

REPUBLIC OF INDONESIA

REPORT ON GEOLOGICAL SURVEY

OF

WEST KALIMANTAN

PHASE II

FEBRUARY, 1981

JAPAN INTERNATIONAL COOPERATION AGENCY  
METAL MINING AGENCY OF JAPAN

REPUBLIC OF INDONESIA/  
REPORT ON GEOLOGICAL SURVEY OF WEST KALIMANTAN  
PHASE II JICA  
FEB, 1981 MMAJ

108  
66.1  
MPN

国際協力事業団

受入 月日	'87.4.18	108
登録 No.	08447	66-1 MPN

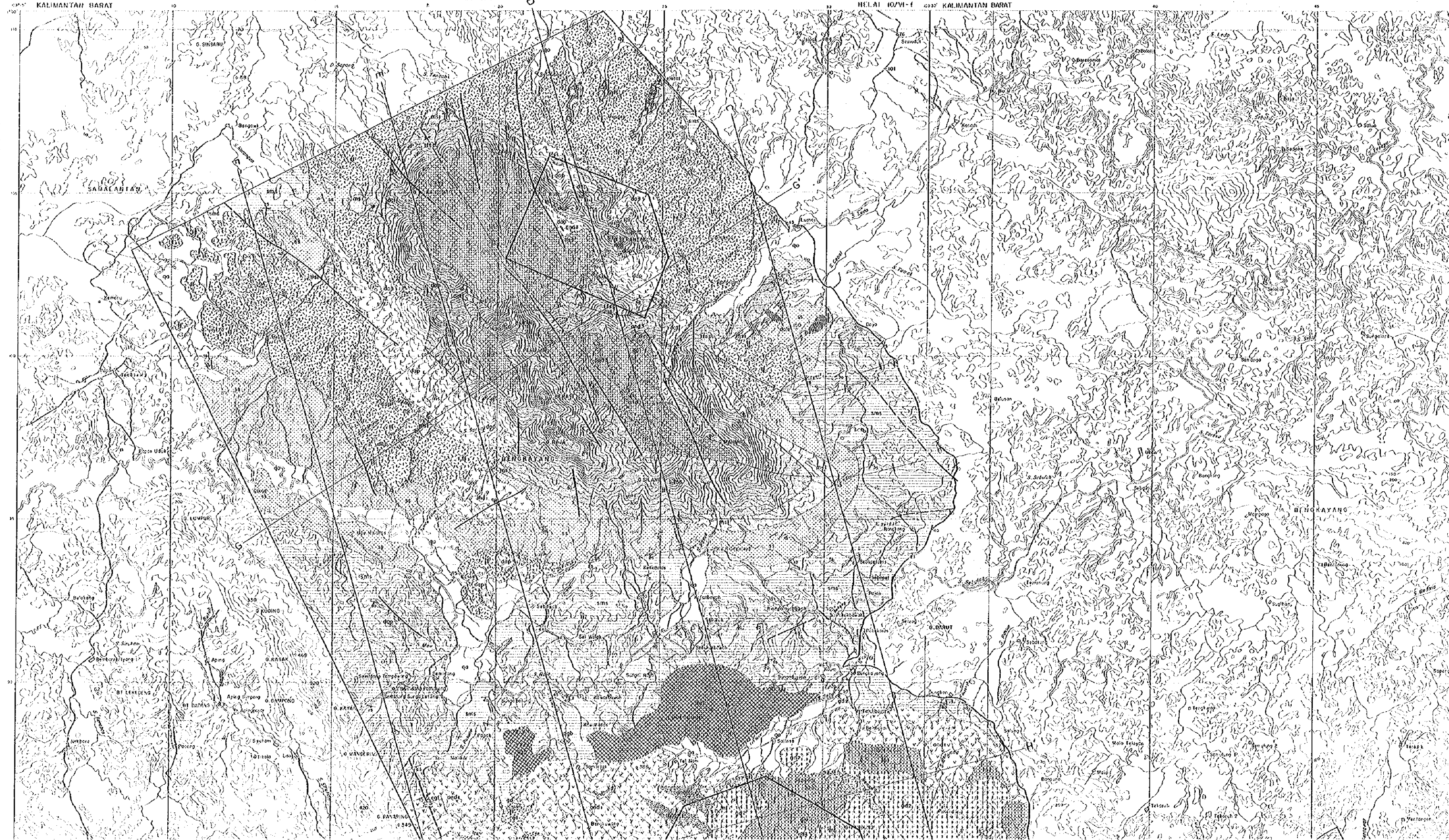


INDEX MAP	
	PL. I-1
	PL. I-2
	PL. I-3

**BENGKAYANG**  
Scale 1:50,000  
Date 1/2/51

35 A

**SEBALAU**  
Scale 1:50,000  
Date 1/2/51

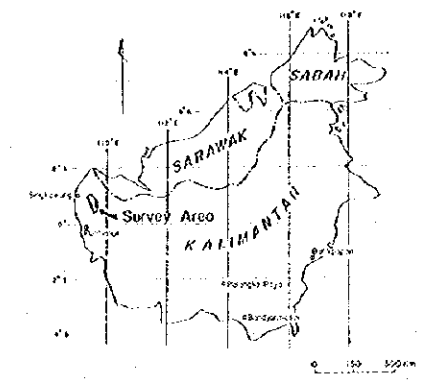


08117  
PL. 1-4

METAL MINING AGENCY OF JAPAN  
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DIRECTORATE OF MINERAL RESOURCES  
DIRECTORATE GENERAL OF MINES  
MINISTRY OF MINES AND ENERGY  
REPUBLIC OF INDONESIA

METALLIC MINERAL EXPLORATION SURVEY  
IN  
WEST KALIMANTAN INDONESIA  
**GEOLOGICAL MAP**

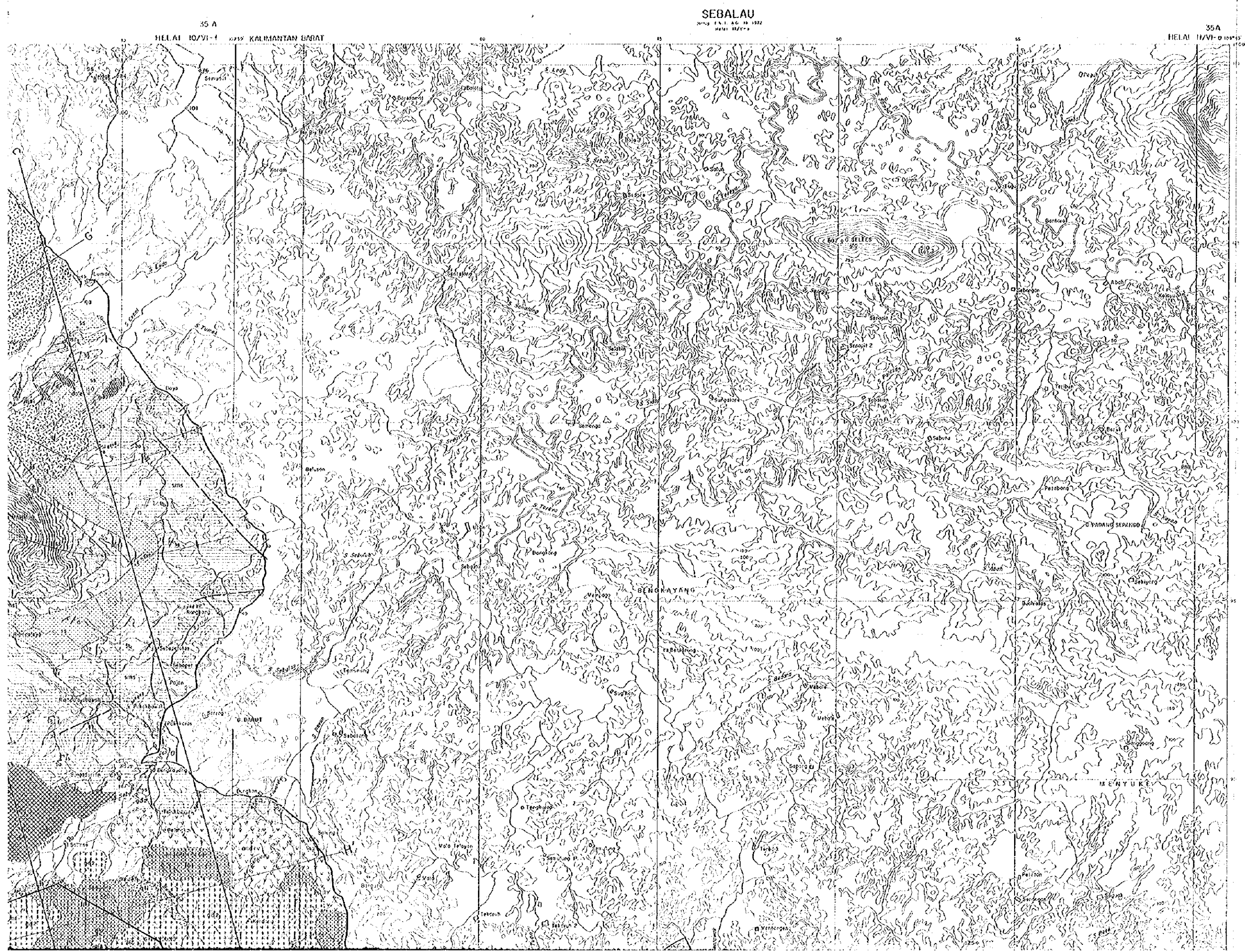
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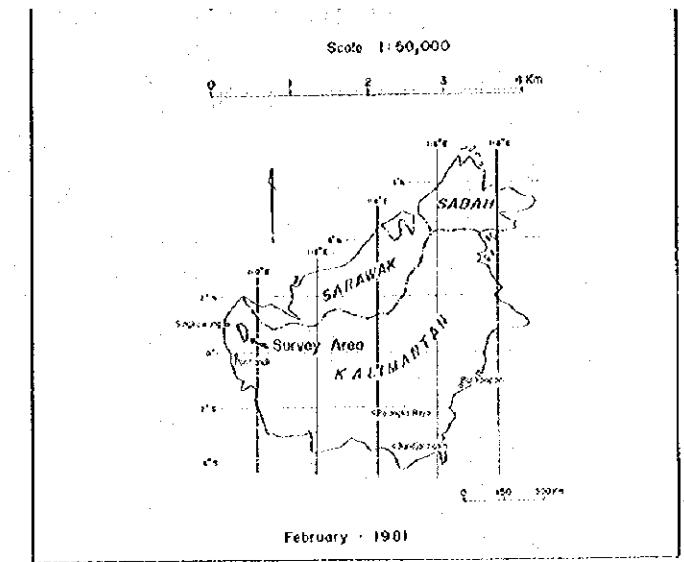
February 1981

**LEGEND**

	Sedimentary Rocks	Igneous Rocks
QUATERNARY	q0 Gravel, Sand	
	qt Tuffs	
TERTIARY	<b>Serantak Formation</b>	
	tl Dacitic pyroclastic rock	ad3 Andesite dyke
	tlb Dacitic tuffbreccia	ap2 Quartz porphyry 2
	tlc Serantak Dacite	ad4 Diorite dyke
		gd4 Gneodiorite 4
		ad5 Diorite dyke
		ap1 Quartz porphyry 1
		al6 Altered felsic rock
CRETACEOUS	<b>Belanga Formation</b>	
	ms3 Red mudstone	gr2 Granite 2
	ad1a Andesitic pyroclastic rock	gr1 Granite 1
	ad2 Andesite 2 and gray mudstone	gd Tiang Quartz diorite
	ad3 Dacitic pyroclastic rock	gd3 G.Selantik Granodiorite
	ad4 Dacite	gr G.Rayo Granodiorite
	<b>Jirak Formation</b>	
	ss Coarse sandstone	gd4 G.Selantik Granodiorite
	ms2 Mudstone 2	
	ad1a Andesitic pyroclastic rock	
ad1 Andesite 1		





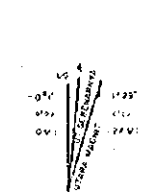


**LEGEND**

	Sedimentary Rocks	Igneous Rocks
<b>QUATERNARY</b>	<ul style="list-style-type: none"> <li>gs Gravel, Sand</li> <li>qt Talus</li> </ul>	
<b>TERTIARY</b>	<p><b>Serantok Formation</b></p> <ul style="list-style-type: none"> <li>st1 Dacitic pyroclastic rock</li> <li>st2 Dacitic tuffbreccia</li> <li>st3 Serantok Dacite</li> </ul>	<ul style="list-style-type: none"> <li>and1 Andesite dyke</li> <li>qp2 Quartz porphyry 2</li> <li>di2 Diorite dyke</li> <li>gr4 Granodiorite 4</li> <li>do2 Dolerite dyke</li> <li>qp1 Quartz porphyry 1</li> <li>af2 Altered felsic rock</li> <li>tn2 Sirkh Tonalite</li> <li>bn1 Banyu Tonalite</li> <li>gp2 G. Pandan Quartz gabbro</li> </ul>
<b>CRETACEOUS</b>		<ul style="list-style-type: none"> <li>gr2 Granite 2</li> <li>gr1 Granite 1</li> <li>qt Quartz diorite</li> <li>g2 G. Selatou Granodiorite</li> <li>g3 G. Raya Granodiorite</li> <li>g4 G. Sebiowak Granodiorite</li> </ul>
<b>JURASSIC</b>	<p><b>Belanga Formation</b></p> <ul style="list-style-type: none"> <li>ms1 Red mudstone</li> <li>and1 Andesitic pyroclastic rock</li> <li>and2 Andesite 2 and gray mudstone</li> <li>and3 Dacitic pyroclastic rock</li> <li>da Dacite</li> </ul> <p><b>Jarak Formation</b></p> <ul style="list-style-type: none"> <li>cs1 Coarse sandstone</li> <li>ms2 Mudstone 2</li> <li>and4 Andesitic pyroclastic rock</li> <li>and5 Andesite 1</li> <li>con1 Conglomerate</li> </ul>	
<b>TRIASSIC</b>	<p><b>Bungkayang Group</b></p> <ul style="list-style-type: none"> <li>sm1 Sungabatang Formation (Alternating bed of sandstone siltstone and mudstone) (Fossil)</li> <li>ss Riamptaya Formation (Sandstone)</li> <li>ms3 Kolong Formation (Black shale)</li> <li>act1 Bona Formation (Acidic tuff)</li> <li>ts1 Bona Formation (Tuffaceous sandstone)</li> </ul>	
	<ul style="list-style-type: none"> <li>Strike and dip of bedding</li> <li>Anticlinal axis</li> <li>Synclinal axis</li> <li>Fault confined</li> <li>Fault inferred</li> <li>A—A' Line of profile map</li> </ul>	

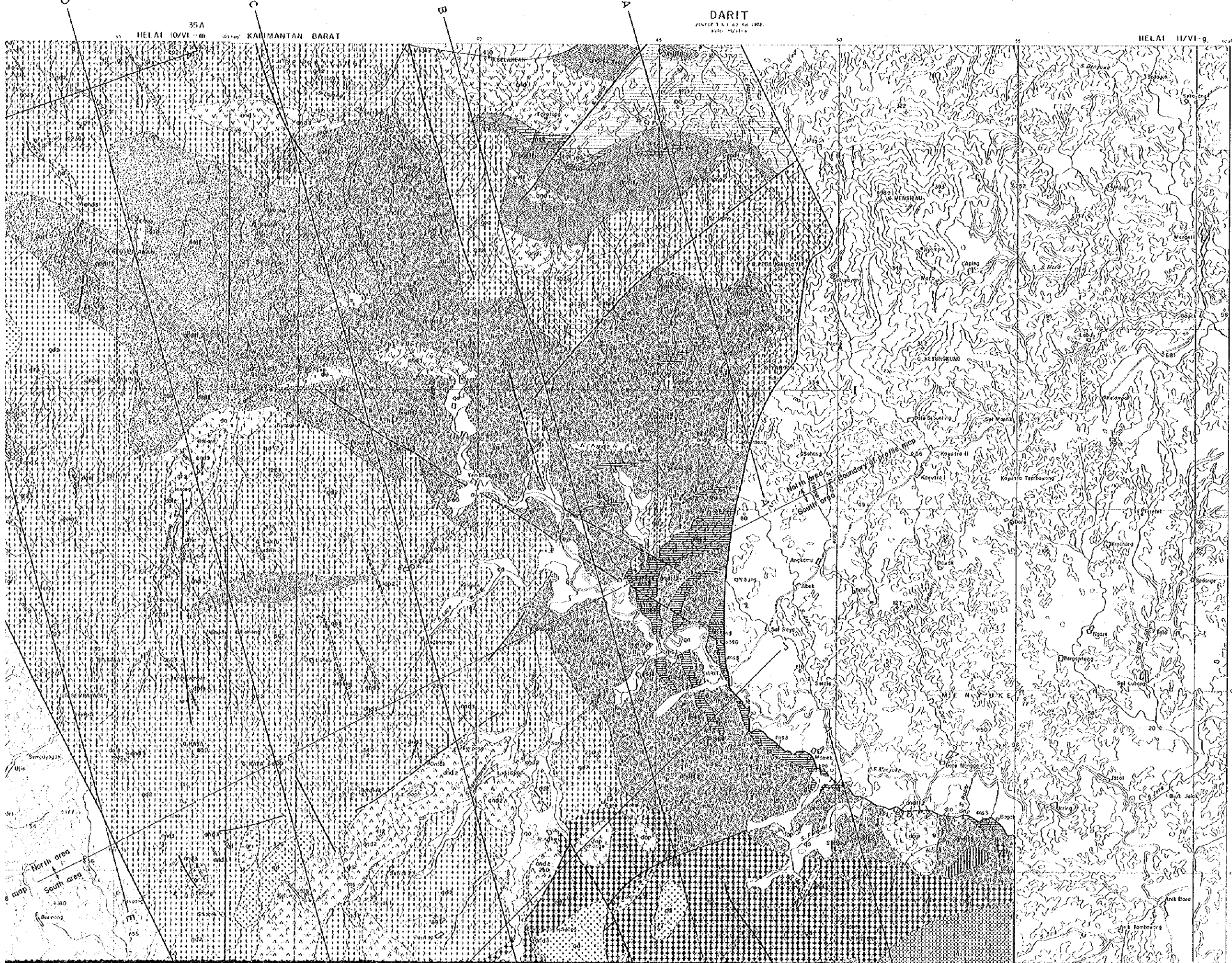
Map prepared by the Sarawak Survey, 1901-1902. Datum: 1901. Scale: 1:50,000.

Map prepared by the Sarawak Survey, 1901-1902. Datum: 1901. Scale: 1:50,000.


  
 1:50,000
   
 PL.1-1
   
 PL.1-2
   
 PL.1-3



0817  
 1123  
 PL-2



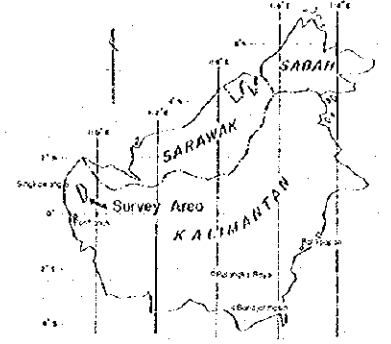
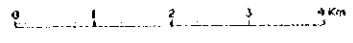
METAL MINING AGENCY OF JAPAN  
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 REPUBLIC OF INDONESIA

METALLIC MINERAL EXPLORATION SURVEY  
 IN  
 WEST KALIMANTAN INDONESIA

**GEOLOGICAL MAP**

Scale 1:50,000



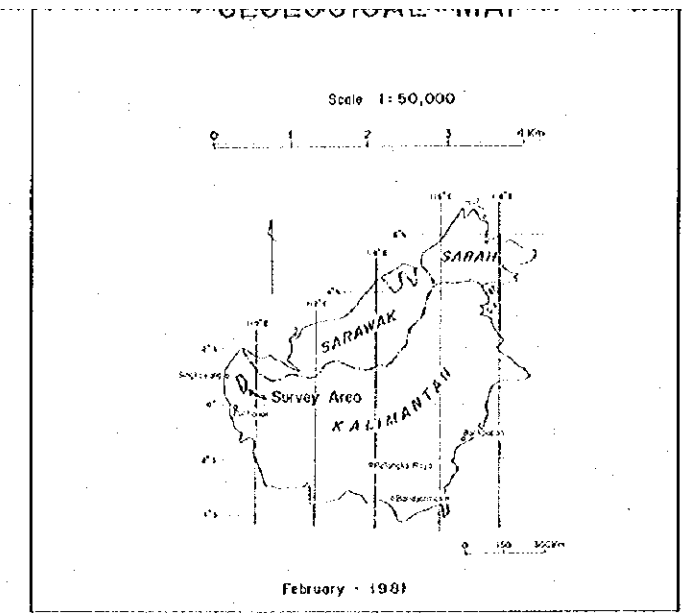
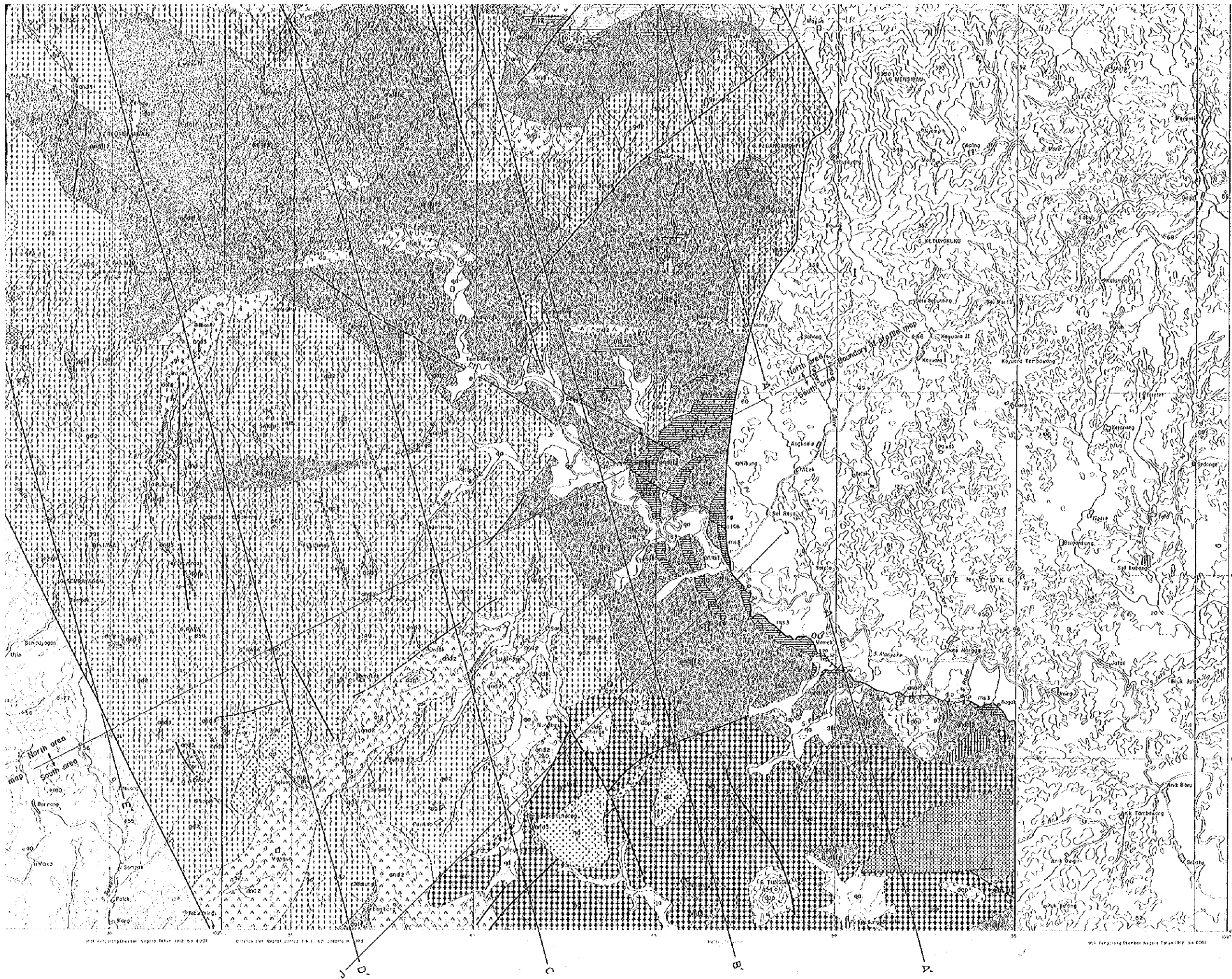
February - 1981

**LEGEND**

	Sedimentary Rocks	Igneous Rocks
QUATERNARY	Gravel, Sand	
	Talus	
TERTIARY	<b>Seroniak Formation</b>	
	Dacitic pyroclastic rock	Andesite dyke
	Dacitic tuffbreccia	Quartz porphyry 2
	Seroniak Dacite	Diorite dyke
		Granodiorite 4
		Dolerite dyke
		Quartz porphyry 1
		Altered felsic rock
CRETACEOUS		Sirih Tonalite
		Bonyi Tonalite
		G.Pandan Quartz gabbro
		Granite 2
		Granite 1
		Tiong Quartz diorite
JURASSIC	<b>Belanga Formation</b>	
	Red mudstone	
	Andesitic pyroclastic rock	
	Andesite 2 and gray mudstone	
	Dacitic pyroclastic rock	
	Dacite	
	<b>Jirak Formation</b>	
	Coarse sandstone	
	Mudstone 2	
	Andesitic pyroclastic rock	
Andesite 1		







**LEGEND**

	Sedimentary Rocks	Igneous Rocks
QUATERNARY	Gravel, Sand	
	Talus	
TERTIARY	<b>Seranok Formation</b>	
	Daotic pyroclastic rock	Andesite dyke
	Daotic tuffaceous	Quartz porphyry 2
	Seranok Dacite	Diorite dyke
		Granodiorite 4
		Dolerite dyke
CRETACEOUS		Quartz porphyry 1
		Altered felsic rock
		Sirih Tonalite
		Bangi Tonalite
		G.Pendon Quartz gabbro
		Granite 2
TRIASSIC - JURASSIC	<b>Batoneo Formation</b>	
	Red mudstone	Granite 1
	Andesitic pyroclastic rock	Tiang Quartz diorite
	Andesite 2 and gray mudstone	G.Selantik Granodiorite
	Daotic pyroclastic rock	G.Raya Granodiorite
	Dacite	G.Sebiakok Granodiorite
	<b>Jirak Formation</b>	
	Coarse sandstone	
	Mudstone 2	
	Andesitic pyroclastic rock	
Andesite 1		
Conglomerate		
<b>Bungkayang Group</b>		
Sungaiabung Formation (Alternating bed of sandstone siltstone and mudstone) (Fossil)		
Rampeloyo Formation (Sandstone)		
Kalong Formation (Black shale)		
Banon Formation (Acidic tuff)		
Banon Formation (Tuffaceous sandstone)		
Strike and dip of bedding Anticlinal axis Synclinal axis Fault confirmed Fault inferred A—A' Line of profile map		



INDEX MAP

PL. I-1
PL. I-2
PL. I-3

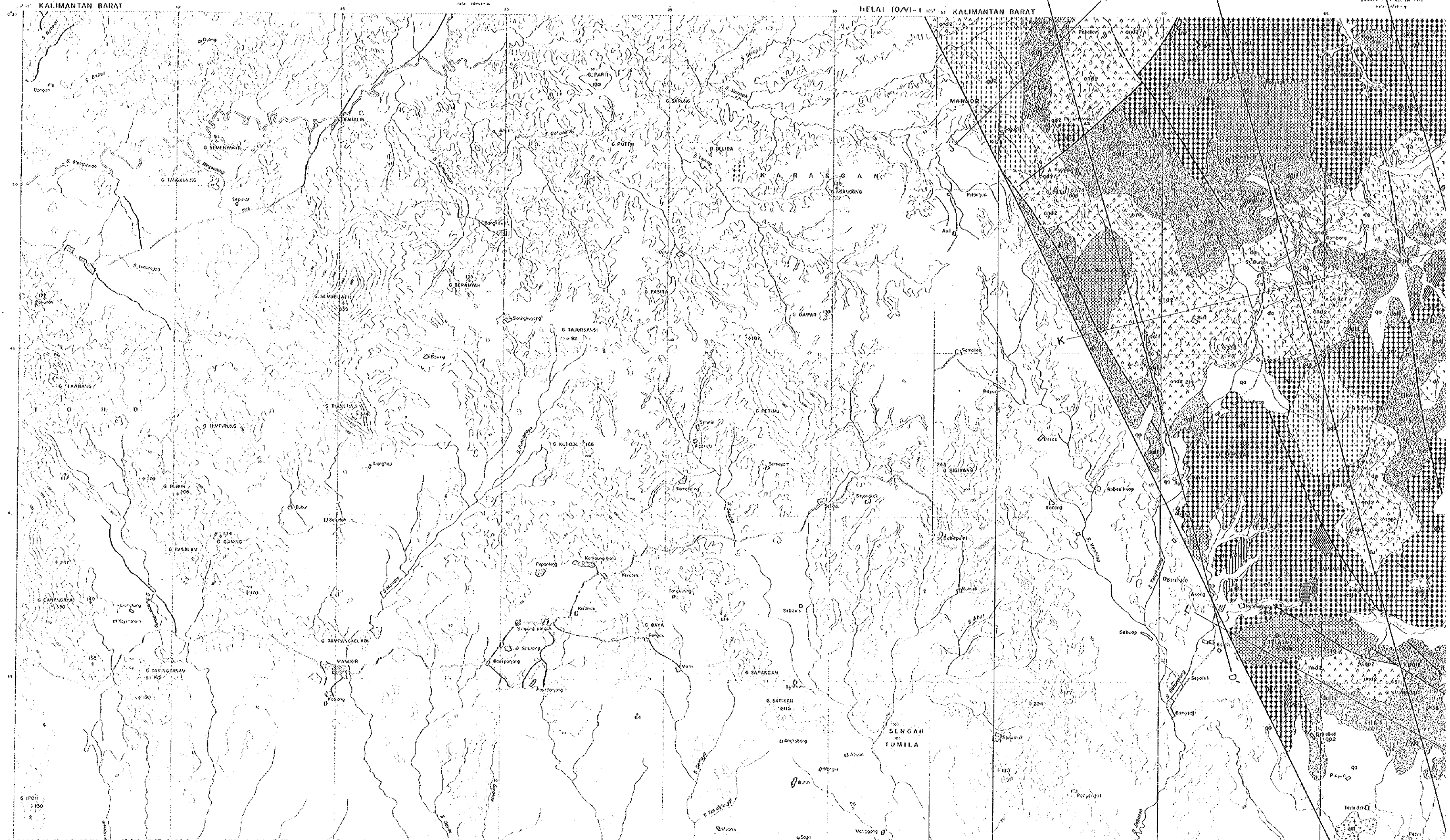
MANDOR

1:50,000

35 A

PAWUMAN

1:50,000



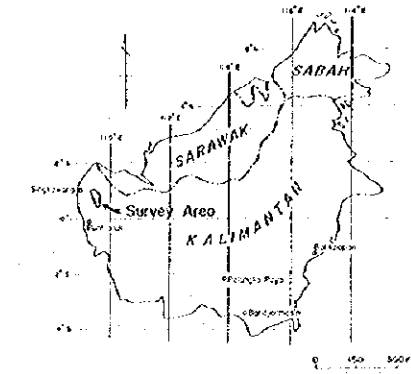
PL. 1-3

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METALLIC MINERAL EXPLORATION SURVEY  
 IN  
 WEST KALIMANTAN INDONESIA

**GEOLOGICAL MAP**

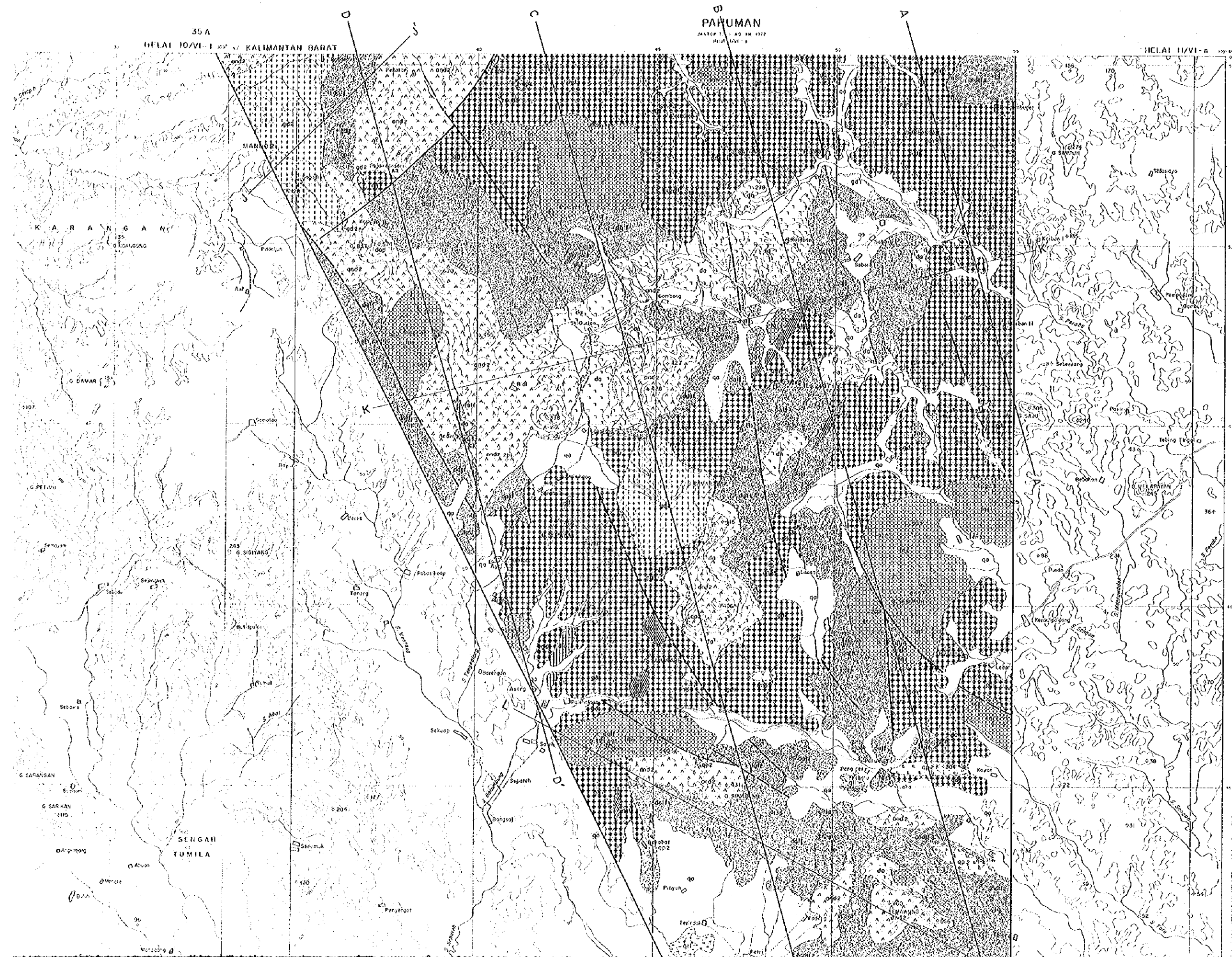
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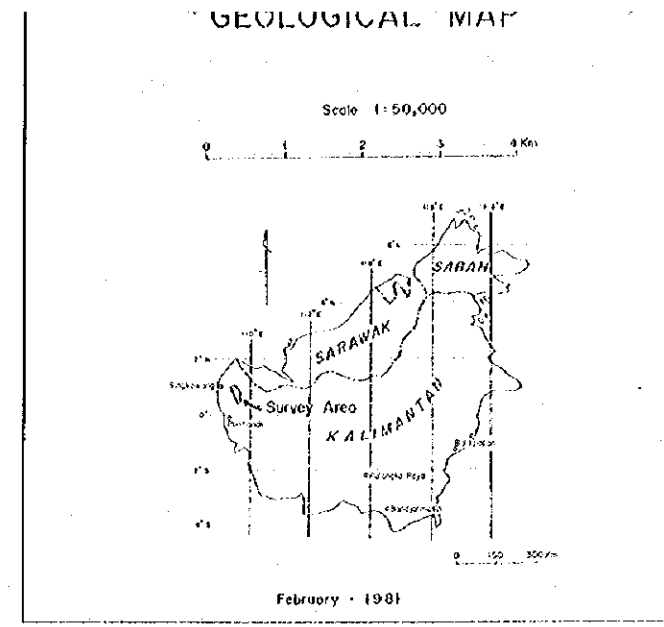
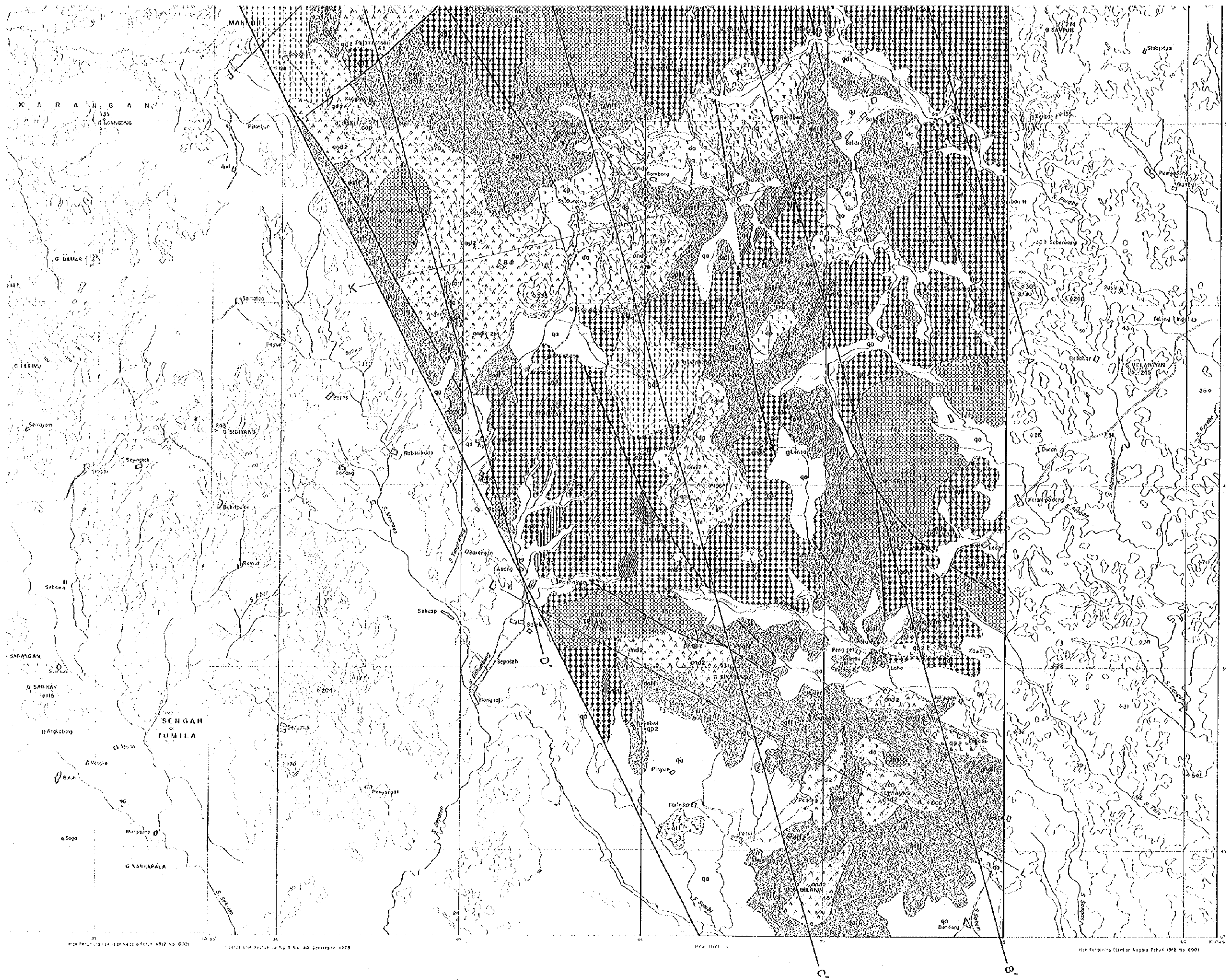
February - 1961

**LEGEND**

	Sedimentary Rocks	Igneous Rocks
QUATERNARY	00 Gravel, Sand 01 Tulus	
TERTIARY	<b>Serantok Formation</b> 11 Dacitic pyroclastic rock 1br Dacitic tuffbreccia 12p Serantok Dacite	003 Andesite dyke 002 Quartz porphyry 2 001 Diorite dyke 004 Granodiorite 4 005 Dolerite dyke 006 Quartz porphyry 1 007 Altered felsic rock 102 Sirih Tonalite 101 Banyu Tonalite 008 G.Pandan Quartz gabbro
CRETACEOUS		009 Granite 2 010 Granite 1 000 Tiang Quartz diorite 003 G.Selentok Granodiorite 004 G.Rayo Granodiorite 005 G.Sebiwak Granodiorite
	<b>Delingo Formation</b> 003 Red mudstone 002 Andesitic pyroclastic rock 001 Andesite 2 and grey mudstone 000 Dacitic pyroclastic rock 00 Dacite	
JURASSIC	<b>Jirak Formation</b> 003 Coarse sandstone 002 Mudstone 2 001 Andesitic pyroclastic rock 000 Andesite 1	







### LEGEND

Sedimentary Rocks		Igneous Rocks		
QUATERNARY	<ul style="list-style-type: none"> <li>q0 Gravel, Sand</li> <li>q11 Talus</li> </ul>			
TERTIARY	<b>Serentak Formation</b> <ul style="list-style-type: none"> <li>stf Dacitic pyroclastic rock</li> <li>stbr Dacitic tuffbreccia</li> <li>stdp Serentak Dacite</li> </ul>	<ul style="list-style-type: none"> <li>and1 Andesite dyke</li> <li>qp2 Quartz porphyry 2</li> <li>di0 Diorite dyke</li> <li>gd4 Granodiorite 4</li> <li>di0e Diorite dyke</li> <li>qp1 Quartz porphyry 1</li> <li>afsd Altered felsic rock</li> <li>stz2 Sira Tonalite</li> <li>bn1 Banyi Tonalite</li> <li>gp0 G.Pandan Quartz gabbro</li> </ul>		
CRETACEOUS		<ul style="list-style-type: none"> <li>gr2 Granite 2</li> <li>gr1 Granite 1</li> <li>qt0 Tiong Quartz diorite</li> <li>gs3 G.Selantar Granodiorite</li> <li>gr2 G.Raya Granodiorite</li> <li>gs1 G.Selawak Granodiorite</li> </ul>		
JURASSIC	<b>Belaga Formation</b> <ul style="list-style-type: none"> <li>ms3 Red mudstone</li> <li>and1a Andesitic pyroclastic rock</li> <li>and2 Andesite 2 and gray mudstone</li> <li>dat Dacitic pyroclastic rock</li> <li>di0 Dacite</li> </ul> <b>Jirek Formation</b> <ul style="list-style-type: none"> <li>cs2 Coarse sandstone</li> <li>ms2 Mudstone 2</li> <li>and1 Andesitic pyroclastic rock</li> <li>and1 Andesite 1</li> <li>conglomerate</li> </ul>			
TRIASSIC	<b>Bungkayang Group</b> <ul style="list-style-type: none"> <li>sm3 Sengolbetung Formation (Alternating bed of sandstone siltstone and mudstone) (Fossil)</li> <li>ss Rompetayo Formation (Sandstone)</li> <li>ms1 Kalang Formation (Black shale)</li> <li>actf Bonan Formation (Acidic tuff)</li> <li>ts1 Bonan Formation (Tuffaceous sandstone)</li> </ul>			
		<ul style="list-style-type: none"> <li>Strike and dip of bedding</li> <li>Anticlinal axis</li> <li>Synclinal axis</li> <li>Fault confirmed</li> <li>Fault inferred</li> <li>Line of profile map</li> </ul>		



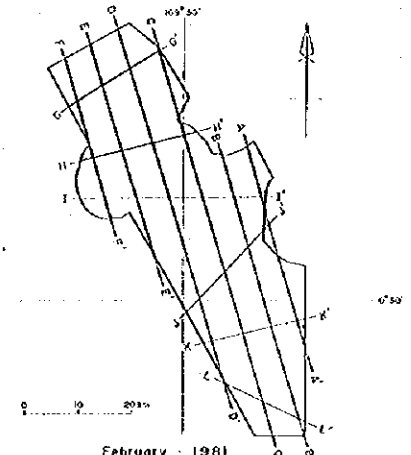
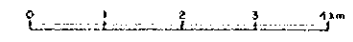
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METALLIC MINERAL EXPLORATION SURVEY  
 IN  
 WEST KALIMANTAN INDONESIA

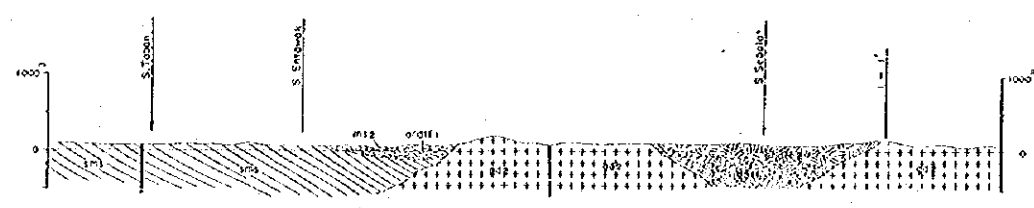
**GEOLOGICAL PROFILES  
 (NORTH AREA)**

Scale 1:50,000

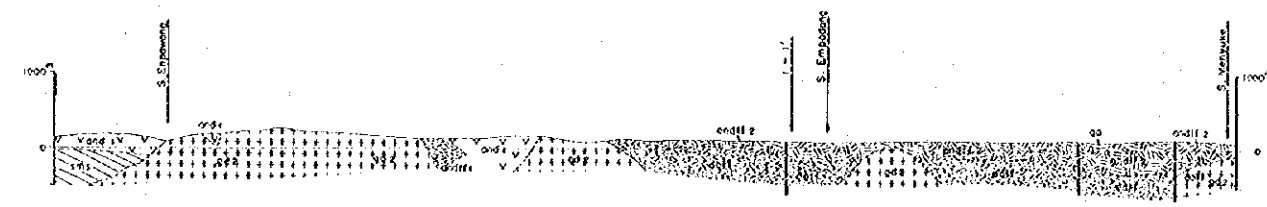


February 1981

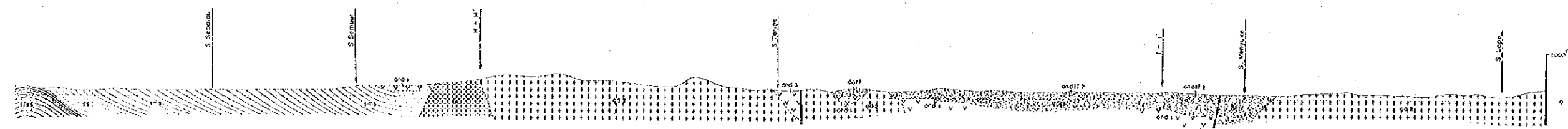
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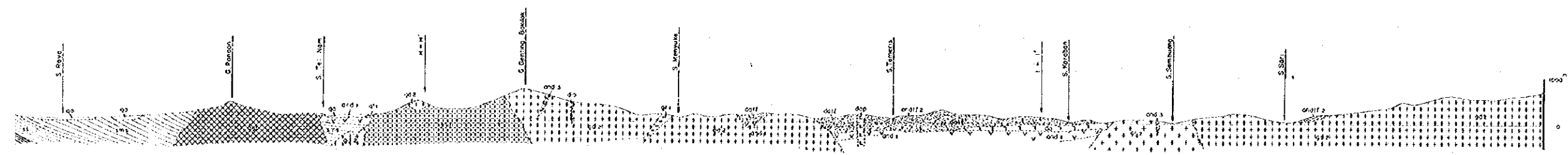
B - B'



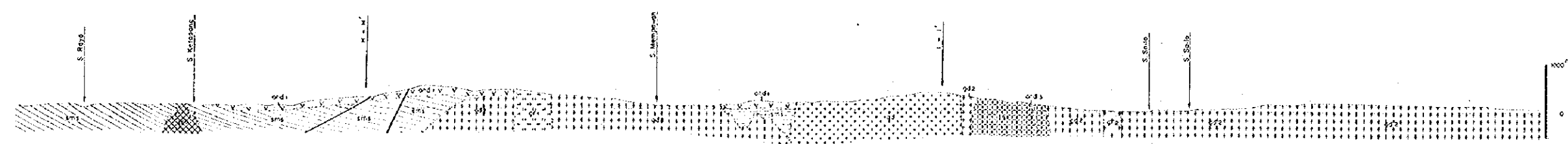
C - C'



D - D'



E - E'

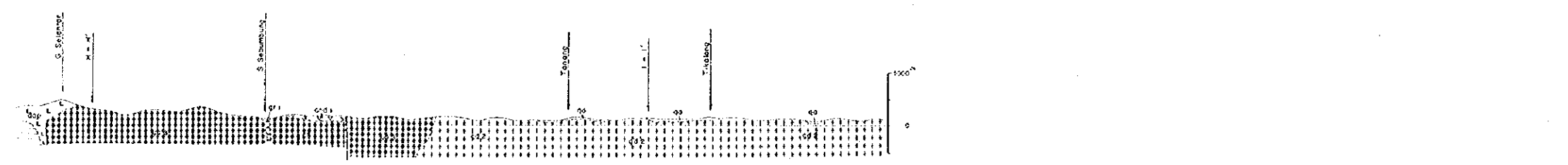
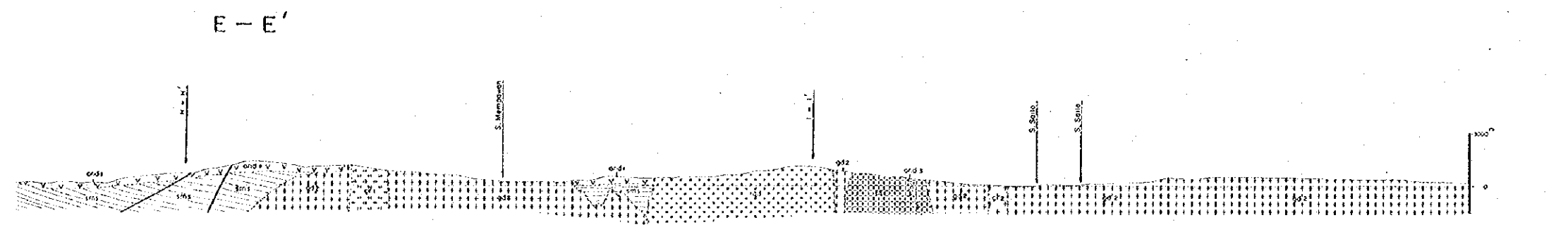
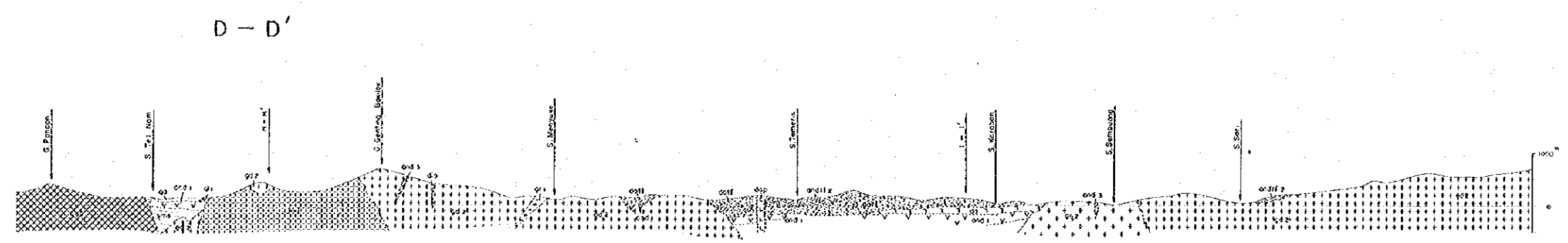
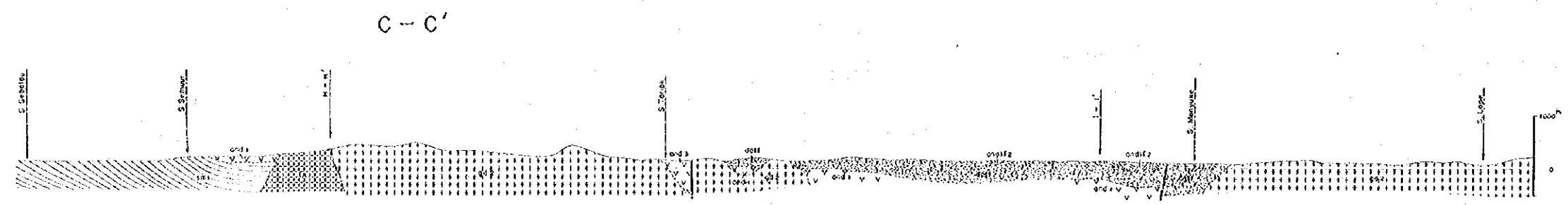


**LEGEND**

	Sedimentary Rocks	Igneous Rocks
QUATERNARY	Gravel, Sand	
	Talus	
TERTIARY	<b>Serantak Formation</b>	
	Dacitic pyroclastic rock	Andesite dyke
	Dacitic tuffbreccia	Quartz porphyry 2
	Serantak dacite	Diorite dyke
		Granodiorite 4
		Dolerite dyke
		Quartz porphyry 1
		Altered felsic rock
	Sirih Tonalite	
	Banyu Tonalite	
	G.Pandan Quartz gabbro	
CRETACEOUS		Granite 2
		Granite 1
		Tiong Quartz dacite
		G.Selantar Granodiorite
		G.Raya Granodiorite
		G.Sebiwak Granodiorite
JURASSIC	<b>Delago Formation</b>	
	Red mudstone	
	Andesitic pyroclastic rock	
	Andesite 2 and gray mudstone	
	Dacitic pyroclastic rock	
	Dacite	
	<b>Jirak Formation</b>	
Coarse sandstone		
Mudstone 2		
	Andesitic pyroclastic rock	



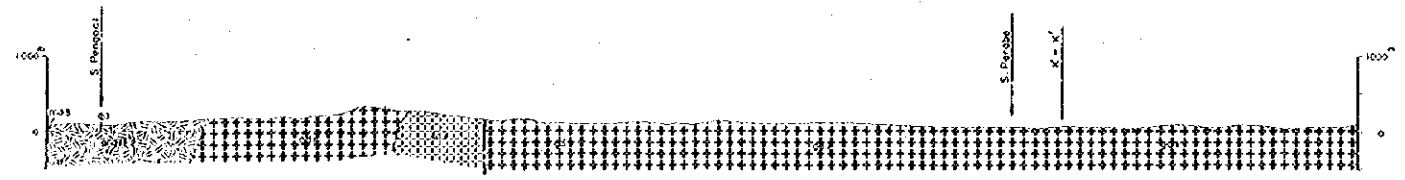




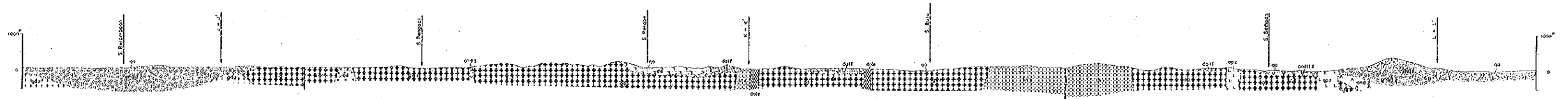
**LEGEND**

Sedimentary Rocks		Igneous Rocks	
QUATERNARY	qs Gravel, Sand		
	qt Tuffs		
<b>TERTIARY</b>			
<b>Serenok Formation</b>		ond3	Andesite dyke
sd1	Dacitic pyroclastic rock	qp2	Quartz porphyry 2
sd2	Dacitic tuffaceous	do	Diorite dyke
sdp	Serenok Diorite	gd4	Grenodiorite 4
		do1a	Diorite dyke
		qp1	Quartz porphyry 1
		alr	Altered felsic rock
		in2	Sinh Tanahite
		in3	Bangi Tanahite
		gq6	G.Pandan Quartz gabbro
<b>CRETACEOUS</b>			
		gr2	Granite 2
		gr1	Granite 1
		qd	Tiang Quartz diorite
		gd3	G.Selantor Grenodiorite
		gd2	G.Raya Grenodiorite
		gd1	G.Sebiwak Grenodiorite
<b>TRIASSIC - JURASSIC</b>			
<b>Belahago Formation</b>			
ms1	Red mudstone		
and1a	Andesitic pyroclastic rock		
and2	Andesite 2 and gray mudstone		
sd1	Dacitic pyroclastic rock		
do	Dacite		
<b>Jirak Formation</b>			
ss	Coarse sandstone		
ms2	Mudstone 2		
and1b	Andesitic pyroclastic rock		
and1	Andesite 1		
cp	Conglomerate		
<b>Bungkokang Group</b>			
ms	Sungabatang Formation (Alternating bed of sandstone siltstone and mudstone) [Fossil]		
ss	Riangpekyo Formation (Sandstone)		
ms	Kalong Formation (Black shale)		
actf	Bona Formation (Acidic tuff)		
ts	Bona Formation (Tuffaceous sandstone)		
// Fault confirmed / / Fault inferred			

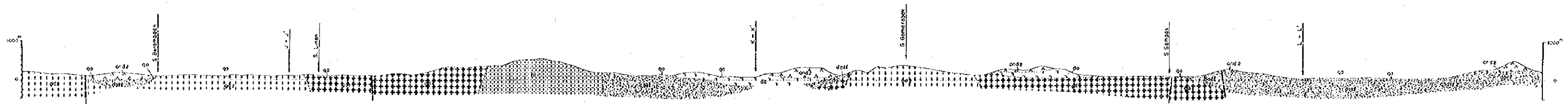
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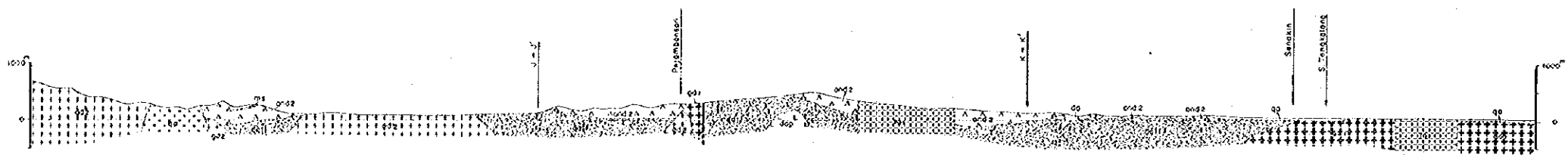
B - B'



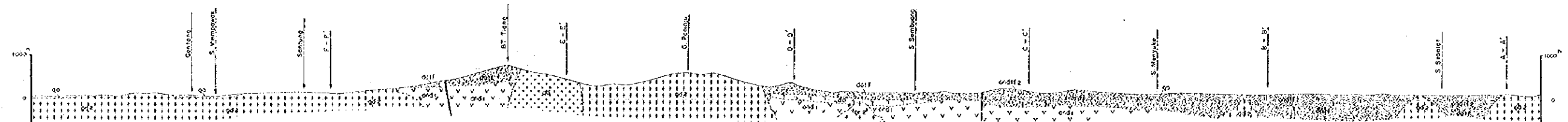
C - C'



D - D'



E - E'



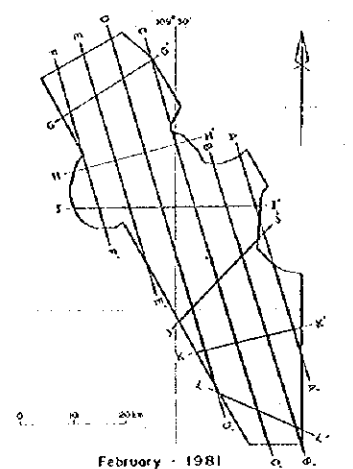
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METALLIC MINERAL EXPLORATION SURVEY  
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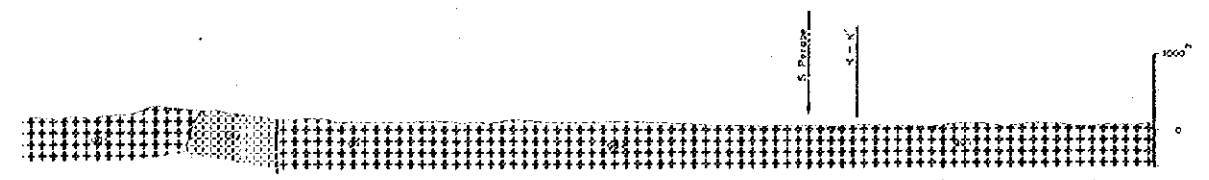
GEOLOGICAL PROFILES  
 (SOUTH AREA)

Scale 1:50,000

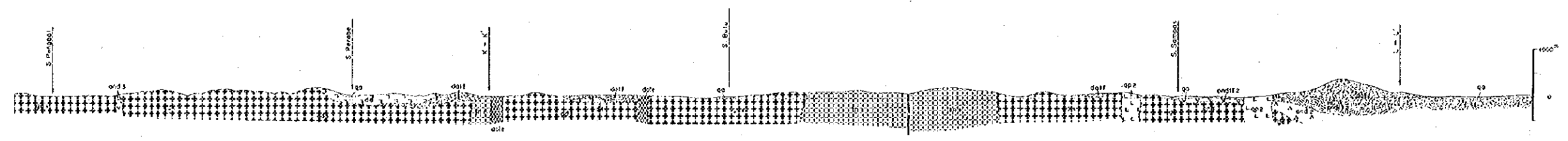


February 1981

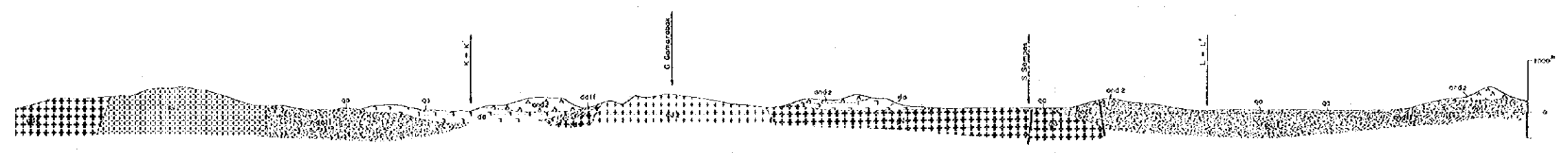
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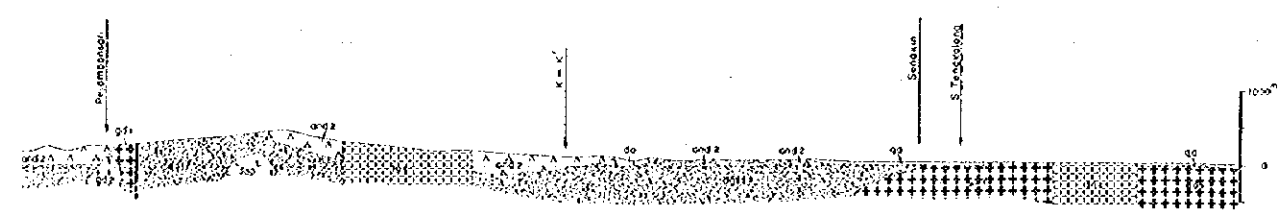
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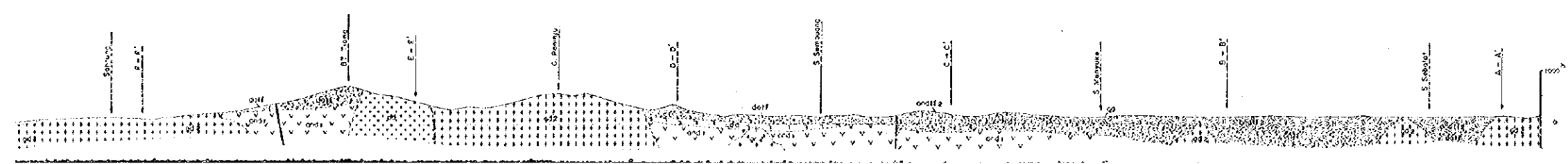
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D - D'



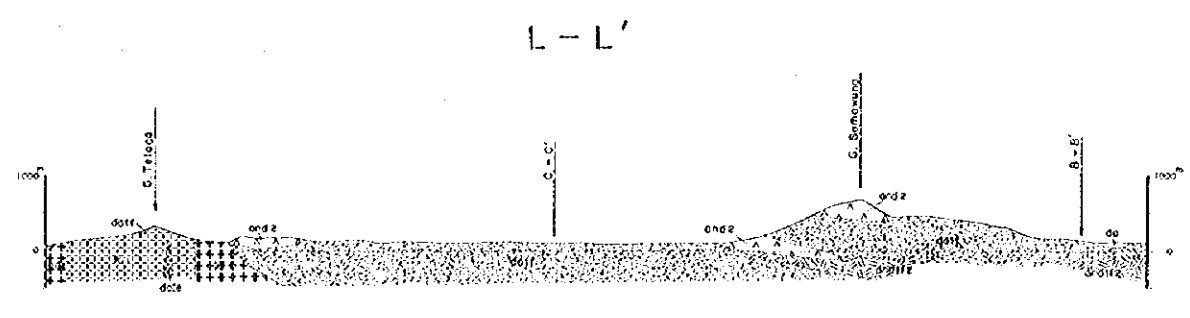
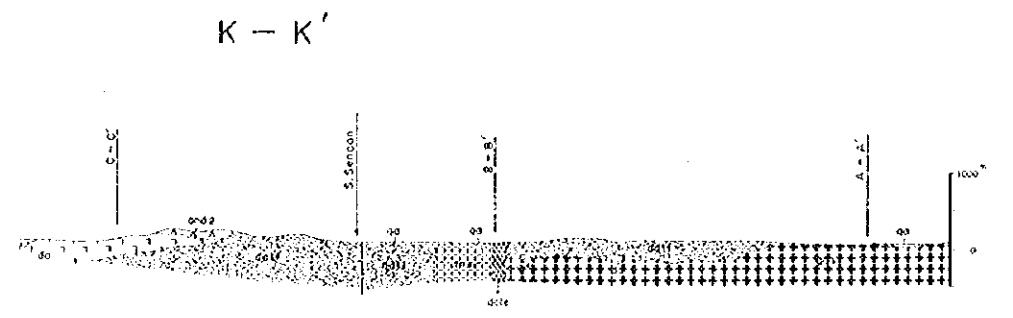
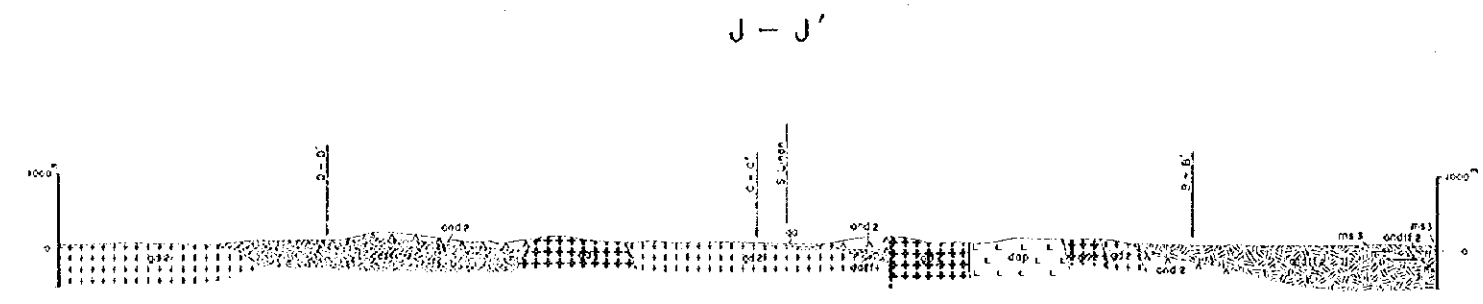
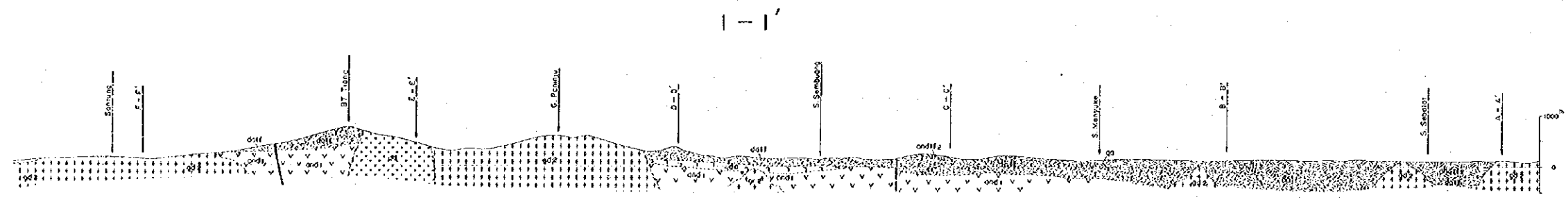
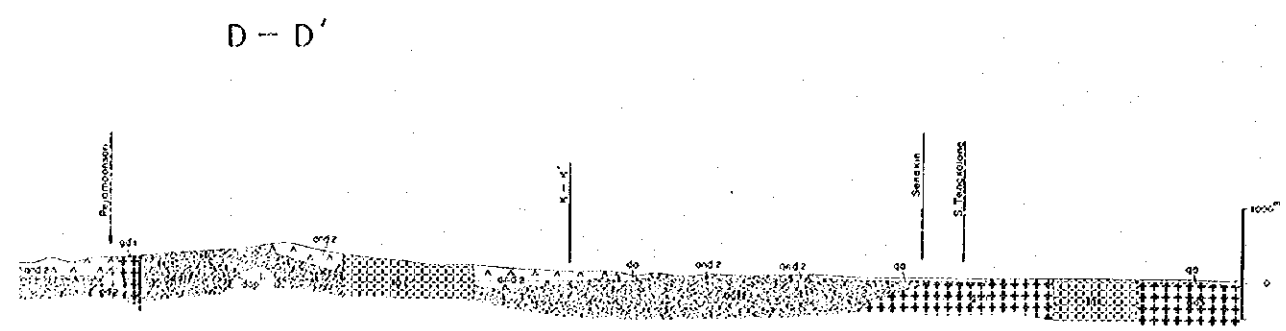
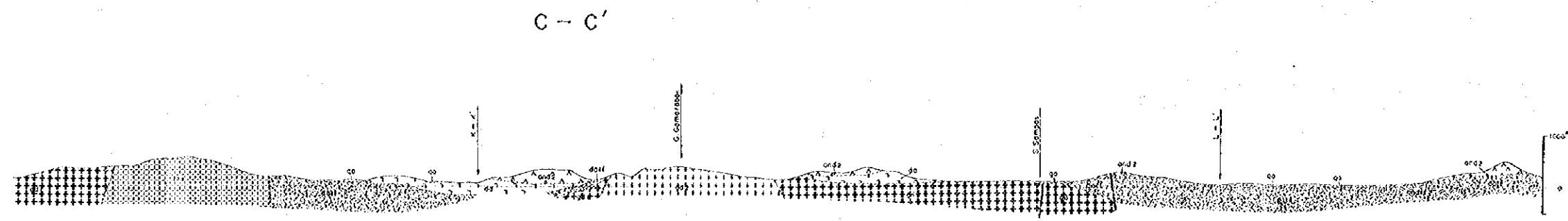
E - E'



LEGEND

	Sedimentary Rocks	Igneous Rocks
QUATERNARY	qs Gravel, Sand	
	qt Tuffs	
TERTIARY	<b>Serantak Formation</b>	
	tf Dacitic pyroclastic rock	and3 Andesite dyke
	tbr Dacitic tuffbreccio	ep2 Quartz porphyry 2
	tdp Serantak Dacite	da Quartz dyke
		gd4 Granodiorite 4
		di2 Diabase dyke
		qp1 Quartz porphyry 1
		alrn Altered felsic rock
		tn2 Silih Tonalite
		bn1 Banyu Tonalite
	qsb G.Pandan Quartz gabbro	
CRETACEOUS		gr2 Granite 2
		gr1 Granite 1
		qf Yang Quartz diorite
		gs3 G.Selantor Granodiorite
		gs2 G.Raya Granodiorite
		gs1 G.Sebiwak Granodiorite
JURASSIC	<b>Belanga Formation</b>	
	ms3 Red mudstone	
	andp2 Andesitic pyroclastic rock	
	and2 Andesite 2 and gray mudstone	
	andf Dacitic pyroclastic rock	
	da Dacite	
	<b>Jirak Formation</b>	
cs1 Coarse sandstone		
ms2 Mudstone 2		
andf Andesitic pyroclastic rock		





**LEGEND**

Geological Period	Sedimentary Rocks		Igneous Rocks	
	Symbol	Description	Symbol	Description
QUATERNARY	□	Gravel, Sand	□	Andesite dyke
	□	Talus	□	Quartz porphyry 2
TERTIARY	<b>Serantok Formation</b>		□	Diorite dyke
	□	Dacitic pyroclastic rock	□	Granodiorite 1
	□	Dacitic tuffbreccia	□	Diorite dyke
	□	Serantok Dacite	□	Quartz porphyry 1
	□		□	Altered felsic rock
	□		□	Sirih Tonalite
	□		□	Banyi Tonalite
	□		□	G.Pandan Quartz gabbro
	□		□	Granite 2
	□		□	Granite 1
CRETACEOUS			□	Tiang Quartz diorite
			□	G.Selantar Granodiorite
			□	G.Rayo Granodiorite
			□	G.Sebanak Granodiorite
	<b>Betelango Formation</b>			
	□	Red mudstone		
	□	Andesitic pyroclastic rock		
	□	Andesite 2 and gray mudstone		
<b>Jirak Formation</b>				
□	Coarse sandstone			
□	Mudstone 2			
□	Andesitic pyroclastic rock			
□	Andesite 1			
□	Conglomerate			
<b>Bungkayang Group</b>				
□	Sungabelung Formation (Alternating bed of sandstone siltstone and mudstone) (Fossil)			
□	Rampelaya Formation (Sandstone)			
□	Kukung Formation (Black shale)			
□	Banan Formation (Acidic tuff)			
□	Banan Formation (Tuffaceous sandstone)			
		— / —	Fault confirmed	
		- - - / - - -	Fault inferred	

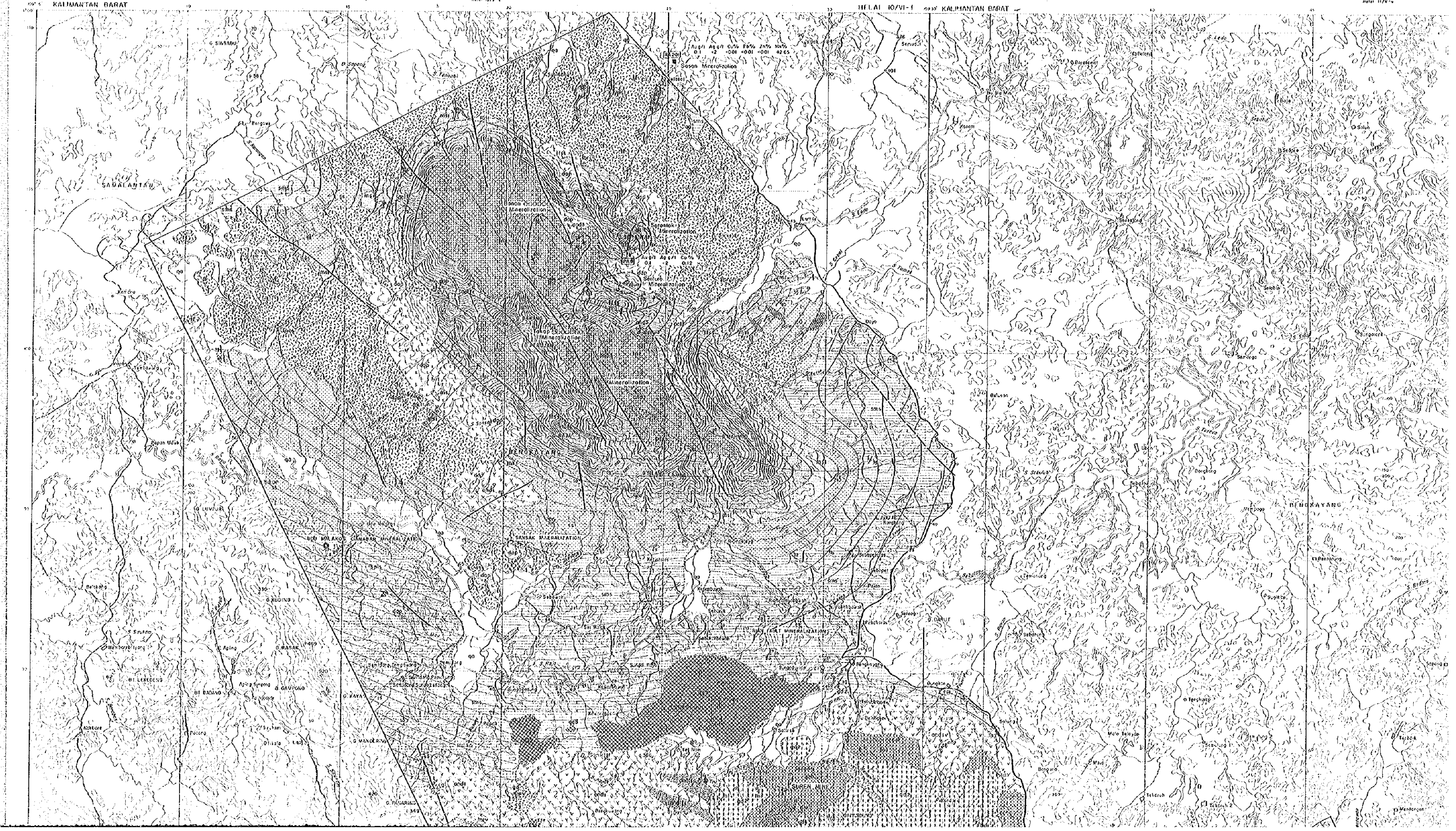
INDEX MAP

	PL. 3-1
	PL. 3-2
	PL. 3-3

**BENGKAYANG**  
 1:50,000  
 1972

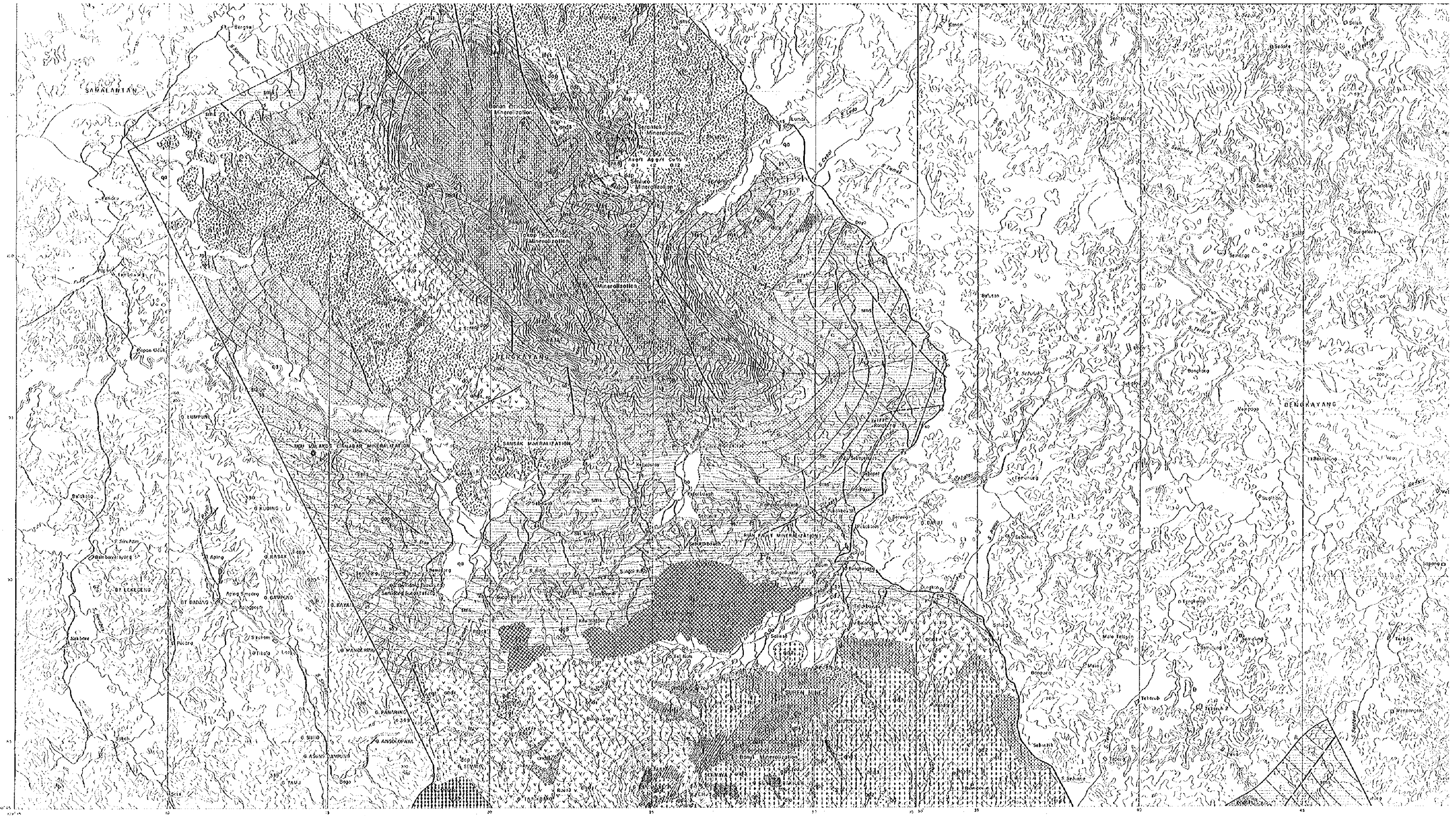
HELAI 10/VI-1  
 1:50,000  
 1972

**SEBALAU**  
 1:50,000  
 1972







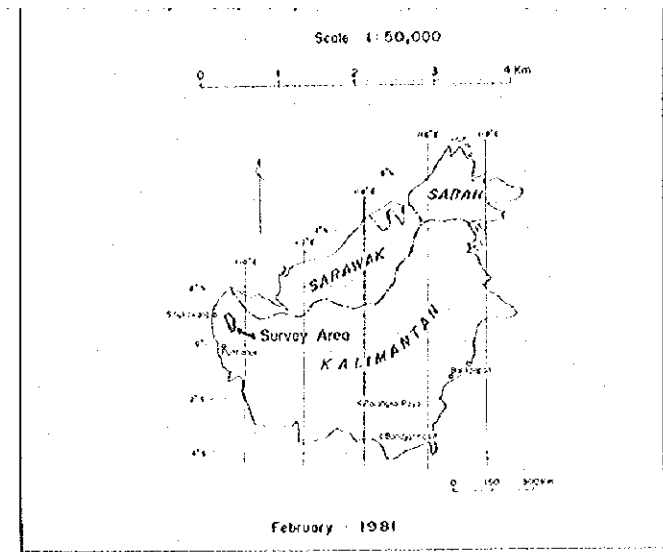


Geological Map of Saralantan, 1:50,000, 1978

Geological Map of Bengayang, 1:50,000, 1978

Geological Map of Bengayang, 1:50,000, 1978

45



**LEGEND**

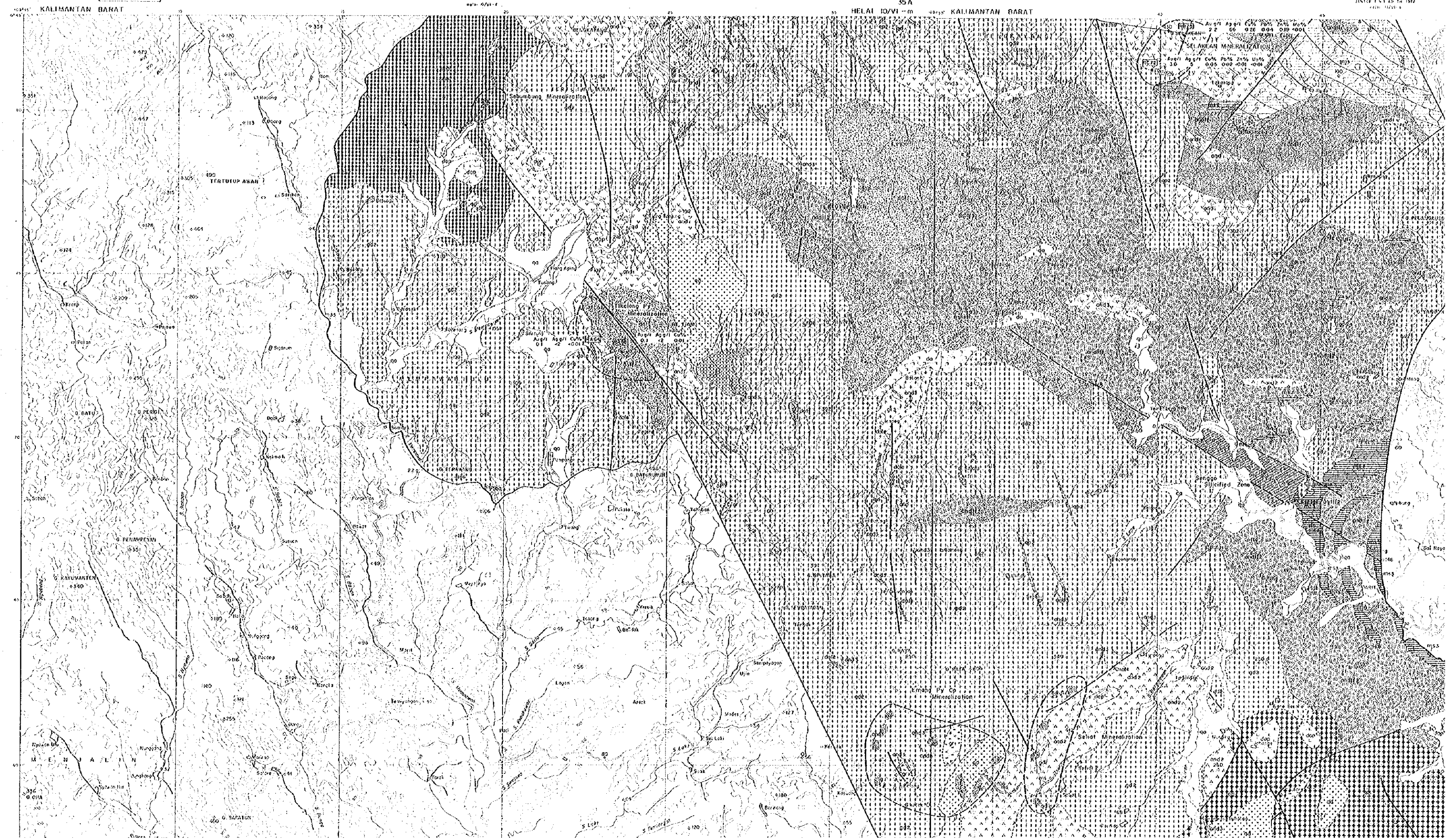
Sedimentary Rocks		Igneous Rocks		
QUATERNARY	<ul style="list-style-type: none"> <li>qs Gravel, Sand</li> <li>qt Talus</li> </ul>			
TERTIARY	<p>Serentak Formation</p> <ul style="list-style-type: none"> <li>st1 Dacitic pyroclastic rock</li> <li>st2 Dacitic tuffbreccia</li> <li>st3 Serentak Dacite</li> </ul>	<ul style="list-style-type: none"> <li>ad3 Andesite dyke</li> <li>qp2 Quartz porphyry 2</li> <li>ds Dorsite dyke</li> <li>gd4 Granodiorite 4</li> <li>de4 Deleterite dyke</li> <li>ap1 Quartz porphyry 1</li> <li>alr Altered felsic rock</li> <li>tn2 Srah Tonolite</li> <li>dn1 Danyi Tonolite</li> <li>gab G.Pandan Quartz gabbro</li> </ul>		
CRETACEOUS		<ul style="list-style-type: none"> <li>gr2 Granite 2</li> <li>gr1 Granite 1</li> <li>qd Tiang Quartz diorite</li> <li>gs3 G.Sentor Granodiorite</li> <li>gs2 G.Rayo Granodiorite</li> <li>gs1 G.Sebiwak Granodiorite</li> </ul>		
JURASSIC	<p>Dalanga Formation</p> <ul style="list-style-type: none"> <li>ms3 Red mudstone</li> <li>and1a Andesitic pyroclastic rock</li> <li>ard2 Andesite 2 and grey mudstone</li> <li>dat Dacitic pyroclastic rock</li> <li>da Dacite</li> </ul> <p>Jirek Formation</p> <ul style="list-style-type: none"> <li>cs1 Coarse sandstone</li> <li>ms2 Mudstone 2</li> <li>and1a Andesitic pyroclastic rock</li> <li>and1 Andesite 1</li> <li>cg1 Conglomerate</li> </ul>			
TRIASSIC	<p>Bungkayang Group</p> <ul style="list-style-type: none"> <li>smx Sunggubutung Formation (Alternating bed of sandstone siltstone and mudstone) (Fossil)</li> <li>ss Rampelaya Formation (Sandstone)</li> <li>ms1 Kolong Formation (Black shale)</li> <li>actl Banan Formation (Acidic tuff)</li> <li>lfsa Banan Formation (Lufaceous sandstone)</li> </ul>			
Geological Structure		Mineralization		
<ul style="list-style-type: none"> <li>Strike line and dip of bedding in sedimentary rocks</li> <li>Anticlinal axis</li> <li>Synclinal axis</li> <li>Fault confirmed</li> <li>Fault inferred</li> </ul>		<ul style="list-style-type: none"> <li>Metapherous vein, Ore bed, Quartz vein (confirmed/referred)</li> <li>Disseminated mineralization</li> <li>Circular mineralization</li> <li>Formalization zone</li> <li>Shaded zone</li> <li>Manganese mineralization</li> </ul>		



INDEX MAP  
PL. 3-1  
PL. 3-2  
PL. 3-3

KARANGAN  
1:50,000  
1952

DARIT  
1:50,000  
1952



0817

PL-3-2

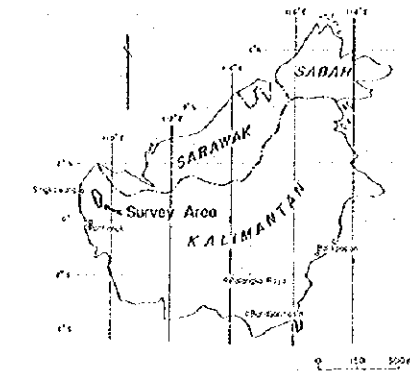
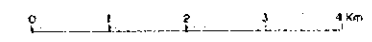
METAL MINING AGENCY OF JAPAN  
 JAPAN INTERNATIONAL COOPERATION AGENCY

DIRECTORATE OF MINERAL RESOURCES  
 DIRECTORATE GENERAL OF MINES  
 MINISTRY OF MINES AND ENERGY  
 REPUBLIC OF INDONESIA

METALLIC MINERAL EXPLORATION SURVEY  
 IN  
 WEST KALIMANTAN INDONESIA

MAP OF RELATIONS BETWEEN GEOLOGICAL  
 STRUCTURE AND MINERALIZATION

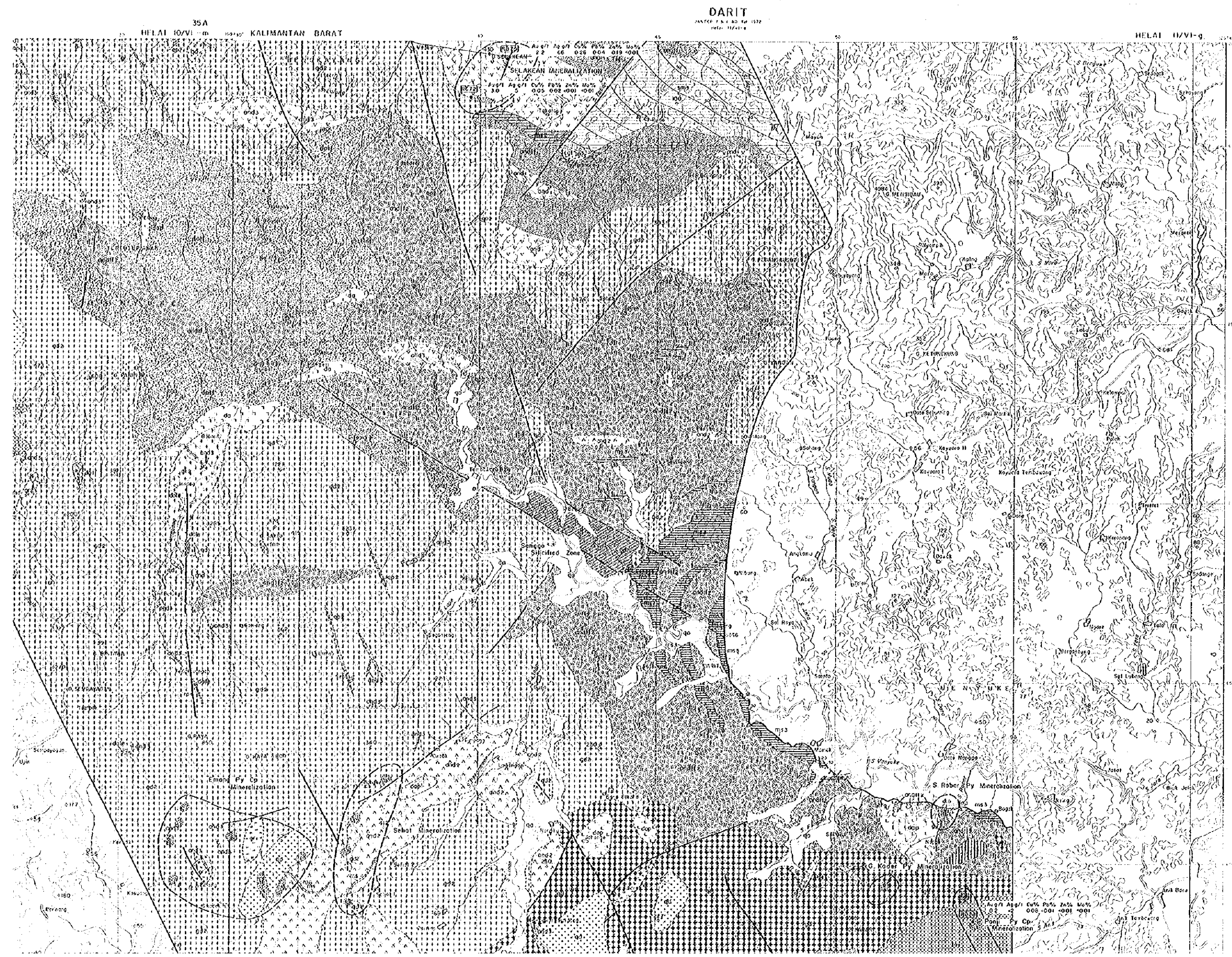
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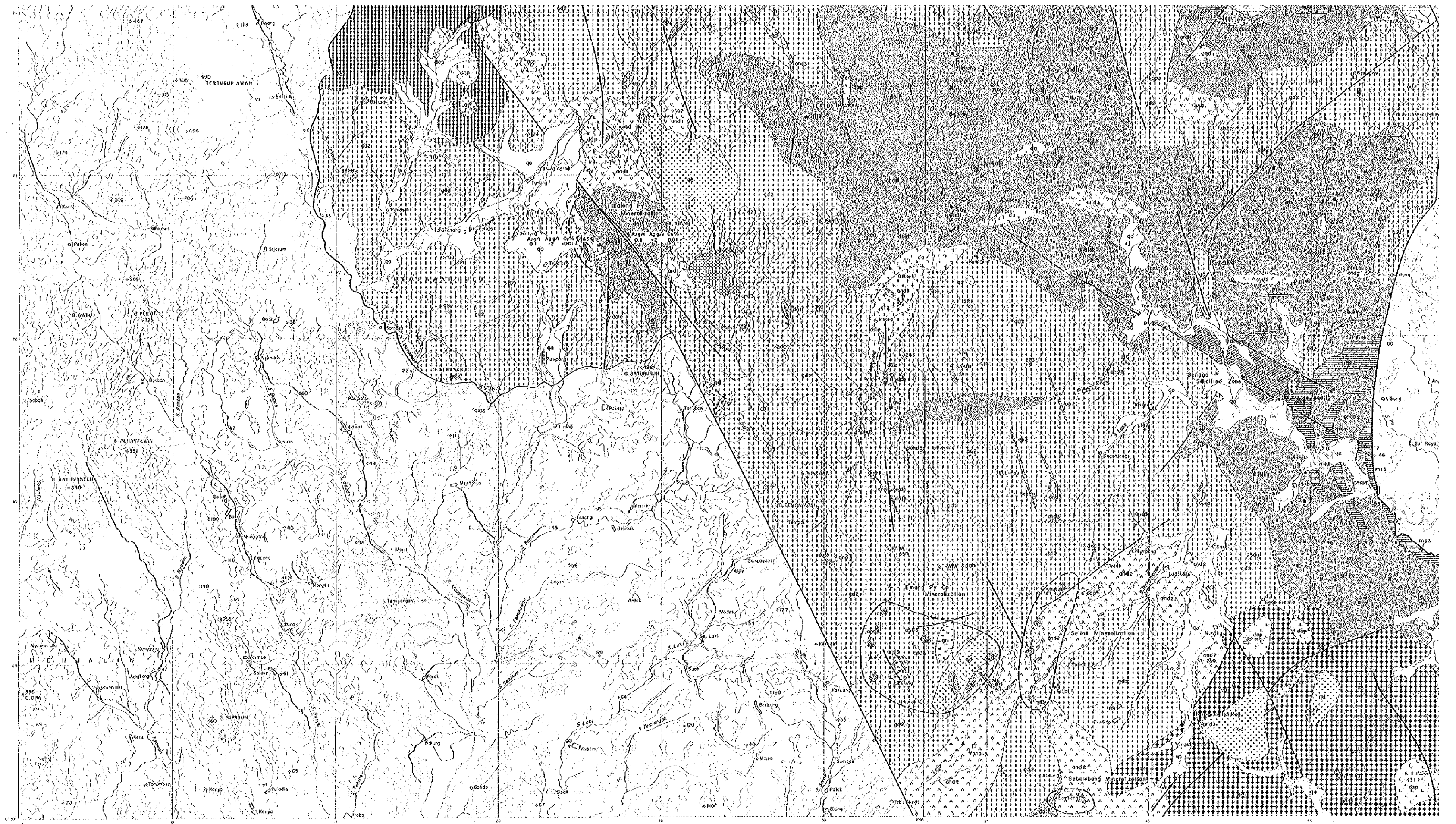


February - 1961

LEGEND

	Sedimentary Rocks	Igneous Rocks
QUATERNARY	qu Gravel, Sand	
	qt Talus	
TERTIARY	Serontok Formation	and3 Andesite dyke
	st Dacitic pyroclastic rock	ap2 Quartz porphyry 2
	st Dacitic tuffbreccia	dy Dacite dyke
	sdp Serontok Dacite	gd4 Granodiorite 4
		dy Dolerite dyke
		qp1 Quartz porphyry 1
		altm Altered felsic rock
CRETACEOUS		tn2 Sirih Tonalite
		tn1 Banyu Tonalite
		gp9 G.Pandan Quartz gabbro
		gr2 Granite 2
		gr1 Granite 1
		td Tiang Quartz diorite
		gs3 G.Selantor Granodiorite
JURASSIC		gs2 G.Roya Granodiorite
		gs1 G.Sebiwok Granodiorite
	Defango Formation	
	ms1 Red mudstone	
	ap112 Andesitic pyroclastic rock	
	ap12 Andesite 2 and gray mudstone	
	ap11 Dacitic pyroclastic rock	
Jirak Formation		
ds Dacite		
cs Coarse sandstone		
m2 Mudstone 2		
ap11 Andesitic pyroclastic rock		
as1 Andesite 1		





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INDEX MAP

PL.3-1

PL.3-2

PL.3-3



MANDOR

JANUARY 1954

SCALE 1:50,000

35 A

PAHUMAN

JANUARY 1954

SCALE 1:50,000



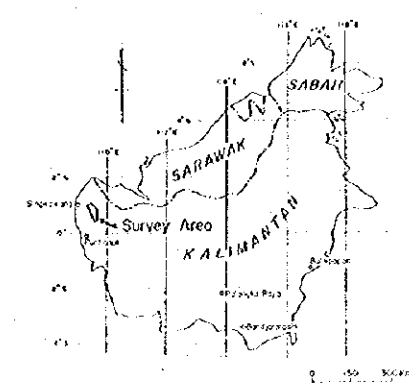
PL 3-3

METAL MINING AGENCY OF JAPAN  
 JAPAN INTERNATIONAL COOPERATION AGENCY  
 DIRECTORATE OF MINERAL RESOURCES  
 DIRECTORATE GENERAL OF MINES  
 MINISTRY OF MINES AND ENERGY  
 REPUBLIC OF INDONESIA

METALLIC MINERAL EXPLORATION SURVEY  
 IN  
 WEST KALIMANTAN INDONESIA

MAP OF RELATIONS BETWEEN GEOLOGICAL  
 STRUCTURE AND MINERALIZATION

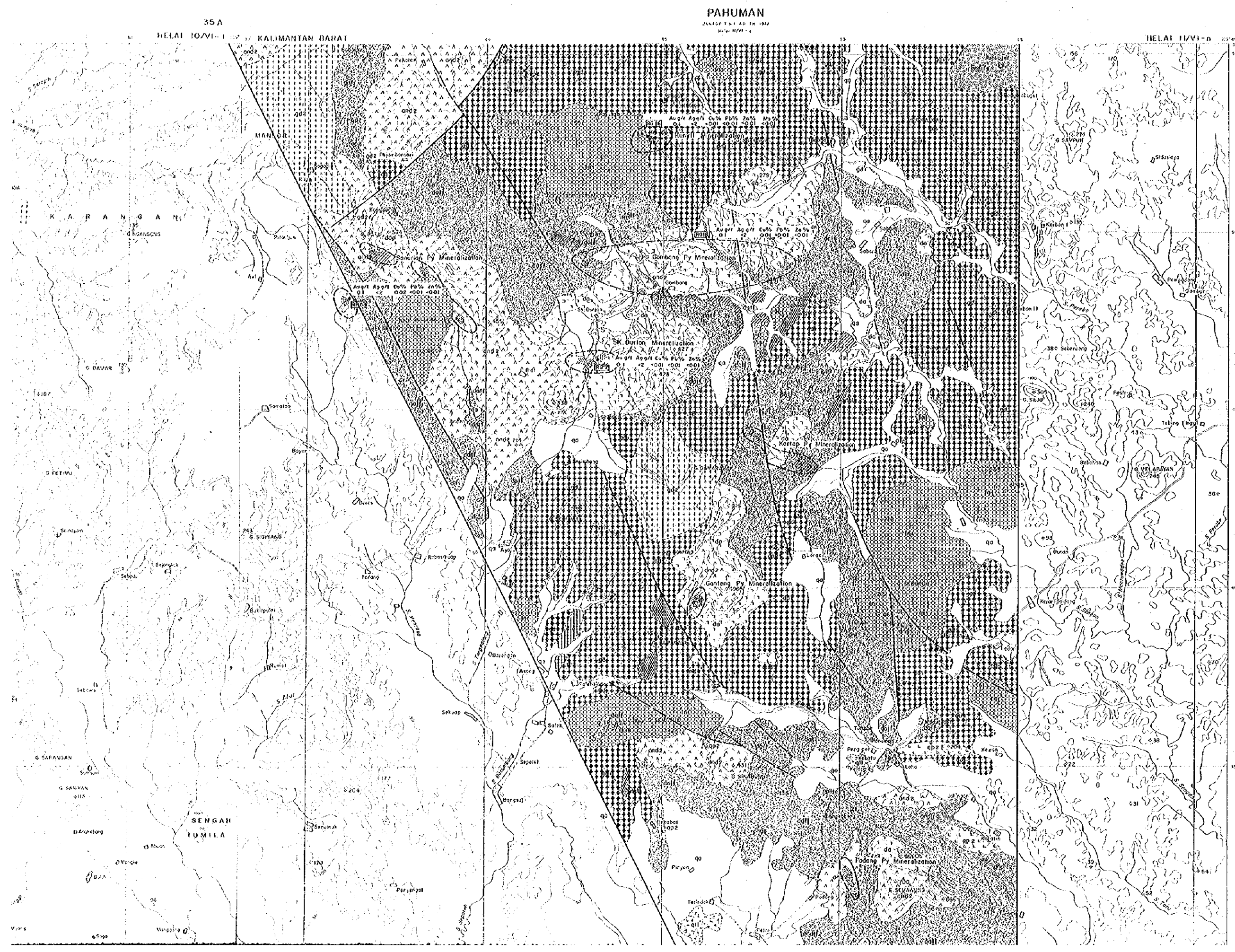
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February - 1961

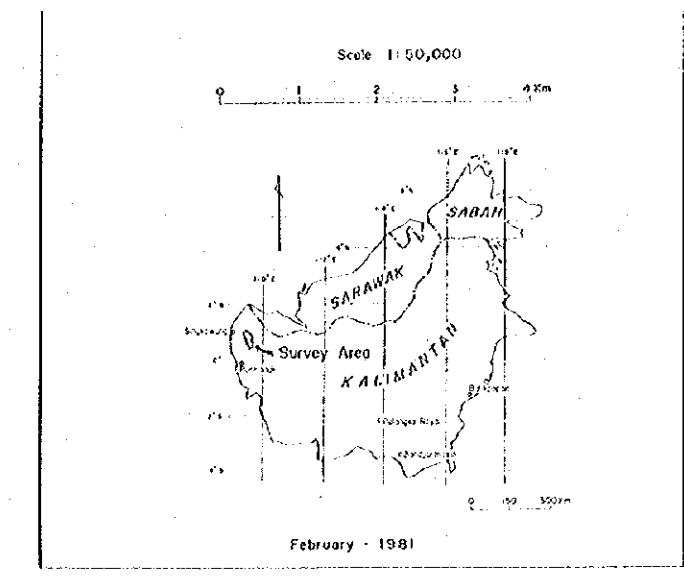
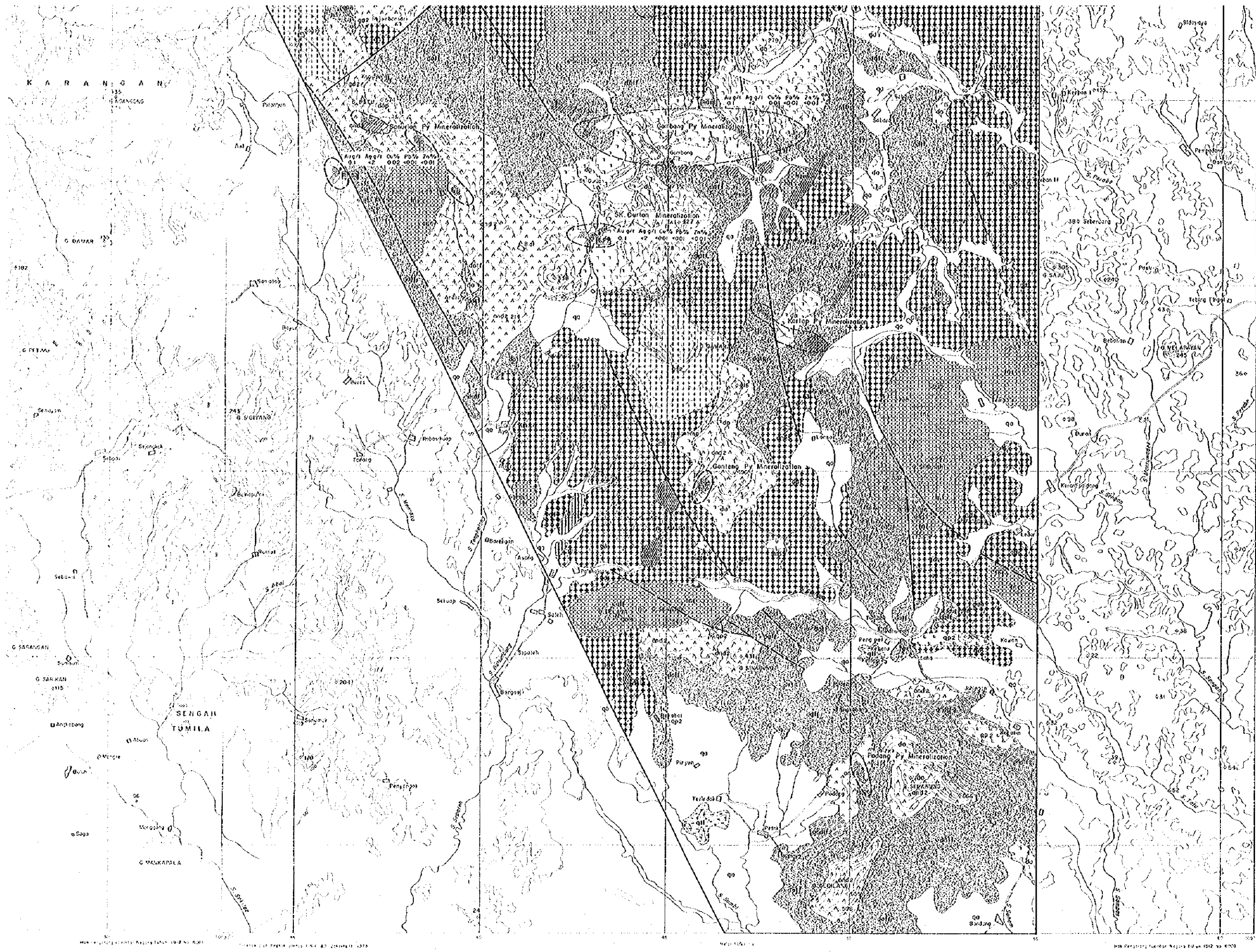
LEGEND

	Sedimentary Rocks	Igneous Rocks
QUATERNARY	<ul style="list-style-type: none"> <li>q0 Gravel, Sand</li> <li>qt Talus</li> </ul>	
TERTIARY	<p>Serantak Formation</p> <ul style="list-style-type: none"> <li>tr Dacitic pyroclastic rock</li> <li>trf Dacitic tuffbreccia</li> <li>trp Serantak Dacite</li> </ul>	<ul style="list-style-type: none"> <li>ad3 Andesite dyke</li> <li>qp2 Quartz porphyry 2</li> <li>do Diorite dyke</li> <li>gd4 Granodiorite 4</li> <li>dlc Dolerite dyke</li> <li>qp1 Quartz porphyry 1</li> <li>alr Altered felsic rock</li> <li>tr2 Sirkh Tonalite</li> <li>tr3 Banyu Tonalite</li> <li>gpb G.Pandan Quartz gabbro</li> </ul>
CRETACEOUS		<ul style="list-style-type: none"> <li>gr2 Granite 2</li> <li>gr1 Granite 1</li> <li>tdq Tiang Quartz diorite</li> <li>gs3 G.Selantik Granodiorite</li> <li>gr3 G.Raya Granodiorite</li> <li>gs1 G.Sebiwak Granodiorite</li> </ul>
JURASSIC	<p>Belanga Formation</p> <ul style="list-style-type: none"> <li>ms3 Red mudstone</li> <li>ad1a Andesitic pyroclastic rock</li> <li>ad2 Andesite 2 and grey mudstone</li> <li>ad1f Dacitic pyroclastic rock</li> <li>ds Dacite</li> </ul> <p>Jirat Formation</p> <ul style="list-style-type: none"> <li>ss Coarse sandstone</li> <li>m2 Mudstone 2</li> <li>ad1r Andesitic pyroclastic rock</li> <li>ad1 Andesite 1</li> </ul>	









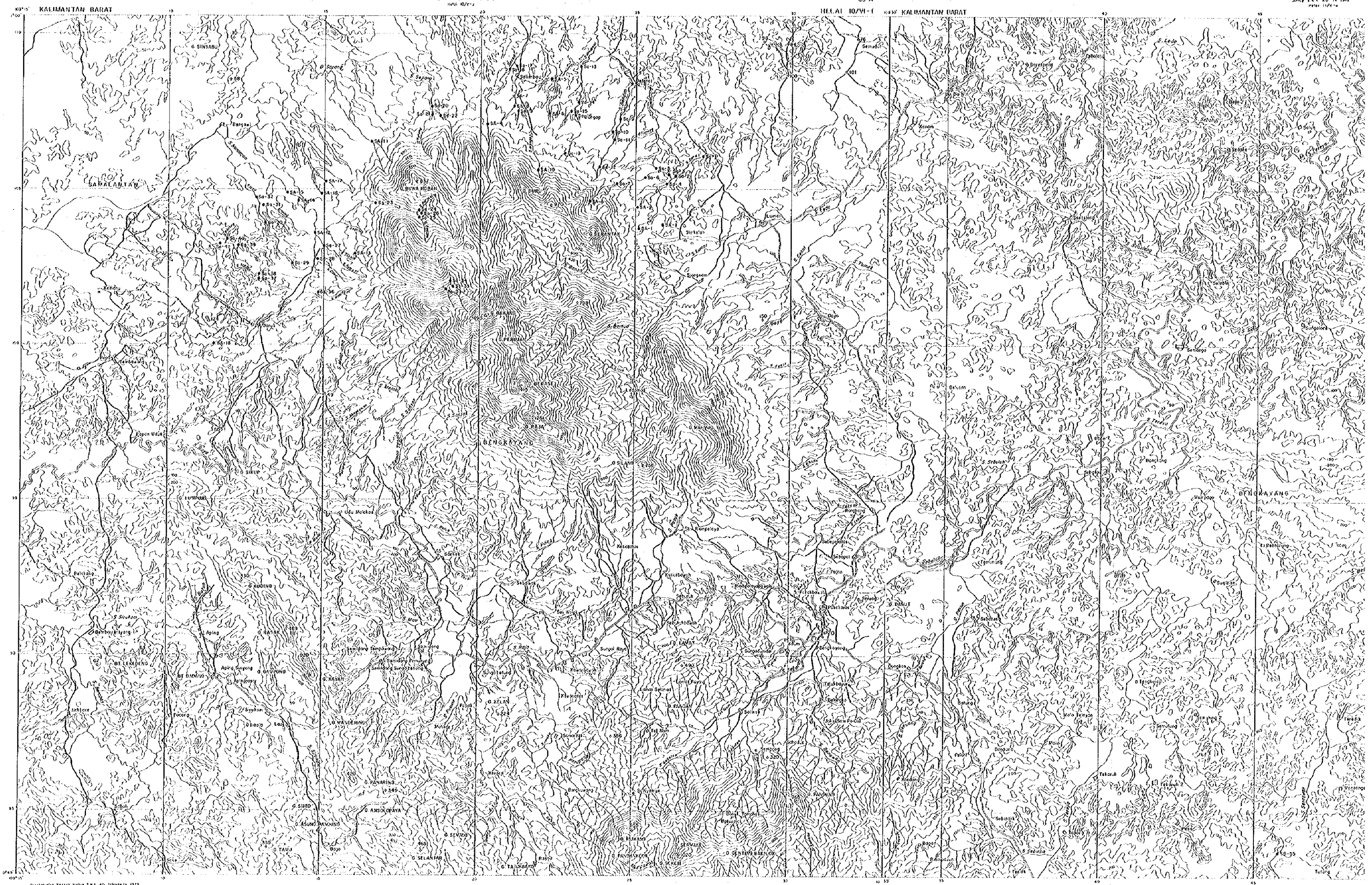
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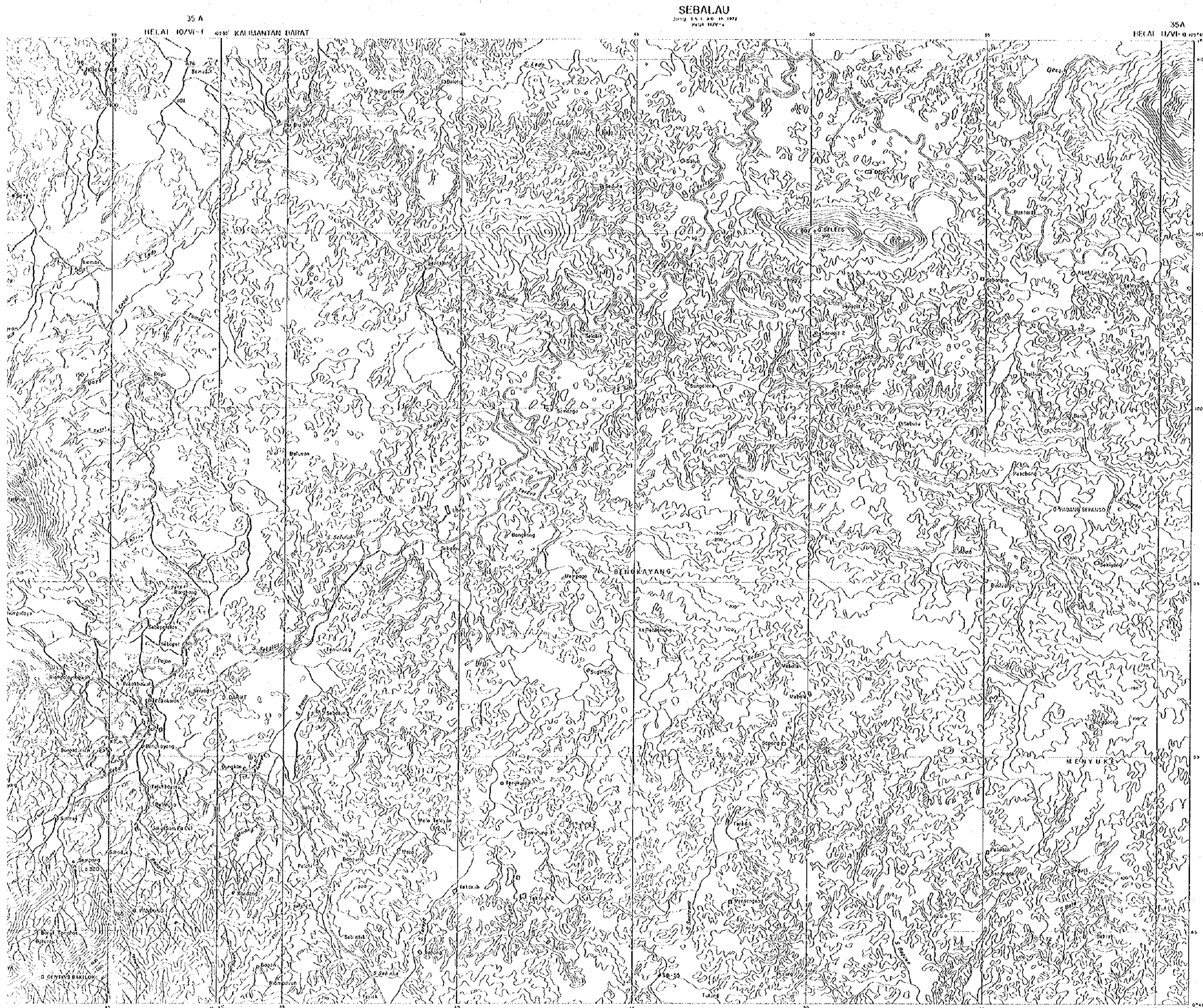
	Sedimentary Rocks	Igneous Rocks
QUATERNARY	q0 Gravel, Sand	
	qt Talus	
TERTIARY	Serantok Formation	
	st Dacitic pyroclastic rock	and3 Andesite dyke
	st1 Dacitic tuffbreccia	qp2 Quartz porphyry 2
	st2 Serantok Dacite	dy Dolerite dyke
		gd4 Granodiorite 4
		dy1 Dolerite dyke
		qp1 Quartz porphyry 1
		alt Altered felsic rock
CRETACEOUS		tn2 Sish, Tanohite
		tn1 Banyi, Tanohite
		gpb G. Pandan Quartz gabbro
		gr2 Granite 2
		gr1 Granite 1
		q3 Tiang Quartz diorite
		g3 G. Sefontar Granodiorite
JURASSIC	Belaga Formation	
	ms1 Red mudstone	
	and1a Andesitic pyroclastic rock	
	and2 Andesite 2 and grey mudstone	
	stf Dacitic pyroclastic rock	
	do Dacite	
	Uluok Formation	
	ss Coarse sandstone	
	ms2 Mudstone 2	
	and1c Andesitic pyroclastic rock	
and1 Andesite 1		
cg Conglomerate		
TRIASSIC	Bungkokang Group	
	ms3 Singsibetang Formation (Alternating bed of sandstone siltstone and mudstone) (Fossil)	
	ms Riampelaya Formation (Sandstone)	
	ms4 Kolung Formation (Black shale)	
	ac11 Baran Formation (Acid tuff)	
	ms Baran Formation (Tuffaceous sandstone)	
Geological Structure	Strike, dip and dip of bedding in sedimentary rocks	Mineralization
	Anticline axis	Metaliferous vein, Ore bed, Quartz vein (confirmed/inferred)
Synclinal axis	Disseminated mineralization	
Fault confirmed	Canobar mineralization	
Fault inferred	Tourmalinization zone	
	Silicified zone	
	Manganese mineralization	

BENGKAYANG  
Sheet 1.A. 40 (1947-1952)  
1:50,000

35 A

SEBALAU  
Sheet 1.A. 40 (1947-1952)  
1:50,000





SEBALAU  
2012 1:50,000  
1981

03117

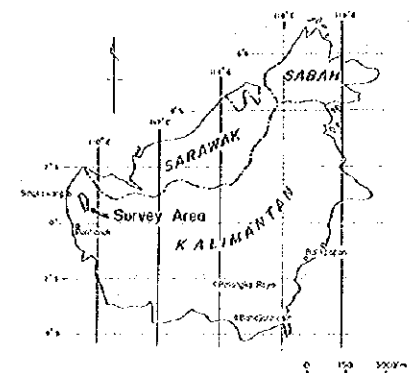
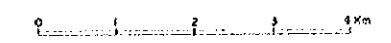
PL.4-1

METAL MINING AGENCY OF JAPAN    DIRECTORATE OF MINERAL RESOURCES  
JAPAN INTERNATIONAL                DIRECTORATE GENERAL OF MINES  
COOPERATION AGENCY                MINISTRY OF MINES AND ENERGY  
REPUBLIC OF INDONESIA

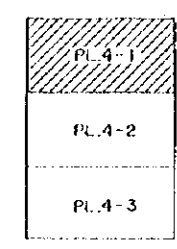
METALLIC MINERAL EXPLORATION SURVEY  
IN  
WEST KALIMANTAN INDONESIA

LOCATION MAP OF GEOCHEMICAL  
SAMPLES AND PANNING SAMPLES

Scale 1:50,000



February 1981



LEGEND

• SA-7 No of Sample

KARANGAN

25000 1:50,000 1:100,000  
MAY 1957

35A

HELAI 10/VI - m

KALIMANTAN BARAT

DARIT

25000 1:50,000 1:100,000  
MAY 1957

KALIMANTAN BARAT

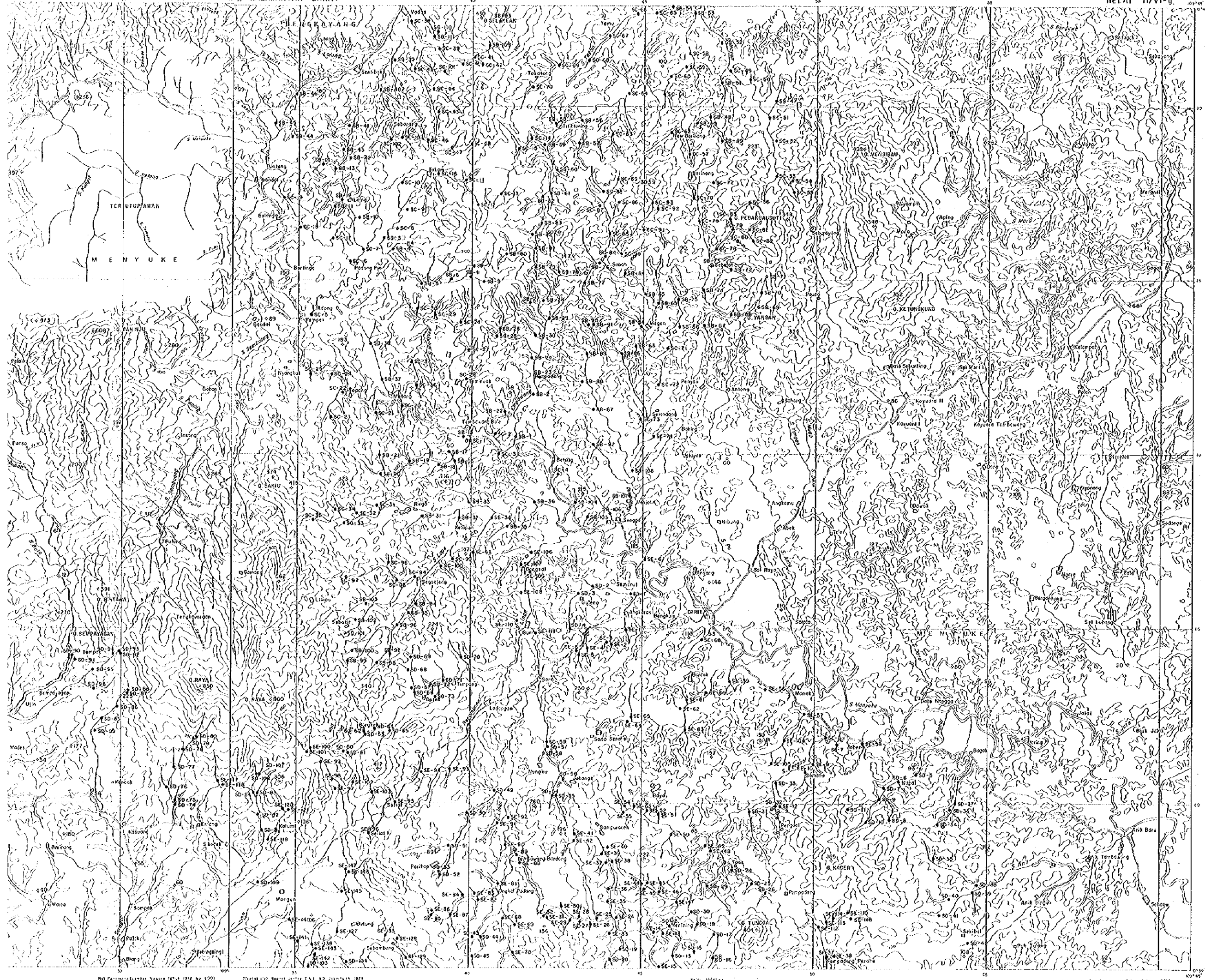


DARIT

JANUARY 1981

HELAI 10/VI-35A KALIMANTAN BARAT

HELAI 11/VI-9



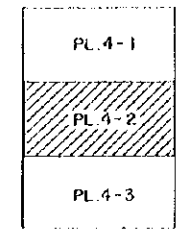
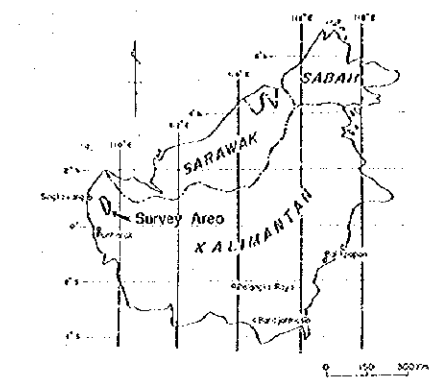
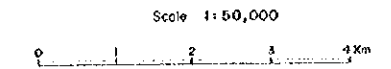
PL.4-2

METAL MINING AGENCY OF JAPAN  
 JAPAN INTERNATIONAL  
 COOPERATION AGENCY

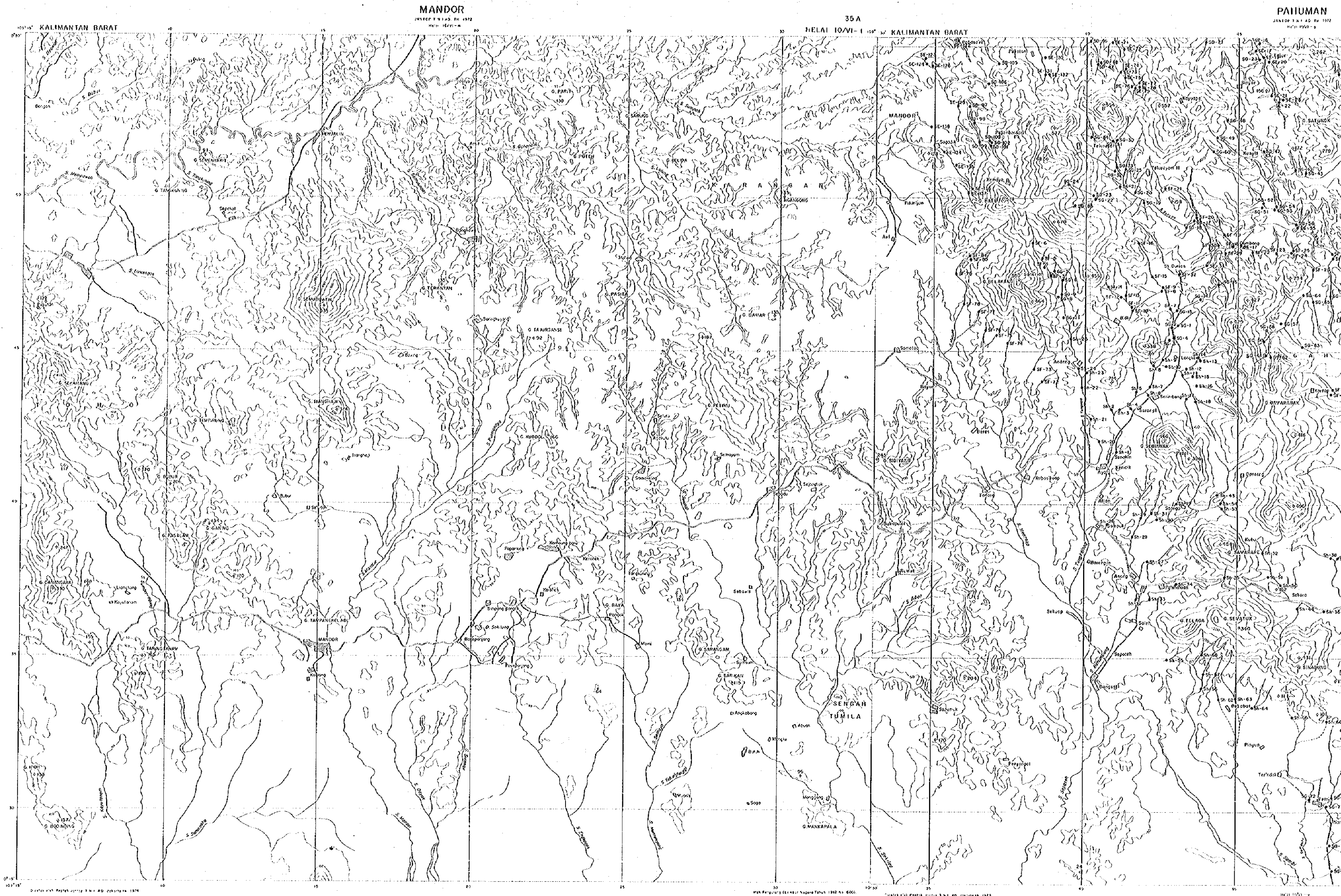
DIRECTORATE OF MINERAL RESOURCES  
 DIRECTORATE GENERAL OF MINES  
 MINISTRY OF MINES AND ENERGY  
 REPUBLIC OF INDONESIA

METALLIC MINERAL EXPLORATION SURVEY  
 IN  
 WEST KALIMANTAN INDONESIA

LOCATION MAP OF GEOCHEMICAL  
 SAMPLES AND PANNING SAMPLES



LEGEND  
 \*SA-7 No. of Sample



**MANDOR**  
JANUARY 1952  
Scale 1:60,000

**35 A**

**PAILUMAN**  
JANUARY 1952  
Scale 1:60,000

KALIMANTAN BARAT

MELAI 10/VI-1 KALIMANTAN BARAT

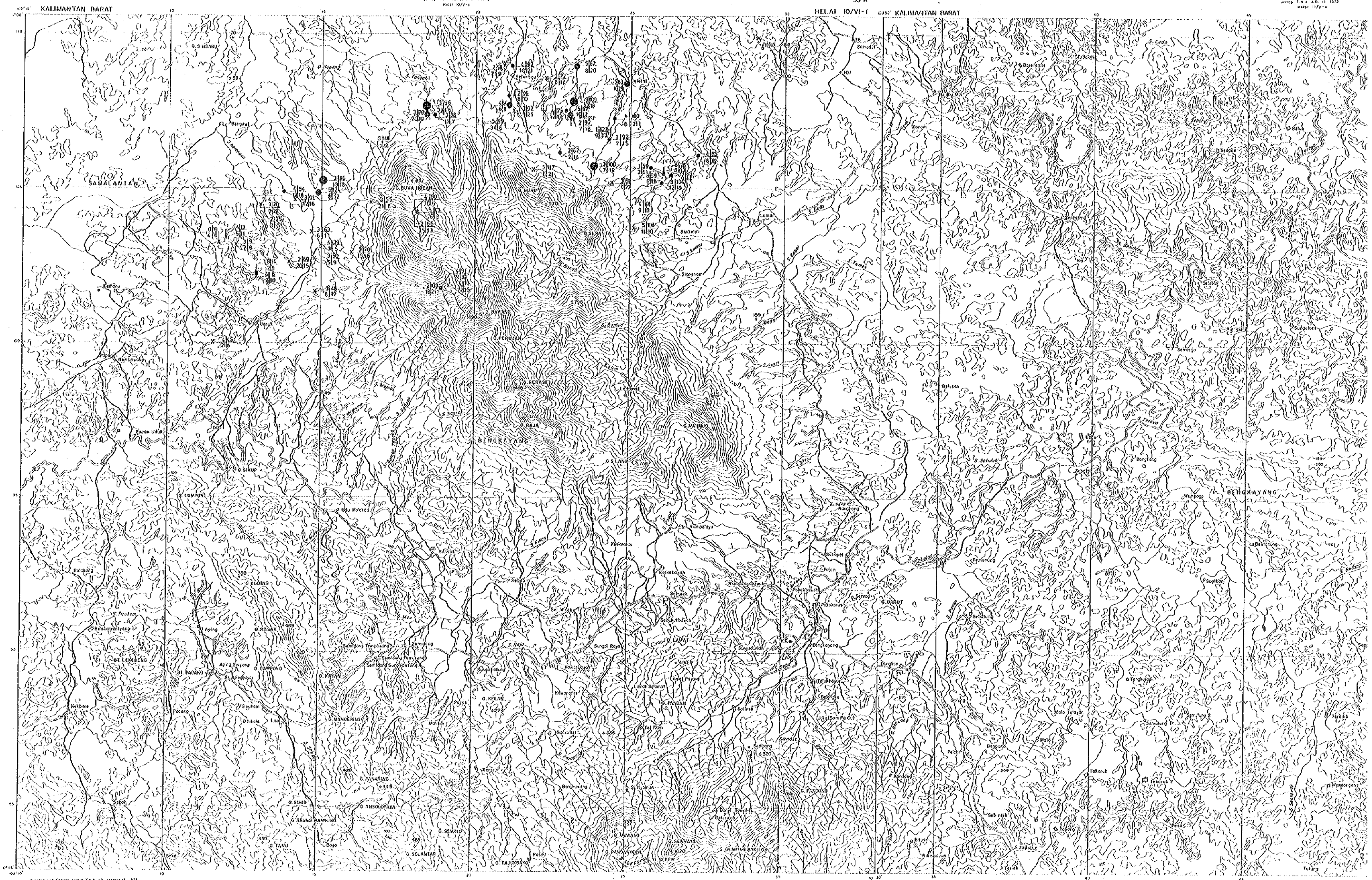




BENGKAYANG  
JULY 1944 AD. JUNE 1945  
SCALE 1:50,000

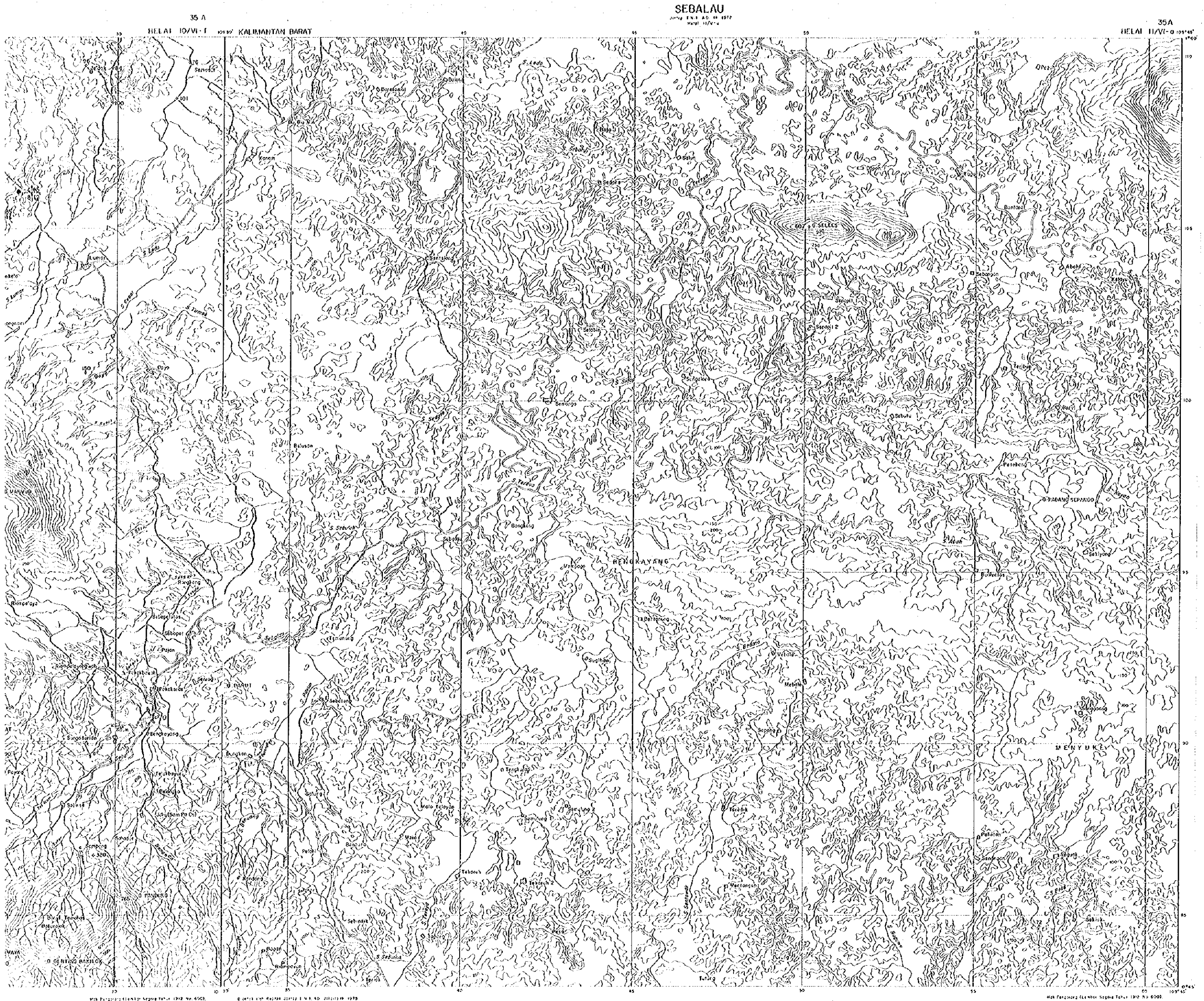
35 A

SEBALAU  
JULY 1944 AD. 11 1945  
SCALE 1:50,000



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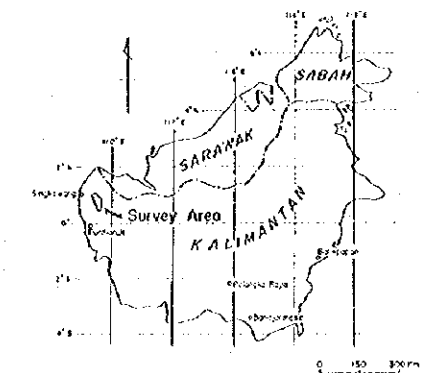
08117

METAL MINING AGENCY OF JAPAN  
 JAPAN INTERNATIONAL COOPERATION AGENCY  
 DIRECTORATE OF MINERAL RESOURCES  
 DIRECTOR GENERAL OF MINES  
 MINISTRY OF MINES AND ENERGY

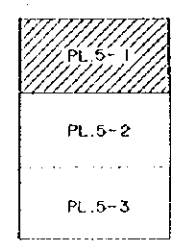
METALLIC MINERAL EXPLORATION SURVEY  
 IN  
 WEST KALIMANTAN INDONESIA

MAP OF GEOCHEMICAL ASSAY RESULTS  
 AND GOLD PANNING RESULTS

Scale 1:50,000  
 0 1 2 3 4 km



February 1981



LEGEND

Number of gold grain in stream sediment

(Megascopic determination)

- X 0
- 1 ~ 4
- 5 ~ 16
- 17 ~ 69
- 69 <

Chemical analysis values of stream sediment

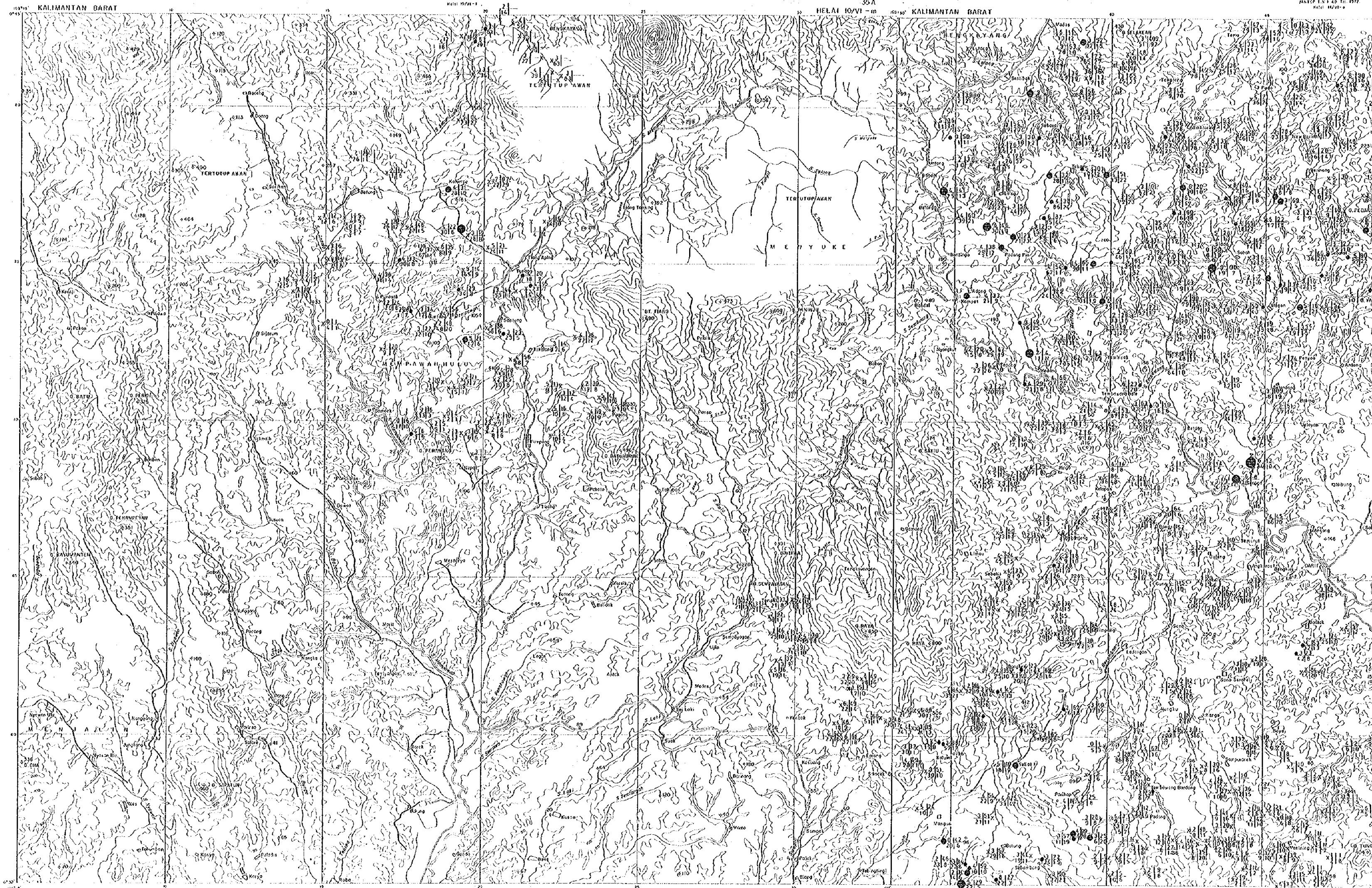
- Mo (P.P.M) | Zn (P.P.M)
- Cu (P.P.M) | Pb (P.P.M)

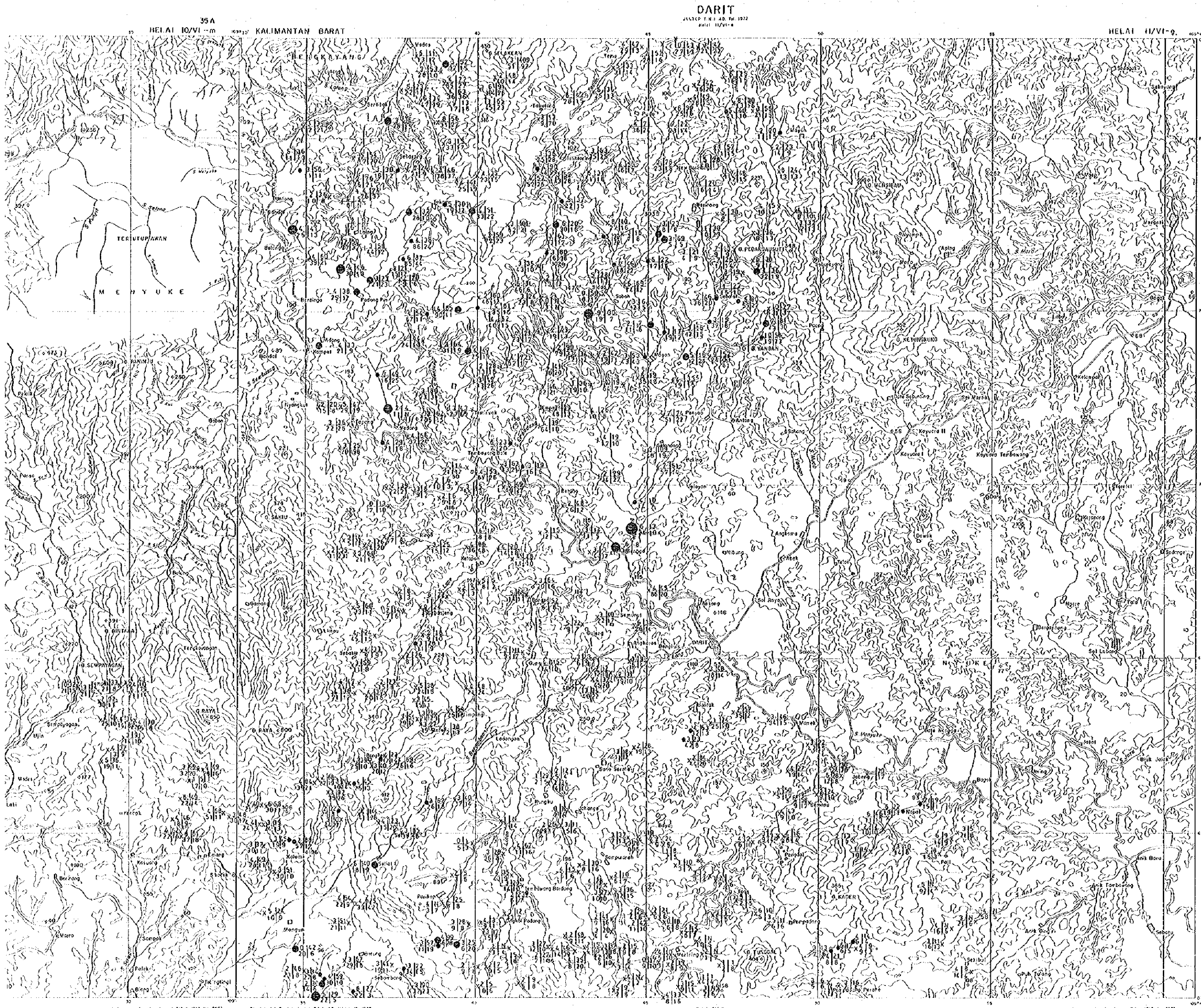
KARANGAN

JULY 1952  
HELI 10/VI-40

DARIT

JULY 1952





PL-5-2

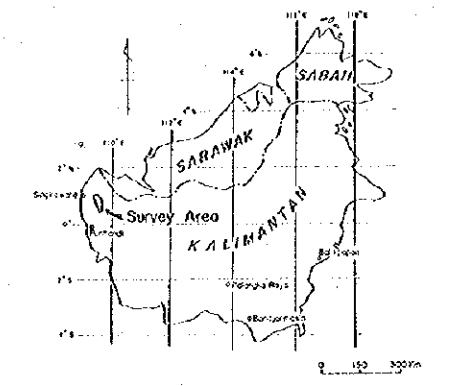
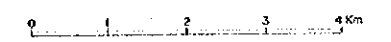
METAL MINING AGENCY OF JAPAN  
 JAPAN INTERNATIONAL  
 COOPERATION AGENCY

DIRECTORATE OF MINERAL  
 RESOURCES  
 DIRECTORATE GENERAL  
 OF MINES  
 MINISTRY OF MINES  
 AND ENERGY

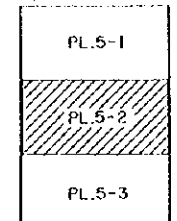
METALLIC MINERAL EXPLORATION SURVEY  
 IN  
 WEST KALIMANTAN INDONESIA

MAP OF GEOCHEMICAL ASSAY RESULTS  
 AND GOLD PANNING RESULTS

Scale 1:50,000



February 1981



LEGEND

Number of gold grains in stream sediment  
 (Megascopic determination)

- X 0
- 1 ~ 4
- 5 ~ 16
- ⊙ 17 ~ 69
- ⊗ 69 <

Chemical analysis values of stream sediment

Mn (P.P.M) | Zn (P.P.M)  
 Cu (P.P.M) | Pb (P.P.M)

MANDOR

JANUARY 1962  
SCALE 1:50,000

35 A

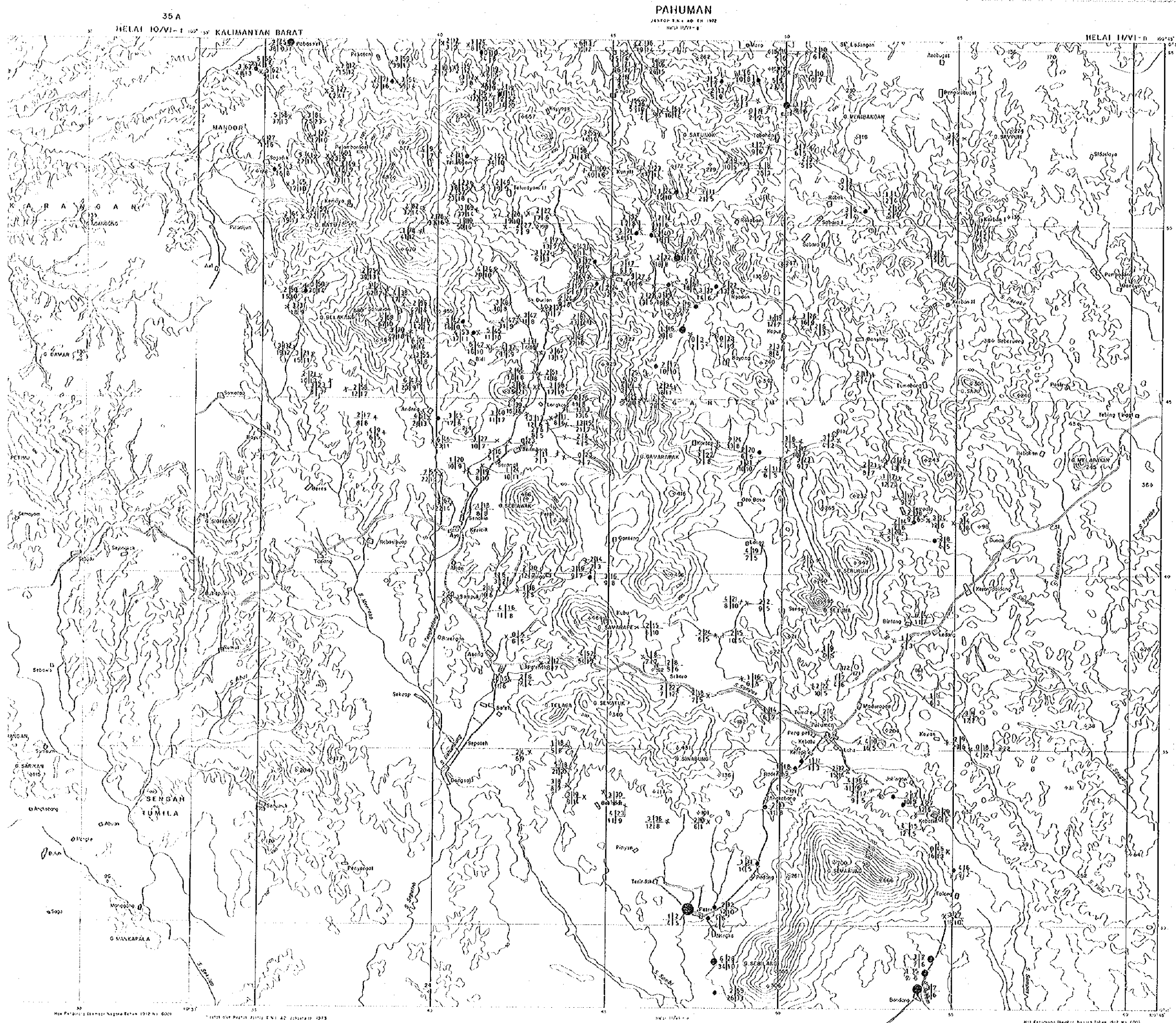
PAHUMAN

JANUARY 1962  
SCALE 1:50,000

KALIMANTAN BARAT

HELAL (OVI-1) 100' W KALIMANTAN BARAT





PL. 6-3

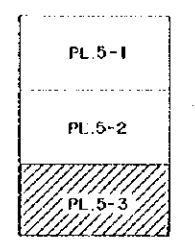
METAL MINING AGENCY OF JAPAN      DIRECTORATE OF MINERAL RESOURCES  
 JAPAN INTERNATIONAL              DIRECTORATE GENERAL OF MINES  
 COOPERATION AGENCY              MINISTRY OF MINES AND ENERGY

METALLIC MINERAL EXPLORATION SURVEY  
 IN  
 WEST KALIMANTAN INDONESIA

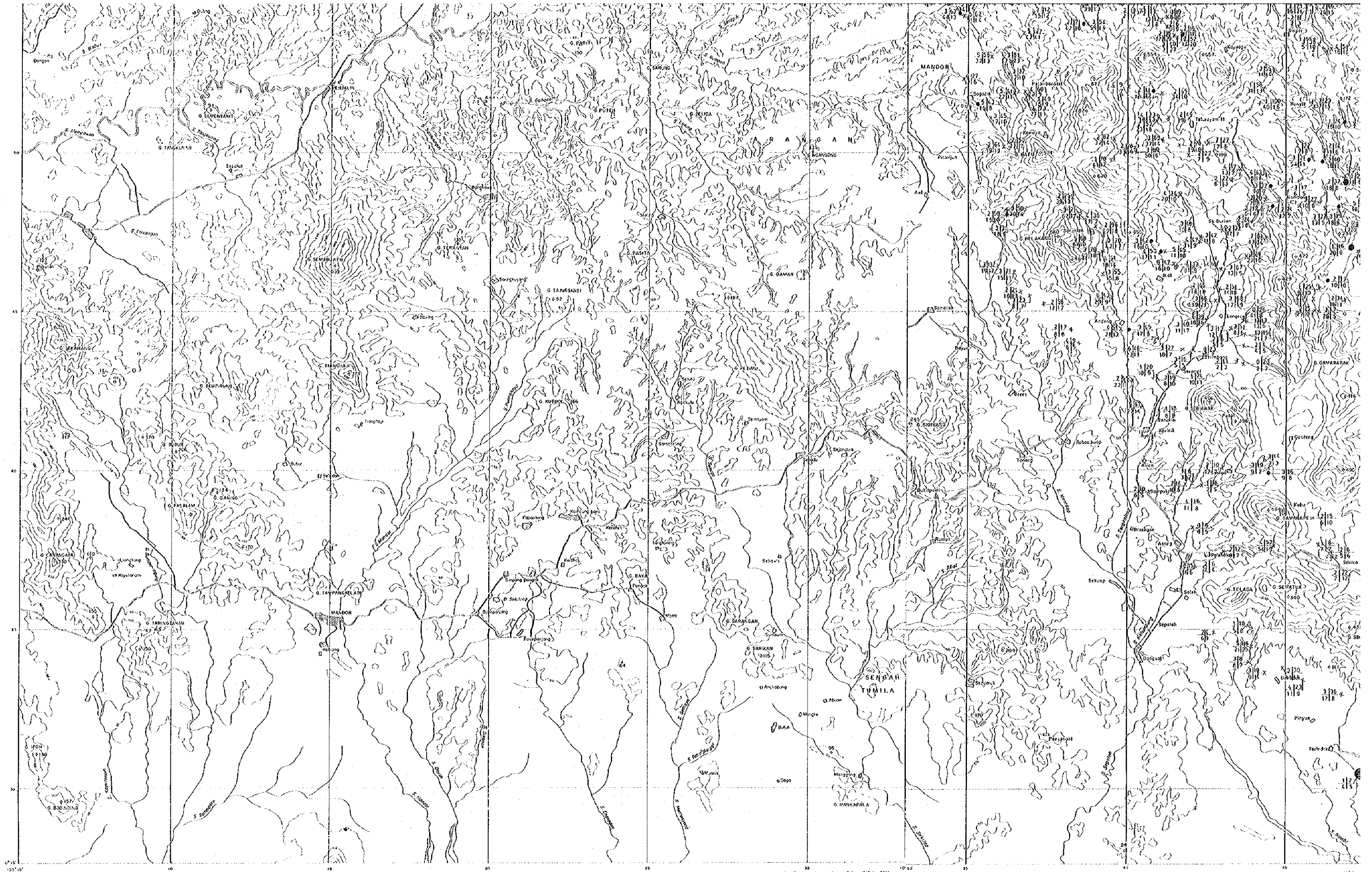
MAP OF GEOCHEMICAL ASSAY RESULTS  
 AND GOLD PANNING RESULTS

Scale 1:50,000

February - 1981



- LEGEND**
- Number of gold grain in stream sediment  
 (Megascopic determination)
- X 0
  - 1 ~ 4
  - 5 ~ 16
  - ⊙ 17 ~ 69
  - ⊗ 69 <
- Chemical analysis values of stream sediment
- Mo (P.P.M)    Zn (P.P.M)
  - Cu (P.P.M)    Pb (P.P.M)



1:50,000 Scale with Rectangular Projection UTM Zone 48Q, Jakarta 1978

1:50,000 Scale with Rectangular Projection UTM Zone 48Q, Jakarta 1978

1:50,000 Scale with Rectangular Projection UTM Zone 48Q, Jakarta 1978

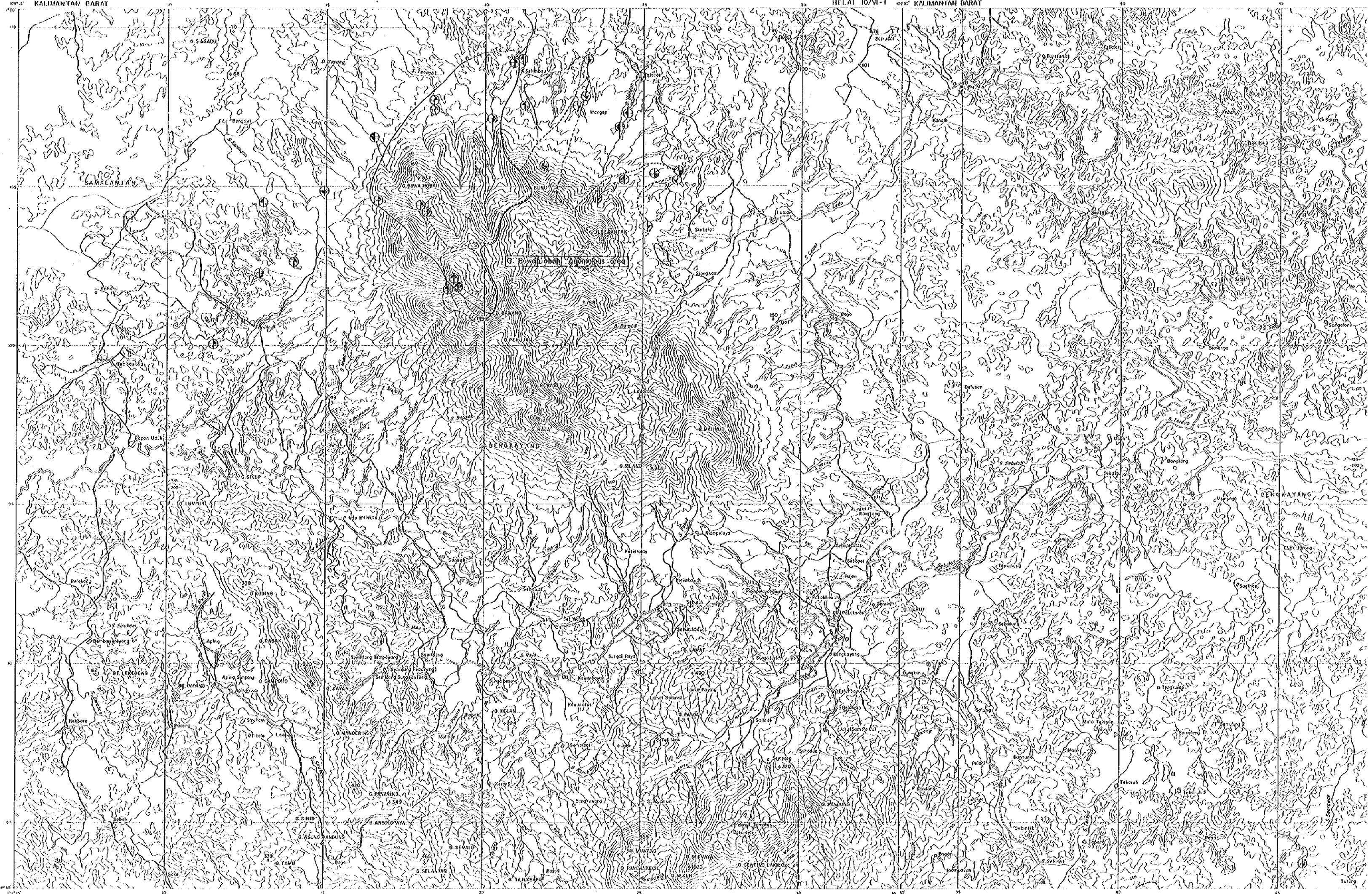


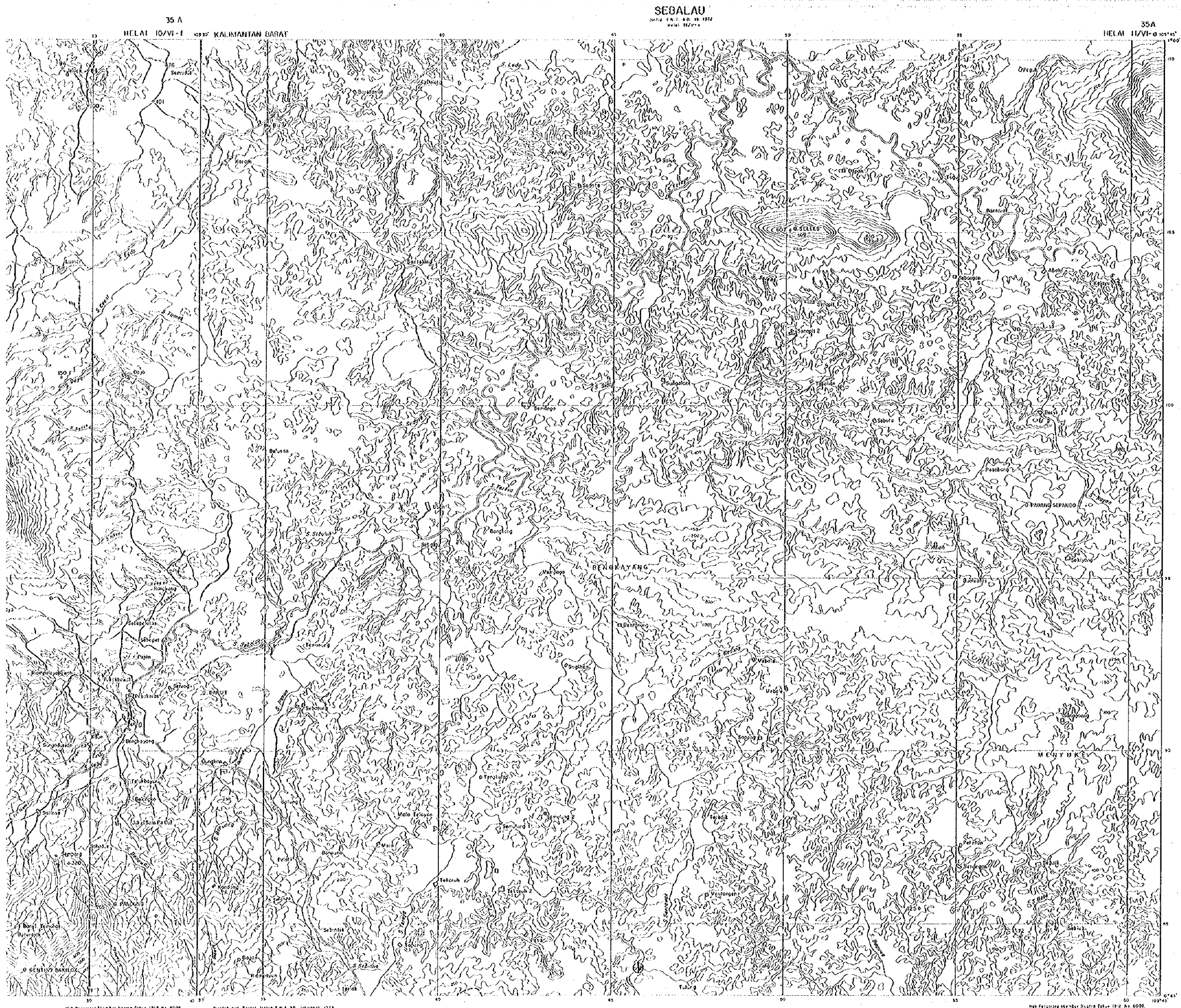


BENGKAYANG  
1:50,000  
HELAI 10/VI-1

35 A

SEBALAU  
1:50,000  
HELAI 11/VI-1



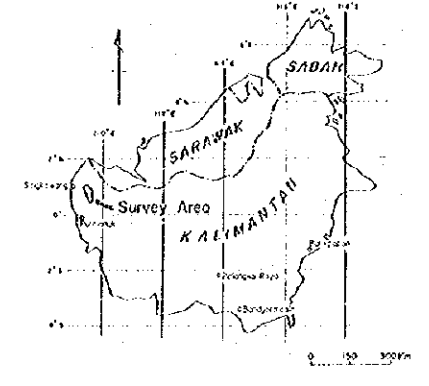


08117  
PL. G-1

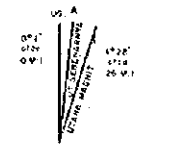
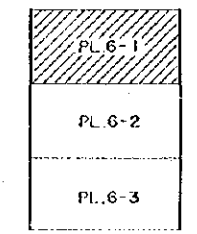
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 JAPAN INTERNATIONAL                  DIRECTORATE GENERAL OF MINES  
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METALLIC MINERAL EXPLORATION SURVEY  
 IN  
 WEST KALIMANTAN INDONESIA  
 MAP OF GEOCHEMICAL ANOMALIES

Scale 1:50,000  
 0 1 2 3 4 km



February - 1981



LEGEND

First class Anomaly ( $2\bar{x} + 2\sigma$ )	Second class Anomaly ( $\bar{x} + 2\sigma - 2\bar{x} + 1\sigma$ )
Cu	Pb
Pb	Zn
Zn	Mo
Mo	
Cu - Geochemical anomalous area	
Pb - Geochemical anomalous area	
Zn - Geochemical anomalous area	
Mo - Geochemical anomalous area	