772 Hnt 4825-5000 Py Imp (Ox to Nov) 5031-30 5177 Hnt Oq VI 230°	3	50						
51.64 52.17		Sheard		Arg		4	51.64 52.17						
53.00		Oz Hnt				5	53.00						
60		Oz Pl Boat Plane Spills				6	60						
63.50		Oz Hnt			61.33 Hnt Hnt Oz VI (Py)	7	63.50						
70	Ad	Grn Gry with Fin Hnt Mh Partly Oz (± 20cm) Oz Gr Mafics, Amyg Cal Partly Py Imp / VI Network			74.50 Col V, Witen 270°	8	70	Ad	Brn Zone Amyg Tex Bs / Ad				
76.58		Pl Porphyric Facies				9	76.58						
86.60 87.19		Sheard Zone Hnt Chilled Margin, Bonding 240°		Hnt	Oz V 260°	10	86.60 87.19						
90	Op	Pl Oz Porphy Pl Am/nd Oz Rora				11	90						
93.80		260°				12	93.80						
100	Ad	Py VI Partly Ox Gry Grn			96.86-96 Oz Py V W=5cm 260°	13	100	Ad	Gry Grn Fin Vesice Carbonated Mn Comp Py Imp Partly Basaltic in Part				
	Stop					14							
						15							
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Fig. II-4-15 Drilling Log of Area E1 (5) E1-9, E1-10

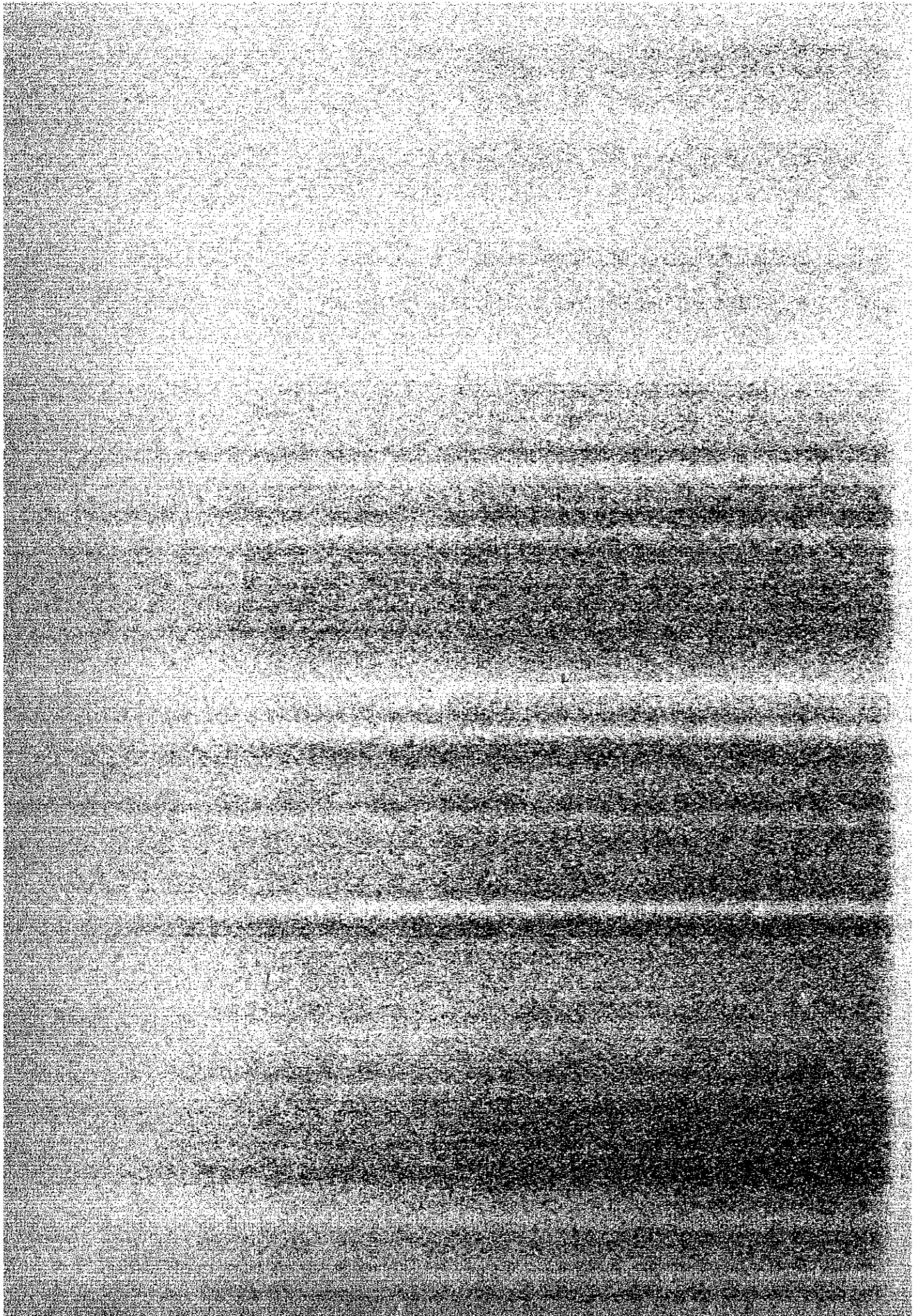
AREA KADOMA Drill No. E1-11

AREA KADOMA Drill No. E1-12

AREA KADOMA Drill No. E1-11					AREA KADOMA Drill No. E1-12						
Depth (m)	Column	Geology			Sample No.	Depth (m)	Column	Geology			Sample No.
		Rock Name	Description	Alteration				Mineralization	Rock Name	Description	
0-10	Soil/La					Soil					
10-20	Ad	Weathered Red Brn Yellow Clay	White Clay Altered	Ox Zone	3040-35	Ad	1455 1752	S ₁			
20-30		Grey. Red Crn. Fin. Non Weathered			Grey. Gln. Med. Partly Porous						
30-40	Ad	Vertical Gash		Ox Zone	3260-3300	Ad	3090-3120	W ₁ Arg ₁	H ₁ Ni ₁ V	①	
40-50		Fractured Intensely			Fractured Zone					3240-3280	2460-30
50-60	Ad	Grey Gln. Amps			4447	Op		Co ₁			
60-70		Fin. W ₁ Ps. Ph ₁ Ad			Py Imp. or N ₁ Loc ₁					5068	5307
70-80	Ad	Fractured Zone			5243	Op	260°				
80-90		Py Imp. or N ₁ Loc ₁			Py Imp. or N ₁ Loc ₁					5354	5307
90-100	Ad	Amys Ad/Br			5682	Op	280-90°				
100		Med. W ₁ Sp ₁ Ad Stop			Py Imp. or N ₁ Loc ₁					5767	725-30 Py Vi

Fig. II-4-16 Drilling Log of Area E1 (6) E1-11, E1-12

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