

Photo 5. Jaw Crushing Test Machine

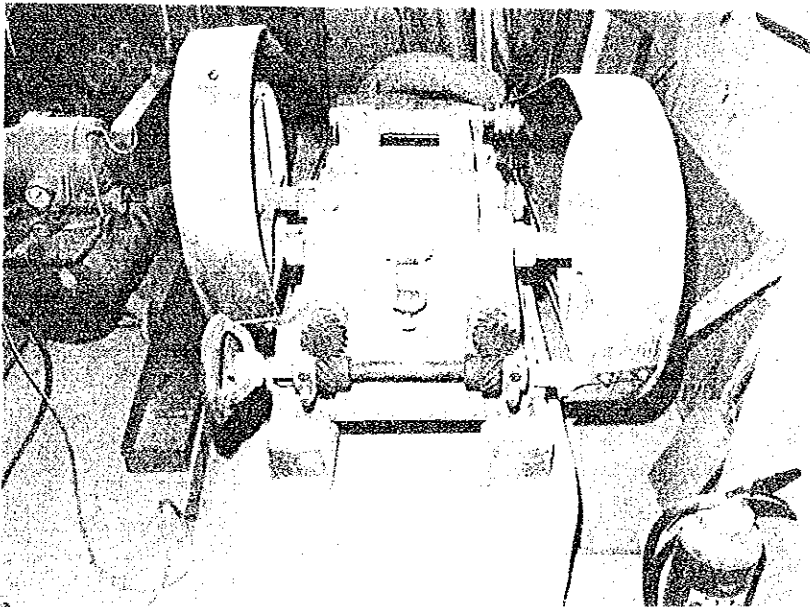


Photo 6. Roll Crushing Test Machine

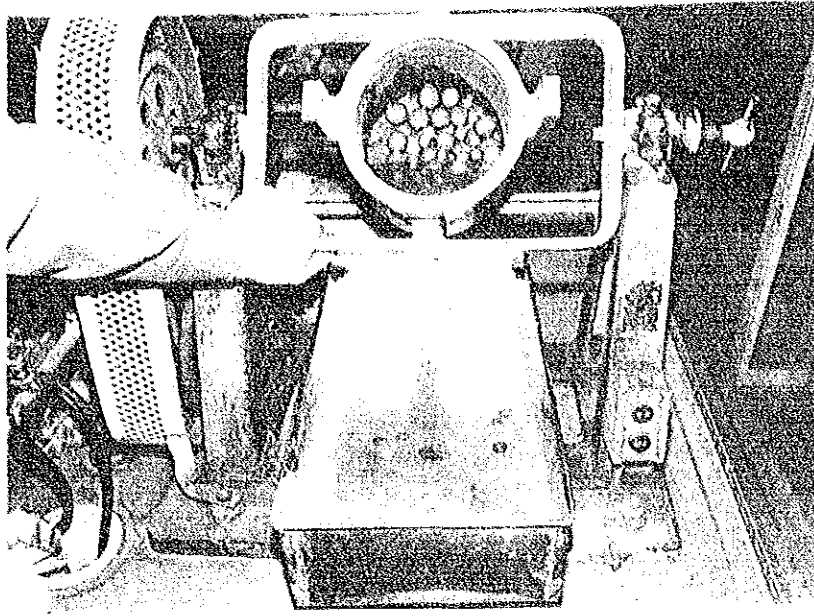


Photo 7. Ball Milling Test Machine

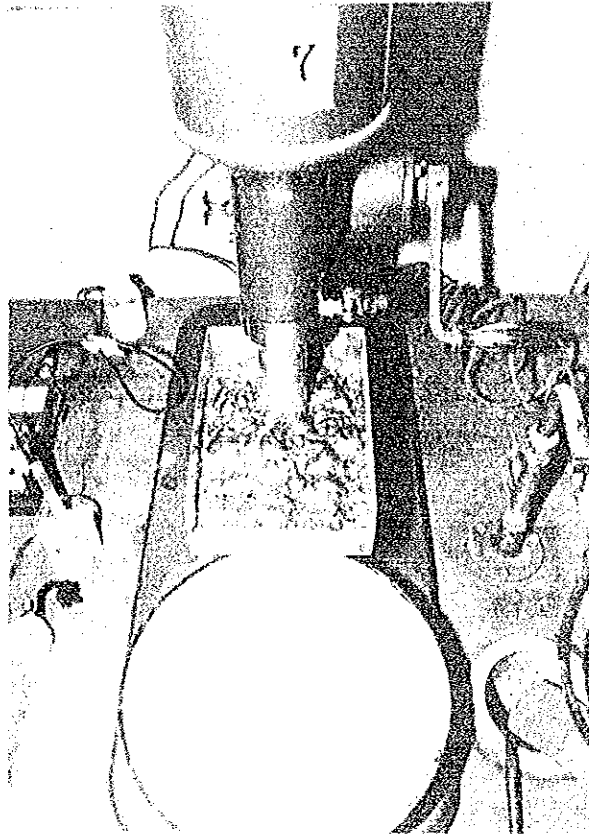


Photo 8. Pb Flotation with Deover Lad.
Flotation Machine

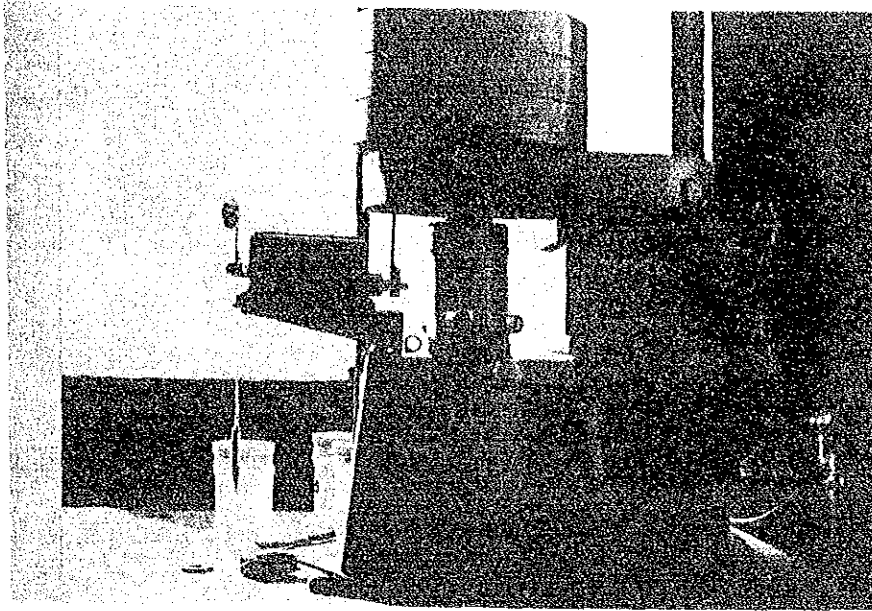


Photo 9. Hardgrove Grindability Machine

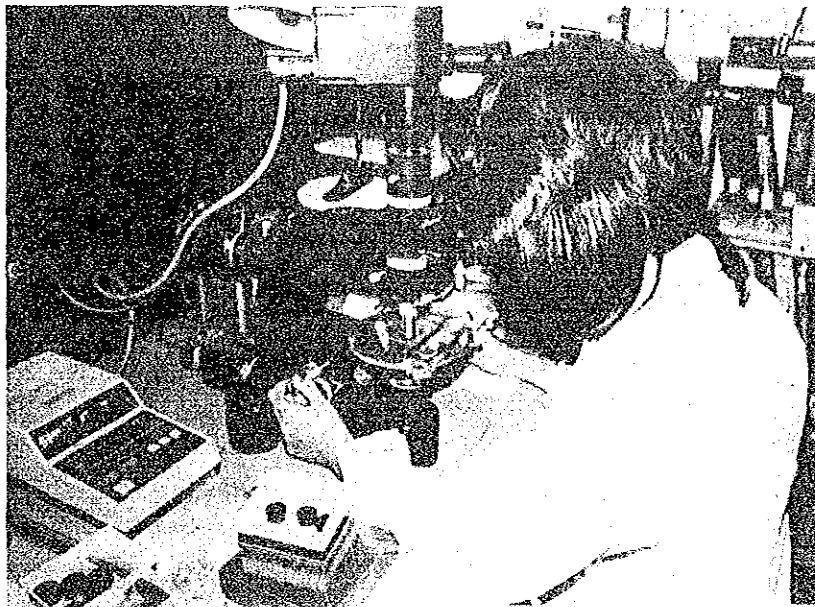


Photo 10. Microscopic Observation

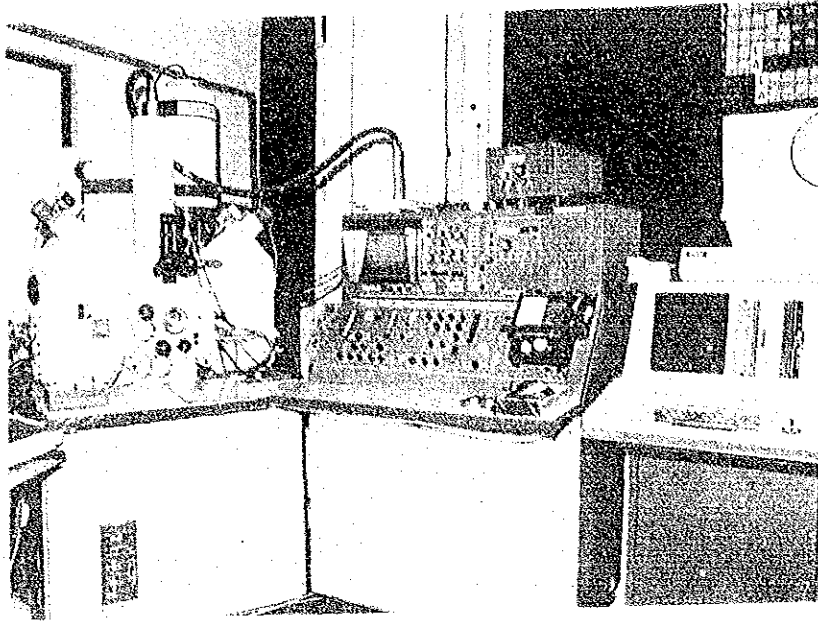


Photo 11. Electron Prob X-ray Microanalyser

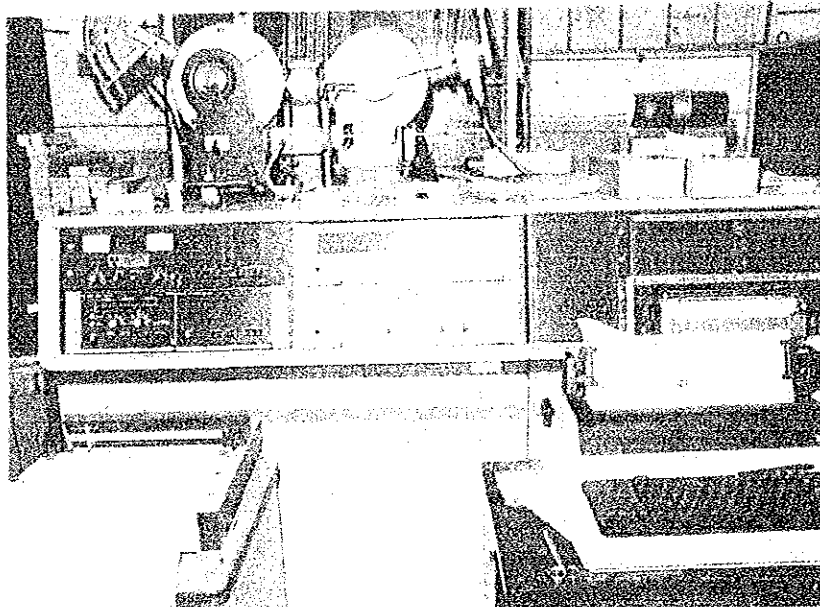


Photo 12. X-ray Diffractometer

2. 供試試料の X 線回折

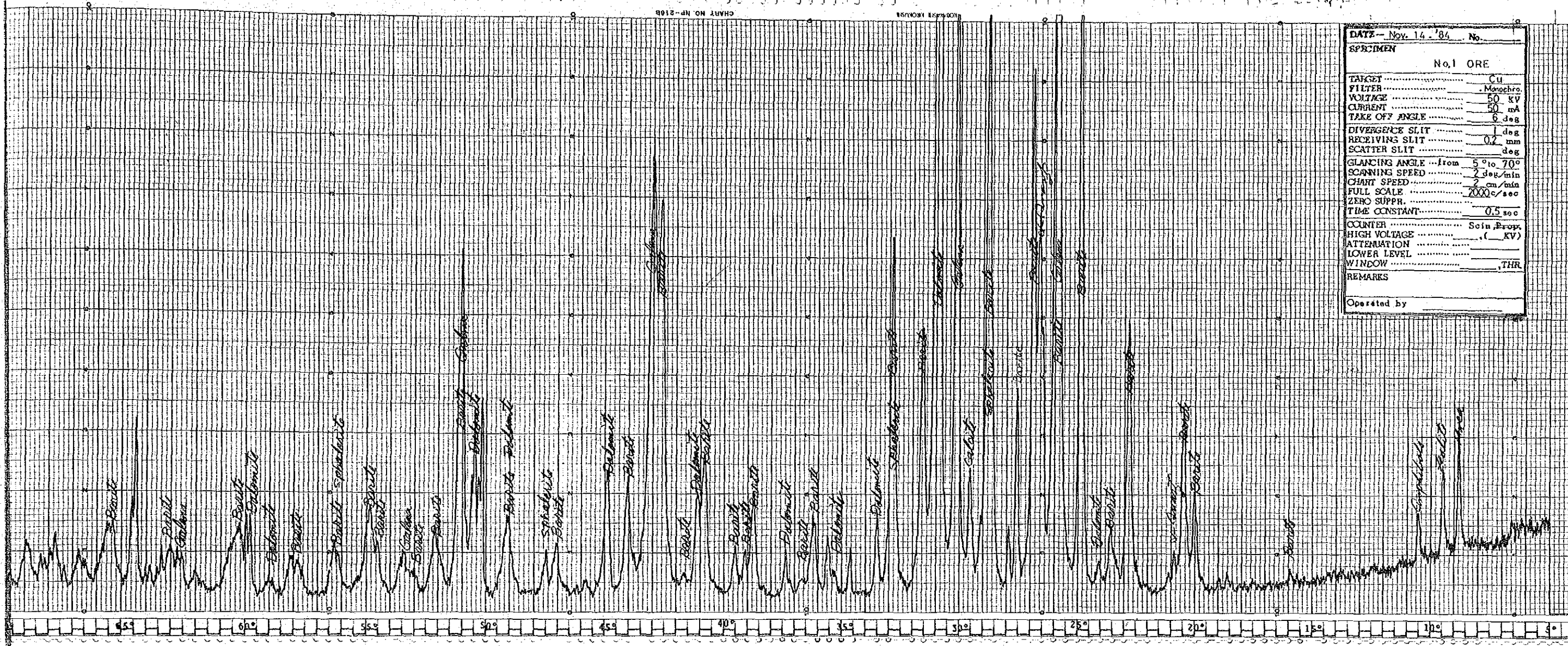


Fig. A-2 X-Ray Diffraction Chart of No. 1 Ore

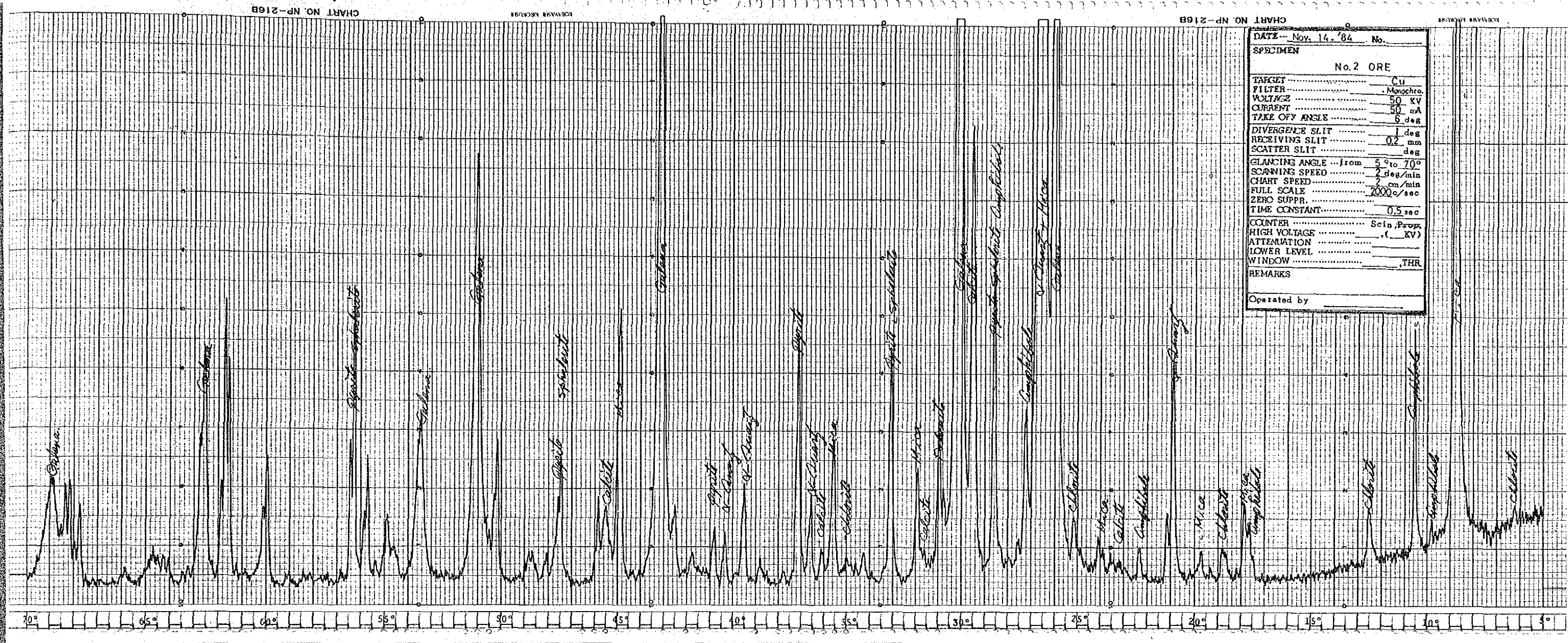


Fig. A-3 X-Ray Diffraction Chart of No. 2 Ore

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The abbreviations in the photo indicate the following minerals.

Am : Amphibole	G : Gangue
Ba : Barite	Gl : Galena
Bi : Biotite	Li : Limonite
Ca : Calcite	Py : Pyrite
Cp : Chalcopyrite	Q : Quartz
Cv : Covellite	Sp : Sphalerite
F : Feldspars	

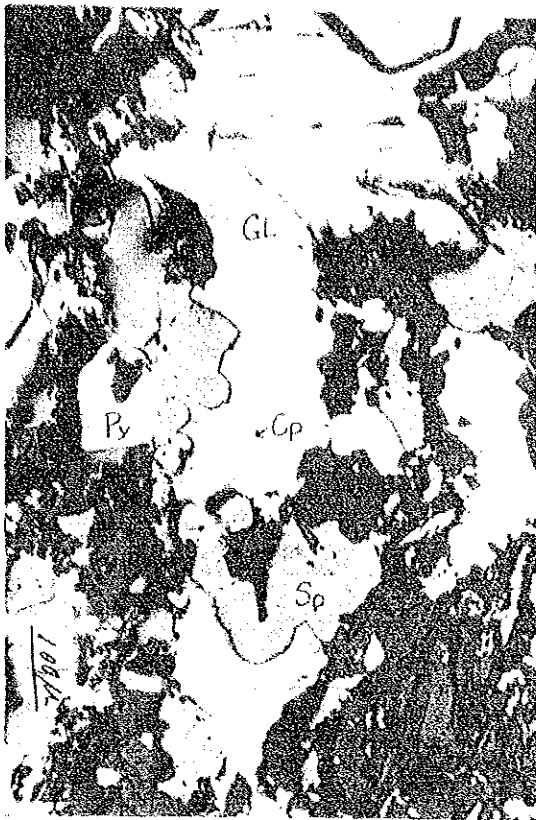


Photo 13.
BORING CORE

Coarse middling consisting mainly of galena, gangue minerals and sphalerite. Pyrite, chalcopyrite and sphalerite are included in galena. Gangue minerals are irregular in shape, and include chalcopyrite in a spotty form, showing paragenetic occurrence in a form of middling.

0 200μ x 80

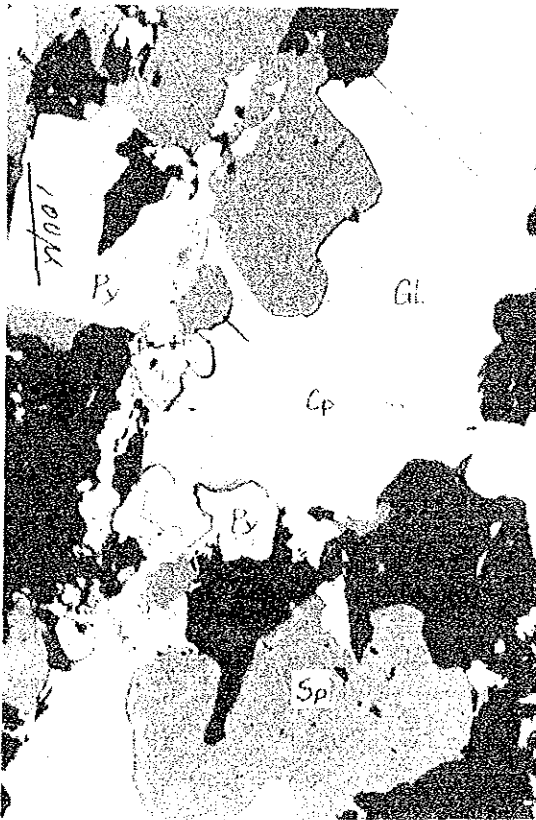


Photo 14.
BORING CORE

Same as Photo 13

0 100μ x 160

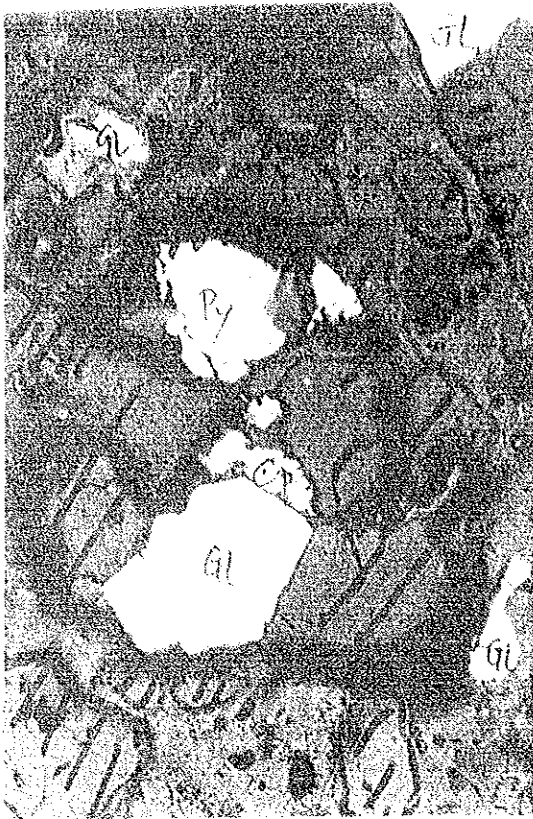


Photo 15.
No. 1 Ore: Flotation feed

Coarse middling composed of pyrite, chalcopyrite and gangue minerals (center). Galena forms middling with gangue minerals.

0 200 μ x 80

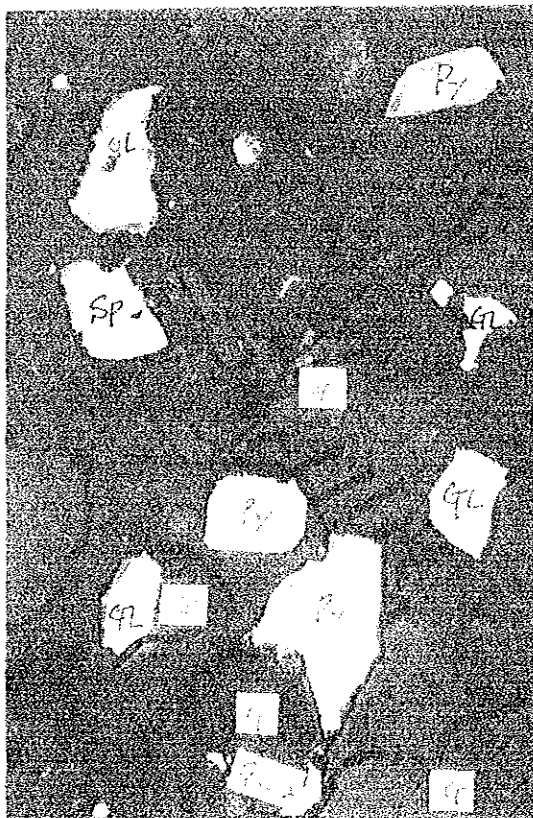


Photo 16.
No. 1 Ore: Flotation feed

Consists of middling of galena and gangue minerals, middling of galena and sphalerite, and independent sphalerite.

0 200 μ x 80

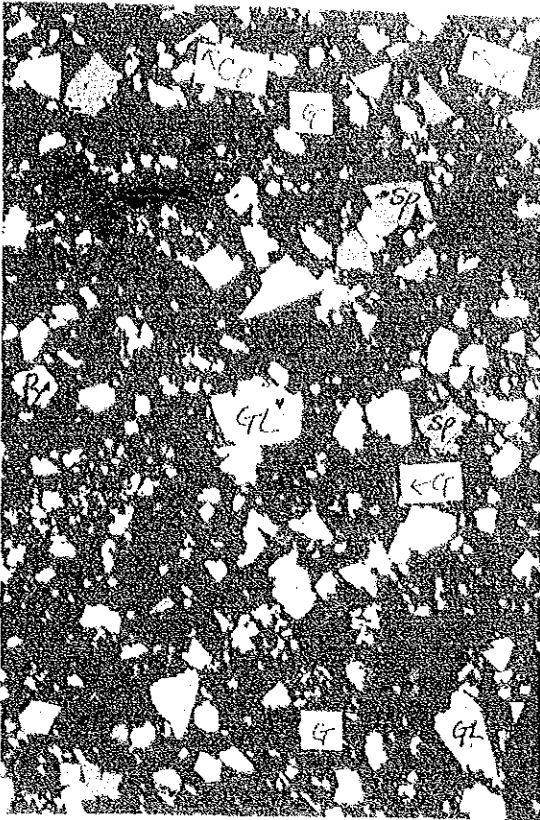


Photo 17.
No. 1 Ore: Pb Concentrate

Mainly composed of galena and sphalerite. Pyrite and chalcopyrite are present each one grain in photo.

0 100μ x 160

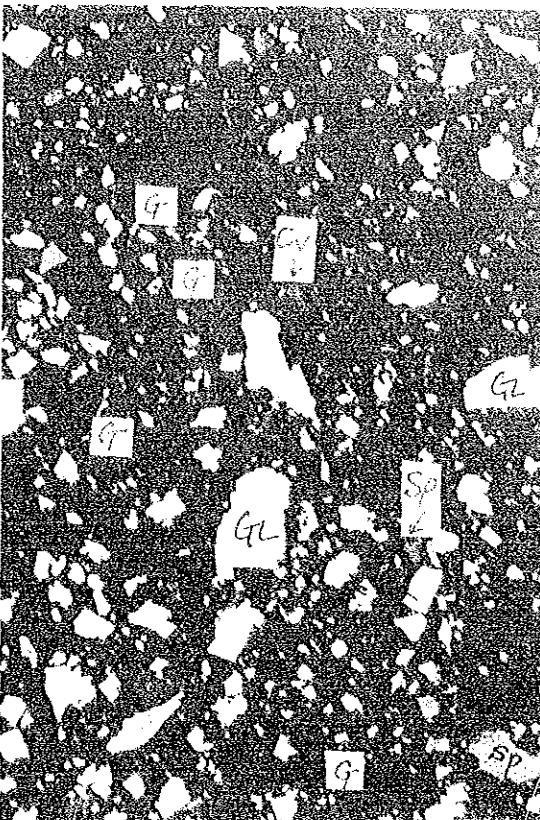


Photo 18.
No. 1 Ore: Pb Concentrate

Consists of galena, sphalerite, gangue minerals and covellite. Pyrite and chalcopyrite are not observed. Sphalerite forms the grains brownish in color.

0 100μ x 160

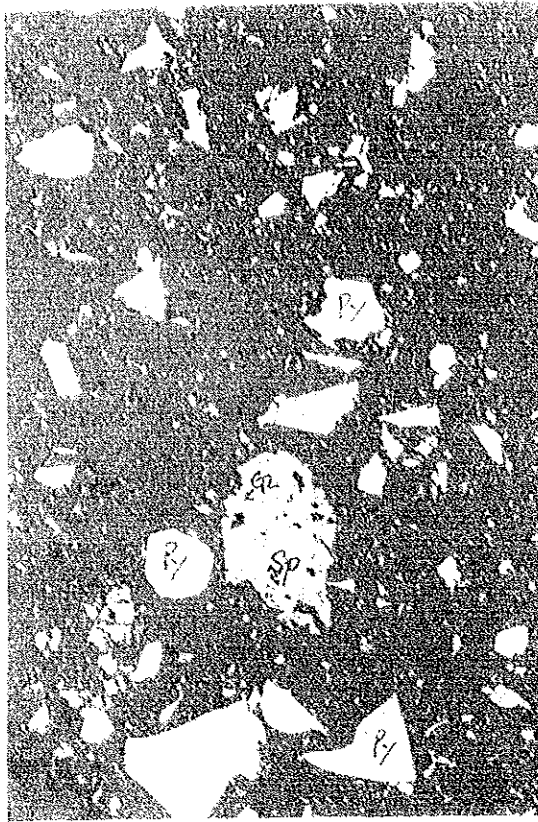


Photo 19.
No. 1 Ore: Zn Concentrate

Mostly consist of the free particles of sphalerite, pyrite and gangue minerals. Sphalerite at the center is accompanied by tiny particles of galena.

0 100μ x 160
└──────────┘



Photo 20.
No. 1 Ore: Zn Concentrate

Mostly composed of the free particles of pyrite, sphalerite and chalcopyrite. Galena is present only in the form of inclusion in gangue minerals.

0 100μ x 160
└──────────┘

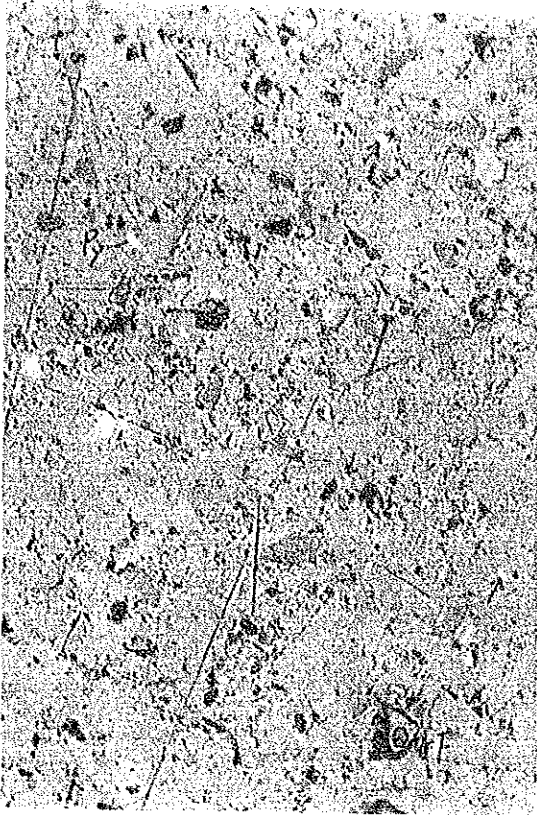


Photo 21.
No. 1 Ore: Py Concentrate

Tiny crystals of pyrite are scattered. Gangue minerals consist of hard quartz and feldspar, and soft barite and calcite. The formers show strong relief (lower right).


0 100 μ x 160




Photo 22.
No. 1 Ore: Py Concentrate

The latter show an indistinct boundary with barite matrix because of similar color and reflectivity.

Same as Photo 21.


0 100 μ x 160




Photo 23.
No. 1 Ore: Ba Concentrate

A small amount of pyrite are scattered, Hard gangue minerals are found in a very small amount.

0 100 μ x 160

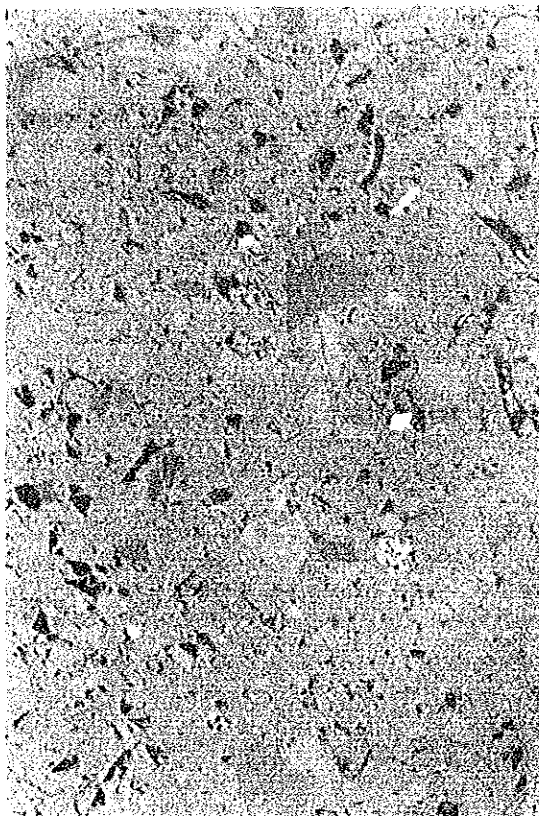


Photo 24.
No. 1 Ore: Ba Concentrate

Same as Photo 23.

0 100 μ x 160

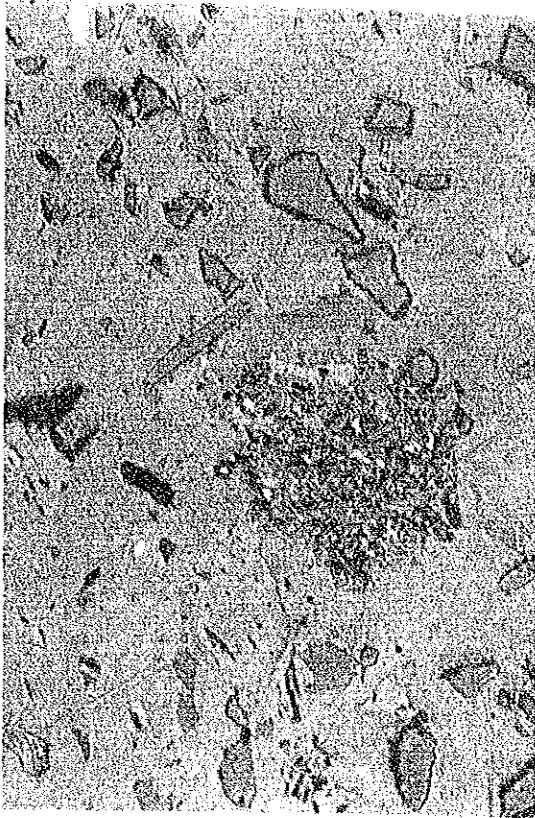


Photo 25.
No. 1 Ore: Tailing

Pyrite, galena and limonite are scattered. Hard gangue minerals are dominant.

0 100 μ x 160
└──────────┘



Photo 26.
No. 1 Ore: Tailing

Same as Photo 25.

0 100 μ x 160
└──────────┘

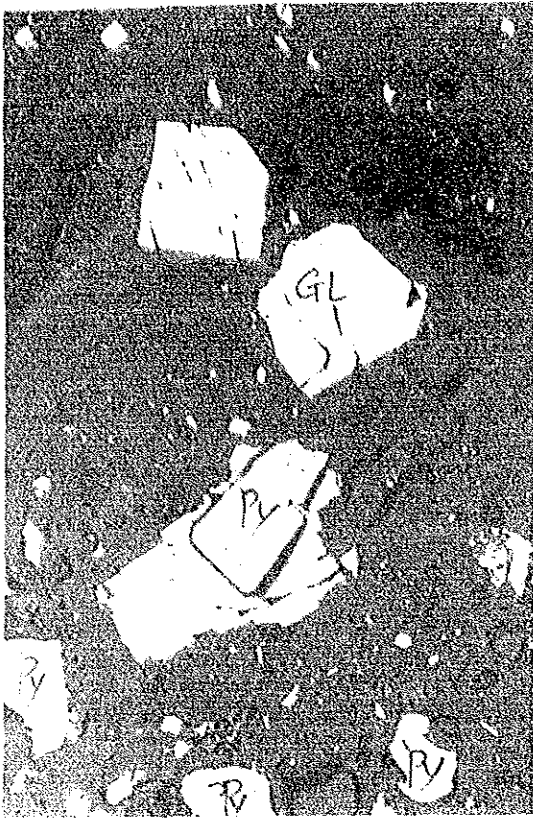


Photo 27.
No. 2 Ore: Flotation feed

Galena is present as free particles, and forms middling with pyrite. Very fine-grained white minerals are galena and pyrite.

0 100μ x 80



Photo 28.
No. 2 Ore: Flotation feed

Middlings consisting of galena and gangue minerals, and pyrite, chalcopyrite, galena and gangue minerals are observed.

0 100μ x 80

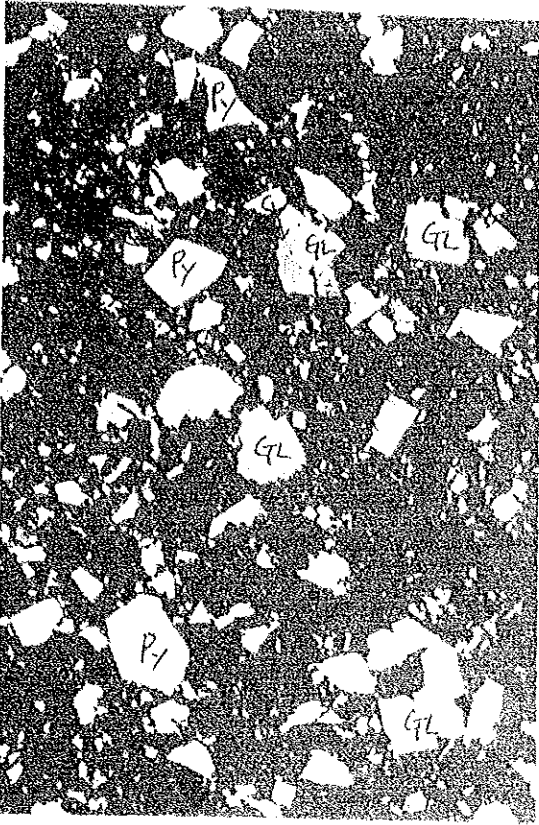



Photo 29.
No. 2 Ore: Pb Concentrate

Mainly composed of free particles of galena and pyrite. Sphalerite is present in small quantity.

0 100 μ x 160


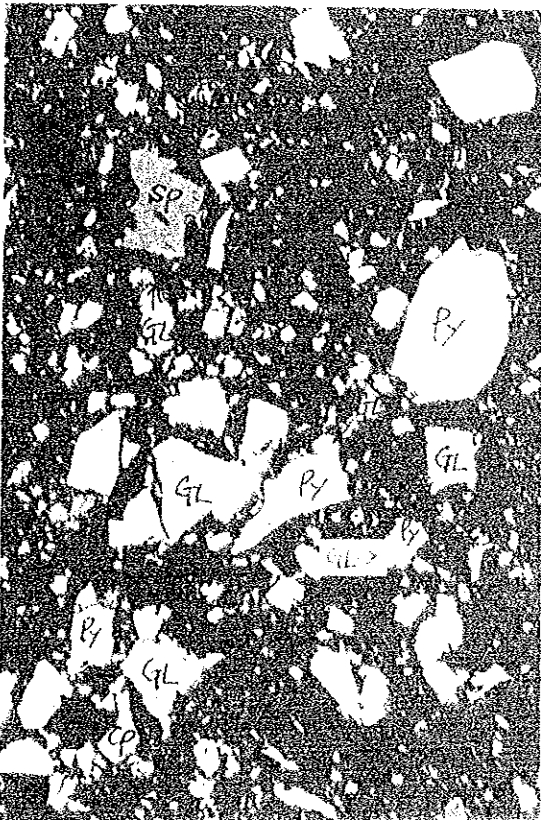



Photo 30.
No. 2 Ore: Pb Concentrate

Same as Photo 29.

0 100 μ x 160


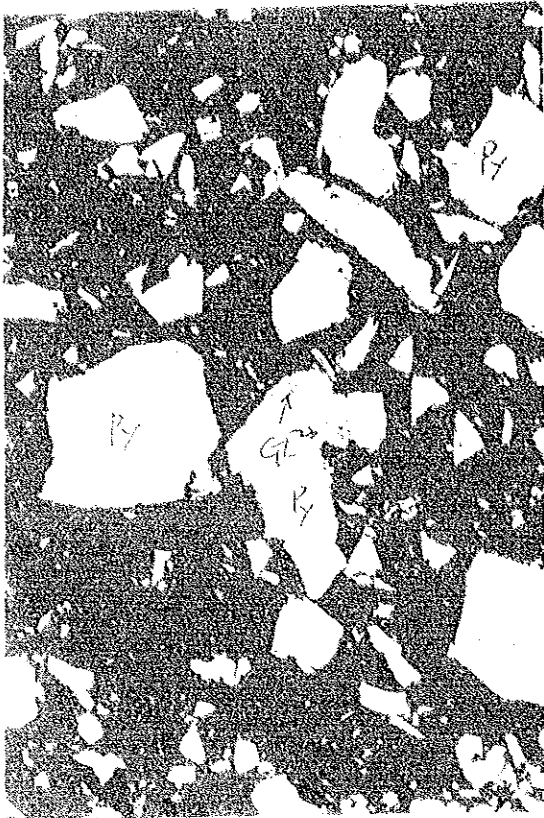


Photo 31.
No. 2 Ore: Zn Concentrate

Mostly composed of free particles of pyrite. Middlings consisting of pyrite and galena, and gangue minerals and present in small quantity.

0 100 μ x 160
└──────────┘

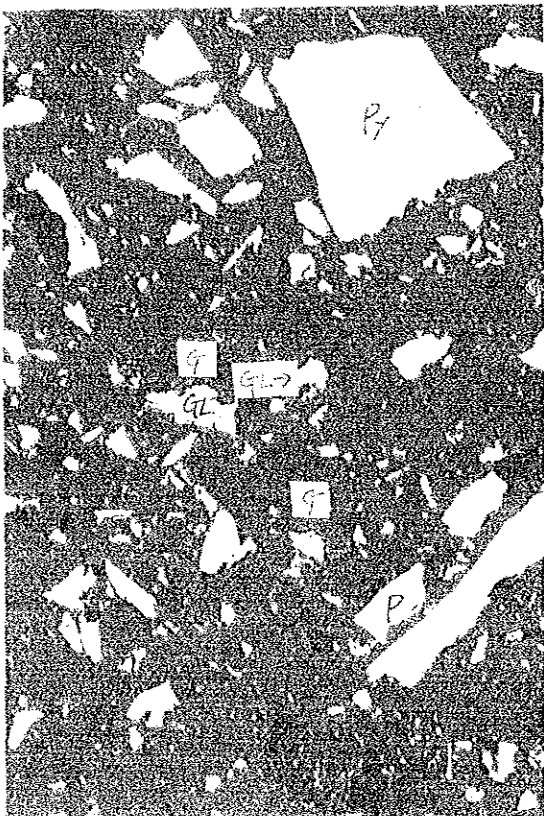


Photo 32.
No. 2 Ore: Zn Concentrate

Same as Photo 31.

0 100 μ x 160
└──────────┘

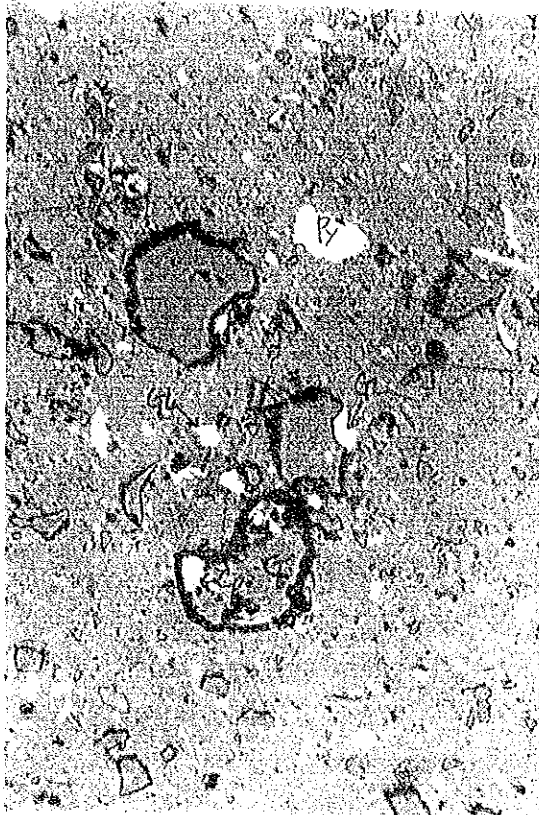



Photo 33.
No. 2 Ore: Py Concentrate

Most of the bright minerals are pyrite. Galena is present in small quantity.

0 100 μ x 160


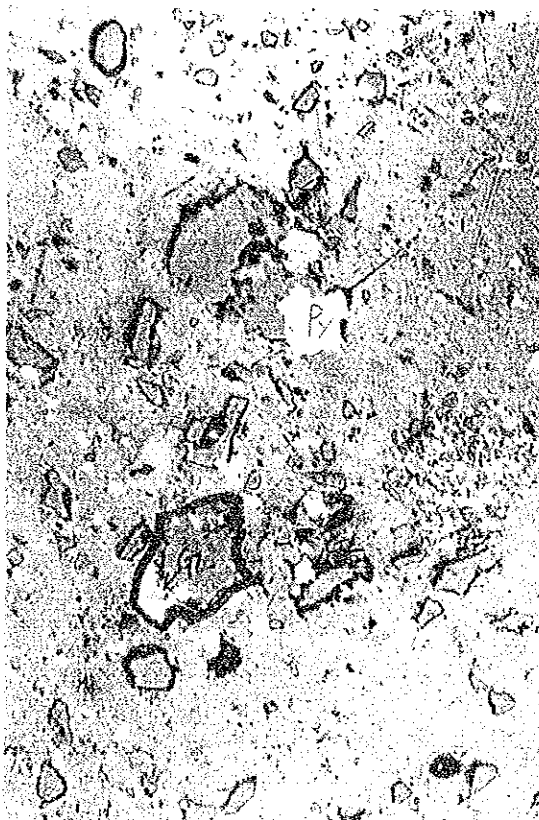


Photo 34.
No. 2 Ore: Py Concentrate

Same as Photo 33.



0 100 μ x 160




Photo 35.
No. 2 Ore: Ba Concentrate

Most of the white particles are pyrite. Barite occupies a part of the particles showing a similar tone to bakelite matrix. Middling of galena and gangue minerals are observed in Photo 24.

0 100 μ x 160


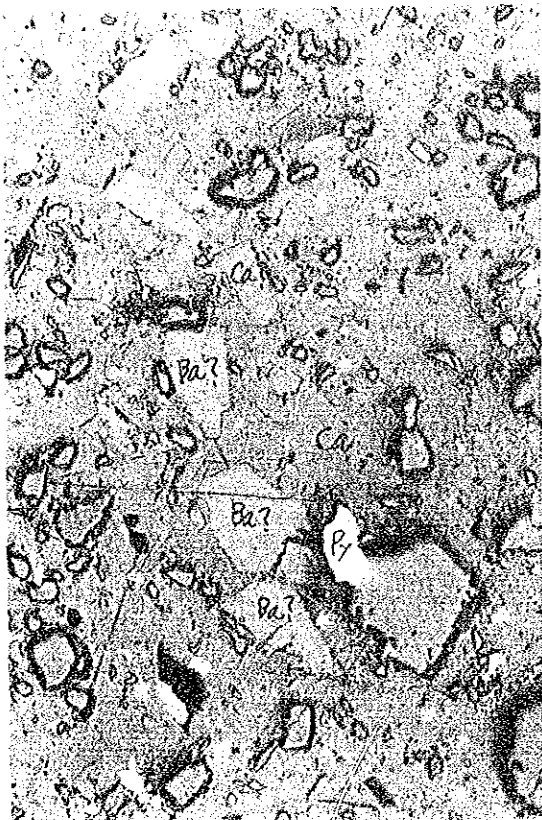


Photo 36.
No. 2 Ore: Ba Concentrate

Same as Photo 35.


0 100 μ x 160




Photo 37.
No. 2 Ore: Tailing

Tiny particles of pyrite are scattered.

0 100 μ x 160



Photo 38.
No. 2 Ore: Tailing

Same as Photo 37.

0 100 μ x 160

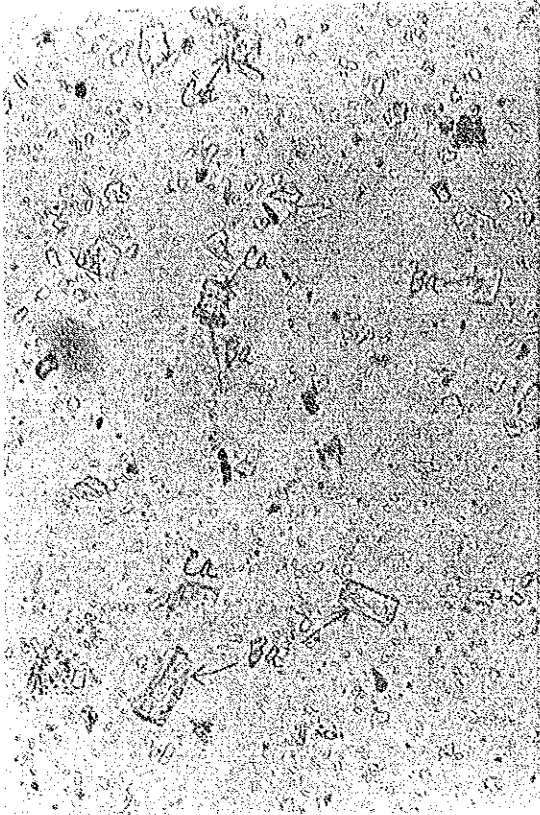



Photo 39.
No. 1 Ore: Py Concentrate
(Open Nicols)

Most of the transparent particles are calcite. Barite is small in quantity.

0 100 μ x 255


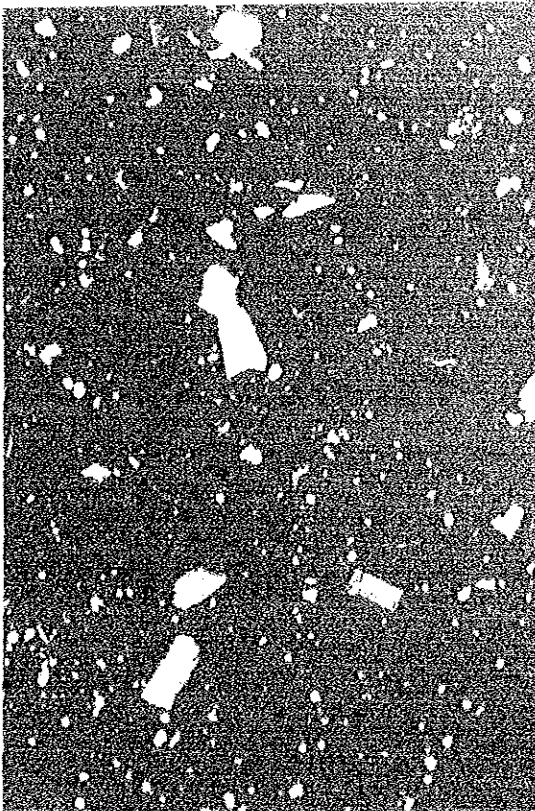



Photo 40.
No. 1 Ore: Py Concentrate
(Cross Nicols)

Same as Photo 39.

0 100 μ x 255


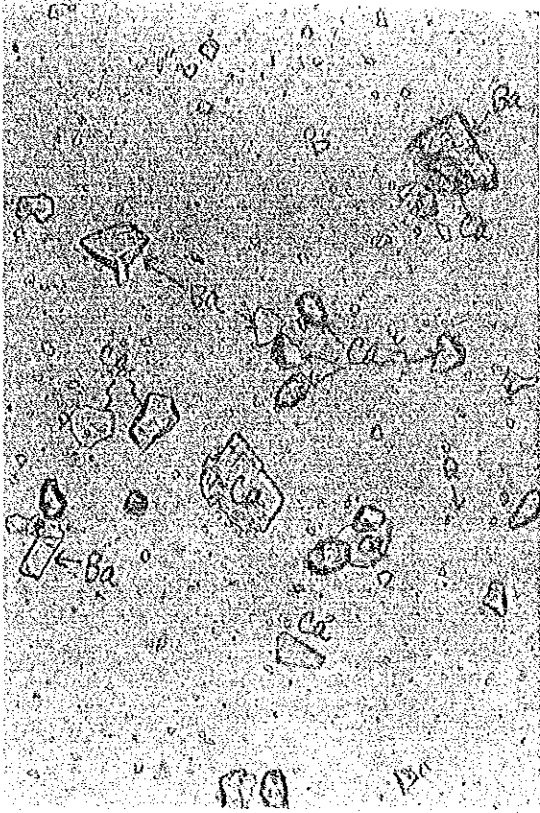


Photo 41.
No. 1 Ore: Ba Concentrate
(Open Nicols)

Mostly consist of calcite, accompanied by a small amount of barite and quartz.

0 100 μ x 105
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Photo 42.
No. 1 Ore: Ba Concentrate
(Cross Nicols)

Same as Photo 41.

0 100 μ x 105
└───┘

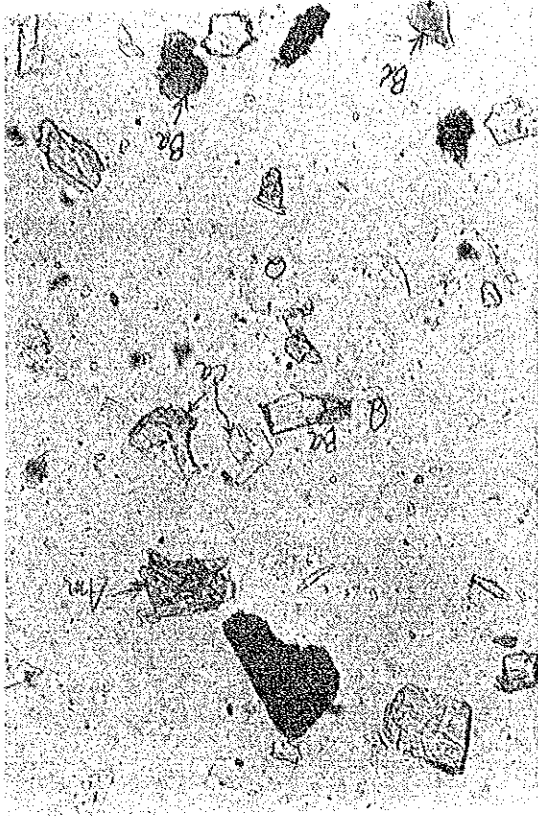


Photo 43.
No. 1 Ore: Tailing
(Open Nicols)

Mainly composed of calcite and quartz (partly feldspar?). Biotite and amphibole are found in small quantity.

0 100 μ

x 105

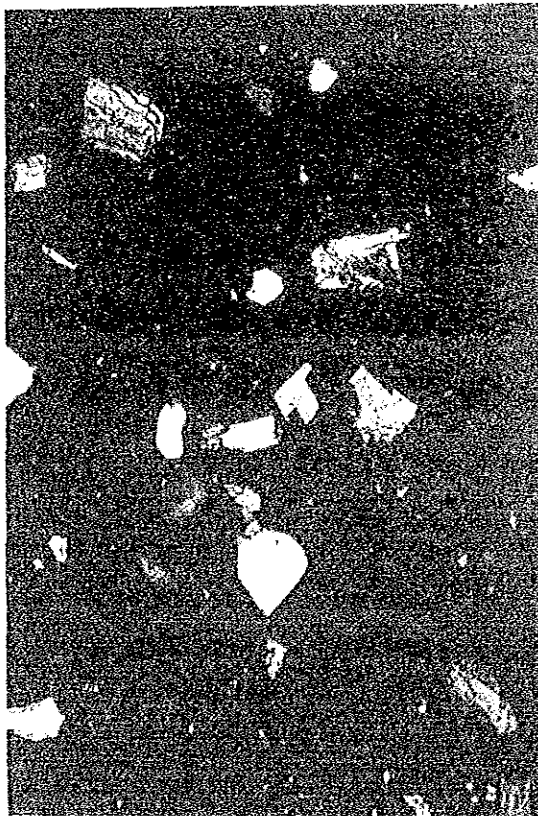


Photo 44.
No. 1 Ore: Tailing
(Cross Nicols)

Same as Photo 43.

0 100 μ

x 105