

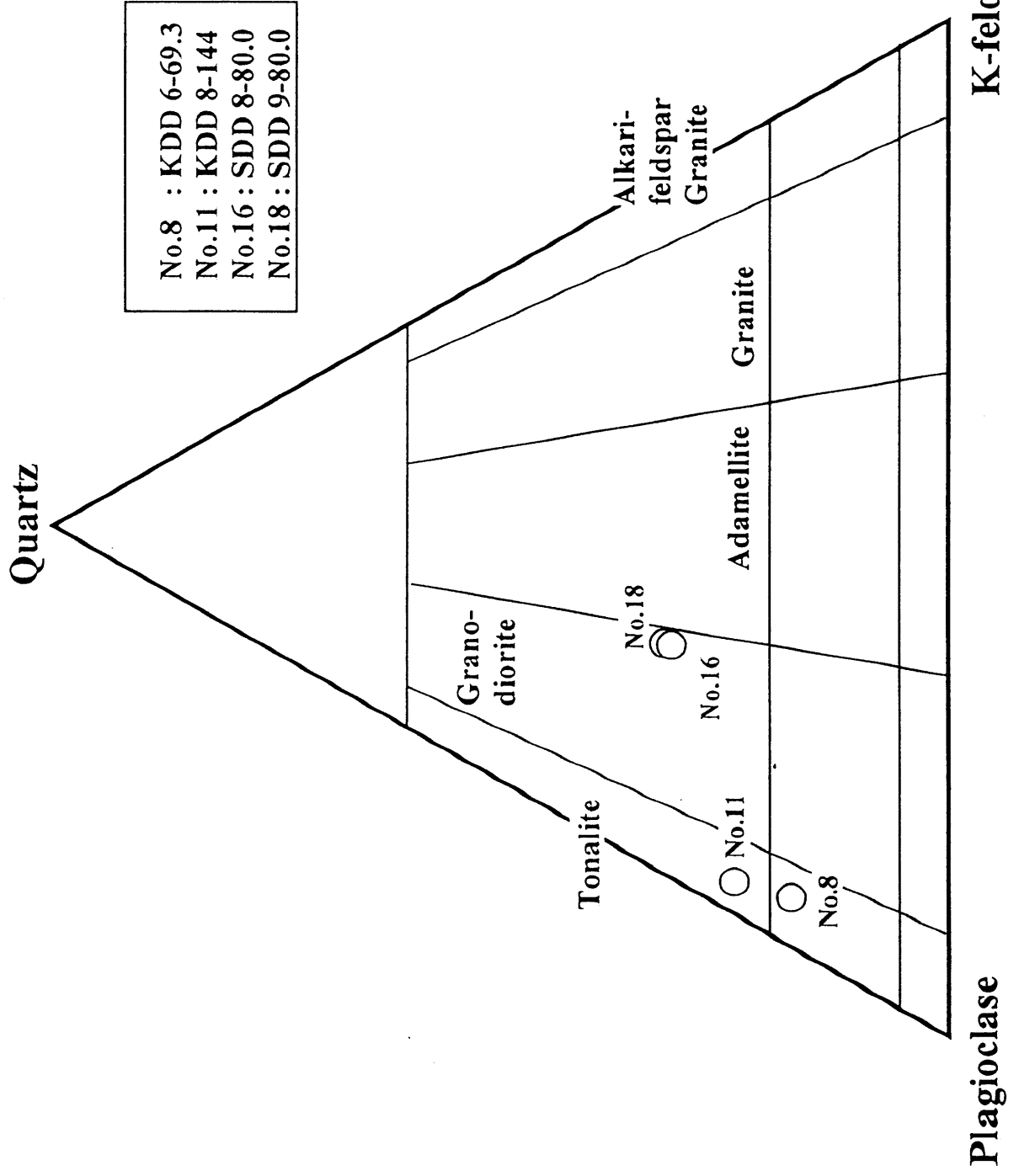
Apc.26 Résultat d'observation microscopique en lames minces

Apc.26 (1) Résultat d'observation microscopique en lames minces

Serial No.	Sample No.	Rock Name/Description	Minerals															
			Primary								Secondary and Alteration							
			Qz	Kf	Pl	Bi	Amp	Sph	M	Qz	Bi	Se	Ep	Ch	Ca	others		
1	KDD 1-62.6	Bi Amp Granodiorite	○	○	⊙	○	○	⊙	△	·	·	⊙	○	○	○	○		
2	KDD 1-106.5	Amp Bi Granodiorite	○	○	⊙	○	○	○	·	·	·	○	○	○	○	○		
3	KDD 1-139.4	Bi Granodiorite	○	○	⊙	○	○	○	·	·	·	○	○	○	△	○		
4	KDD 2-70.7	Sandstone	⊙			○				·								
5	KDD 3-67.4	Dolerite			⊙	○			·			⊙						
6	KDD 4-86.5	Ho Bi Granodiorite	○	○	⊙	○	○	△	·			·	△	△	△			
7	KDD 5-133.4	Bi Granodiorite	⊙	·	⊙	△						○	△	△	△			
8	KDD 6-69.3	Diorite	○	·	⊙	○	○					○	○	○	⊙			
9	KDD 7-71.6	Sandstone	⊙		·	○												
10	KDD 7-124.2	Sandstone	⊙	·	·	○				·		○						
11	KDD 8-144	Bi Granodiorite	○	·	⊙	○						△	·	△				
12	SDD 2-60	Ho Bi Granodiorite	○	○	○	△	△	·	·	·		·	·	·	·			
13	SDD 3-62.6	Meta Sediment	·	·	·				△	△		·	·	·	·			
14	SDD 4-160.0	Meta Sediment	·	·	·				⊙	⊙		·	·	·	·			
15	SDD 5-120.0	Bi Ho Granodiorite	○	·	⊙	○	○	○	·	·		△	△	△	·			
16	SDD 8-80.0	Bi Ho Granodiorite	○	·	⊙	○	○	△	·	·		△	△	△	·			
17	SDD 9-70.0	Tonalite	△	·	⊙	△	△	·	·	·		△	△	△	·			
18	SDD 9-80.0	Bi Ho Granodiorite	○	·	⊙	○	○	△	·	·		△	△	△	·			
19	SDD 9-190.0	Mylonite	○	○	○	○						·	·	·	·			
20	SRC 104-48-49	Tonalite	△	·	⊙	△	△	·	·	·		△	△	△	·			

Apc.26 (2) Résultat d'observation microscopique en lames minces

Modal Composition						
Sample No.	8	11	16	18		
Sample Name	KDD 6-69.3	KDD 8-144	SDD 8-80.8	SDD 9-80.0		
Rock Name	Diorite	Bi Granodiorite	Bi Ho Granodiorite	Bi Ho Granodiorite		
Quartz	11.4	16.2	24.1	25.4		
Plagioclase	50.4	49.0	35.7	37.2		
K-feldspar	2.8	2.0	17.7	18.4		
Hornblende	12.6		13.5	10.9		
Biotite	22.7	32.8	8.9	8.1		
Sphene		tr	tr	tr		
Apatite	tr		tr	tr		
Zircon		tr	tr	tr		
Calcite	tr	tr				
OPQ	tr	tr	tr	tr		
Total	100.0	100.0	100.0	100.0		
Granitic System						
Quartz	17.7	24.1	31.1	31.4		
Plagioclase	78.0	72.9	46.1	45.9		
K-feldspar	4.4	3.0	22.8	22.7		



Apc.26 (3) Résultat d'observation microscopique en lames minces

Apc.26 (4) Résultat d'observation microscopique en lames minces

(1)KDD 1-62.6

Biotite Amphibole Granodiorite

This rock is a medium-grained equigranular biotite amphibole granodiorite with quartz vein. Constituent minerals are plagioclase, K-feldspar, quartz, amphibole and biotite. Sphene, zircon and opaque minerals are recognized as accessory minerals. Euhedral to subhedral plagioclase (0.5~3mm) core is replaced with sericites. Quartz (0.5mm~1cm) is subhedral to anhedral grains that usually exhibit weak undulatory extinction. K-feldspar (0.5~2mm) shows perthitic texture. Anhedral biotite and euhedral to subhedral amphibole are altered to chlorites. Chlorite, sericite and quartz occur as secondary minerals.

(2)KDD 1-106.5

Amphibole Biotite Granodiorite

Medium-grained equigranular granodiorite with biotite and small amount of amphibole. This rock has been weathered very hard. Chlorite, sericite, epidote and quartz occur as secondary minerals. Euhedral to subhedral plagioclase (0.5~3mm) core is replaced with sericites. Quartz (0.5~2mm) is subhedral to anhedral grains that usually exhibit weak undulatory extinction. Subhedral to anhedral K-feldspar (0.5~3mm) shows perthitic texture. Anhedral biotite (0.5~1mm) completely altered to chlorite. Sphene and zircon are recognized as accessory minerals. Calcite vein is well developed.

(3)KDD 1-139.4

Biotite Granodiorite

Medium-grained equigranular granodiorite with biotite. Euhedral to subhedral plagioclase (0.5~3mm) is replaced with sericites. Quartz (0.5~2mm) is subhedral to anhedral grains that usually exhibit weak undulatory extinction. Subhedral to anhedral K-feldspar (0.5~2mm) shows perthitic texture. Anhedral biotite (0.5~2mm) is completely altered to chlorite. Sphene is recognized as accessory minerals. Chlorite, sericite, calcite and quartz occur as secondary minerals.

(4) KDD 2-70.7

Fine-grained Sandstone

This rock is fine-grained. The rock consists of mainly quartz, biotite and opaque minerals with small amount of plagioclase and K-feldspar. They have a general grain size of 0.1 to 0.15mm in diameter. Biotite shows small flakes and partly altered to chlorite. Opaque minerals show vein structure with secondary chlorite.

(5) KDD 3-67.4

Dolerite (or porphyrite)

This rock is a dolerite or porphyrite and shows porphyritic texture. Plagioclase is main constitute mineral as phenocryst and groundmass. Phenocryst plagioclase (~3mm) shows zonal structure and is replaced with sericites. Plagioclase in groundmass (0.3mm) show lath-shaped and also changed to sericites. Biotite (0.5mm) is completely altered to chlorite. Calcite and chlorite are recognized as secondary minerals.

(6)KDD 4-86.5

Hornblende Biotite Granodiorite

This rock is a coarse-grained hornblende biotite granodiorite. Constituent minerals are plagioclase, K-feldspar, quartz, biotite and hornblende. They have a general grain size of 0.5 to 2mm in diameter. Chlorite and sericite occur as secondary minerals. Euhedral to subhedral plagioclase core is replaced with sericite. Quartz is subhedral to anhedral grains that usually exhibit very weak undulatory extinction. K-feldspar shows perthitic texture. Subhedral to anhedral biotite and hornblende are changed to chlorite. Needled minerals (sphene?) are recognized in biotite and some other minerals.

(7)KDD 5-133.4

Biotite Granodiorite

Medium-grained equigranular granodiorite with biotite. This rock has been weathered very hard.

Apc.26 (5) Résultat d'observation microscopique en lames minces

Euhedral to subhedral plagioclase (0.5~3mm) is replaced with sericites. Quartz (0.5~2mm) is subhedral to anhedral grains that usually exhibit weak undulatory extinction. Subhedral to anhedral K-feldspar (0.5~2mm) shows perthitic texture. Anhedral biotite (0.5~2mm) is completely altered to chlorite. Chlorite, sericite, calcite and quartz occur as secondary minerals.

(8)KDD 6-69.3

Diorite

Medium-grained equigranular diorite with biotite and small amount of amphibole. This rock has been weathered very hard. Constituent minerals are plagioclase, quartz, biotite and amphibole with small amount of K-feldspar. Plagioclase (1~2.5 mm) is replaced with sericites. Biotite and amphibole are partly altered to chlorite. Chlorite, sericite, calcite and quartz are recognized as secondary minerals.

(9)KDD 7-71.6

Sandstone

This rock is fine-grained sandstone. Main constitute minerals are quartz and biotite with small amount of plagioclase and K-feldspar. They have a general grain size of 0.1 to 0.5mm in diameter. Biotite shows small flakes and partly altered to chlorite. Secondary quartz shows vein structure.

(10)KDD 7-124.2

Sandstone

This rock is fine-grained sandstone. Main constitute minerals are quartz and biotite with plagioclase. They have a general grain size of 0.2 to 0.3 mm in diameter. Biotite shows small flakes and partly altered to chlorite. Opaque minerals and secondary quartz shows vein structure. Secondary minerals are calcite, chlorite and quartz.

(11)KDD 8-144

Biotite Granodiorite

This rock is coarse-grained equigranular granodiorite with biotite. Main constitute minerals are quartz, plagioclase, K-feldspar, biotite and opaque minerals. Euhedral to subhedral plagioclase (0.5~1mm) is partly replaced with sericites. Subhedral to anhedral quartz (0.5~1.0mm) usually exhibits weak undulatory extinction. Subhedral to anhedral K-feldspar (0.5~0.8mm) shows perthitic texture. Euhedral to anhedral biotite (0.5~1mm) is relatively fresh mineral, but partly altered to chlorite. Chlorite, calcite and sericite occur as secondary minerals.

(12)SDD 2-26

Hornblende Biotite Granodiorite

This rock is coarse-grained hornblende biotite granodiorite. Constituent minerals are plagioclase, K-feldspar, quartz, biotite and hornblende. They have a general grain size of 1 to 5 mm in diameter. Chlorite and sericite occur as secondary minerals. Euhedral to subhedral plagioclase is replaced with sericite. Quartz is subhedral to anhedral grains that usually exhibit weak undulatory extinction. K-feldspar shows perthitic texture. Subhedral to anhedral biotite is relatively fresh. Euhedral to subhedral hornblende is relatively fresh grain. But, both of biotite and hornblende are slightly altered to chlorite. Secondary minerals are chlorite and sericite. Spene, zircon and opaque minerals are recognized as accessory minerals.

(13)SDD 3-62.6

Meta Sediment

This rock is medium-grained metamorphic sediment. Main constitute minerals are actinolite, chlorite, opaque minerals with small amount of quartz and plagioclase. Acicular actinolite (1~3mm) is very remarkable and partly altered. Euhedral hornblende is recognized slightly amount and completely changed to chlorite. Euhedral to subhedral plagioclase is replaced with sericite. Chlorite, sericite and quartz occur as secondary minerals.

Apc.26 (6) Résultat d'observation microscopique en lames minces

(14)SDD 4-160.0

Meta Sediment

This rock is also fine-grained metamorphic sediment. Main constitute minerals are actinolite, chlorite, opaque minerals with small amount of quartz and plagioclase. Acicular actinolite (1~3mm) is very remarkable and shows vein structure. Euhedral hornblende is recognized slightly amount and completely changed to chlorite. Euhedral to subhedral plagioclase is replaced with sericite. Chlorite, sericite and quartz occur as secondary minerals.

(15)SDD 5-120.0

Biotite Hornblende Granodiorite

This sample consists of coarse-grained equigranular biotite hornblende granodiorite. Euhedral to subhedral plagioclase (0.5~3mm) shows zonal structure and is replaced with sericite. Quartz (0.5~1mm) is subhedral to anhedral grains that usually exhibit undulatory extinction. K-feldspar (0.5~1mm) shows perthitic texture. Subhedral to anhedral biotite (0.5~2mm) and hornblende are altered to chlorite. Sphene and zircon recognized as accessory minerals, and chlorite and sericite occur as secondary minerals.

(16)SDD 8-80.0

Biotite Hornblende Granodiorite

Coarse-grained equigranular biotite hornblende granodiorite. Euhedral to subhedral plagioclase (0.5~3mm) shows zonal structure and is replaced with sericite. Quartz (0.5~1mm) is subhedral to anhedral grains that usually exhibit undulatory extinction. K-feldspar (0.5~1mm) shows perthitic texture. Subhedral to anhedral biotite (0.5~2mm) and hornblende are altered to chlorite and epidote. Sphene and zircon recognized as accessory minerals, and chlorite, sericite and epidote occur as secondary minerals.

(17)SDD 9-70.0

Fine-grained Tonalite

This rock is a fine-grained tonalite. Constituent minerals are plagioclase, quartz, biotite, hornblende and small amount of K-feldspar. They have a general grain size of 0.5 to 1.5 mm in diameter. Euhedral to subhedral plagioclase is replaced with sericite. Quartz is subhedral to anhedral grains that usually exhibit very weak undulatory extinction. Subhedral to anhedral biotite and euhedral to subhedral hornblende are partly altered to chlorite. Sphene and zircon recognized as accessory minerals. Chlorite and sericite occur as secondary minerals.

(18)SDD 9-80.0

Biotite Hornblende Granodiorite

This rock is very similar to No.16 samples. Coarse-grained equigranular biotite hornblende granodiorite. Euhedral to subhedral plagioclase (0.5~3mm) shows zonal structure and is replaced with sericite. Quartz (0.5~1mm) is subhedral to anhedral grains that usually exhibit undulatory extinction. K-feldspar (0.5~1mm) shows perthitic texture. Subhedral to anhedral biotite (0.5~2mm) and hornblende are altered to chlorite and epidote. Sphene and zircon recognized as accessory minerals, and chlorite, sericite and epidote occur as secondary minerals.

(19)SDD 9-190.0

Mylonite

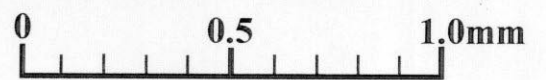
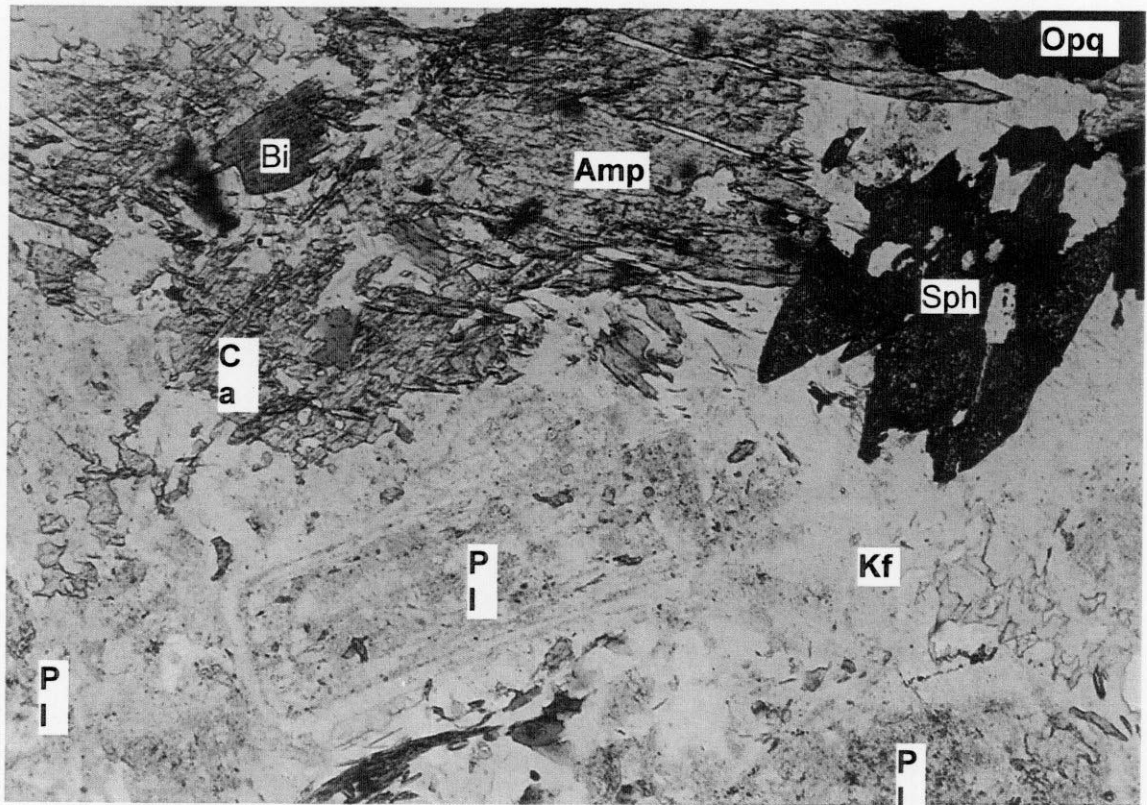
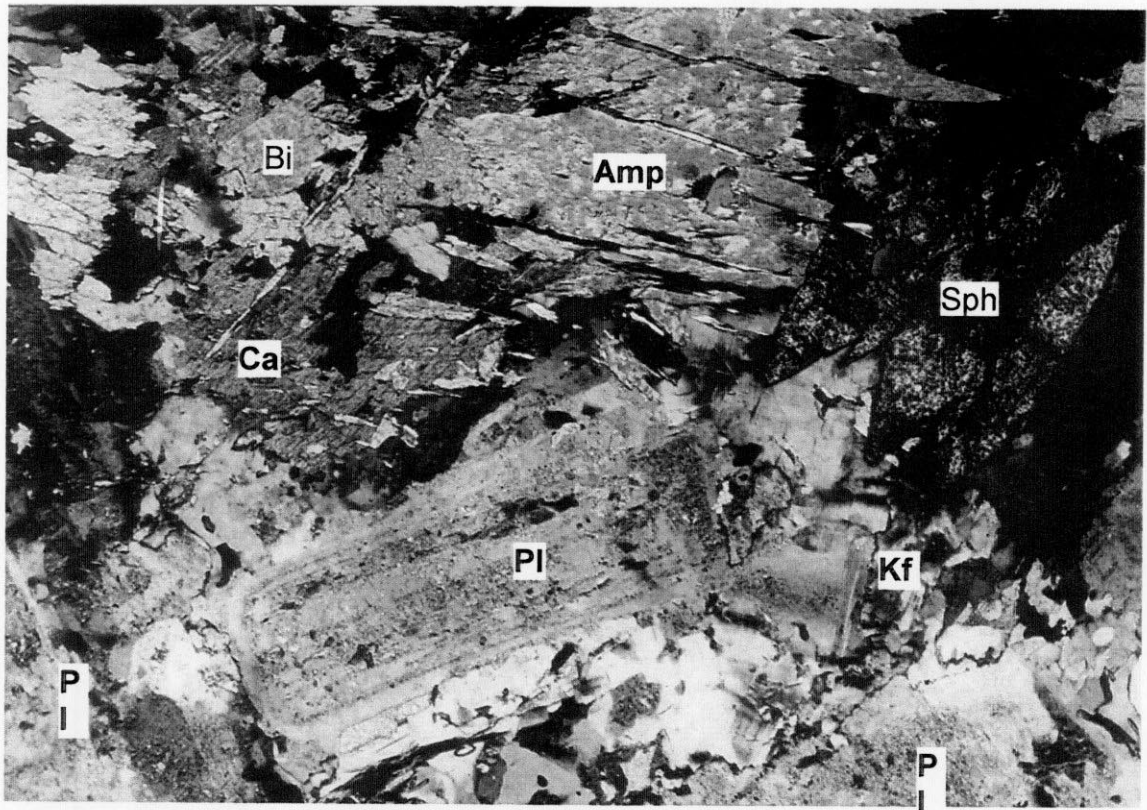
This sample has been deformed, because cataclastic texture recognized. Main constitute minerals are plagioclase, quartz K-feldspar, hornblende and actinolite. Plagioclase shows zonal structure and is replaced with sericite. Quartz (0.5~3mm) is subhedral to anhedral grains that usually exhibit undulatory very hard extinction. K-feldspar (0.5~2mm) shows perthitic texture and deformed. Subhedral to anhedral hornblende is complexly altered to chlorite and epidote. Chlorite, sericite, quartz and epidote occur as secondary minerals.

(20) SRC-18 23-24m pt

Apc.26 (7) Résultat d'observation microscopique en lames minces

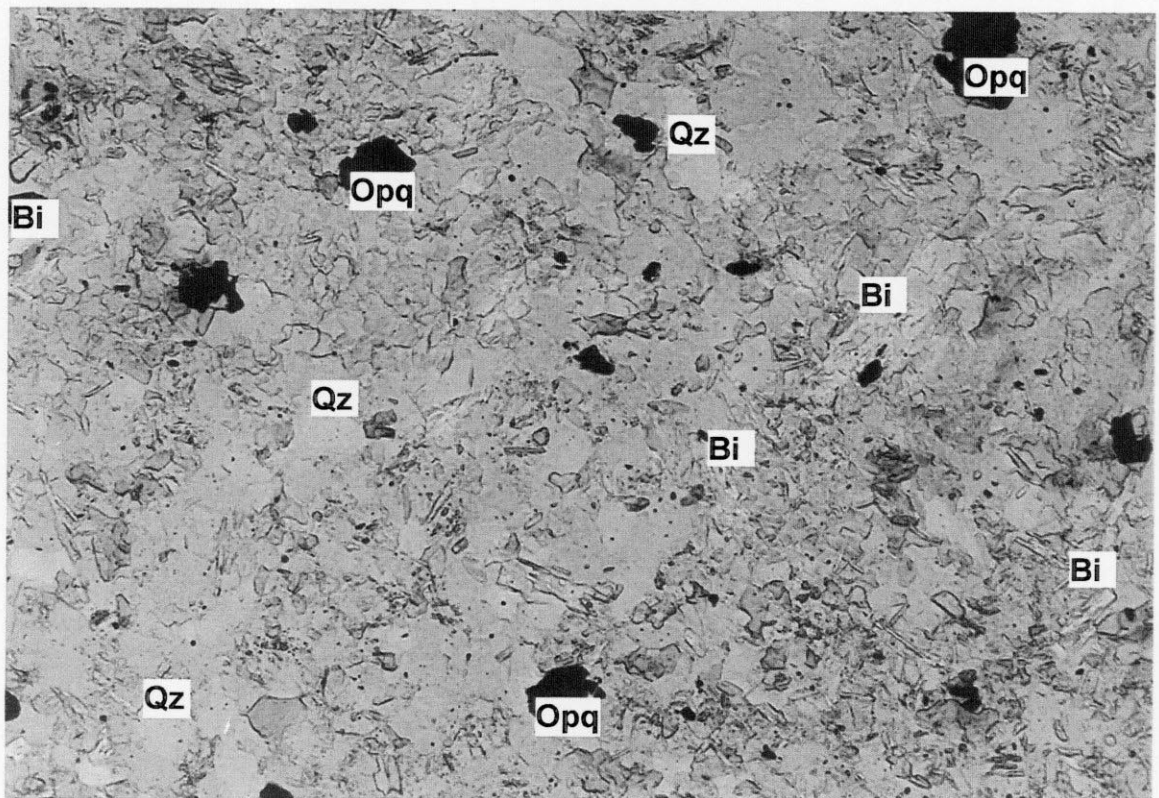
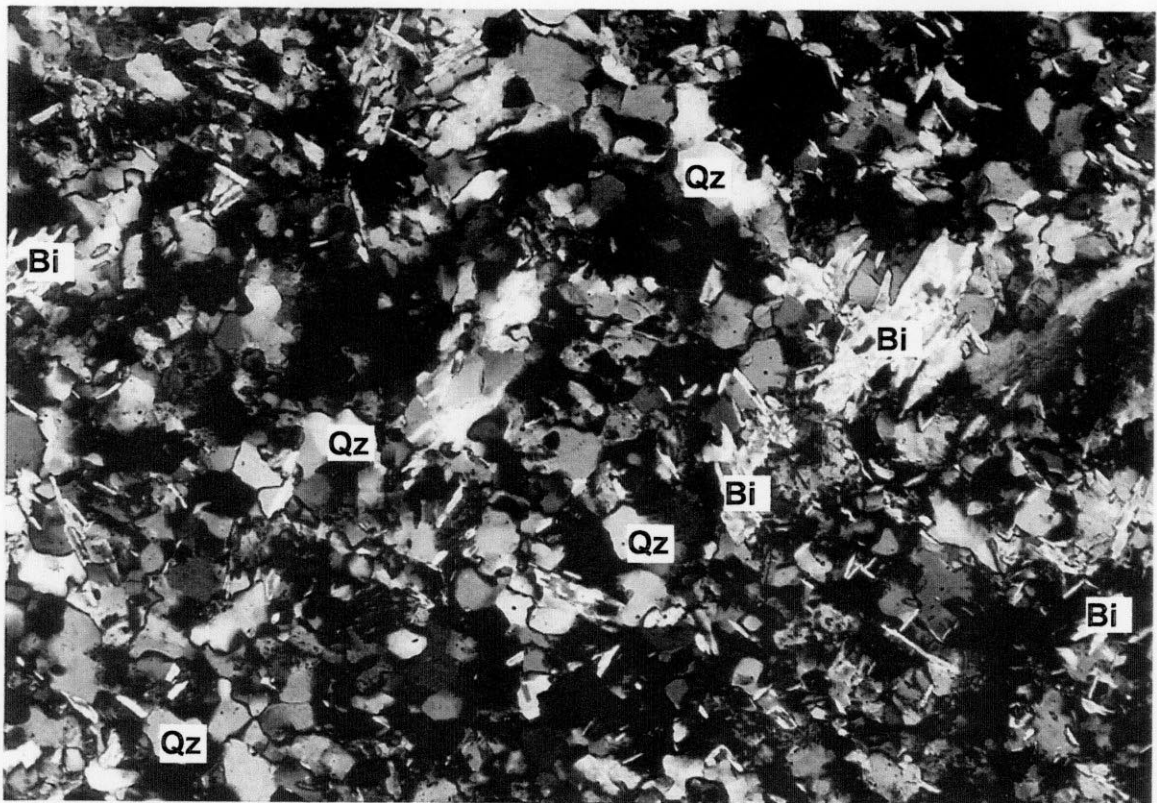
Tonalite

This rock is a medium-grained tonalite. Constituent minerals are plagioclase, quartz, biotite, hornblende and small amount of K-feldspar. They have a general grain size of 0.5 to 2.0 mm in diameter. Euhedral to subhedral plagioclase is replaced with sericite. Quartz is subhedral to anhedral grains that usually exhibit very weak undulatory extinction. Subhedral to anhedral biotite and euhedral to subhedral hornblende are partly altered to chlorite. Sphene and zircon recognized as accessory minerals. Chlorite and sericite occur as secondary minerals.



Sample Name : KDD1-62.6

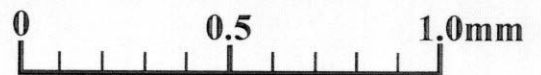
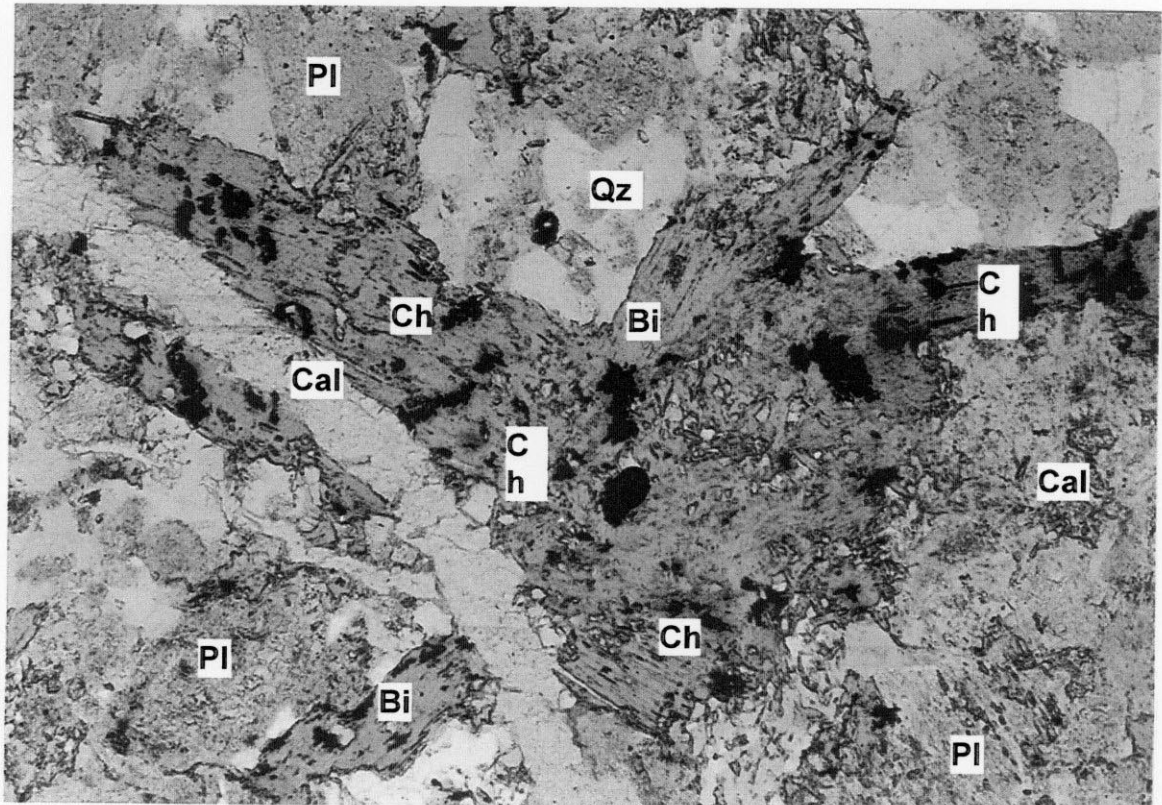
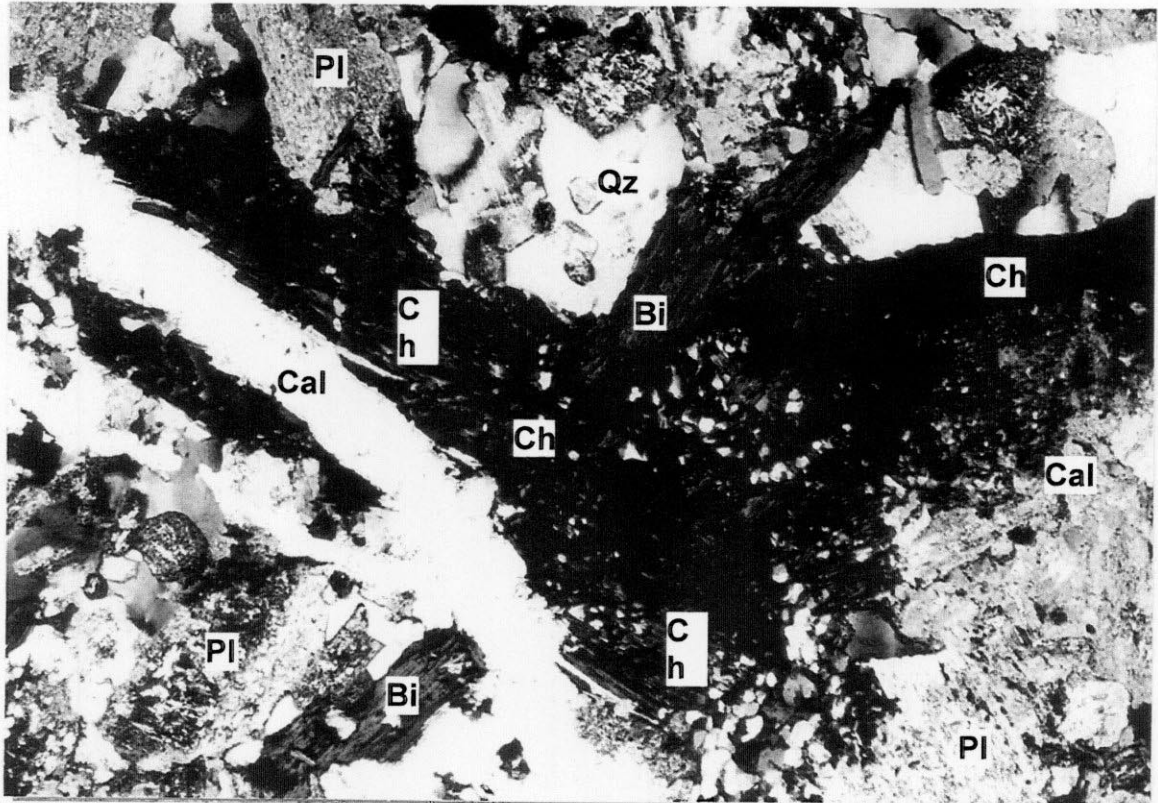
Apc.26 (8) Résultat d'observation microscopique en lames minces



0 0.5mm

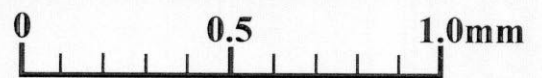
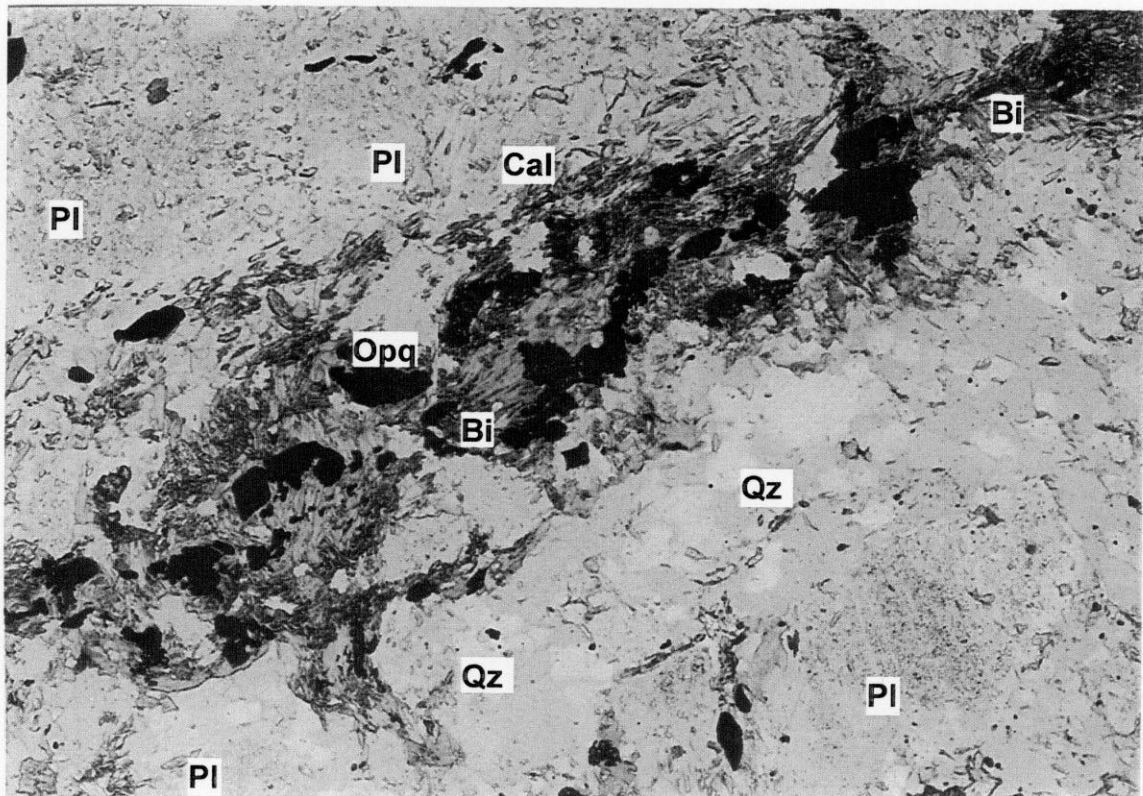
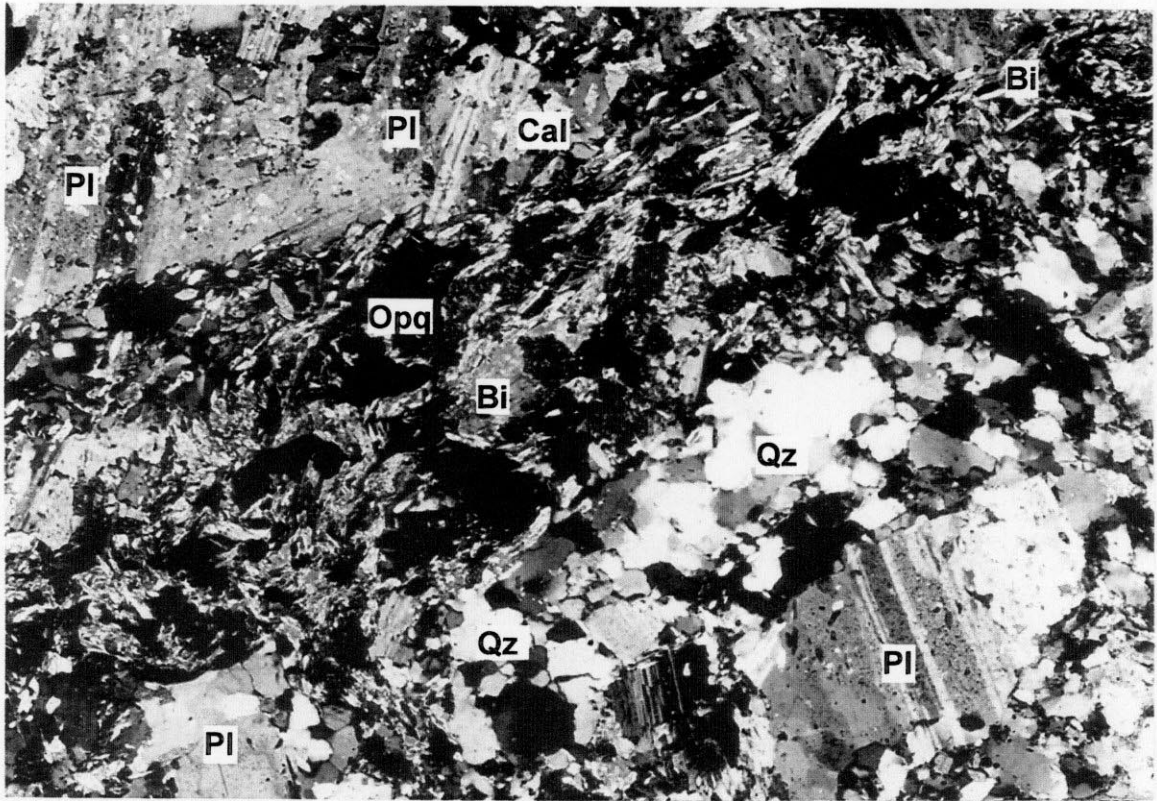
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Apc.26 (9) Résultat d'observation microscopique en lames minces



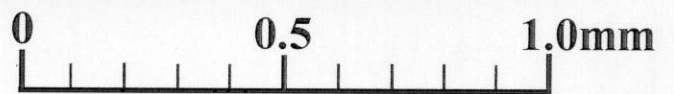
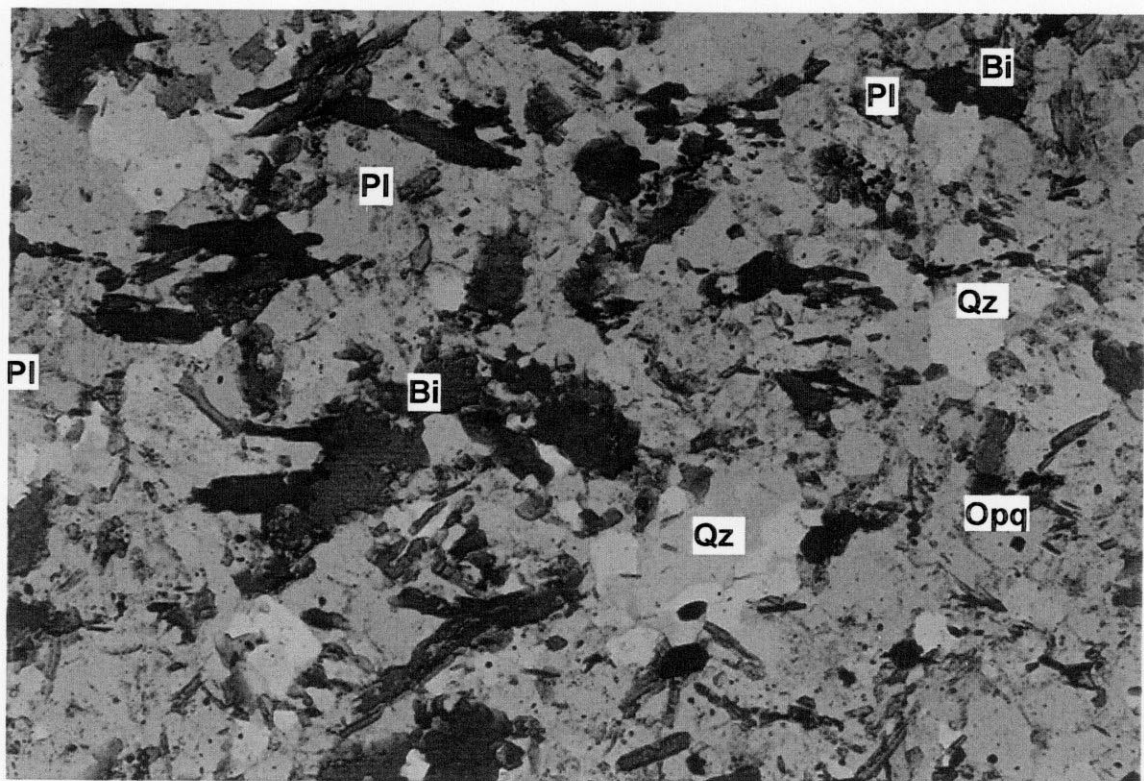
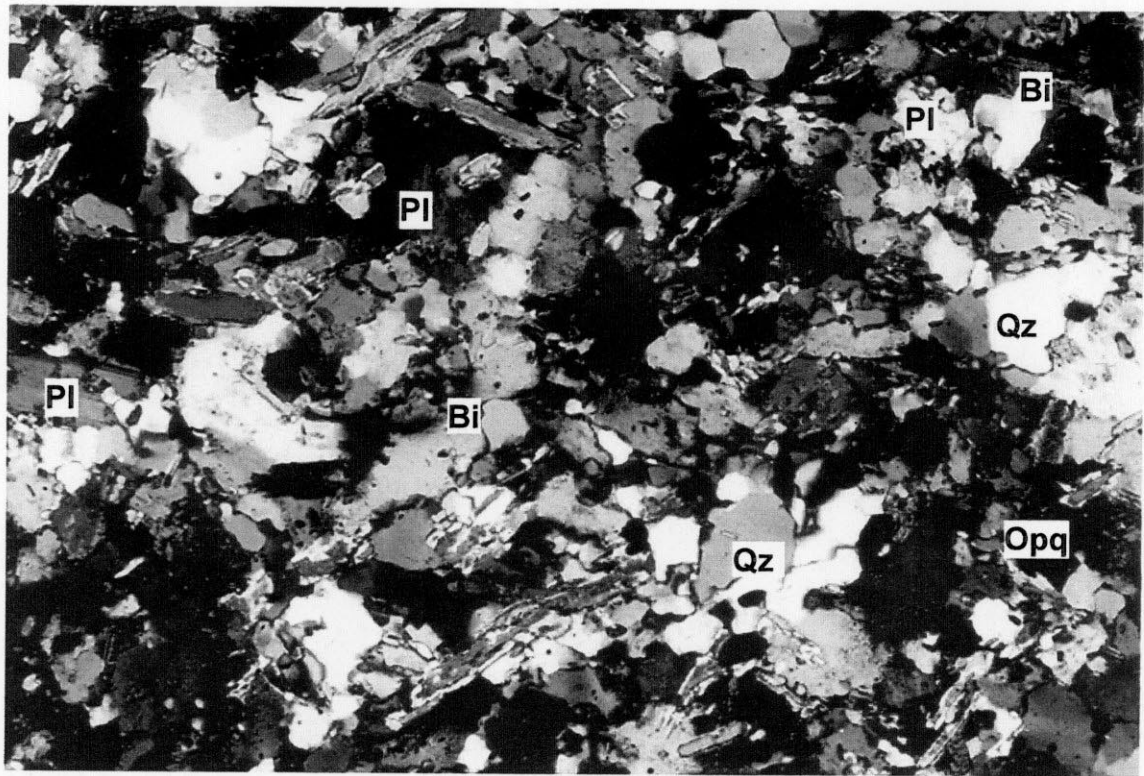
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Apc.26 (10) Résultat d'observation microscopique en lames minces



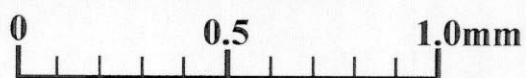
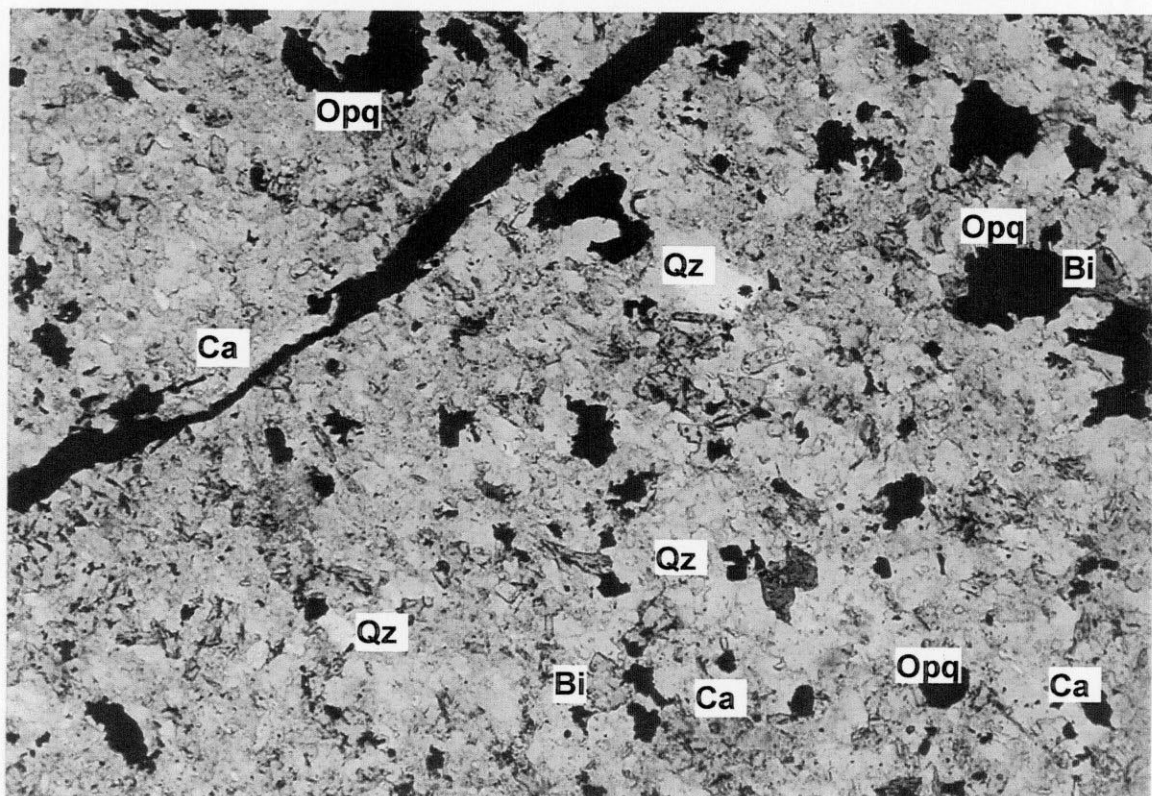
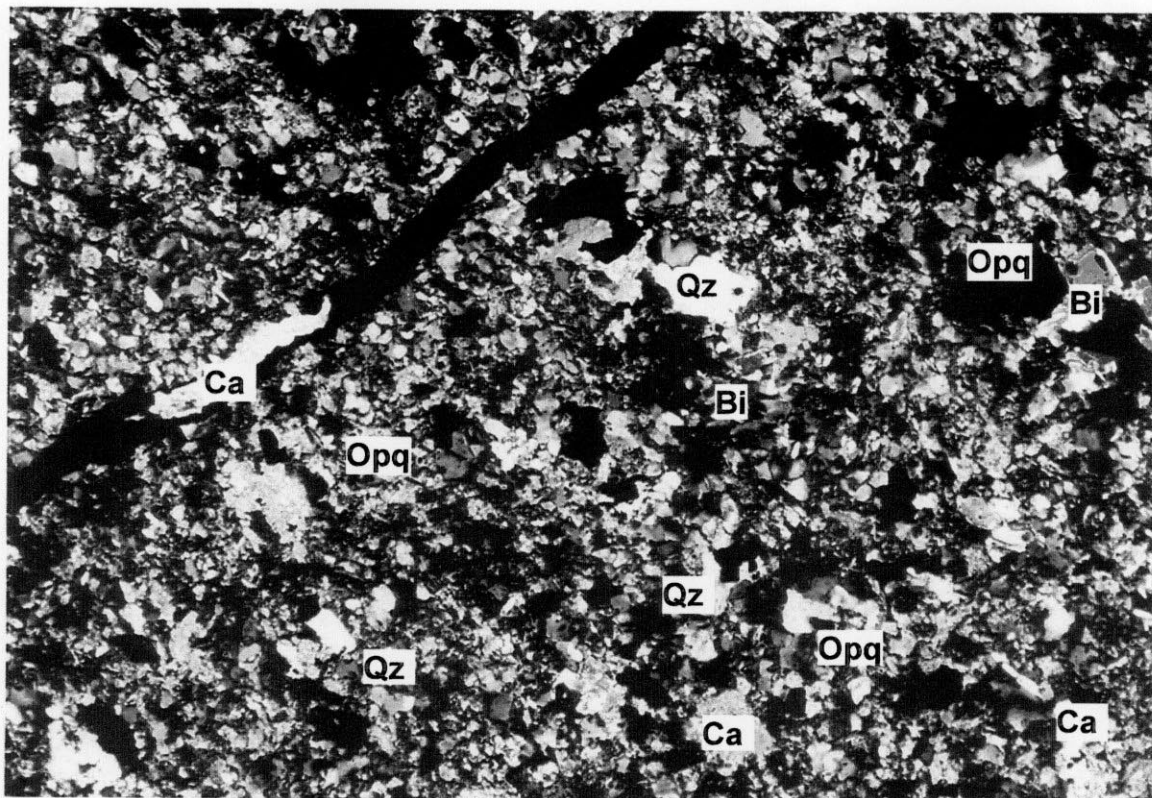
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Apc.26 (11) Résultat d'observation microscopique en lames minces



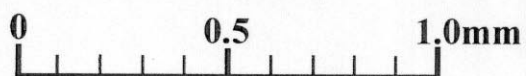
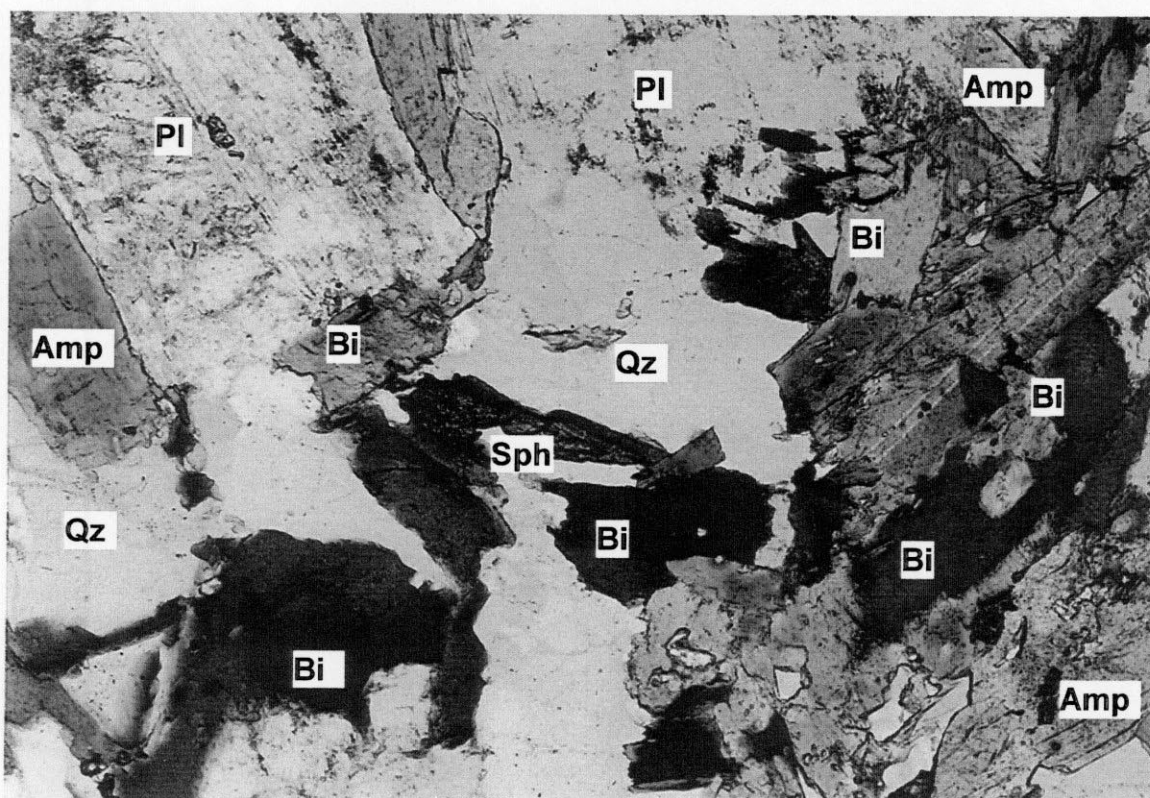
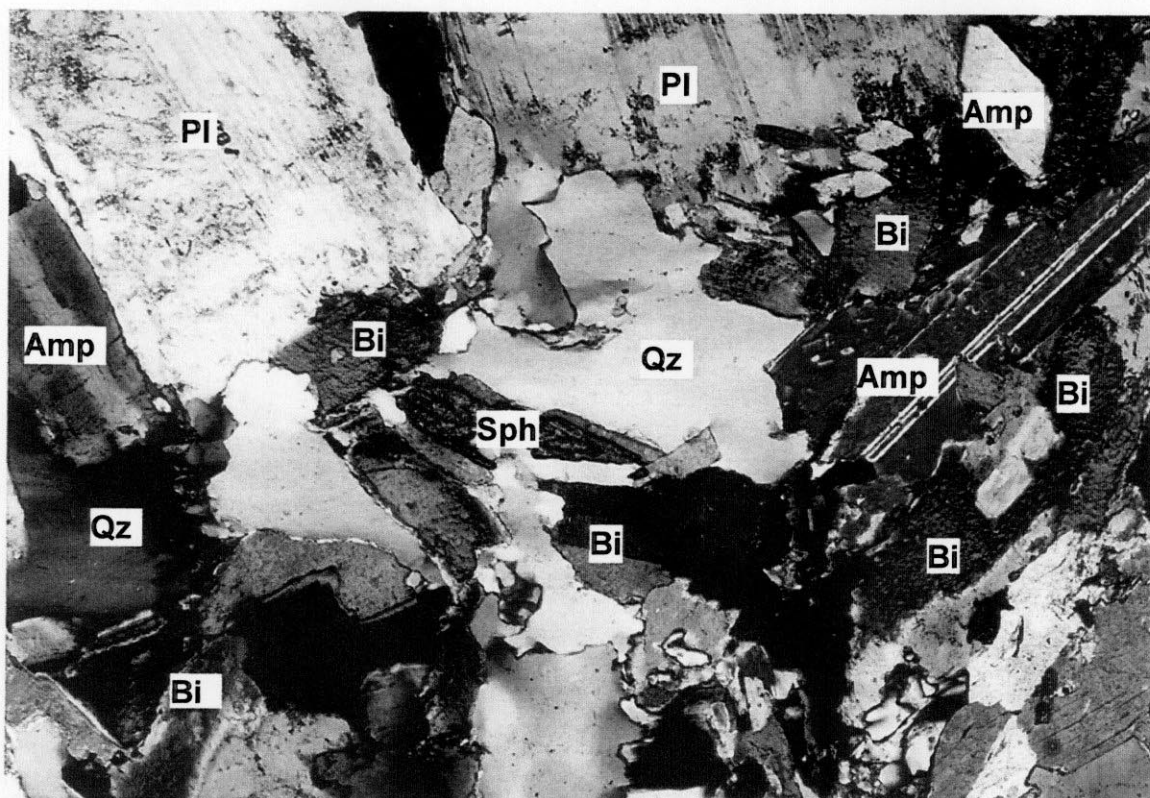
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Apc.26 (12) Résultat d'observation microscopique en lames minces



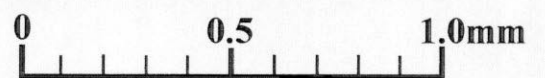
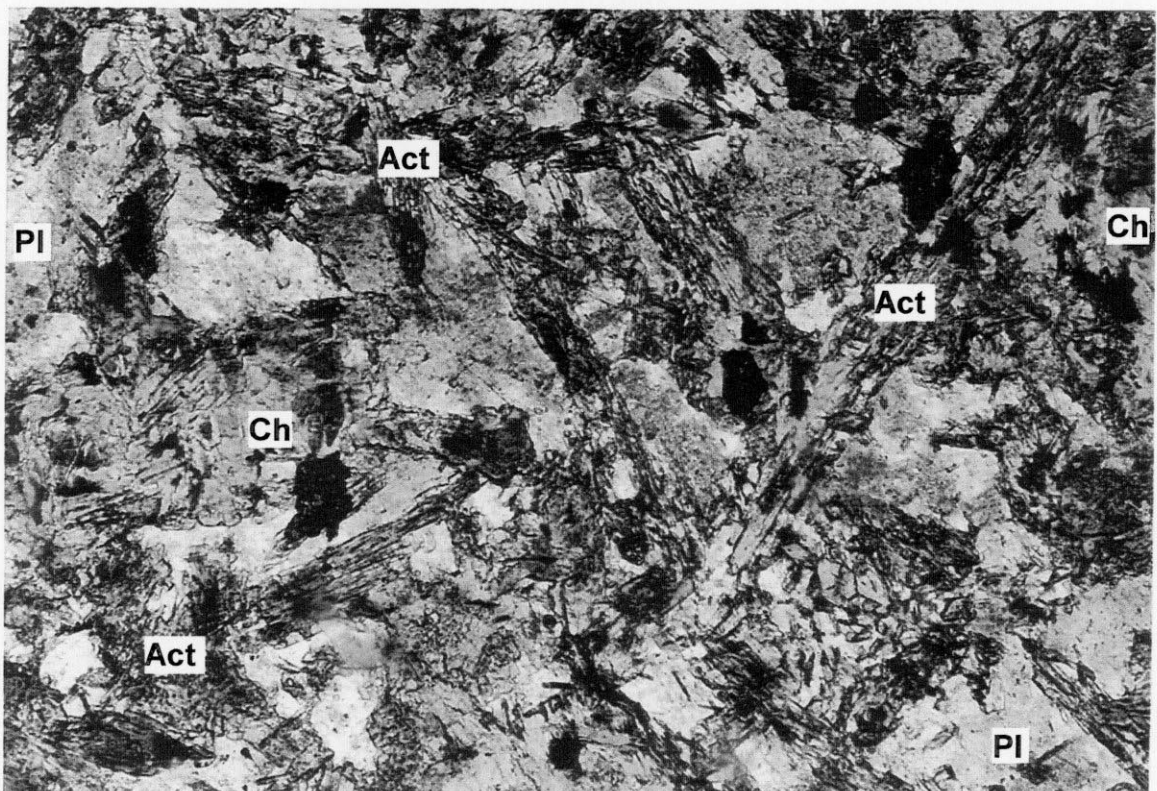
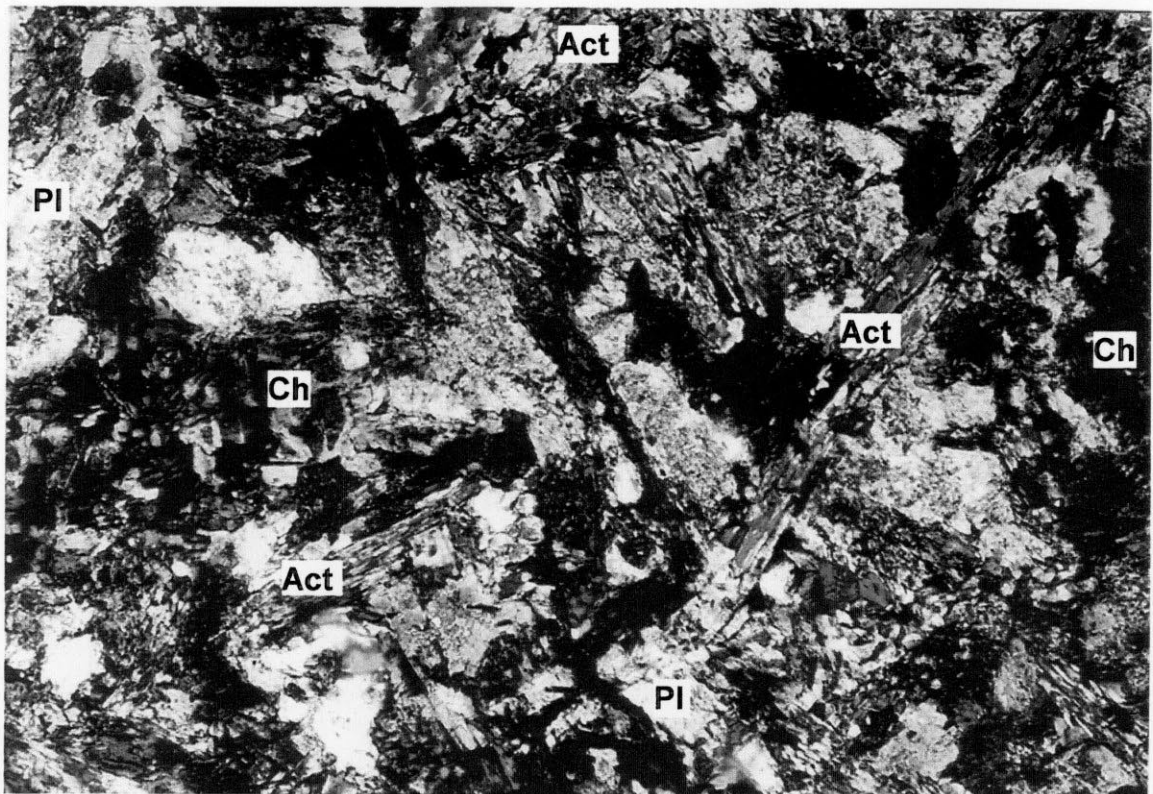
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Apc.26 (13) Résultat d'observation microscopique en lames minces



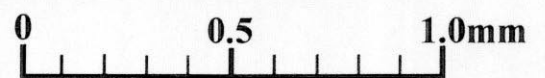
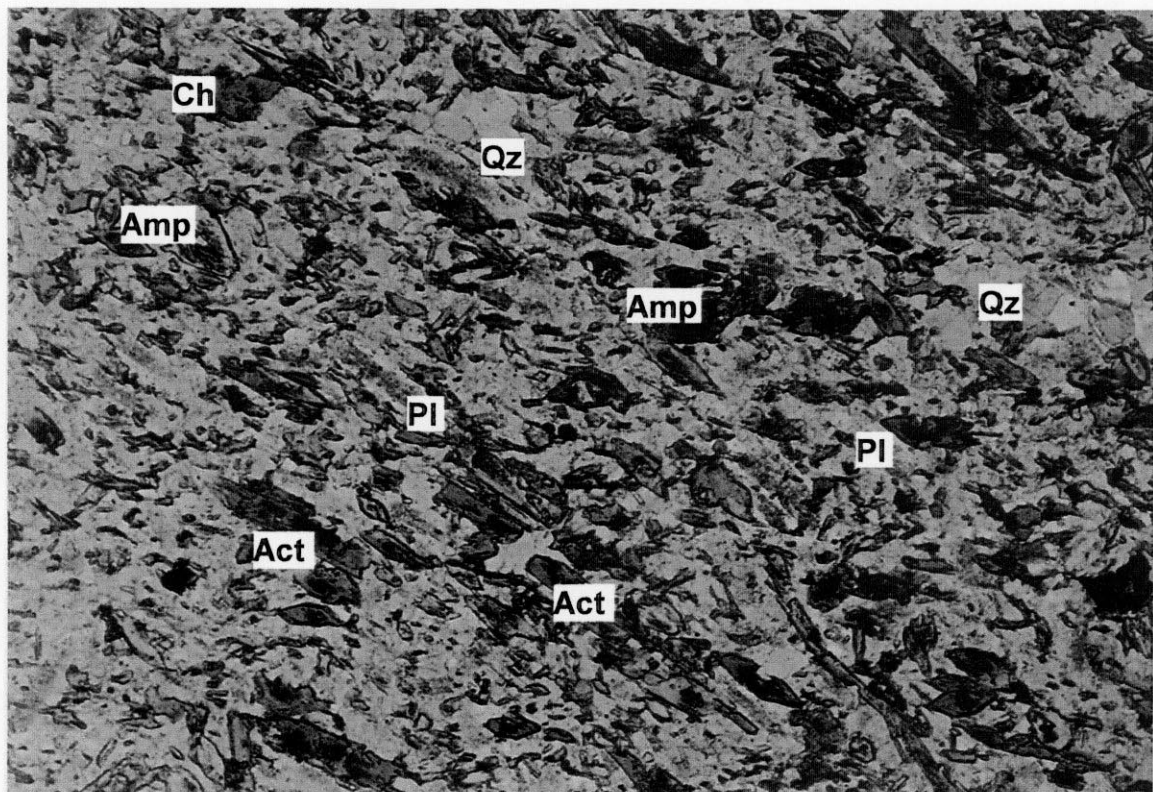
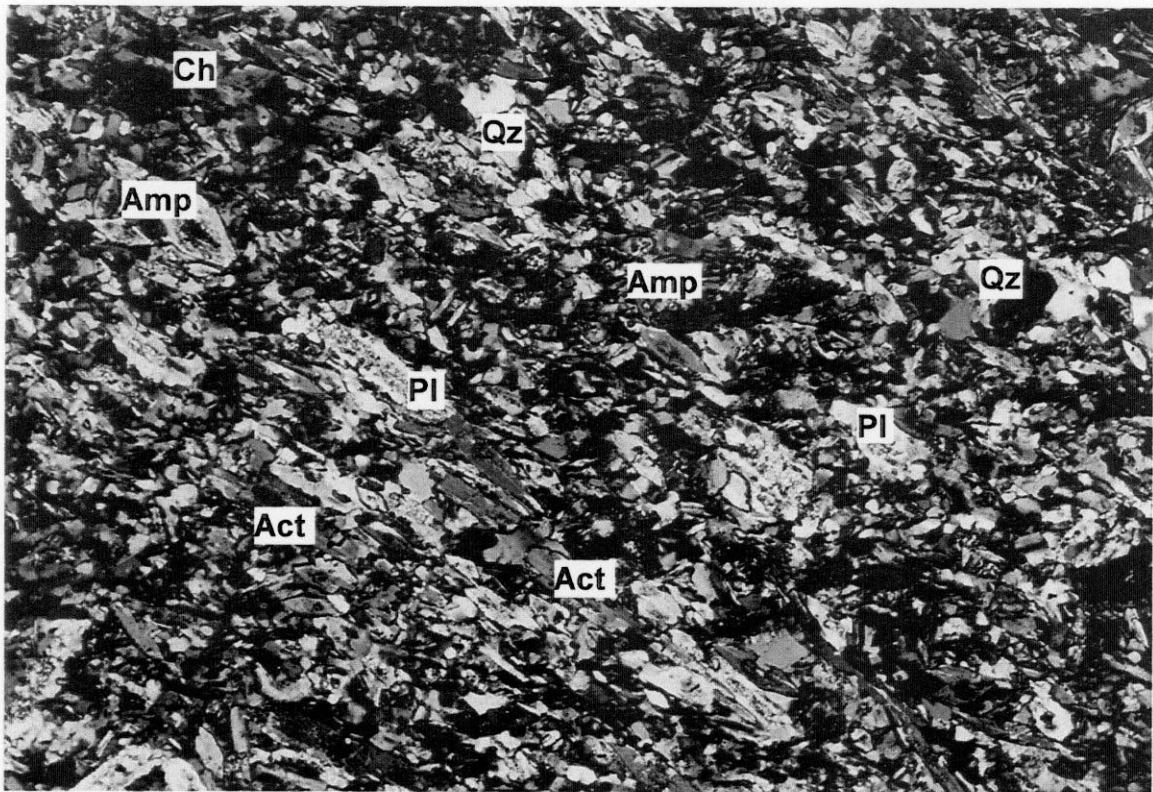
Sample Name : SDD2-60

Apc.26 (14) Résultat d'observation microscopique en lames minces



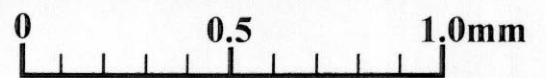
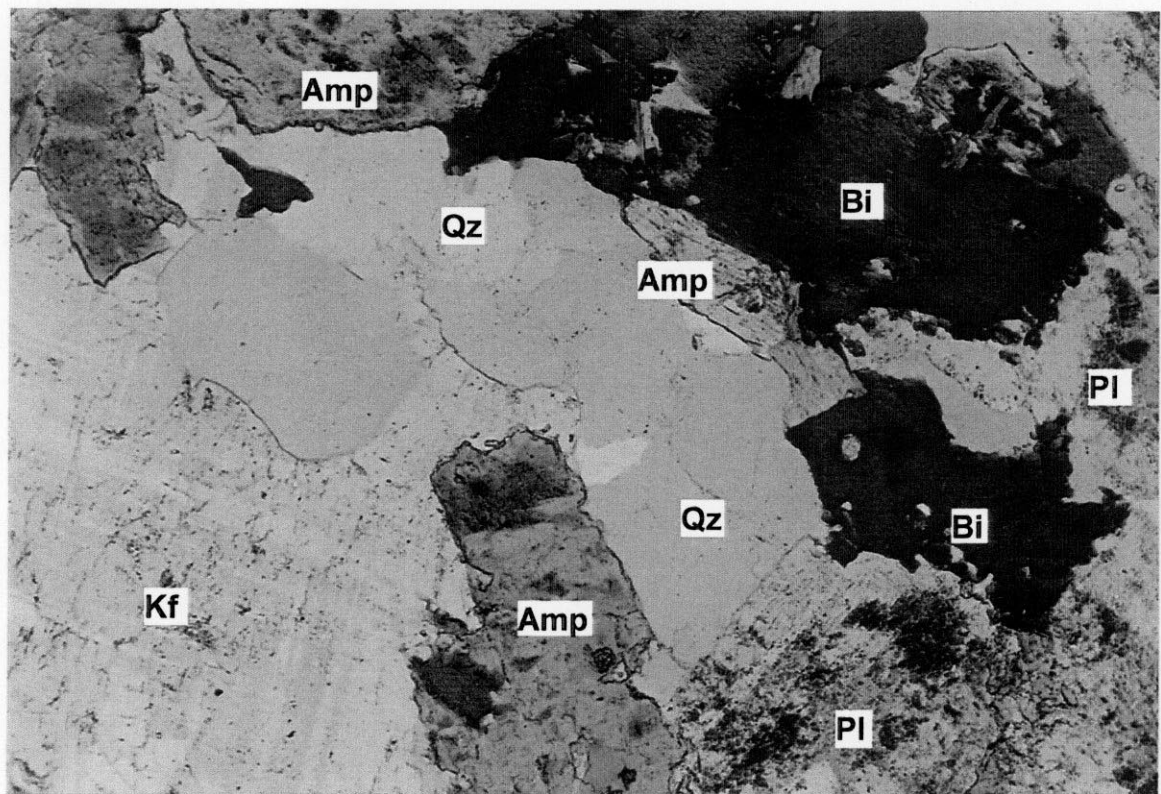
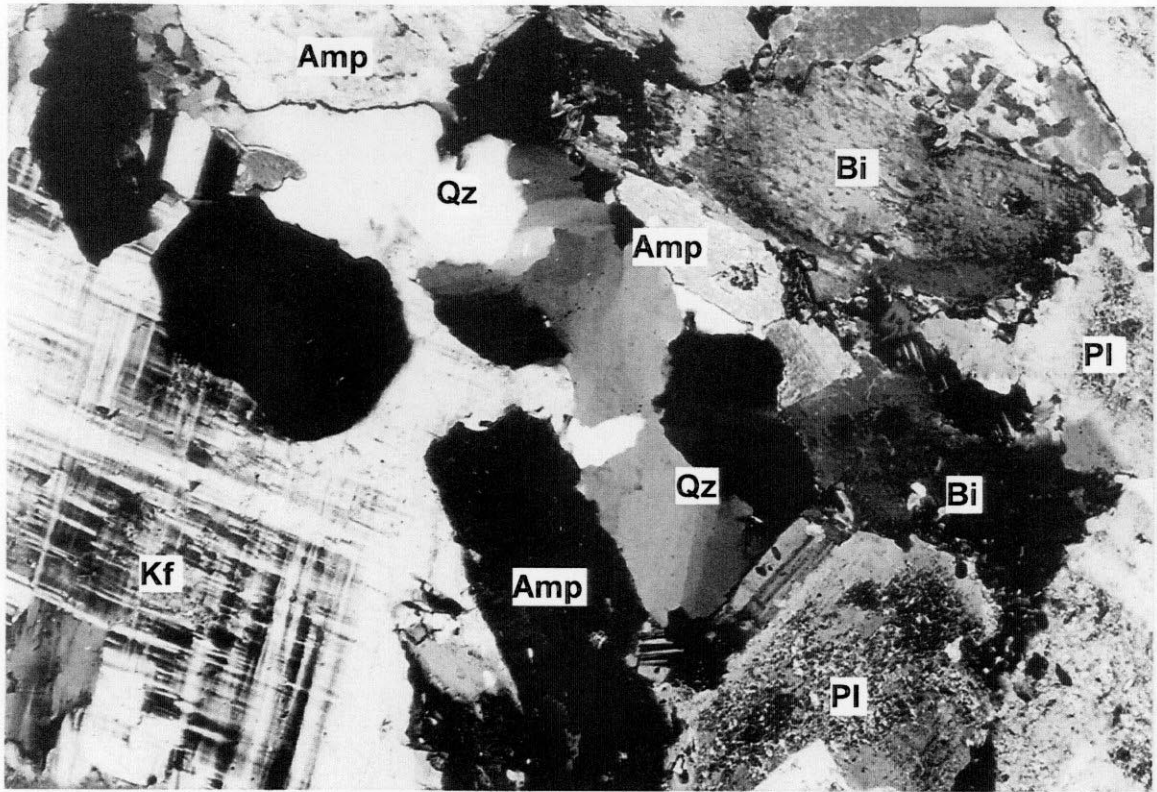
Sample Name : SDD3-62.6

Apc.26 (15) Résultat d'observation microscopique en lames minces



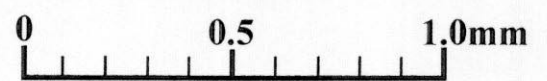
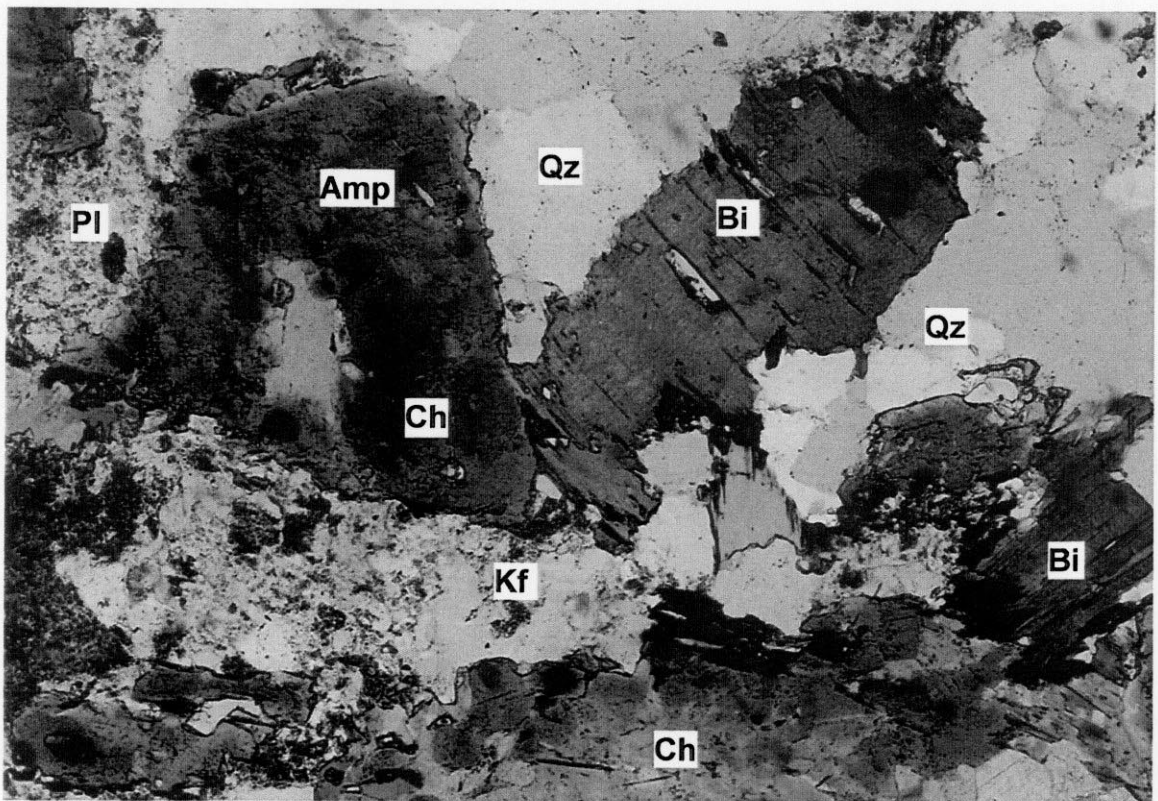
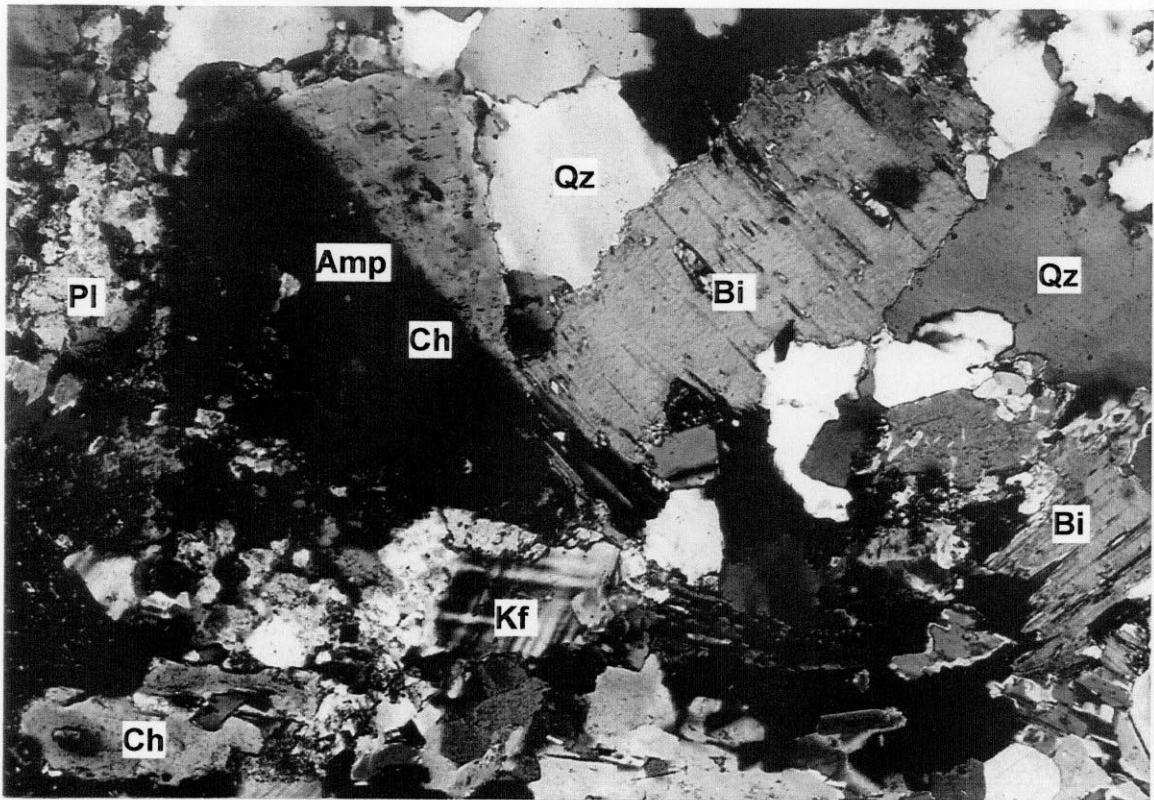
Sample Name : SDD4-160.0

Apç.26 (16) Résultat d'observation microscopique en lames minces



Sample Name : SDD5-120.2

Apc.26 (17) Résultat d'observation microscopique en lames minces



Sample Name : SDD9-80.0

Apc.26 (18) Résultat d'observation microscopique en lames minces