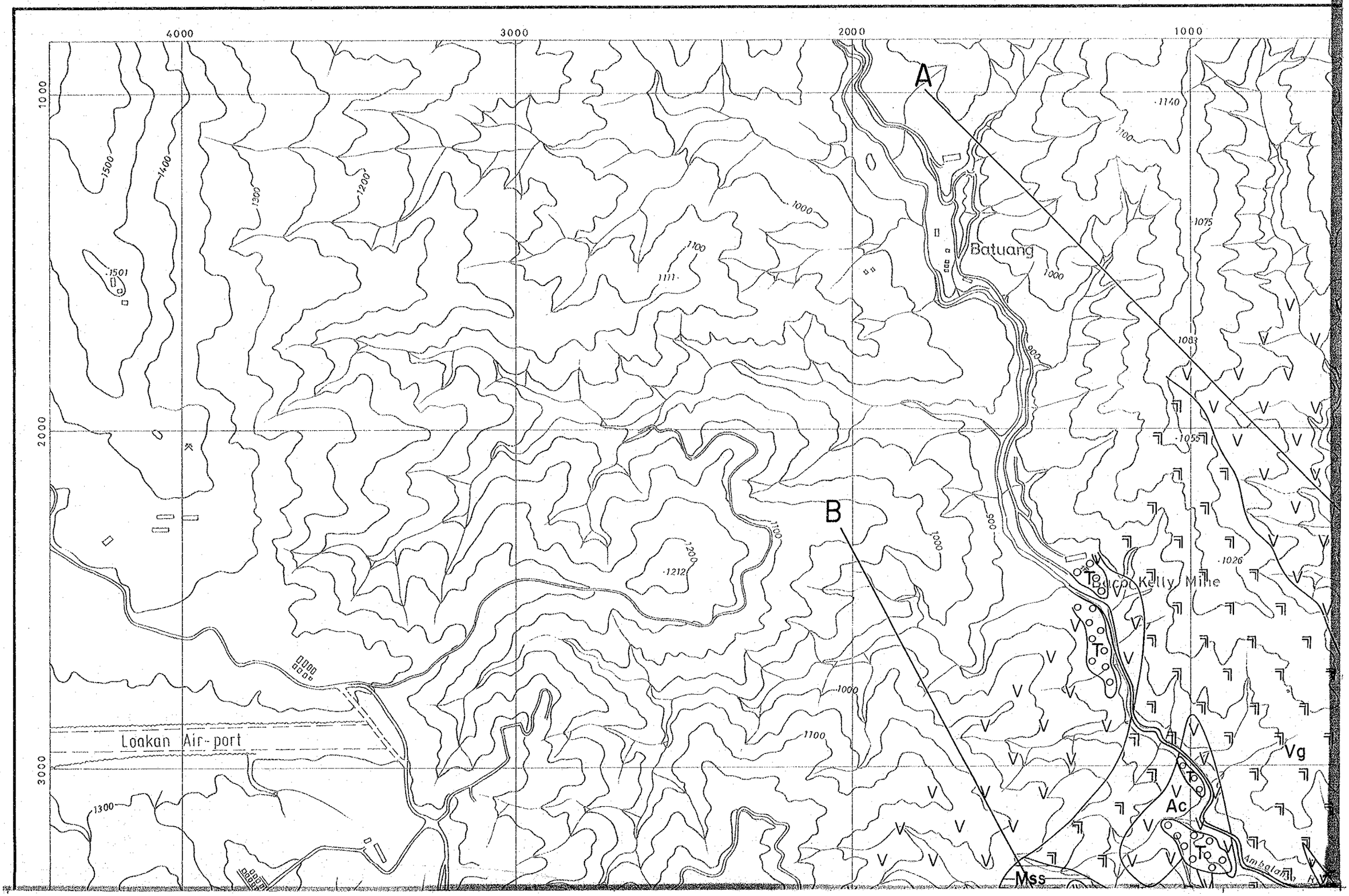
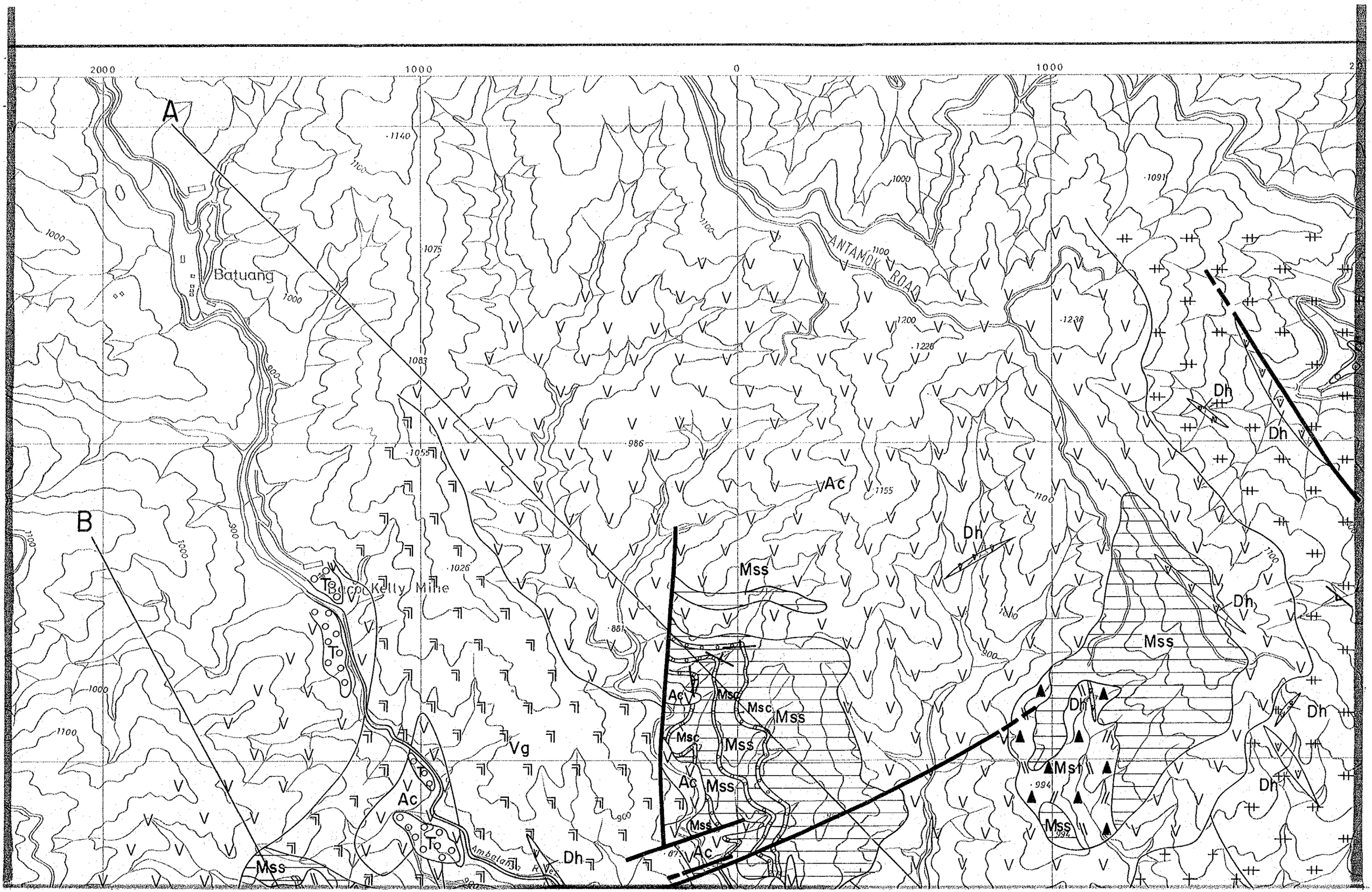
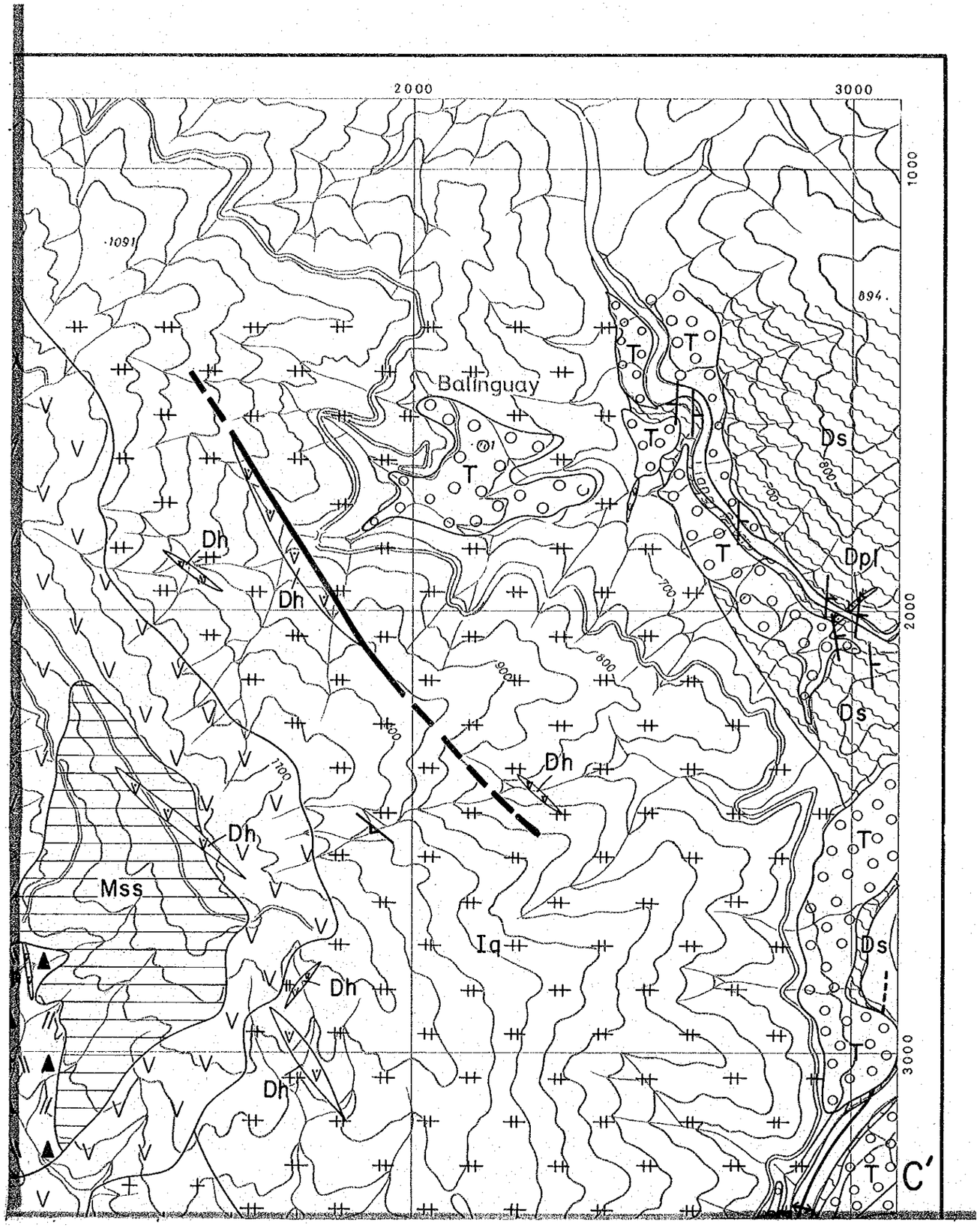
ACUPAN—ITOGON

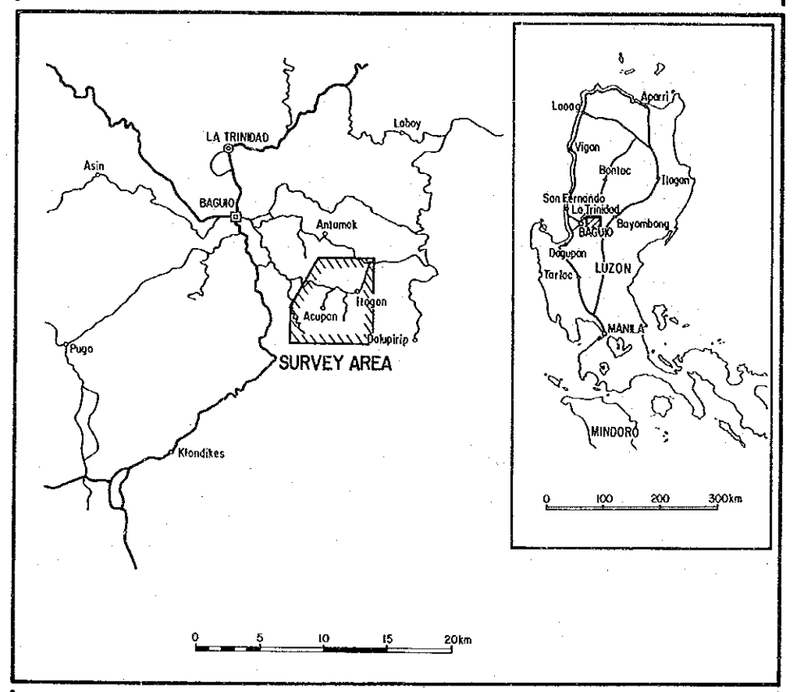



2000
1000
0
1000
A
B
Batuang
ANTAMOK ROAD
Kelly Mine
Ambalanai River
Ac
Dh
Mss
Msc
Msf
Vg
To



Acupan Itogon Geothermal Development Survey
the Republic of the Philippines

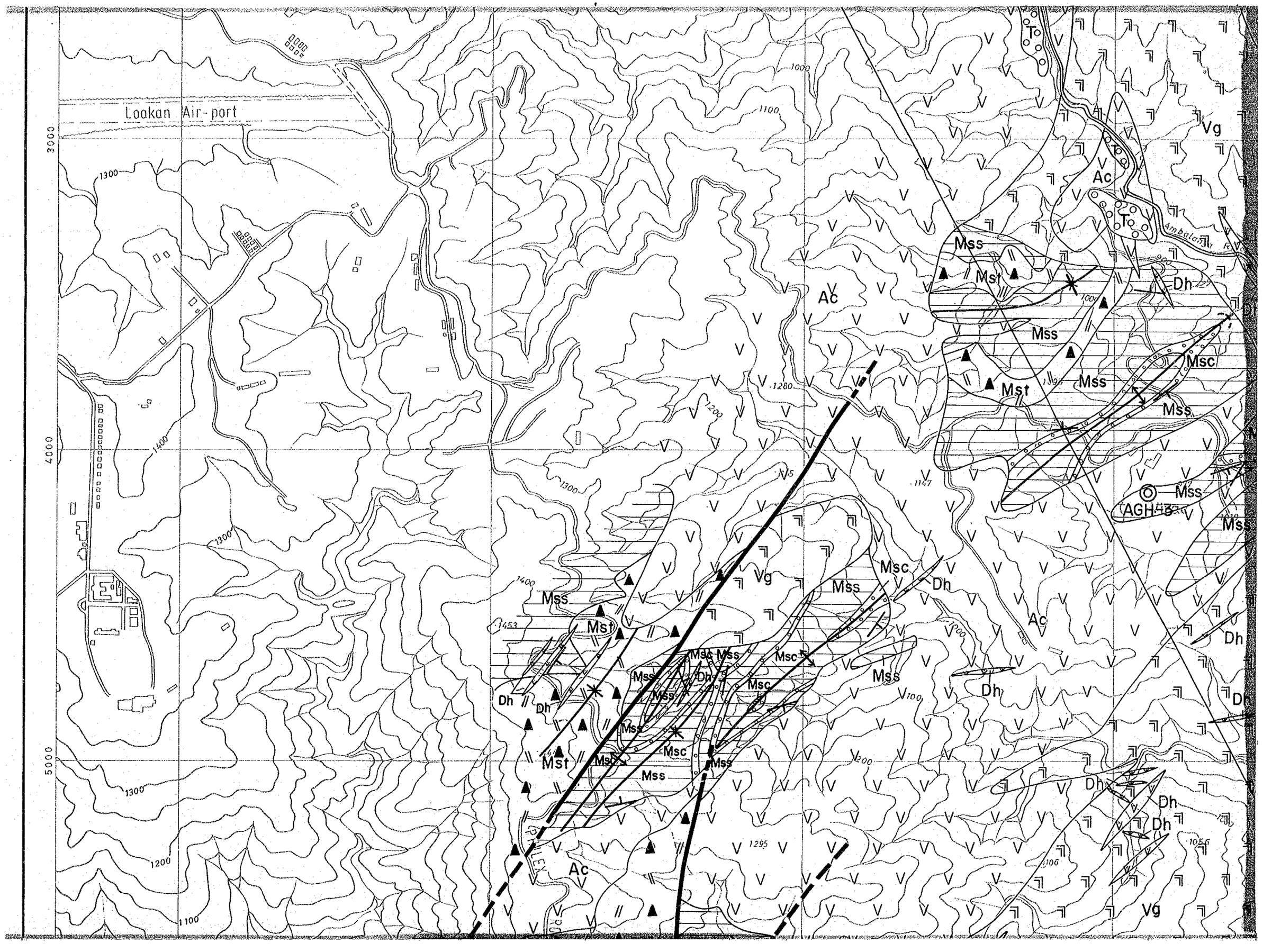
Fig. II-1-3 Geological Map

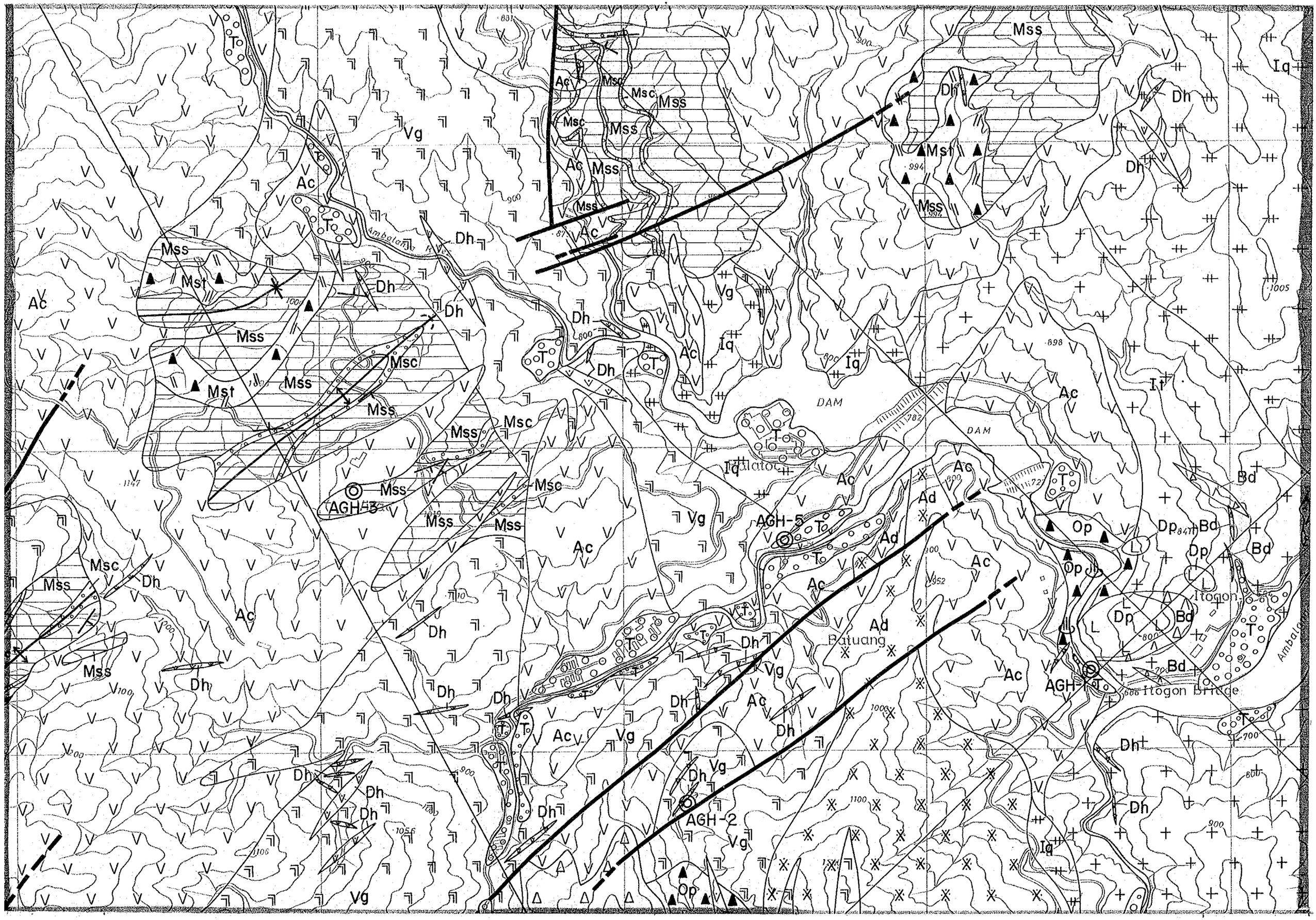


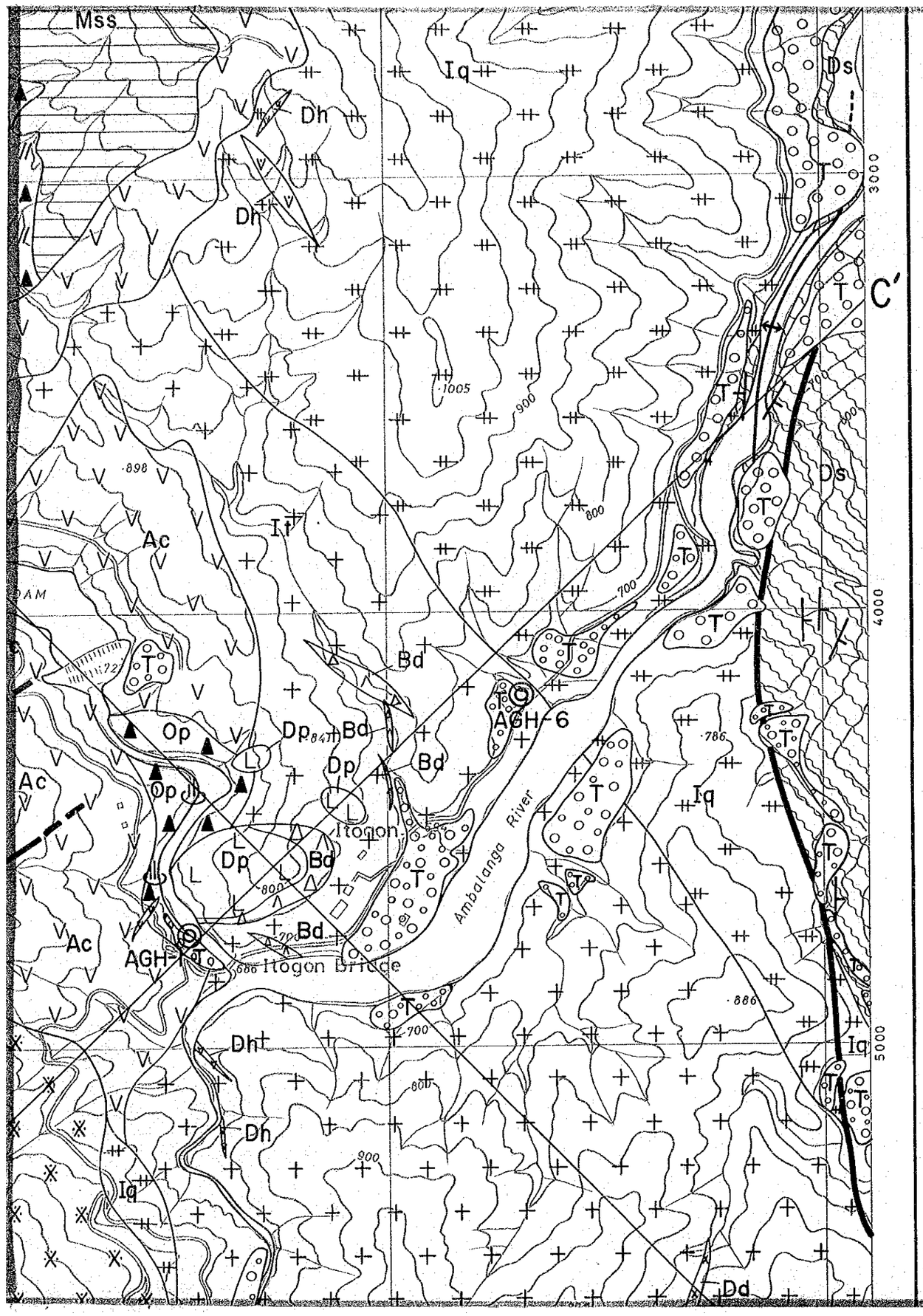
Japan International Cooperation Agency

Scale 1 : 10,000

0 500 1,000m


Loakan Air-port
3000
4000
5000
1300
1400
1000
1100
1200
1280
1295
1453
1147
1056
Ac
Vg
To
Mss
Mst
Dh
Msc
AGH 43
Ambalan River


Ac
Mss
Mst
Dh
Vg
To
Msc
Iq
Ad
Op
Dp
Bd
Lt
DAM
Ambalan River
Itogon
Itogon Bridge
Batuang
AGH-2
AGH-3
AGH-5



Scale 1 : 10,000

0 500 1,000m

LEGEND

QUATERNARY	Pleistocene	Terrace deposite	T	conglomerate sand clay
		Dacite plug	Dp	dacite (1.28~0.49 Ma)
		Breccia dyke	Bp	dacite vent breccia (0.84 Ma)
		Young plug	Yp	dacite pyroclastic rock
NEOGENE	Pliocene	Old plug	Op	andesitic pyroclastic rock
	Miocene	Miocene sedimentary rocks	Msl	andesitic pyroclastic rock
			Msa	andesite lava
			Msc	conglomelate
			Mss	tuffaceous sandstone sandstone, coarse tuff
CRETACEOUS		Dalupirip schist	Ds	actinolite schist epidote-actinolite schist (82.6 Ma)

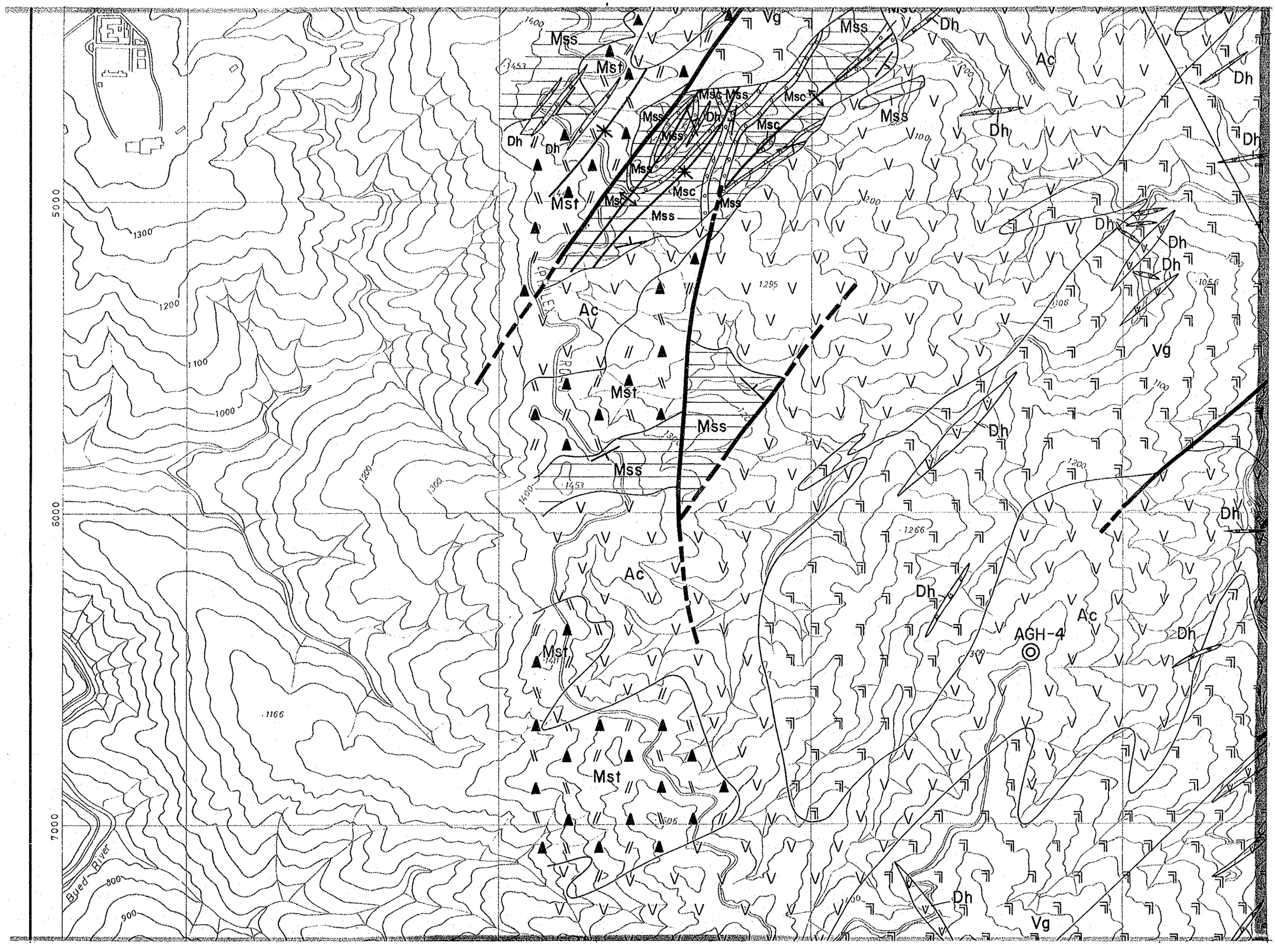
<Intrusive rocks>

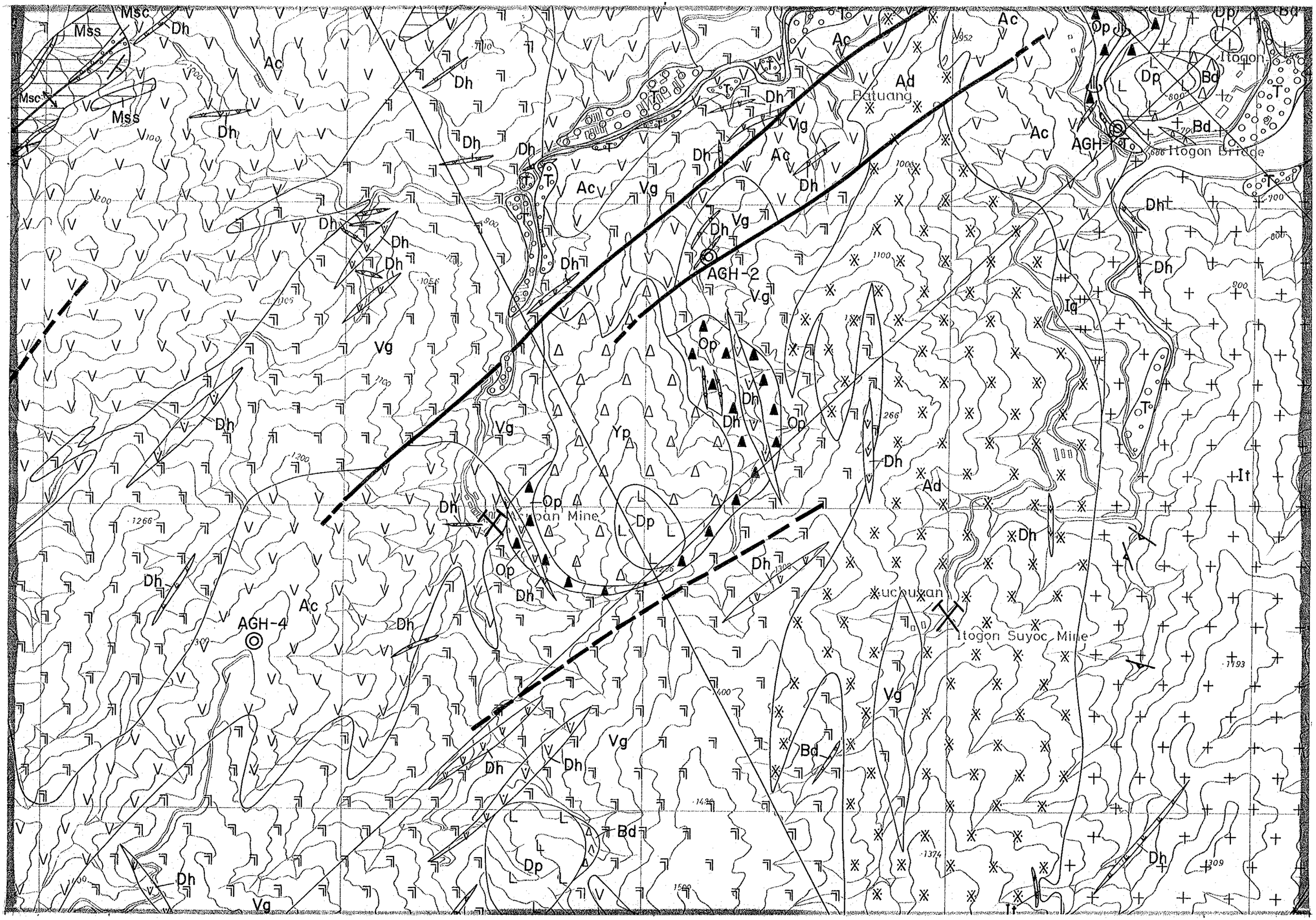
	Dyke rocks	Dh	mega-hornblende andesite porphyry hornblende andesite porphyry (2.37 Ma)
		Dpl	mega plagioclase bearing andesite porhyry
	Andesite complex	Ac	hornblende andesite porphyry, plagioclase andesite porphyry, aphanitic andesite (2.38 Ma)
Agno Batholith	Virac granodiorite	Vg	hornblende-biotite granodiorite (5.2 Ma)
	Dyke rock	Dd	diorite
	Itogon tonalite	It	hornblende-biotite tonalite (17.9 Ma)
	Itogon quartz-diorite	Iq	(biotite-) hornblende quartz-diorite (21.7 Ma)
	Antamok diorite	Ad	hornblende diorite to hornblende gabbro

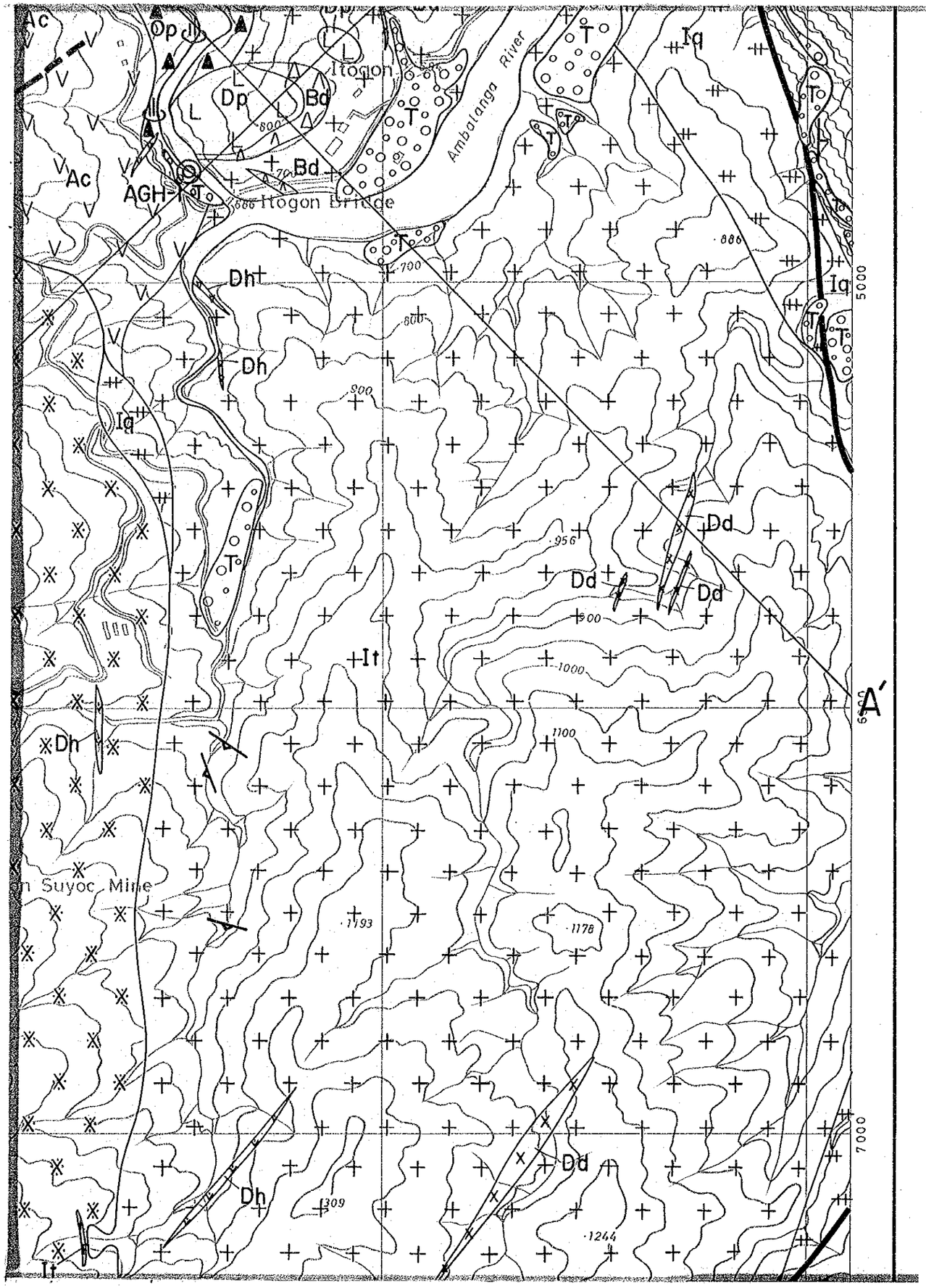
fault

anticline

syncline


Vg
Mss
Dh
Ac
Mst
Msc
AGH-4
5000
6000
7000
1300
1200
1100
1000
900
800
1166
1295
1266
1453
Bued River


Msc
Mss
Dh
Ac
Ad
Batuang
Op
Dp
Bd
Itogon
Itogon Bridge
AGH-1
AGH-2
AGH-4
Vg
Yp
Iq
It
Mine
Suyoc Mine



		Mss	tuffaceous sandstone sandstone, coarse tuff
CRETACEOUS	Dalupirip schist	Ds	actinolite schist epidote-actinolite schist (82.6 Ma)

<Intrusive rocks>

	Dyke rocks	Dh	mega-hornblende andesite porphyry hornblende andesite porphyry (2.37 Ma)
		Dpl	mega plagioclase bearing andesite porhyry
	Andesite complex	Ac	hornblende andesite porphyry, plagioclase andesite porphyry, aphanitic andesite (2.38 Ma)
Agno Batholith	Virac granodiorite	Vg	hornblende-biotite granodiorite (5.2 Ma)
	Dyke rock	Dd	diorite
	Itogon tonalite	It	hornblende-biotite tonalite (17.9 Ma)
	Itogon quartz-diorite	Iq	(biotite-) hornblende quartz-diorite (21.7 Ma)
	Antamok diorite	Ad	hornblende diorite to hornblende gabbro

fault

anticline

syncline

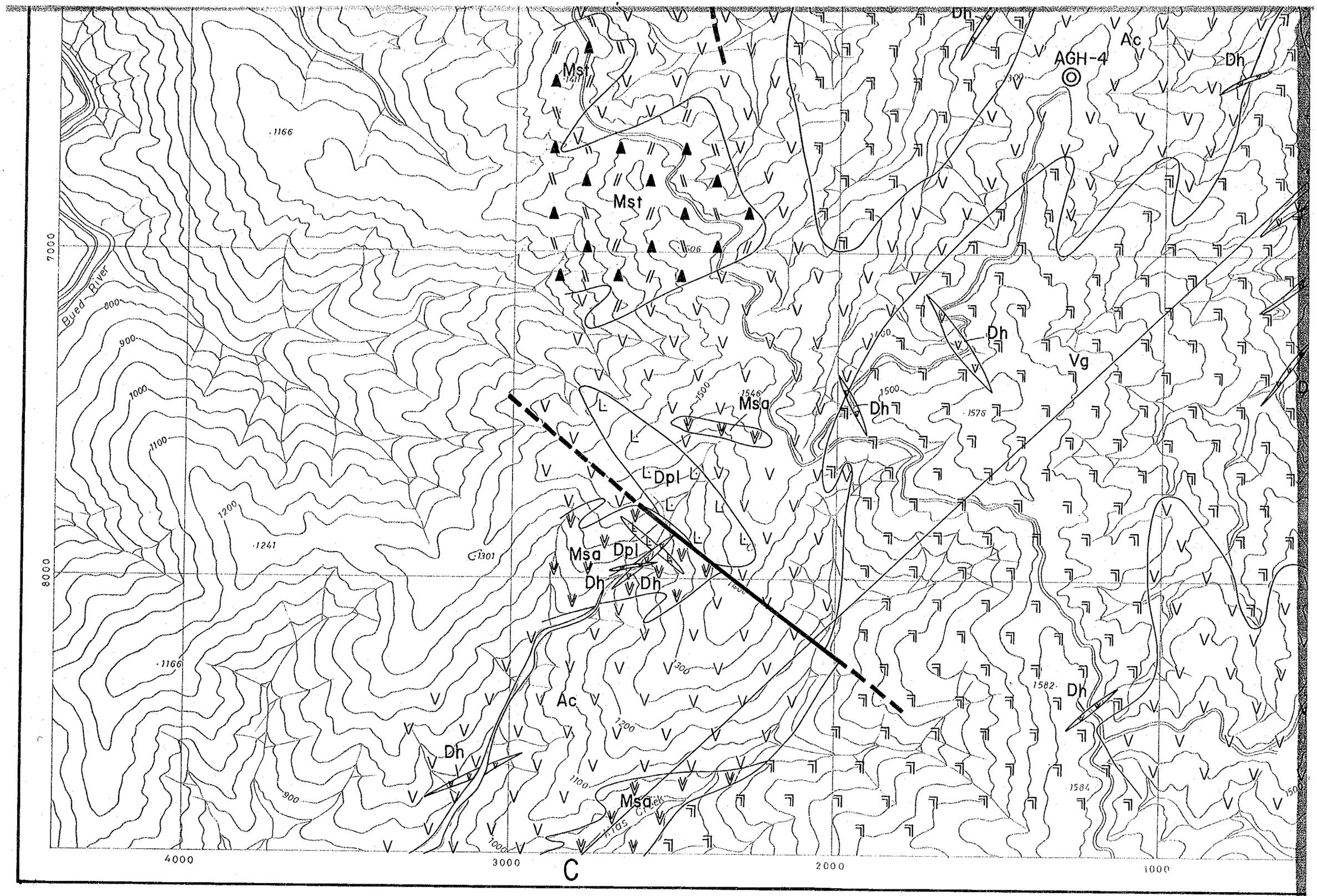
bedding

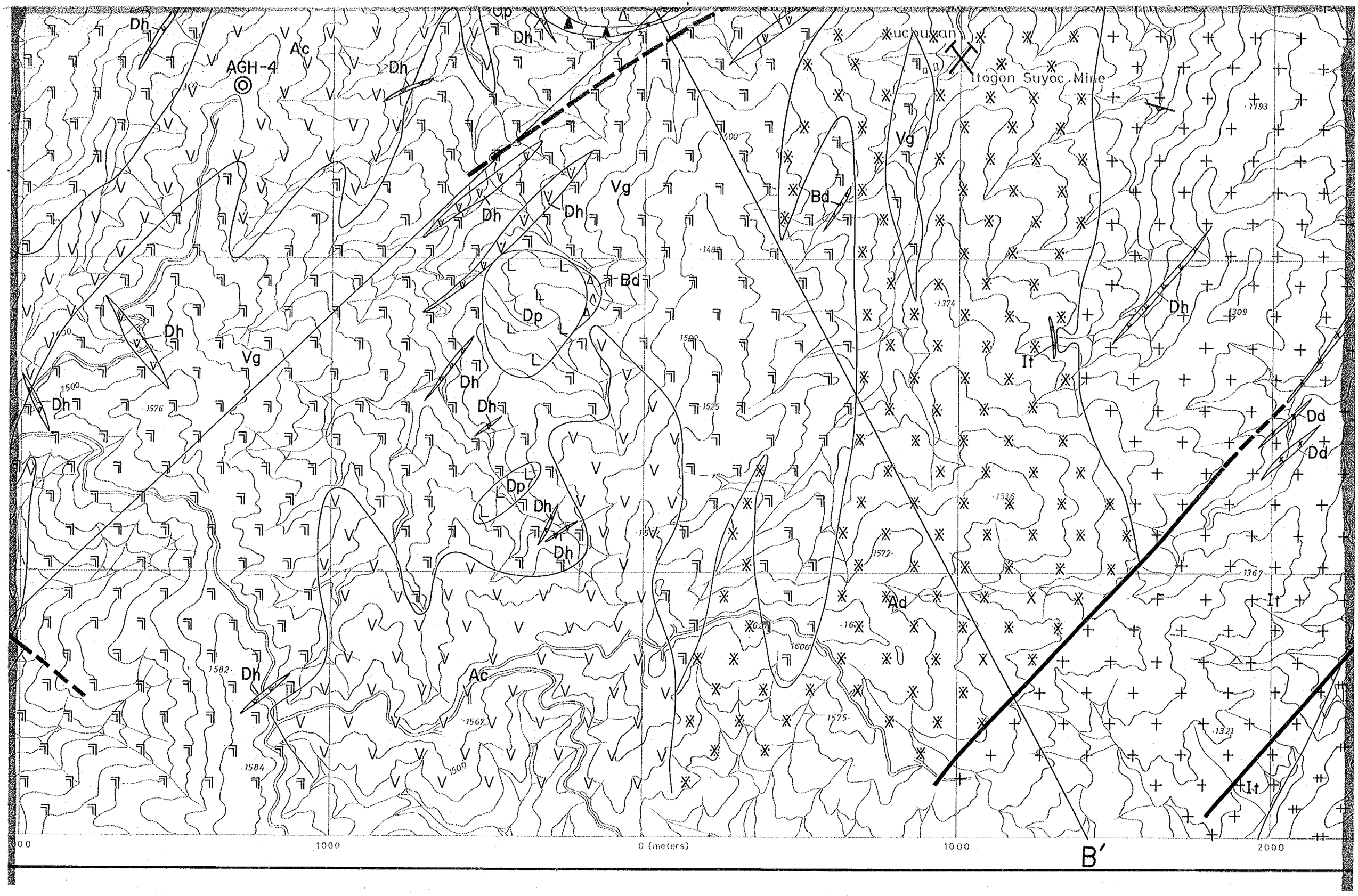
foliation

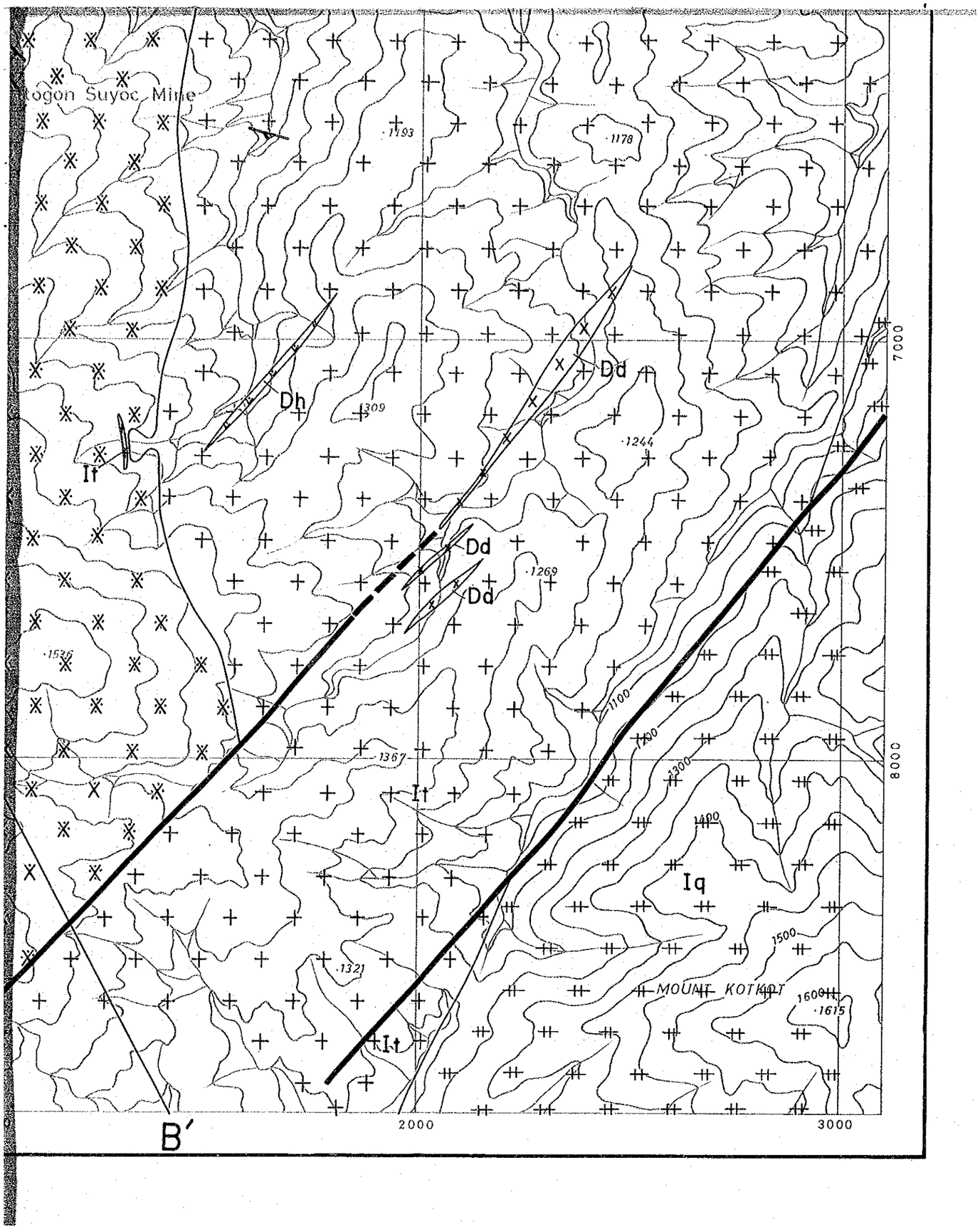
operating mine

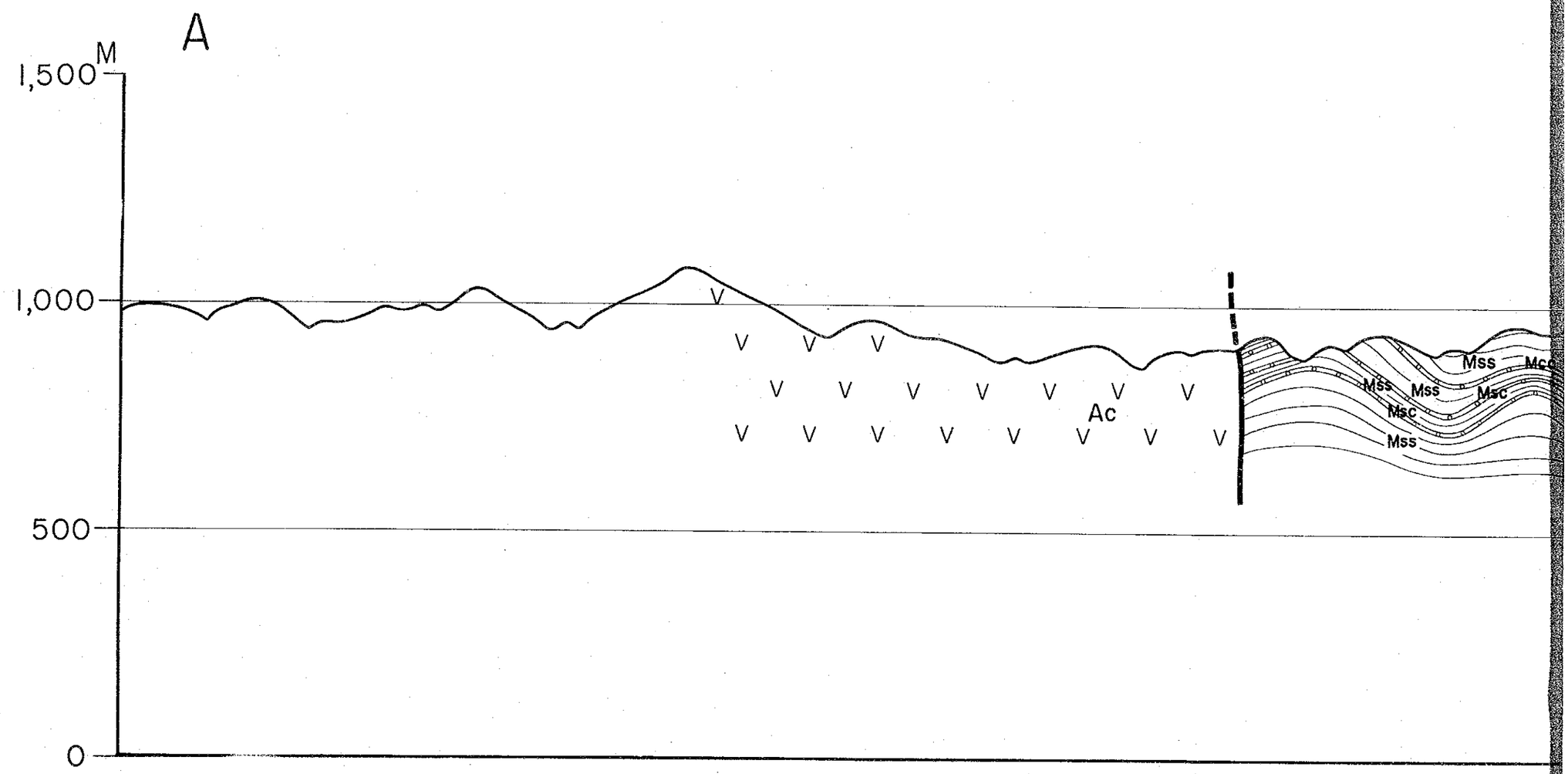
hot spring

gradient hole (AGH-1 to 6)


Mst
Mst
Dh
Ac
AGH-4
Dh
Dh
Vg
Msa
Dh
Dpl
Msa
Dpl
Dh
Dh
Ac
Dh
Dh
Msa
Bued River
Atas Creek
7000
8000
4000
3000
2000
1000
C

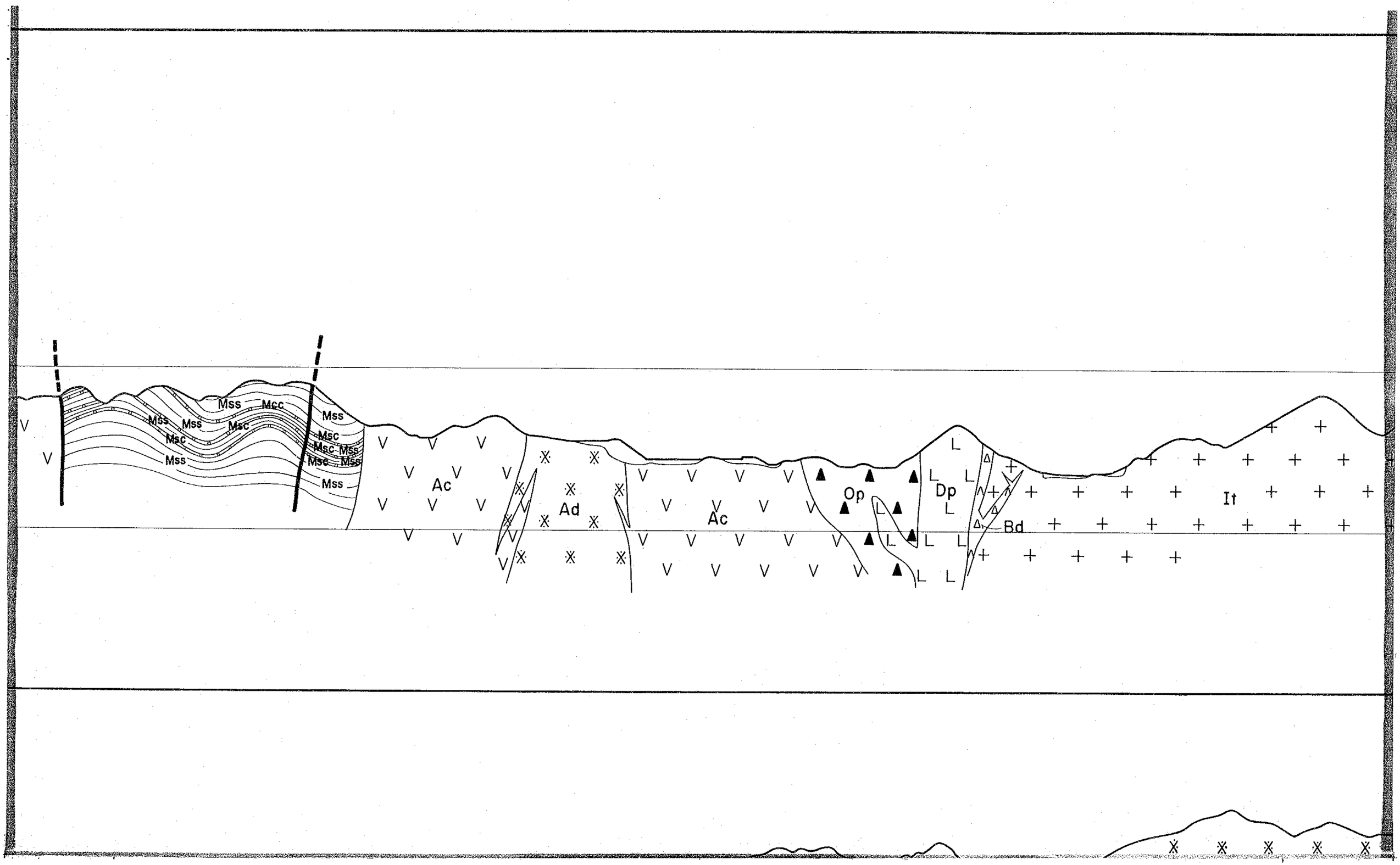

Dh
Ac
AGH-4
Dh
Up
Dh
Uchuxan
Itogon Suyoc Mine
Vg
Vg
Bd
Dh
Dh
Bd
Dp
Dh
Vg
Dh
Dh
Dh
Dh
Dp
Dh
Dh
It
Dd
Dd
Ad
It
Dh
Ac
It
1000
0 (meters)
1000
2000
B′

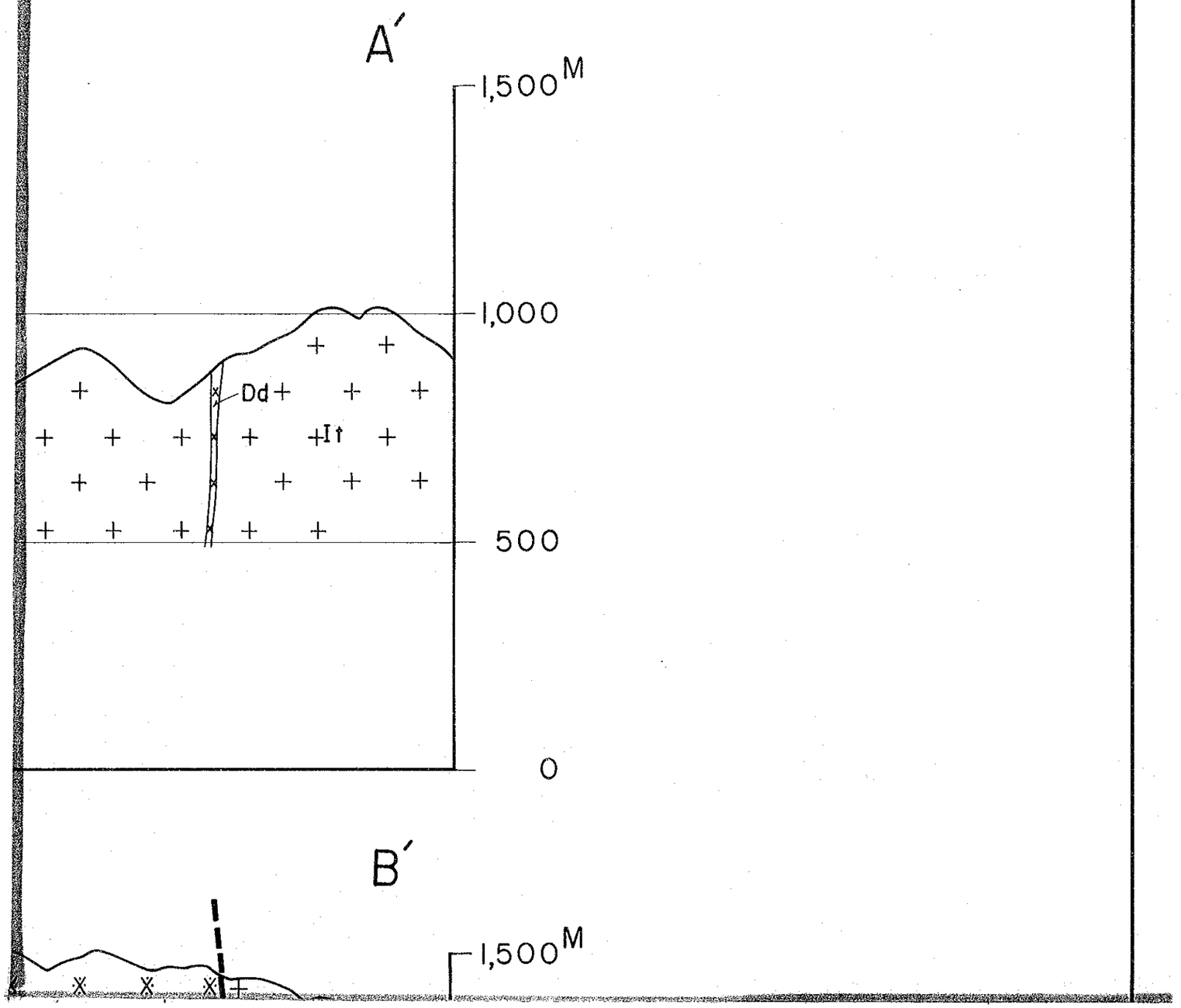

ogon Suyoc Mine
1193
1178
Dh
1309
Dd
1244
It
Dd
1269
Dd
1536
1100
1150
1367
1200
It
1400
Iq
1500
1321
MOUNT KOTKOT
1600
1615
It
B′
2000
3000
7000
8000



B

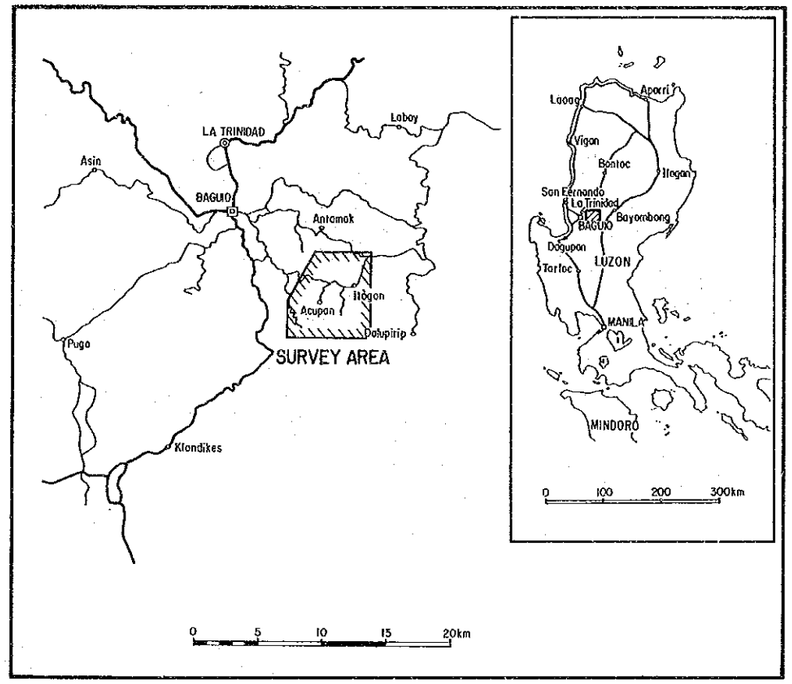
1,500 M


Mss
Mcc
Mss
Mss
Msc
Msc
Mss
Mss
Msc
Msc
Mss
Mss
Mss
Ac
Ad
Ac
Op
Dp
Bd
It



Acupan Itogon Geothermal Development Survey
the Republic of the Philippines

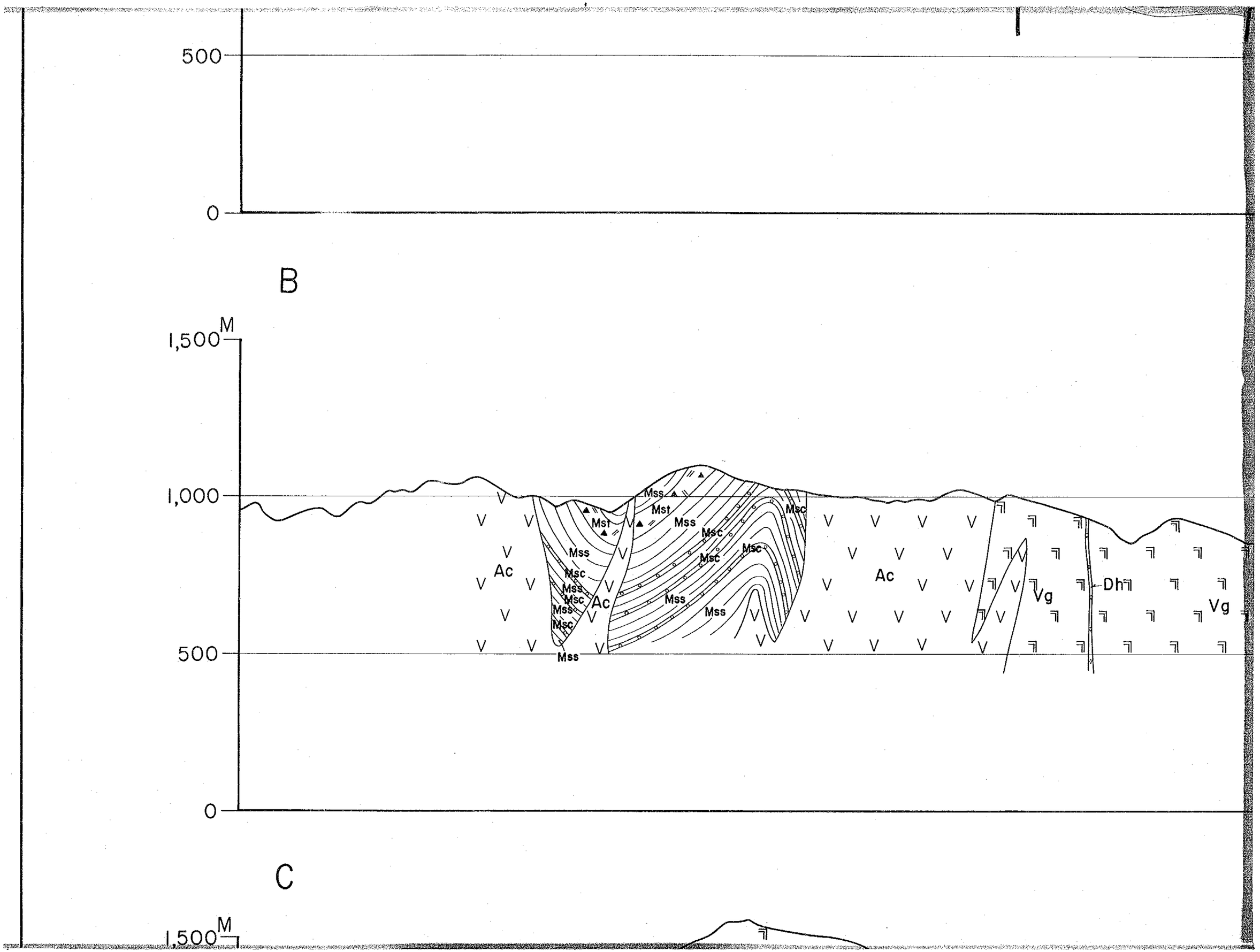
Fig.II-1-4 Geological Profiles.

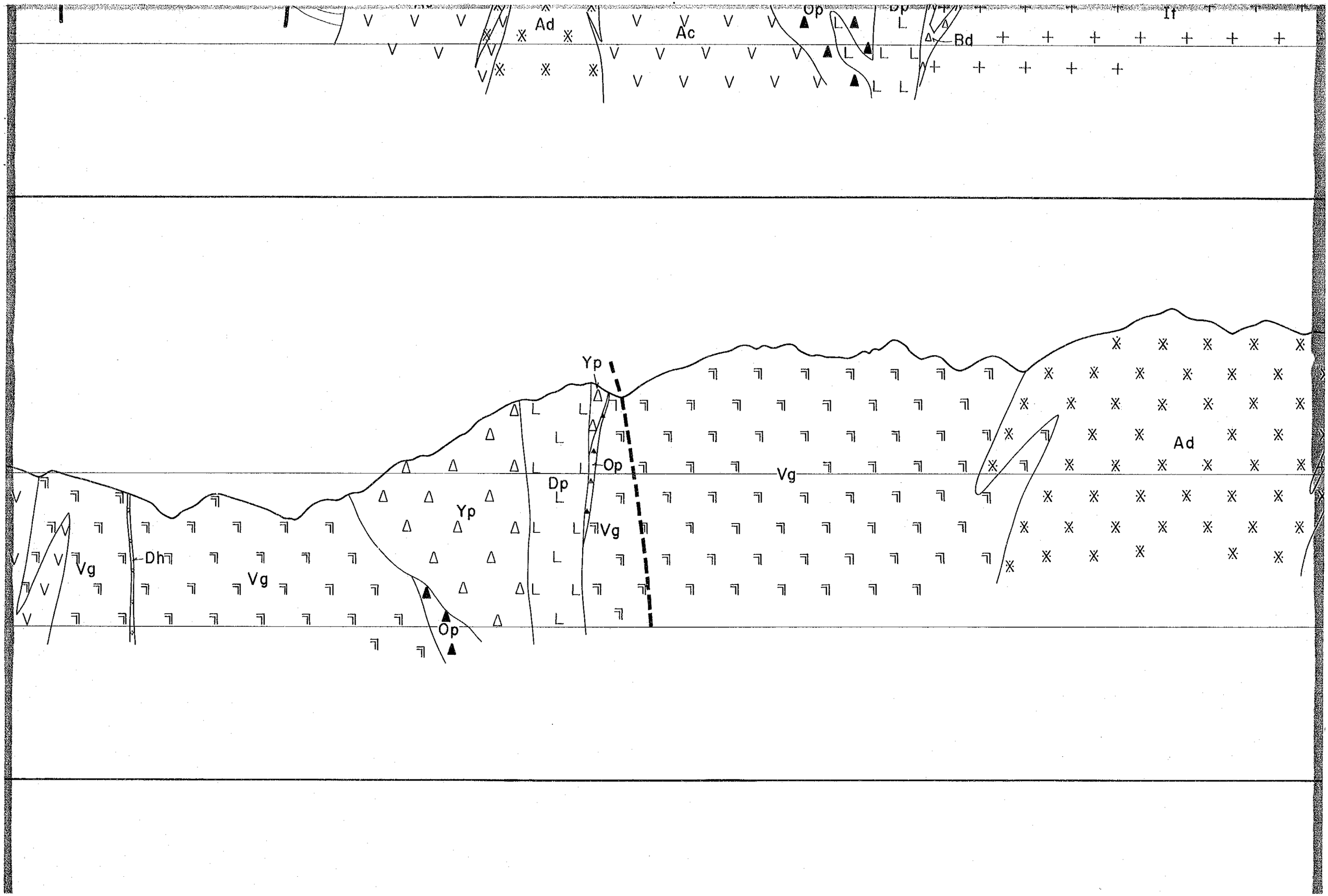


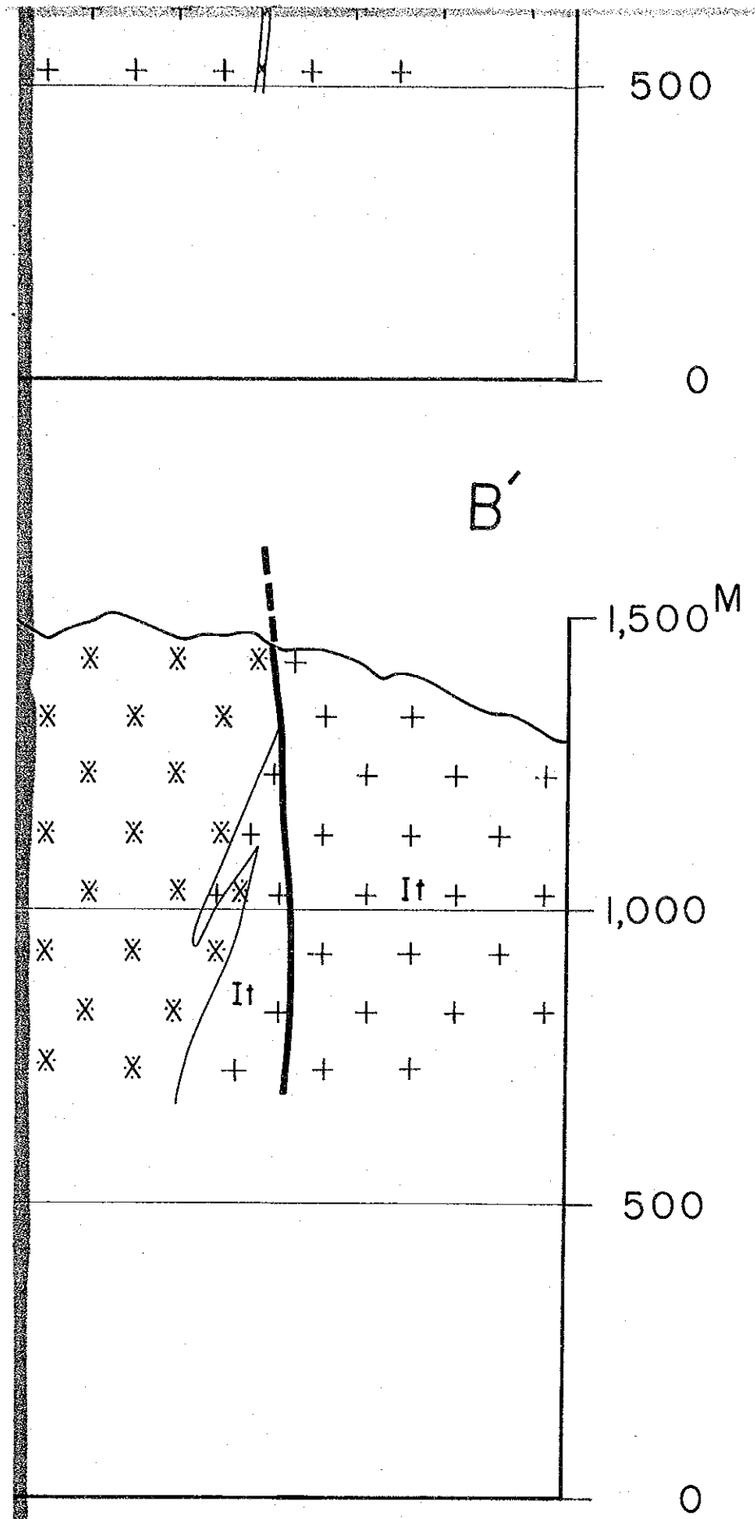
Japan International Cooperation Agency

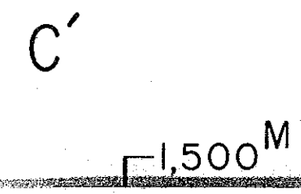
Scale 1 : 10,000

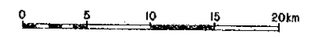
0 500 1,000m


500
0
B
1,500 M
1,000
500
0
Ac
Mss
Msc
Mst
Ac
Mss
Msc
Mst
Mss
Msc
Msc
Msc
Msc
Mss
Mss
Mss
Msc
Mss
Msc
Mss
Ac
Vg
Dh
Vg
C
1,500 M


Ad
Ac
Op
Dp
Bd
It
Yp
Op
Dp
Vg
Ad
Yp
Vg
Vg
Dh
Vg
Op







Japan International Cooperation Agency

Scale 1 : 10,000

0 500 1,000m

LEGEND

QUATERNARY	Pleistocene	Terrace deposite		conglomerate sand clay
		Dacite plug	Dp	dacite (1.28~0.49 Ma)
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		Young plug	Yp	dacitc pyroclastic rock
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<Intrusive rocks>

Dyke rocks	Dh	mega-hornblende andesite porphyry hornblende andesite porphyry	(2.37 Ma)
	Dpl	mega plagioclase bearing andesite porhyry	
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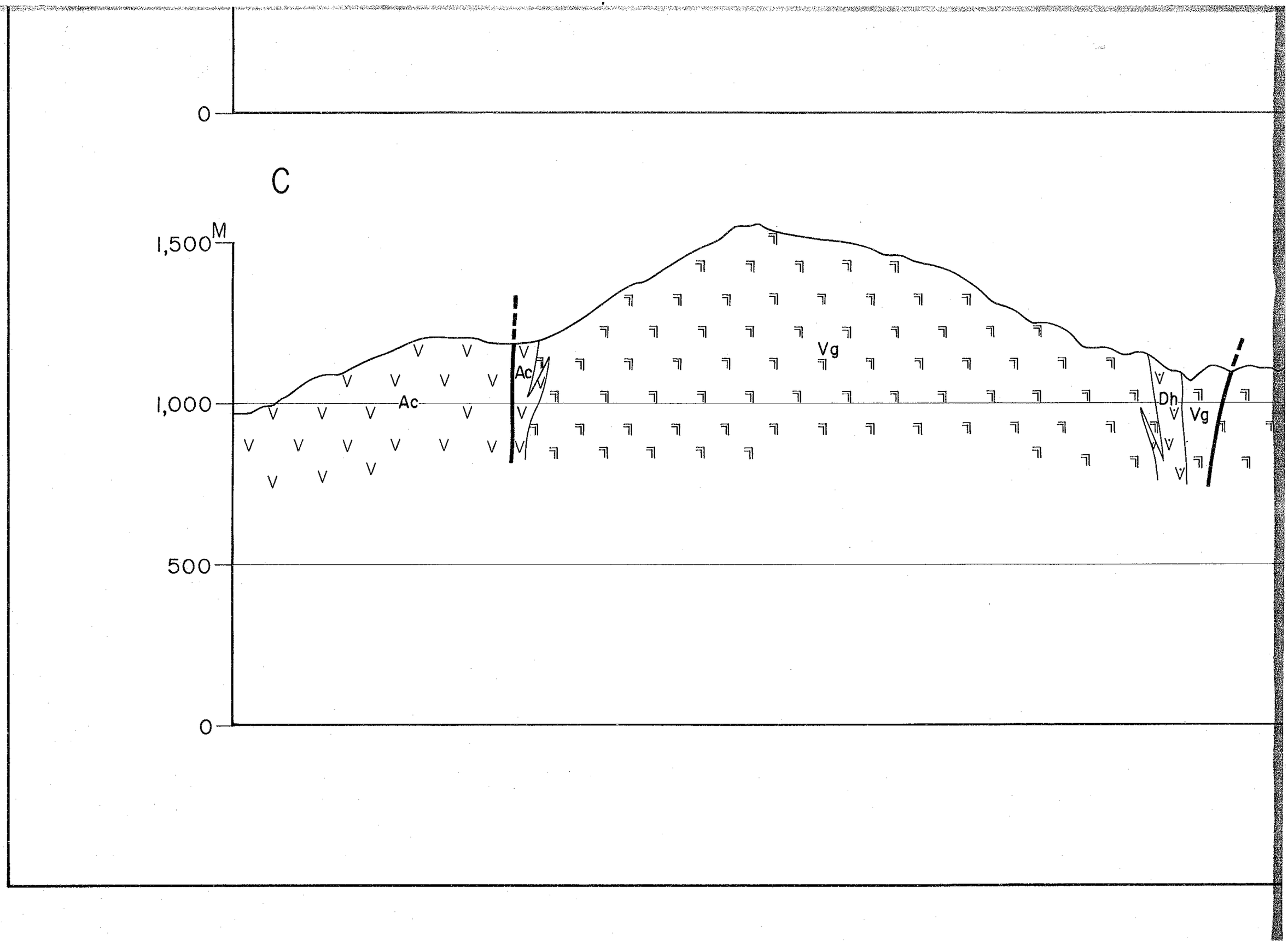
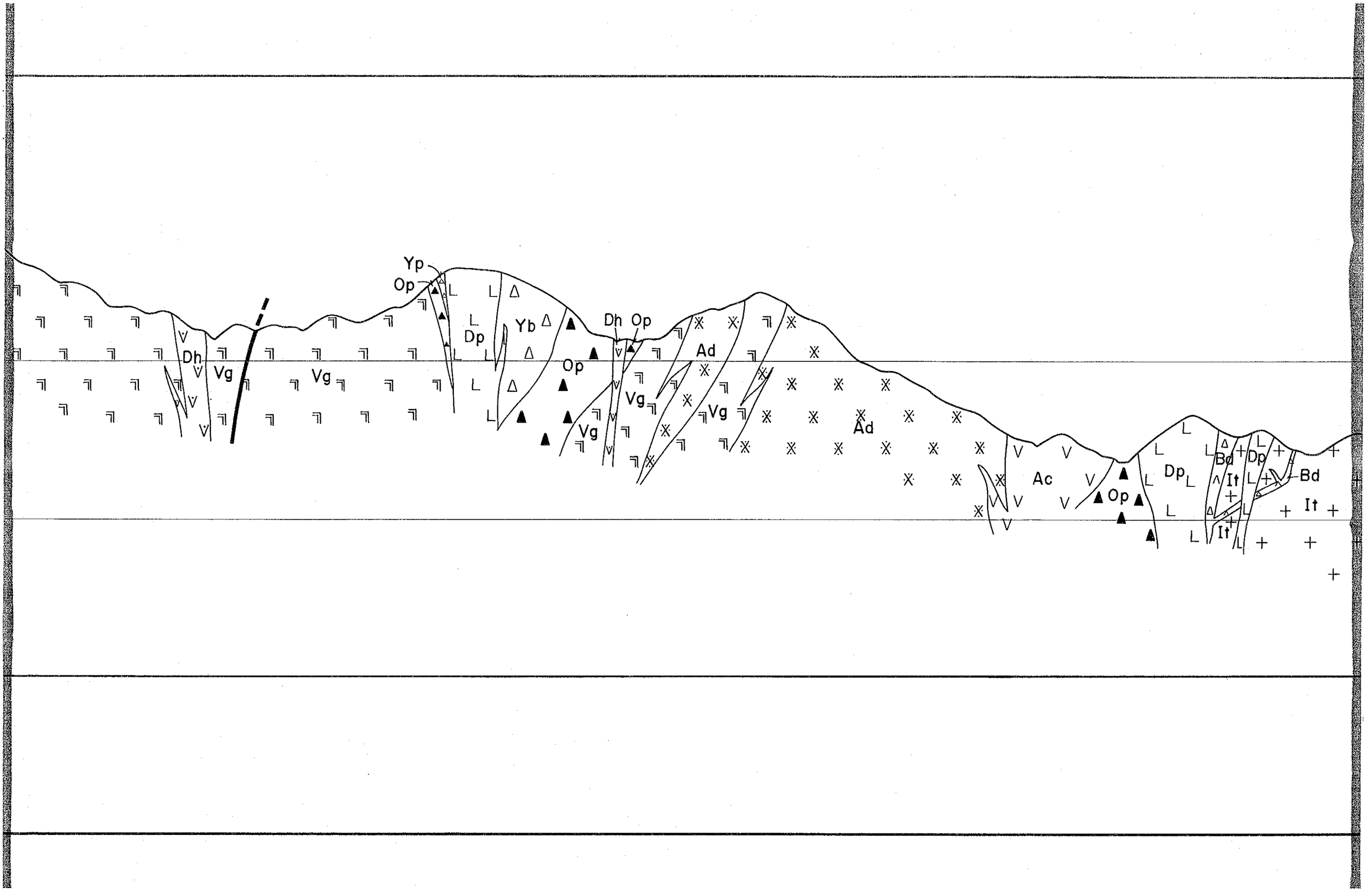
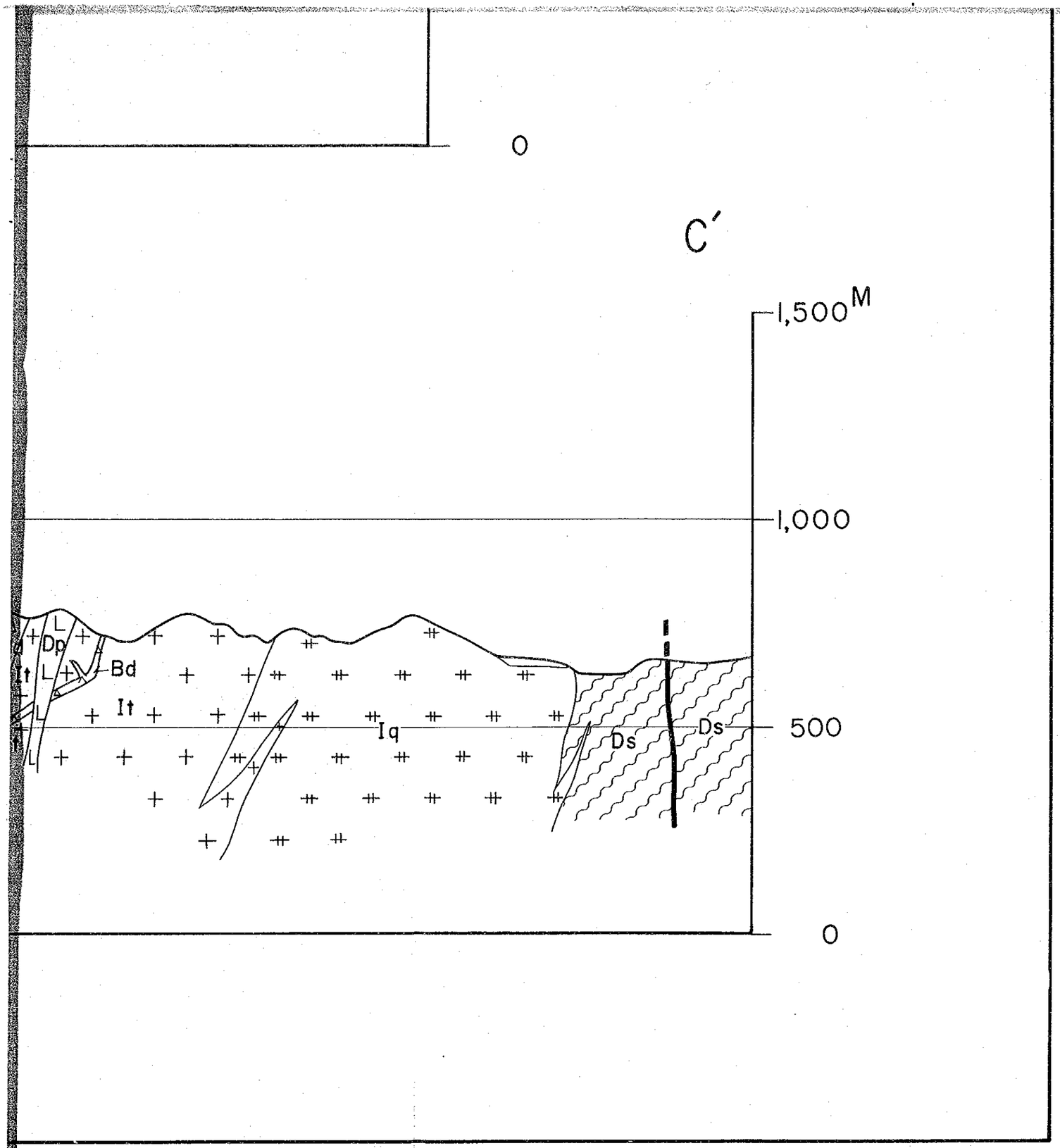
Virac granodiorite	Vg	hornblende-biotite granodiorite	(5.2 Ma)
Dyke rock	Dd	diorite	


0
C
1,500 M
1,000
500
0
Ac
Ac
Vg
Dh
Vg


Yp
Op
Dp
Yb
Dh
Op
Ad
Dh
Vg
Vg
Op
Vg
Vg
Vg
Ad
Ac
Op
Dp
Bd
Dp
Bd
It
It
It



		Mss	tuffaceous sandstone sandstone, coarse tuff
CRETACEOUS	Dalupirip schist	Ds	actinolite schist epidote-actinolite schist (82.6 Ma)

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	Itogon quartz-diorite	Iq	(biotite-) hornblende quartz-diorite (21.7 Ma)
	Antamok diorite	Ad	hornblende diorite to hornblende gabbro

fault