CHAPTER 5 DISCUSSIONS

The geology of this area comprises Devrekani Metamorphics the basement and the Çangal Meta-ophiolite. The metamorphism of the basement Devrekani is of high-grade and gneiss is formed while that of the Çangal is of low-grade resulting in the formation of green schist. The meta-ophiolite occupies about 70% of the total area. The rocks constituting this meta-ophiolite are serpentine, metabasalt, and pelitic schist. The metabasalt and green schist of basaltic tuff origin comprises the major part of the meta-ophiolite. The basaltic rocks are the products of deep seafloor volcanism and they have very wide lateral distribution, in this case over 100km in the east-west direction. Metabasalt is dominant in the western half of the area, while green schist to pelitic schist is the major constituent in the east. The geologic structure is difficult to determine because of the metamorphism. It is, however, inferred that the beds are generally steeply dipping and extend in the east-west direction.

Syngenetic mineralization is observed in the basalt-dominant localities. It consists of mainly pyrite dissemination with chalcopyrite and minor sphalerite. It is mostly accompanied by silicification and argillization. Silicification product is quartz. The major products of argillization are sericite and chlorite, and as the original rock is mafic, epidote, calcite, carbonates, titanium minerals also occur in significant amounts. They occur as lenses, beds, dissemination and others.

The Cozoğlu, Cünür, and the Alayürek Mineralization, which were surveyed in semi-detail during the present phase, are all metamorphosed mineralized zones of Besshi-type. It is not clear whether we confirmed the top of the zones or the eroded bottom. But as they are all of syngenetic formation, the next step will be to confirm the three-dimensional extent of the mineralized zones.

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

6-1 Conclusions

Existing data and information on the geology and mineral resources of the Taşköprü Zone were analyzed and interpreted. Geological reconnaissance of the area was planned and implemented on the basis of the results of the above studies.

The geological work covered an area of 559km^2, 1/25,000 scale topographic map was used for the reconnaissance. Pre-Lias Çangal Meta-ophiolite is dominant in the survey zone. The ophiolite is metamorphosed to green schist facies and the mafic volcanic rocks became metabasalts, pyroclastics to green schist, and the pelitic rocks formed towards the end of the ophiolite activity were metamorphosed to pelitic schist. Mineral showings occur in the metabasalts and green schist and is accompanied by silicification and argillization. The following three localities were extracted as being promising for future metal exploration from the results of studies of previous data and the present geological reconnaissance. These localities were surveyed in semi-detail on the scale of 1/5,000.

a. Cozoğlu	Cyprus-type metamorphic mineralization
b. Cünür	Cyprus-type metamorphic mineralization
c. Alayürek	Cyprus-type metamorphic mineralization

a. Cozoğlu Mineralized Zones

Two openings to old adits and waste dumps were found in an area of 350 x 350m in metabasalt. In one of the old adits, there is a 10cm thick quartz vein with copper oxide stains and 3m wide gossan, but the exposure is not good. Geophysical prospecting is necessary for confirming the state of mineralization.

b. Cünür Mineralized Zones

The zones are located in metabasalt and green schist. There are extensive gossan occurrences (500 x 60m - 100 x 10m) in eight localities of this zone. Pyrite veinlets were found at one of the gossan outcrops and copper oxide smears on the host rock at another. There are wide silicified zones around these gossan occurrences and further geochemical and geophysical exploration are warranted.

c. Alayürek Mineralized Zones

These zones are developed in the green schist and metabasalt. Pyrite dissemination occurs over 600x50m and chalcopyrite was found in some parts of the mineralized zones. High-grade copper ore samples were collected during previous surveys, but during the present work, such samples were not found. Although the metamorphism of the host rocks is not strong, further geochemical and geophysical exploration are warranted.

From the above results, it is believed that the green schist and metabasalt extend in the NEE-SWW direction with fairly steep dip. And the mineralized zones are expected to extend further downward. Although the surface

manifestation of mineralization is relatively weak, the Besshi-type mineralization becomes stronger downward. In order to confirm the subsurface conditions of mineralization, further geochemical and geophysical exploration are warranted in these mineralized zones.

6-2 Recommendations for the Second Phase Survey

It is recommended that the following be carried out in the Taşköprü Zone during the second phase of this project.

Geophysical prospecting in the Cozoğlu Mineralized Zones. This will provide knowledge regarding the mineralization in deeper zones.

Geochemical and geophysical prospecting in both the Cünür and Alayürek Mineralized Zones. Delineate the strong mineral showings by geochemical work and delineate the low resistivity zone and FE anomalies by geophysics.

PART 5 DIKMENDAG ZONE

PART 5 DIKMENDAĞ ZONE

CHAPTER 1 GEOLOGY OF THE DIKMENDAG ZONE

1-1 Outline of Geology

The geology of this area comprises the Lias Küre Formation and the Cretaceous Köstekciler and Satıköy Formations in ascending order. The Küre Formation covers most of the zone. Dikmendağ Zone has mountainous topography without any flat areas, and geologic units younger than Tertiary are not developed. Most of the Küre Formation consists of sedimentary rocks with some basalts and minor intrusive bodies. Fossils were not found in the survey area, but the correlation from the lithology is shown in Table 1-23. A schematic column, and a geological map and a cross section are shown in Figures 5-1 and 5-2.

1-2 Stratigraphy

1-2-1 Küre Formation

Type locality:It is very similar to the formation in the Küre Mine Zone.

Thickness:Over 1,000m.

Distribution:Basalts occur mostly between Masköy and Furuncuk Villages, while alternation of black shale, siltstone, and fine sandstone occur widely on the western side of the Dikmendağ Zone.

Lithology and occurrence:The rocks of this formation are sedimentary rocks composed of black shale, siltstone, and fine-grade sandstone, and basaltic rocks. There are no fossils in the sedimentary rocks. The attitude of the sedimentary units varies considerably and the dip is generally in the range of 60°-70°. The basaltic rocks are very similar to those of the Küre Area with characteristics of spilite and diabase. They have porphyritic texture and the chemical composition is somewhat felsic; close to that of andesite. Basalt lava is intercalated in the sedimentary rocks and pyrite dissemination is observed in them at Öcür Village.

Stratigraphic relations:This formation occupies the lowermost horizon of the area and is overlain unconformably by Köstekciler Formation.

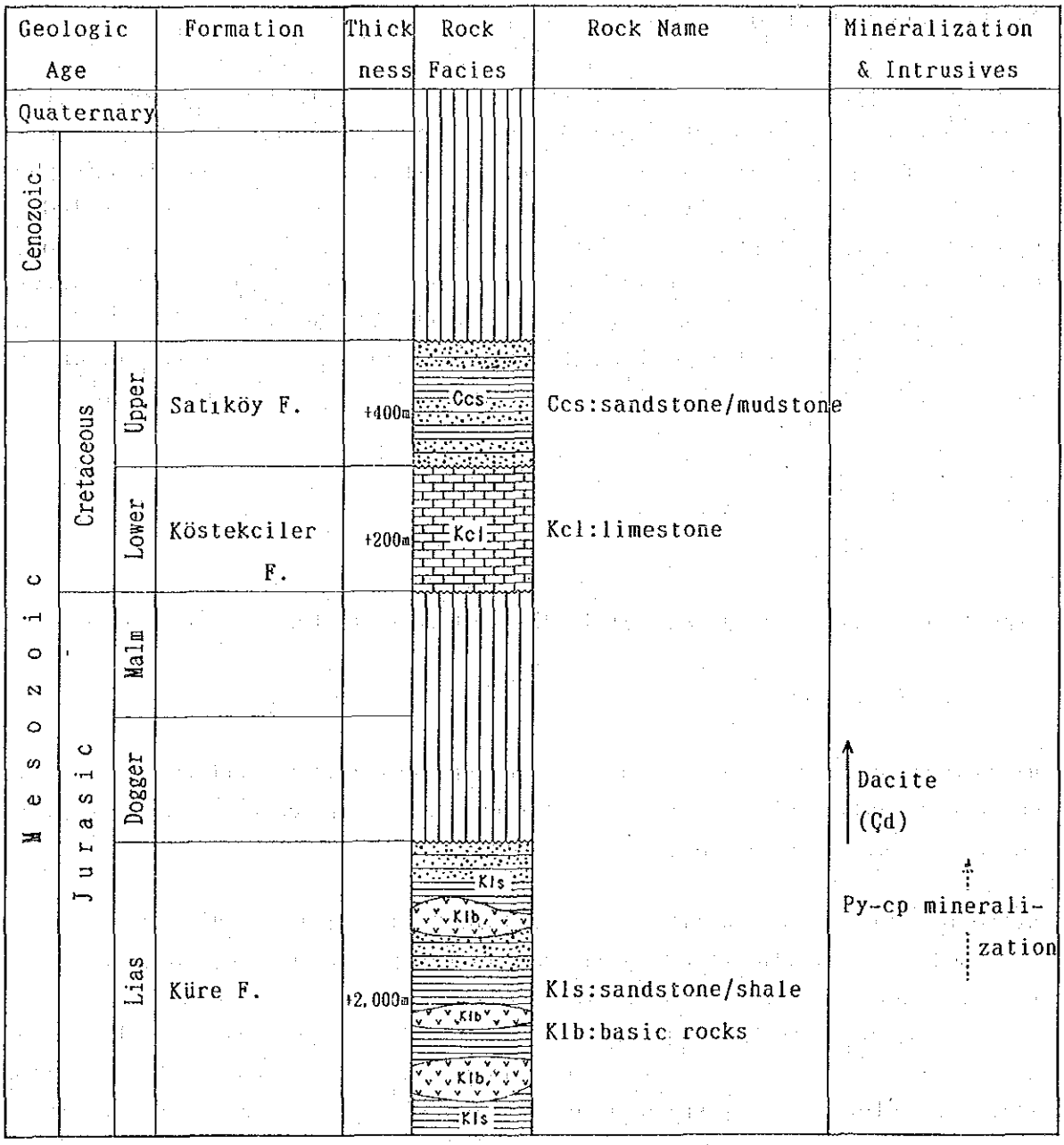
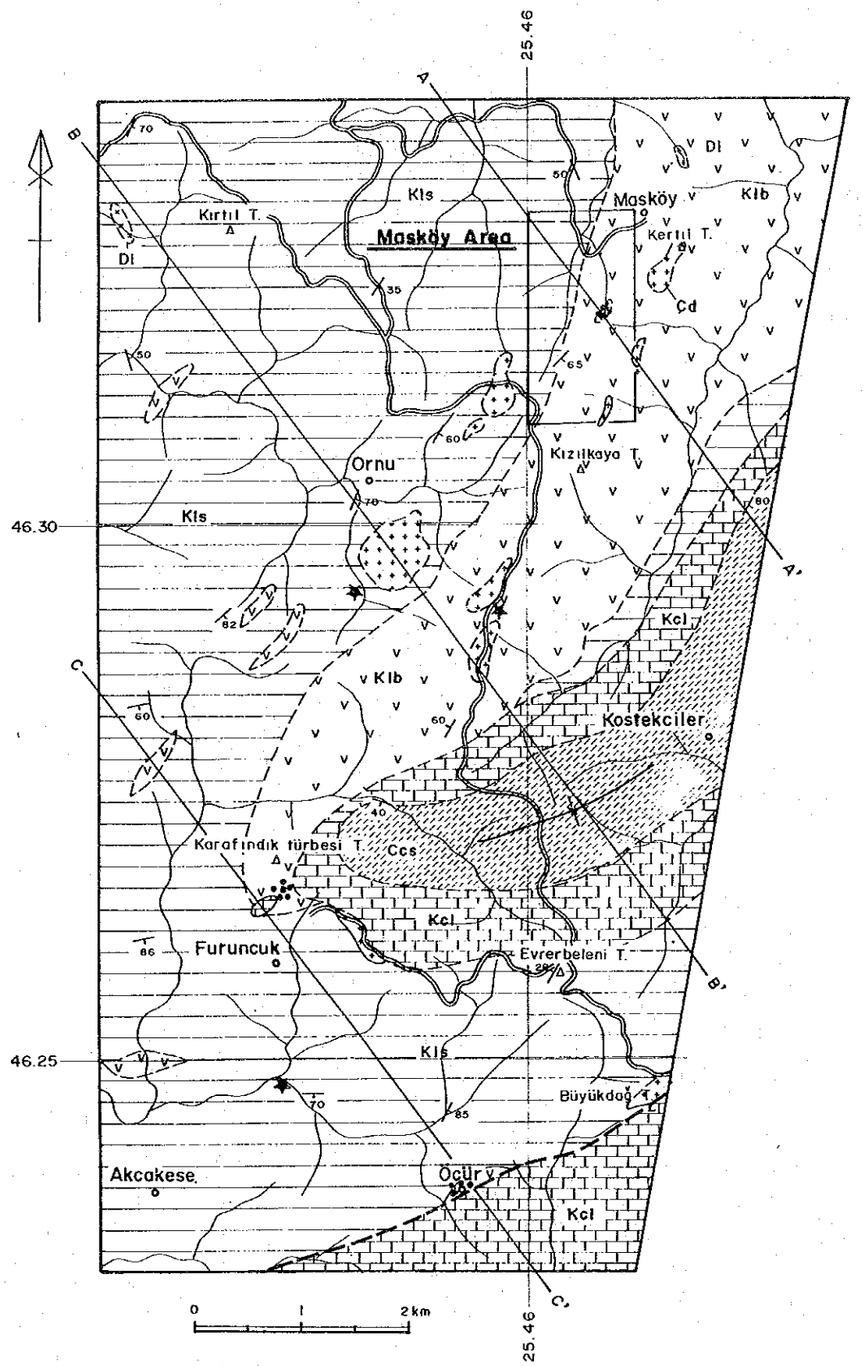
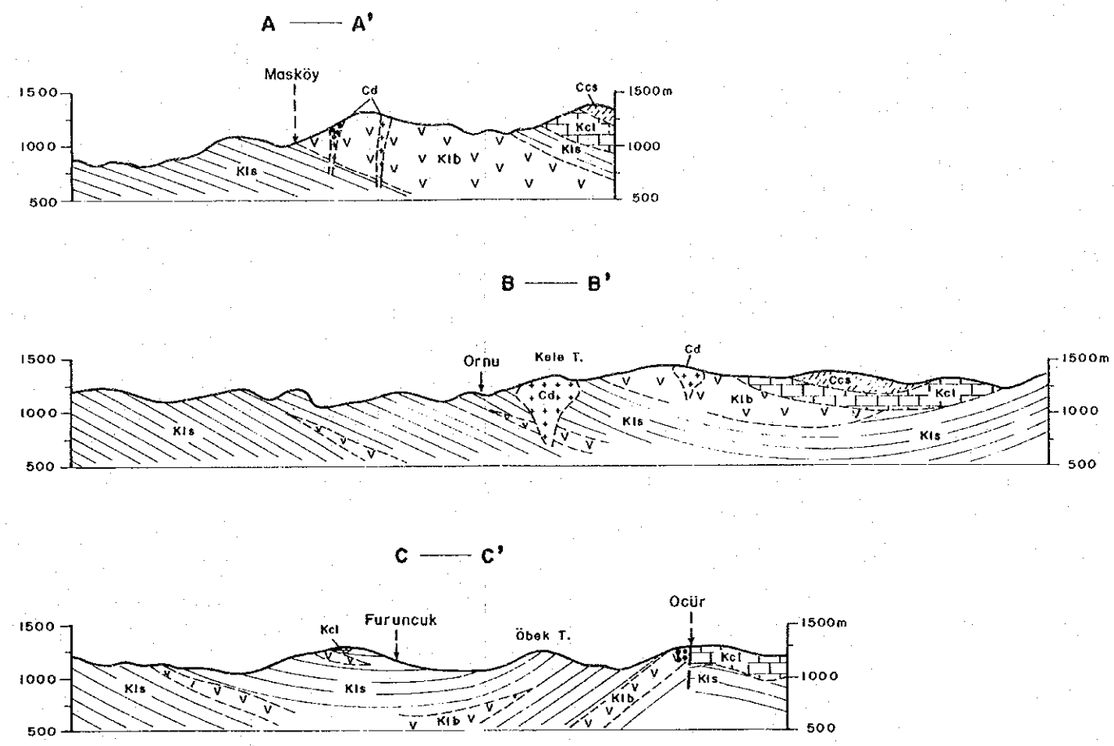


Figure 5-1 Schematic Column in the Dikmendağ Zone





L E G E N D

Satiköy F.	Ccs	Sandstone and mudstone
Köstekciler F.	Kcl	Limestone
Küre F.	Kıs	Alternation of sandstone and shale
	Klb	Basic rock
Intrusiv rocks	Cd	Dacite
	Di	Diorite
		Dissemination of pyrite / slag
		Probable fault
		Syncline axis
	20	Strike and dip
	A — A'	Profile section
		Sem - detailed survey area

Figure 5-2 Geologic Map and Cross Sections of the Dikmendağ Zone

1-2-2 Köstekciler Formation

Type locality:North and south of Köstekciler Village.

Thickness:Over 200m.

Distribution:This formation overlies the Küre Formation unconformably and occurs between Köstekciler and Satıköy Villages. A synclinal axis passes through the above two villages.

Lithology and occurrence:The rocks constituting the formation are grey to bluish grey calcareous rocks and calcareous sandstone. These are shallow marine sediments extending from the south northward. They were formed during the regional transgression during the Malm Epoch.

Stratigraphic relations:This formation overlies the Küre Formation unconformably and underlies the Satıköy Formation unconformably. This is correlated to the Çağlayan Formation of the Küre Area, but regionally index fossils are found and is correlated to the İnaltı Formation.

1-2-3 Satıköy Formation

Type locality:Vicinity of Satıköy Village.

Thickness:Over 400m.

Distribution:This formation occurs between the Satıköy and Köstekciler Villages, similar to the distribution of the Köstekciler Formation.

Lithology and occurrence:The rocks constituting this formation are yellow to grey turbiditic sandstone, conglomerate, and dark grey calcareous shale. They occur as well bedded formation in the synclinal part of the above zone.

Stratigraphic relations:This formation unconformably overlies the Köstekciler Formation.

CHAPTER 2 INTRUSIVE ROCKS

2-1 Dioritic Rocks

Diorite is intruded into sandstone-shale alternation of the Küre Formation in a relatively small scale. It is holocrystalline and microscopically, it

is gabbroic in nature with idiomorphic plagioclase surrounded by hornblende and augite. Minor amount of opaque titanium minerals occur as an accessory (sample M106).

2-2 Dacite

Many dacite lava domes occur arranged in the NNE-SSW direction between Masköy and Ornu Villages. These are all small intrusive bodies with maximum dimensions of 500 x 500m at southern Ornu Village. It has been intruded into the sandstone-shale alternation and basalts of the Küre Formation. Pyrite dissemination is associated with the intrusion. These bodies are partly sericitized. Similar characteristics are observed microscopically (samples K114, Y093).

CHAPTER 3 GEOLOGIC STRUCTURE

A NE-SW trending synclinal axis passes through the vicinity of the center of the area and Köstekciler and Satıköy Formations are distributed in the synclinal part. A NEE-SWW trending fault occur in the south and there are pyrite disseminations in the basaltic rocks cut by this fault.

Although the sandstone-shale alternation of the Küre Formation is widely distributed, the attitude varies considerably and the geologic structure is difficult to reconstruct. Figure 5-1, however, is a cross section of the area prepared by assuming a general synclinal structure.

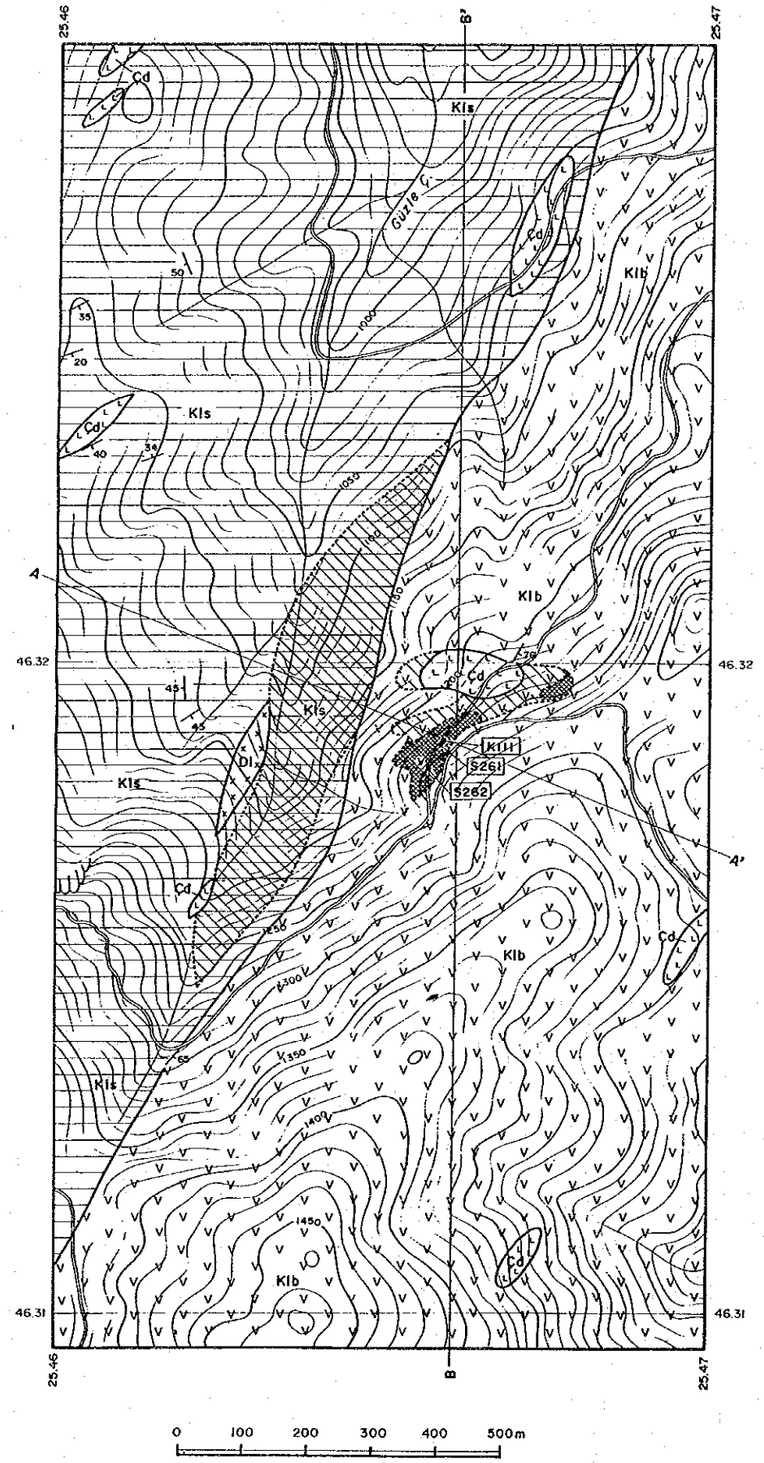
CHAPTER 4 MINERALIZATION AND ALTERNATION

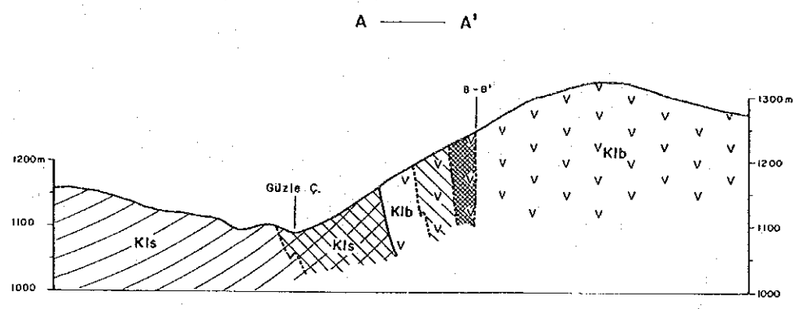
4-1 Masköy Mineralized Zones

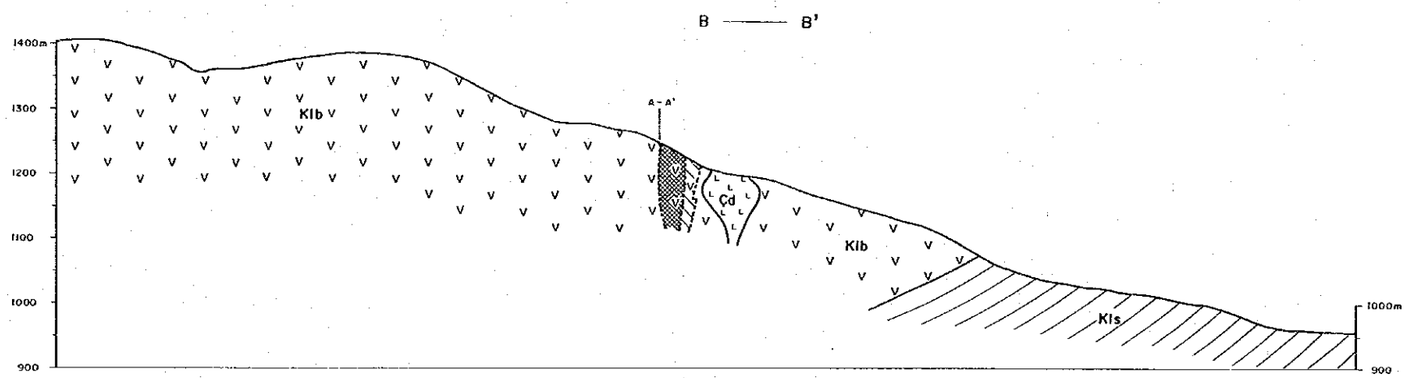
This zone is located in the northeastern part of the Dikmendağ area. A geological map and a cross section are shown in Figure 5-3 and a sketch of the mineralized zone in Figure 5-4.

4-1-1 Geology

The geology around this zone is composed of Küre Formation, dacite, and diorite. The rocks constituting this formation are basalt, black shale, siltstone and sandstone. The basalt is mostly massive, but is also partly pillow lava. Black shale forms alternation with siltstone and sandstone,







L E G E N D

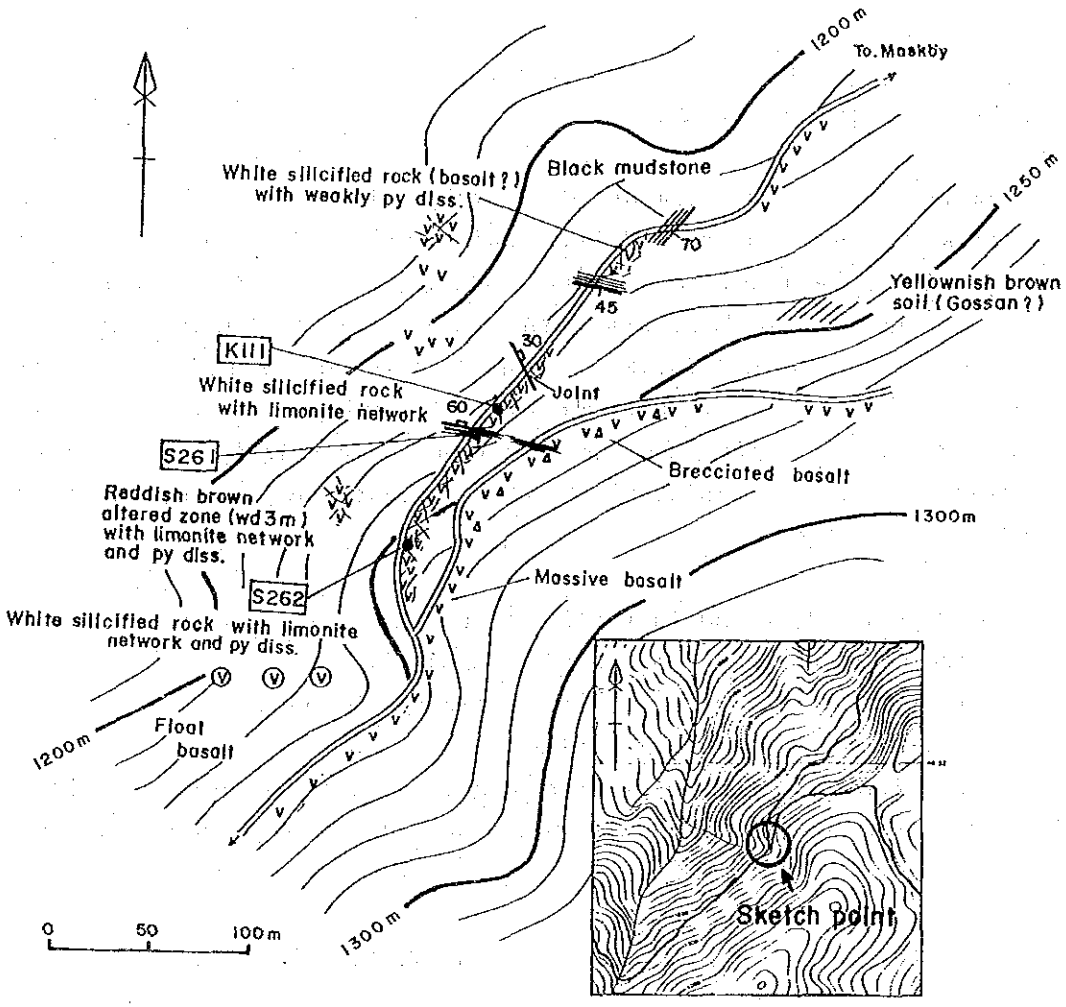
Küre Formation	Kls	Sandstone, siltstone and shale	
	Klb	Basalt	
Intrusive rocks	Çd	Dacite	
	Di	Diorite	
Mineralization and alteration		Silicification and dissemination of pyrite	
		Silicification	
		Strike and dip of strata	
	A——A'	Profile section	
	S261	Location and number of sample for ore assay	

Sample No.	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Co (%)	S (%)
K111	<0.1	<5	<0.01	<0.01	0.01	<0.006	1.93
S261	<0.1	<5	<0.01	<0.01	0.01	<0.006	3.58
S262	<0.1	<5	<0.01	0.01	0.01	<0.006	4.48

Figure 5-3 Geologic Map and Cross Sections of the Maskōy Locality

but in this area black shale and siltstone are the thicker units. These sedimentary units have NE-SW strike and the dip in most areas ranges 20°-65° SE.

Dacite occurs as small stocks and dykes in the basalt and the sedimentary rocks. Diorite occurs as dykes in the sedimentary units.



Sample No.	Au Gr/T	Ag Gr/T	Cu %	Pb %	Zn %	Co %	S %
K111	<0.1	< 5	< 0.006	<0.01	0.01	<0.006	1.93
S261	<0.1	5	< 0.006	<0.01	0.01	<0.006	43.58
S262	<0.1	< 5	< 0.006	0.01	0.01	<0.006	4.48

Figure 5-4 Sketch of Maskōy Mineralized Zones

4-1-2 Mineralization and Alteration

This zone consists of limonite network veinlets and pyrite dissemination over an area of 300 x 50m and gossan. It extends in the NE-SW direction. The host rock is basalt and it is silicified to dark grey in the pyrite disseminated parts of the zone. Both Cu and Zn grades of the rock samples from this zone are low.

Dacite occurs in the vicinity, but it is fresh without evidences of alteration.

4-2 Other Mineralized Zones

Weak mineralization accompanied by pyrite dissemination is observed in the basalt at north of Furuncuk Village and in Öcür Village in the southern part of the Dikmendağ area. The mineralization north of Furuncuk is located at the southern end of the basalt and is at the southern extension of the synclinal axis. The mineralization in Öcür is cut by a NEE-SWW fault and to the south of the fault is Köstekciler Formation, while to the north is basalt which occur rarely in the sandstone-shale alternation. Assay was not carried out for the samples of this zone because only a very minor amount of pyrite was observed.

Mine wastes were found in the following three localities in this area.

1km south of Ornu Village (sample K405)

1.6km southeast of Ornu Village (sample S111)

1km south of Furuncuk Village

The two samples were assayed. Results are shown in Table 1-11(12). Sample K405 with malachite recognizable with the unaided eyes contained Cu 3.25%.

CHAPTER 5 DISCUSSIONS

The major geologic unit in this area is the Küre Formation of the Lias Series. It consists mostly of sandstone-shale alternation with intercalations of basaltic rocks. All the pyrite mineralization of this zone occurs in the basalt which is exposed in rare cases. Thus the mineralization of this zone is considered to be weak at the surface.

The characteristics of the Cyprus-type mineralization, however, is the almost total lack of white argillization and the occurrence of the metal in specific zones such as in the basalt. Therefore, the weak mineralization at

the surface could be an important manifestation.

Aside from the mineralized zones, mine wastes were discovered at three localities in this area. This naturally indicates past mining activities and usually mineral showings occur in the vicinity. It was not possible, however, to locate mineral showings here because of the poor exposure and also because the activities were of old times with no information in the village.

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

6-1 Conclusions

The geological reconnaissance was carried out in this area after careful geological and geochemical study of the existing information and data of the Küre area.

The geological reconnaissance covered an area of 66km^2 using 1/25,000 scale topographic map. The Küre Formation of Lias Series is widely distributed in this area. The Lias Series are correlated to the basalt and sandstone-shale alternation developed near the Küre Mine and the mineral showings also occur in the basaltic rocks. Masköy Mineralized Zone was extracted as promising for metallic exploration and semi-detailed survey at 1/5,000 scale was carried out.

The Masköy Zone occurs as silicified zone around the dacite intrusion (150x70m) in the basaltic rock. Its lateral extension if 300 x 200m. Pyrite dissemination occurs in parts of the silicified zone. This occurrence is similar to that of the Küre Mine and detailed survey is warranted.

6-2 Recommendations for Second Phase Survey

The results of the first phase survey reveals that basaltic rocks are intercalated in sandstone-shale alternations and in some parts pyrite mineralization occurs in the basalt. Although surface manifestation of the mineralization is weak, there are possibilities of this type of mineralization becoming stronger in the lower subsurface zones. Geophysical exploration is necessary to confirm the possibility.

From the above reasons, it is recommended that geophysical survey be carried out in this area as a part of the second phase survey.

PART 6 CONCLUSIONS AND RECOMMENDATIONS

PART 6 CONCLUSIONS AND RECOMMENDATIONS

CHAPTER 1 CONCLUSIONS

Prior to the field survey, all existing geoscientific data and information regarding the Küre Area were analyzed and interpreted. Field survey was planned and implemented with the knowledge of the previous surveys. Geological reconnaissance covering 559km^2 of the Taşköprü Zone and 66km^2 of the Dikmendağ Zone were carried out and the results are expressed in 1/50,000 scale geological maps. The extracted promising zones were geologically surveyed in semi-detail as follows. A total of 4km^2 in Cozoğlu, Cünür, and Alayürek of Taşköprü Zone and 2km^2 in Masköy of Dikmendağ Zone. The results are shown in 1/5,000 scale geological maps. Küre Mining Zone is important as a mine is presently in operation, and 22km^2 was surveyed in semi-detail.

The geology of the Taşköprü Zone predominantly consists of pre-Lias Çangal Meta-ophiolite. The mineralized zone is accompanied by silicification and argillization in the metabasalts and green schist.

In the Küre Mining and Dikmendağ Zones, the deposits and mineral showings occur in the Lias basalt. Although different in age, these mineralization and that of the Taşköprü are related to ophiolite. The geological environment indicate metamorphosed Besshi-type mineralization in Taşköprü and Cyprus-type in Küre Mining and Dikmendağ.

The following localities were extracted as targets for future exploration. In Küre Mining Zone;southern part of Aşıköy deposit, northern and southern parts of Bakibaba deposit, vicinity of entrance to Gallery 920ML, southern part of İpsinler mineralized zone, and Zemberekler and Kızılsu deposits. In Taşköprü Zone; Cozoğlu, Cünür and Alayürek.

The descriptions of the individual localities are in the following section.

1-1 Southern Part of Aşıköy Deposits

Clear CSAMT anomalies were obtained. The surface is covered by sandstone-shale alternation of the Küre Formation. It is south of the Aşıköy Deposit which is presently mined by open pit. This corresponds to the southern extension of the deposit. There are three N-S trending tectonic lines

parallel to each other near the Küre Mine and this location is near the western line.

1-2 Vicinity of Entrance to Gallery 920ML

CSAMT anomalies were obtained with values second to southern part of Aşıköy. Pyrite dissemination was found in the 920ML gallery, but further exp;oration has not been conducted. This location corresponds to the northern extension of the Zemberekler. Basalts occur on the surface.

1-3 North and South of Bakibaba Deposit

CSAMT anomalies with values after 1-1 and 1-2. At the surface basalts and minor amount of sandstone-shale alternation are observed. These anomalies are located to the north and south of the Bakibaba Deposit with high copper grade and the existence of the N-S tectonic lines in the vicinity enhances the need for further exploratory work in the area.

1-4 South of İpsinler Mineralized Zones

Very strong CSAMT anomalies occur in this locality. The surface is covered by limestone talus deposits of Karadana Formation and manifestation of mineralization is not observed on the surface. IP anomalies were not obtained and this could be due to flow of subsurface water or to CSAMT anomalies due to targets deeper than 200m depth. Further geophysical investigation is warranted.

1-5 Zemberekler and Kızılsu Deposit

Küre Mine is located in a topographically steep area and there are high tension electric transmission lines in the general area. Also there are large amounts of overburden from the open pit covering the vicinity. Therefore, geophysical work can be carried out only in limited parts. This locality can only be further explored by drilling from the above reasons.

1-6 Cozoğlu Mineralized Zone

Two openings to old adits and waste dumps were found in an area of 350 x 350m in metabasalt. In one of the old adits, there is a 10cm thick quartz vein with copper oxide stains and 3m wide gossan, but the exposure is not good. Geophysical prospecting is necessary for confirming the state of mineralization.

Geophysical prospecting in the Cozoğlu Mineralized Zone. This will provide knowledge regarding the mineralization in deeper zones.

1-7 Cünür Mineralized Zone

The zone is located in metabasalt and green schist. There are extensive gossan occurrences (500 x 60m - 100 x 10m) in eight localities of this zone. Pyrite veinlets were found at one of the gossan outcrops and copper oxide smears on the host rock at another. There are wide silicified zones around these gossan occurrences and further geochemical and geophysical exploration are warranted.

Geochemical and geophysical prospecting in both the Cünür and Alayürek Mineralized Zones. Delineate the strong mineral showings by geochemical work and delineate the low resistivity zone and FE anomalies by geophysics.

1-8 Alayürek Mineralized Zone

This zone is developed in the green schist and metabasalt. Pyrite dissemination occurs over 600x50m and chalcopyrite was found in some parts of the mineralized zone. High-grade copper ore samples were collected during previous surveys, but during the present work, such samples were not found. Although the metamorphism of the host rocks is not strong, further geochemical and geophysical exploration are warranted.

From the above results, it is believed that the green schist and metabasalt extend in the NEE-SWW direction with fairly steep dip. And the mineralized zones are expected to extend further downward. Although the surface manifestation of mineralization is relatively weak, the Besshi-type mineralization becomes stronger downward. In order to confirm the subsurface conditions of mineralization, further geochemical and geophysical exploration are warranted in these mineralized zones.

1-9 Distribution Area of Basic Rocks in the Dikmendag

The results of the first year survey reveals that basaltic rocks are intercalated in sandstone-shale alternations and in some parts pyrite mineralization occurs in the basalt. Although surface manifestation of the mineralization is weak, there are possibilities of this type of mineralization becoming stronger in the lower subsurface zones. Geophysical exploration is necessary to confirm the possibility.

1-10 Ophiolite Area

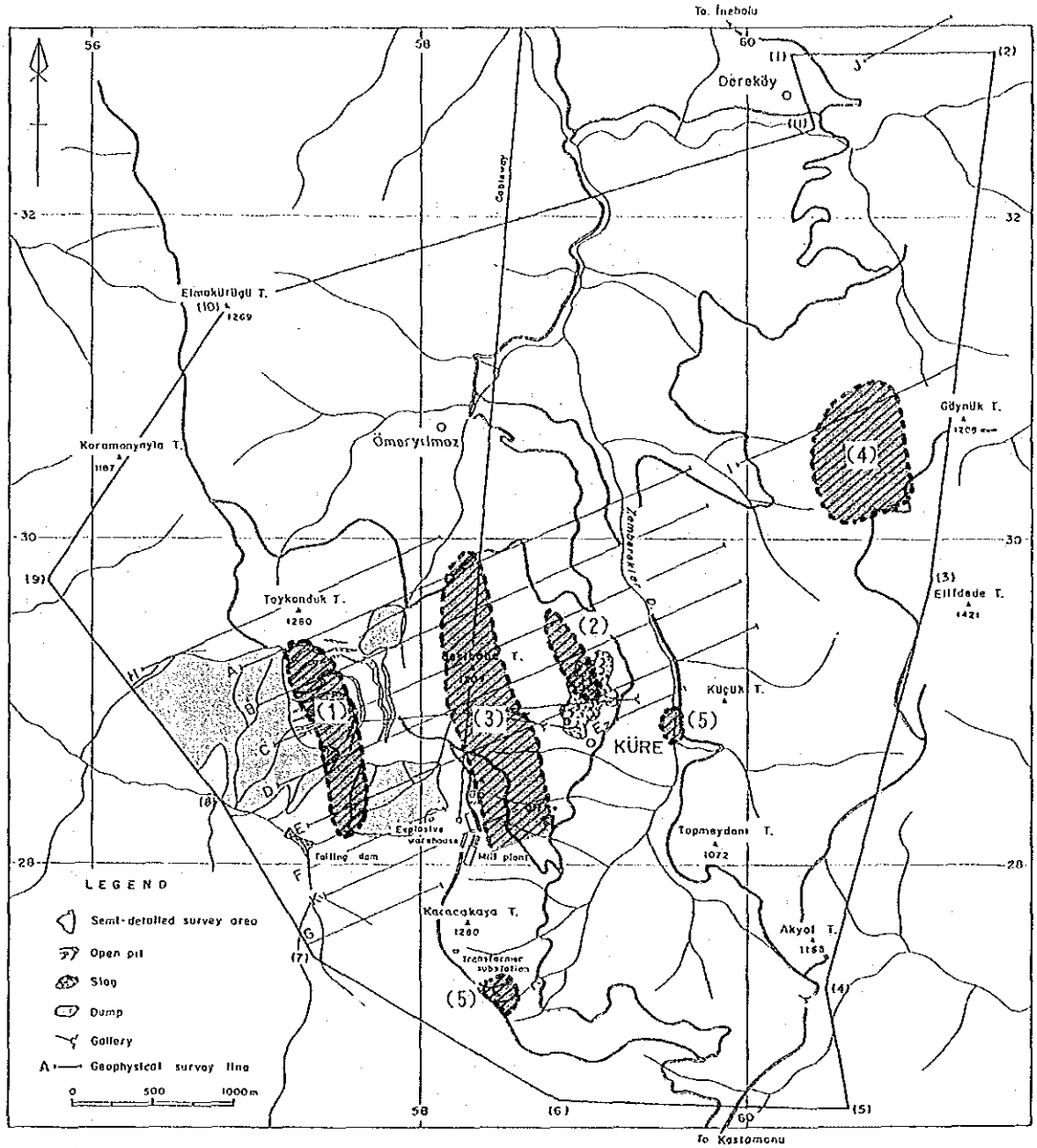
Küre Formation is widely distributed to the east and west of the Küre Mine. This is called Akgöl Formation in the regional survey by İnebolu-Kastamonu and is described as consisting of ophiolite and alternation of sandstone and shale. It is treated as a single unit in the field. But geochemically, the minor element content differs by occurrence, and those accompanied by mineralization can most probably can be distinguished from those not. The distribution of the mafic volcanic rocks have been clarified by the past surveys at; east of Küre Mine and the western part of Dikmendağ Zone. Geological investigation in these areas is expected to yield useful results.

CHAPTER 2 RECOMMENDATIONS FOR THE SECOND PHASE SURVEY

It is recommended that the following be carried out during the second phase of this project. It is anticipated that promising localities will be delineated as a result of the work listed below.

Zone	Promising Localities	Geochemical Survey	Geophysical Prospecting	Drilling Survey
Küre Mining	Southern Part of Aşıköy Orebody			Reco
	Vicinity of Entrance to Gallery 920ML			Reco
	North and South of Bakibaba Deposit			Reco
	South of İpsinler Mineralized Zone.		Reco	
	Zemberekler and Kızılsu Deposits			Reco
Taşköprü	Cozoğlu Mineralized Zone		Reco	
	Cünür Mineralized Zone	Reco	Reco	
	Alayürek Mineralized Zone	Reco		
Dikmendağ	Distribution Area of Basic Rock	Reco ?	Reco	
Distribution Area of Ophiolite		Reco		

Reco:recommendation



LEGEND

(1) Southern Part of Aşıköy Deposits

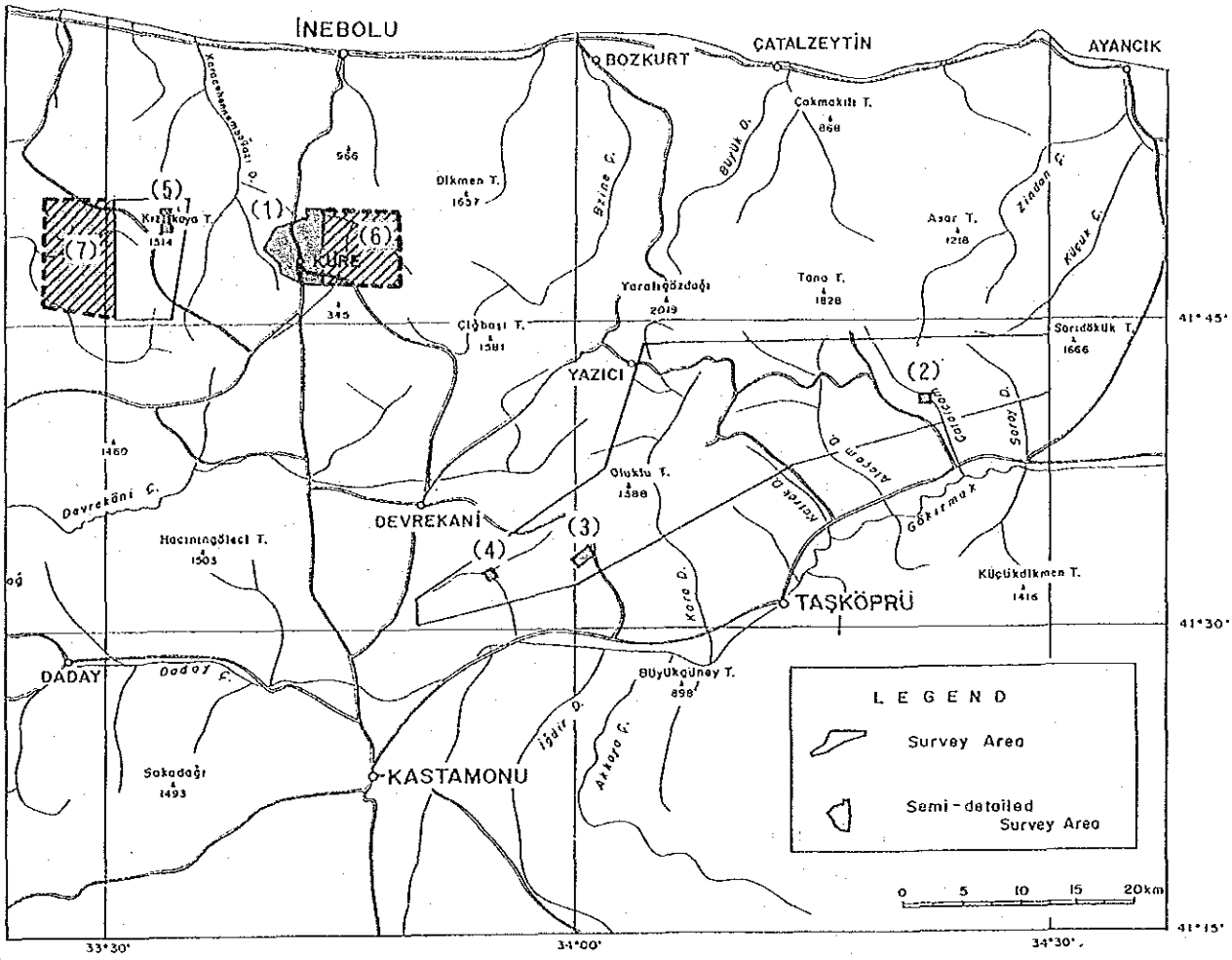
(2) Vicinity of Entrance to Gallery 920ML

(3) Nouth and South of Bakibaba Deposit

(4) South of Ipsinler Mineralized Zones

(5) Zemberekler and Kızılsu Deposits

Figure 6-1 Recommendation Map (1)



LEGEND

(1) Küre Mining Zone
(2) Cozoğlu
(3) Cünür
(4) Alayürek
(5) Dikmendağ
(6) East of Küre Mining Zone
(7) West of Dikmendağ Zone

Figure 6-1 Recommendation Map (2)

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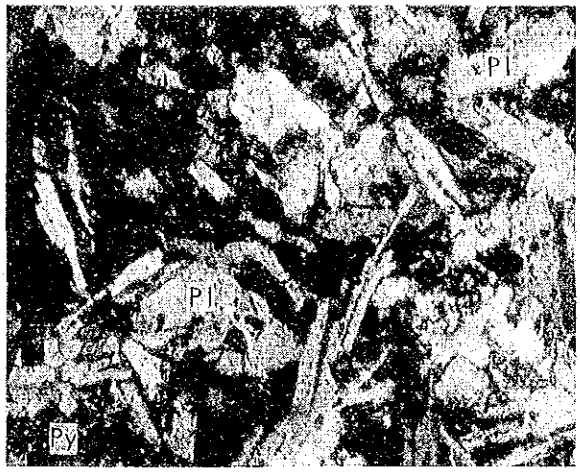
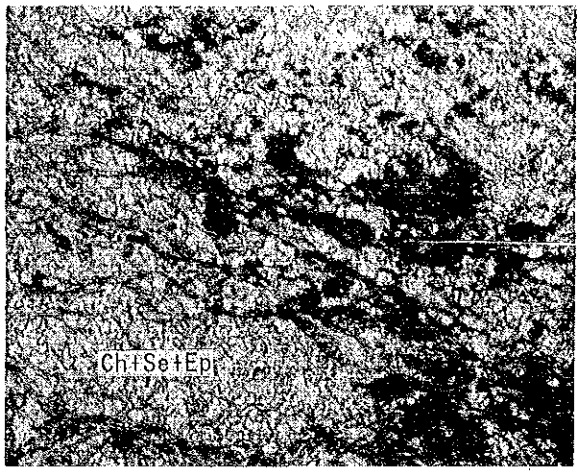
MTA:Maden Tetkik ve Arama Genel Müdürlüğü
MAD:Maden Arama Dairesi
MEAD:Maden Etüd ve Arama Dairesi

Y007 (Massive basalt)

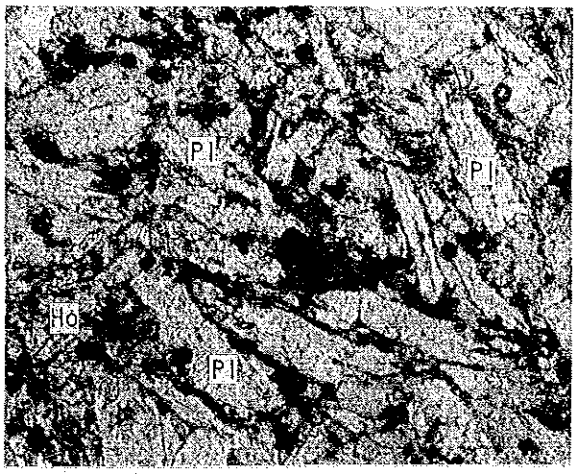


A104 (Greenschist)

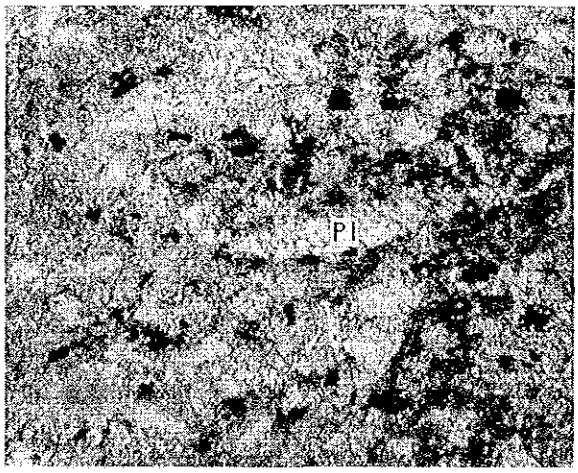


Y005 (Pillow lava)

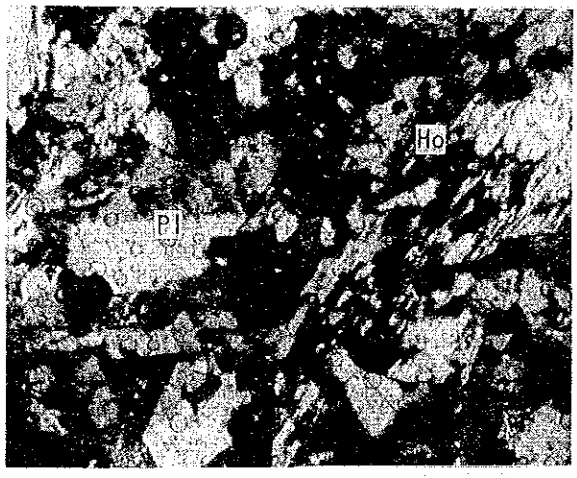
K206 (Meta basalt)



Y039 (Hayaloclstite)



Y009 (Diorite)



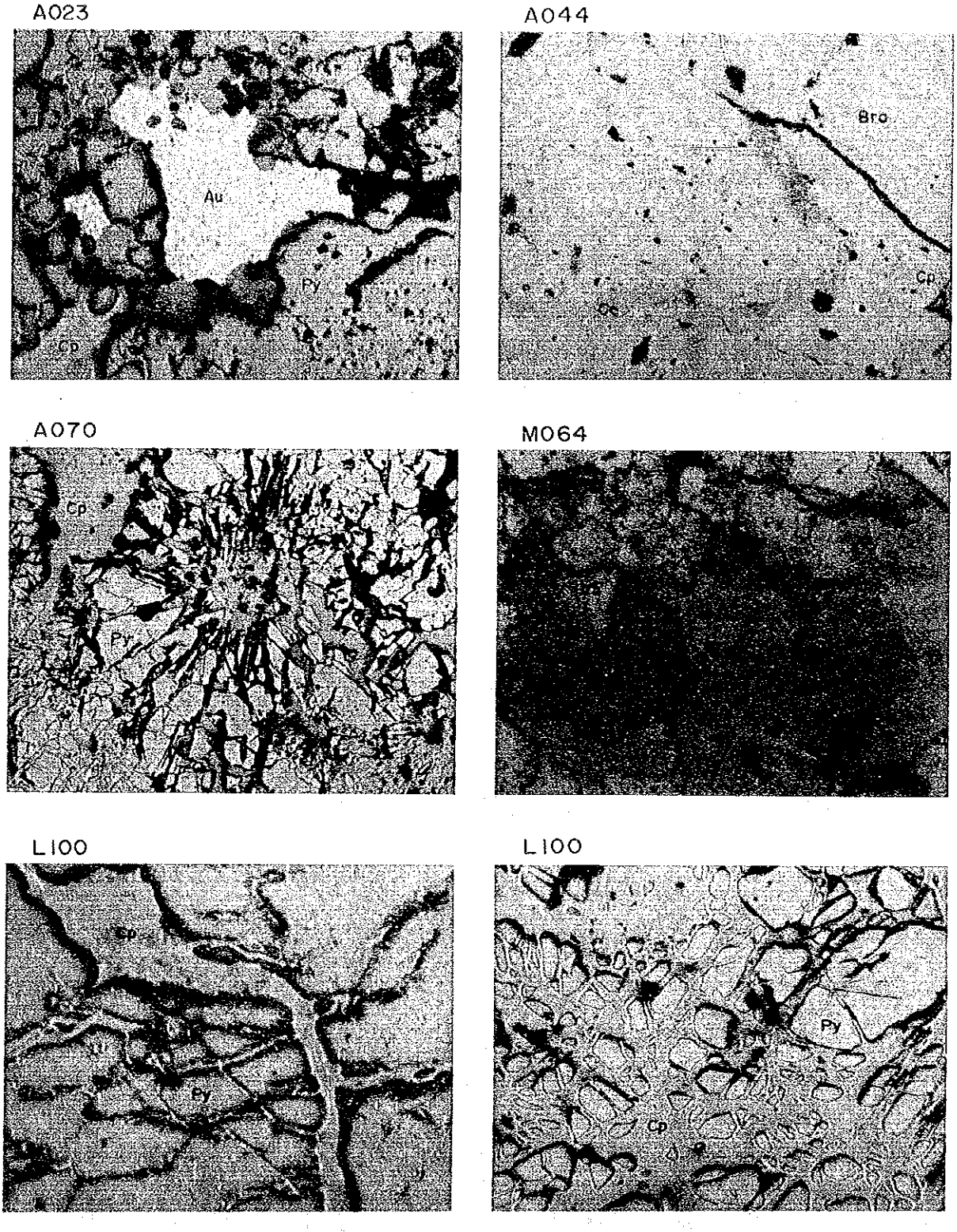
L E G E N D

0 0.3mm

Pl:Plagioclese Ho:Hronblende Py:Pyroxene Ch:Chlorite
Se:Sericite Ep:Epidote

写真1 顕微鏡写真(薄片)

Photo. 1 Microscopic Photograph (Thin Section)

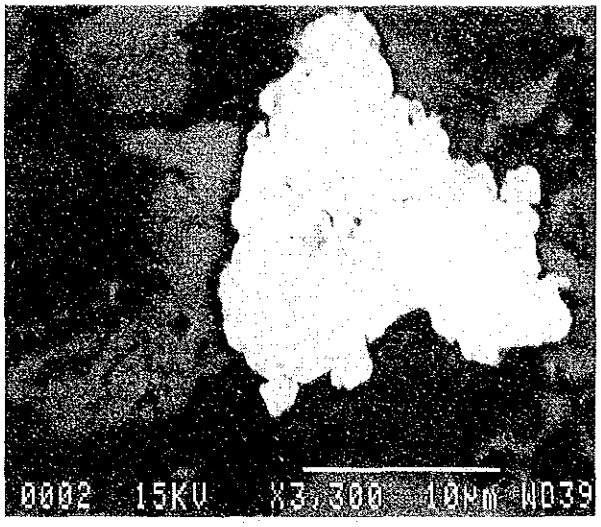


Au : Native gold　Cp : Chalcopyrite　Py : Pyrite　Crl : Carrollite　0　0.3mm

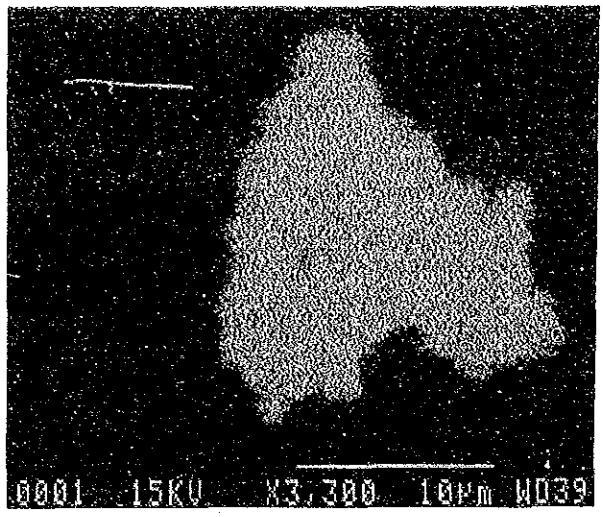
Bra : Bravoite　Co : Cobalt

写真2　顕微鏡写真(研磨片)

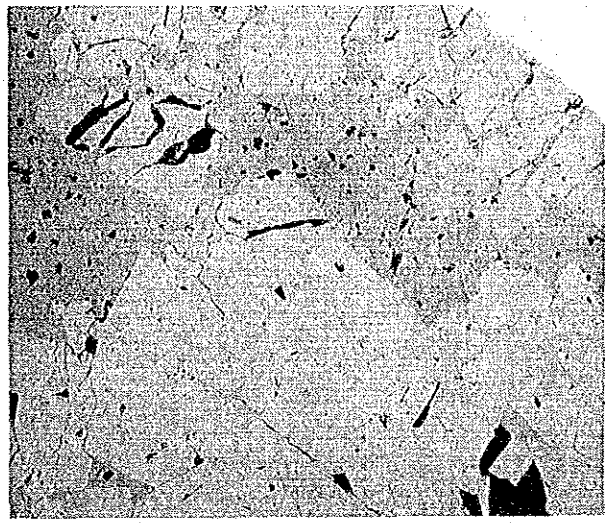
Photo. 2 Microscopic Photograph (Polished Section)



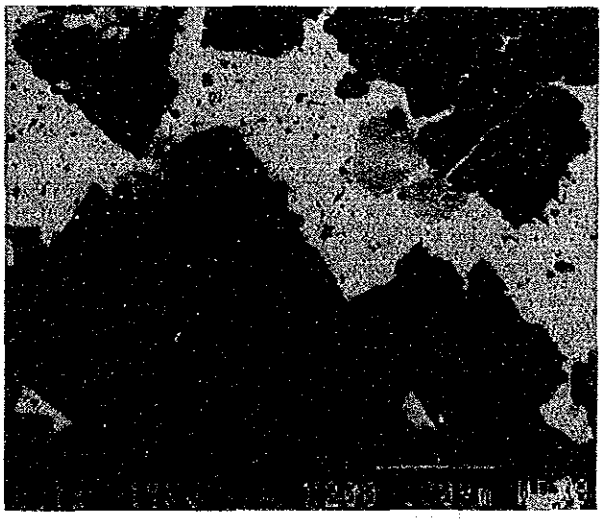
Backscattered Electric Image (Sample No. A035)



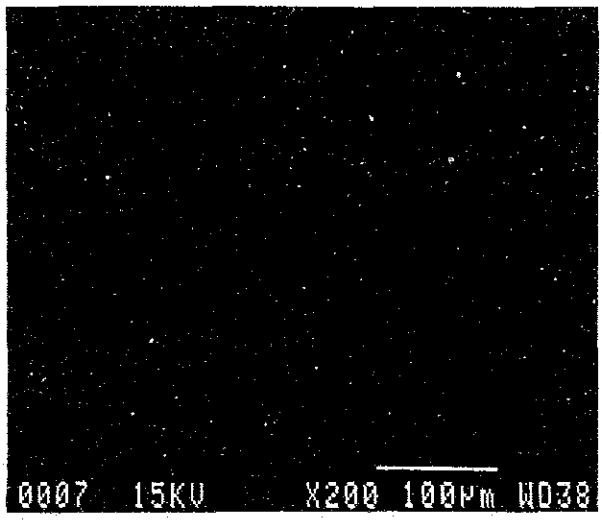
Silver Characteristic X-ray Images of
Cu-Ag sulfide mineral (Sample No. A035)



Microphotograph of Carrollite (Sample No. M064)



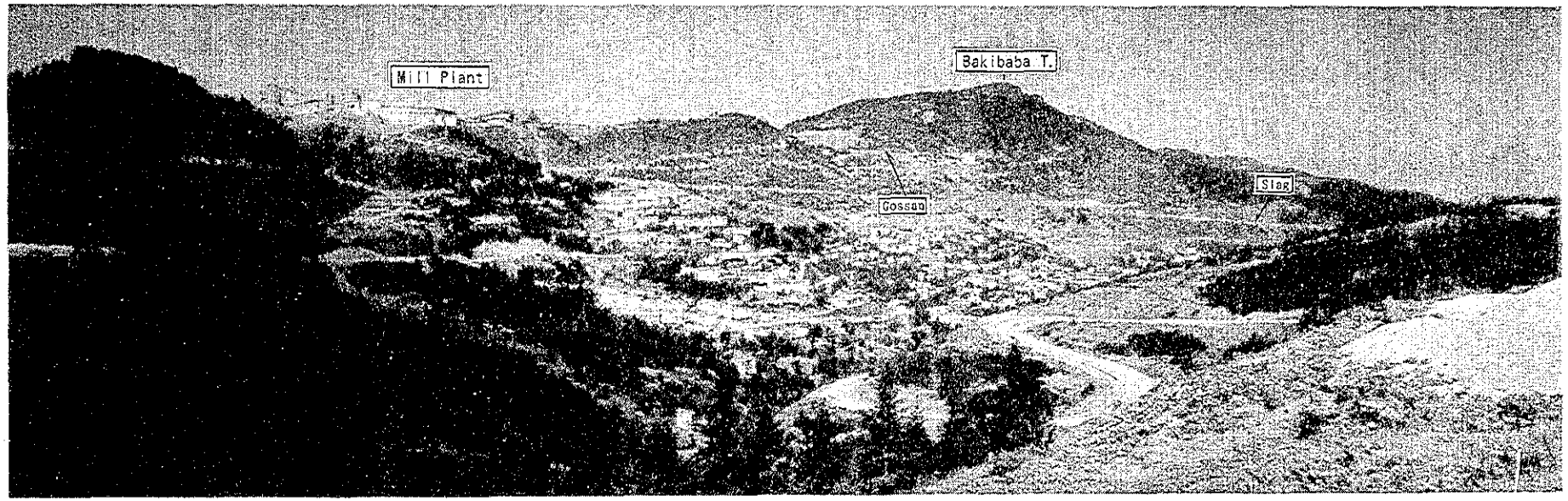
Backscattered Electric Image (Sample No. M064)



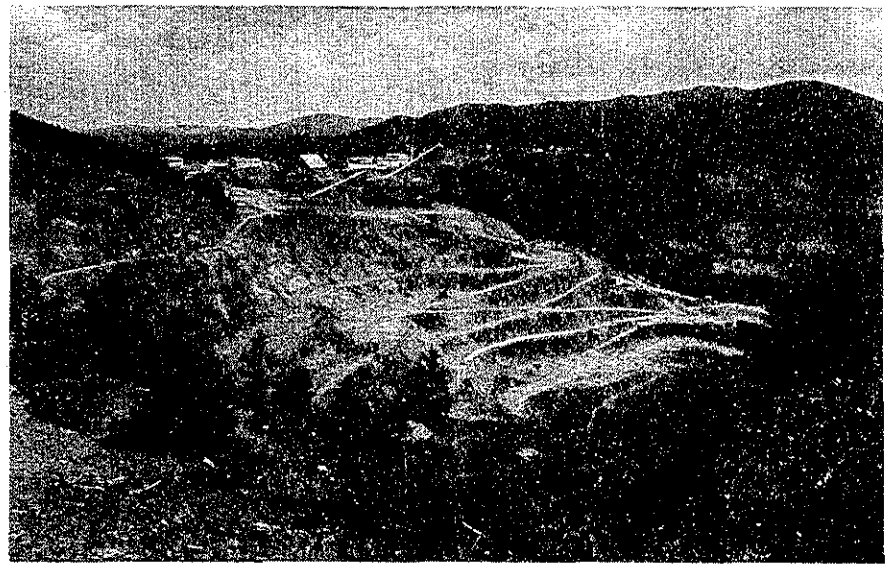
Cobalt Characteristic X-ray Images of Carrollite

写真３　BEI及び特性X線像

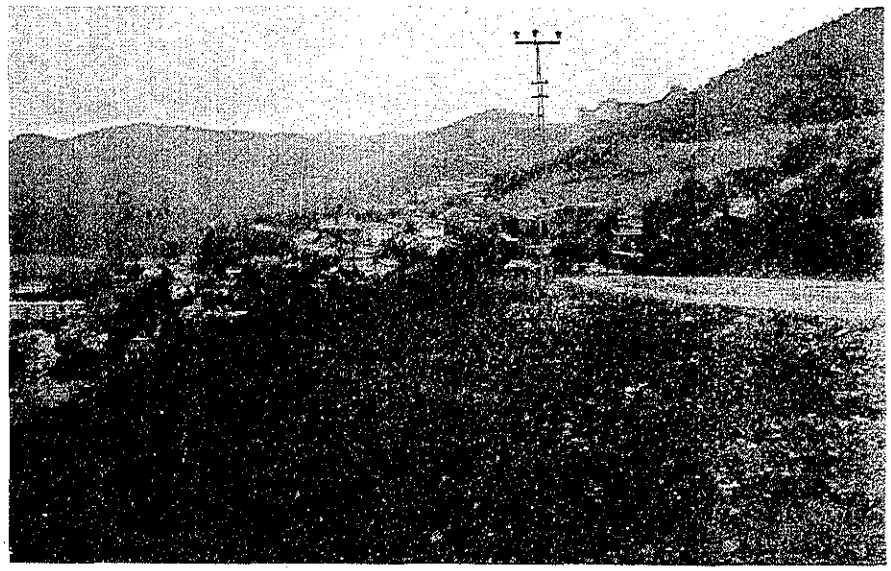
Photo. 3 BEI and Characteristic X-ray Images



Küre Mine Town



Aşıköy Open Pit



Slag of the Bakibaba

写真4　キューレ鉱山全景

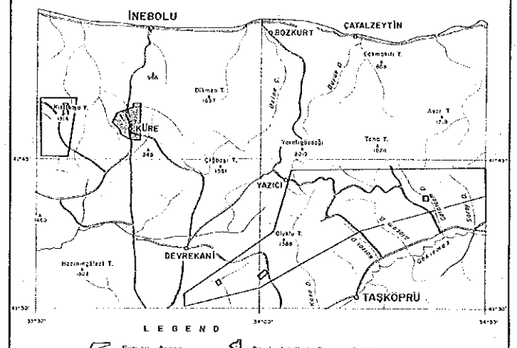
Photo. 4 Küre Mine Photograph

556
557
558
559
632
631
630
Kss
Osg
Klm
Klh
Di
Da
Klp
Toykondu
Aşıköy
Baklbaba
Zemberekler
KÜRE
Dump
A
B
B'
C
C'
Kss
Klm
Klh
Klp
Osg
Kss

PL. I

REPORT ON THE MINERAL EXPLORATION IN THE KÜRE AREA, THE REPUBLIC OF TURKEY

GEOLOGIC MAP OF THE KÜRE MINING ZONE (I)



DECEMBER 1992

JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

Scale 1 : 5,000

0 100 200 300 400 500m

559 560 561

632 631 630

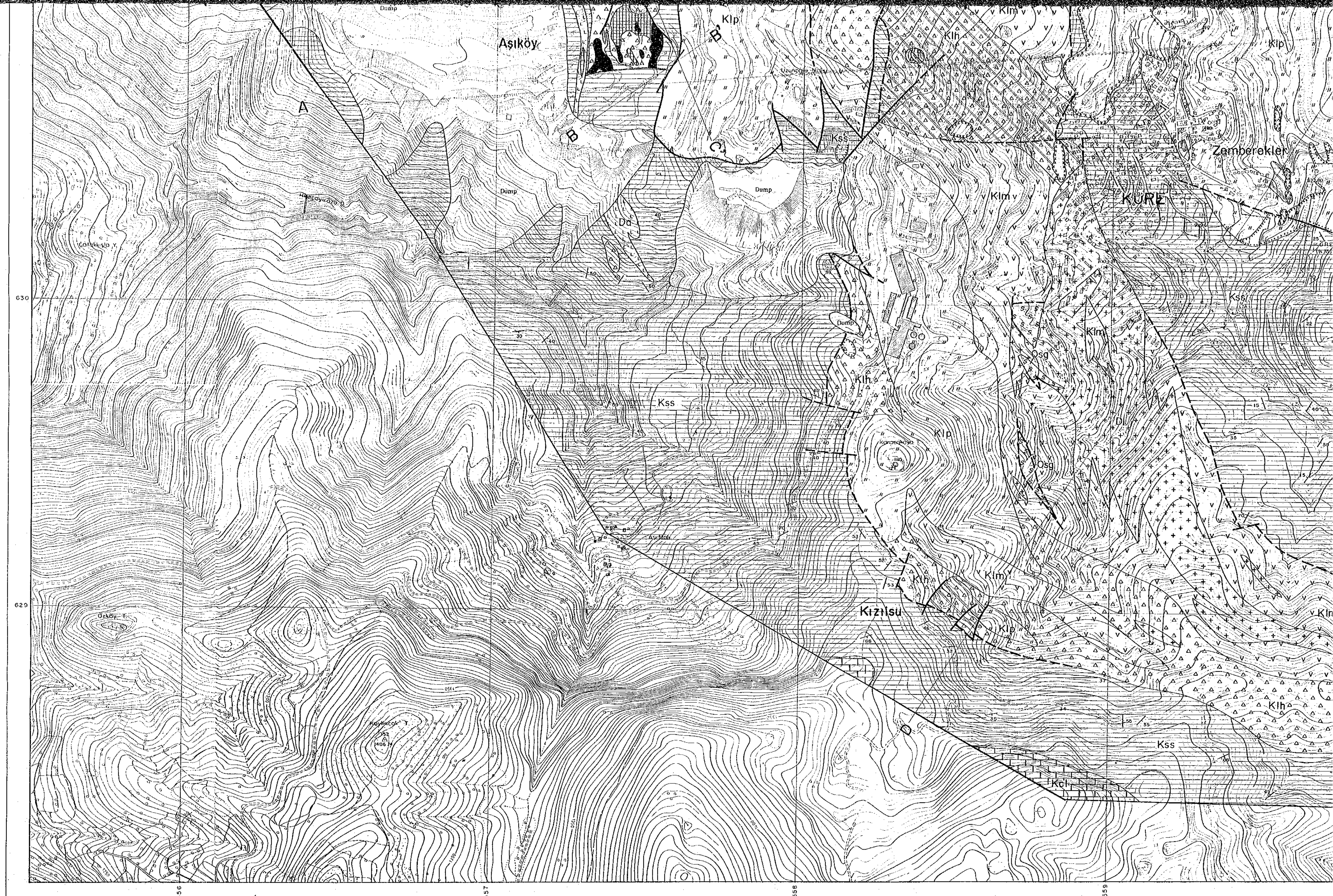
A A'

Kss Klh Klm Klp Kcl Dl Osg

Akbaba Zemberekler KÜRE

L E G E N D

- Talus deposit — a
- Çağlayan F. — Marl — Ccm
- Karadona F. — Limestone — Kcl
- Black shale, sandstone — Kss
- Pillow lava — Klp


Aşıköy
Dump
A
B
B'
C
C'
Klp
Klm
Klh
Kss
Da
KÜRE
Zemberekler
Ksst
Osg
Di
Kızılsu
D
Kcl
630
629
556
557
558
559