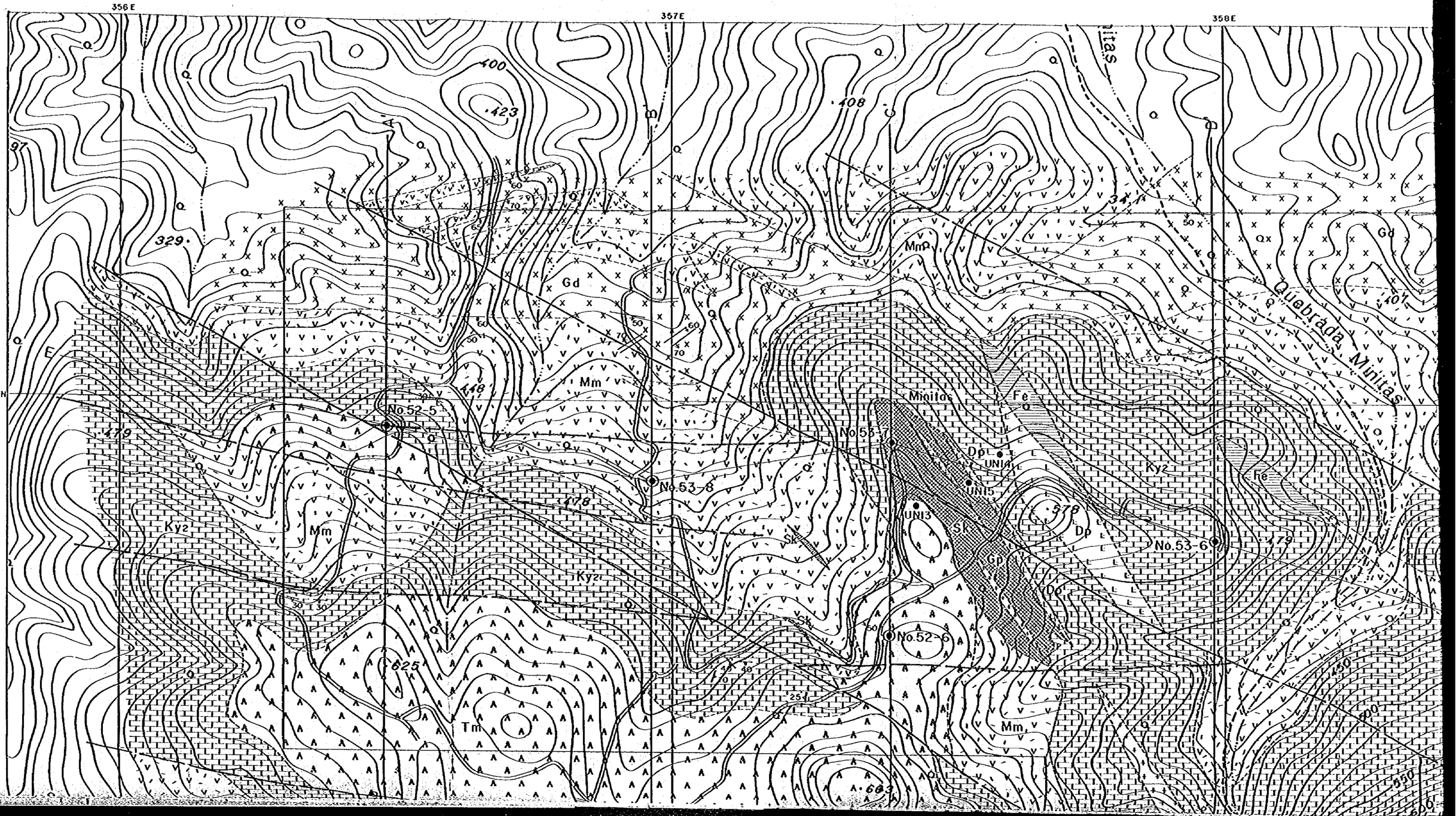
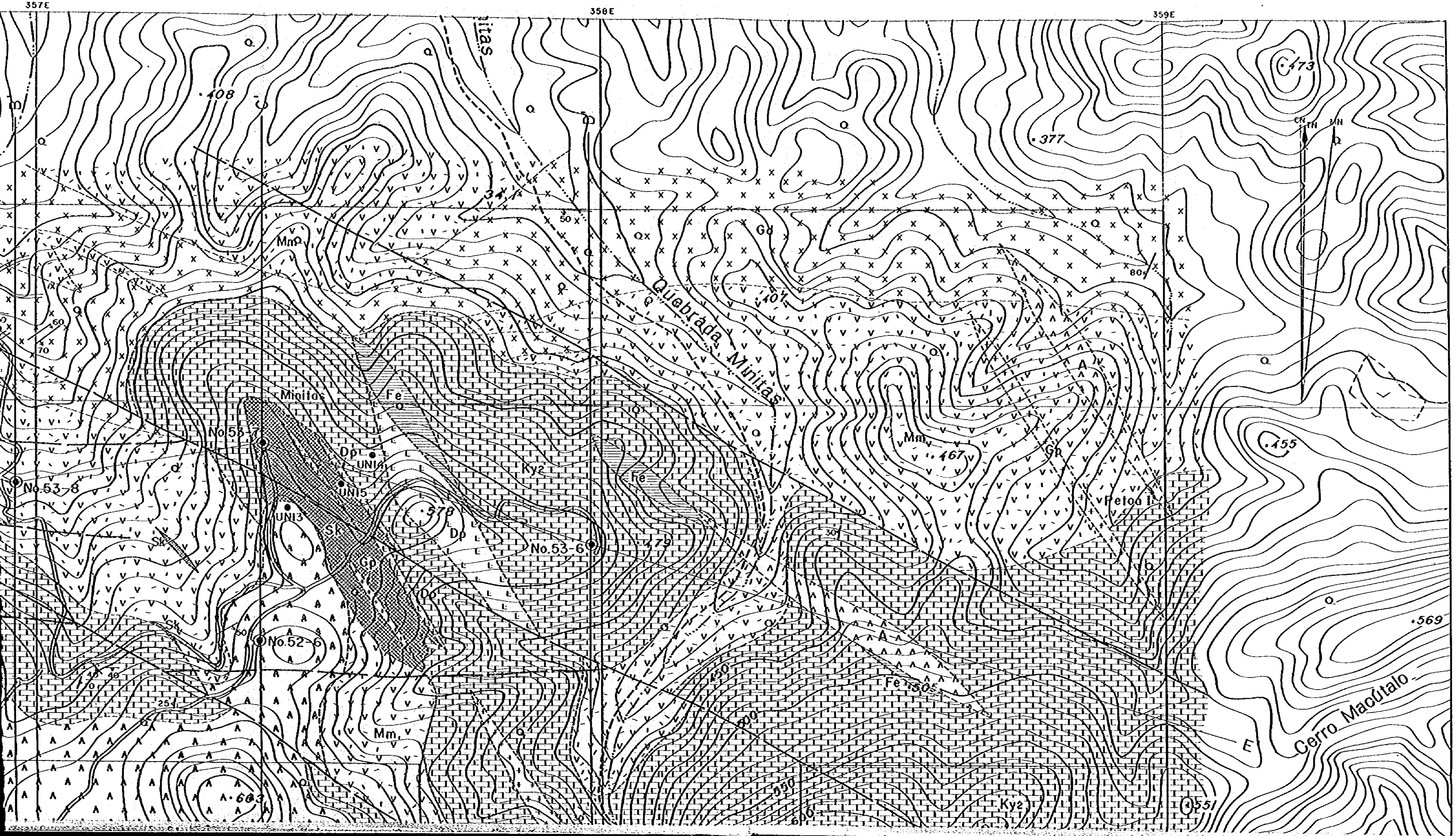
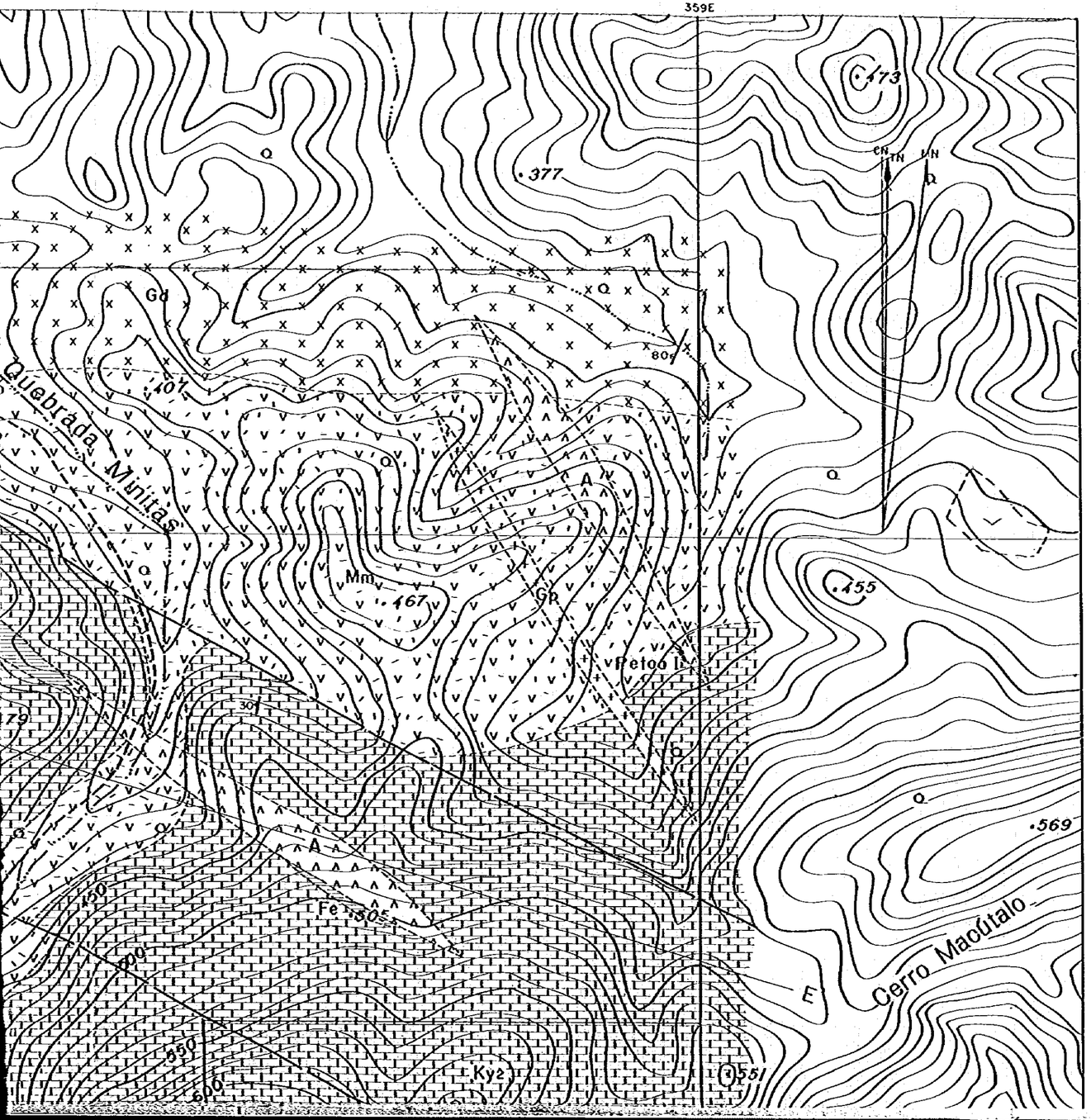

356E
357E
358E
1688N
Quebrada Munitas
Minitas
Fe
Gd
Mm
Mmp
Ky2
Tm
Dp
Gp
Sk
Qt
UNI1
UNI3
UNI5
No.52-5
No.52-6
No.53-6
No.53-7
No.53-8
400
423
408
329
448
479
578
625
663



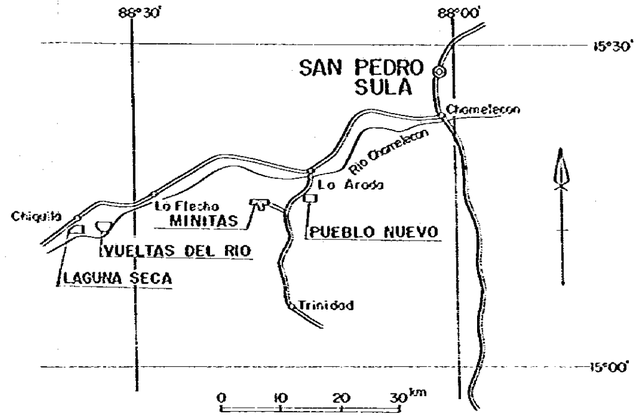
357E
358E
359E
Quebrada Minitas
Cerro Macútalo
Minitas
No.53-7
No.53-8
No.53-6
No.52-6
UN13
UN14
UN15
.408
.377
.473
.455
.467
.578
.479
.569
.663
.551



PL. III - I - 3

GEOLOGICAL SURVEY
OF
THE WESTERN AREA, REPUBLIC OF HONDURAS
VOL. 3

GEOLOGICAL MAP OF THE MINITAS SECTOR



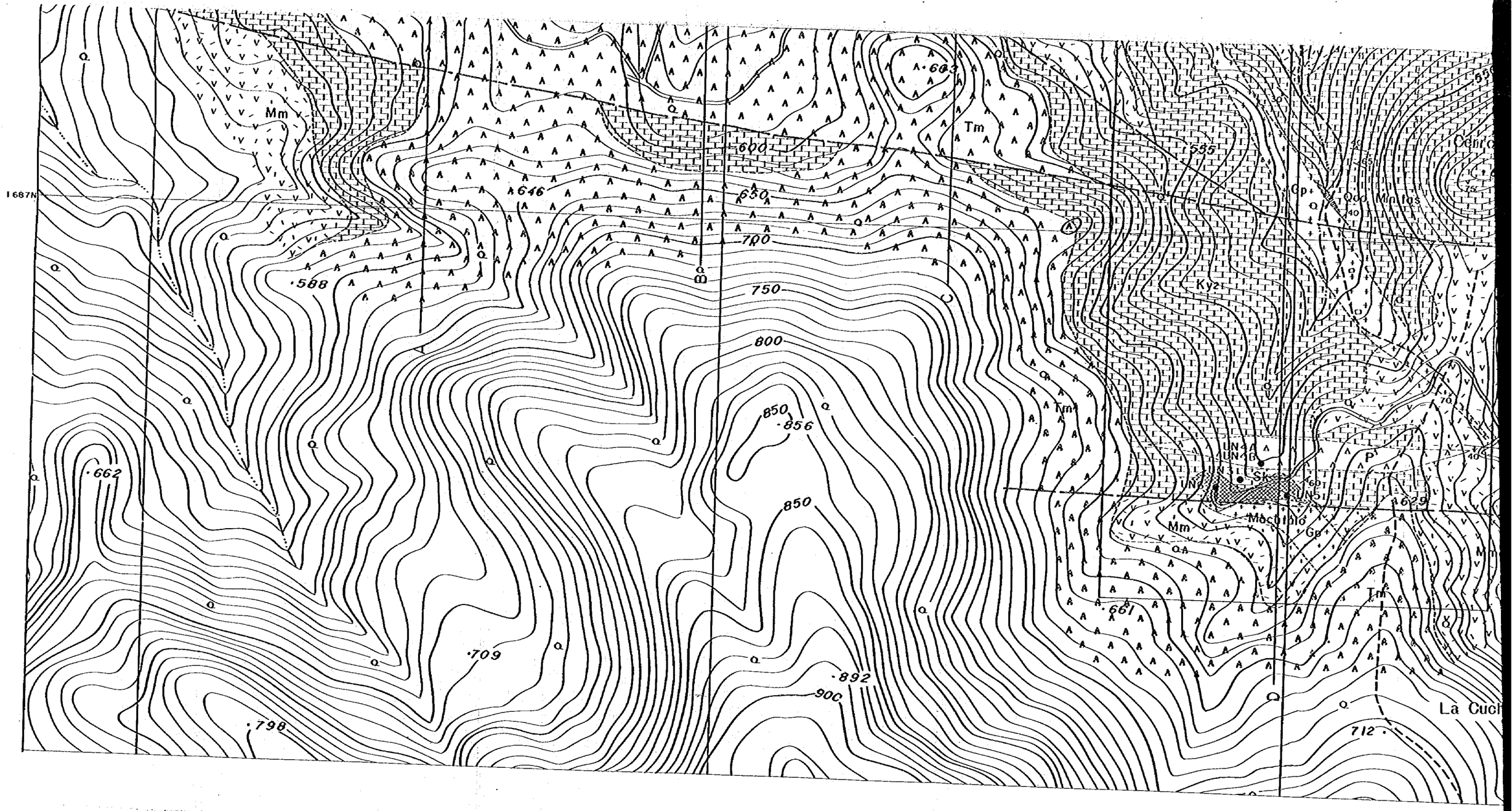
METAL MINING AGENCY OF JAPAN
JAPAN INTERNATIONAL COOPERATION AGENCY
GOVERNMENT OF JAPAN

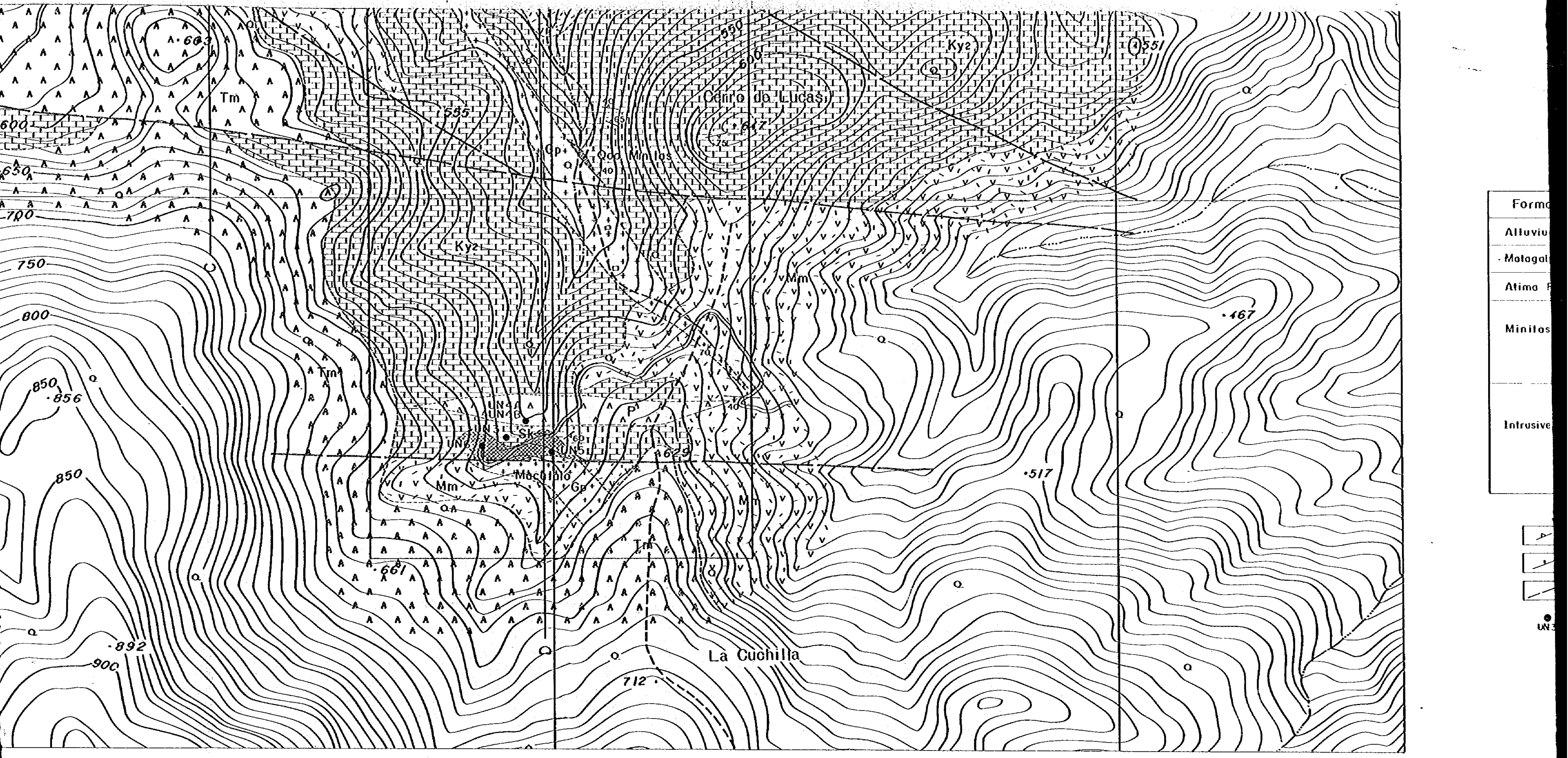
FEBRUARY 1979

prepared by MESCO, Inc.

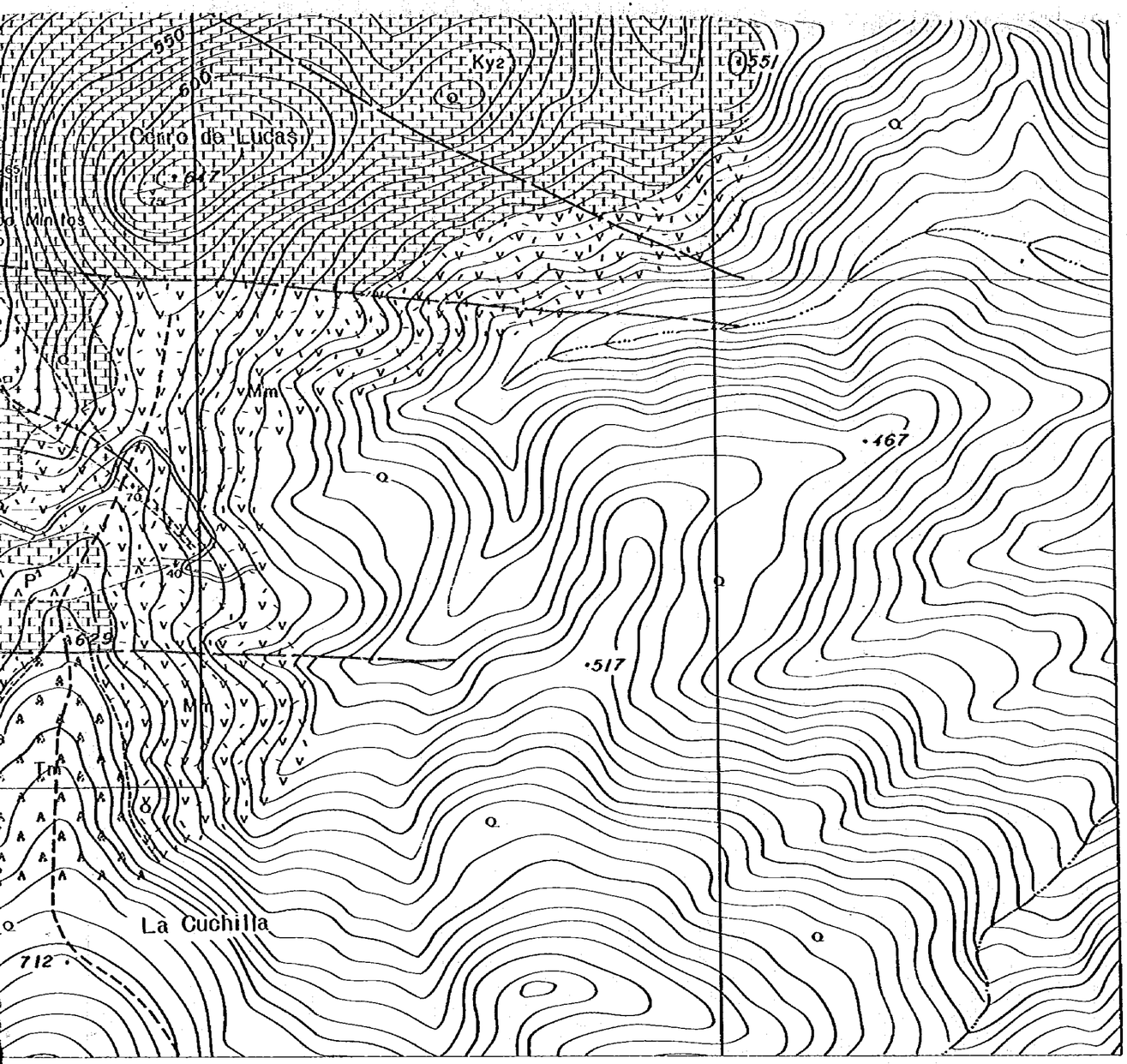
Scale 1 : 5,000

0 10 20 30 40 50m


1687N
Mm
Tm
Qoc
Mm fos
Gp
Ky2
Mt Diablo
UN4A
UN4C
UN3
UN5
Sh
P
600
535
646
650
700
588
750
800
850
856
662
850
709
892
900
798
663
661
629
712
La Cuch



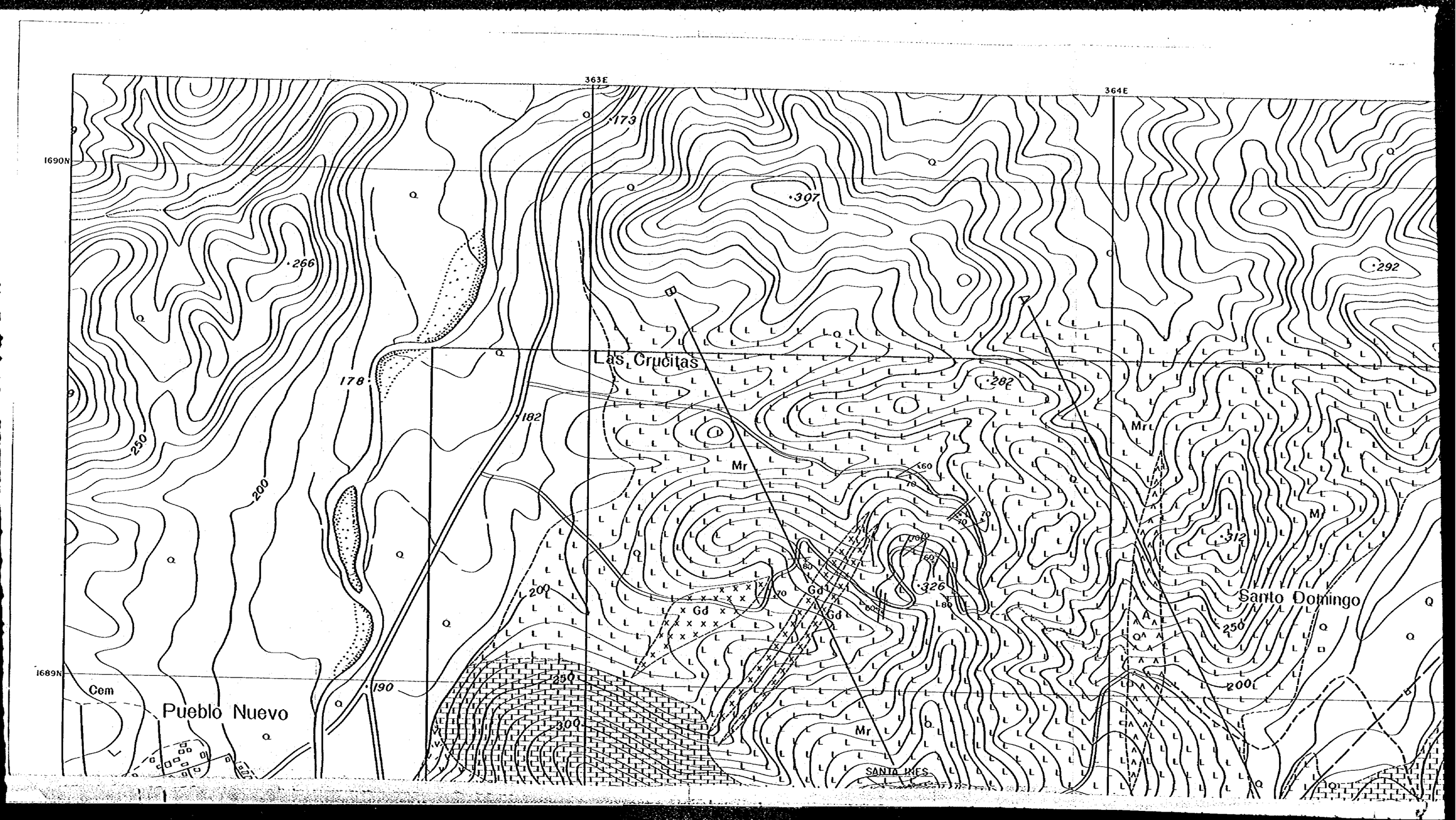
Cerro de Lucas
Qda Minitas
La Cuchilla
Tm
Ky2
Mm
Sk
Gp
P
UN3
UN5
UN6
600
650
700
750
800
850
856
892
900
663
555
550
617
551
467
517
629
661
712
Formo
Alluviu
Matagal
Atima
Minitas
Intrusive

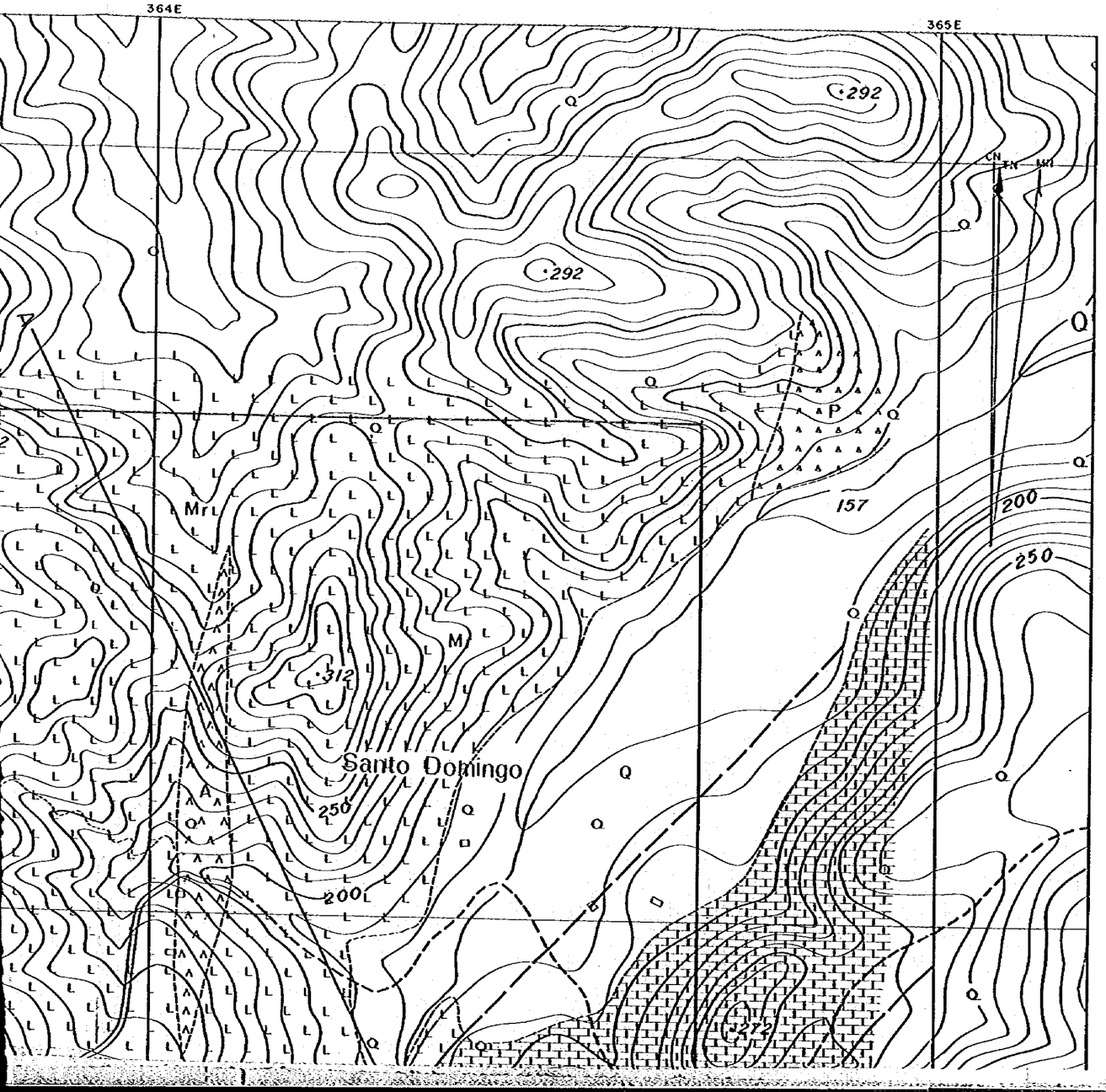


LEGEND

Formation	Stratigraphical Mark	Symbol	Lithology
Alluvium		Q	gravel, sand & mud
Metagalpa F.		Tm	basalt, andesite & pyroclastics
Atima F.		Ky2	massive limestone
Minitos F.		Mm	metaandesite, metaporphyrite & pyroclastics
		Gd	granodiorite
		Mr	liporite
Intrusive rock		A	andesite dyke
		P	porphyrite dyke
		Dp	diorite porphyry
		Gp	granite porphyry & granodiorite porphyry

	bedding plane		adit
	fissure	sk	mineralized zone (skarn)
	fault	Fe	mineralized zone (Fe gossan)
UN3	DDH by UNDP (1969~1972)		surveyed area

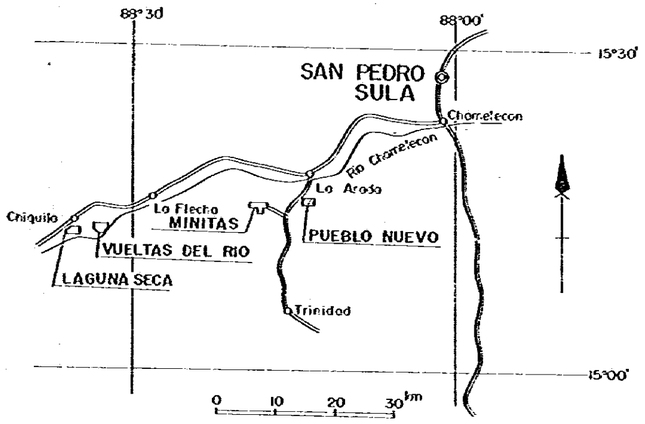

363E
364E
1690N
1689N
Las Crucitas
Pueblo Nuevo
Santo Domingo
Cem
SANTA INES
Mr
Gd
Q
·173
·307
·266
·292
·178
·182
·282
·312
·326
·190
250
200
300
60
70
80



PL. III - I - 4

GEOLOGICAL SURVEY
OF
THE WESTERN AREA, REPUBLIC OF HONDURAS
VOL. 3

GEOLOGICAL MAP OF THE PUEBLO NUEVO SECTOR



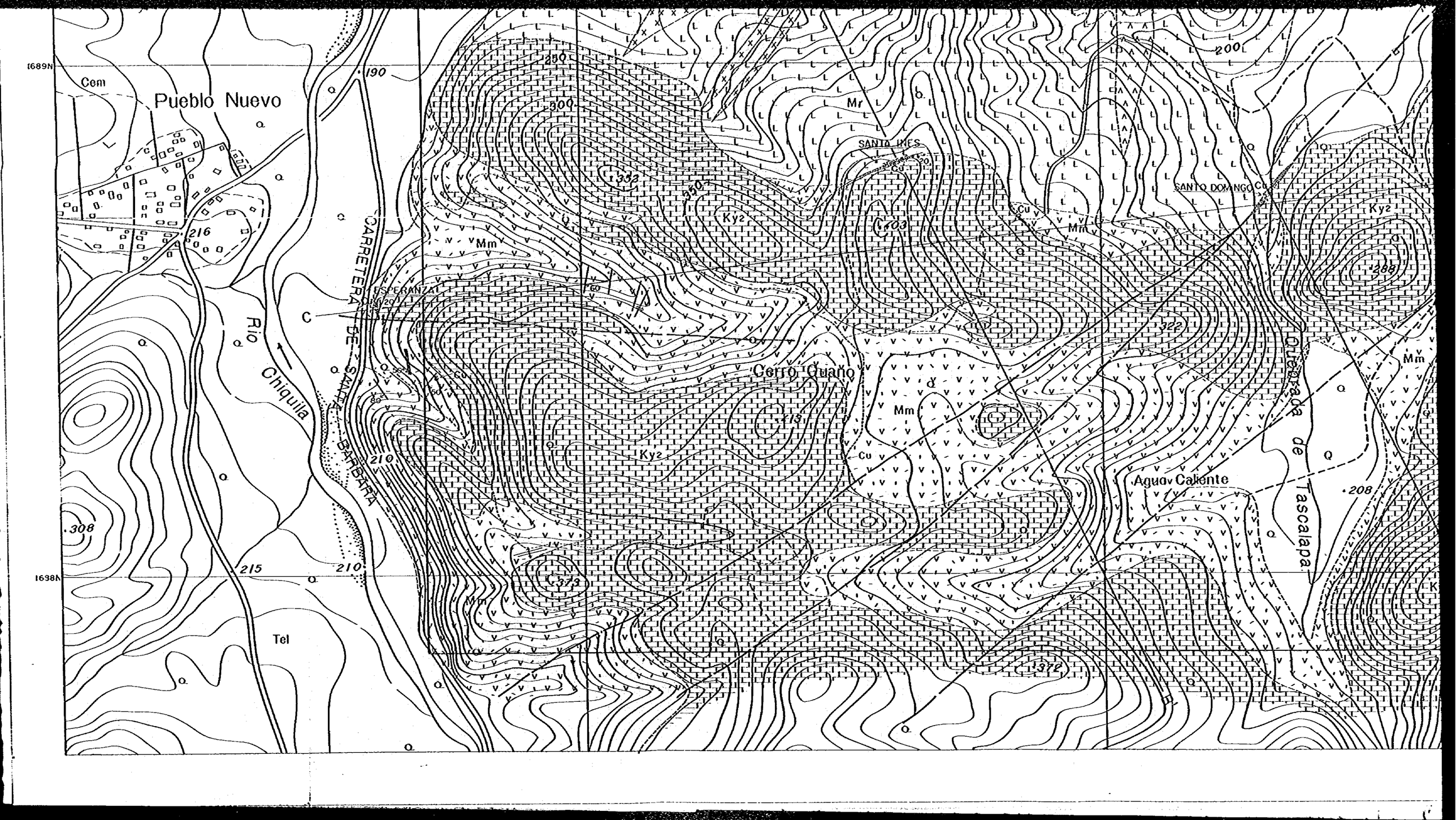
METAL MINING AGENCY OF JAPAN
JAPAN INTERNATIONAL COOPERATION AGENCY
GOVERNMENT OF JAPAN

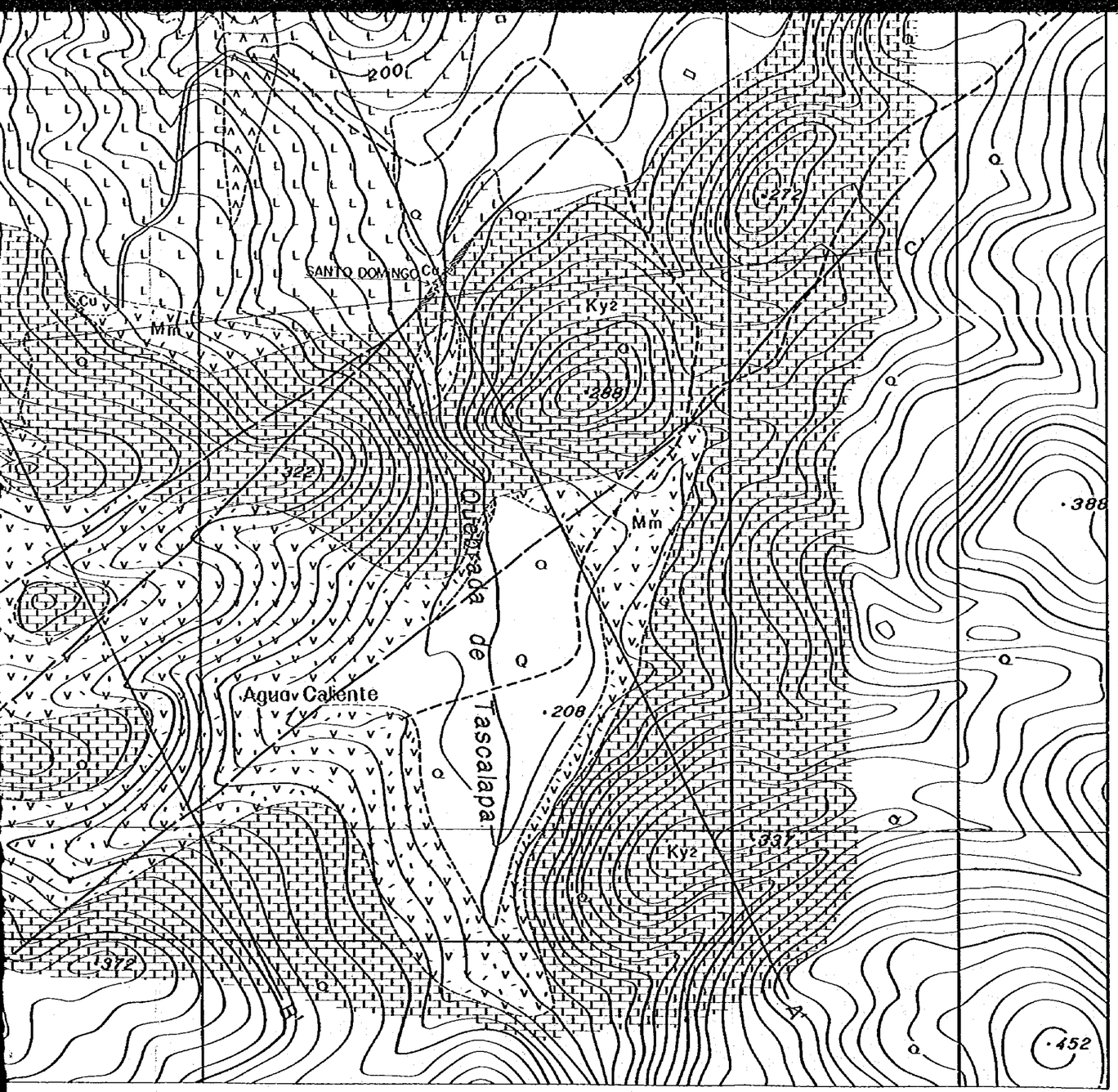
FEBRUARY 1979

prepared by MESCO, Inc.

Scale 1 : 5,000

0 10 20 30 40 50m


1689N
1688N
Cem
Pueblo Nuevo
190
216
215
210
308
CARRETERA DE SANTA BARBARA
Rio Chiquila
ESPERANZA
C
Tel
350
500
332
Ky2
Mm
Mr
SANTO INES
Cu
SANTO DOMINGO
C103
Cerro Guano
313
322
288
Aguav Caliente
Quebrada de Tascalapa
208
200
373
372



JAPAN INTERNATIONAL COOPERATION AGENCY
GOVERNMENT OF JAPAN
FEBRUARY 1979
prepared by MESCO, Inc.

Scale 1 : 5,000

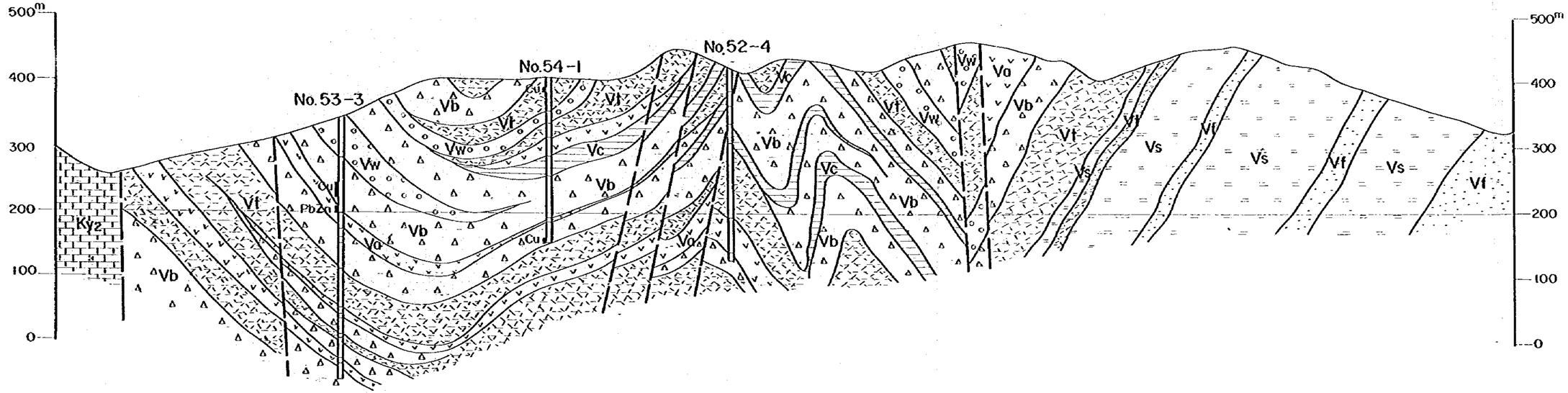
0 10 20 30 40 50m

LEGEND

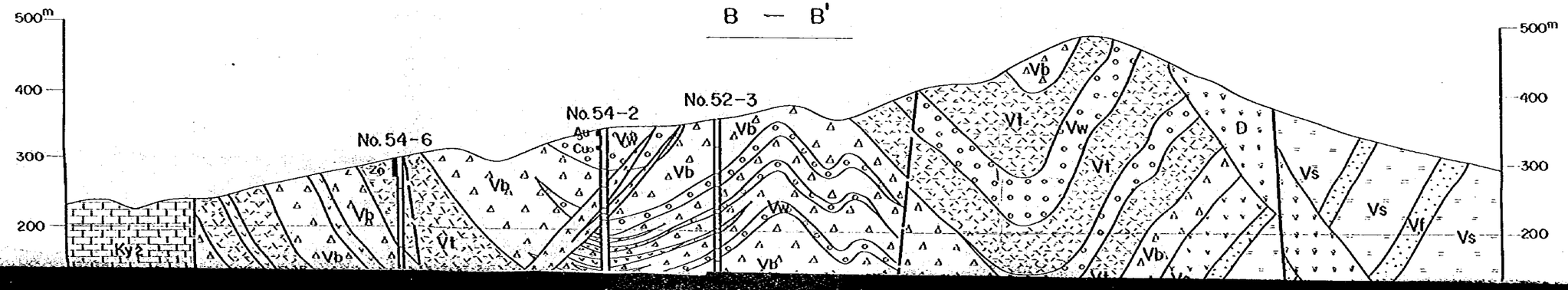
Formation	Stratigraphical Mark	Symbol	Lithology
Alluvium		Q	gravel, sand & mud
Matagalpa F.		Tm	basalt, andesite & pyroclastics
Alima F.		Ky2	massive limestone
Minitas F.		Mm	metaandesite, metaporphyrite & pyroclastics
		Gd	granodiorite
		Mr	liparite
Intrusive rock		A	andesite dyke
		P	porphyrite dyke
		Dp	diorite porphyry
		Gp	granite porphyry & granodiorite porphyry

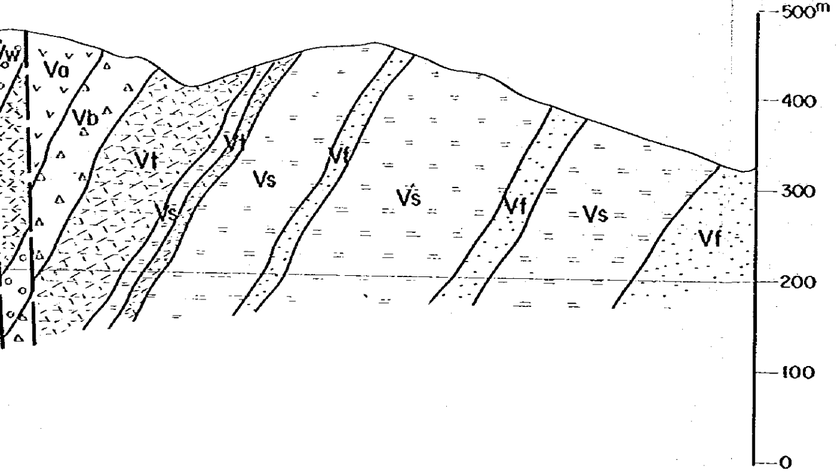
- bedding plane
- fissure
- fault
- UN30 — DDH by UNDP (1969 ~ 1972)
- adit
- Cu — mineral indication
- surveyed area

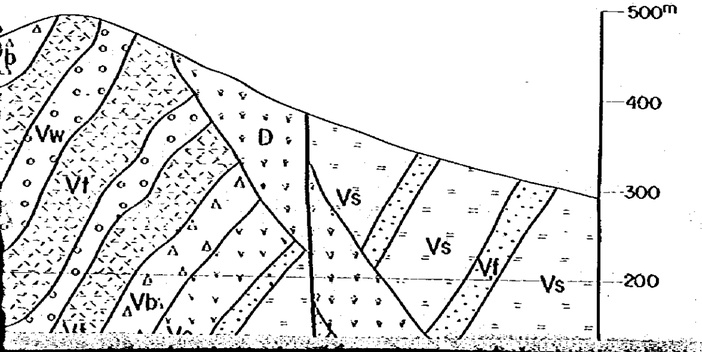
A — A'


500m
400
300
200
100
0
No.53-3
No.54-1
No.52-4
Kyz
Vb
Vf
Vw
Vc
Va
Vs
Cu
Pb Zn

B — B'


500m
400
300
200
No.54-6
No.54-2
No.52-3
Kyz
Vb
Vf
Vw
Vs
D
Au
Cu
Zn



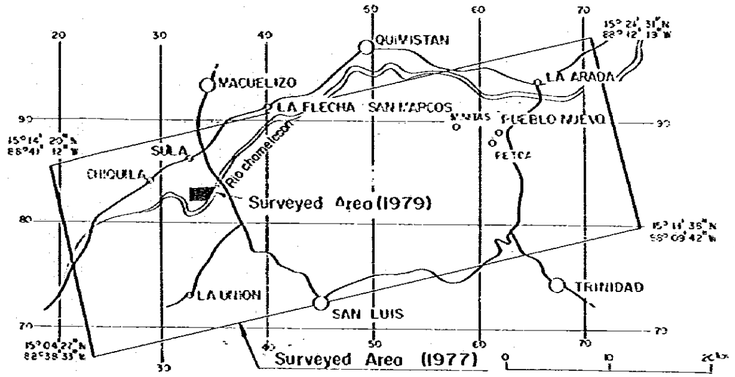


PL. Ⅲ - I - 5

GEOLOGICAL SURVEY OF THE WESTERN AREA REPUBLIC OF HONDURAS

VOL. 4

GEOLOGICAL PROFILES OF THE VUELTAS DEL RIO SECTOR



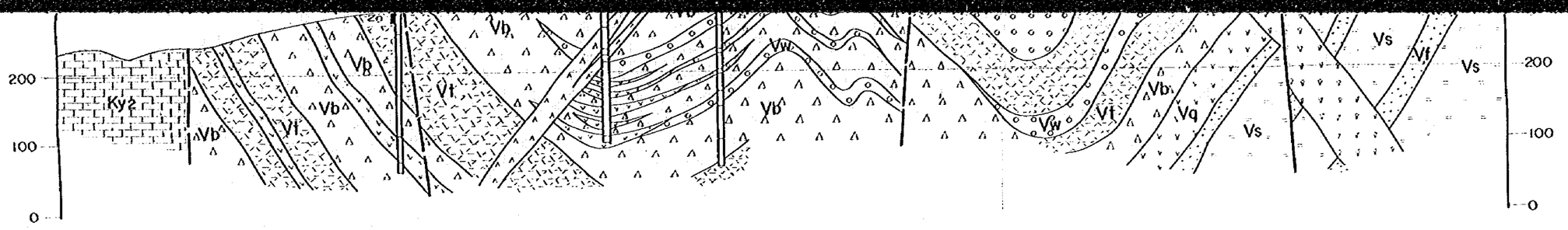
METAL MINING AGENCY OF JAPAN
JAPAN INTERNATIONAL COOPERATION AGENCY
GOVERNMENT OF JAPAN

FEBRUARY 1980

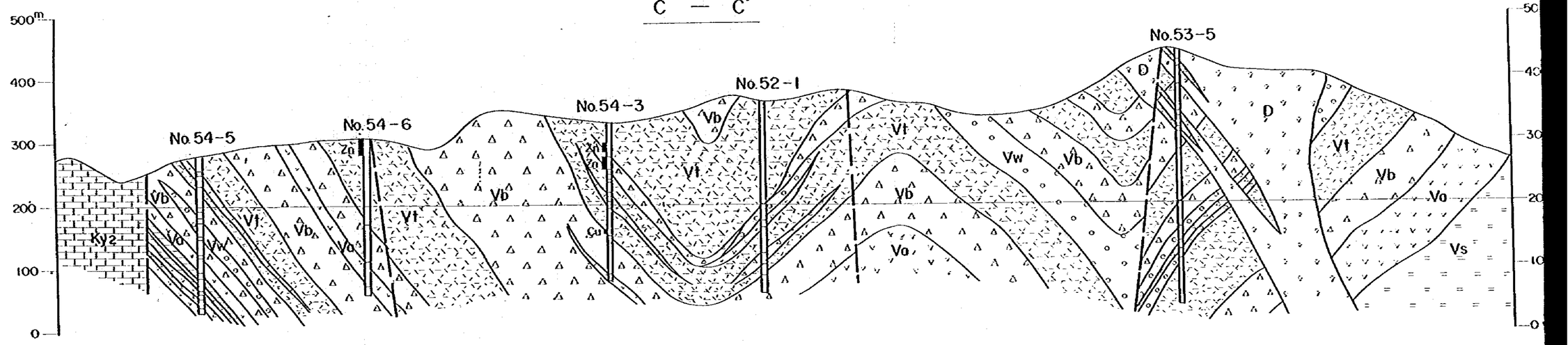
Prepared by MESCO, Inc.

Scale 1:5,000

0 100 200 300 400 500m

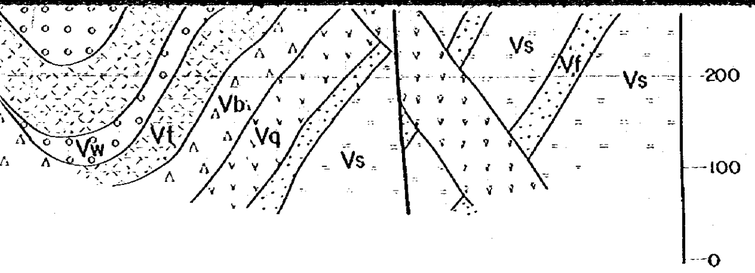

200
100
0
Ky2
Vb
Vt
Vw
Vq
Vs
200
100
0

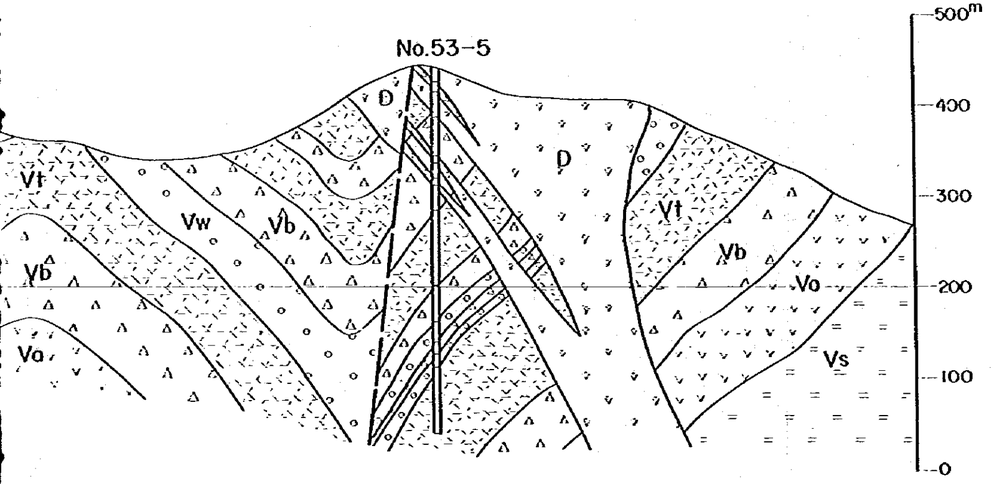
C — C'


500m
400
300
200
100
0
No.54-5
No.54-6
No.54-3
No.52-1
No.53-5
Ky2
Vb
Vo
Vw
Vt
Vq
Vs
D
Zn
Cu
50
40
30
20
10
0

D — D'

No.54-1





LEGEND

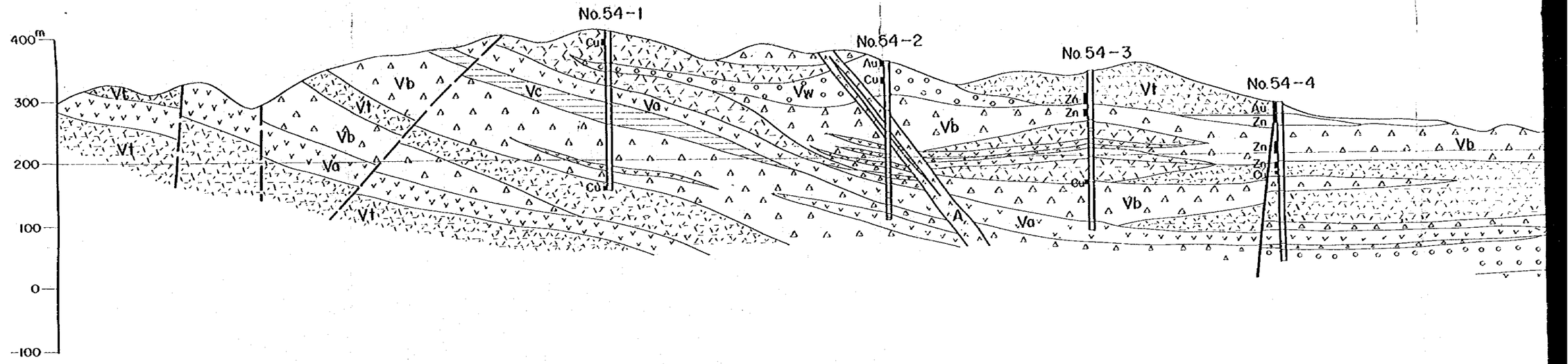
Formation	Stratigraphical Mark	Symbol	Lithology
Alluvium		Q	gravel, sand & clay
Atimo F.		Ky2	massive limestone
Vueltas del Rio F.		Vt	meta tuff
		Vb	meta tuff breccia
		Vw	meta welded tuff & meta tuff
		Vc	shale
		Vg	conglomerate
		Va	meta andesite & meta welded tuff
		Vs	schalstein, diabase, meta andesite & meta diabase
		Vf	meta fine tuff
Intrusive rock		A	andesite & porphyrite dyke
		Qp	quartz porphyry
		D	dacite porphyry

fault

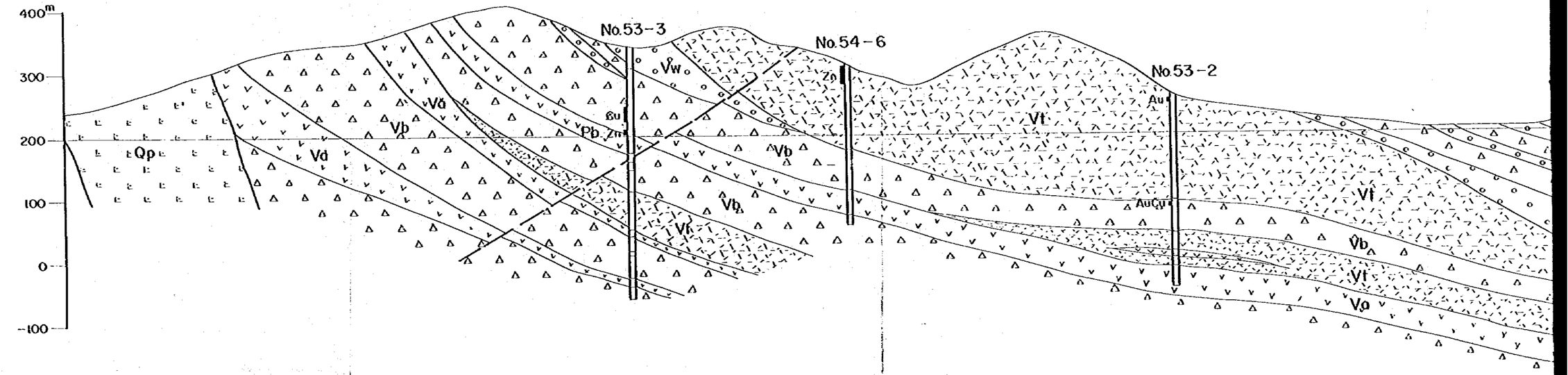
Cu,Pb,Zn mineral indication

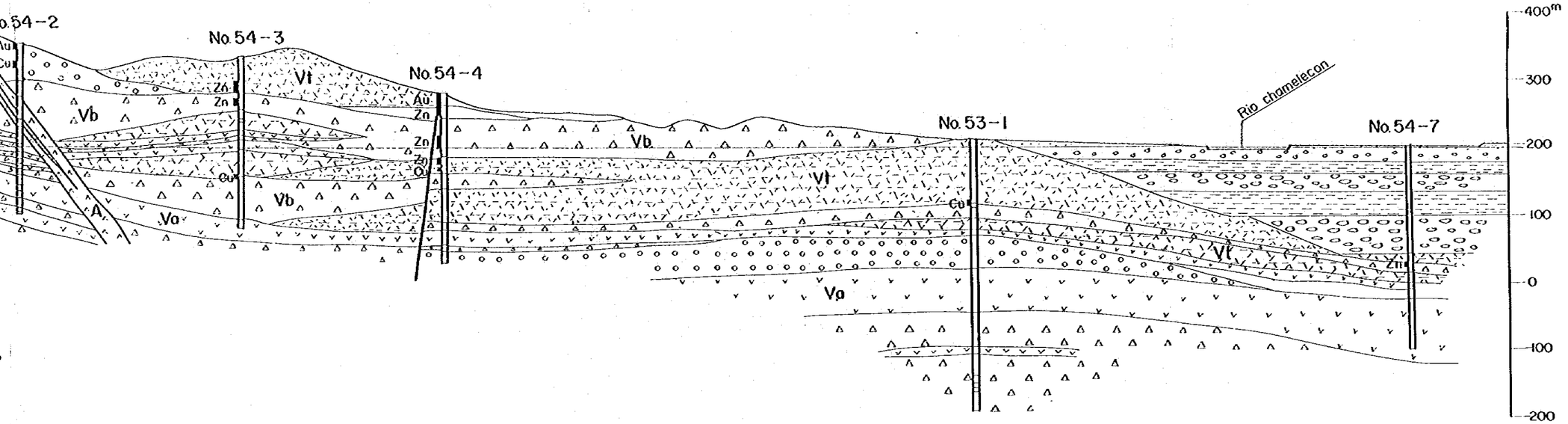
H054-1 DDH by Joponese Team (1977~1979)

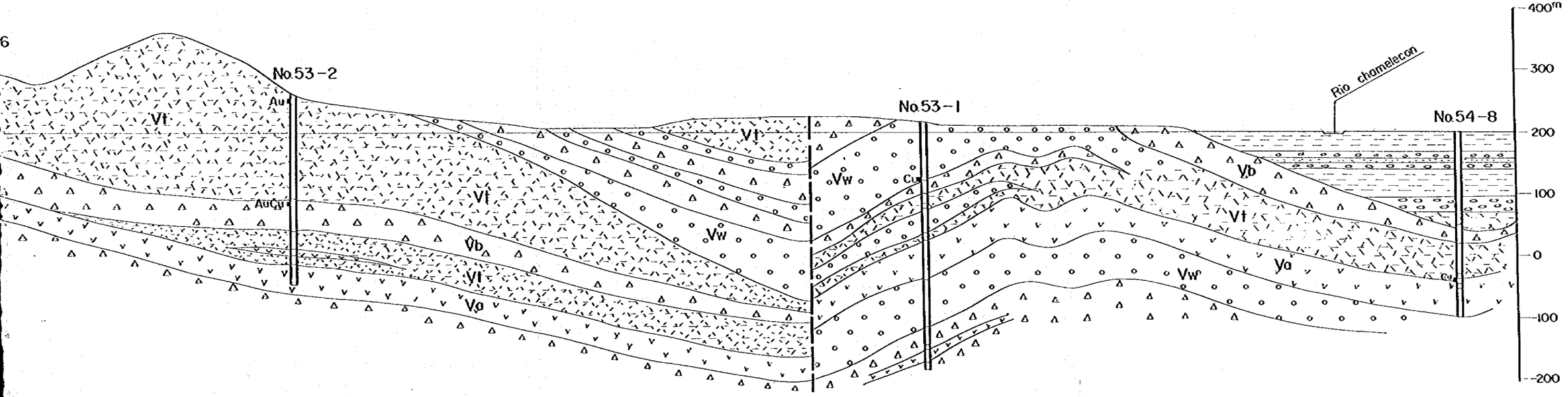
D — D


No.54-1
No.54-2
No.54-3
No.54-4
400m
300
200
100
0
-100
Vc
Vb
Vt
Va
Vw
Cu
Au
Zn
Pb

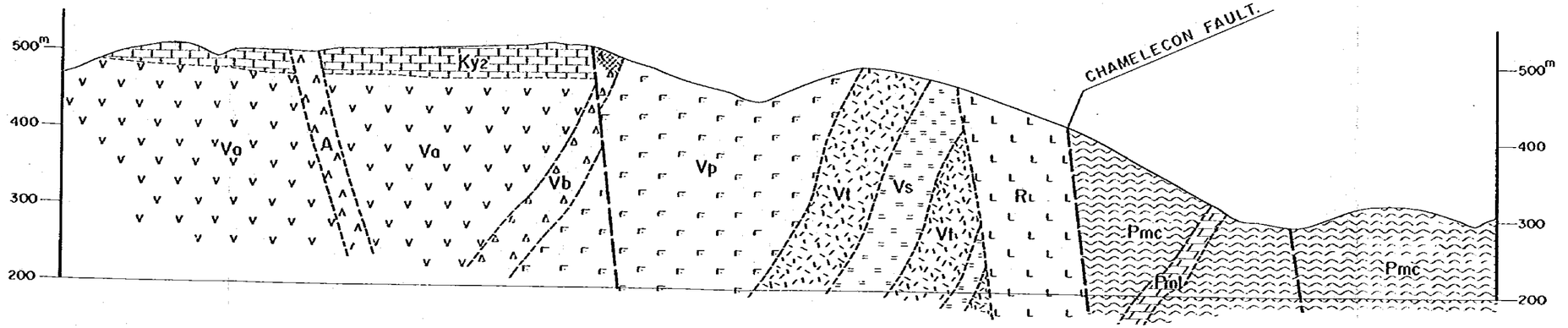
E — E'


No.53-3
No.54-6
No.53-2
400m
300
200
100
0
-100
Qp
Vd
Va
Vb
Vt
Vw
Cu
Pb
Zn
Au
AuCu

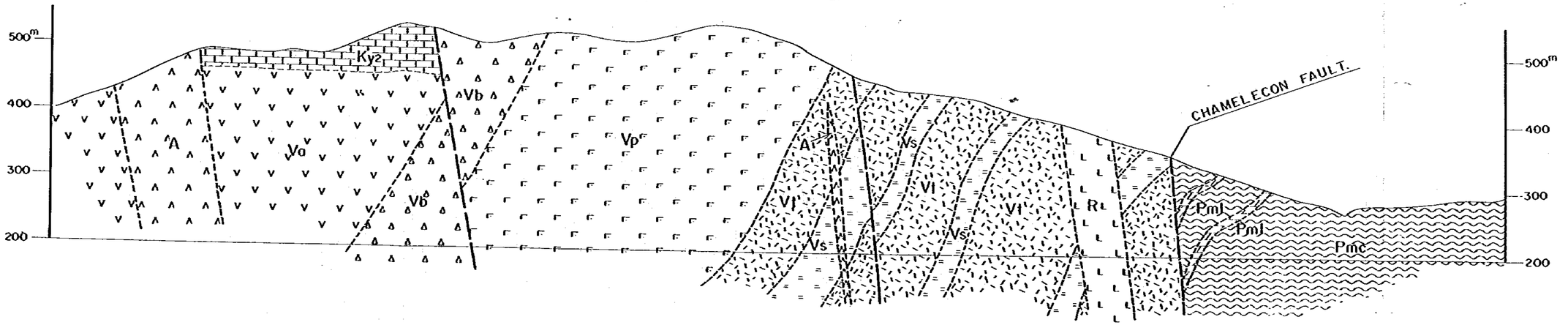

o.54-2
No.54-3
No.54-4
No.53-1
No.54-7
Rio chamelecon
Au
Cu
Zn
Vt
Vb
Va
400m
300
200
100
0
-100
-200


6
No.53-2
No.53-1
No.54-8
Rio chamelecon
Au
Cu
AuCu
Vt
Vb
Vw
Va
Ya
400m
300
200
100
0
-100
-200

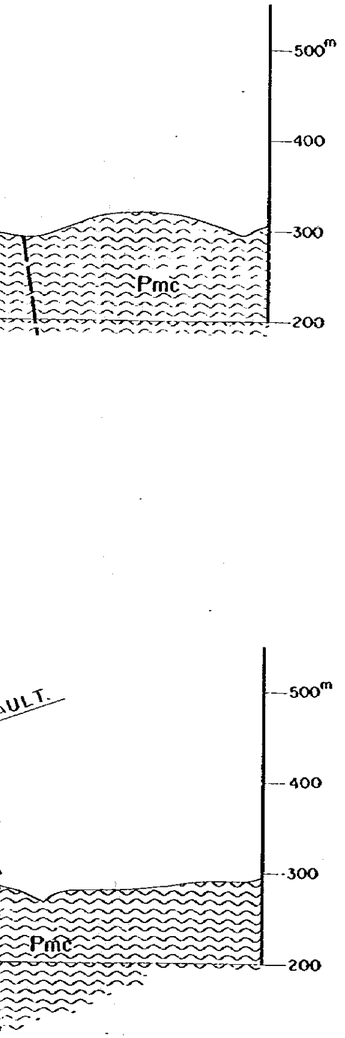
A — A'



B — B'



Formation
Alluvium
Atimo F.
Vueltas del Rio F
Chiquila- Arada Group
Intrusive rock



LEGEND

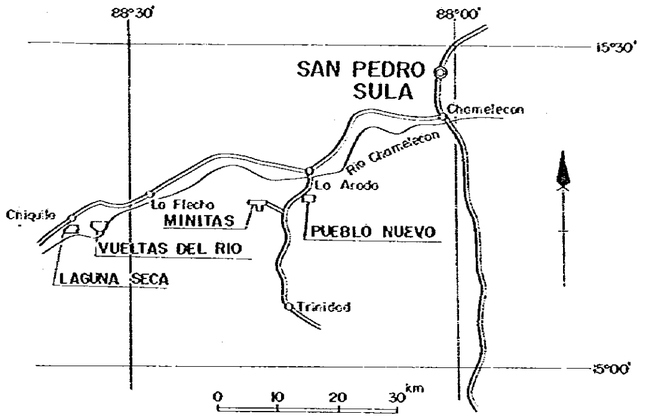
Formation	Stratigraphical Mark	Symbol	Lithology
Alluvium		Q	gravel, sand & mud
Atima F.		Ky2	massive limestone
Vueltas del Rio F.		Vt	tuff
		Vb	tuff breccia
		Vw	welded tuff & tuff
		Vc	shale
		Vg	conglomerate
		Va	metaandesite & welded tuff
		Vp	dioritic porphyry
		Vs	schalstein, diabase, metaandesite & metadiobase
		Vf	fine tuff
Chiquila-Arada Group		Pmc	chlorite-sericite-schist
		Pml	crystalline limestone
Intrusive rock		A	andesite & porphyrite dyke
		Qp	quartz porphyry
		R	liporite
		D	dacite porphyry

- bedding plane
- fissure
- schistosity
- fault
- anticlinal axis/synclinal axis
- adit
- silicified zone

PL. III-1-6

GEOLOGICAL SURVEY
OF
THE WESTERN AREA, REPUBLIC OF HONDURAS
VOL. 3

GEOLOGICAL PROFILES OF THE LAGUNA SECA SECTOR

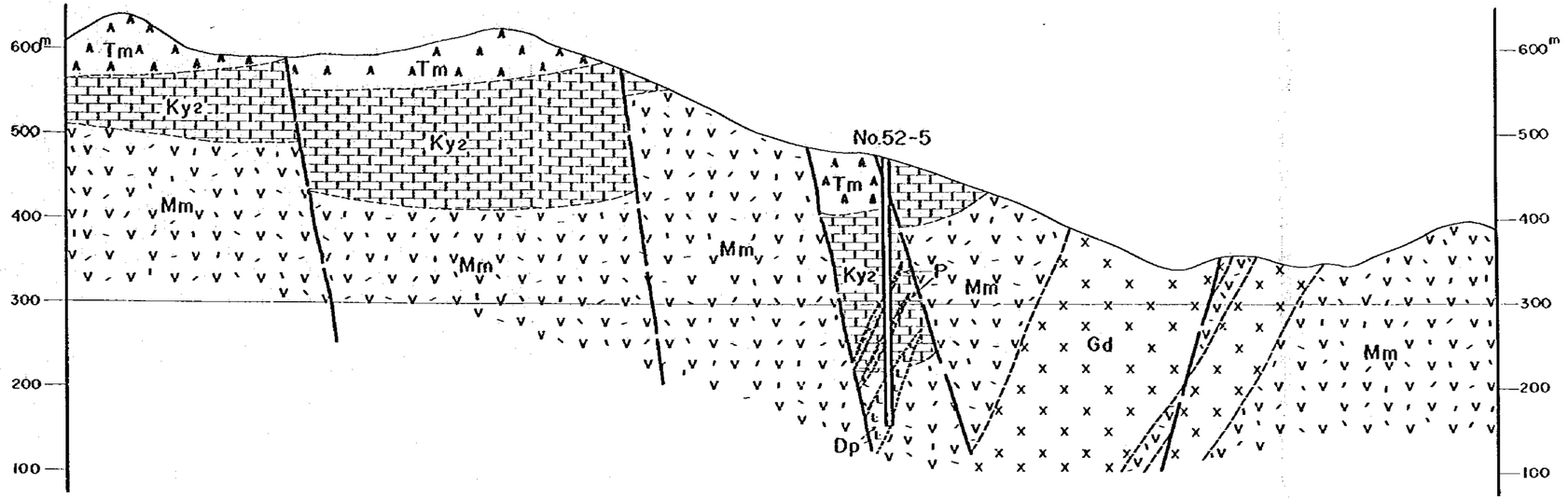


METAL MINING AGENCY OF JAPAN
JAPAN INTERNATIONAL COOPERATION AGENCY
GOVERNMENT OF JAPAN
FEBRUARY 1979
prepared by MESCO, Inc.

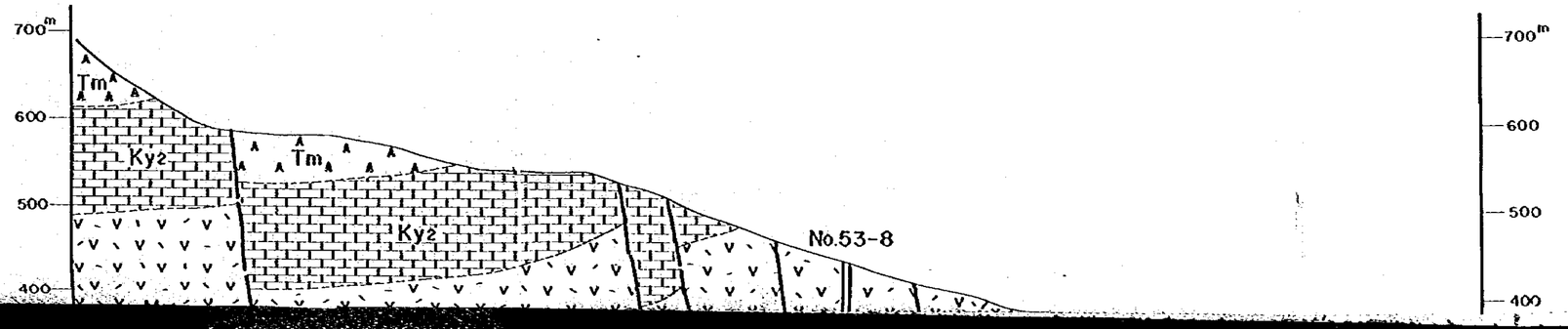
Scale 1 : 5,000

0 10 20 30 40 50m

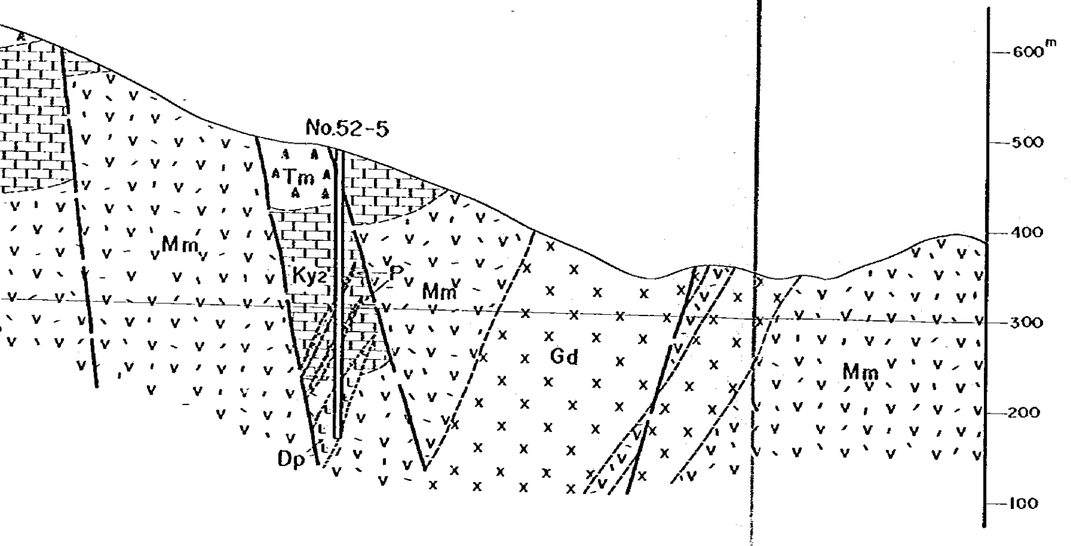
A —— A'


600m
500
400
300
200
100
Tm
Ky2
Mm
No.52-5
Pv
Gd
Dp

B —— B'


700m
600
500
400
Tm
Ky2
No.53-8

A —— A'

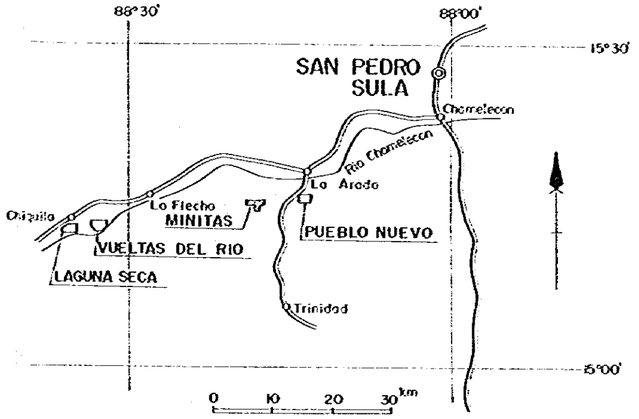


B —— B'

PL. III - I - 7

GEOLOGICAL SURVEY
OF
THE WESTERN AREA, REPUBLIC OF HONDURAS
VOL. 3

GEOLOGICAL PROFILES OF THE MINITAS SECTOR



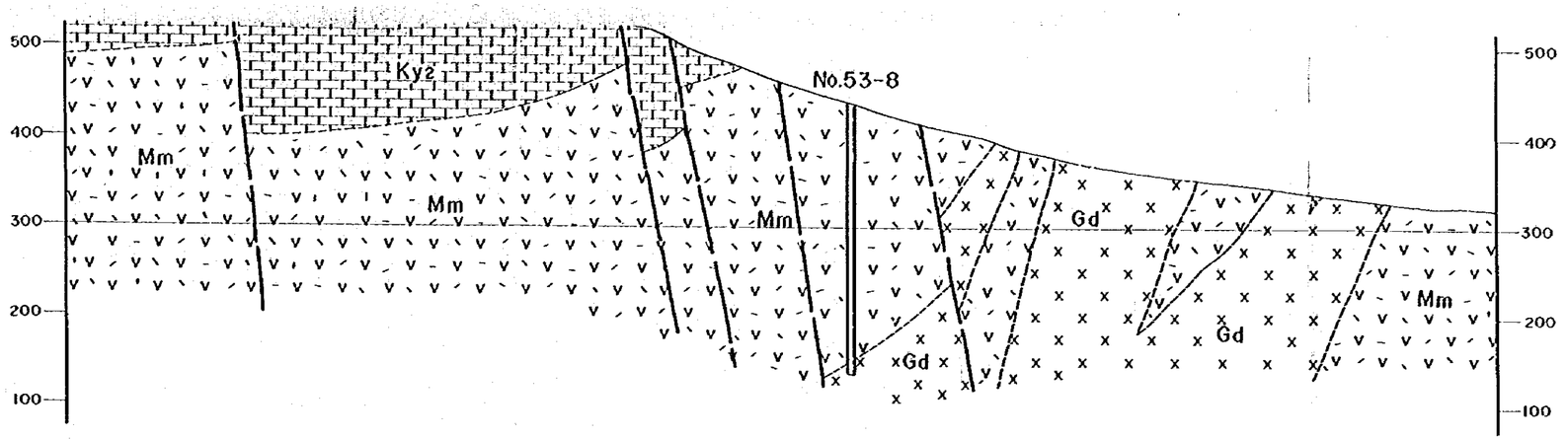
METAL MINING AGENCY OF JAPAN
JAPAN INTERNATIONAL COOPERATION AGENCY
GOVERNMENT OF JAPAN

FEBRUARY 1979

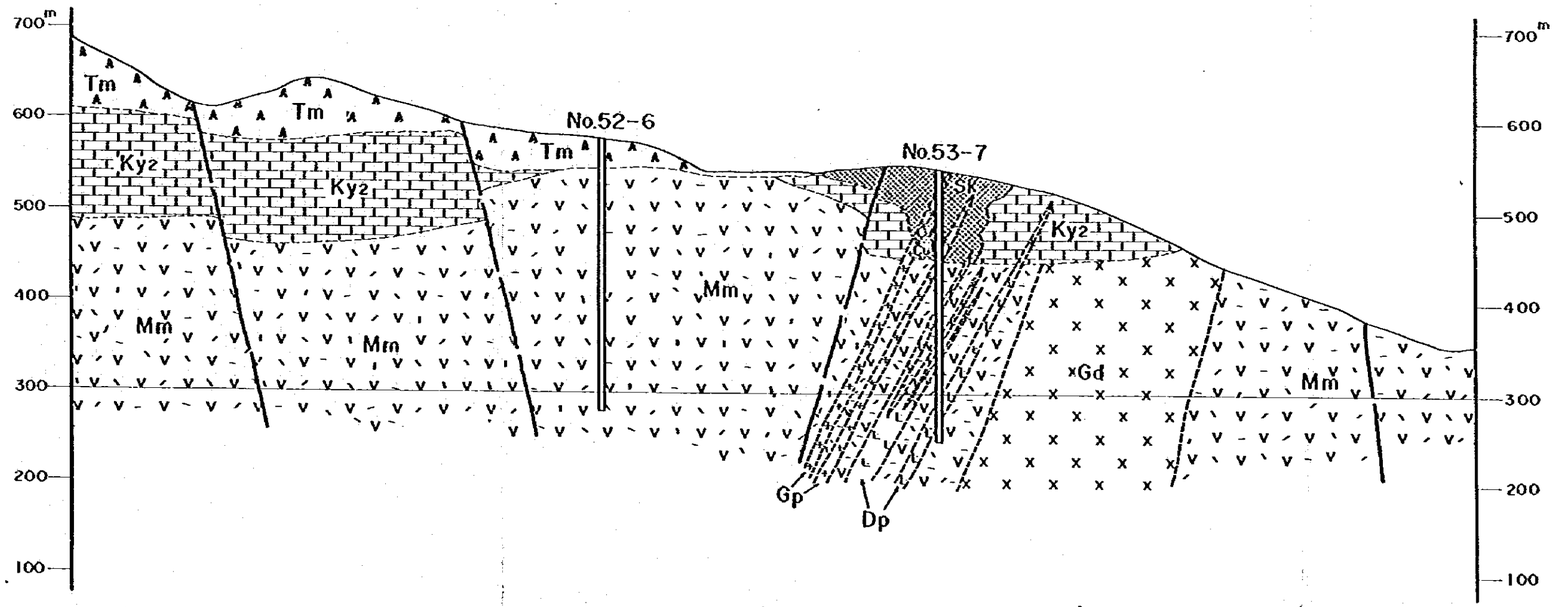
prepared by MESCO, Inc

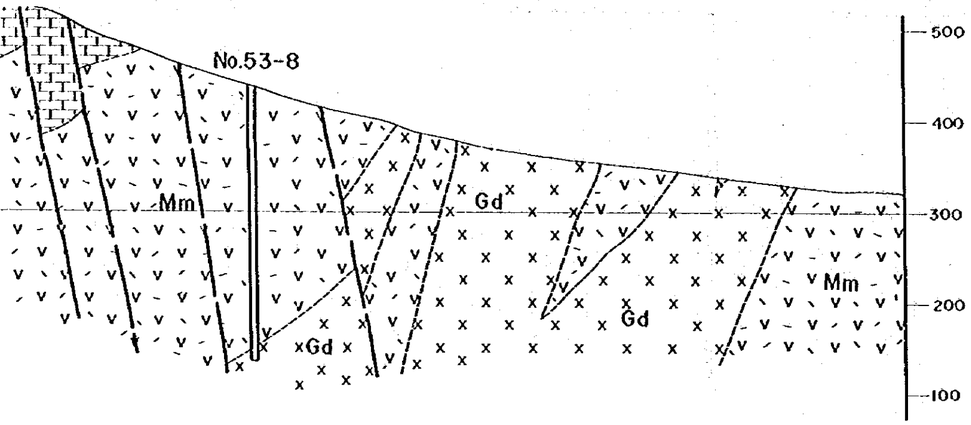
Scale 1 : 5,000

0 10 20 30 40 50m

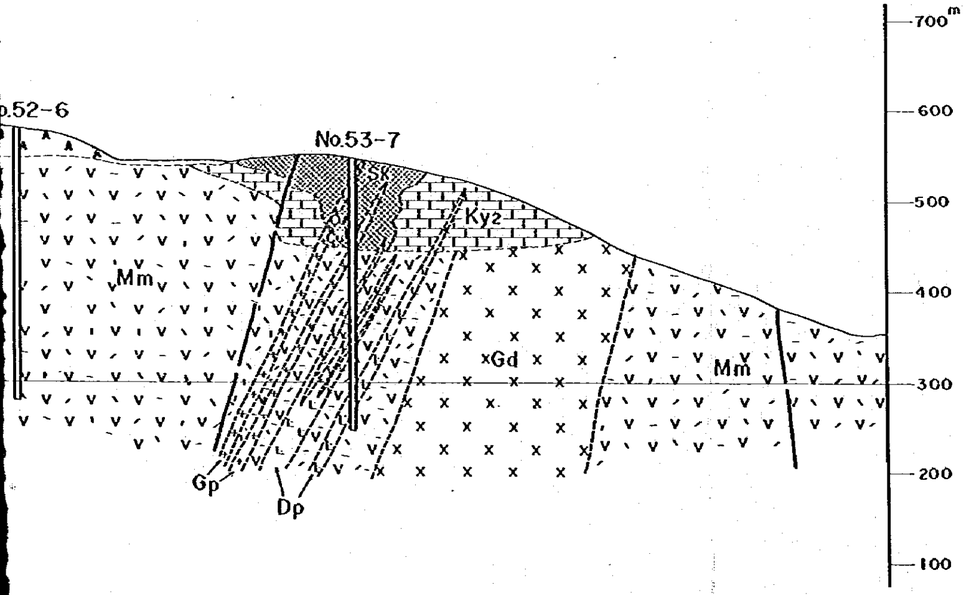

500
400
300
200
100
Ky2
Mm
Mm
Mm
No.53-8
Gd
Gd
Gd
Mm

C —— C'


700m
600
500
400
300
200
100
Tm
Tm
Tm
Ky2
Ky2
Ky2
Mm
Mm
Mm
No.52-6
No.53-7
Gd
Mm
Gp
Dp



C —— C'

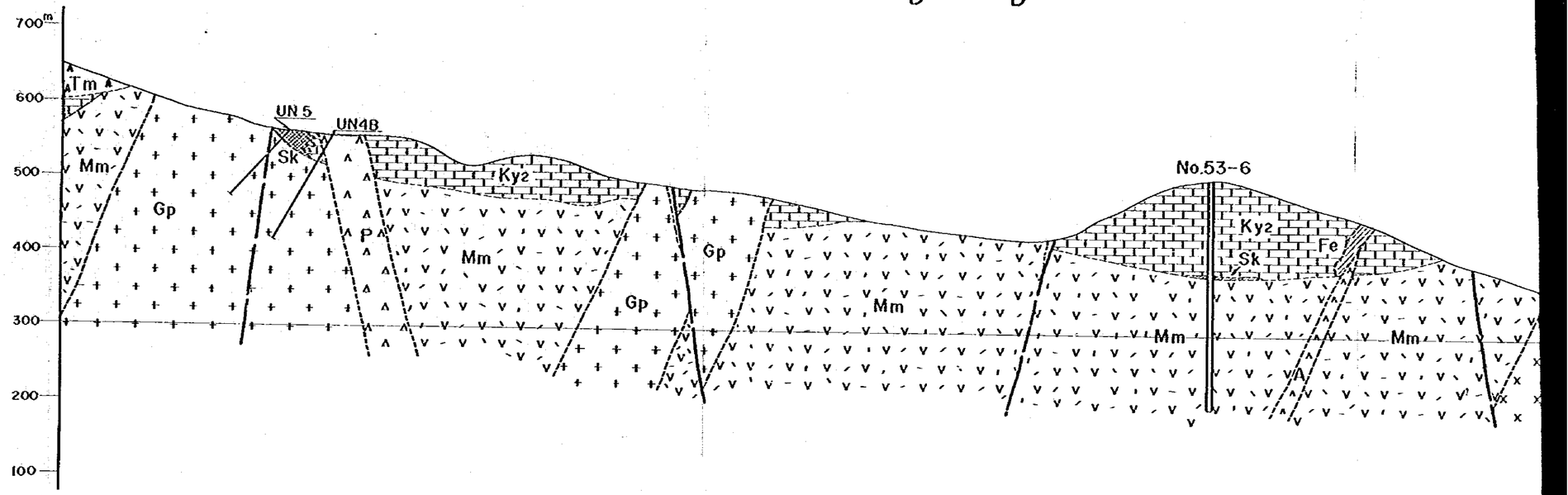


LEGEND

Formation	Stratigraphical Mark	Symbol	Lithology
Alluvium		Q	gravel, sand & mud
Matagalpa F.		Tm	basalt, andesite & pyroclastics
Atima F.		Ky_2	massive limestone
Minitas F.		Mm	meta-andesite, meloporphyrite & pyroclastics
		Gd	granodiorite
		Mr	liparite
Intrusive rock		A	andesite dyke
		P	porphyrite dyke
		Dp	diorite porphyry
		Gp	granite porphyry & granodiorite porphyry

	fault	sk	mineralized zone(skarn)
UN3	DDH by UNDP (1969~1972)	Fe	mineralized zone(Fe gossan)

D —— D'

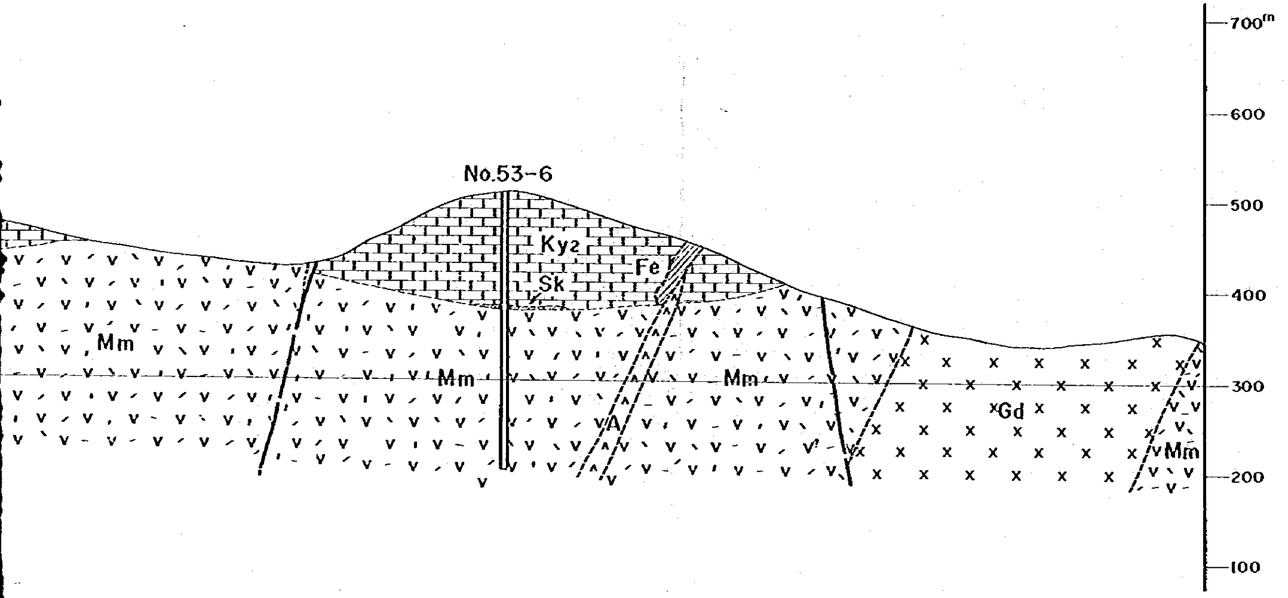


E —— E'

600m

No.53-7

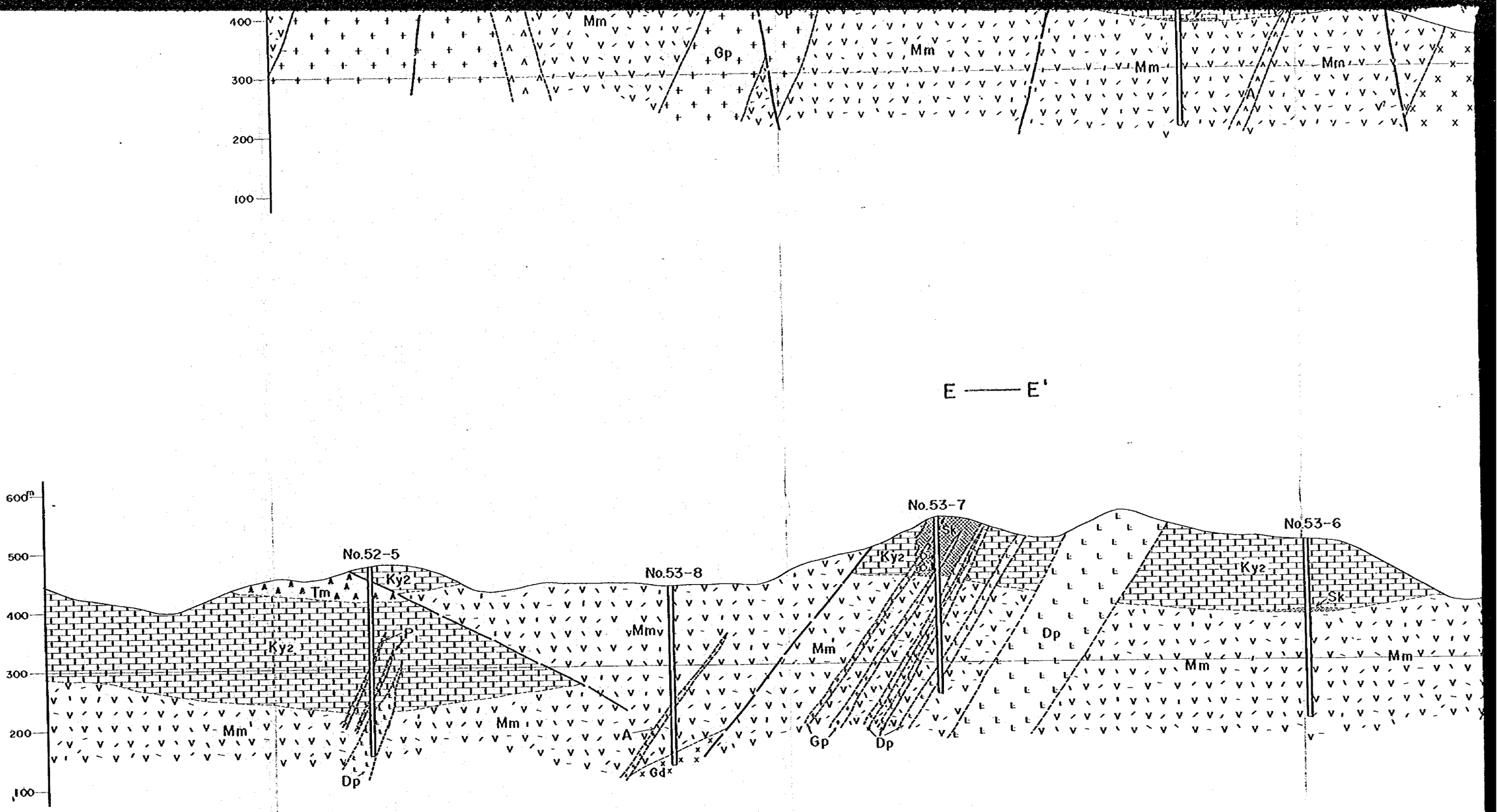
D —— D'

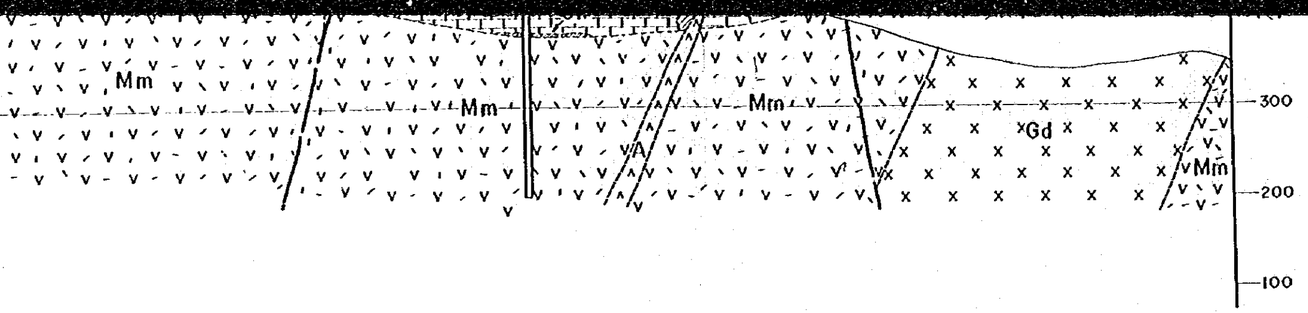


E —— E'

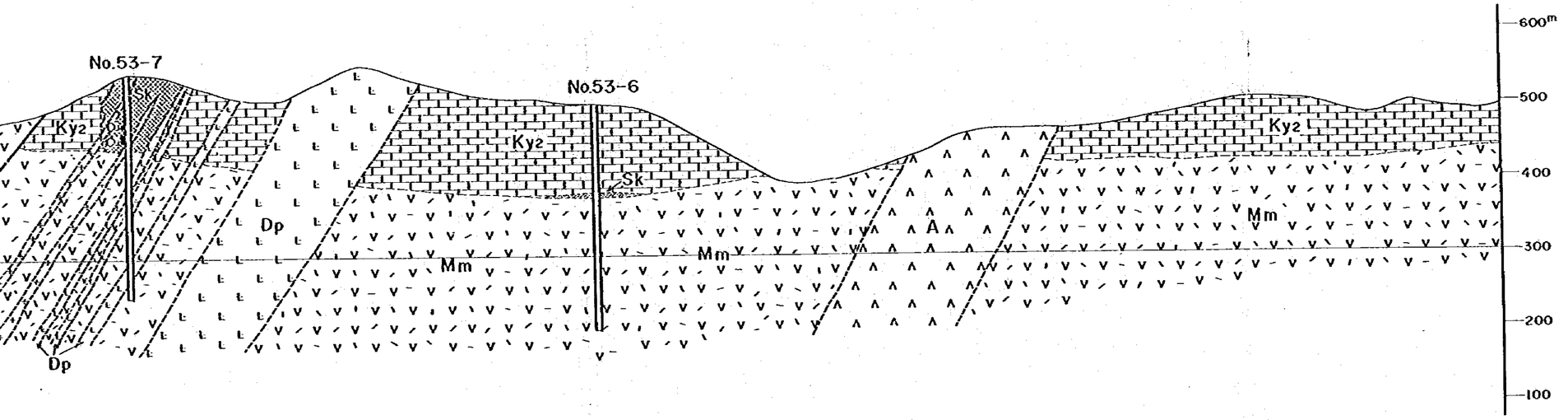
No.53-7

600m

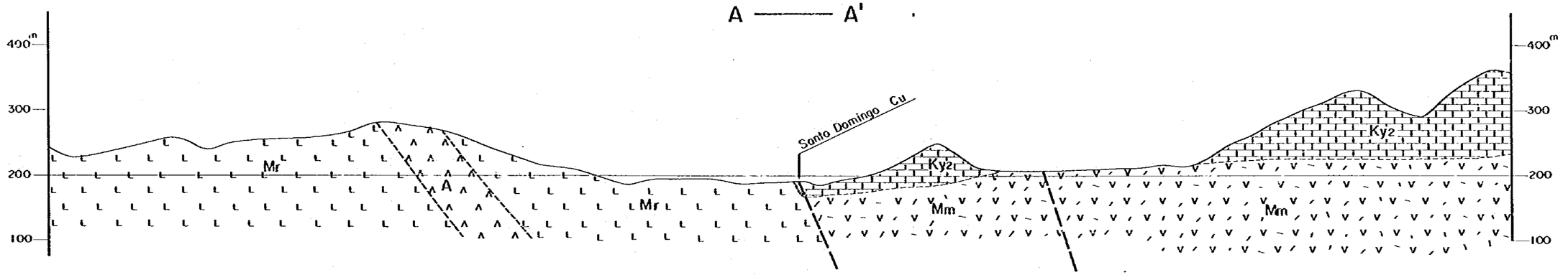

400
300
200
100
Mm
Gp
Mm
Mm
Mm
E —— E'
600m
500
400
300
200
100
No.52-5
No.53-8
No.53-7
No.53-6
Tm
Ky2
Ky2
P
Mmv
Mm
Mm
A
Gd
Dp
Gp
Ky2
Sk
Dp
Ky2
Sk
Mm
Mm
Mm
Mm


Mm
Mm
Mm
Gd
Mm
300
200
100

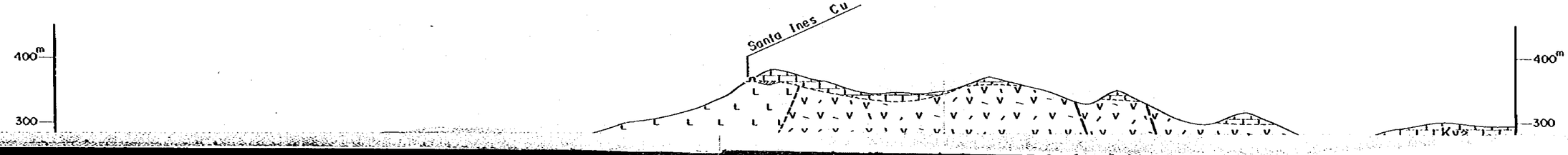
E —— E'

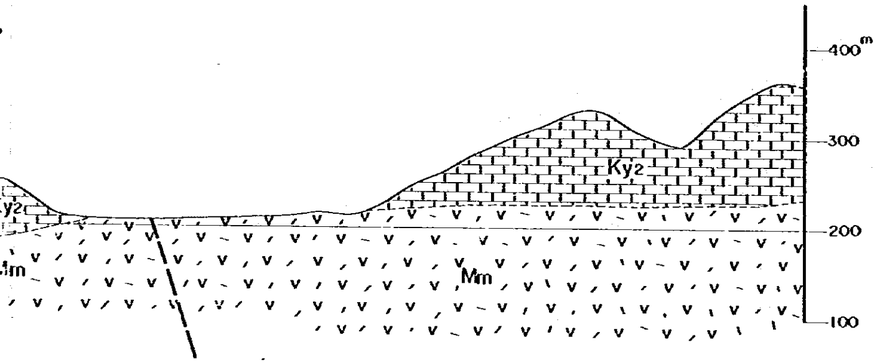

No.53-7
No.53-6
Sk
Ky2
Ky2
Ky2
Sk
Dp
Dp
Mm
Mm
Mm
A
600m
500
400
300
200
100

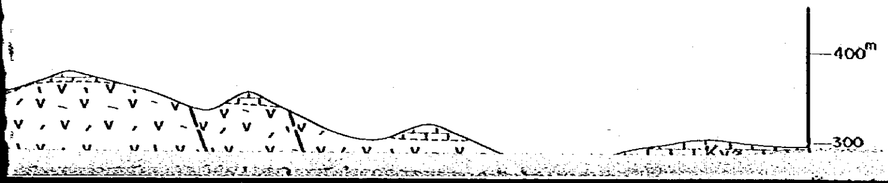
A —— A'


400m
300
200
100
Mr
A
Mr
Santo Domingo Cu
Ky2
Mm
Ky2
Mm
Ky2
400m
300
200
100

B —— B'


400m
300
Santa Ines Cu
400m
300
Ky2

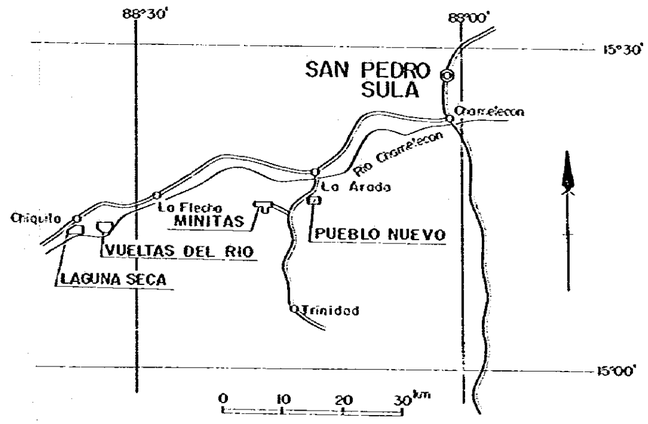




PL. III-I-8

GEOLOGICAL SURVEY
OF
THE WESTERN AREA, REPUBLIC OF HONDURAS
VOL. 3

GEOLOGICAL PROFILES OF THE PUEBLO NUEVO SECTOR

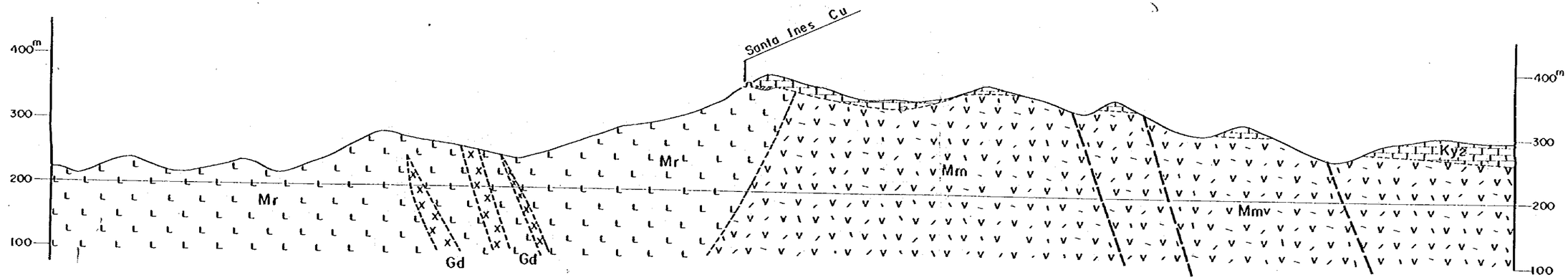


METAL MINING AGENCY OF JAPAN
JAPAN INTERNATIONAL COOPERATION AGENCY
GOVERNMENT OF JAPAN

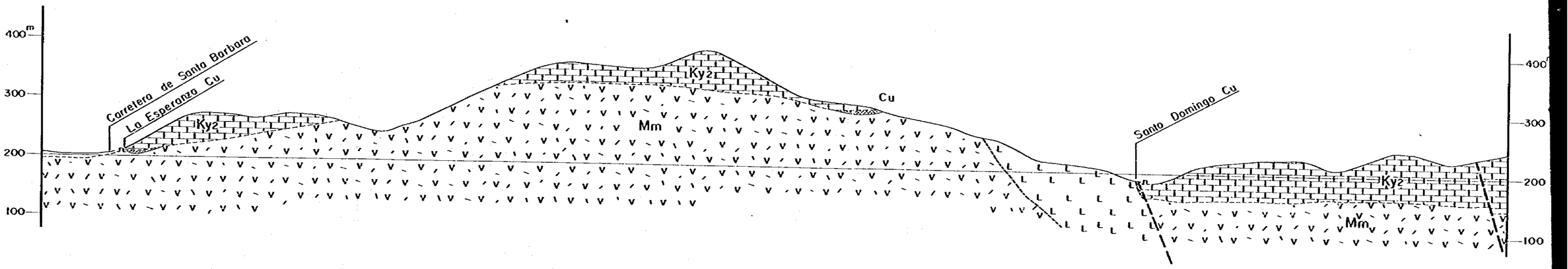
FEBRUARY 1979

prepared by MESCO, Inc.

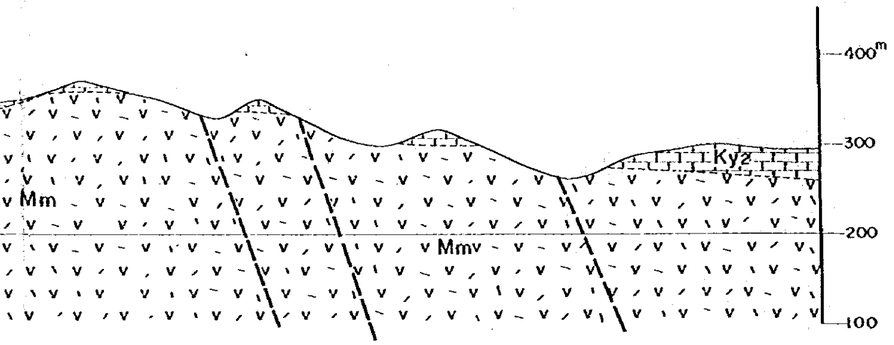
Scale - 1 : 5,000

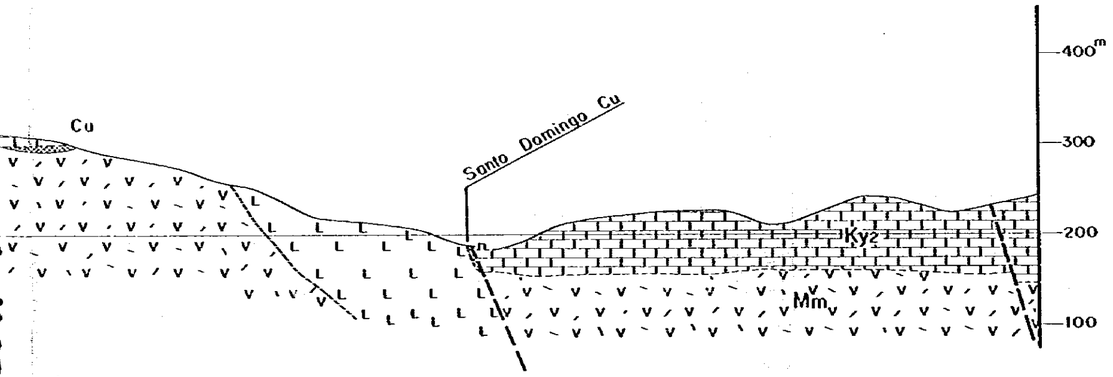

400m
300
200
100
Santa Ines Cu
Mr
Mr
Gd
Gd
Mm
Mmv
Ky2
400m
300
200
100

C —— C'


400m
300
200
100
Carretera de Santa Barbara
La Esperanza Cu
Ky2
Mm
Ky2
Cu
Santo Domingo Cu
Ky2
Mm
400
300
200
100

JAPAN INTERNATIONAL COOPERATION AGENCY
GOVERNMENT OF JAPAN
FEBRUARY 1979
prepared by MESCO, Inc.





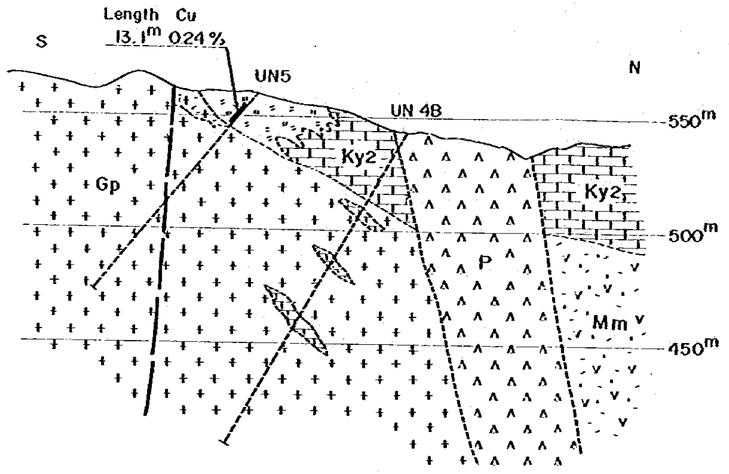
Scale - 1 : 5,000

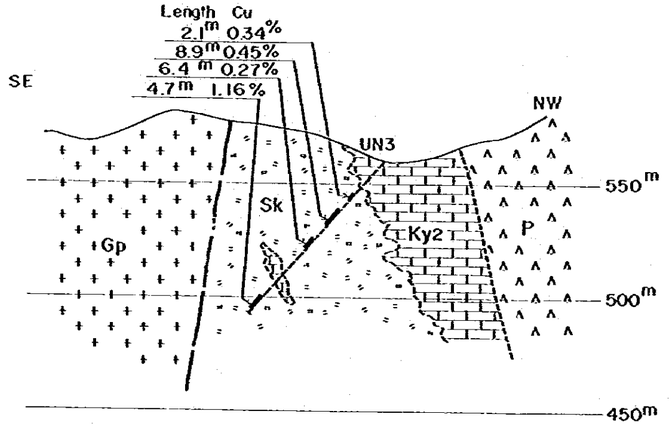
LEGEND

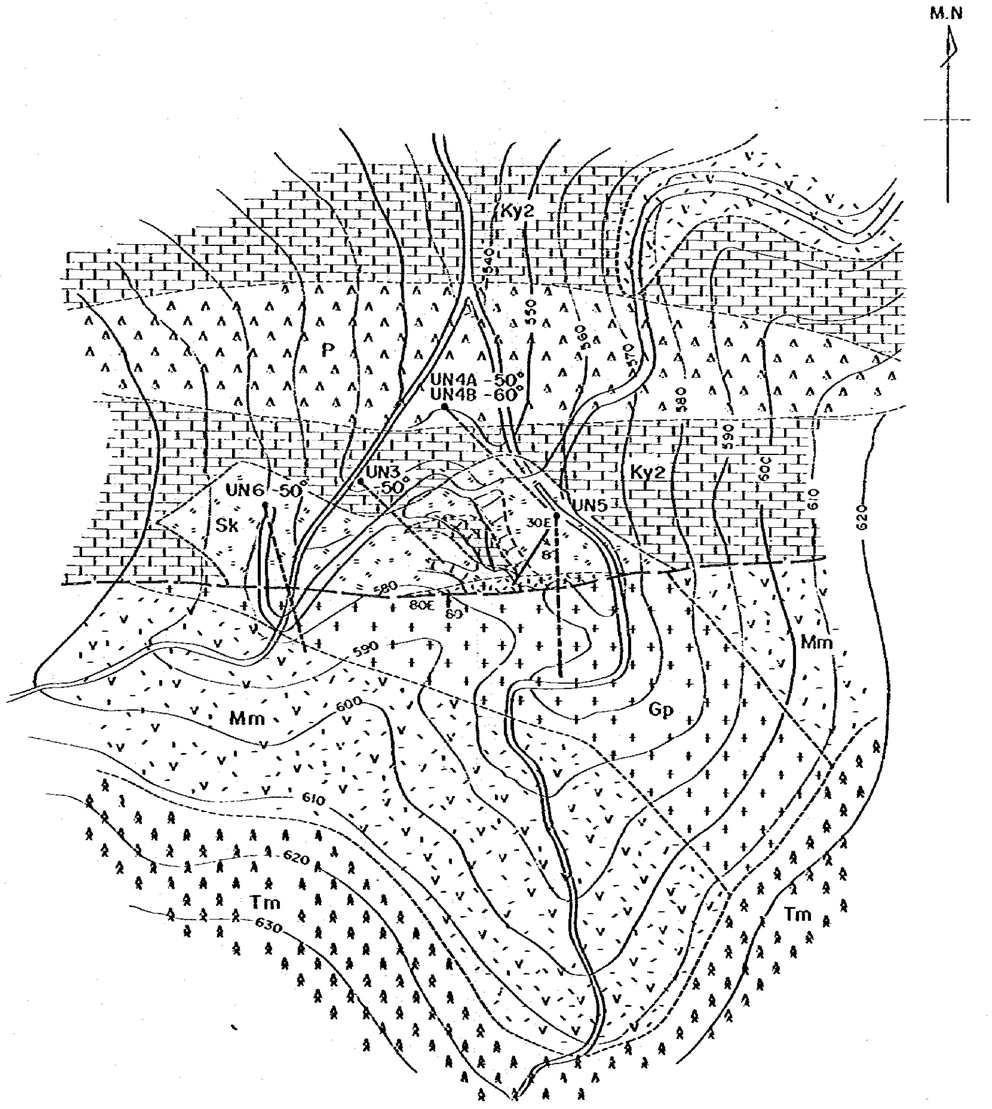
Formation	Stratigraphical Mark	Stratigraphical Symbol	Lithology
Alluvium		Q	gravel, sand & mud
Motogalpa F		Tm	basalt, andesite & pyroclastics
Atima F.		Ky_2	massive limestone
Minitas F.		Mm	metaandesite, metaporphyrite & pyroclastics
		Gd	granodiorite
		Mr	liporite
Intrusive rock		A	andesite dyke
		P	porphyrite dyke
		Dp	diorite porphyry
		Gp	granite porphyry & granodiorite porphyry

fault

mineral indication







GEOLOGICAL
OF
THE WESTERN AREA, REPU
VOL.

GEOLOGICAL
OF
THE MACUTALO OUTCROP IN

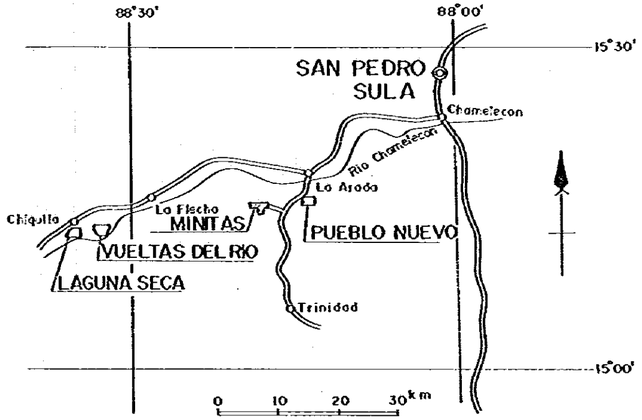
METAL MINING AGEN
JAPAN INTERNATIONAL C
GOVERNMENT O
FEBRUARY
prepored by ME

Scale 1
0 40 80

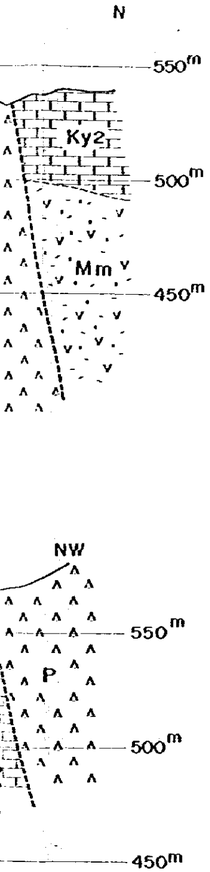
PL. Ⅲ - 1 - 13

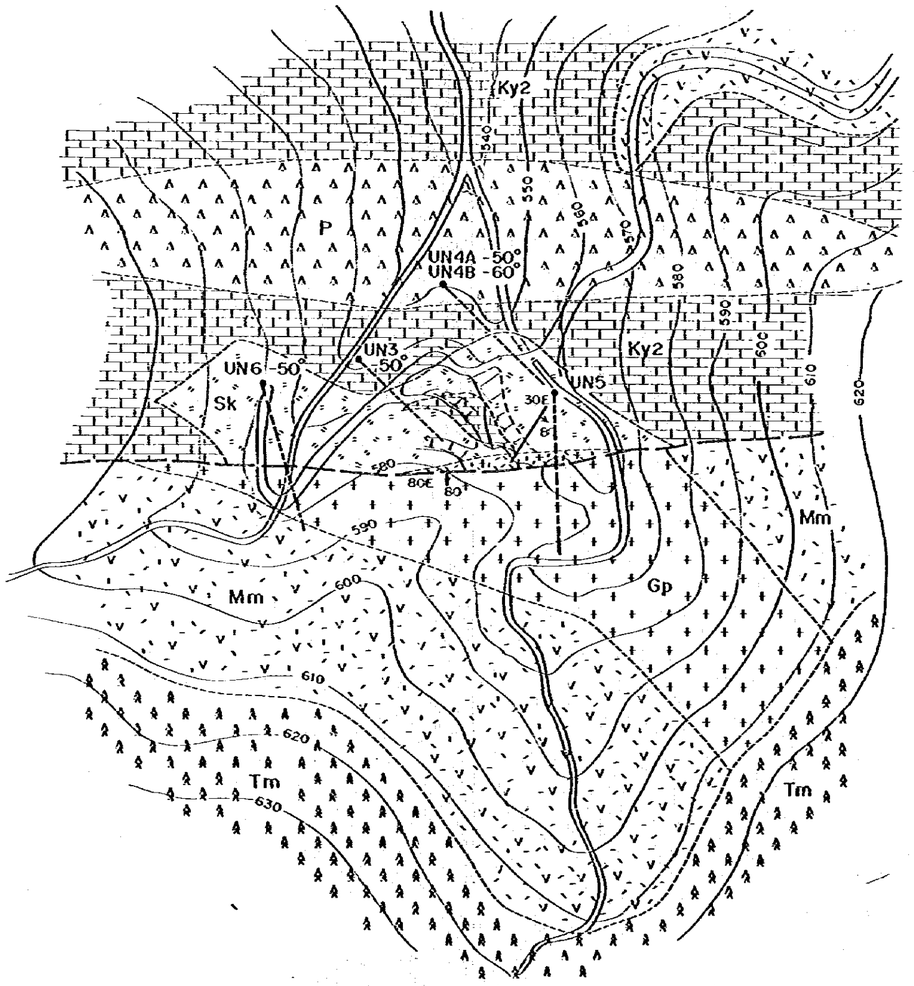
GEOLOGICAL SURVEY
OF
THE WESTERN AREA, REPUBLIC OF HONDURAS
VOL. 3

GEOLOGICAL SKETCH OF THE MACUTALO OUTCROP IN THE MINITAS SECTOR



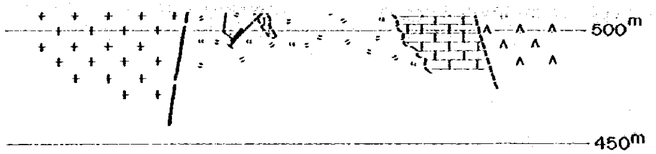
METAL MINING AGENCY OF JAPAN
JAPAN INTERNATIONAL COOPERATION AGENCY
GOVERNMENT OF JAPAN
FEBRUARY 1979
prepared by MESCO, Inc.

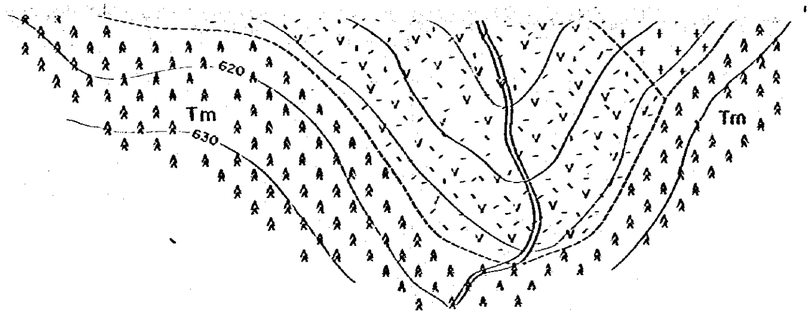




Scale 1 : 2,000

0 40 80 120 160 200m





JAPAN INTERNATIONAL C
GOVERNMENT O
FEBRUARY
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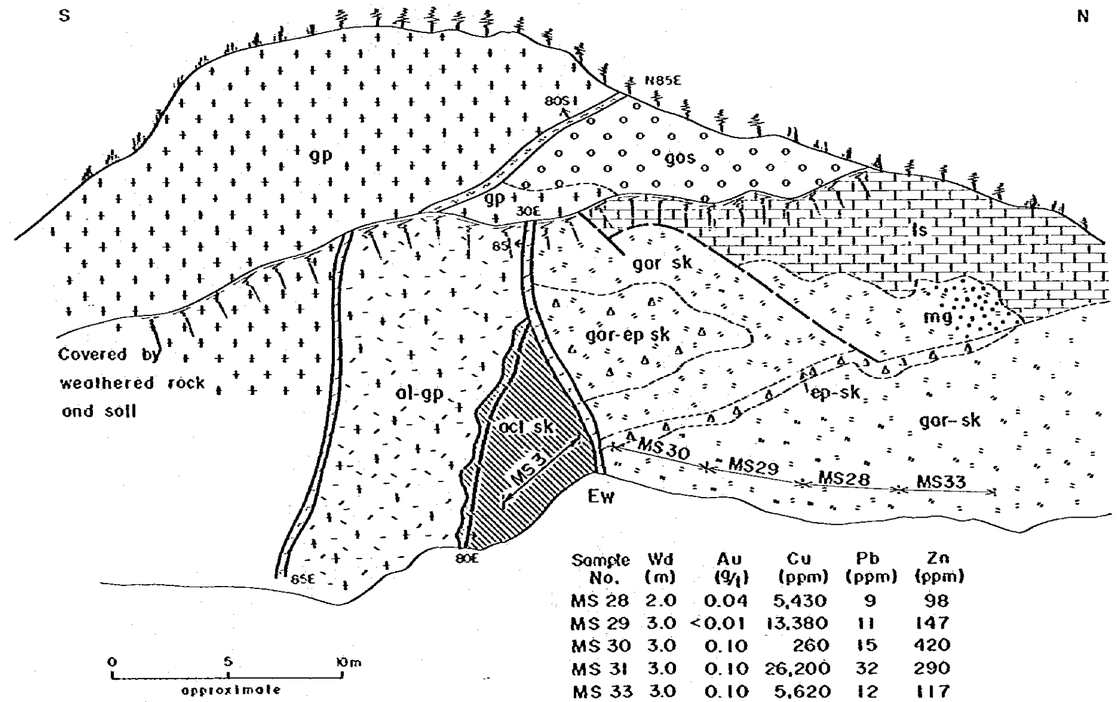
Scale 1:
0 40 80

LEGEND

- ls limestone
- gp granodiorite porphyry
- ol-gp altered grnodiorite prophyry brittly epidote-chlorite bearing part
- gar garnet skarn with magnetite
- gar-ep garnet-epidote skarn with quartz, magnetite
- ep epidote skarn
- mg magnetite
- act actinolite skarn, magnetite-chalcopyrite-bornite-pyrite
- gos gosson
- sheared zone

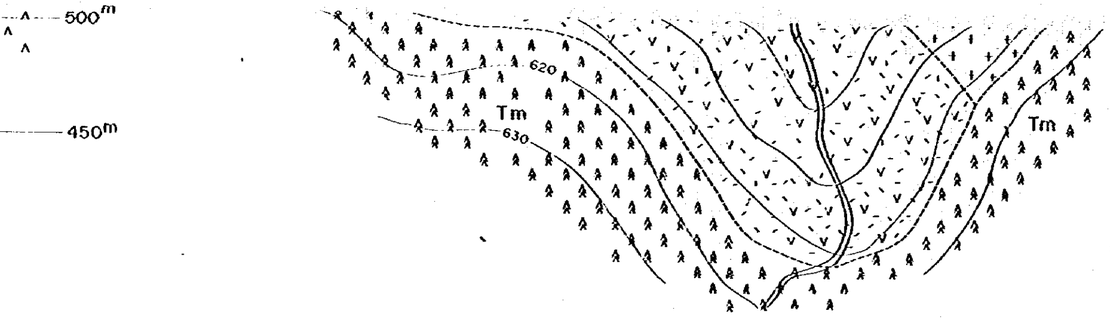
Sketch of Macutalo Outcrop



Sample No.	Wd (m)	Au (g/t)	Cu (ppm)	Pb (ppm)	Zn (ppm)
MS 28	2.0	0.04	5,430	9	98
MS 29	3.0	<0.01	13,380	11	147
MS 30	3.0	0.10	260	15	420
MS 31	3.0	0.10	26,200	32	290
MS 33	3.0	0.10	5,620	12	117

LEGEN

- Tm basalt
- Ky limest
- Mm metoo & pyr
- P porphy
- Gp gronod
- ol-gp altere
- Sk skarn
- fault
- UN3 DDH



JAPAN INTERNATIONAL COOPERATION AGENCY
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FEBRUARY 1979
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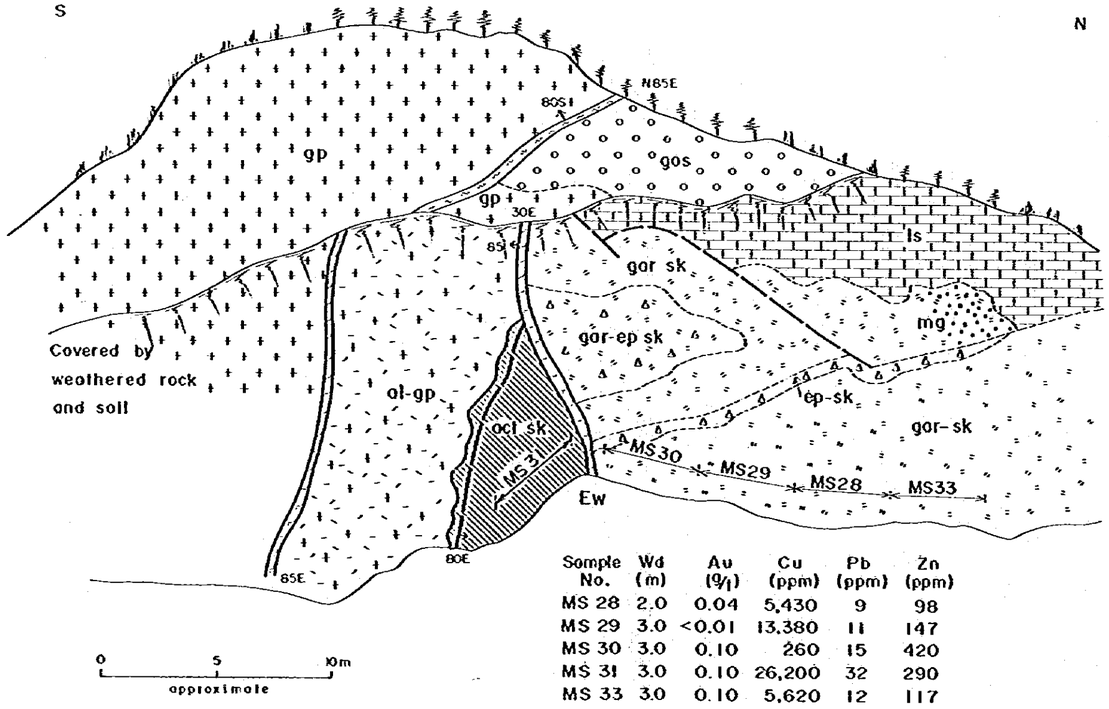
Scale 1 : 2,000

0 40 80 120 160 200m

Sketch of Macutalo Outcrop



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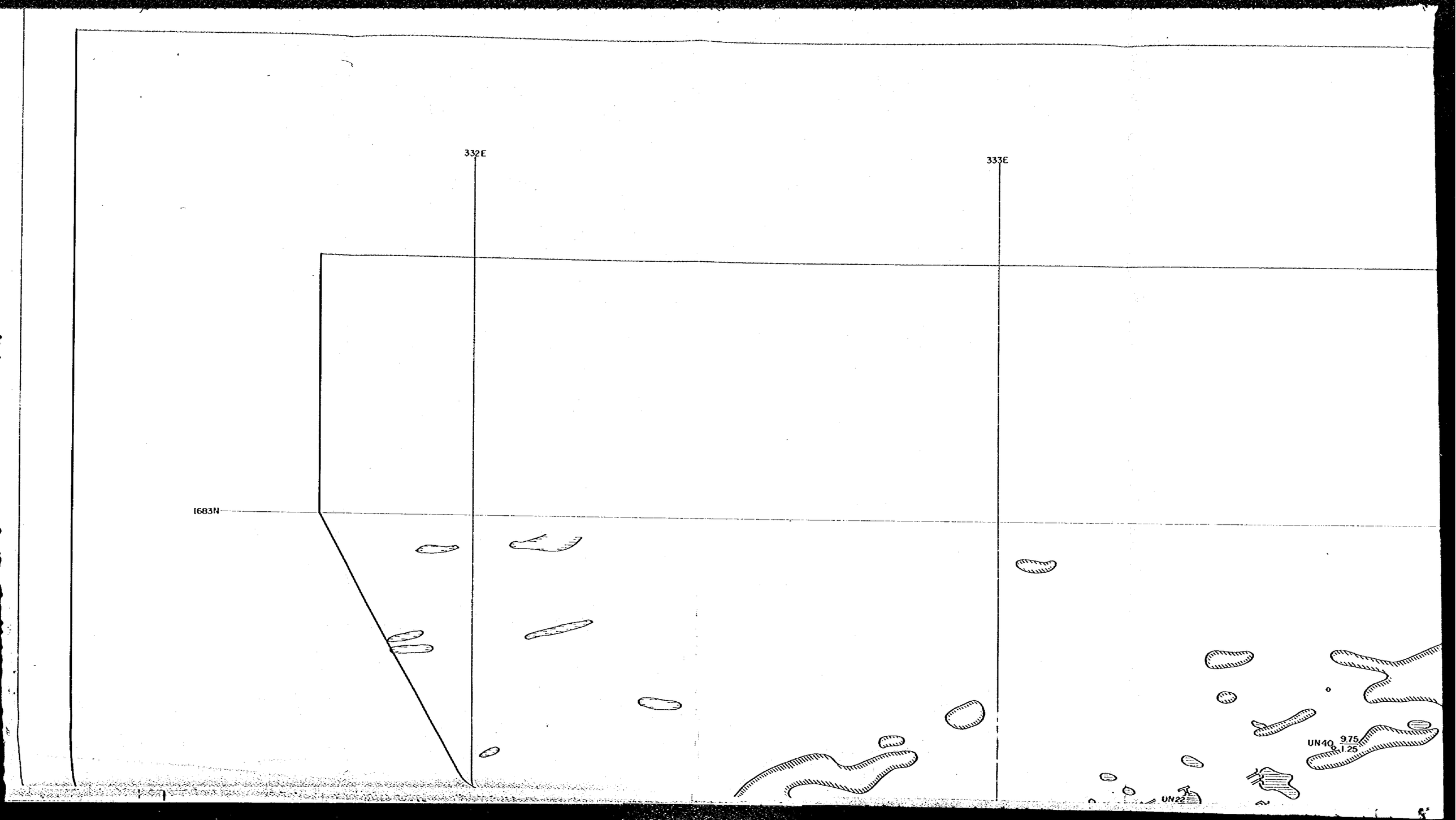
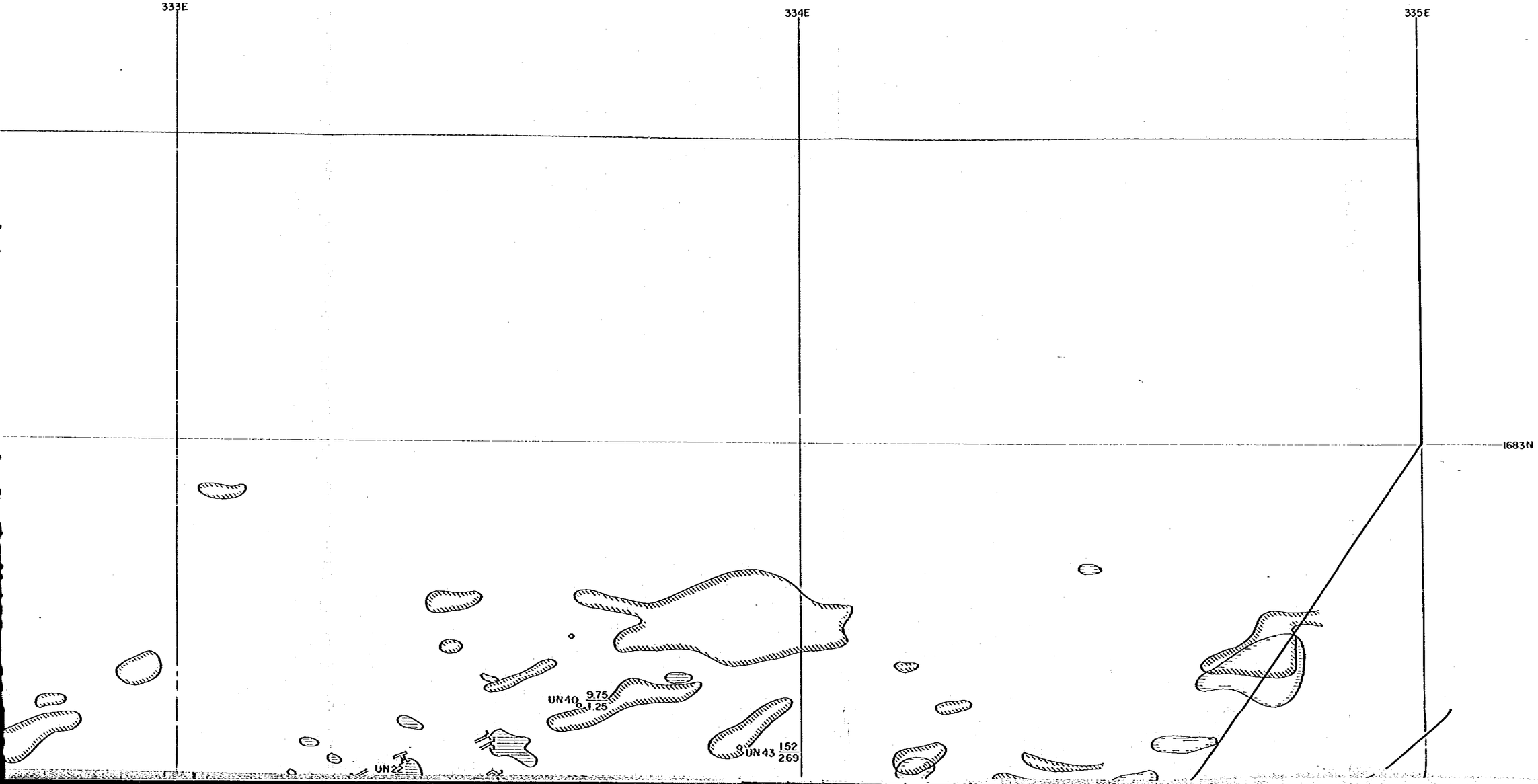
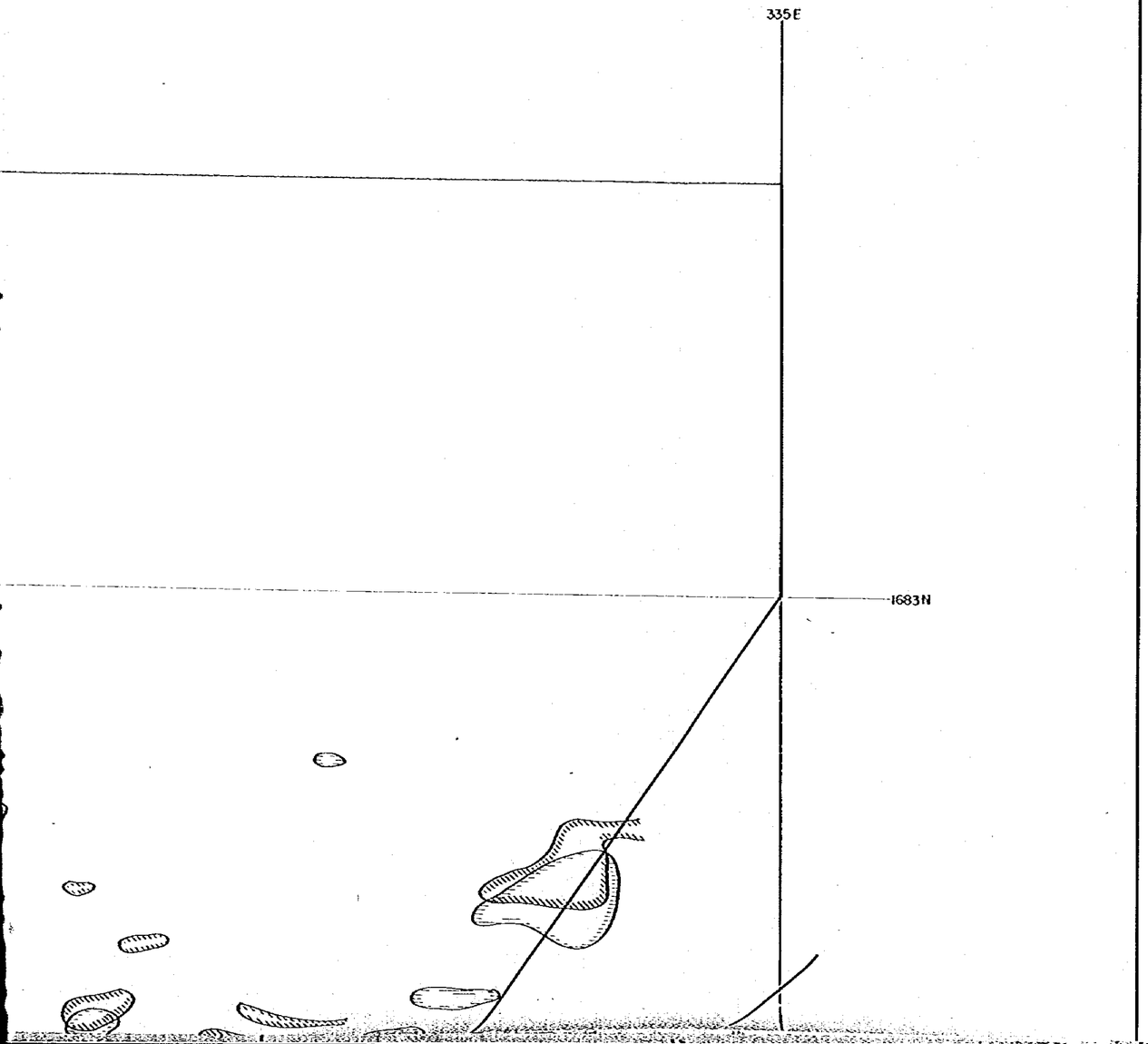
MS 30	3.0	0.10	260	15	420
MS 31	3.0	0.10	26,200	32	290
MS 33	3.0	0.10	5,620	12	117

LEGEND

	Tm	basalt, andesite
	Ky	limestone
	Mm	metoandesite, metaporphyrite & pyroclastics
	P	porphyrite
	Gp	granodiorite porphyry
	al-gp	altered granodiorite porphyry
	Sk	skarn
— — —		fault
-------→	UN3	DDH by UNDP


332E
333E
1683N
UN40 9.75 1.25
UN22


333E
334E
335E
1683N
UN40 9.75 1.25
UN43 152 269
UN22

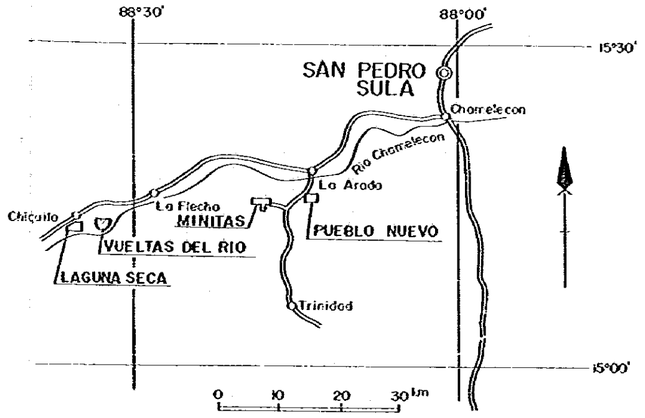


PL. Ⅲ - 1 - 18

GEOLOGICAL SURVEY
OF
THE WESTERN AREA, REPUBLIC OF HONDURAS

VOL. 3

GEOCHEMICAL MAP BY UNDP IN THE VUELTAS DEL RIO SECTOR



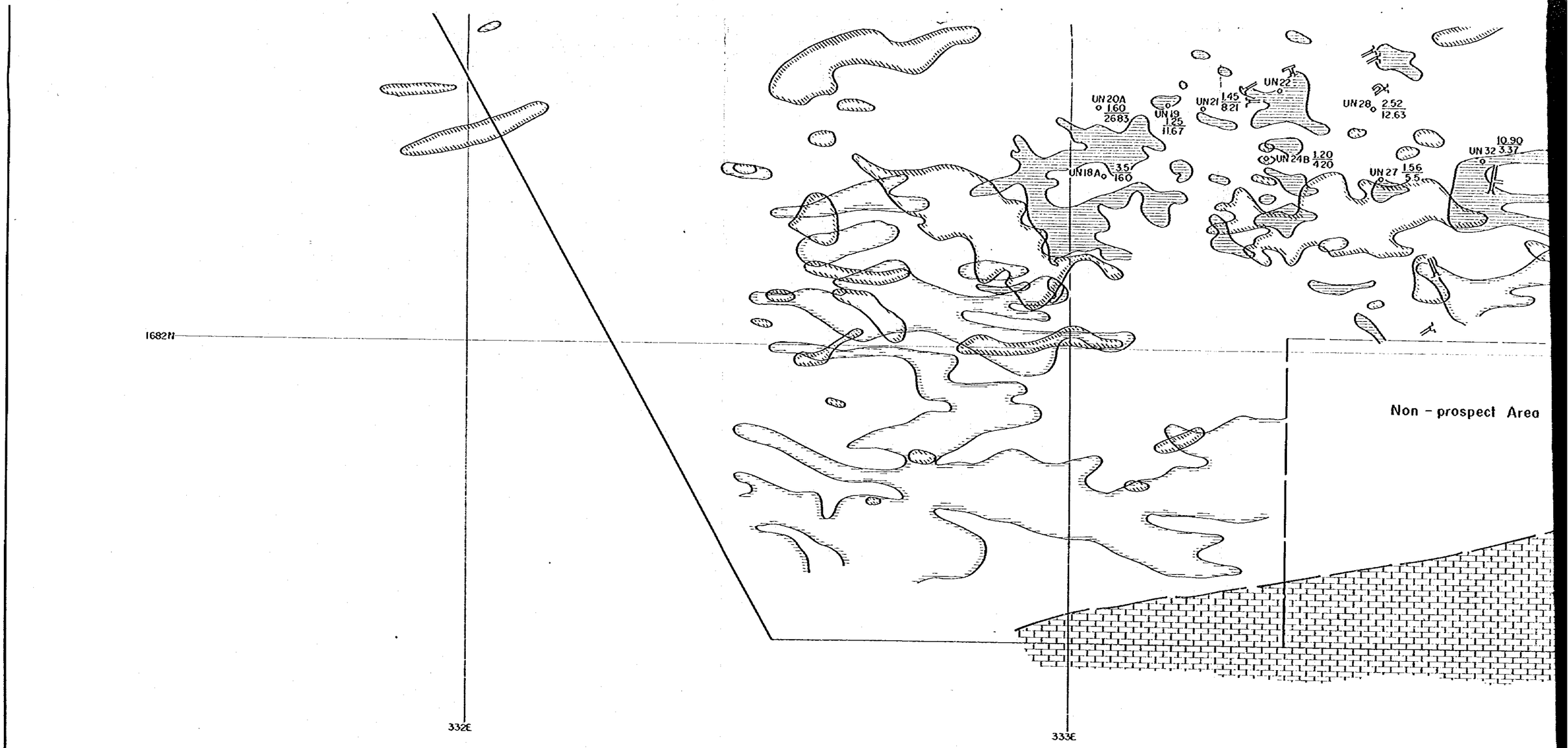
METAL MINING AGENCY OF JAPAN
JAPAN INTERNATIONAL COOPERATION AGENCY
GOVERNMENT OF JAPAN

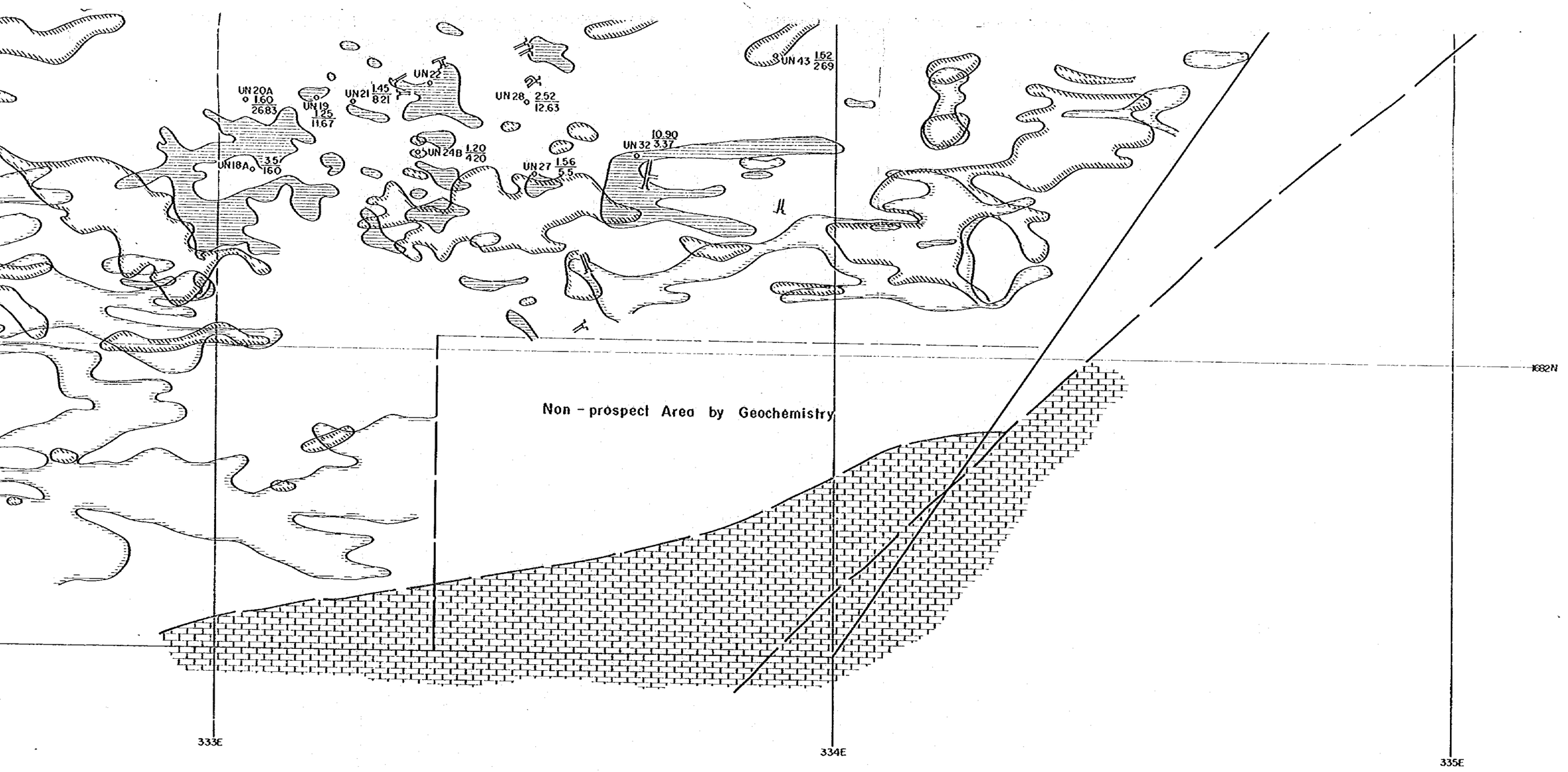
FEBRUARY 1979

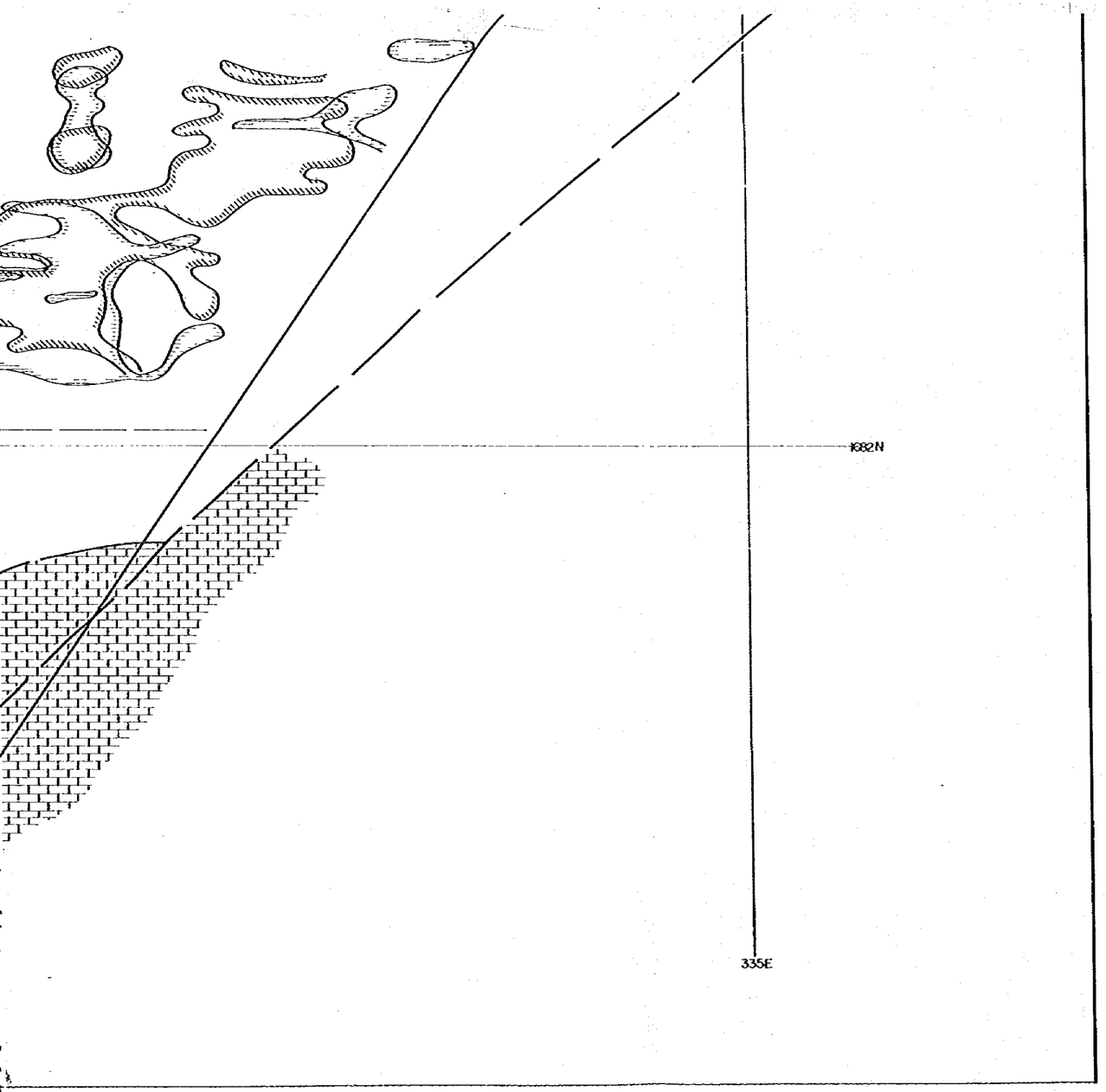
prepared by MESCO, Inc.

Scale 1 : 5,000

0 100 200 300 400 500 m


UN20A 1.60 2683
UN19 1.25 11.67
UN21 1.45 8.21
UN22
UN28 2.52 12.63
10.90
UN32 3.37
UN24B 1.20 4.20
UN27 1.56 5.5
UN18A 3.57 1.60
1682N
Non - prospect Area
332E
333E


UN 20A 1.60 / 26.83
UN 19 1.25 / 11.67
UN 21 1.45 / 8.21
UN 22
UN 28 2.52 / 12.63
UN 43 1.52 / 269
UN 18A .35 / 160
UN 24B 1.20 / 420
UN 27 1.56 / 5.5
UN 32 10.90 / 3.37
Non - prospect Area by Geochemistry
1682N
333E
334E
335E



LEGEND

- Vuellas del Rio Formation
- Atimo Formation
- Fault
- Adit
- UN21 2.45 Au (g/t) / 1.85 Width (m)
- DDH by UNDP
- Surveyed sector
- Au > 1.01 ppm
- Cu > 251 ppm
- Zn > 501 ppm