THE MINERAL EX

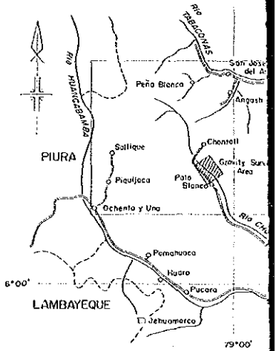
IN

THE PACHAPIRIANA AREA,

( PHASE II

PL.-6

Geophysical Interp




JAPAN INTERNATIONAL CO...

METAL MINING AGENC...

FEBRUARY ...

Prepared by ...

LEGEN...

A–A' Cross section

Boring site

Quartz vein

Contour of basement de...

100m interval

High density zone on basement

Assumed High dens... zone on basement

Low resistivity z... (<20 m)

High resistivity ... (>1000 m)

THE MINERAL EXPLORATION

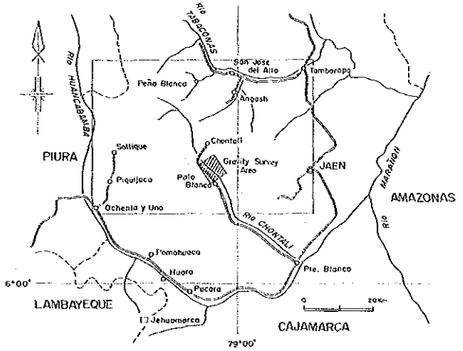
IN

THE PACHAPIRIANA AREA, REPUBLIC OF PERU

( PHASE III )

PL.-6

# Geophysical Interpretation Map




JAPAN INTERNATIONAL COOPERATION AGENCY

METAL MINING AGENCY OF JAPAN

FEBRUARY 1991

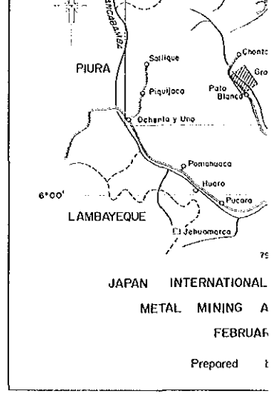
Prepared by MINDECO

## LEGEND

- A—A' Cross section
- Boring site
- Quartz vein

Contour of basement depth

- 100m interval
- High density zone on basement
- Assumed High density zone on basement
- Low resistivity zone (<20 m)
- High resistivity zone (>1000 m)



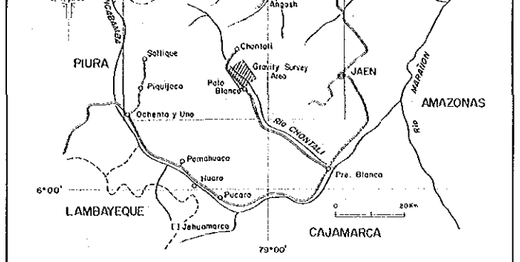

JAPAN INTERNATIONAL
METAL MINING A
FEBRUAR
Prepared

LEGE

A–A' Cross sectior
Boring site
Quartz vein
Contour of basemen
100m interva
High density on basement
Assumed High zone on base
Low resistivi (<20 m)
High resistiv (>1000 m)

0 50

Scale = 1




JAPAN INTERNATIONAL COOPERATION AGENCY

METAL MINING AGENCY OF JAPAN

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# LEGEND

A–A' Cross section

Boring site

Quartz vein

Contour of basement depth

100m interval

High density zone on basement

Assumed High density zone on basement

Low resistivity zone (<20 m)

High resistivity zone (>1000 m)

0 500 1000

Scale = 1 : 10,000

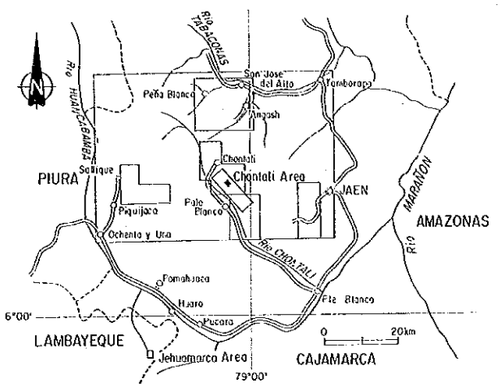
PL-7 (1)

# THE MINERAL EXPLORATION IN THE PACHAPIRIANA AREA, REPUBLIC OF PERU

( PHASE III )

## Core Log (MJPC-1)

## Chontali Area




JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1991
prepared by MINDECO

0 10 20m

Location : 9'370.609 N, 716.071E
Elevation : 1,822.55 m
Direction : 230° Inclination -15°

### LEGEND

Symbol

- shale
- tuff
- lapilli tuff
- tuff breccia
- andesite
- brecciated rock
- fault breccia
- sheared zone
- quartz zone
- missing zone

Intensity of alteration and mineralization

- — weak
- + moderate
- ++ strong
- ( ) sporadically

-15 intersected angle of vein
∠50 intersected angle of bedding plane

sh — shale
tf — tuff or tuffaceous
lp-tf — lapilli tuff
tf-bre — tuff breccia
Sil — silicification
Arg — argillization
chl — chloritization
ep — epidotization
oth — others
wk — weak

py — pyrite
Cp — chalcopyrite
Trh — tetrahedrite
Sp — sphalerite
Ga — galena
cc — chalcocite
Bn — bornite
limo — limonite or limonitized
Hm — hematite
Hb — hornblende
Qtz — quartz

dr — drusy
v — vein

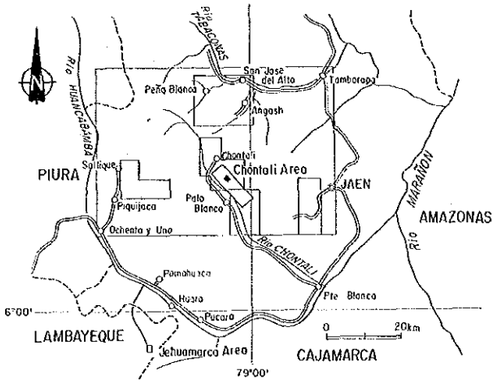
PL-7(2)

# THE MINERAL EXPLORATION IN THE PACHAPIRIANA AREA, REPUBLIC OF PERU

(PHASE III)

## Core Log (MJPC-2)

## Chontali Area




JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1991
prepared by MINDECO

0 10 20m

Location : 9'370.610N, 716.073E

Elevation : 1,822.11m

Direction : 230° Inclination −40°

### LEGEND

Symbol

- shale
- tuff
- lapilli tuff
- tuff breccia
- andesite
- brecciated rock
- fault breccia
- sheared zone
- quartz zone
- missing zone

Intensity of alteration and mineralization

- — weak
- + moderate
- # strong
- ( ) sporadically

15 intersected angle of vein

50 intersected angle of bedding plane

sh — shale
tf — tuff or tuffaceous
lp-tf — lapilli tuff
tf-bre — tuff breccia
Sil — silicification
Arg — argillization
chl — chloritization
ep — epidotization
oth — others
wk — weak

py — pyrite
Cp — chalcopyrit
Trh — tetrahedrite
Sp — sphalerite
Gn — galena
cc — chalcocite
Bn — bornite
limo — limonite or limonitized
Hm — hematite
Hb — hornblende
Qtz — quartz

dr — drusy
v — vein

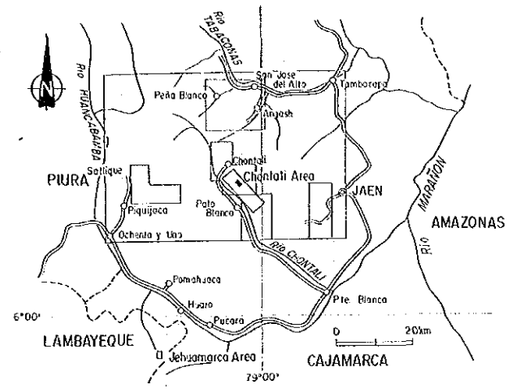
PL-7(3)

# THE MINERAL EXPLORATION IN THE PACHAPIRIANA AREA, REPUBLIC OF PERU

( PHASE Ⅲ )

## Core Log (MJPC-3)

## Chontali Area




JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1991
prepared by MINDECO

0 10 20m

Location : 9'370.278 N, 715.829 E

Elevation : 1,947.36 m

Direction : 50° Inclination −50°

### LEGEND

Symbol

- shale
- tuff
- lapilli tuff
- tuff breccia
- andesite
- brecciated rock
- fault breccia
- sheared zone
- quartz zone
- missing zone

Intensity of alteration and mineralization

- — weak
- + moderate
- ++ strong
- ( ) sporadically

-15 intersected angle of vein

-50 intersected angle of bedding plane

sh — shale
tf — tuff or tuffaceous
lp-tf — lapilli tuff
tf-bre — tuff breccia
Sil — silicification
Arg — argillization
chl — chloritization
ep — epidotization
oth — others
wk — weak

py — pyrite
Cp — chalcopyrite
Trh — tetrahedrite
Sp — sphalerite
Gn — galena
cc — chalcocite
Bn — bornite
limo — limonite or limonitized
Hm — hematite
Hb — hornblende
Qtz — quartz

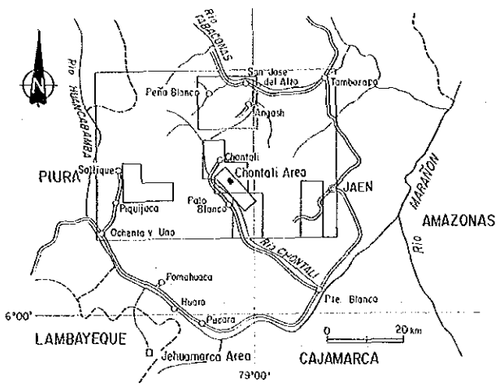
dr — drusy
v — vein

PL-7(4)

THE MINERAL EXPLORATION
IN
THE PACHAPIRIANA AREA, REPUBLIC OF PERU

( PHASE Ⅲ )

# Core Log ( MJPC－4 )
## Chontali Area




JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1991
prepared by MINDECO

0 10 20m

Location : 9'370.277 N ; 715.828E

Elevation : 1,947.26 m

Direction : 50° Inclination － 70°

LEGEND

| Symbol | | Intensity of alteration and mineralization |
|---|---|---|
| shale | brecciated rock | － weak |
| tuff | fault breccia | + moderate |
| lapilli tuff | sheared zone | ++ strong |
| tuff breccia | quartz zone | ( ) sporadically |
| andesite | missing zone | |

15 intersected angle of vein

50 intersected angle of bedding plane

| | | | | | |
|---|---|---|---|---|---|
| sh | — shale | py | — pyrite | dr | — drusy |
| tf | — tuff or tuffaceous | Cp | — chalcopyrite | v | — vein |
| lp-tf | — lapilli tuff | Trh | — tetrahedrite | | |
| tf-bre | — tuff breccia | Sp | — sphalerite | | |
| Sil | — silicification | Gn | — galena | | |
| Arg | — argillization | cc | — chalcocite | | |
| chl | — chloritization | Bn | — bornite | | |
| ep | — epidotization | limo | — limonite or limonitized | | |
| oth | — others | Hm | — hematite | | |
| wk | — weak | Hb | — hornblende | | |
| | | Qtz | — quartz | | |
| | | cal | — calcite | | |

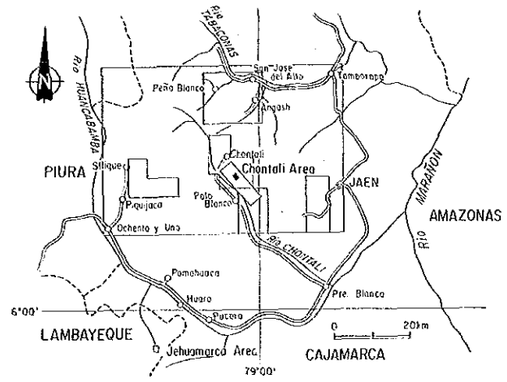
PL-7(5)

# THE MINERAL EXPLORATION IN THE PACHAPIRIANA AREA, REPUBLIC OF PERU

( PHASE Ⅲ )

## Core Log ( MJPC-5 )

## Chontali Area




JAPAN INTERNATIONAL COOPERATION AGENCY

METAL MINING AGENCY OF JAPAN

FEBRUARY 1991

prepared by MINDECO

0 10 20m

Location : 9'370.233 N ; 716.190 E

Elevation : 1,744.53 m

Direction : 230° Inclination − 15°

### LEGEND

Symbol

- shale
- tuff
- lapilli tuff
- tuff breccia
- andesite
- breciated rock
- fault breccia
- sheared zone
- quartz zone
- missing zone

Intensity of alteration and mineralization

- − weak
- + moderate
- ＋ strong
- ( ) sporadically

-15 intersected angle of vein

v 50 intersected angle of bedding plane

sh — shale
tf — tuff or tuffaceous
lp-tf — lapilli tuff
tf-bre — tuff breccia
Sil — silicification
Arg — argillization
chl — chloritization
ep — epidotization
oth — others
wk — weak

py — pyrite
Cp — chalcopyrit
Trh — tetrahedrite
Sp — sphalerite
Gn — galena
cc — chalcocite
Bn — bornite
limo — limonite or limonitized
Hm — hematite
Hb — hornblende
Qtz — quartz

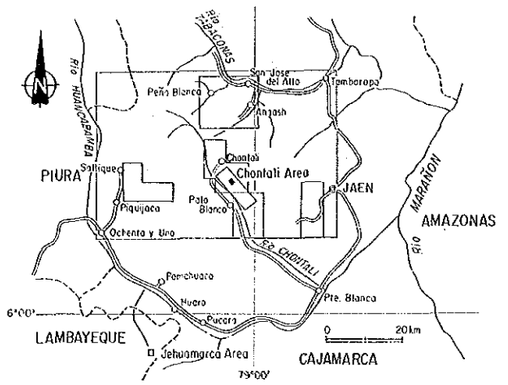
dr — drusy
v — vein

PL-7(6)

THE MINERAL EXPLORATION
IN
THE PACHAPIRIANA AREA, REPUBLIC OF PERU

( PHASE III )

# Core Log (MJPC-6)
## Chontali Area




JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1991
prepared by MINDECO

0 10 20m

Location : 9'370.234 N ; 716.191 E

Elevation : 1,773.60 m

Direction : 230° Inclination −40°

### LEGEND

Symbol

- shale
- tuff
- lapilli tuff
- tuff breccia
- andesite
- brecciated rock
- fault breccia
- sheared zone
- quartz zone
- missing zone

Intensity of alteration and mineralization

- − weak
- + moderate
- ++ strong
- ( ) sporadically

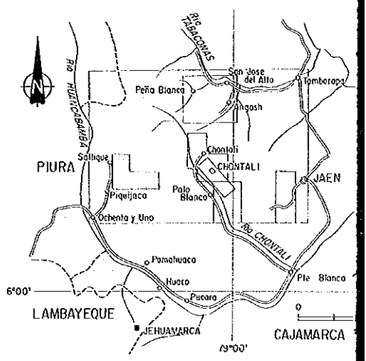
-15 intersected angle of vein

∠50 intersected angle of bedding plane

| | | | |
|---|---|---|---|
| sh | — shale | py | — pyrite |
| tf | — tuff or tuffaceous | Cp | — chalcopyrite |
| lp-tf | — lapilli tuff | Trh | — tetrahedrite |
| tf-bre | — tuff breccia | Sp | — sphalerite |
| Sil | — silicification | Gn | — galena |
| Arg | — argillization | cc | — chalcocite |
| chl | — chloritization | Bn | — bornite |
| ep | — epidotization | limo | — limonite or limonitized |
| oth | — others | Hm | — hematite |
| wk | — weak | Hb | — hornblende |
| | | Qtz | — quartz |
| dr | — drusy | | |
| v | — vein | | |

THE MINERAL EXPLORATION
IN
THE PACHAPIRIANA AREA, REPUBLIC O
( PHASE III )

# Geological Map of the Jehuamarca




JAPAN INTERNATIONAL COOPERATION A
METAL MINING AGENCY OF JAPAN
FEBRUARY 1991
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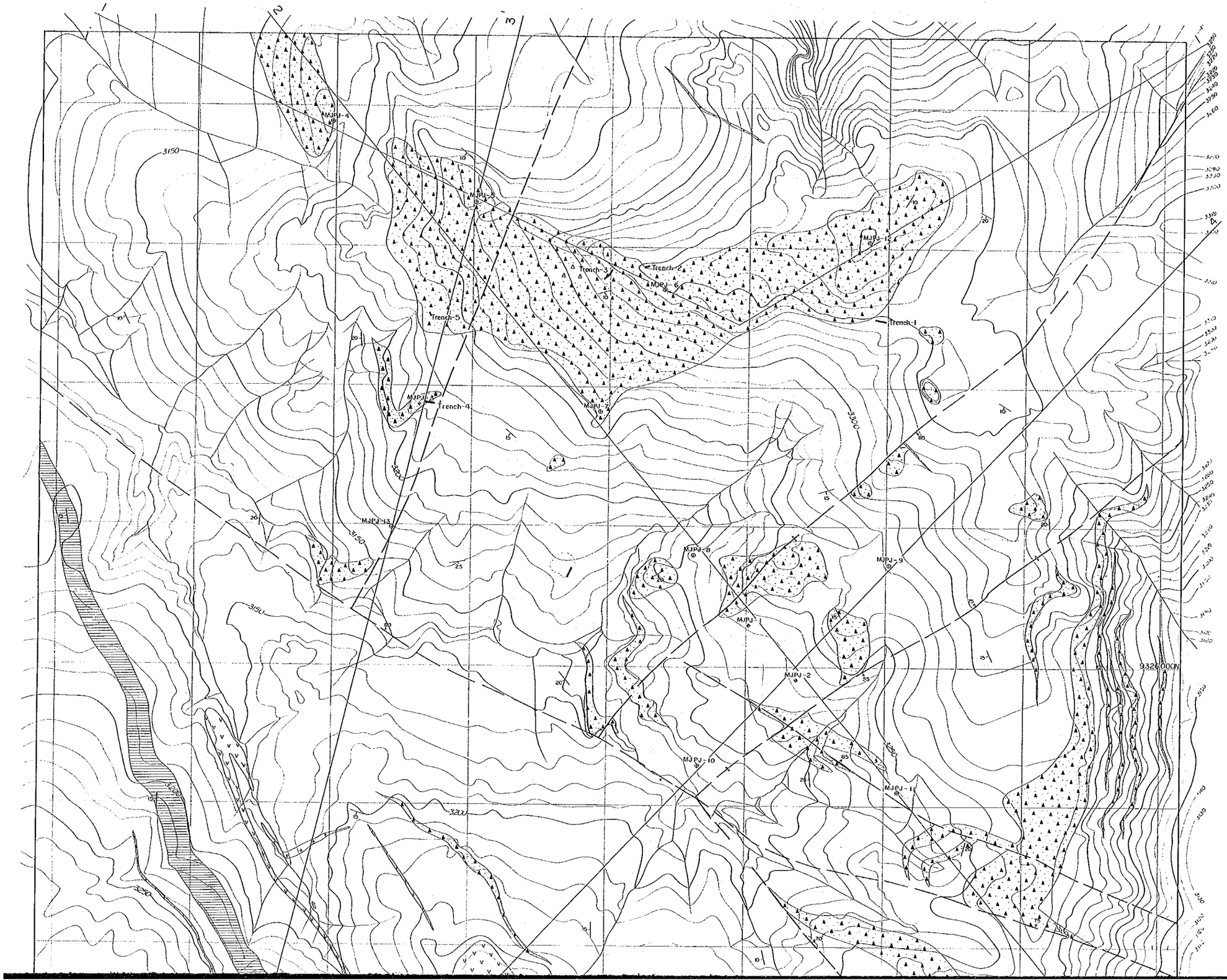
0 100 200




## LEGEND

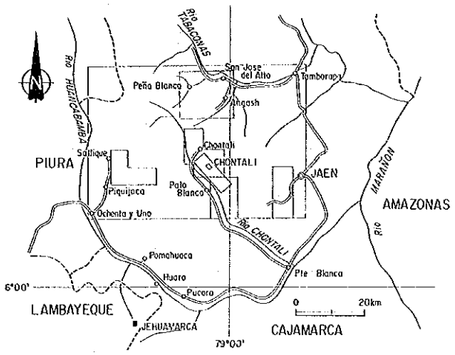
- Pyroclastics
- Silicified Breccid
- Shale and Tuffaceous Shale
- Andesite
- Rhyolite
- Bedding Plane
- Fault
- Driling Site in 1989
- Driling Site in 1990
- Trenching Site

PL-8

THE MINERAL EXPLORATION
IN
THE PACHAPIRIANA AREA, REPUBLIC OF PERU

( PHASE Ⅲ )

# Geological Map of the Jehuamarca Area

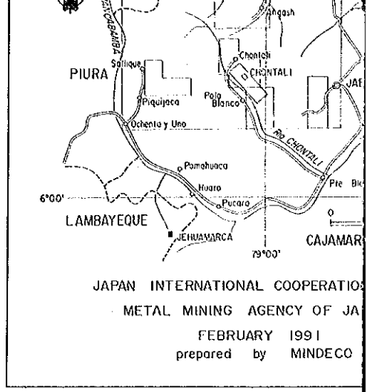



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1991
prepared by MINDECO

0 100 200 250m

## LEGEND

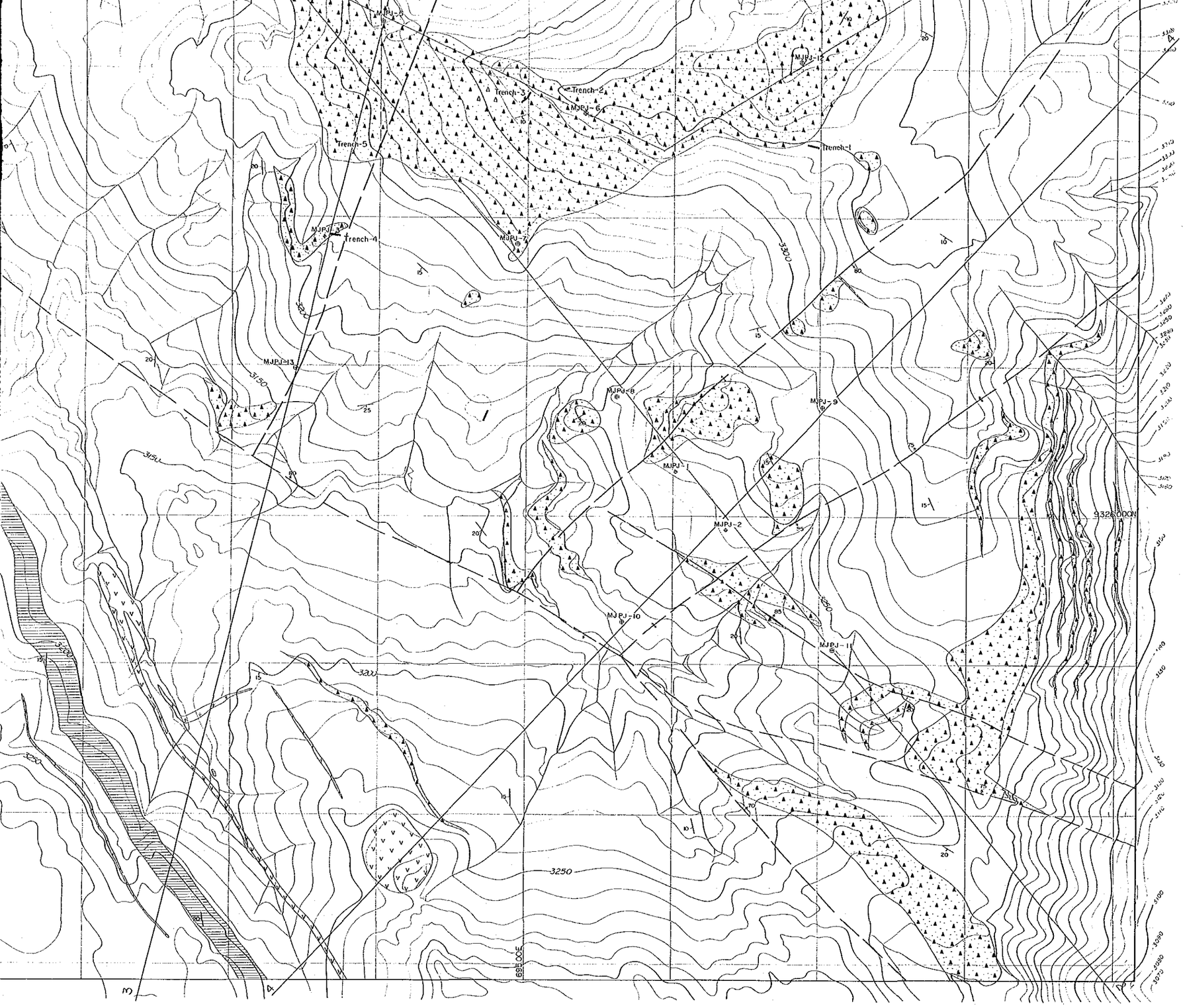
- Pyroclastics
- Silicified Breccid
- Shale and Tuffaceous Shale
- Andesite
- Rhyolite
- Bedding Plane
- Fault
- Driling Site in 1989
- Driling Site in 1990
- Trenching Site

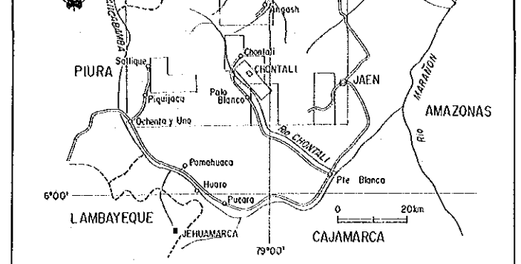



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1991
prepared by MINDECO

## LEGEND

- Pyroclastics
- Silicified Breccia
- Shale and Tuffaceous S
- Andesite
- Rhyolite
- Bedding Plane
- Fault
- Drilling Site in 1989
- Drilling Site in 1990
- Trenching Site




JAPAN INTERNATIONAL COOPERATION AGENCY

METAL MINING AGENCY OF JAPAN

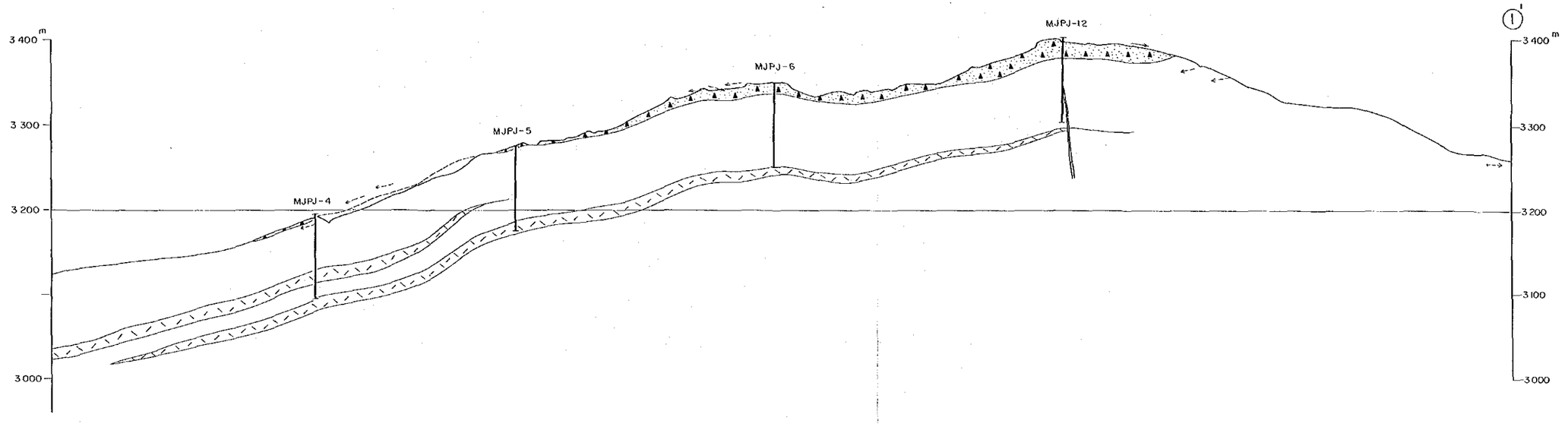
FEBRUARY 1991

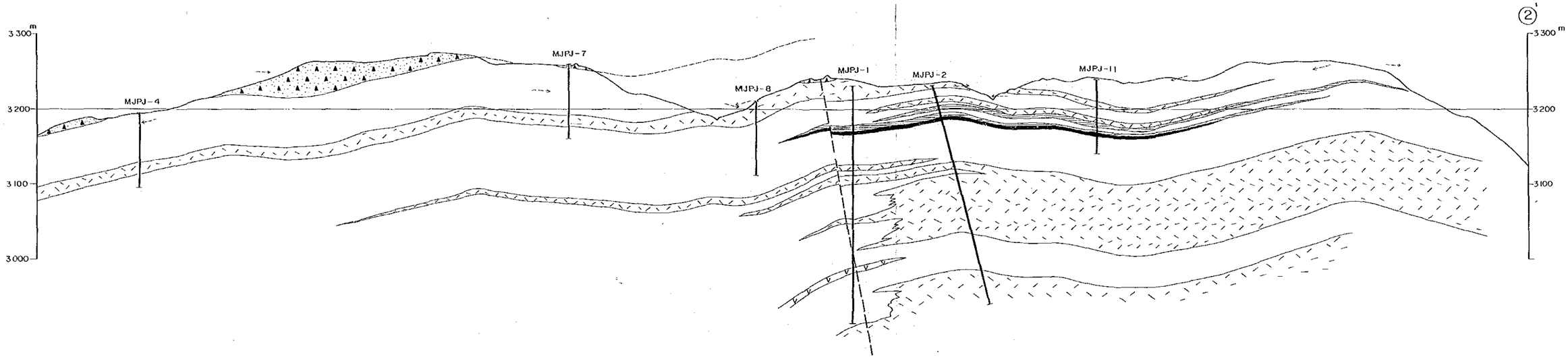
prepared by MINDECO

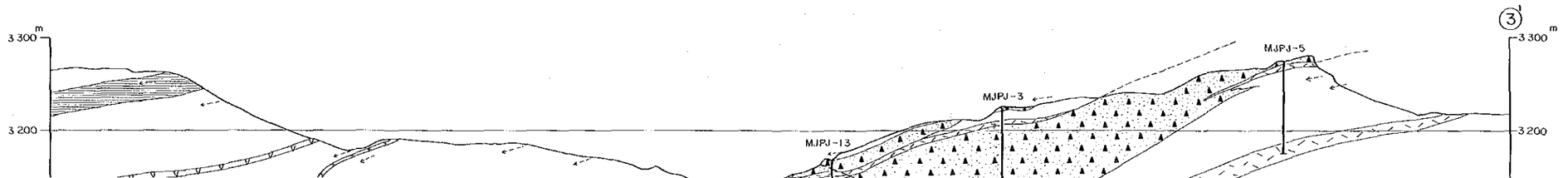
0 100 200 250m

## LEGEND

- Pyroclastics
- Silicified Breccid
- Shale and Tuffaceous Shale
- Andesite
- Rhyolite
- Bedding Plane
- Fault
- Driling Site in 1989
- Driling Site in 1990
- Trenching Site

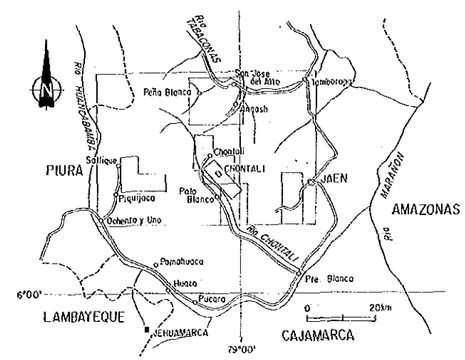

3 400 m
3 300
3 200
3 000
MJPJ-4
MJPJ-5
MJPJ-6
MJPJ-12
1
1'
3 400 m
3 300
3 200
3 100
3 000


3 300 m
3 200
3 100
3 000
MJPJ-4
MJPJ-7
MJPJ-8
MJPJ-1
MJPJ-2
MJPJ-11
2
2'
3 300 m
3 200
3 100

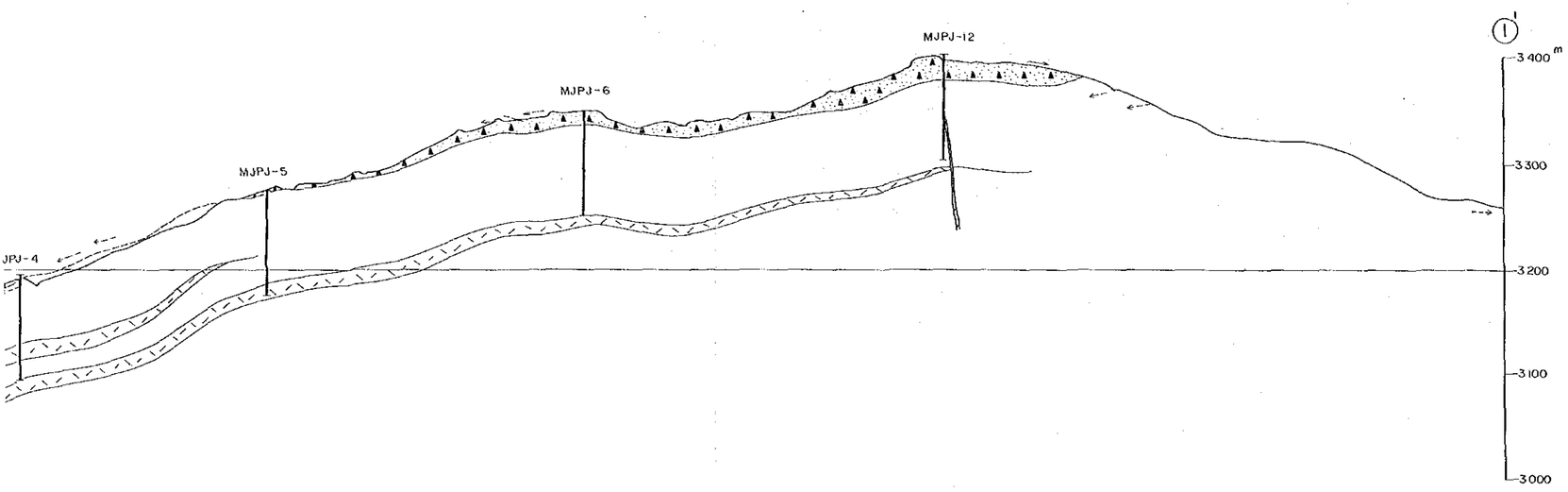

3 300 m
3 200
MJPJ-13
MJPJ-3
MJPJ-5
3
3'
3 300 m
3 200

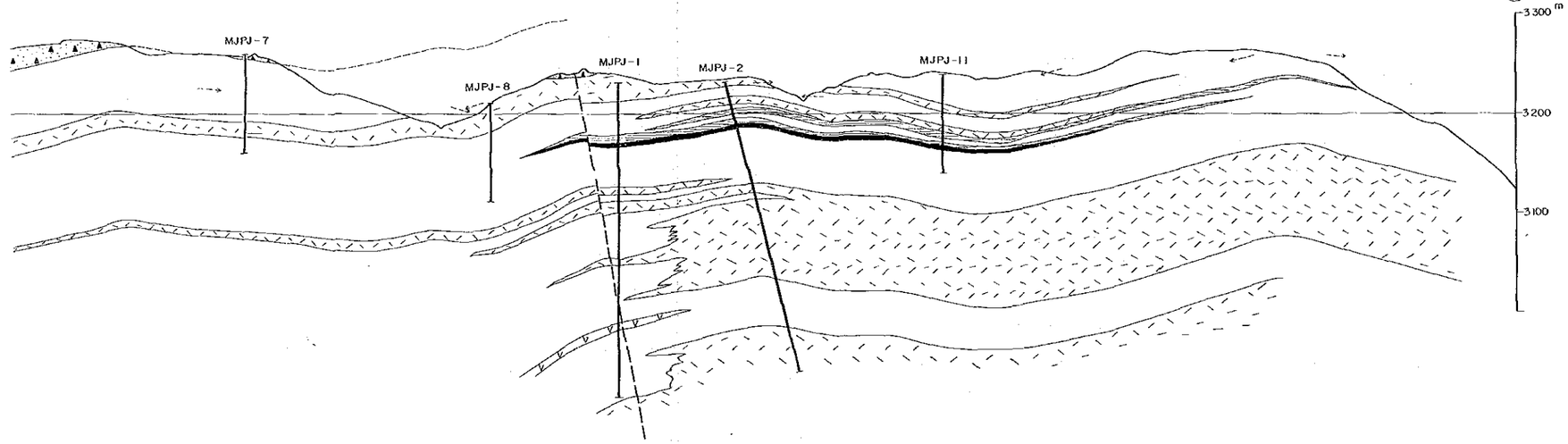
THE MINERAL EXPLORATION
IN
THE PACHAPIRIANA AREA, REPUBLIC OF PERU
( PHASE III )

# Geological profiles of the Jehuamarca Area




JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1991
prepared by MINDECO



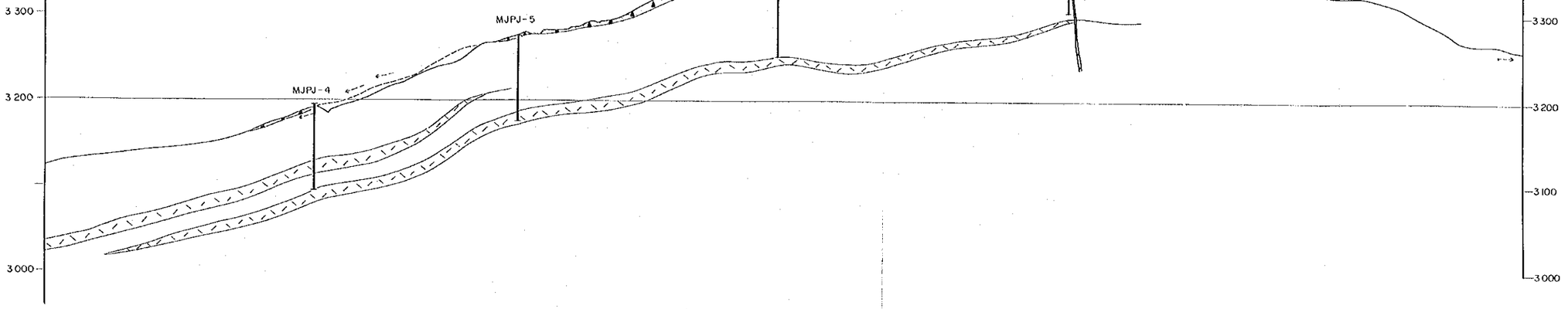


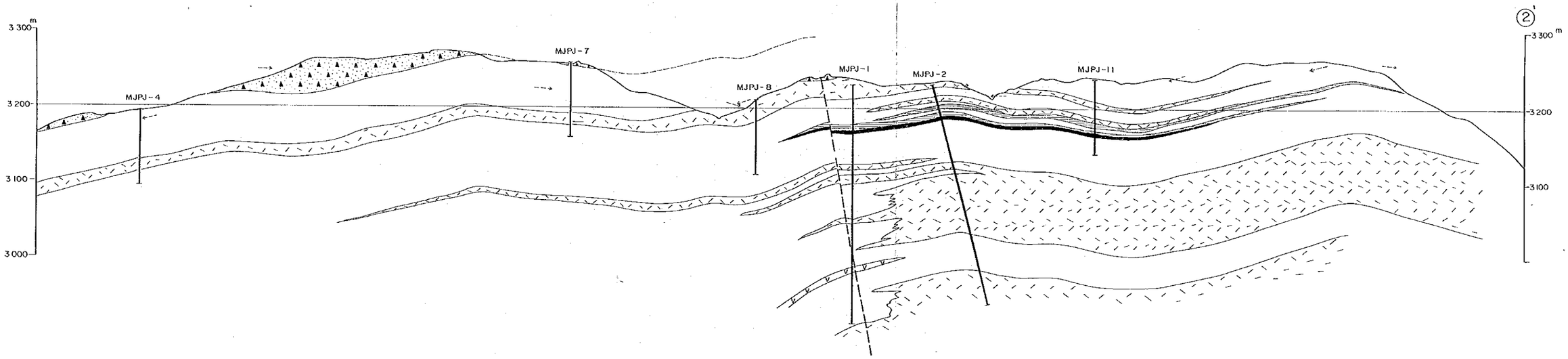


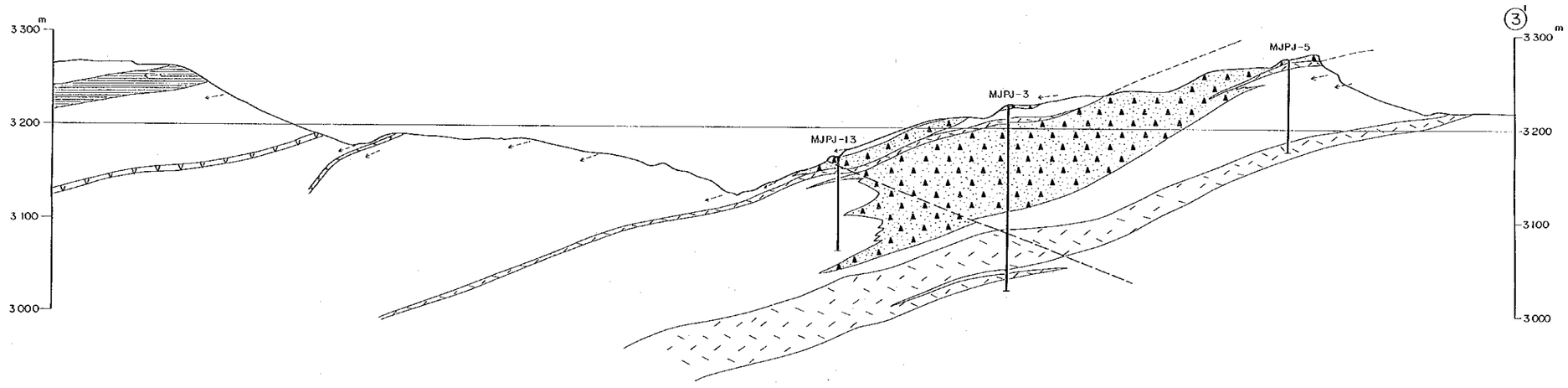
## LEGEND

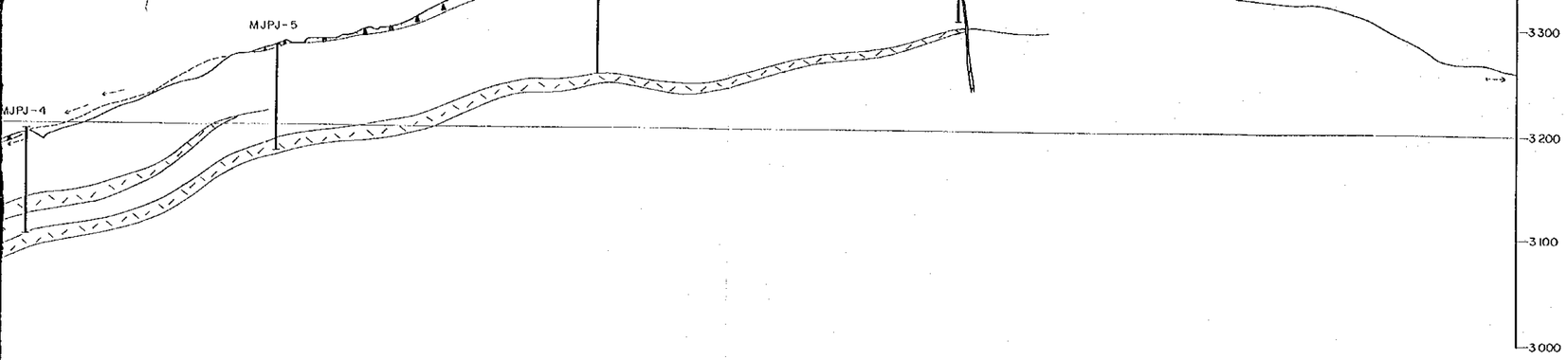
- Lapilli Tuff
- Tuff
- Shale and Tuffaceous Shale
- Silicified Breccia
- Quartg Gne
- Aulcsite
- Rhyolite
- Fault
- Apparent Dip

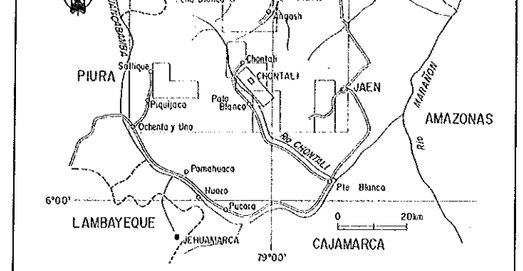
0 100 200 250m


3 300
3 200
3 000
MJPJ-5
MJPJ-4
3 300
3 200
3 100
3 000


m
3 300
3 200
3 100
3 000
MJPJ-4
MJPJ-7
MJPJ-8
MJPJ-1
MJPJ-2
MJPJ-11
2'
3 300 m
3 200
3 100

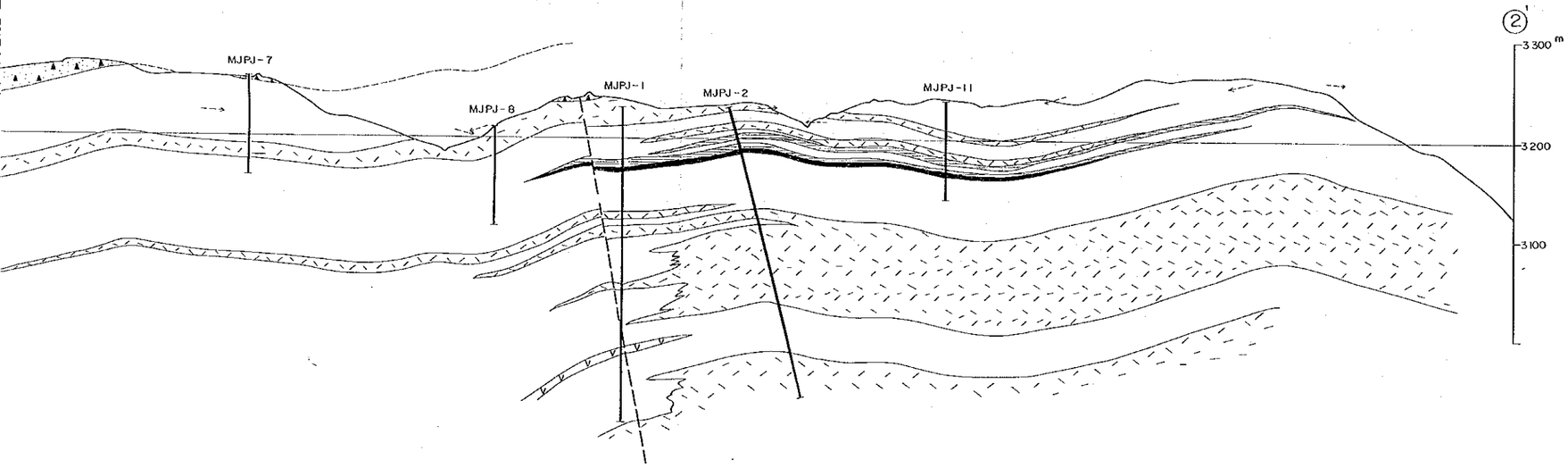

m
3 300
3 200
3 100
3 000
MJPJ-13
MJPJ-3
MJPJ-5
3'
3 300 m
3 200
3 100
3 000

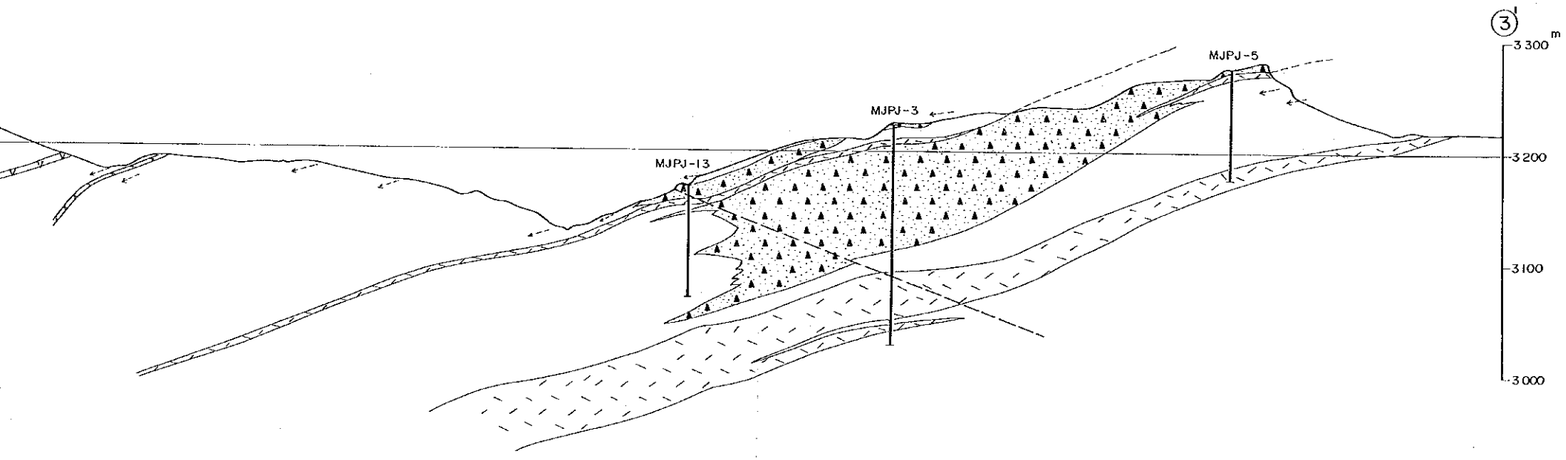



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1991
prepared by MINDECO

0 100 200 250m




## LEGEND

- Lapilli Tuff
- Tuff
- Shale and Tuffaceous Shale
- Silicified Breccia
- Quartg Gne
- Aulcsite
- Rhyolite
- Fault
- Apparent Dip