

MJCV-3 340.50m

100  $\mu$

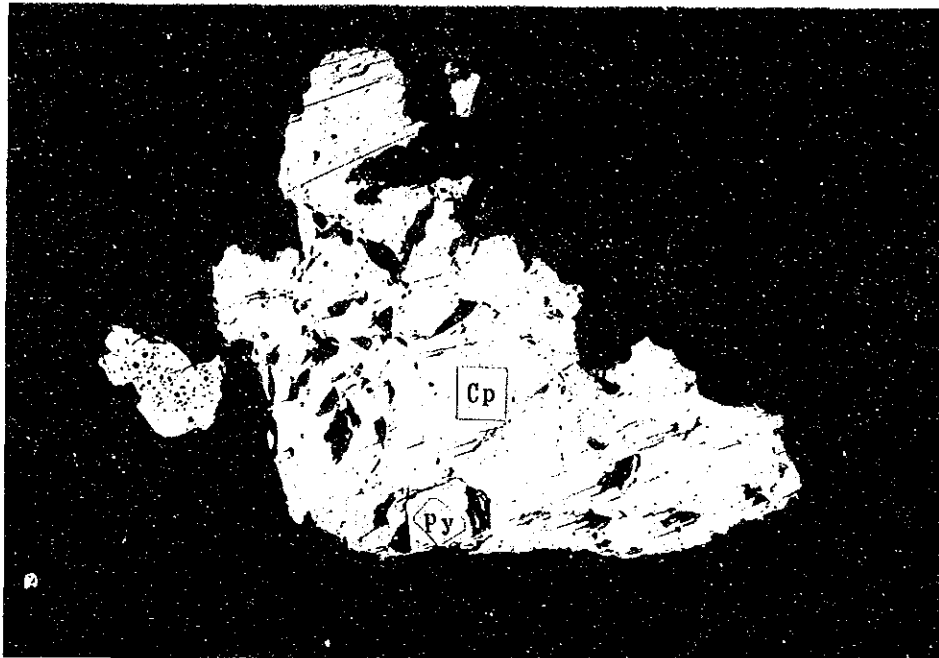
covellite(Cv) associated with pyrite(Py)



MJCV-3 368.20m

100  $\mu$

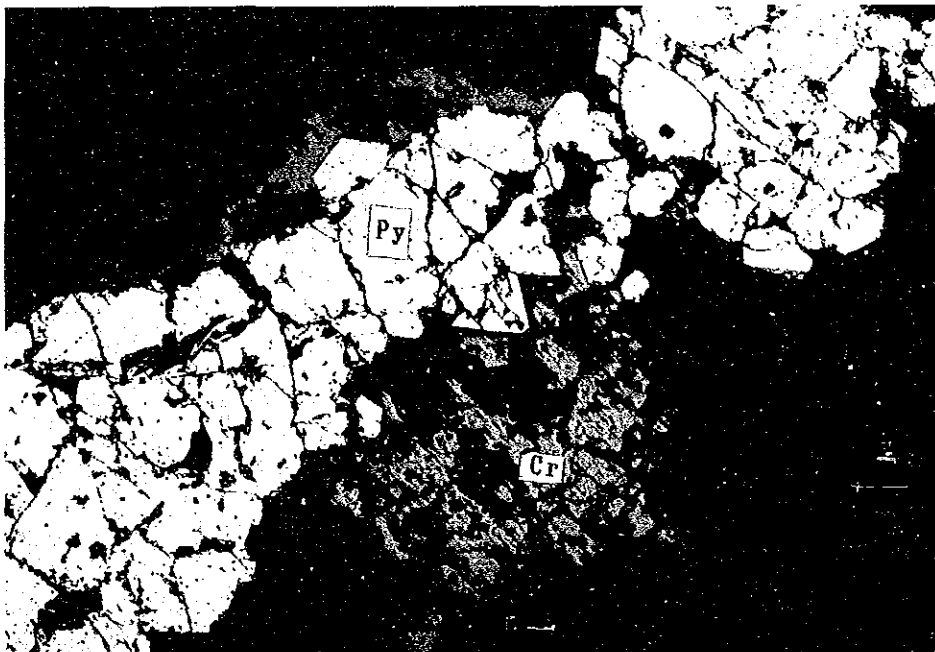
chalcopyrite(Cp) included in pyrite(Py)



300  $\mu$

MJCV-4 443.00m

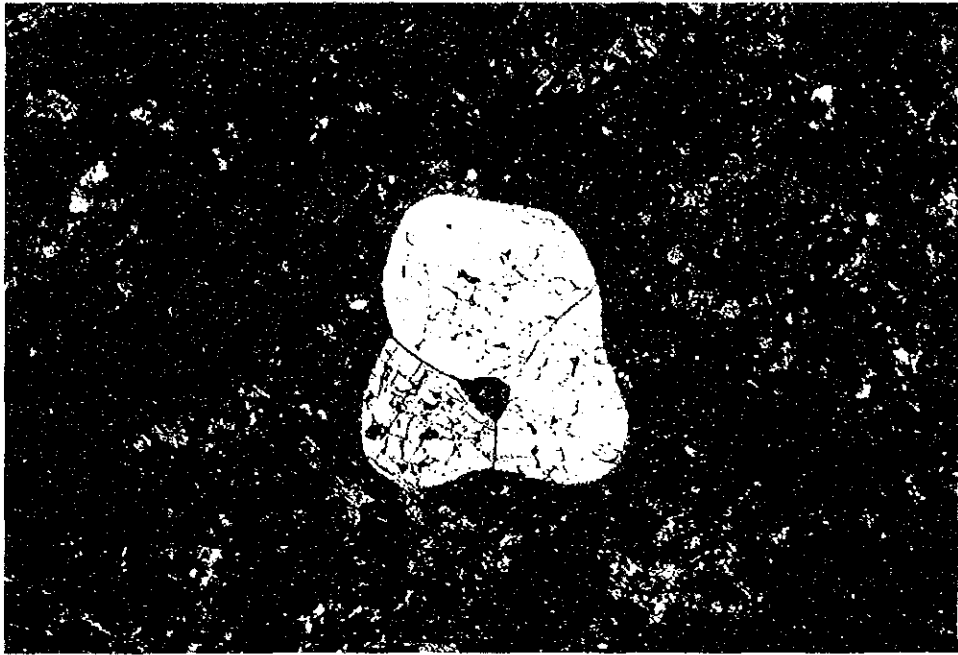
chalcopyrite(Cp) & pyrite(Py)



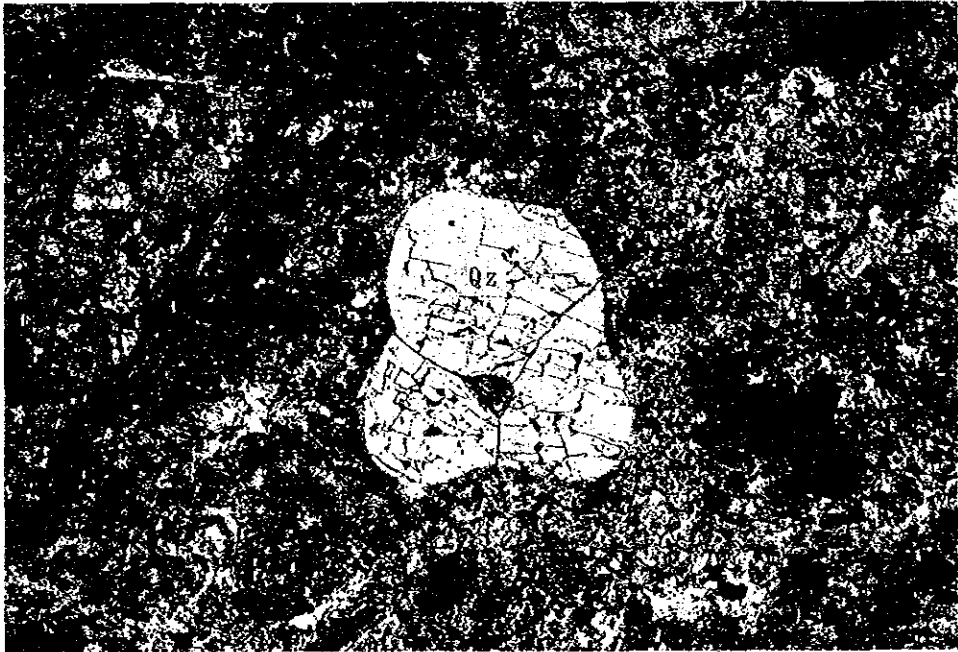
200  $\mu$

MJCV-5 385.25m

cuprite(Cr) associated with pyrite(Py) film



(+)nicols

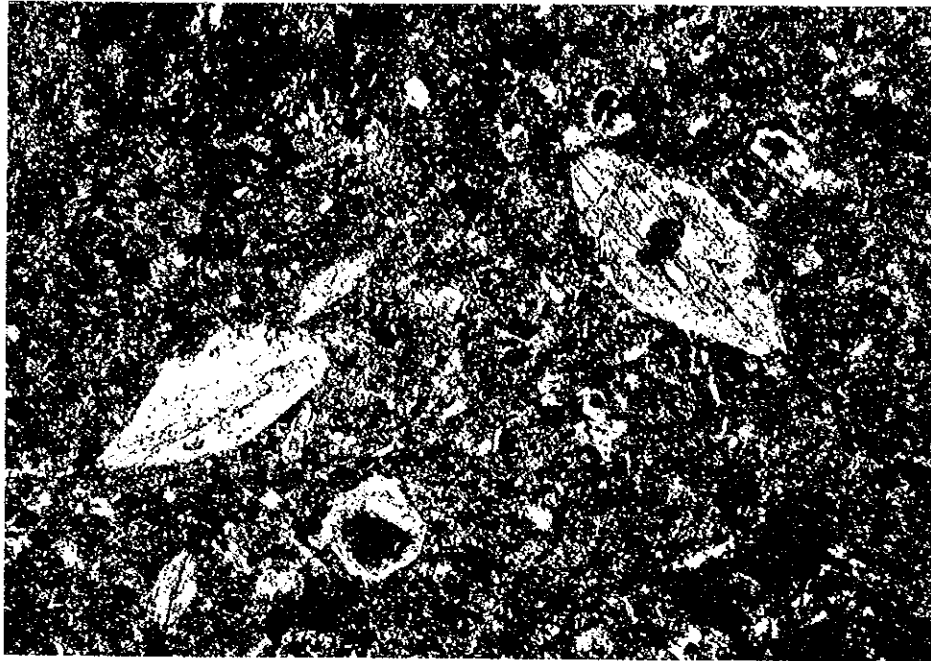


(//)nicols

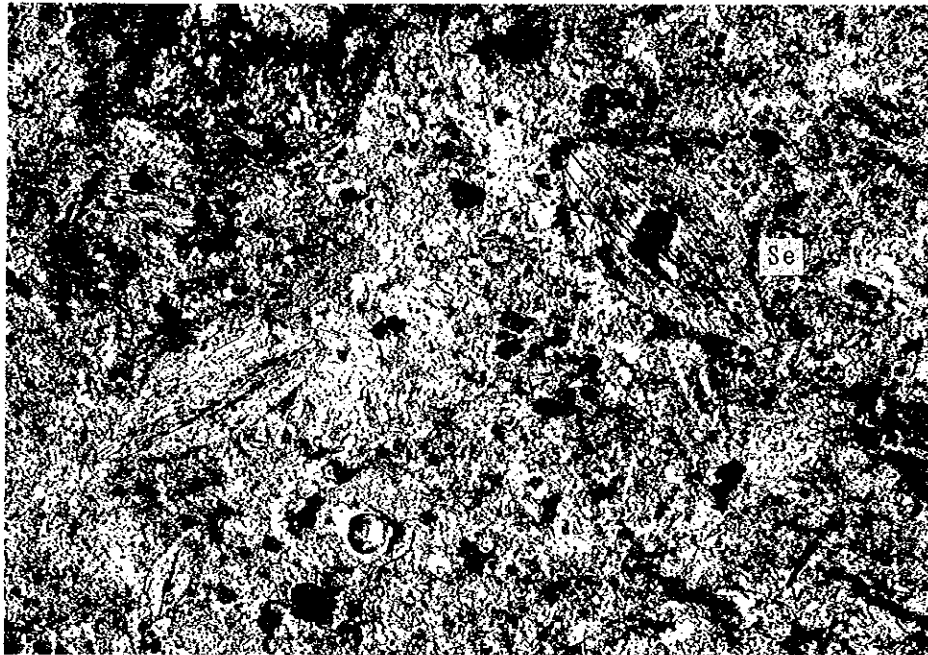
1mm

MJCV-2 200.0m

corrosion quartz(Qz) in diorite porphyry



(+)nicols



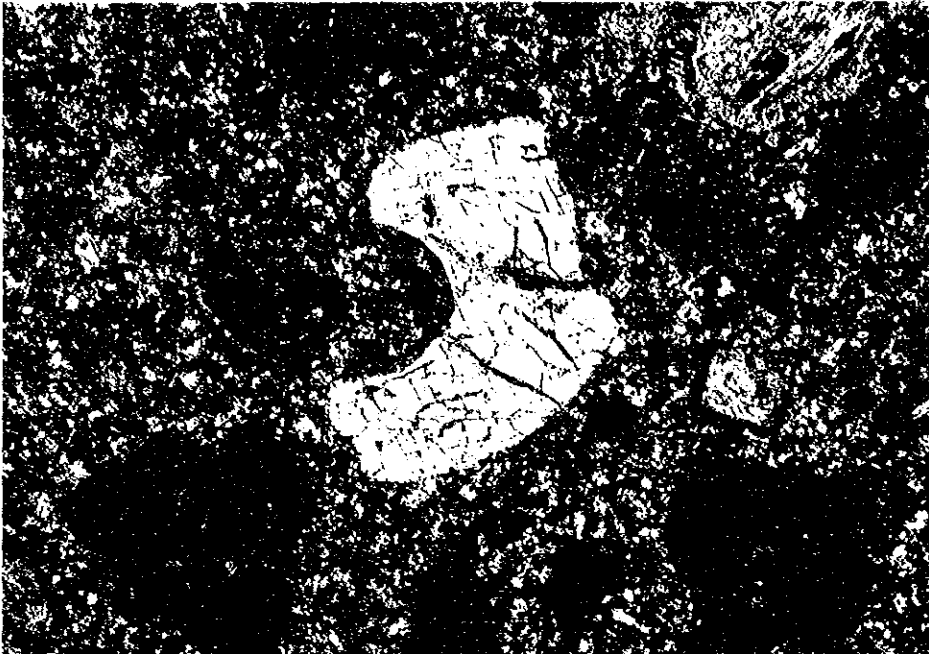
(//)nicols

MJCV-2 200.0m

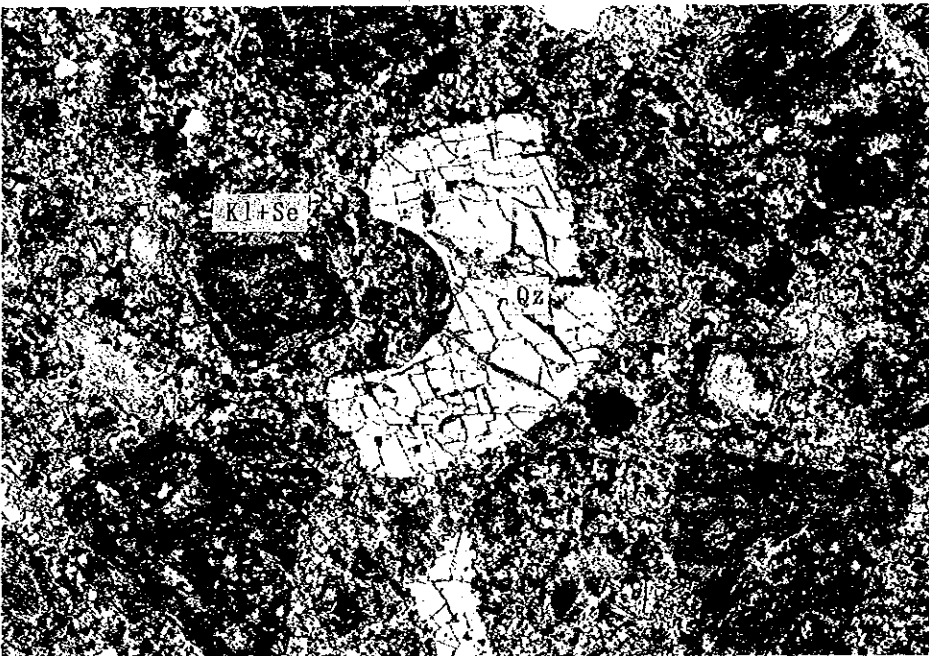
1mm

hornblend pseudomorph altered to sericite(Se)  
in diorite porphyry





(+)nicols

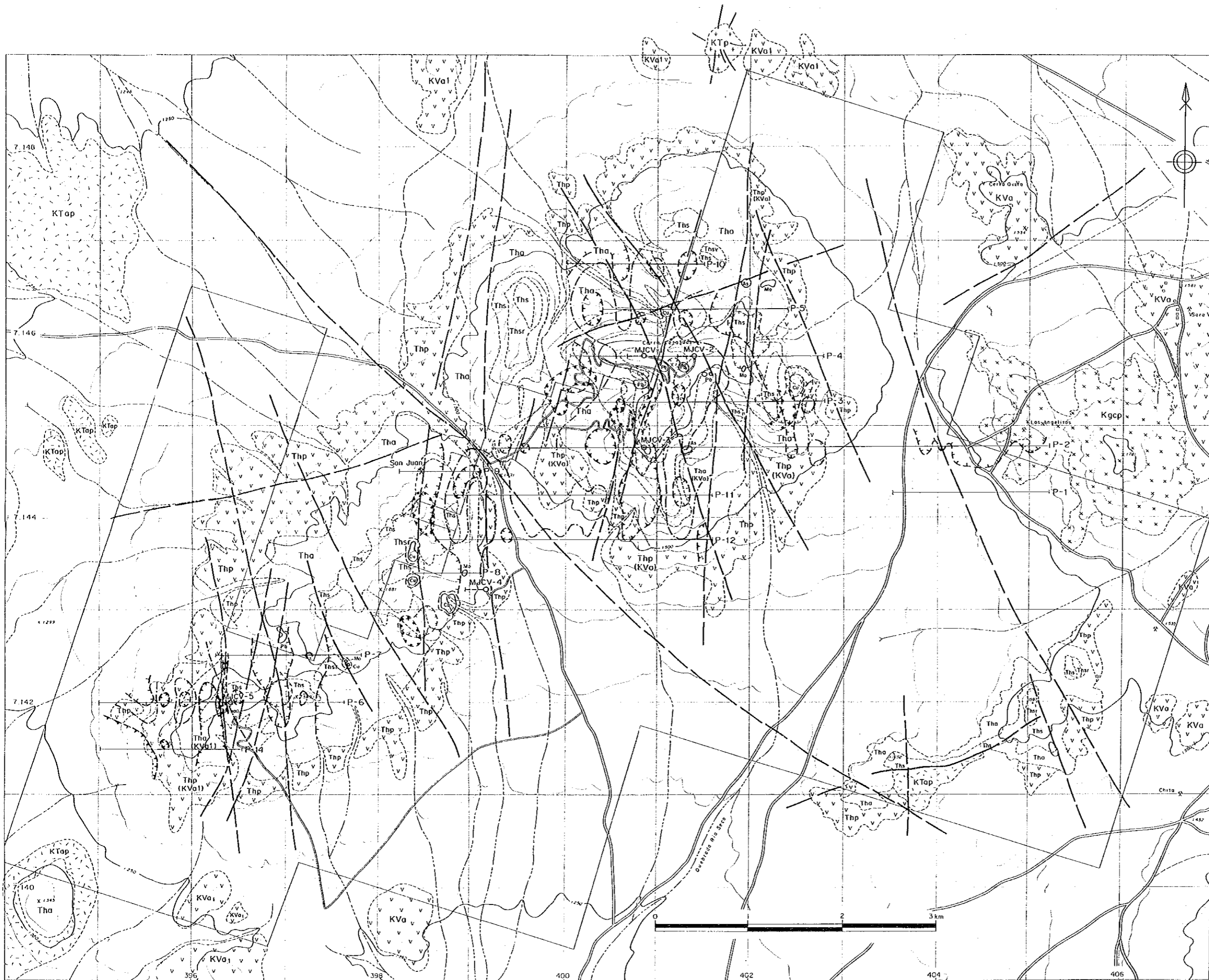


(//)nicols

MJCV-3 141.0m

1mm

corrosion quartz(Qz) and plagioclase pseudomorph  
altered to kaolinite(Kl) & sericite(Se) in meta porphyry



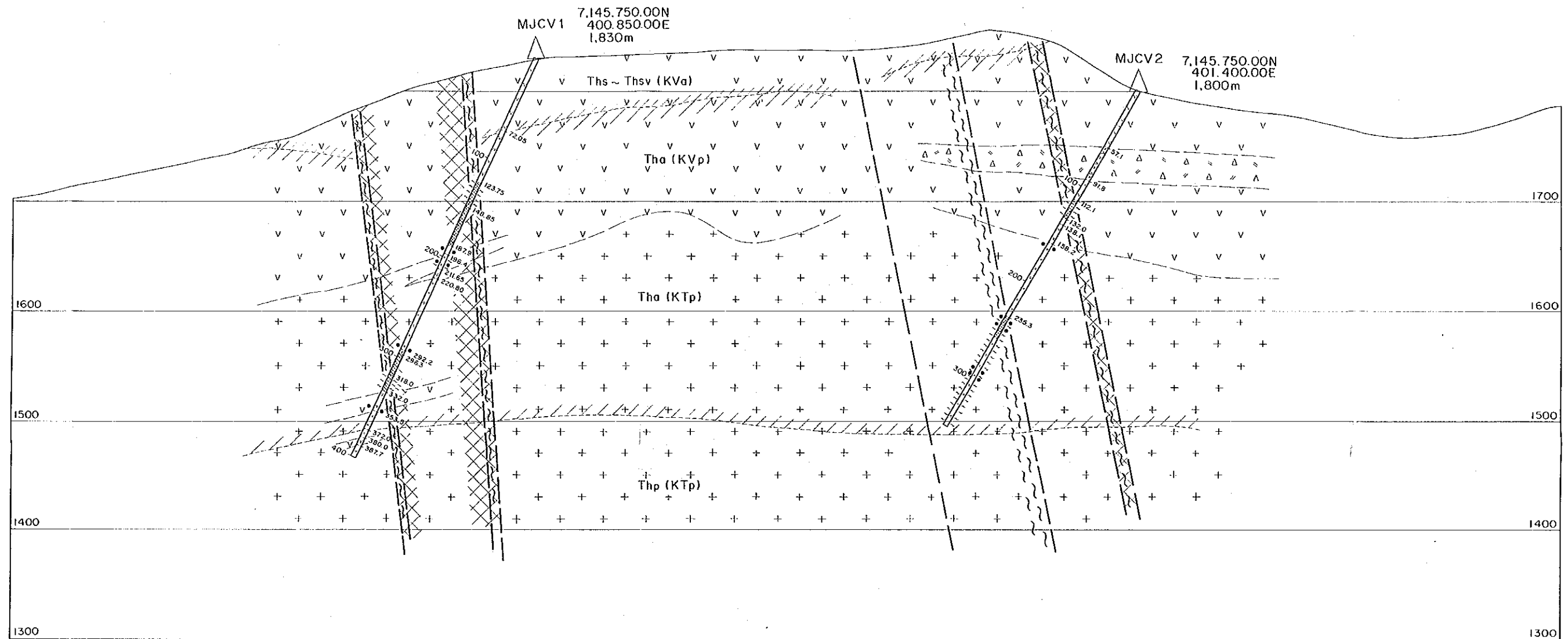
- Legend**
- Lithology**
- Alluvial, colluvial and fluvialite deposits
  - Aeropuerto formation**
  - Andesitic volcanics with intercalated beds of sandstone and breccia
  - Trachyandesitic volcanics with intercalated beds of sandstone and breccia
  - Intrusion**
  - Dioritic - andesitic porphyry
  - Tonalite - quartz latite
  - Quartz diorite
  - Hydrothermal Alteration zone**
  - Intensely silicified zone
  - Quartz sericitized zone
  - Siliceous argillized zone
  - Chloritized zone (Propylitized zone)
  - Limonite - Jorosite rich zone
  - Sulfide Cercillas relic zone (principally pyrite)
  - Fault (broken line shows inferred fault)
  - Geologic contact
  - Access road
  - P-1 Geophysical survey line
- Geochemical anomalous zone**
- >30ppm Cu
  - >30ppm Mo
  - >100ppm As
  - >100ppm Pb
- Geophysical anomalous zone of 1,400 meters level**
- < 20Ωm
  - 100Ωm
  - > 300Ωm
- Other symbols:**
- Drilling site
  - Direction of drilling
  - MJCv-1 No. of drillhole

Plate 1  
 Synthetic map of the Varaguas area  
 (1 : 20,000)

Analysis of Existing Data, Phase I  
 Varaguas Project, JICA/MMAJ-ENAMI

W

E



400,500E

401,000E

401,500E

Legend

Aeropuerto formation

**KVa** Andesitic lava and autobrecciated lava

**KVa** Andesitic tuff and pyroclasts

Intrusion

**KTp** Dioritic-andesitic porphyry

Hydrothermal Alteration zone

**Ths** Intensely silicified zone

**Thsv** Quartz sericitized zone

**Tha** Siliceous argillized zone

**Thp** Chloritized zone (Propylitized zone)

Mineralization

Limonite and Jarosite rich zone

Fault (broken line shows inferred fault)

Fractured zone

Geologic contact

Plate 2-(1)

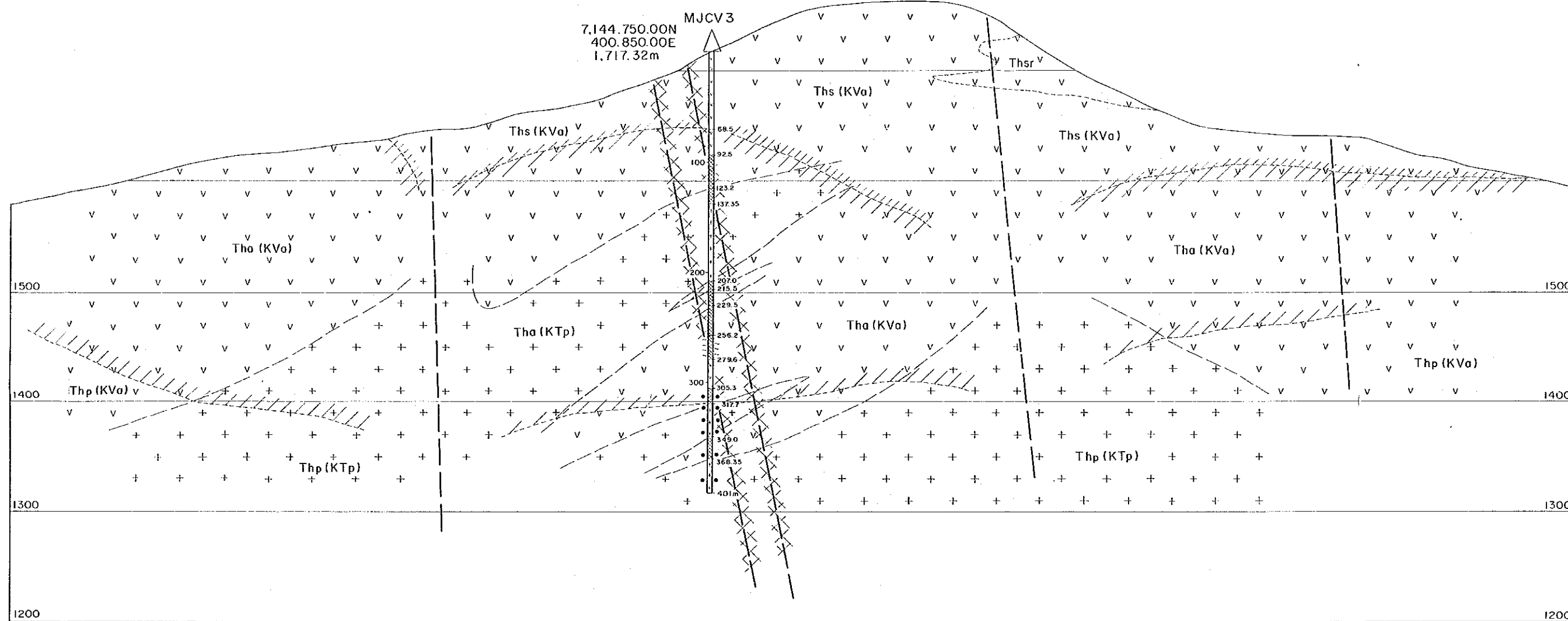
Geologic profile of the drill hole  
MJC V-1 & 2  
(1:2,000)

Drilling Survey, Phase I  
Veraguas Project, JICA/MMAJ-ENAMI



W

E



Legend

Aeropuerto formation

KVa Andesitic lava and autobrecciated lava

KVa Andesitic tuff and pyroclasts

Intrusion

KTp Dioritic-andesitic porphyry

Hydrothermal Alteration zone

Ths Intensely silicified zone

Thsv Quartz sericitized zone

Tha Siliceous argillized zone

Thp Chloritized zone (Propylitized zone)

Mineralization

Limonite and Jarosite rich zone

Fault (broken line shows inferred fault)

Fractured zone

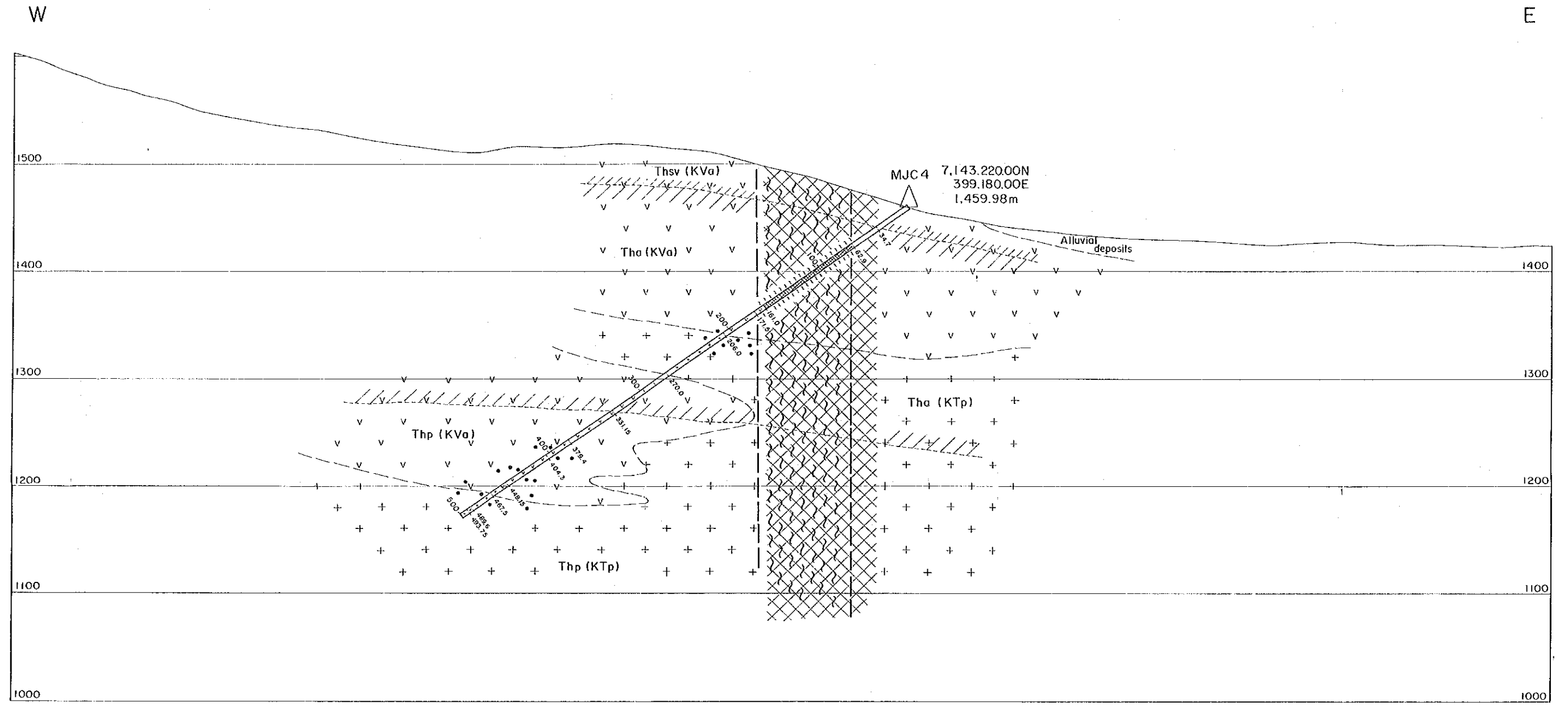
Geologic contact

Plate 2 - (2)

Geologic profile of the drill hole  
MJC3

(1 : 2,000)

Drilling Survey, Phase I  
Veraguas Project, JICA/MMAJ-ENAMI



398.500E

399.000E

399.500E

**Legend**

- Aeropuerto formation**
- KVv v Andesitic lava and autobrecciated lava
  - KVv Δ Andesitic tuff and pyroclasts
- Intrusion**
- KTp + Dioritic-andesitic porphyry

- Hydrothermal Alteration zone**
- Ths / Intensely silicified zone
  - Thsv / Quartz sericitized zone
  - Tha / Siliceous argillized zone
  - Thp / Chloritized zone (Propylitized zone)

- Mineralization
- / Limonite and Jarosite rich zone
- Fault (broken line shows inferred fault)
- ~ Fractured zone
- Geologic contact

Plate 2- (3)

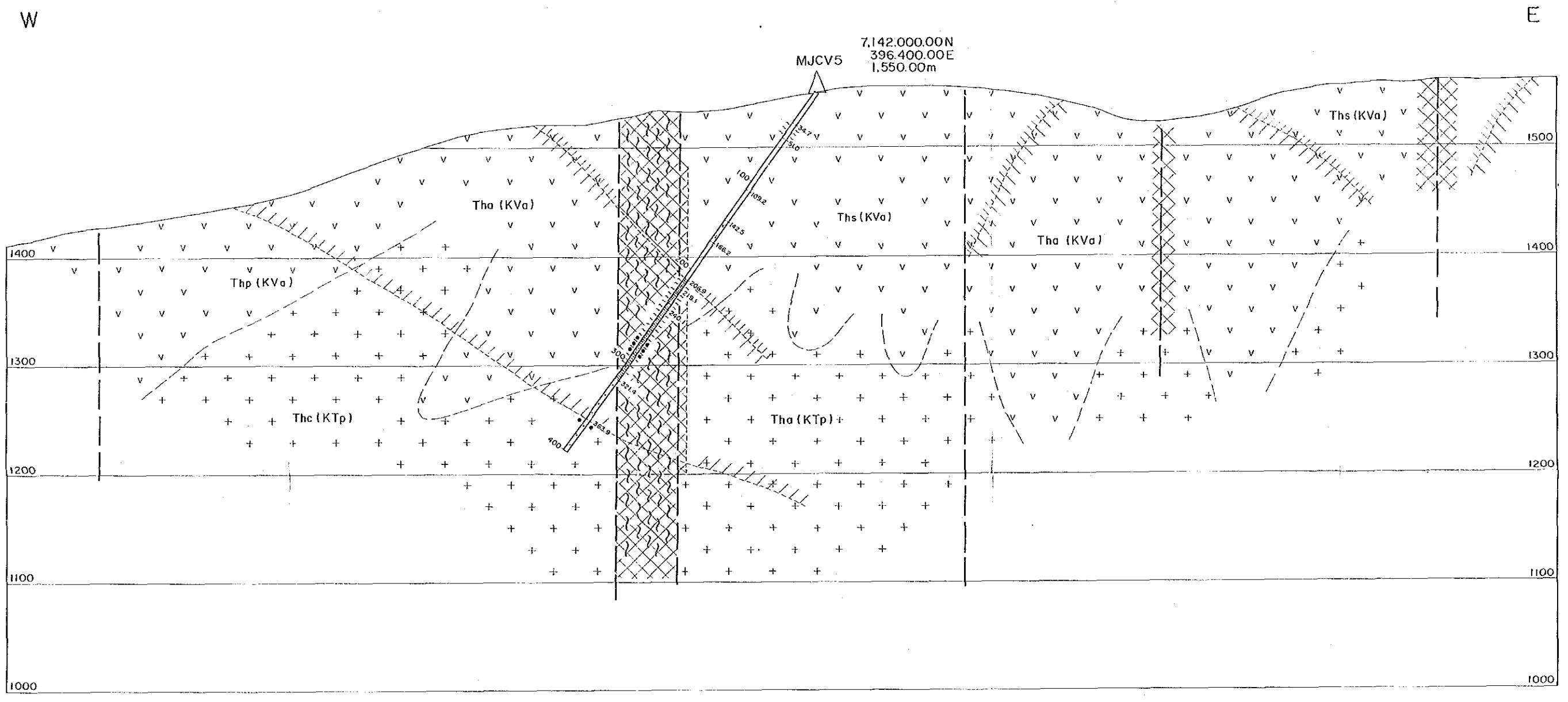
Geologic profile of the drill hole  
MJC4-4

(1 : 2,000)

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
Drilling Survey, Phase I


Veraguas Project, JICA/MMAJ-ENAMI




Legend

Aeropuerto formation


KVa  Andesitic lava and autobrecciated lava


KVa  Andesitic tuff and pyroclasts


Intrusion


KTp  Dioritic-andesitic porphyry


Hydrothermal Alteration zone


Ths  Intensely silicified zone


Thsv  Quartz sericitized zone


Tha  Siliceous argillized zone

Thp  Chloritized zone (Propylitized zone)

 Mineralization

 Limonite and Jarosite rich zone

 Fault (broken line shows inferred fault)

 Fractured zone


 Geologic contact

Plate 2 - (4)

Geologic profile of the drill hole  
MJCv-5

(1 : 2,000)

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Drilling Survey, Phase I

Veraguas Project, JICA/MMAJ-ENAMI

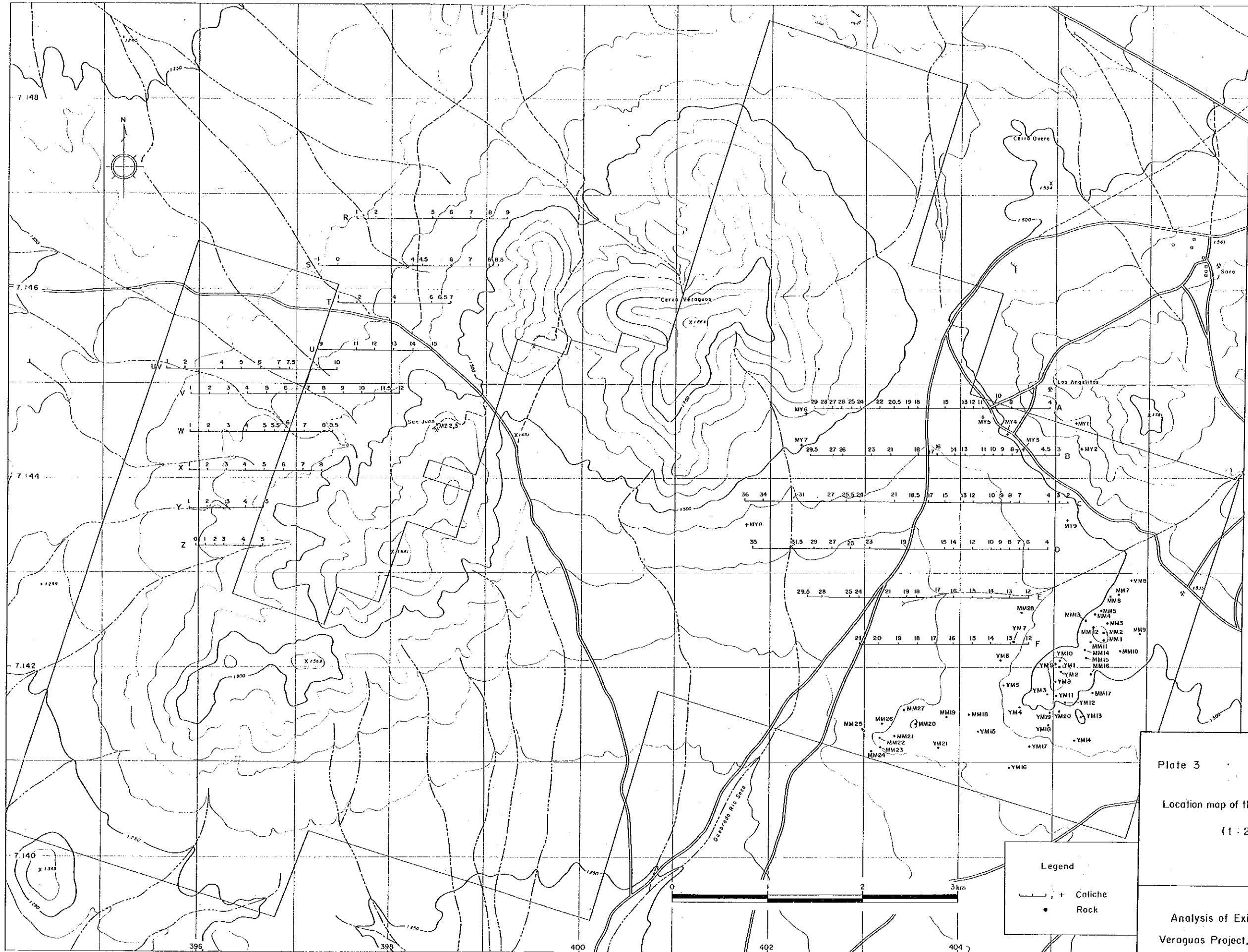
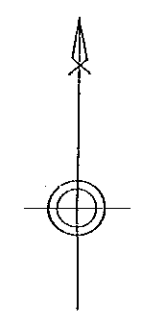


Plate 3

Location map of the Sampling Points  
(1 : 20,000)

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Analysis of Existing Data, Phase I  
Veraguas Project, JICA/MMAJ-ENAMI



**LEGEND**

Recent	Qat	Alluvium	
Pleistocene	Qg	Gravels of terraces	
	Kl	Lamprophyre	
	Kfi	Felsitic intrusion	
Andes Batholith from Medium Cretaceous to Lower Tertiary	Kas	Albite Granite	
	Kap	Adameritic Porphyrite	
	Kld	Leucodiorite	
	Kd	Diorite Indifferentiated	
	Kpo	Hypobysal Porphyrite	
	Kai	Porphyritic Intrusion	
	Kp	Pabellon formation	} Bandurrias formation
Lower Cretaceous (Neocomian)	Kt	Tolorillo formation	
	Kn	Nantaco formation	
	Ka	Abundancia formation	
	Kpc	Punto del Cobre formation	



- Qg Gravels of terraces
  - Kt Lamprophyre
  - Kfi Felsitic intrusion
  - Kas Albite Granite
  - Kap Adameritic Porphyrite
  - Kld Leucodiorite
  - Kd Diorite Indifferentiated
  - Kpo Hypabyssal Porphyrite
  - Kai Porphyritic Intrusion
  - Kp Pabellon formation
  - Kl Tolorillo formation
  - Kn Nantoco formation
  - Ka Abundancia formation
  - Kpc Punta del Cobre formation
  - Kb Bendurrias formation
- Andes Batholith from Medum Cretaceous to Lower Tertiary
- Lower Cretaceous (Neocomian)
- Anticlinal axis
  - Synclinal axis
  - Fault (broken line shows inferred f.)
  - Boundary of strata
  - Access road
  - Survey Area
  - P I Geophysical survey line

Plate 4



- Lower Cretaceous (Neocomian)
- Kt Totoralillo formation
  - Kn Nantoco formation
  - Ka Abundancia formation
  - Kpc Punto del Cobre formation
- Kb Bandurrios formation
- Anticlinal axis
  - Synclinal axis
  - Fault (broken line shows inferred f.)
  - Boundary of strata
  - Access road
  - Survey Area
  - Geophysical survey line

Plate 4

Synthetic map of the Progreso area  
(1 : 25,000)

Analysis of Existing Data, Phase 1  
Veraguas Project, JICA/MMAJ-ENAMI

1 : 25,000

0 1 2 3km

