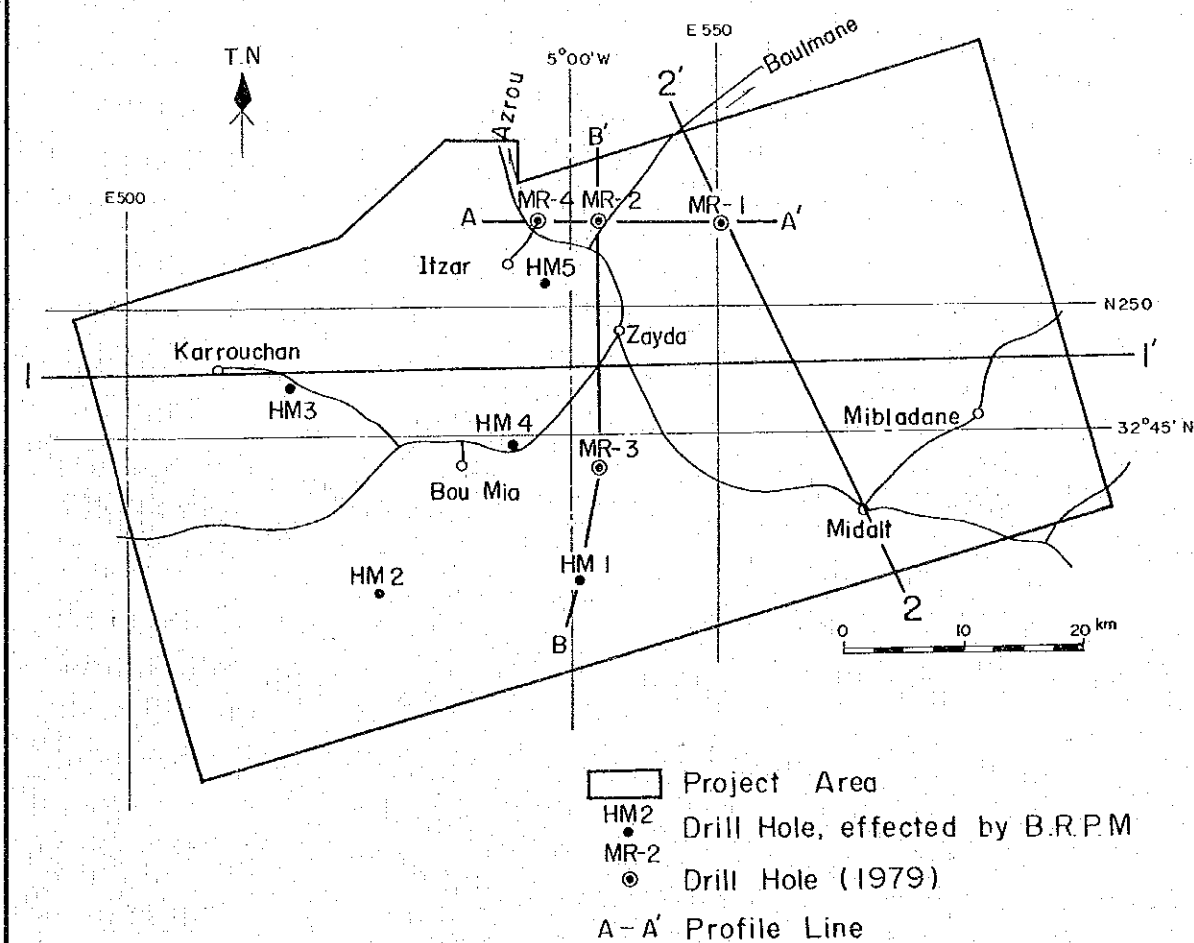


GEOLOGICAL SURVEY  
OF  
HAUTE MOULOYA AREA, MOROCCO

GEOLOGICAL PROFILES OF THE SURVEYED AREA

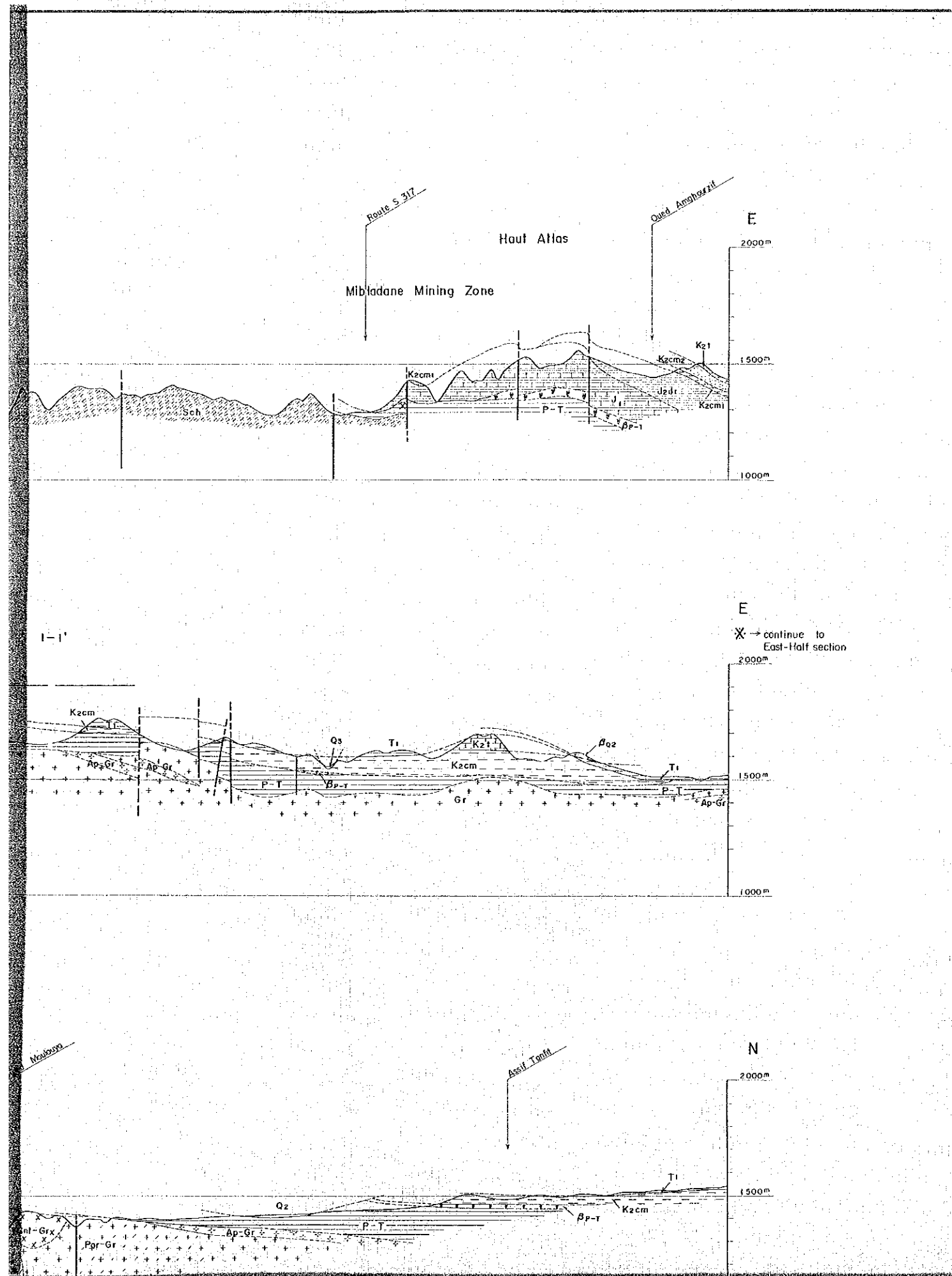


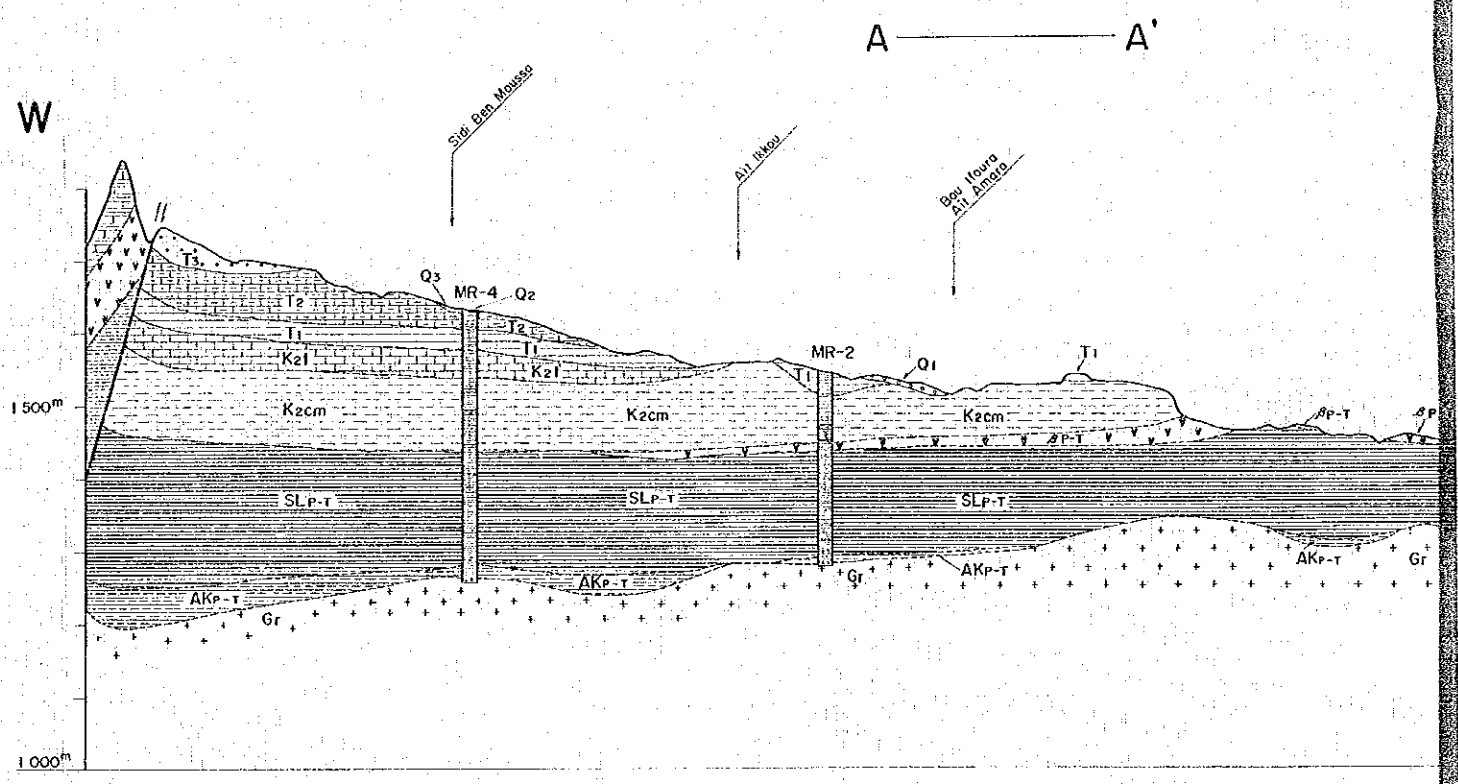
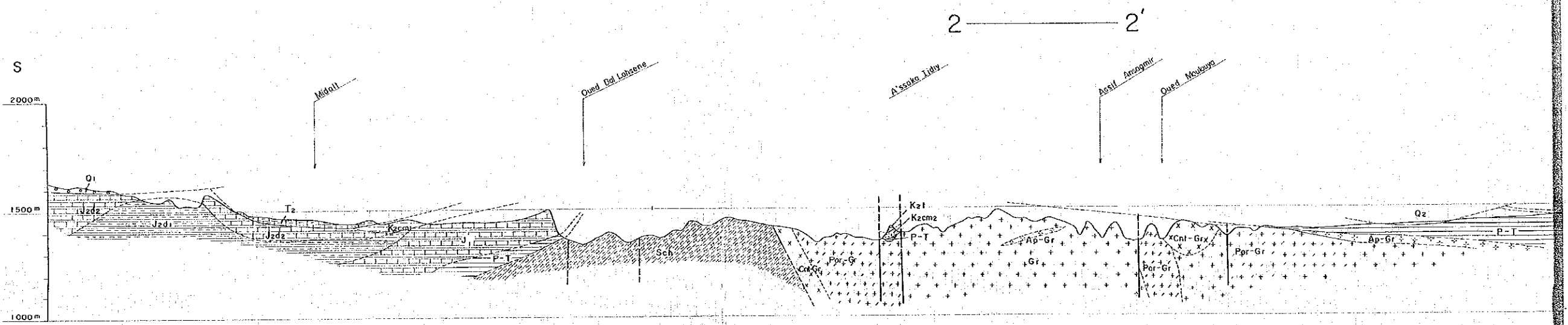
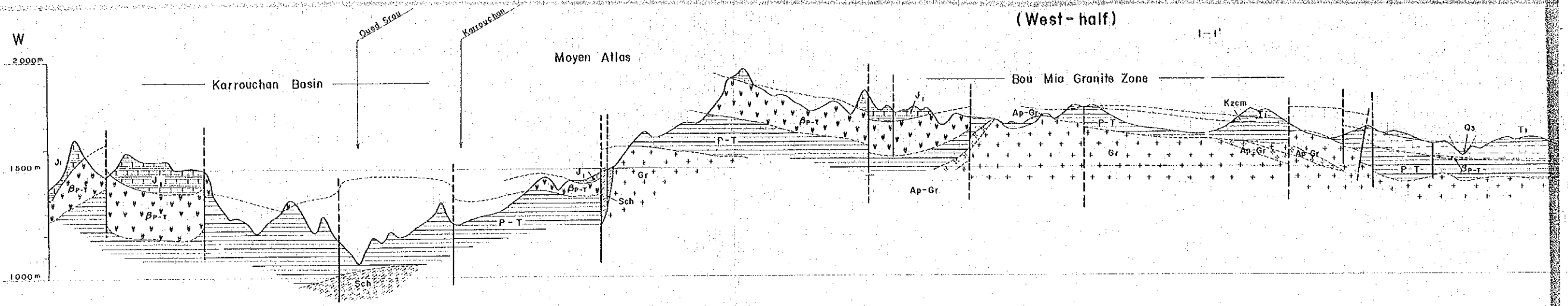
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Vertical Scale 1 : 20,000 (Profile Line 1-1', 2-2')  
1 : 10,000 (Profile Line A-A', B-B')

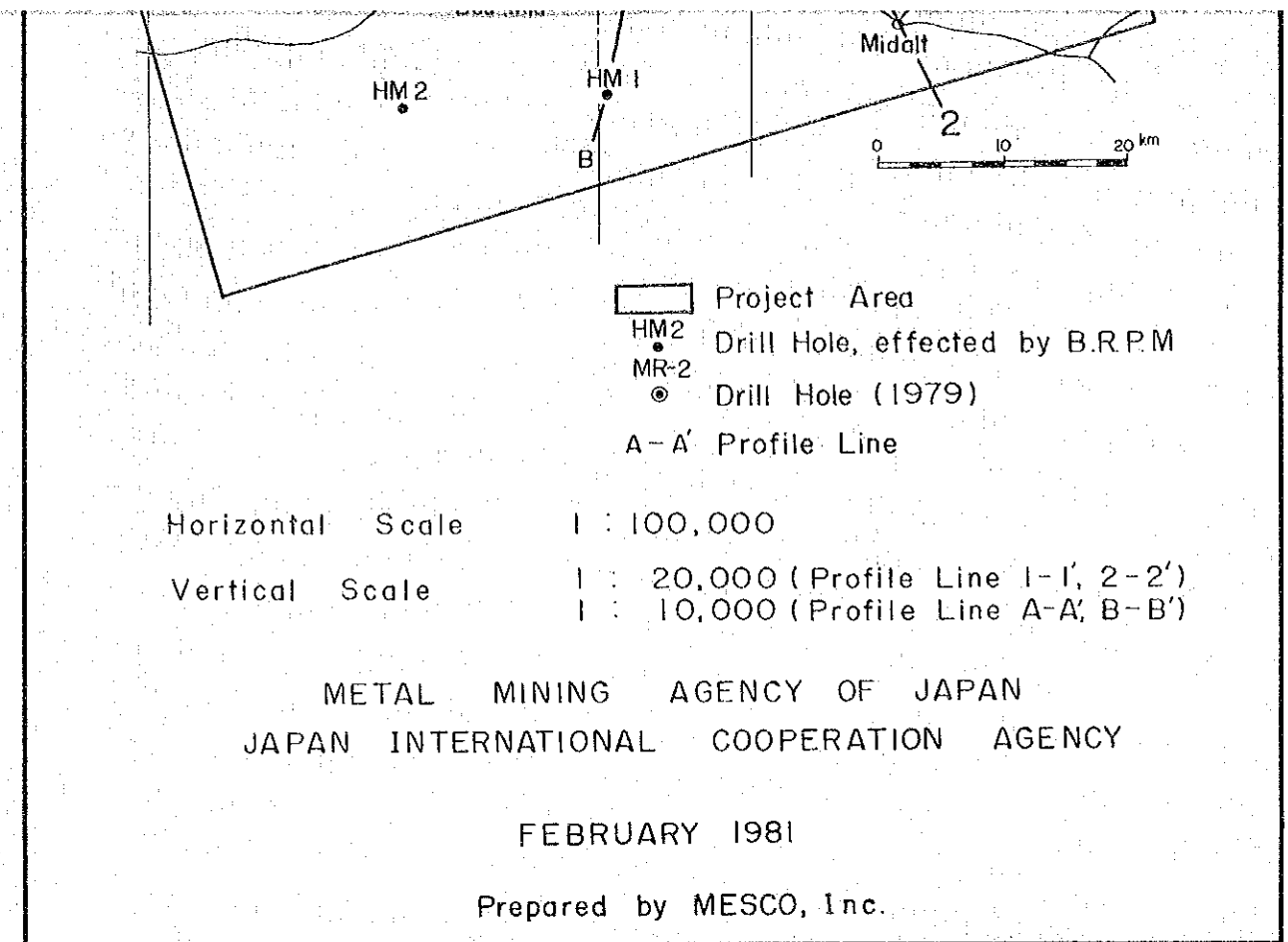
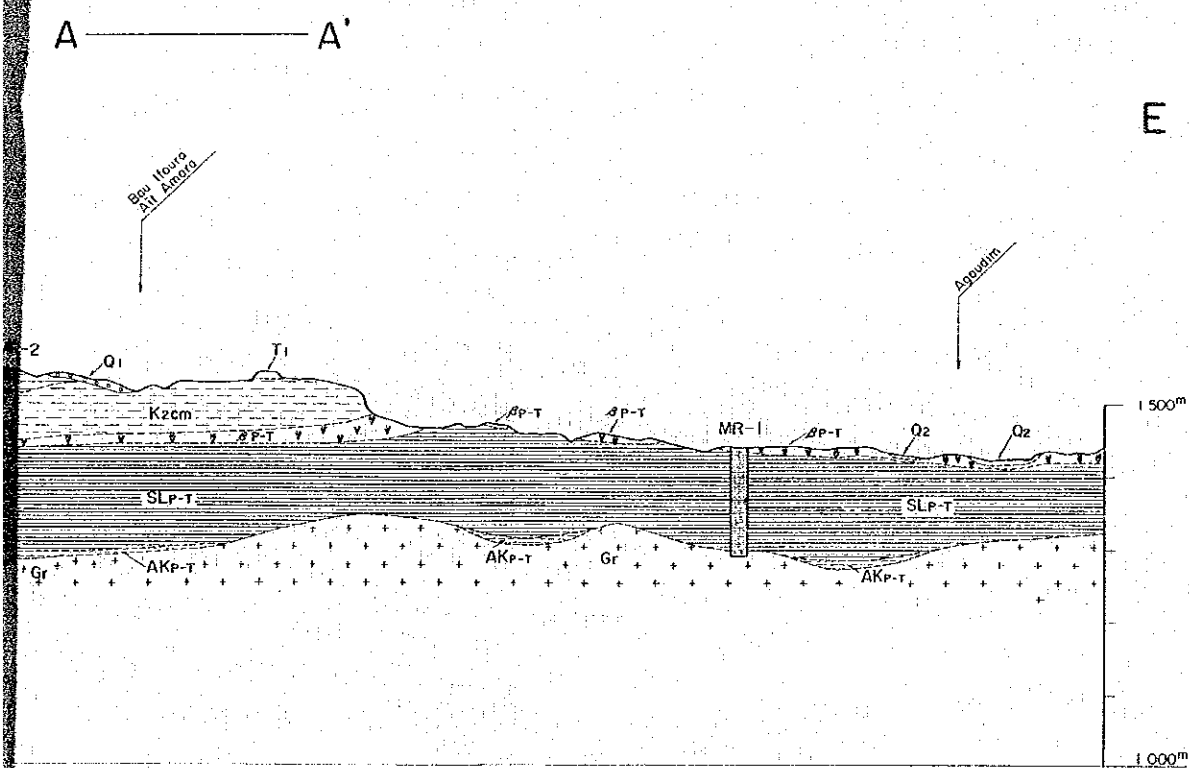
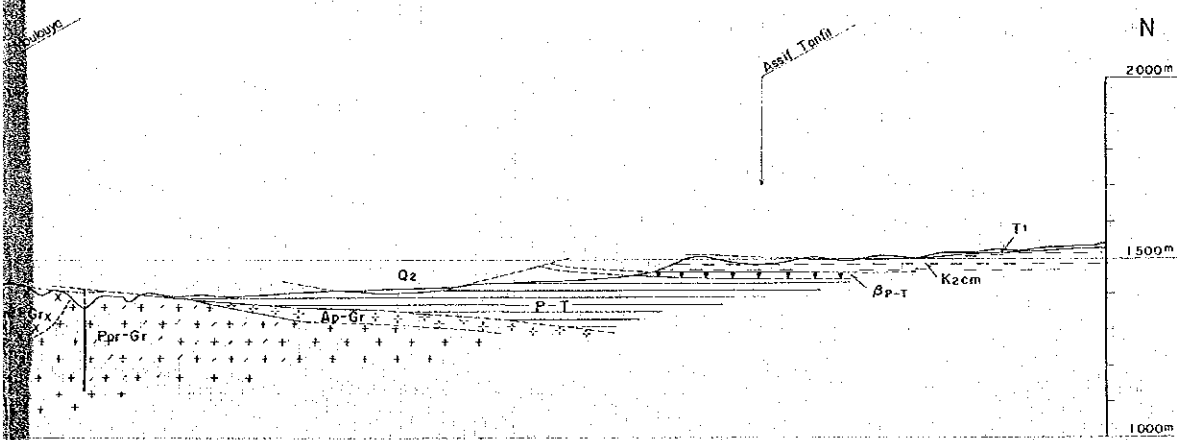
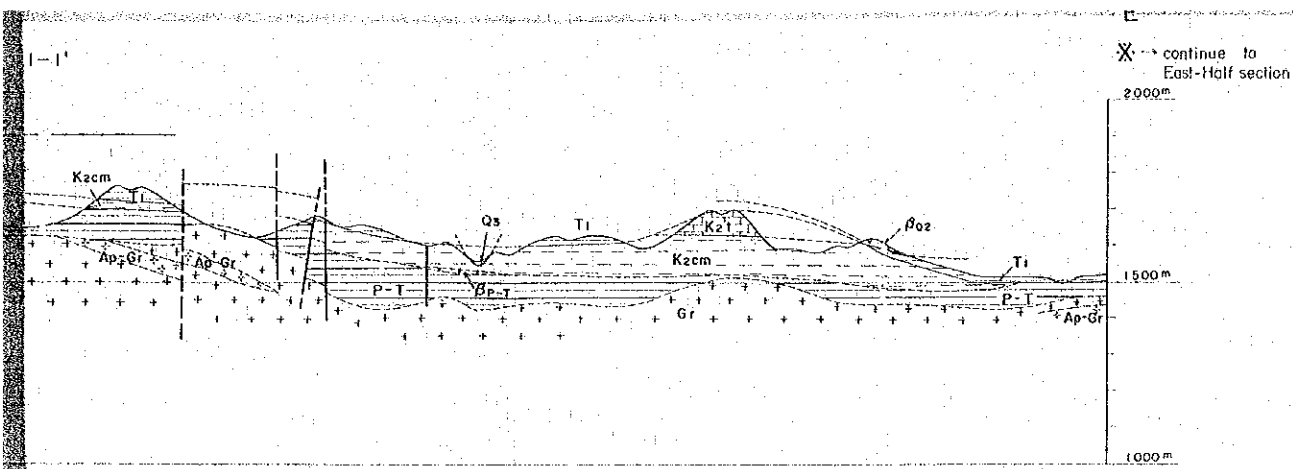
METAL MINING AGENCY OF JAPAN  
JAPAN INTERNATIONAL COOPERATION AGENCY

FEBRUARY 1981

Prepared by MESCO, Inc.

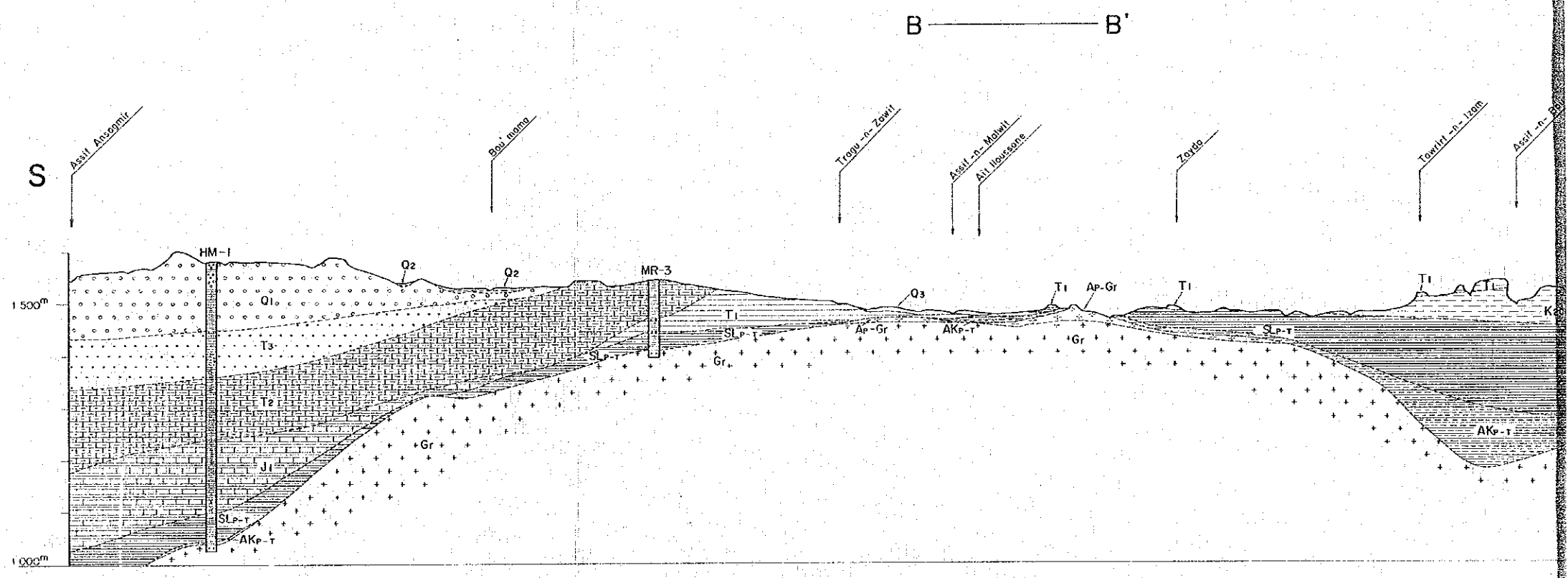
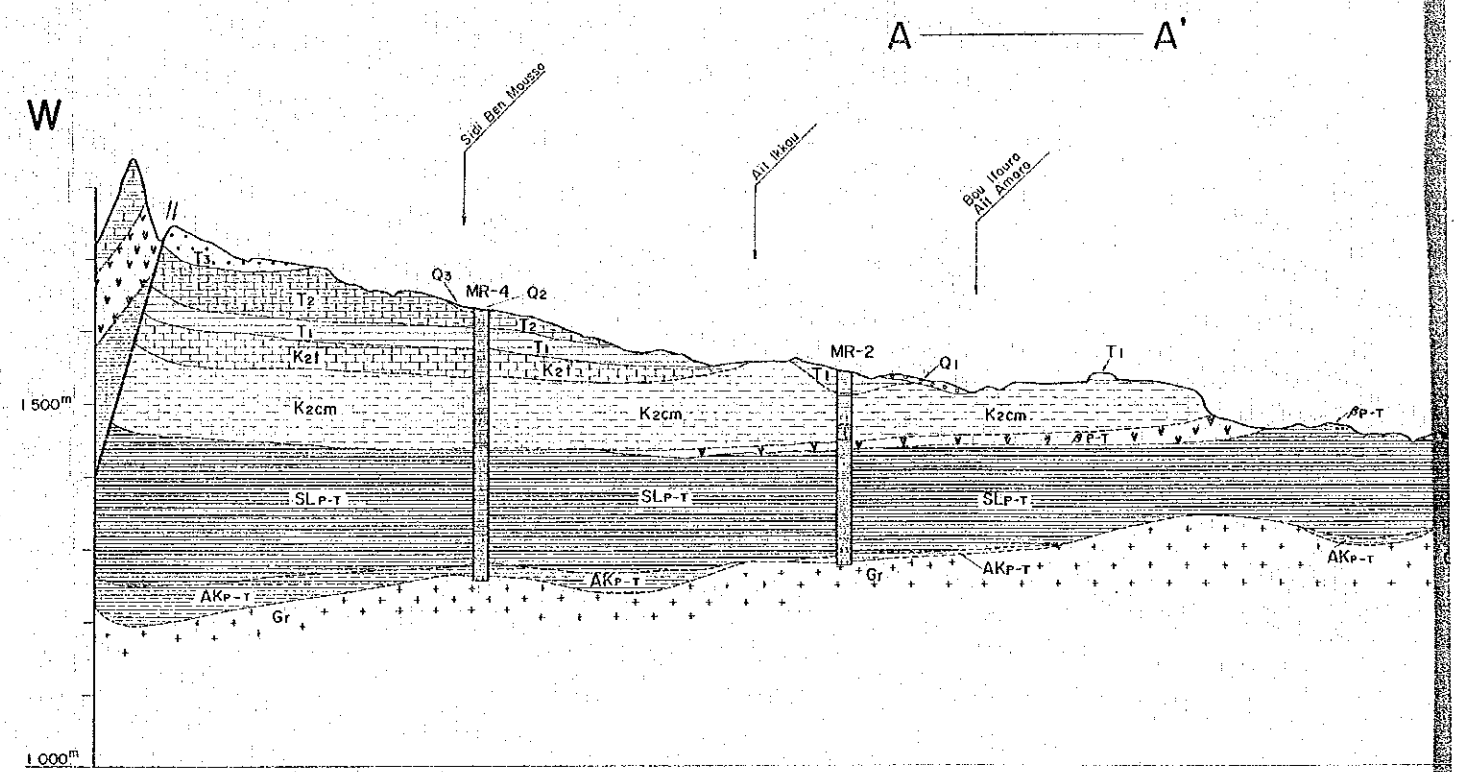


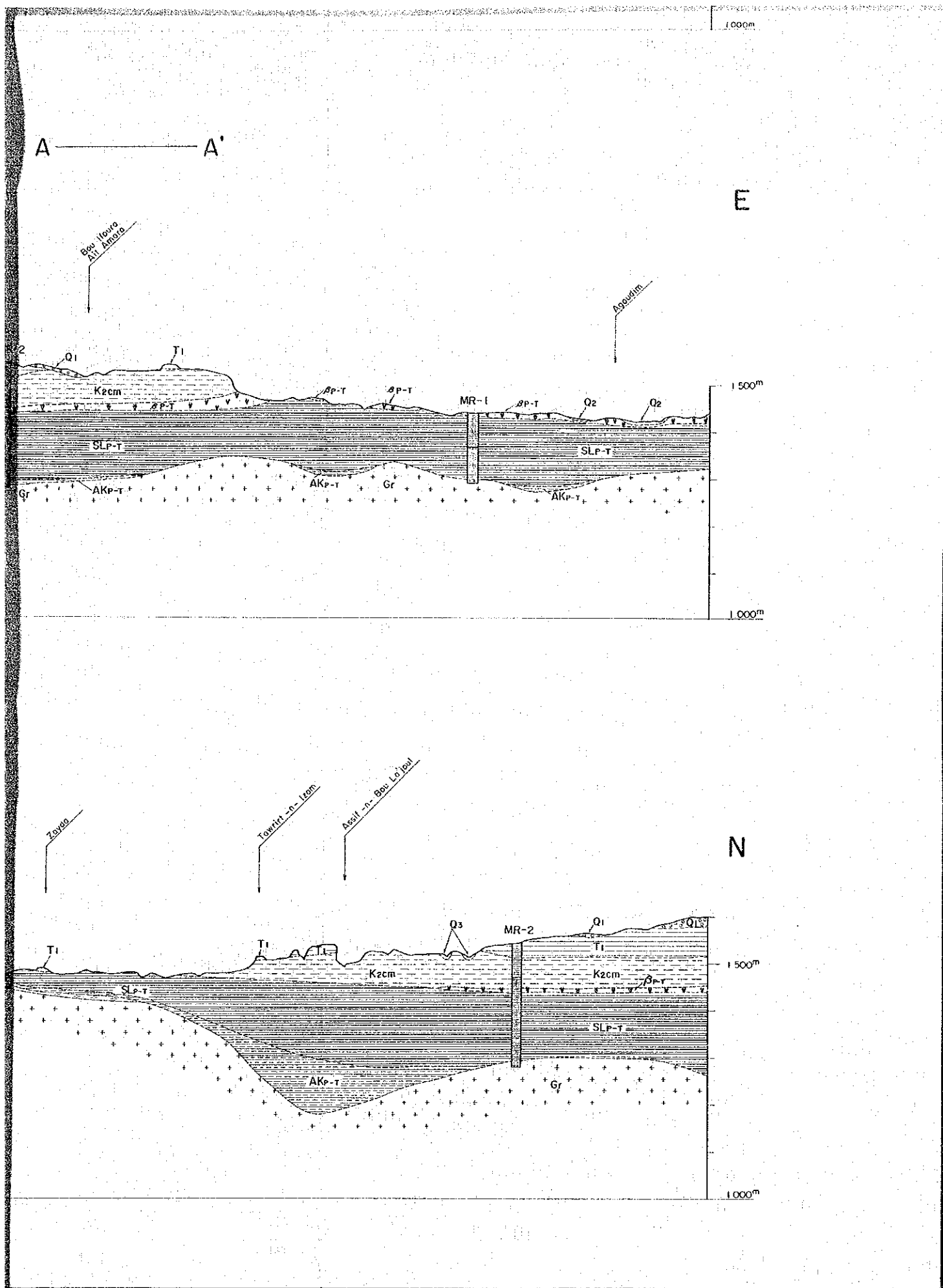




### LEGEND

Geological Age	Geological Unit	Stratigraphical Mark Symbol	Lithology	
Cenozoic	Quaternary	Q3	terrace deposit	
		beta2	basalt (lava)	
		Q2	conglomerate, siltstone, mudstone	
		Q1	conglomerate, siltstone	
Tertiary	Tertiary	T3	calcareous conglomerate, calcareous siltstone, sandstone, marl	
		T2	marl, limestone, siltstone, conglomerate	
		T1	light brown siltstone, conglomeratic sandstone	
Mesozoic	Upper Cretaceous	Turonian	micritic limestone, muddy siltstone, calcareous siltstone, turbidite	
		Cenomanian	K2cm	limestone, calcareous siltstone, poly-colored siltstone, gypsum bed
			K2cm2	siltstone, gypsum bed
			K2cm1	red mudstone, shale, sandstone, limestone
	Middle Jurassic	Dogger	J2d2	limestone, shale
		J2d1	grey mudstone	



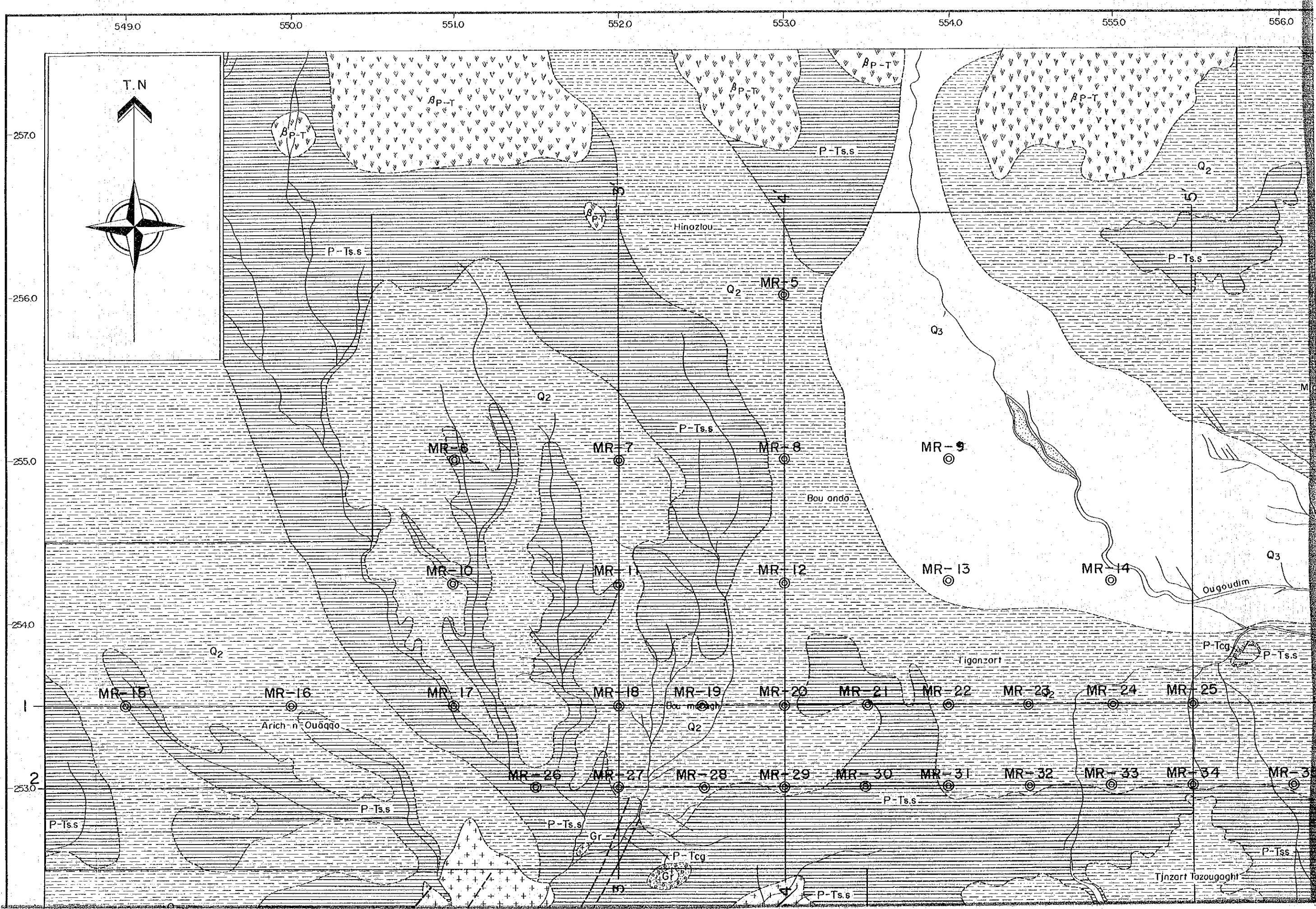


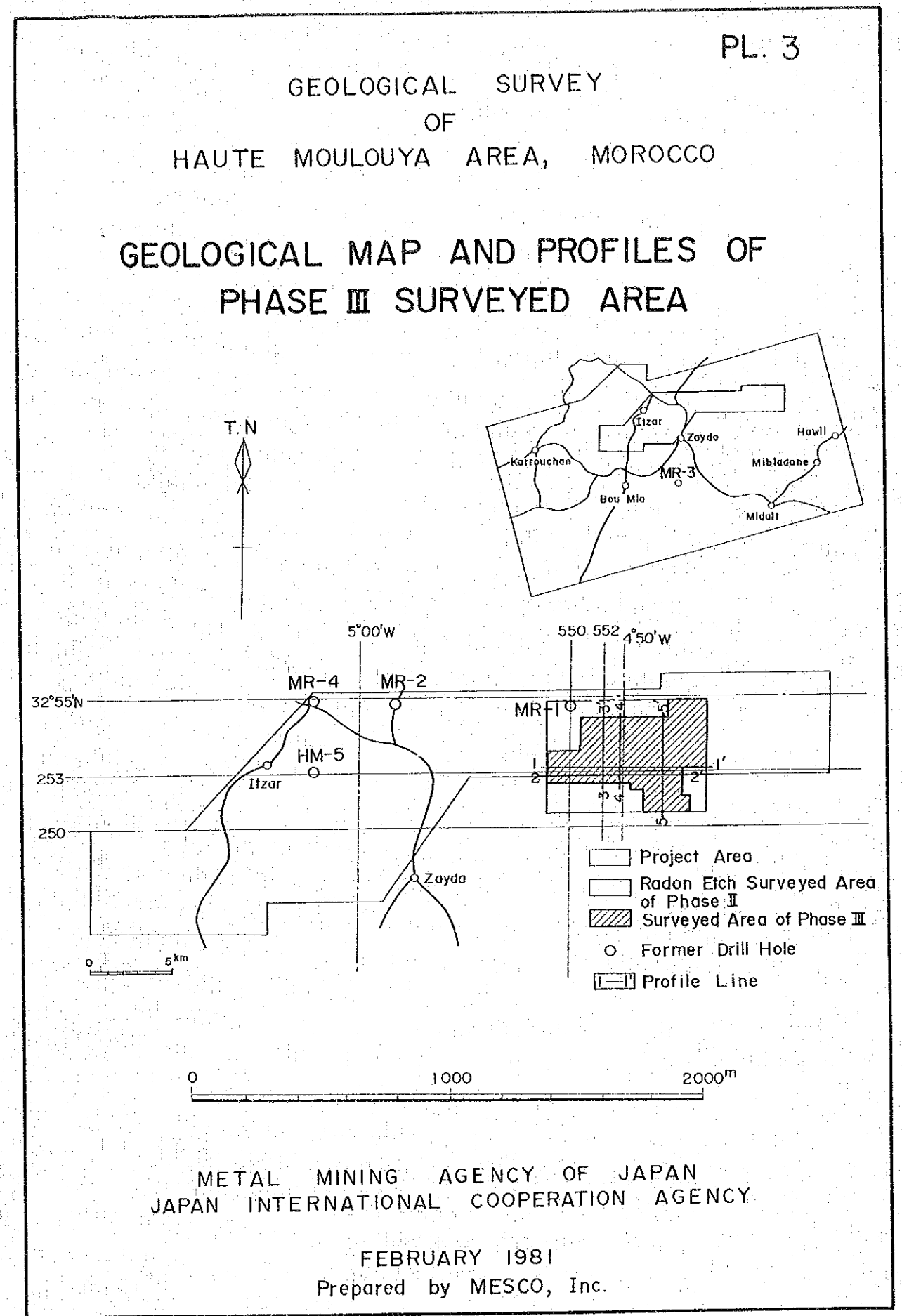
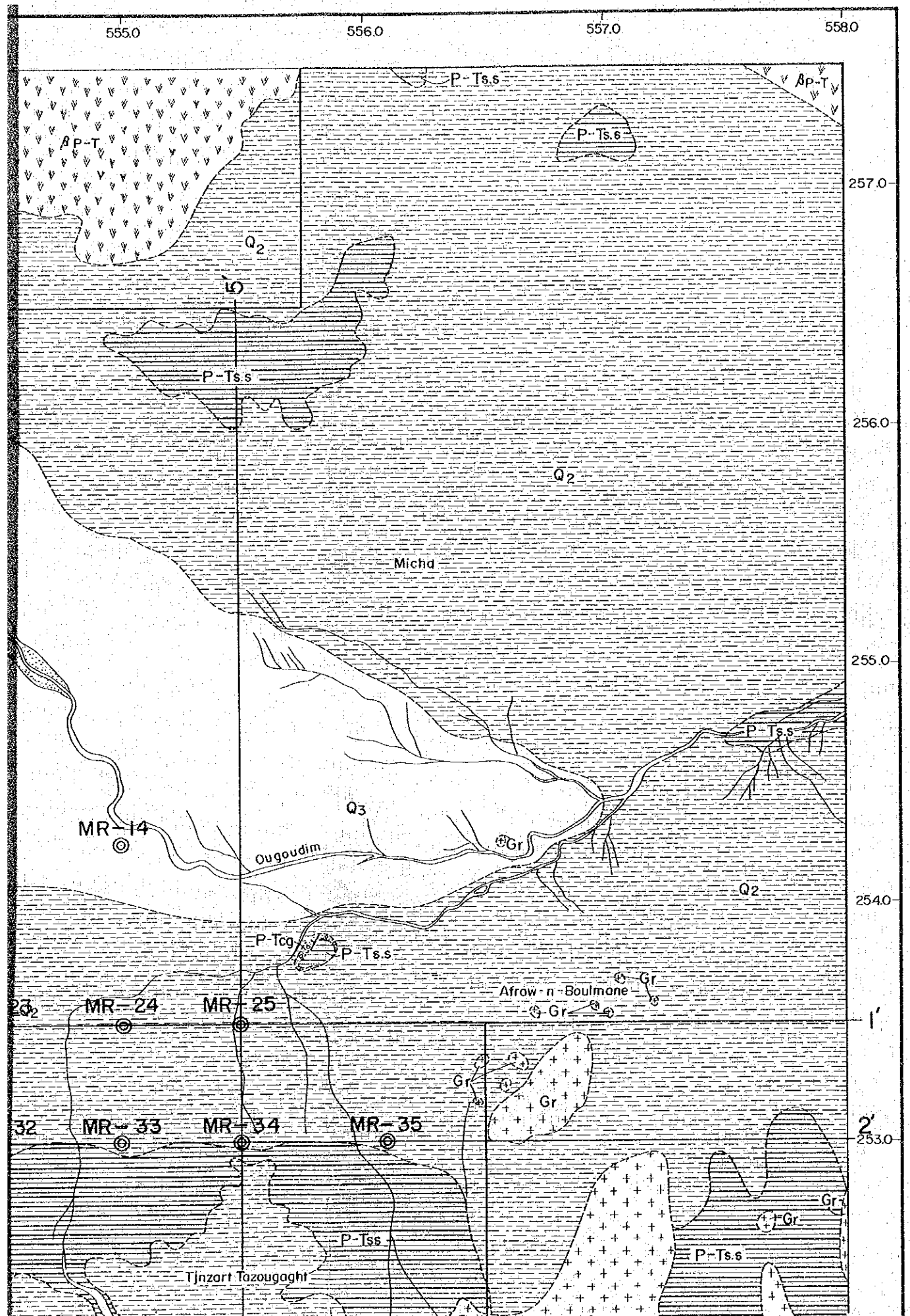
### LEGEND

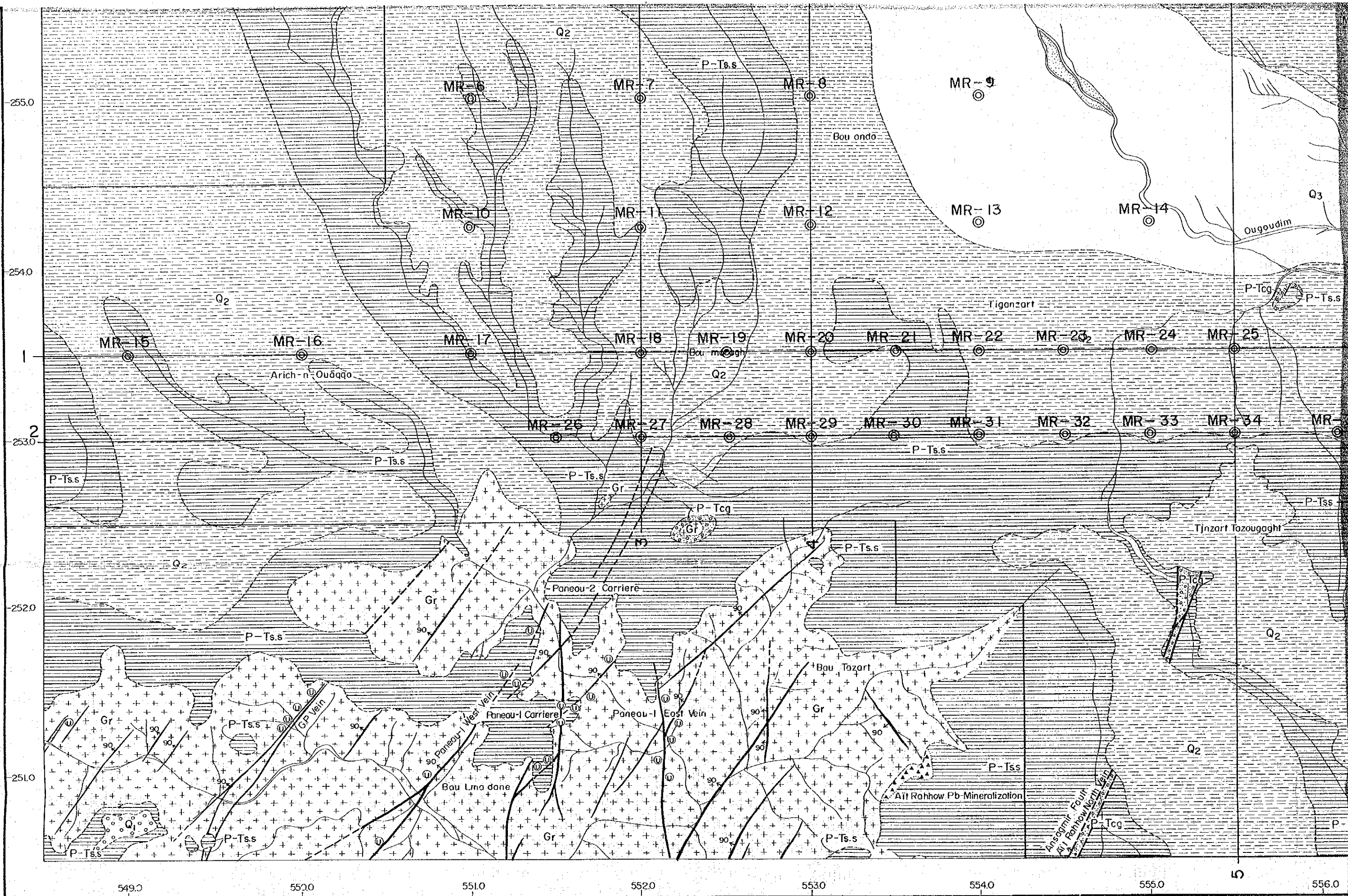
Geological Age	Geological Unit	Stratigraphical Mark Symbol	Lithology	
Cenozoic	Quaternary	Q3	terrace deposit	
		$\beta Q2$	basalt (lava)	
		Q2	conglomerate, siltstone, mudstone	
		Q1	conglomerate, siltstone	
Tertiary	Tertiary	T3	calcareous conglomerate, calcareous siltstone, sandstone, marl	
		T2	marl, limestone, siltstone, conglomerate	
		T1	light brown siltstone, conglomeratic sandstone	
Mesozoic	Upper Cretaceous	Turonian	micritic limestone, muddy siltstone, calcareous siltstone, turbidite	
		Cenomanian	K2t	limestone, calcareous siltstone, poly-colored siltstone, gypsum bed
			K2cm	siltstone, gypsum bed
			K2cm2	red mudstone, shale, sandstone, limestone
	Middle Jurassic	Dogger	J2d2	limestone, shale
			J2d1	grey mudstone
	Lower Jurassic	Lias	J1	limestone, siltstone, marl, sandstone, conglomerate, turbidite, dolomite
	Permo-Triassic	Permo-Trias	$\beta P-T$	basalt (lava), sandstone, conglomerate
			P-T / AK/SL	red sandstone, arkose sandstone, siltstone, mudstone
	Proterozoic ~ Paleozoic	Basement Complex	Ap-Gr	aplitic granite
Gr			granite	
Por-Gr			porphyritic granite	
Cnt-Gr			contaminated granite	
Gr-Dio			granodiorite	
Sch			sericite-chlorite schist, amphibole schist, amphibolite	

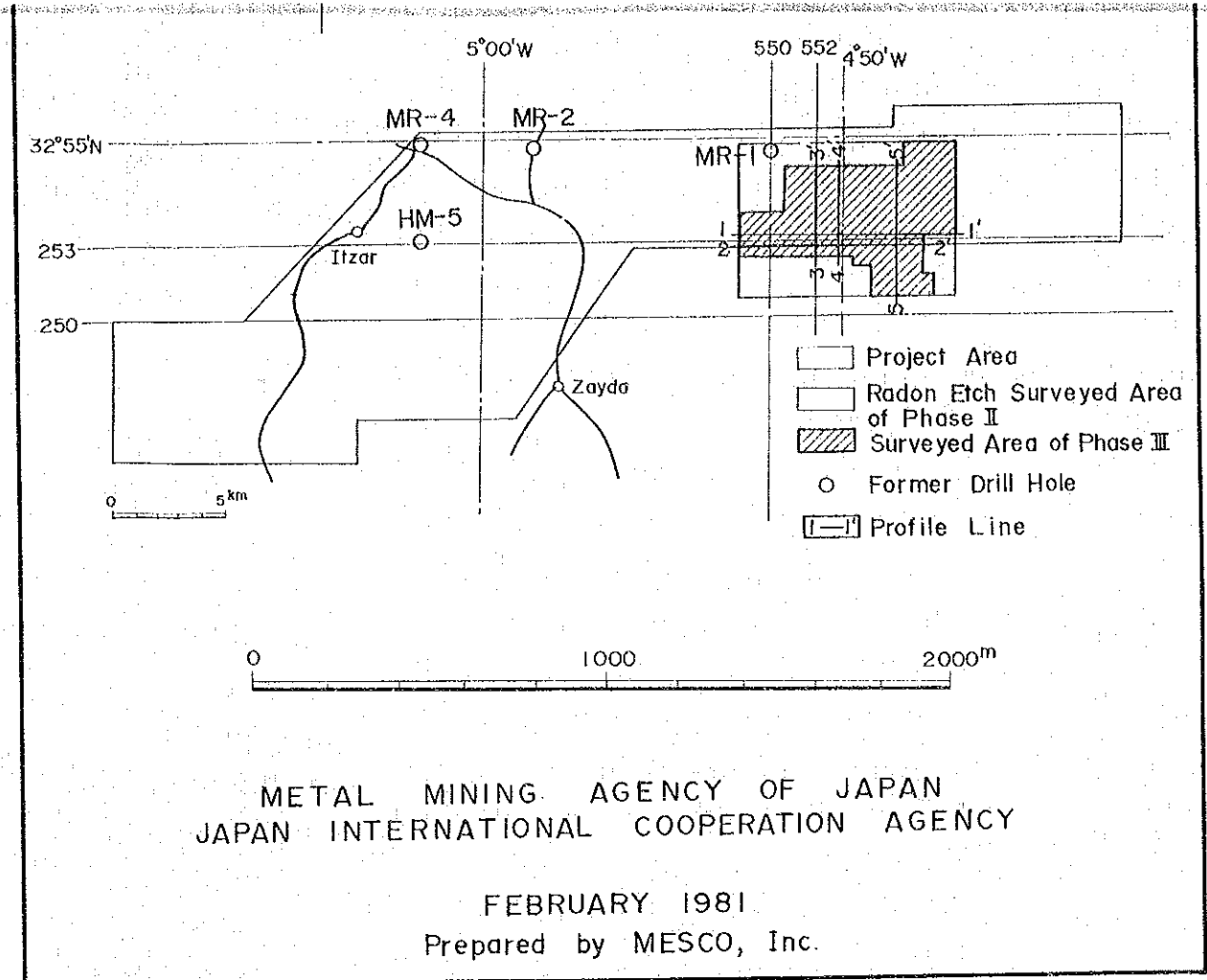
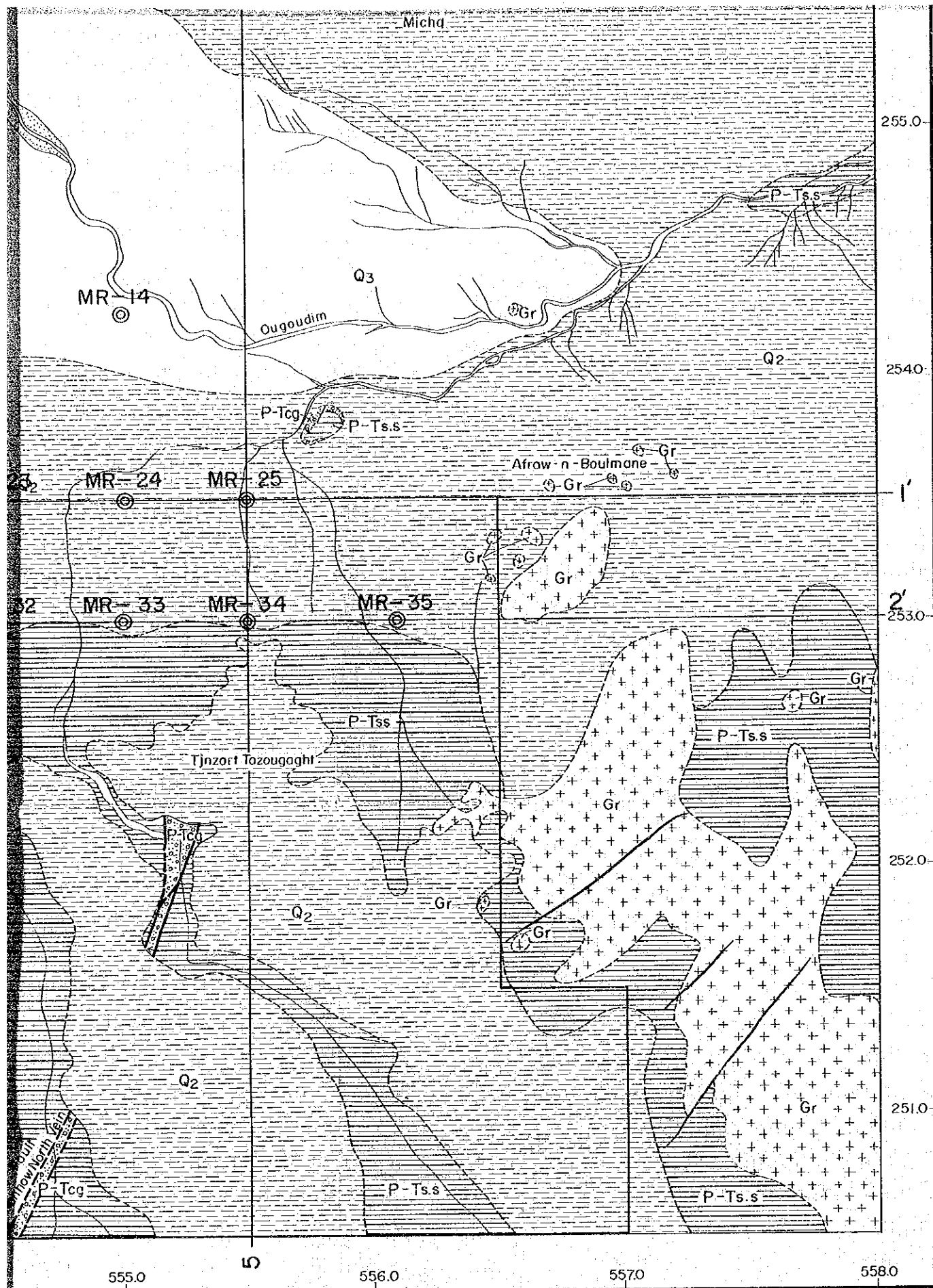
	fault; defined/ approximate
	geological boundary; clear/ gradual/ assumed
	drill hole







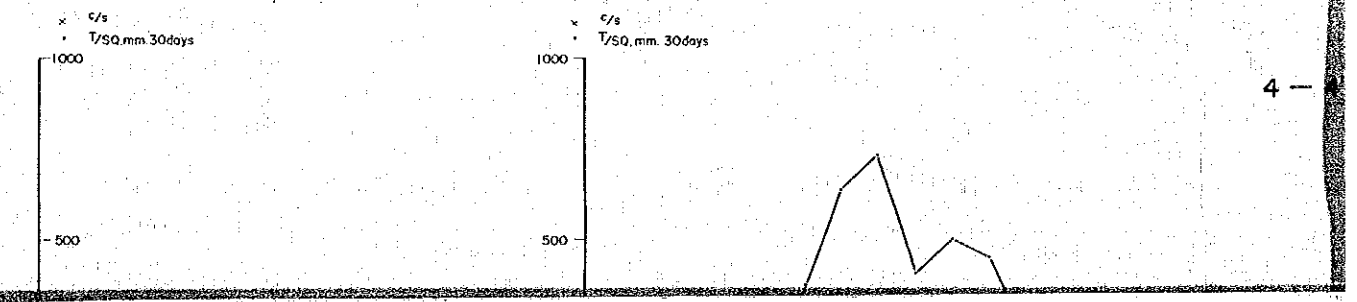
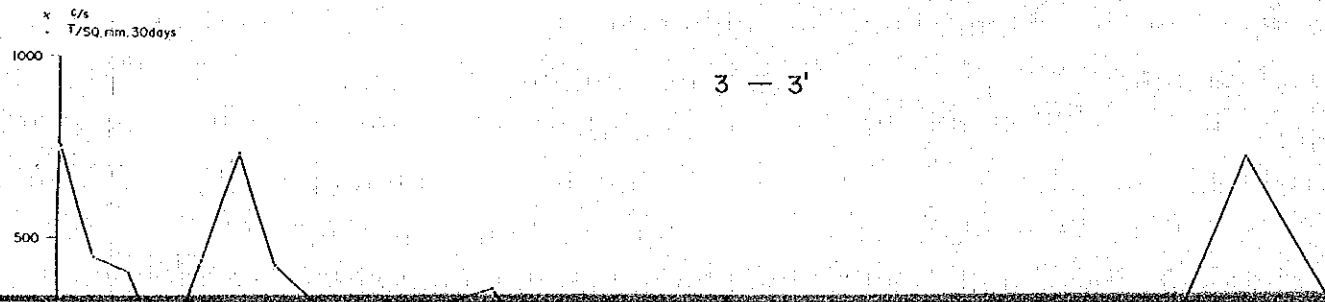
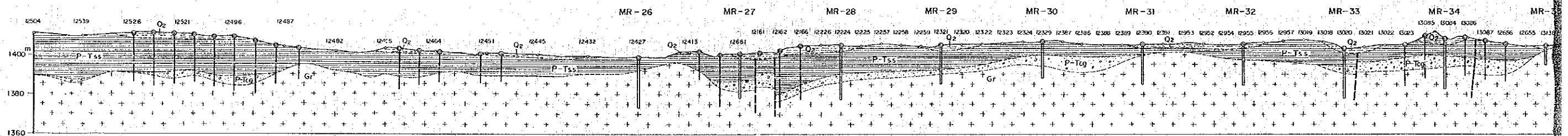
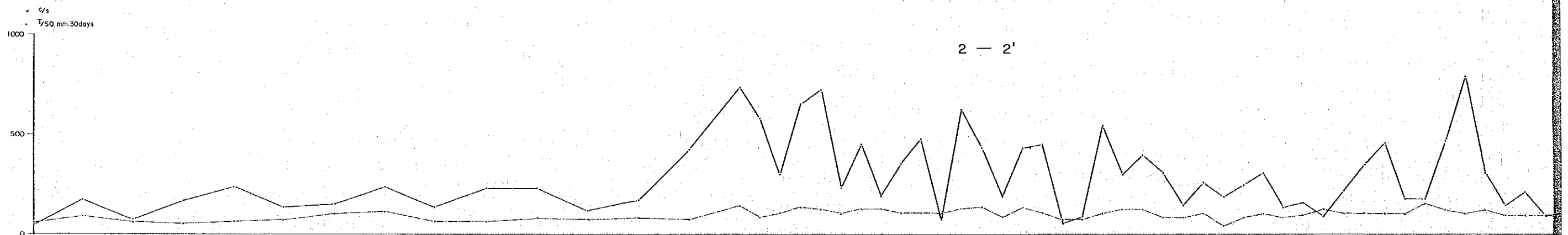
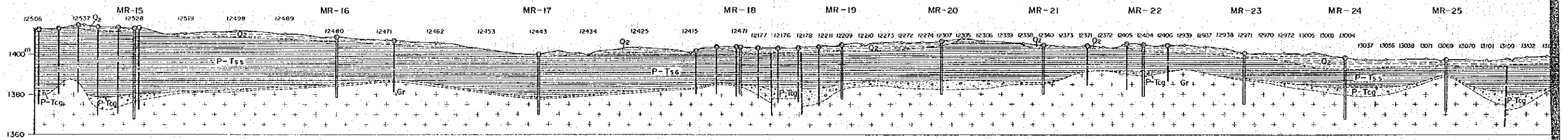
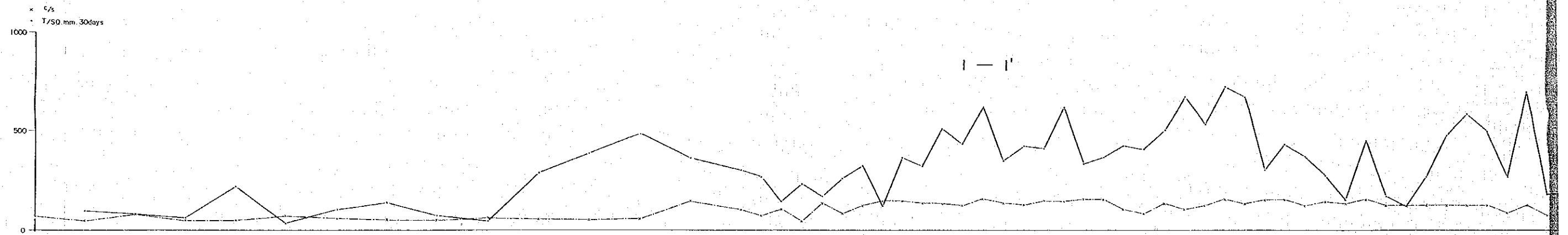
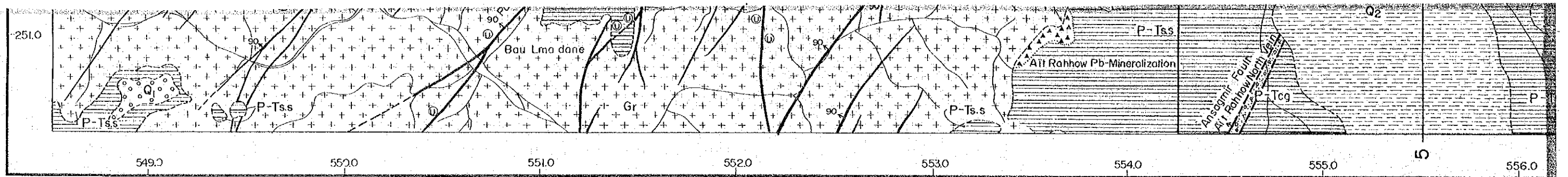


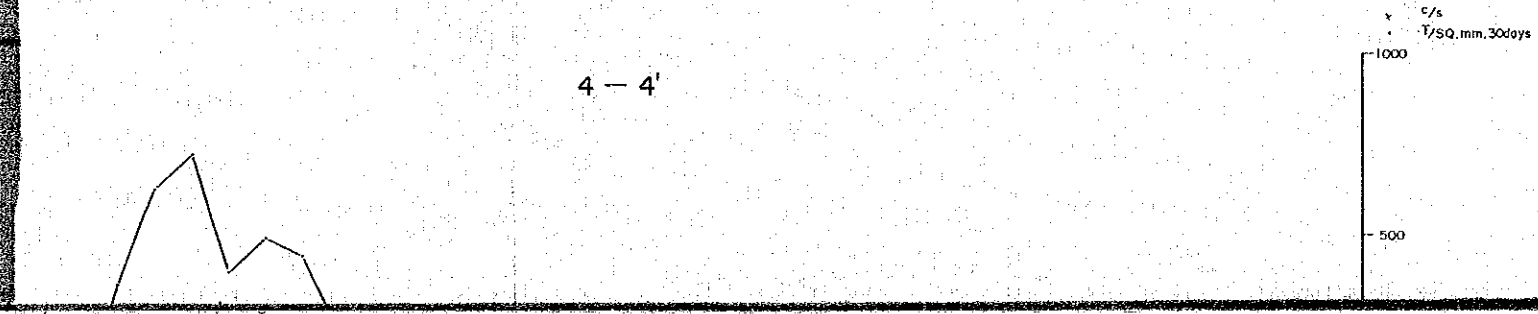
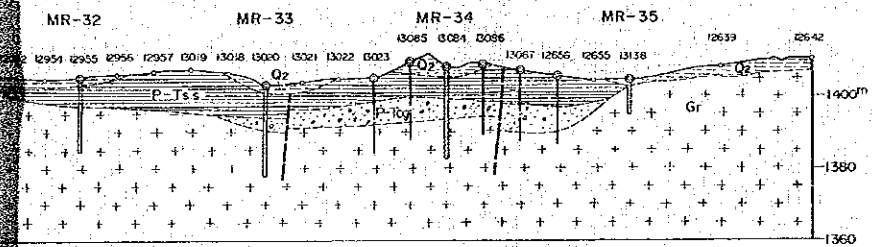
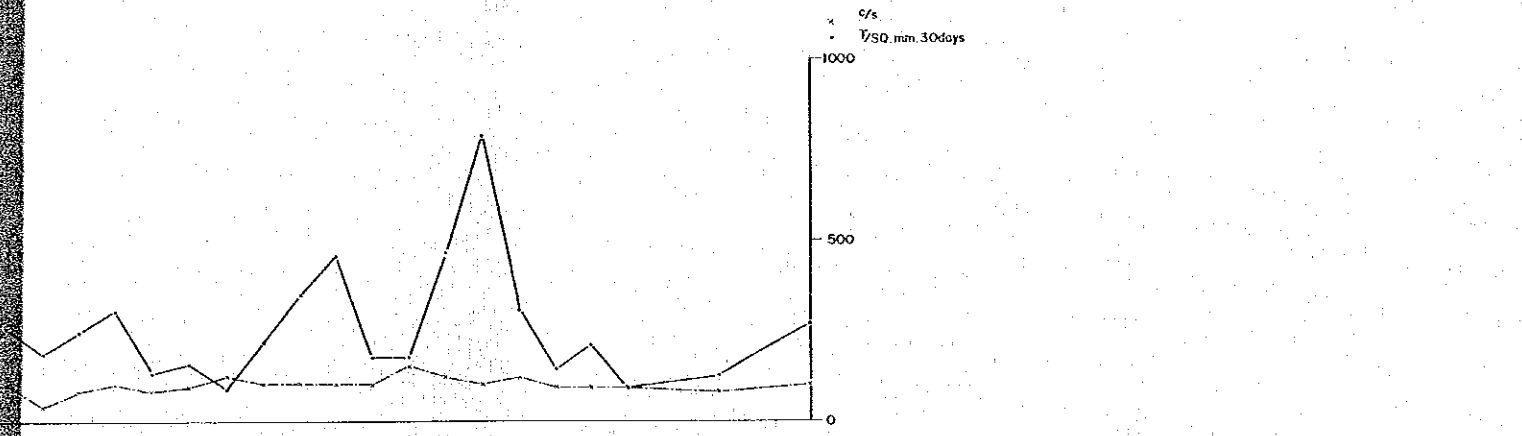
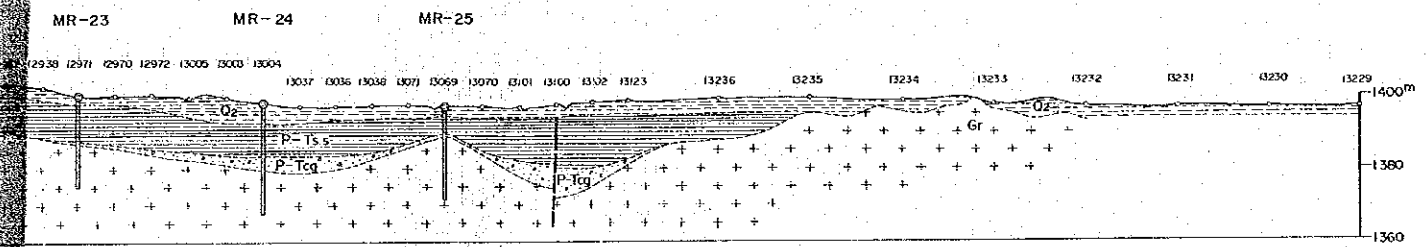
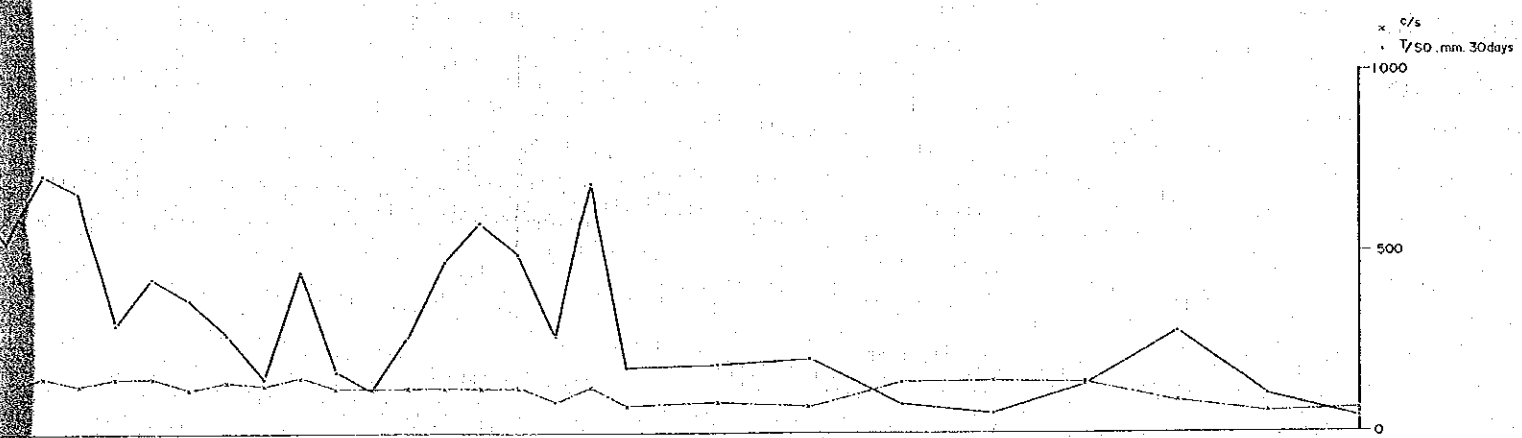
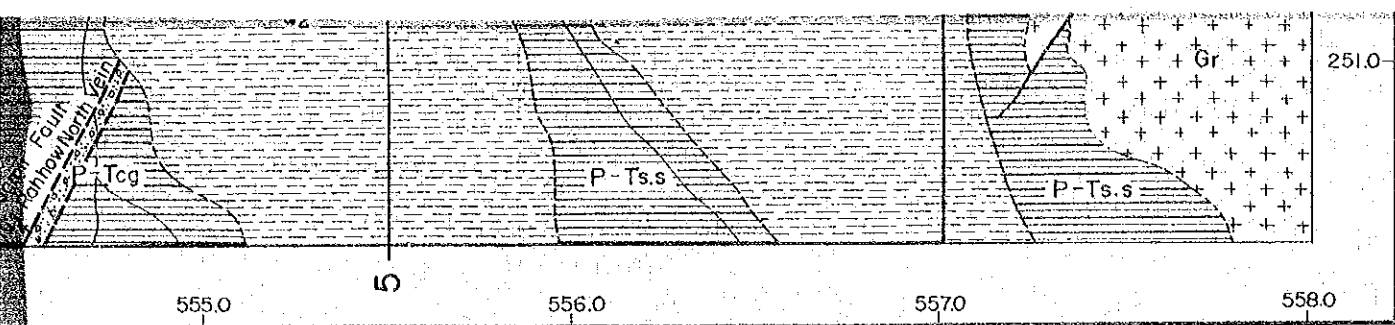







LEGEND

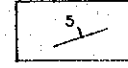
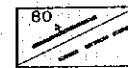
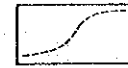
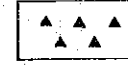
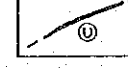
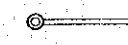
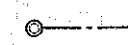

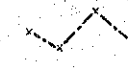
Geological Age	Geological Unit	Stratigraphical Mark Symbol	Lithology
Cenozoic	Quaternary	Q <sub>3</sub> [Symbol]	Terrace deposit
		Q <sub>2</sub> [Symbol]	Conglomerate, siltstone, mudstone
		Q <sub>1</sub> [Symbol]	Conglomerate, siltstone
Mesozoic	Permo-Triassic	β <sub>P-T</sub> [Symbol]	Basalt (lava), sandstone, conglomerate
		P-Ts.s [Symbol]	Red sandstone, arkose sandstone, siltstone, mudstone
		P-Tcg [Symbol]	Red arkosic granule conglomerate
Paleozoic		[Symbol]	Granite, aplitic granite,

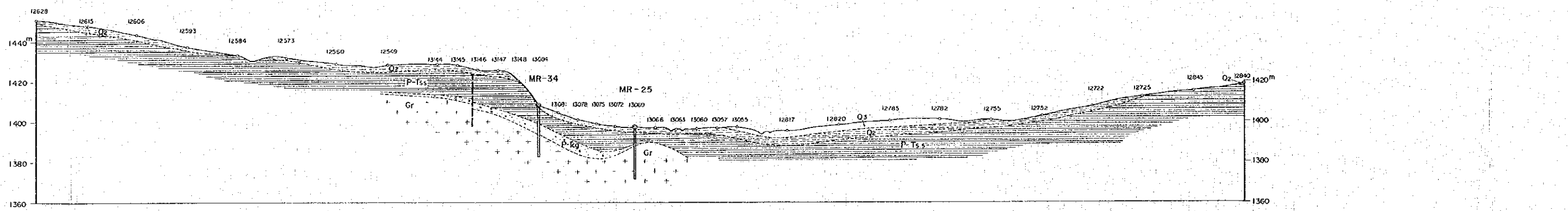
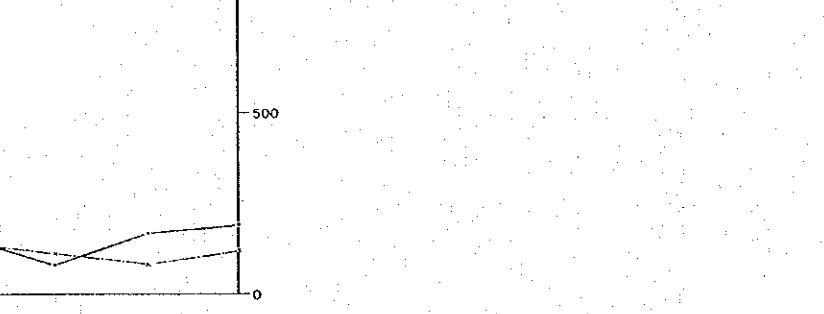
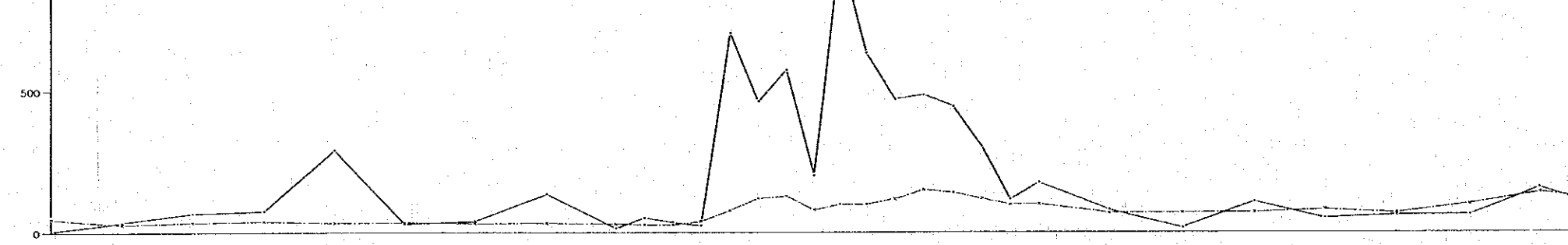
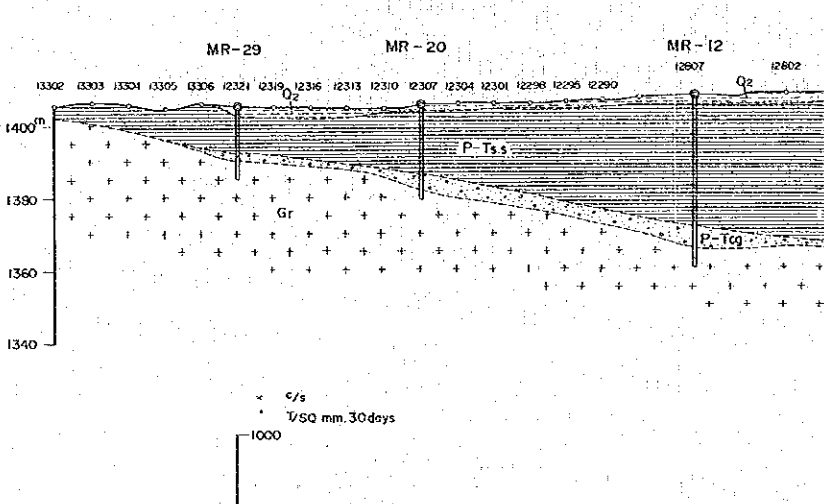
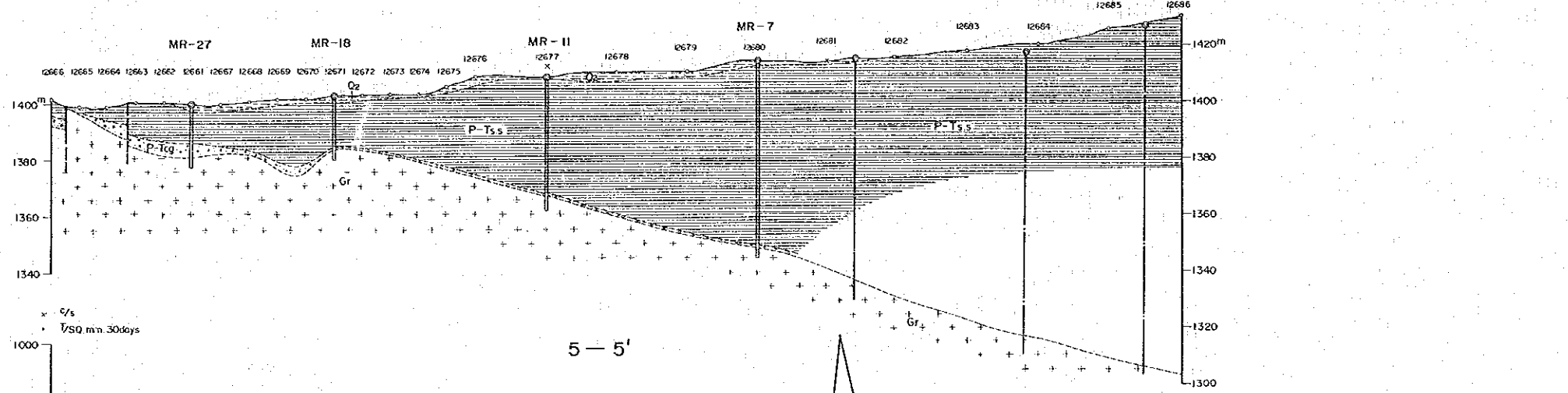
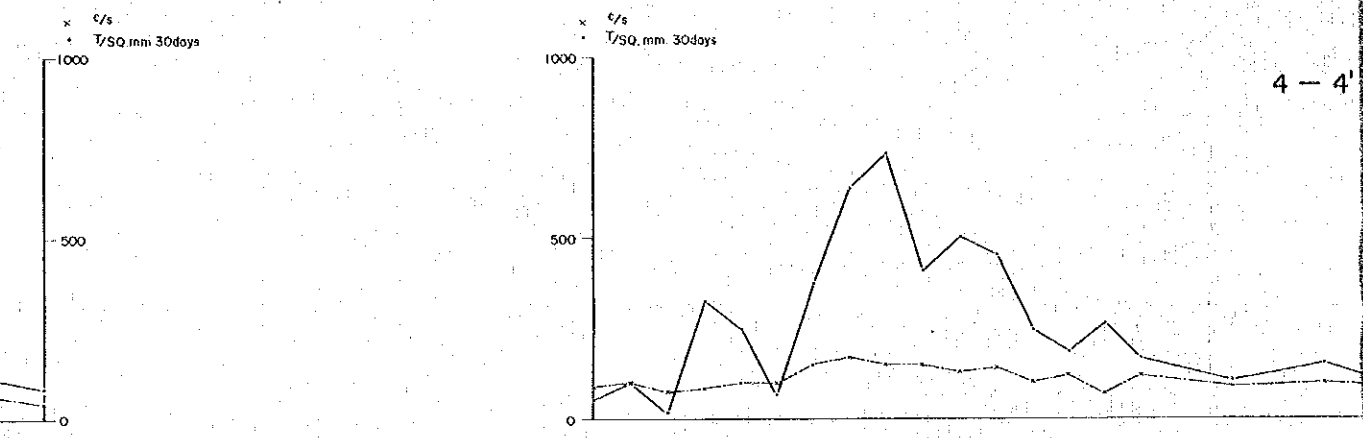
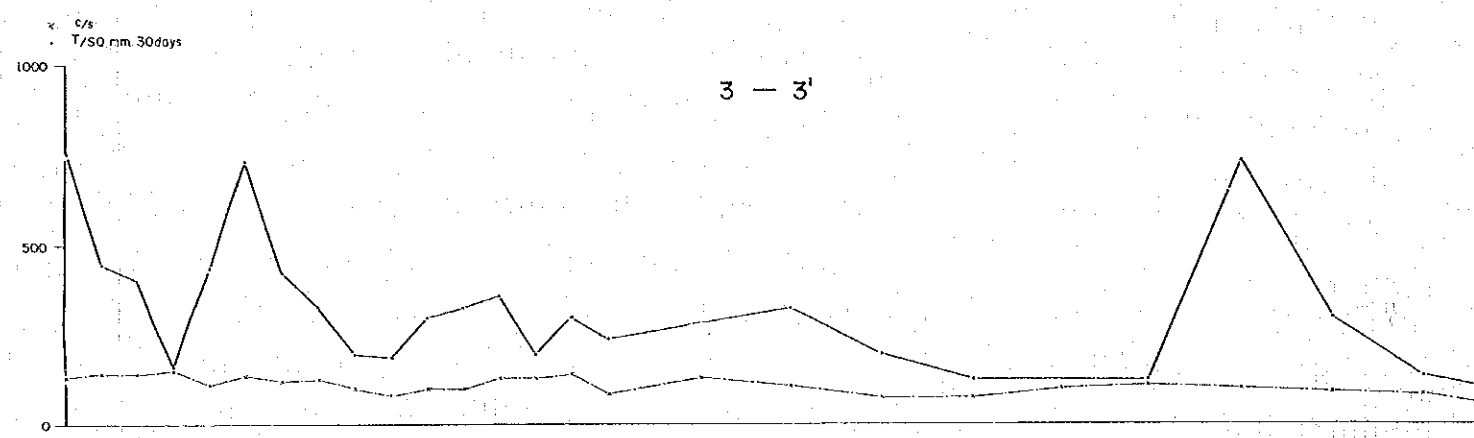
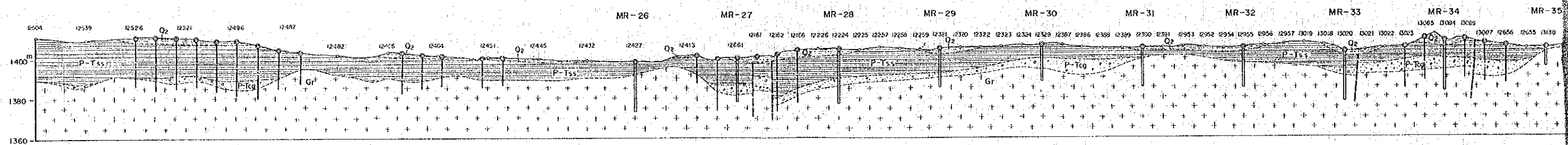
c/s  
 1/50 mm, 30 days  
 1000

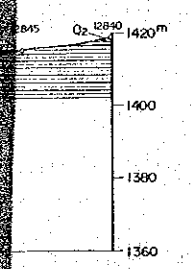
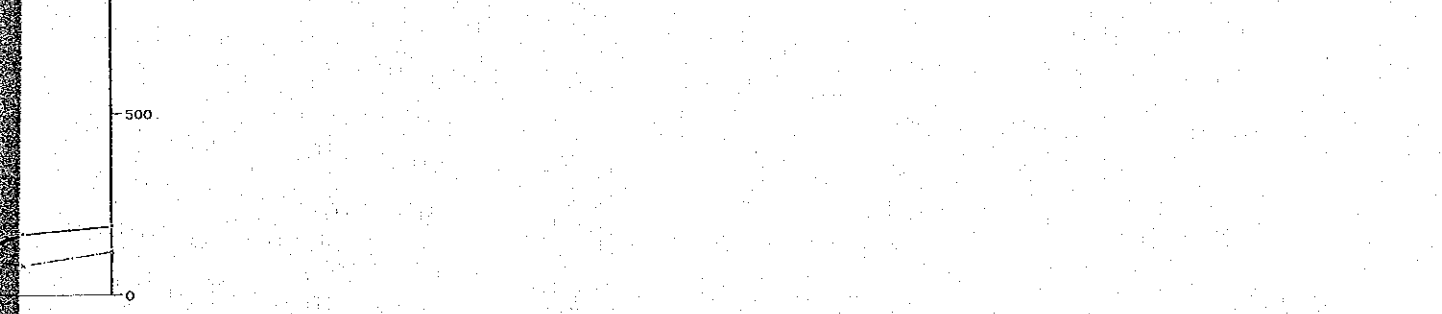
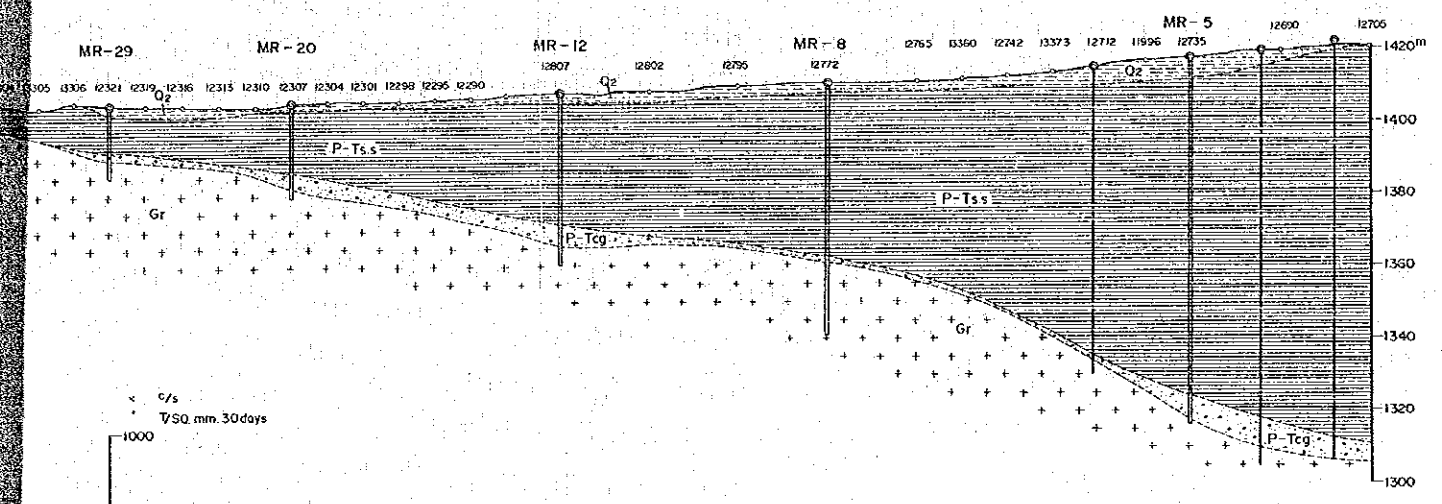
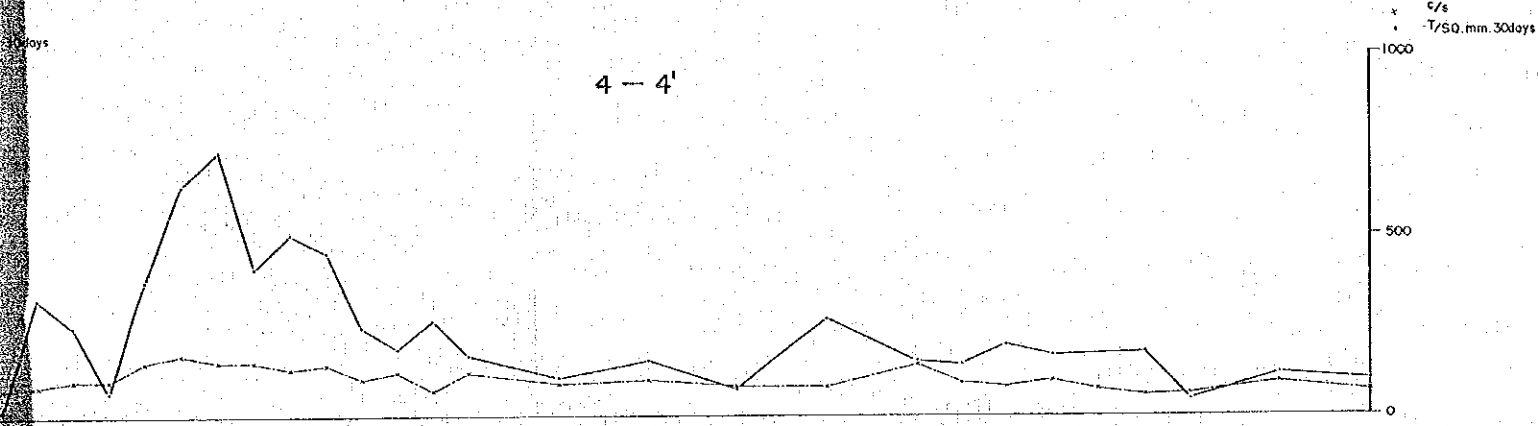
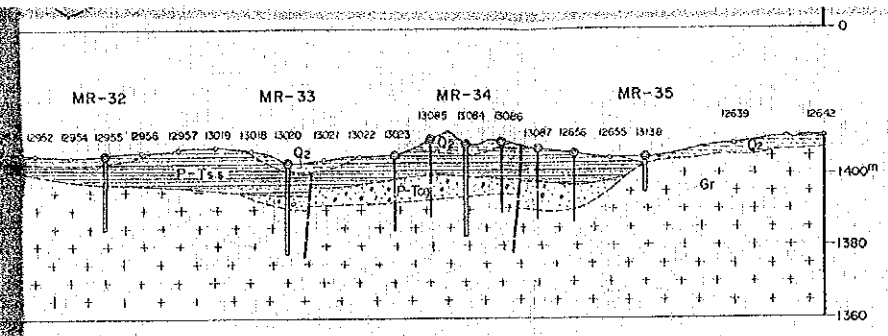




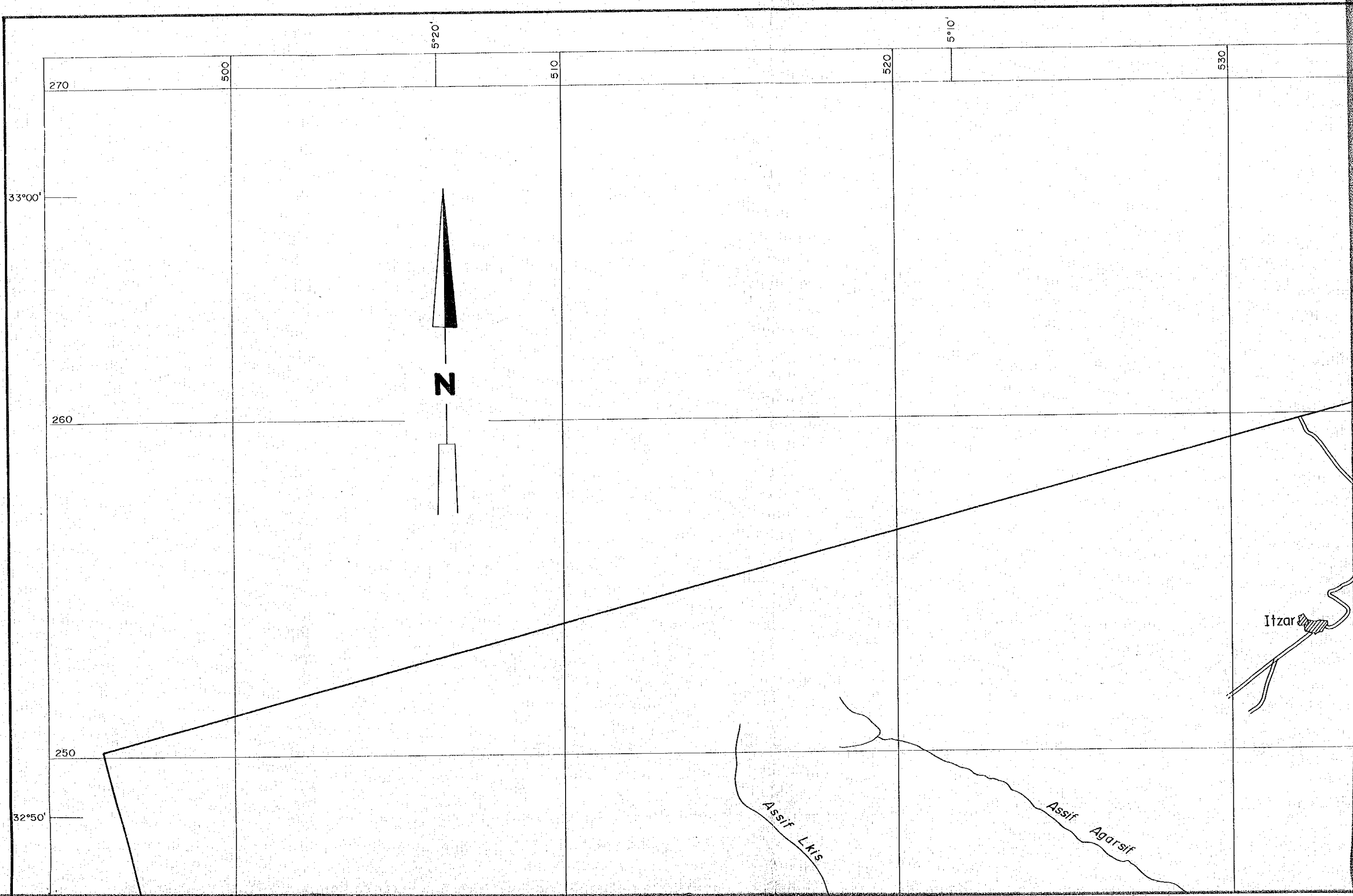
Gen.	Quat	Qi		Qi	Conglomerate, siltstone
Mesozoic	Permo - Triassic	Permo - Triassic		$\beta$ P-T	Basalt (lava), sandstone, conglomerate
				P-Ts.s	Red sandstone, arkose sandstone, siltstone, mudstone
Paleozoic	Permo - Triassic	Permo - Triassic		P-Tcg	Red arkosic granule conglomerate
				Gr	Granite, aplitic granite, porphyritic granite
Proterozoic	Paleozoic	Precambrian			
		Basement Complex			

-  Bedding plane
-  Fault ; defined / assumed
-  Geological boundary
-  Pb disseminated mineralization
-  Uranium mineralization
- 13303 Radon etch cup serial numbers
- o Location of recovered cup
- x Location of unrecovered cup
-  Location of drill hole (by M.M.A.J.)
-  Location of drill hole (by B.R.P.M.)
-  Radon etch curve (T/SQ.mm. 30days)
-  Radioactivity curve (c/s by SPP-2NF)





- x Location of unrecovered cup
- ⊙ Location of drill hole (by M.M.A.J)
- ⊙ Location of drill hole (by B.R.P.M)
- Radon etch curve (T/SQ. mm. 30days)
- Radioactivity curve (c/s by SPP-2 NF)



5°20'

5°10'

270

500

510

520

530

33°00'

260

250

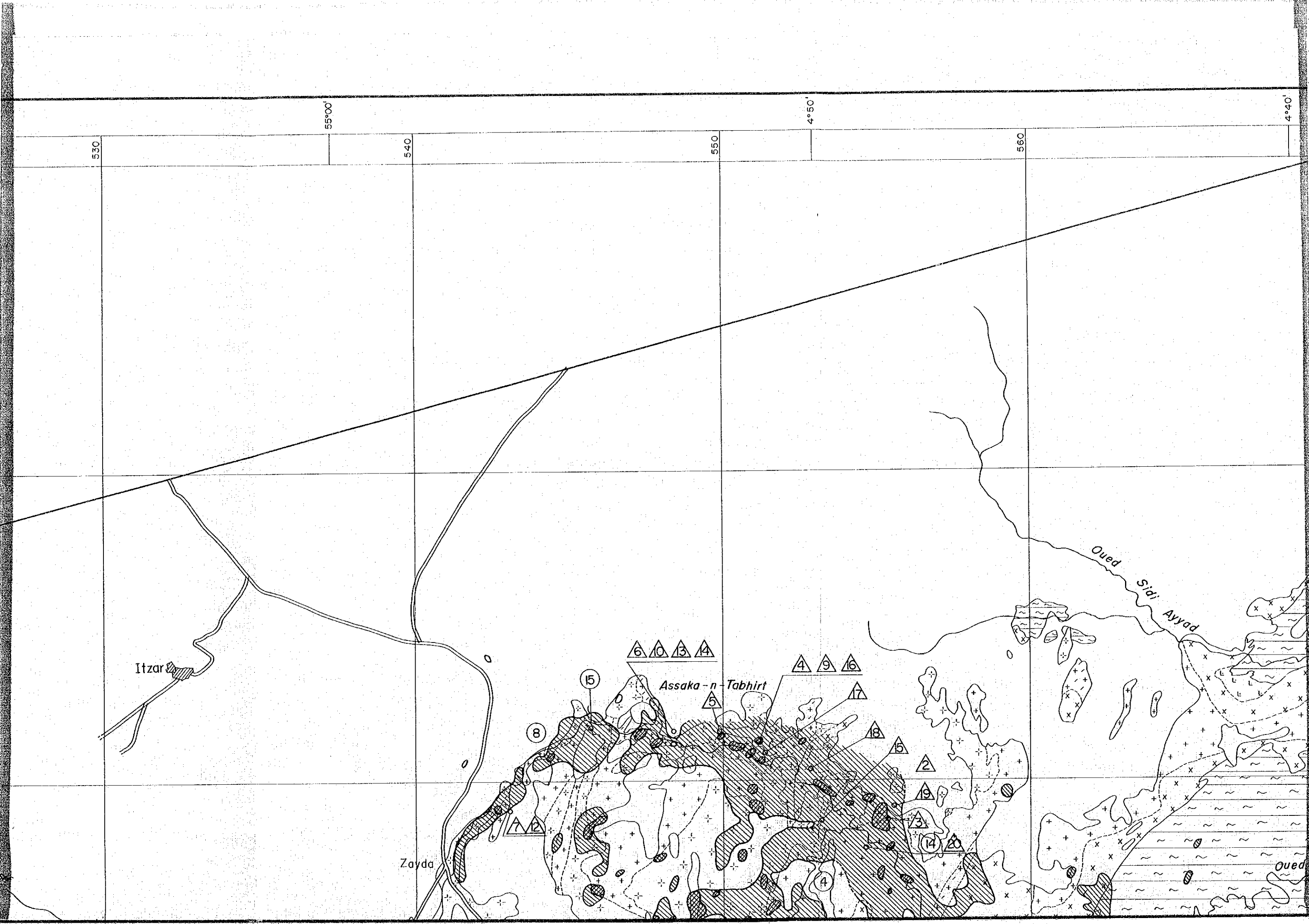
32°50'

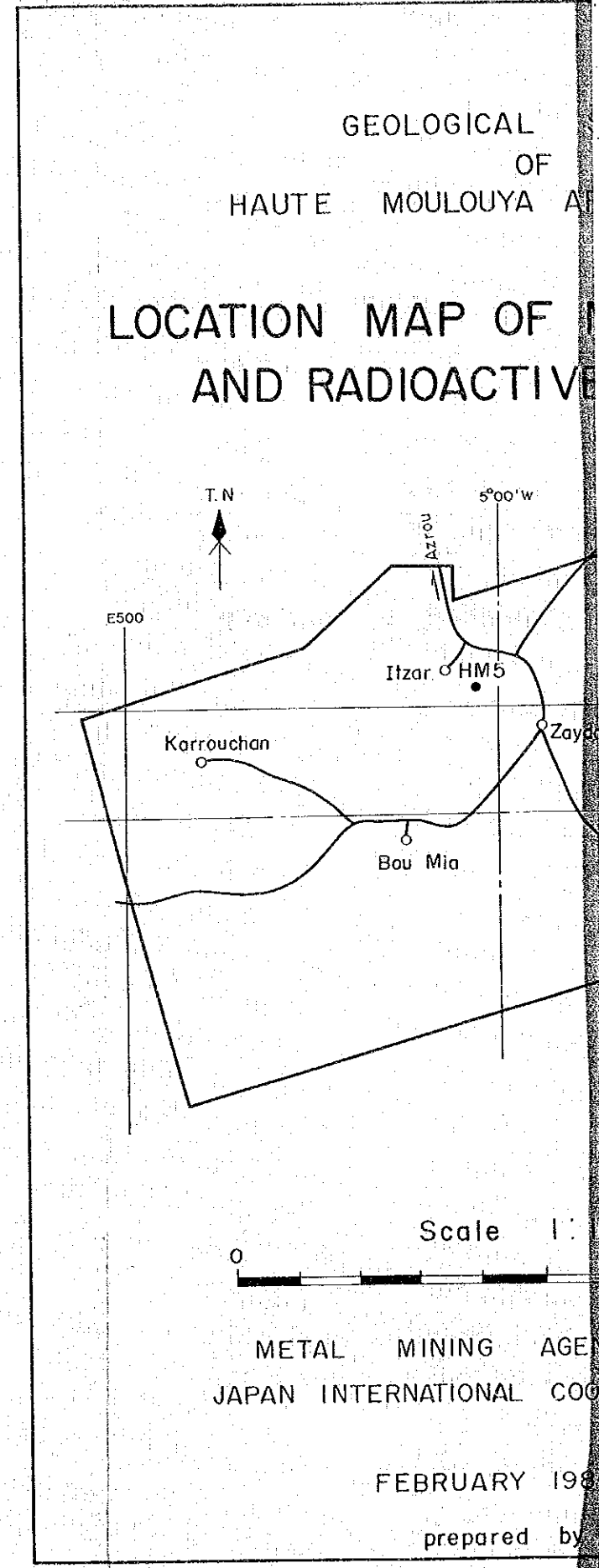
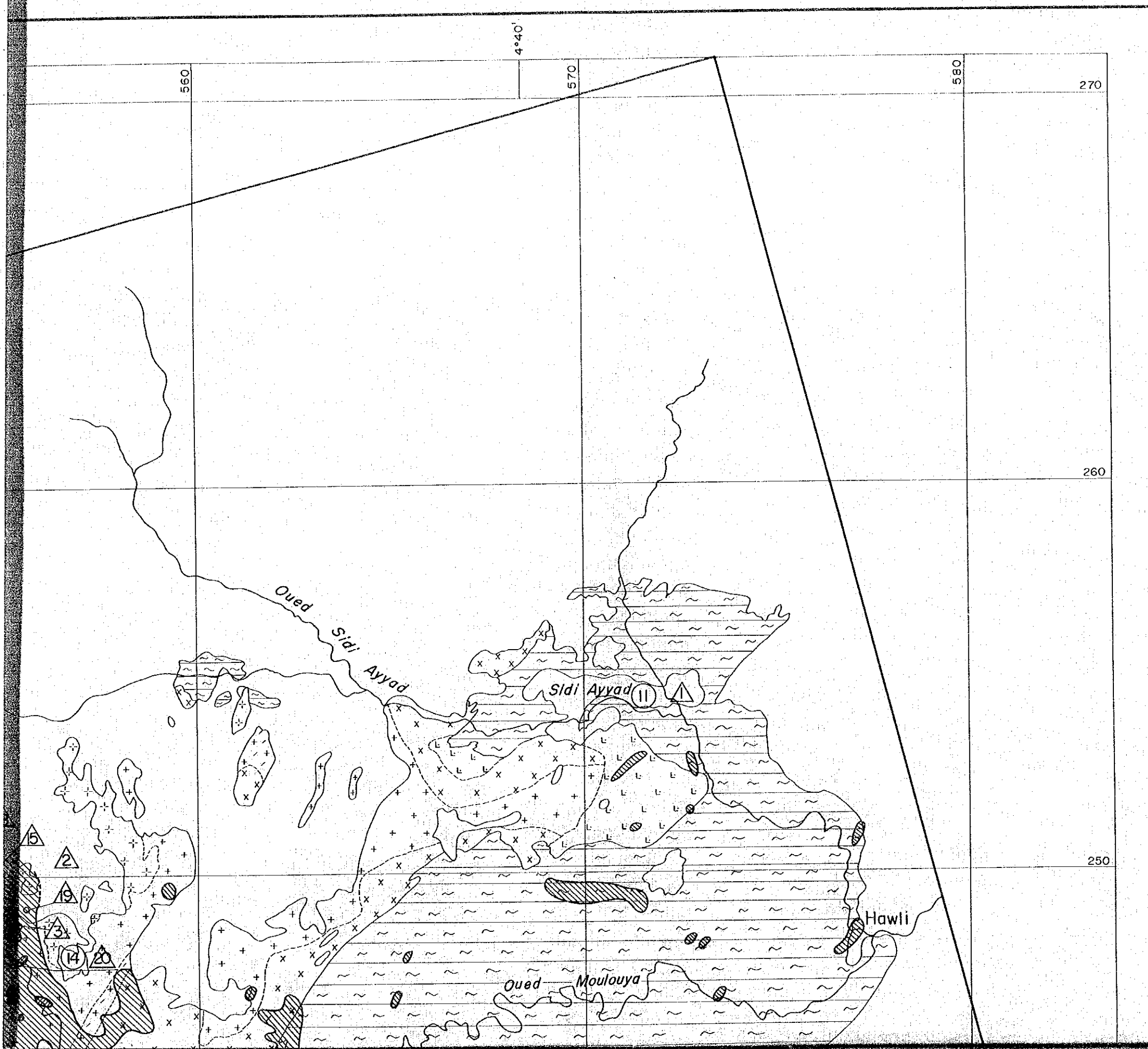
**N**

Itzar

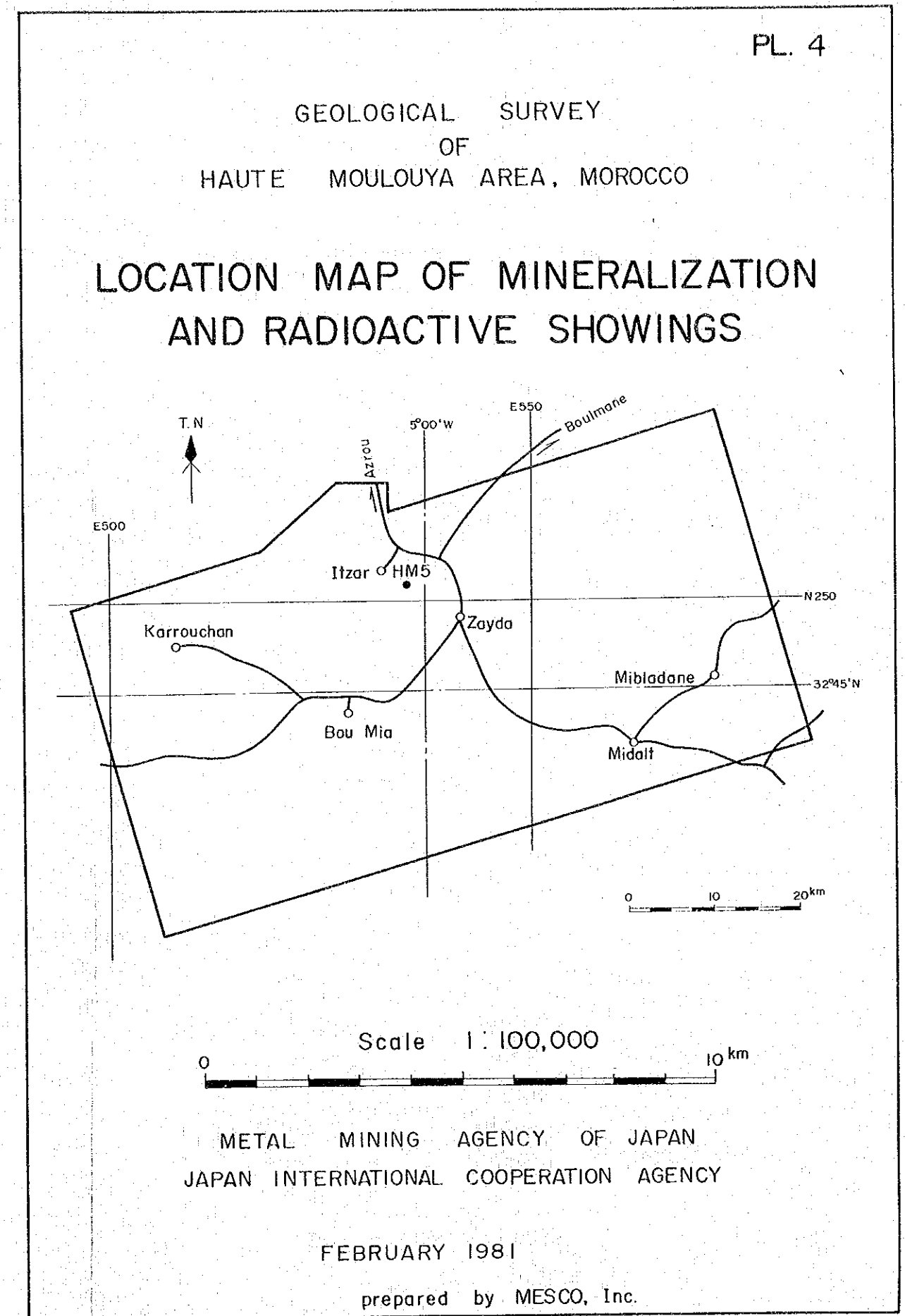
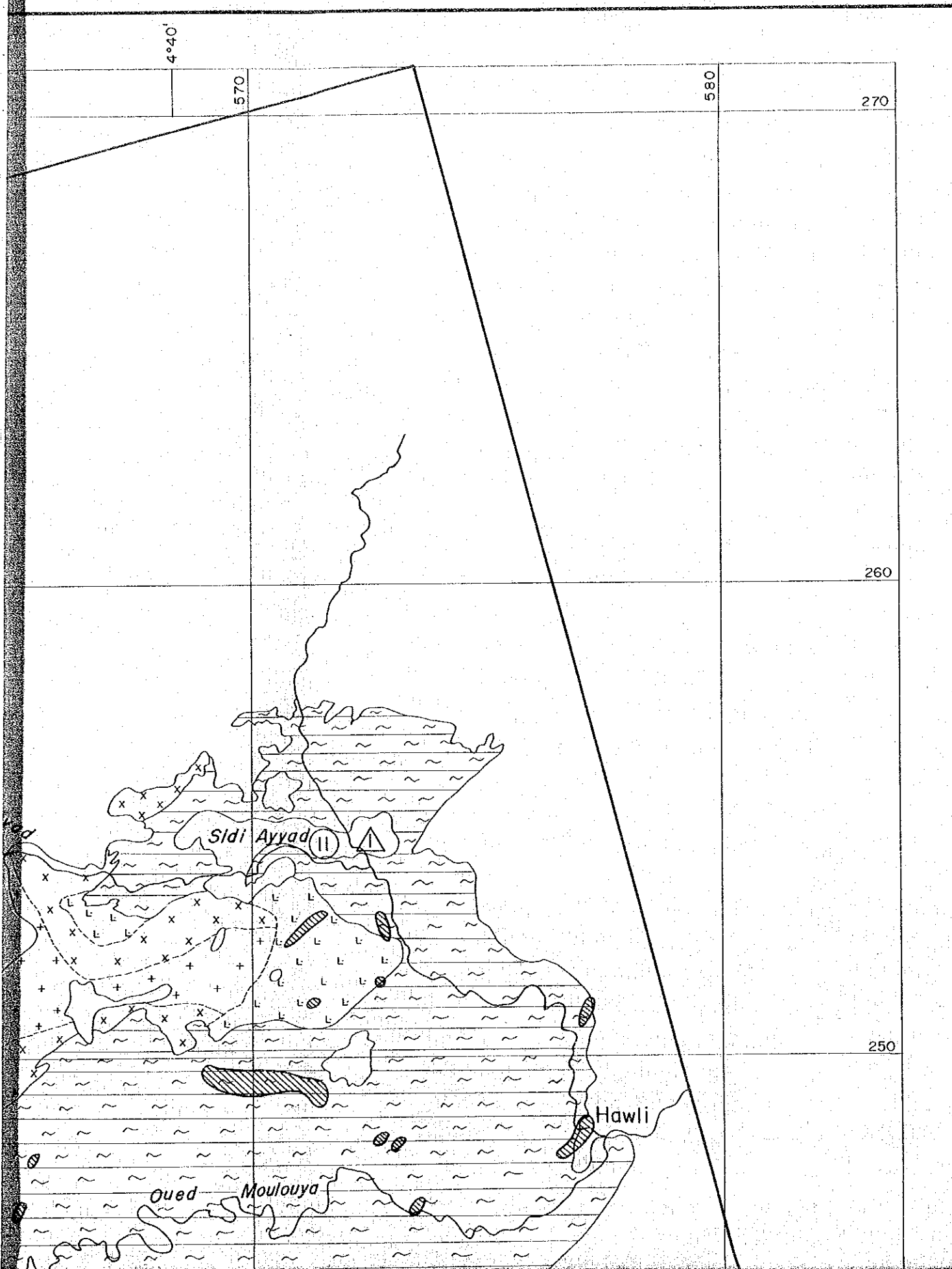
*Assif L'nis*

*Assif Agarsif*









250

32°50'

240

230

32°40'

Itzar

Karrouchan

Assif Lkis

Assif Agarsif

B

5

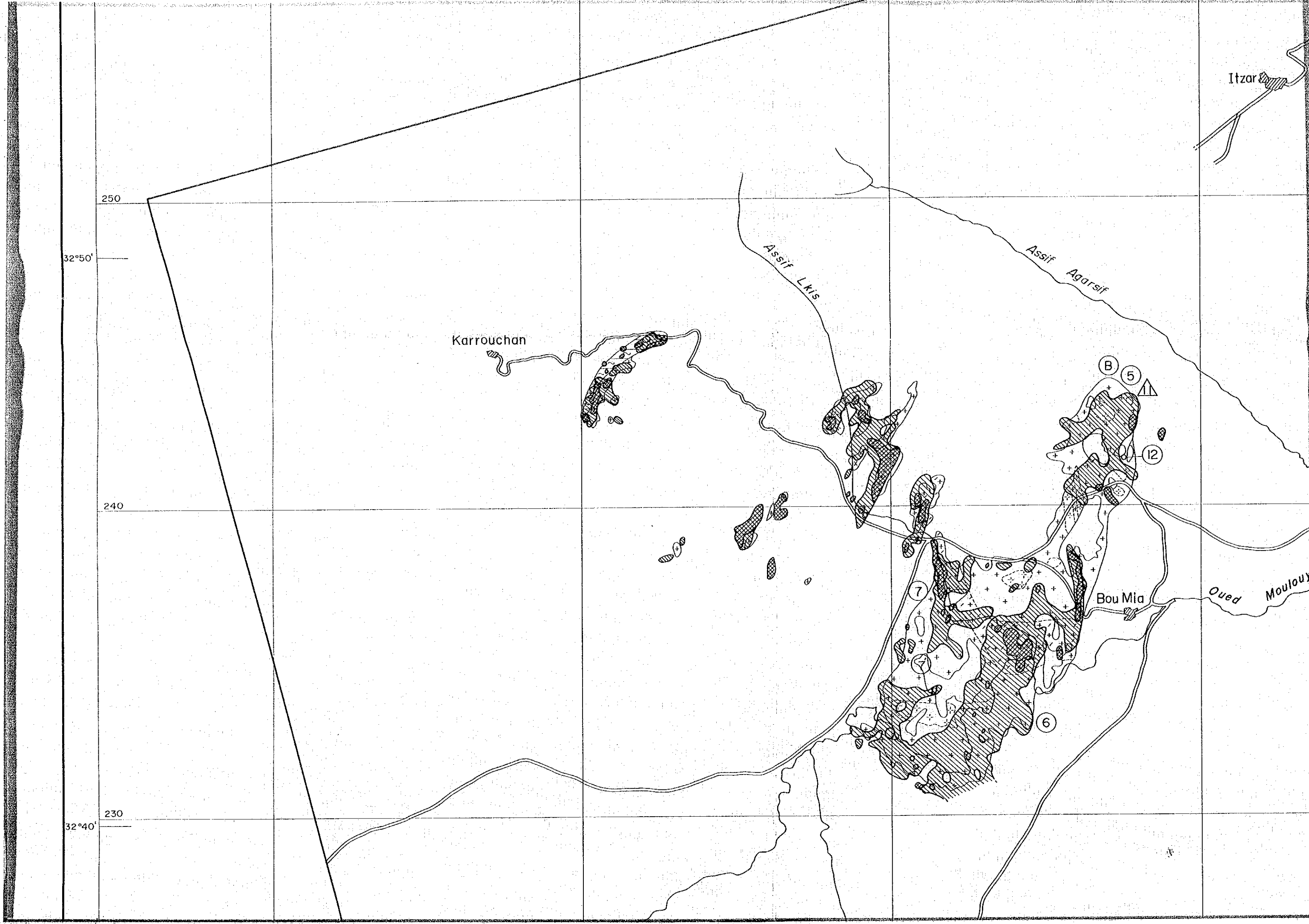
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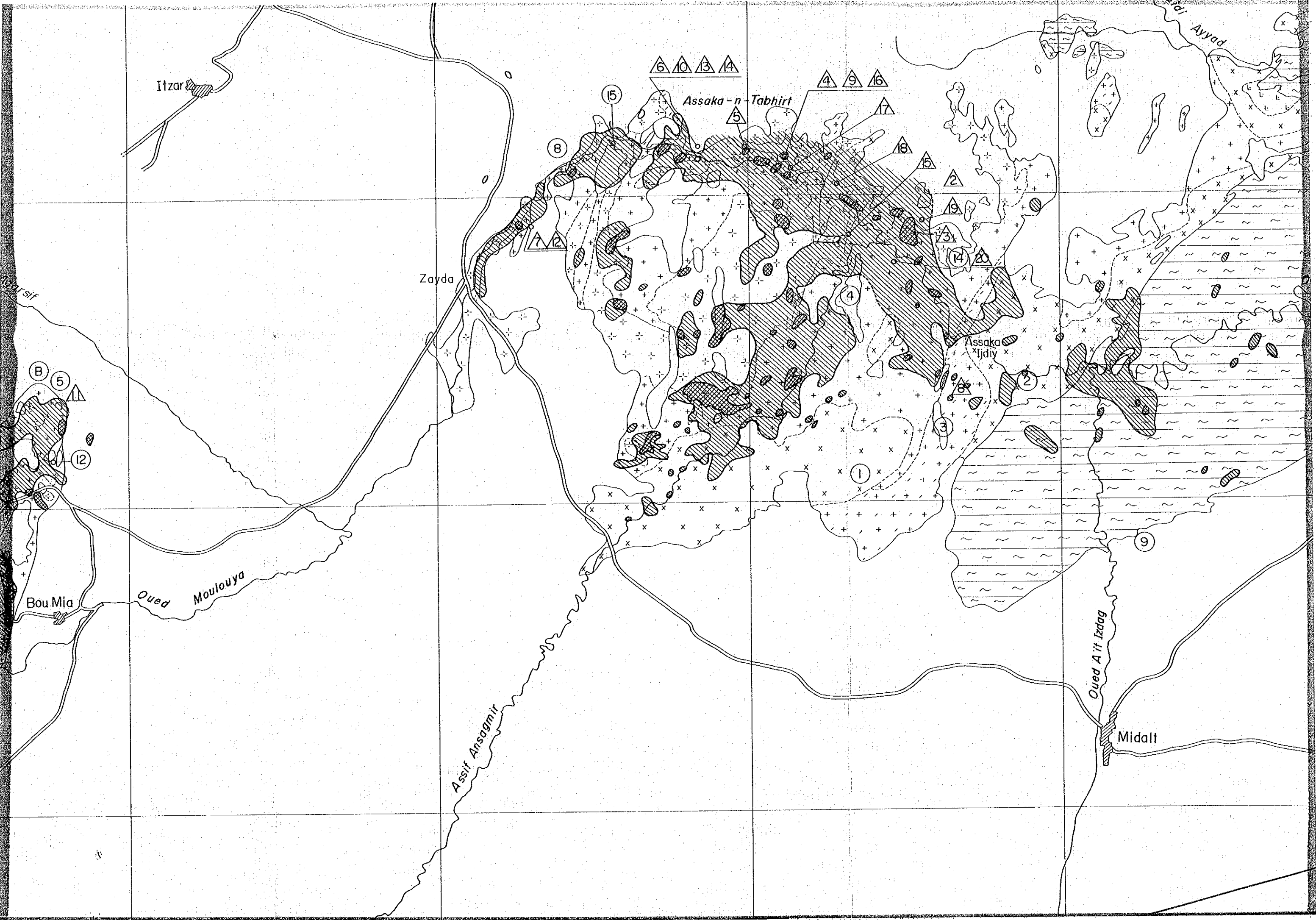
7

Bou Mia

Oued Moulouya

6





Itzar

6 10 3 14

Assaka-n-Tabhirt

4 9 16

15

8

7 2

17

18

19

14

20

Zayda

4

Assaka 'Ijdiy

2

3

1

B

5

12

Bou Mia

Oued Moulouya

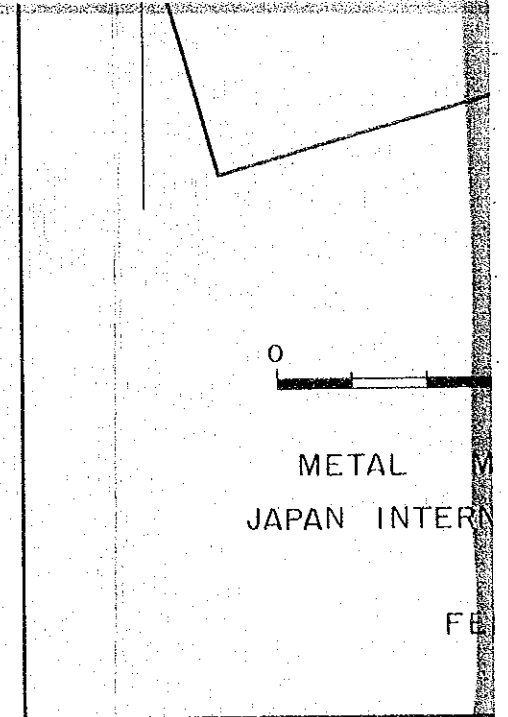
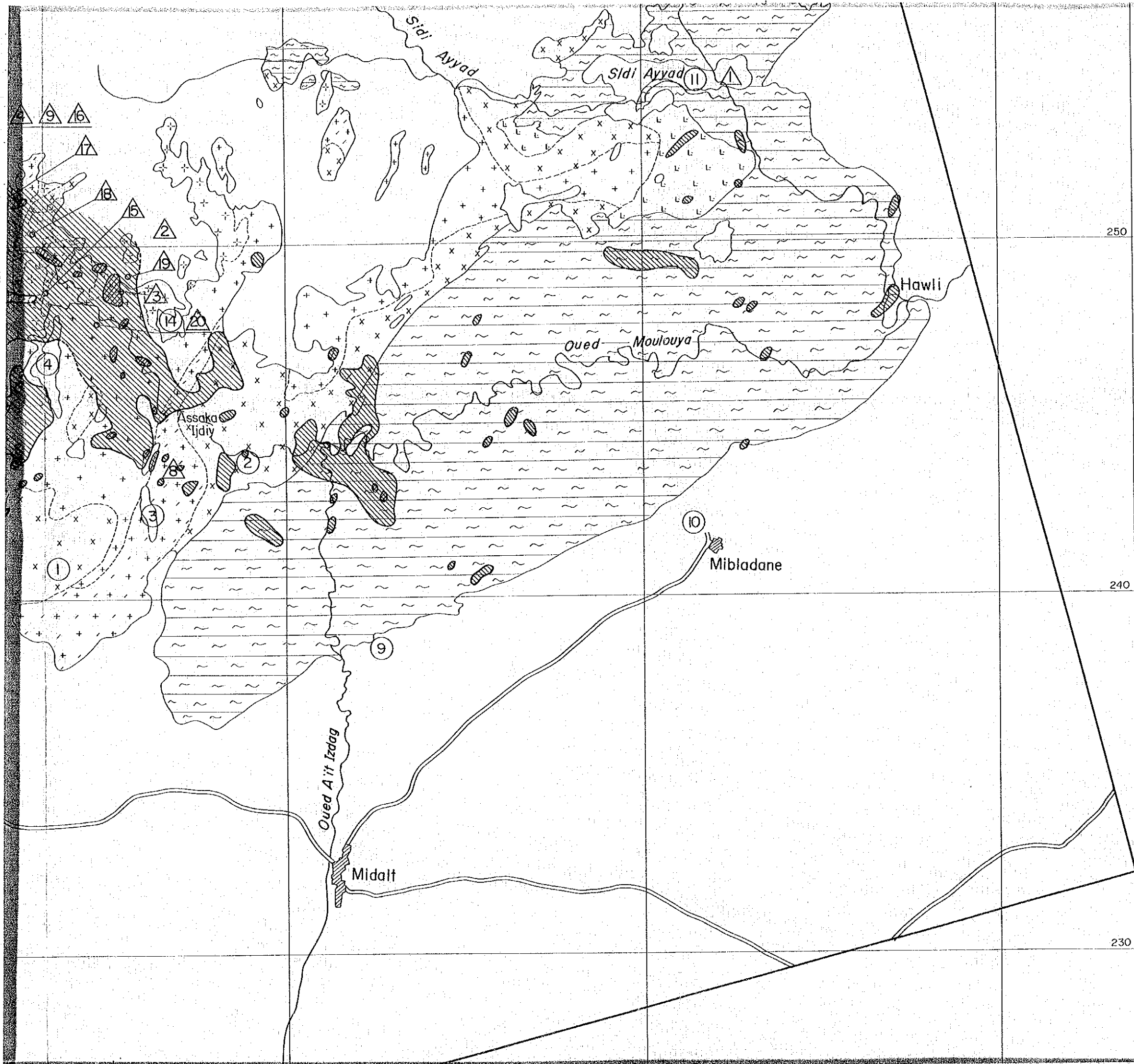
Assif Ansagmit

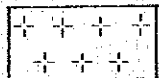
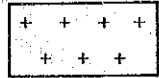
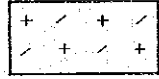
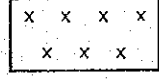
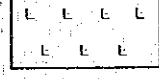
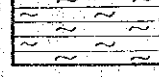
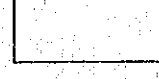


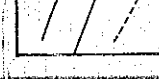
Oued A'it Izdag

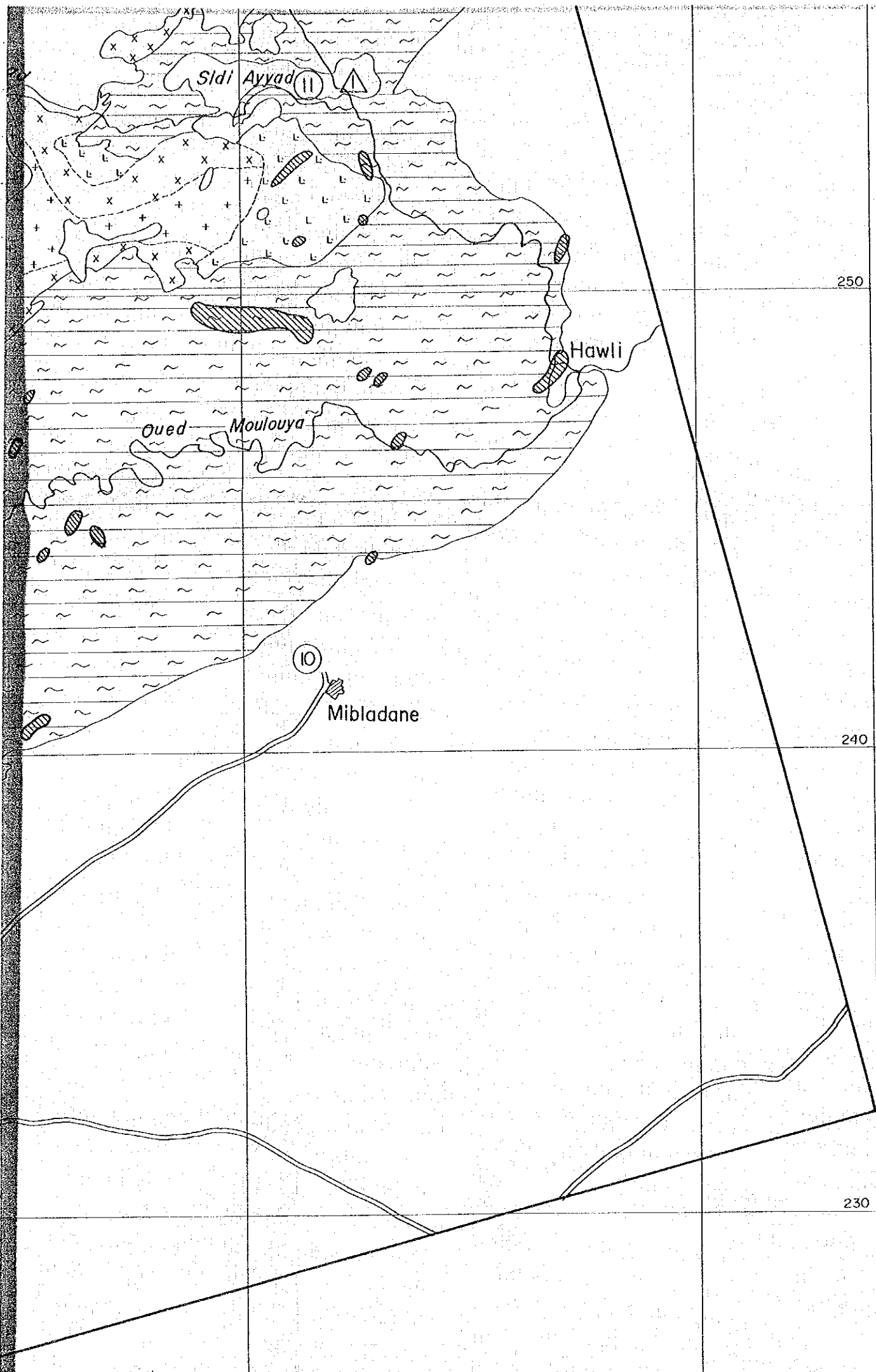
Midalt

9

Oued Ayyad



-  aplitic granite
-  granite
-  porphyritic
-  contaminated
-  granodiorite
-  schist
-  formation
-  radioactive
-  radioactive
-  geological



0 10 20 km

Scale 1:100,000

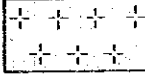
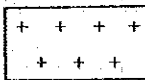

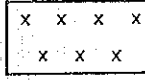
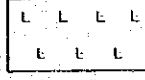
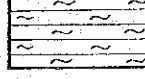
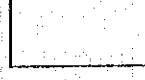


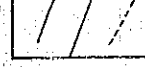
0 10 km

METAL MINING AGENCY OF JAPAN  
JAPAN INTERNATIONAL COOPERATION AGENCY

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prepared by MESCO, Inc.

### LEGEND

-  aplitic granite
-  granite
-  porphyritic granite
-  contaminated granite
-  granodiorite
-  schist
-  formation since Permo - Triassic
-  radioactivity from 150% to 200% (by SPP-2NF)
-  radioactivity over 200% (by SPP-2NF)
-  geological boundary (clear/gradual)

