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MINING LANDS BRANCH

### PETROGRAPHIC DESCRIPTIONS

Submitted by: Geoplastech, Inc.

Petrography by: Barbara Murck

Client: ~~Glenn Mullin~~ Glenn Mullin  
Trinity Explorations

Locality: Munro Township

Project No.: MSL-94-01

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## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-226.5'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This is a classic sample of a serpentinized cumulate-textured dunite, i.e., olivine cumulate. It is the type of rock typically found in layered intrusions and in the cumulate zones of komatiitic sequences, and thus is typical of the Munro Township flows. The sample is dominated by cumulate-textured (euhedral to subhedral, equant), medium-grained (ave. grain size 1-3 mm) olivine. The olivine itself is no longer present, as it has been completely serpentinized. Interstitial to the serpentinized olivine grains are clinopyroxenes, which have undergone minor to extensive chloritic (or possibly anthophyllitic) alteration. Traces of carbonate (probably an alteration mineral) and phlogopite (possibly a primary mineral) are present.

In reflected light, the original fine euhedral chromite grains are still present. They range from little altered to moderately altered with rims of magnetite. Some grains are partially replaced by magnetite. There is also considerable magnetite occurring in the form of very fine, discontinuous gash and fracture fillings and interstitial areas; this is very typical of heavily serpentinized, chromite-bearing rocks. Traces of pyrite are present.

### MINERALOGY

≈75% Serpentine + Remnant Olivine: small fragments of olivine remain here and there, but by far the majority of the olivine has been altered pseudomorphously to a fibrous serpentine assemblage, which retains the original cumulate texture.

≈10% Clinopyroxene: interstitial to the serpentinized olivine.

≈10% Anthophyllite and/or Chlorite: there is a fibrous, colourless (to light brown) alteration mineral with slightly anomalous interference colours; because it is fibrous it is impossible to identify without XRD or another analytical technique, but most likely it is chlorite or anthophyllite altering interstitial clinopyroxene.

≈5% Opaques, consisting (in order of decreasing abundance) of:

Magnetite: the most abundant opaque mineral in the sample; accounts for about 2-3% of the rock as a whole; does not occur euhedrally, but instead

occurs in very fine gashes and fractures and interstitial to other grains, as well as partially replacing serpentinized olivine grains (these occurrences are typical for magnetite that is part of an alteration assemblage in a serpentinized zone); occurs as rims and partial replacement of chromite.

Chromite: minor (about half as abundant as magnetite, accounting for no more than about 2% of the rock as a whole); occurs as euhedral, octahedral grains, ave. 0.1 mm; typically shows rims of magnetite alteration and/or partial replacement by magnetite.

Pyrite: trace; very fine grains, very lightly disseminated throughout the sample.

Tr. Carbonate.

Tr. Phlogopite.

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-397.7'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This is a brecciose, almost net-textured rock. It consists of angular fragments of a very fine-grained, brownish, altered material, probably volcanic in origin, within a breccia-like matrix. Most of the fragments are made of the same brownish volcanic material. Some of the fragments display concentric zoning, suggesting that they have interacted chemically with the surrounding matrix material. The matrix consists partially of sulphides but is dominated by a submicroscopic opaque material that ranges from non-reflectant to poorly reflectant. It is unlikely that this material consists of clay particles, because it is completely opaque (i.e., black in plane polarized light). The sulphides in the matrix are dominated by pyrrhotite with minor chalcopyrite.

### MINERALOGY

≈50% Matrix, consisting (in order of decreasing abundance) of:

**Non reflectant Opaque Material:** most of the matrix material is opaque but nonreflectant to poorly reflectant; it is unidentifiable by simple optical techniques; it is probably not argillaceous material, nor is it glass, because it is not only isotropic, but completely opaque (black in plane polarized light); my guess is that it is dominated by submicroscopic oxides, probably containing at least some magnetite.

**Pyrrhotite:** about 25% of the matrix (10-12% of the rock as a whole) consists of irregular masses of pyrrhotite.

**Chalcopyrite:** minor; fairly common as inclusions in pyrrhotite.

**Pentlandite:** trace; typical flame-like inclusions in pyrrhotite.

**Chromite:** trace; small clusters of very fine grains.

≈50% Fragments, consisting (in order of decreasing abundance) of:

**Brownish Alteration Assemblage:** the fragments are dominated by a submicroscopic to extremely fine-grained, brownish alteration material that

appears to consist of epidote, possibly mixed with chlorite (this would be consistent with alteration of a mafic volcanic fragment).

Anthophyllite(?): accessory; colourless, needle-like grains, probably either anthophyllite or tremolite.

Carbonate: accessory; occurs mainly in one fragment that is of different composition from the rest (more felsic?).

Feldspar: accessory; occurs with carbonate, mainly in one fragment that is of different composition from the rest (more felsic?).

Chlorite: trace to accessory; tends to be associated with pyrrhotite within the fragments; colourless, fibrous, with low, slightly anomalous bluish to brownish interference colours.

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-432.9'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This appears to be a heavily altered, porphyritic, vesicular, partially brecciated mafic flow. It may be an altered flow-top breccia in a mafic-ultramafic flow sequence. The sample is dominated by a submicroscopic brownish material that may contain epidote (but is mostly not identifiable by simple optical means). This is essentially the same material that comprises the fragments in sample **MSL-94-01-397.7'**. The brownish material occurs in large, irregular masses, with an interstitial alteration assemblage dominated by carbonate, opaques, and chlorite, with minor quartz. The overall texture ranges from a swirling, irregular, flow-like or tuffaceous texture to a brecciose, fragmented texture. Within the brownish submicroscopic material are euhedral remnants of microphenocrysts, probably mainly clinopyroxene microphenocrysts (possibly some olivines), now completely chloritized. There are also some round and ovoid masses which appear to be vesicles (amygdules), now filled with chlorite and needle-like opaques.

As in sample **MSL-94-01-397.7'**, much of the opaque material is nonreflectant or poorly reflectant. The reflectant opaques are dominated by pyrrhotite and pyrite, with accessory chromite and trace to accessory pentlandite.

### MINERALOGY

≈65% **Brownish Material**: most of the sample consists of large, irregular masses of a brownish, altered material; it is clearly of volcanic origin, because it contains altered remnants of microphenocrysts, probably mainly clinopyroxene, as well as chlorite-carbonate-opaque-filled vesicles; there are some possible devitrification textures visible in some parts of the material, which suggests an originally glassy rock; the swirling, tuffaceous texture of the sample would be consistent with this.

≈15% **Opaques**, consisting (in order of decreasing abundance) of:

**Nonreflectant Opaque Material**: by far the majority of the opaque material in the sample is nonreflectant, submicroscopic material; it is unlikely (but possible) that it is argillaceous, because it is truly opaque--black in plane polarized light; it could consist of submicroscopic oxide material; I have also

seen carbonaceous material that looks like this; a microprobe analysis could probably establish the composition of this material with some certainty; most of the nonreflectant opaque material occurs in areas interstitial to the volcanic fragments, in association with alteration minerals carbonate, quartz, and chlorite; some extremely fine opaque material also rims the vesicles within the fragments.

**Pyrrhotite:** the most abundant sulphide in the sample (but note that in the rock as a whole, sulphides are present only as an accessory mineral, perhaps 1% of the total rock); occurs as very fine, irregular masses.

**Pyrite:** accessory.

**Chalcopyrite:** trace to accessory; associated with pyrrhotite.

**Chromite:** trace to accessory; very fine, euhedral grains.

**Pentlandite:** trace; flame-like inclusions in pyrrhotite.

≈5-7% **Carbonate:** occurs primarily in areas interstitial to the volcanic fragments; associated with chlorite, quartz, and opaque material (not sulphides); carbonate also fills vesicles within the volcanic fragments (associated with chlorite).

≈5% **Chlorite:** occurs throughout the sample, both in interstitial areas and within the brownish volcanic fragments; within the volcanic fragments, chlorite commonly occurs as alteration of remnant euhedral microphenocrysts (probably clinopyroxene microphenocrysts); chlorite also fills some of the vesicles, along the carbonate and needle-like extremely fine opaques; the chlorite is colourless to very pale green, fibrous, with low, slightly anomalous bluish interference colours.

≈3% (or more?) **Quartz:** mostly extremely fine-grained (although some is coarse enough to be clearly identifiable; part of the alteration assemblage; occurs in areas interstitial to the brownish volcanic material; associated with carbonate and opaque material.

**Acc. Tremolite or Anthophyllite:** needle-like colourless alteration mineral; occurs mainly in areas interstitial to the large, irregular masses of brownish volcanic material.

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-474'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This sample is similar to the preceding (sample **MSL-94-01-432.9'**). Its overall texture ranges from a swirling, tuff-like rock with irregular masses and interstitial alteration, to an almost brecciose texture. What appears to be the "host" rock is mostly extremely fine-grained to submicroscopic and heavily altered. It is clearly volcanic in origin, with remnants of altered microphenocrysts and vesicles. The vesicles are mostly flattened. Large portions of the rock, interstitial to the volcanic host material, have been altered to a carbonate-chlorite assemblage, with abundant opaque, nonreflectant material as seen in previous samples. Carbonate and quartz-carbonate veinlets cut both the interstitial matrix material and the volcanics. Sulphides, present as accessories, are dominated by pyrite in this sample.

### MINERALOGY

≈45% **Brownish Altered Volcanic Host:** the volcanic host has been altered to a greyish-brown (in plane polarized light), extremely fine-grained material; I suspect that there may be appreciable carbonate within this material, but unlike the interstitial and vein carbonate, it does not effervesce in cold HCl (which means, at least, that it is not calcite); otherwise, the material is too fine-grained (to submicroscopic) to permit optical identification of its constituents; there are remnants of microphenocrysts and vesicles within the volcanic material; it may have been originally glassy.

≈20% **Opacues,** consisting (in order of decreasing abundance) of:

**Nonreflectant Opaque Material:** dominates the opaque material in this sample; forms the "matrix" between the irregular masses of volcanic material; associated with alteration minerals such as carbonate; also alters the fragments themselves.

**Pyrite:** the most abundant sulphide (but an accessory, probably less than 2% in the rock as a whole); occurs as clusters of very fine, subidiomorphic grains.

**Chalcopyrite:** accessory.



Chromite: trace.

Pyrrhotite: trace.

Galena(?): trace, very fine grains of a whitish-grey mineral; looks like galena, but it could be a number of minerals (even violartie).

≈20% Carbonate: occurs in masses of fine grains, associated with chlorite, quartz, and nonreflectant opaque material, forming a sort of matrix interstitial to the volcanics; in addition to the identifiable, interstitial carbonate, there may be appreciable carbonate within the fragments (i.e., altering the volcanic material itself), although this material is too fine-grained to identify with certainty; there are also several carbonate veins that cut across both matrix and volcanics; at least some of the carbonate effervesces in cold HCl.

≈10% Chlorite: extremely fine, fibrous chlorite (so fine-grained that it is almost isotropic); common in areas interstitial to the masses of volcanic host, associated with other alteration minerals, especially carbonate; the chlorite is colourless to very pale green, with low, slightly anomalous bluish interference colours; also alters remnants of microphenocrysts and vesicles within the volcanic material.

≈5% Quartz: mostly very fine-grained (though some is coarse enough to be clearly identifiable); associated with carbonate in the altered matrix material between the volcanics.

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-508.2'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This rock is so heavily altered that it is difficult to know what to call it. At first look I was tempted to call it a partially spinifex-textured peridotite or clinopyroxenite, but it is clearly not a classic spinifex. Parts of the sample are quite coarse-grained, consisting predominantly of altered clinopyroxene. The sample does contain abundant, extremely elongated, hopper-type (hollow) grains, but instead of pyroxene or olivine these seem to be mainly altered plagioclase. The rock is probably part of a mafic-ultramafic flow sequence. The feldspar hopper crystals are almost certainly indicative of rapid cooling, but I am not quite sure what to make of the coarser clinopyroxenes; perhaps a two-stage cooling process is indicated(?). I would interpret this as a feldspathic peridotite with a texture that is transitional to spinifex texture.

The alteration is heavy and pervasive, dominated by chlorite, with heavy saussuritic (sericite + epidote + carbonate) alteration of the feldspars. Opaques are dominated by oxides--mostly magnetite and ilmenite. Some of the oxides may have been generated through the alteration of pyroxenes, and some through the alteration of primary oxides, probably a titanomagnetite or ilmenite.

### MINERALOGY

≈40% Feldspar & Altered Feldspar: feldspar occurs in the form of coarse but highly elongate grains, which are typically hollow, "hopper"-type grains; this texture is usually indicative of rapid cooling; the feldspars are so heavily altered that they are barely recognizable, but probably consist of mainly or exclusively plagioclase; the alteration is a submicroscopic, cloudy, saussuritic assemblage, probably containing a mixture of epidote, carbonate, and sericite, as well as other minerals.

≈35% Clinopyroxene & Altered Clinopyroxene: the recognizable clinopyroxene grains are quite coarse, ranging up to 3 mm or more; they typically retain euhedral to subhedral grain boundaries and, though heavily altered, simple twinning is commonly preserved; the alteration is heavy, typically attacking the cores of grains and along fractures; the alteration consists of fibrous chlorite with carbonate and possibly some talc or actinolite(?).

≈20% Chlorite: in addition to the chlorite altering clinopyroxene, there is abundant extremely fine-grained, fibrous chlorite altering what may have been a very fine groundmass interstitial to the clinopyroxene and feldspar grains; this may also be associated with submicroscopic, cloudy epidote.

≈5% Opaques, consisting (in order of decreasing abundance) of:

Magnetite: in clusters, in skeletal intergrowths with ilmenite; about twice as abundant as ilmenite.

Ilmenite: in skeletal intergrowths with magnetite.

Pyrrhotite: trace.

Acc. Carbonate: in cross-cutting veinlets.

Tr. Quartz: in veinlets, associated with carbonate.

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-536.5'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This sample appears to be an altered fine-grained gabbro. The original texture, which is probably best defined as diabasic (fine plagioclase needles and slightly coarser clinopyroxene grains) is well-preserved in spite of the alteration. The original texture is clearly visible when the thin section is held up to the light. The feldspars are heavily altered to a cloudy, saussuritic assemblage. The clinopyroxenes are altered to a fibrous assemblage that seems to consist primarily of a strongly coloured chlorite. The clinopyroxenes themselves, where they are less altered, are quite strongly coloured. There are some fine, cross-cutting veinlets containing carbonate and albite (or possibly adularia?), as well as a cloudy mineral that could be prehnite.

### MINERALOGY

≈50% Plagioclase & Altered Plagioclase: elongate tabular to needle-like grains, ave. 1-1.5 mm in length; now heavily to completely altered to a cloudy, saussuritic alteration assemblage.

≈40% Clinopyroxene & Altered Clinopyroxene: irregular to subhedral prismatic grains, now heavily to completely altered; original grain size ave. 1-2 mm; alteration is an extremely fine-grained mixture of green fibrous minerals, probably mainly actinolite or chlorite + actinolite, with minor exsolved oxide material; the original clinopyroxenes, where preserved, also show strong green colour and pleochroism.

≈5% Opaques, consisting (in order of decreasing abundance) of:

Magnetite/Ilmenite: skeletal intergrowths; by far the most abundant opaque mineral in the sample.

Pyrite: accessory.

Pyrrhotite: trace; extremely fine-grained.

Chalcopyrite: trace; extremely fine-grained.

Acc. Quartz: minor interstitial silicification in limited areas.

Tr.-Acc. Albite: in fine, cross-cutting veinlets, associated with prehnite(?) and carbonate.

Tr.-Acc. Carbonate: in fine, cross-cutting veinlets, associated with prehnite(?) and albite.

Tr.-Acc. Prehnite(?): in fine, cross-cutting veinlets, associated with carbonate and albite.

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-562.4'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This rock is similar mineralogically to the preceding sample (MSL-94-01-536.5'), but coarser-grained. It consists of altered plagioclase laths with an altered ferromagnesian mineral. The protolith could have been either gabbro or diorite, depending on the identity of the original ferromagnesian mineral (if pyroxene, then the rock was a gabbro; if amphibole, then the rock was a diorite). The igneous texture is well-preserved, in spite of alteration; the texture is best described as gabbroic, consisting of randomly-oriented feldspar laths with irregular, interstitial ferromagnesians. Because the mafic minerals are interstitial, there are few subhedral grain outlines preserved, which makes it even more difficult to determine whether the original mineral was an amphibole or a pyroxene. The colour of the alteration of the ferromagnesians is such a bright bluish-green that it suggests an amphibole as the original mineral; it would be unusual for pyroxene to alter to such a strongly-coloured assemblage.

Assuming that the original ferromagnesian mineral was amphibole, then the protolith was a diorite, dominated by plagioclase laths and amphibole (probably hornblende). The plagioclase is now heavily altered to a cloudy, saussuritic (epidote-dominated) assemblage. The amphibole has clearly undergone some metasomatism (moving around of chemical constituents) during alteration. The less-altered remnants in the cores of some original grains are colourless, while the heavily altered rims consist of a very strongly coloured (blue-green to deep green) mixture of fibrous amphibole, probably with some chlorite.

There is a small amount of interstitial quartz, about 5-7% of the total rock. This is typical of diorite (and, in fact, not all that unusual in gabbro either). There is also a small amount of quartz that seems to be associated with chloritic veining.

### MINERALOGY

≈50% Plagioclase & Altered Plagioclase: long, slender laths, ave. grain size 1-2 mm in length; plagioclase is now heavily to totally altered to a cloudy, saussuritic (epidote-dominated) assemblage, although ghosts of twinning are preserved in many grains; in some parts of the sample there are myrmekitic intergrowths between the feldspar and interstitial quartz.

≈30% Amphibole & Altered Amphibole: irregular grains, interstitial to feldspar laths; original grain size very variable (depending on the sizes of interstitial spaces), ranging up to several mm per individual grain; less-altered cores of grains are colourless, with very strongly coloured (blue-green) altered rims, suggesting the movement of chemical constituents during alteration; a strong blue-green colour in amphiboles often (but not always) indicates an alkalic composition; the alteration tends to be fibrous, probably mostly actinolite, sometimes with chlorite.

≈10% Chlorite: extremely fine-grained, fibrous, part of the assemblage altering amphibole; there is also a limited amount of chloritic veining associated with quartz; the chlorite is unusually strongly coloured, pleochroic in deep emerald green to pale tan, with anomalous greenish interference colours.

≈5% Opaques, consisting (in order of decreasing abundance) of:

Ilmenite/Magnetite: the dominant opaque mineral is a strongly skeletal ilmenite or ilmenite/magnetite intergrowth; closely associated (intergrown) with amphibole.

Pyrite: minor; irregular masses.

≈5% Quartz: interstitial to the amphibole and plagioclase; looks like primary (i.e., igneous) quartz; there is also a small amount of quartz associated with chloritic veining.

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-628.2'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This is a plagioclase-dominated rock. Given the ultramafic-mafic association, it would be reasonable to assume that the protolith was an anorthosite (or gabbroic anorthosite, or plagioclase-rich diorite), although it is impossible to check the original composition of the plagioclase given the degree of alteration. The style of alteration--heavily pervasive, along with open-space-filling veinlets, and dominated by carbonate--is different from that observed in preceding samples.

The plagioclase grains in the rock are elongate, lath-shaped, medium-grained. They are heavily to totally altered to a cloudy, submicroscopic, saussuritic (epidote-dominated) assemblage. Twinning is preserved in a large number of grains. Interstitial to the plagioclase laths there are some irregular, cloudy patches of submicroscopic material. It is possible that these were originally mafic minerals, in which case the rock would have been very similar to the preceding sample (MSL-94-01-562.4' ) in both texture and mineralogy. However, absolutely nothing remains of the material that originally occupied the interstitial areas, so it is impossible to be sure.

The sample is cut by fine and very fine quartz-carbonate veining with a colourless fibrous mineral that could be fibrous albite. There is a suggestion of open-space-filling textures in these veinlets. The veinlets cross-cut each other, perhaps suggesting more than one episode of veining (or continuing, overlapping veining). There is a lot of carbonate in the alteration assemblage overall, both in the submicroscopic alteration (where it is difficult to identify) and in the veining. None of the carbonate effervesces in cold HCl, which indicates that it is not calcite (could be ankerite or magnesite, among other possibilities).

### MINERALOGY

≈70% Plagioclase & Altered Plagioclase: elongate, lath-like grains, ranging from 1 to 3 mm in length; twinning is preserved in spite of the very heavy alteration; alteration is cloudy, submicroscopic, saussuritic, with a high proportion of carbonate.

≈25% Submicroscopic Alteration & Carbonate: probably the majority of the submicroscopic, greyish-brown (in plane polarized light) alteration in this



sample is composed of carbonate, although in the finest-grained parts of the sample it is difficult to identify with certainty; none of the carbonate effervesces in cold HCl, indicating that it is not calcite (could be ankerite or magnesite, among others); the carbonate alters plagioclase (see above) and areas interstitial to the plagioclase, where it is the finest-grained, and probably mixed with some other submicroscopic alteration minerals; carbonate (also non-effervescent) also occurs in fine veinlets, sometimes alone and sometimes associated with quartz and a fibrous mineral, possibly albite.

≈3% Opaques, consisting (in order of decreasing abundance) of:

Leucoxene-Altered Ilmenite/Magnetite: most of this is nonreflectant, probably a leucoxene-type alteration that preserves the original skeletal intergrowth texture of the oxides.

Chalcopyrite: minor; irregular masses, associated with carbonate veining.

Pyrite: trace; extremely fine grains.

Acc. Quartz: in very fine veinlets, associated with carbonate and a fibrous mineral (albite?).

Acc. Albite(?): a fibrous, colourless mineral in very fine veinlets, associated with quartz and carbonate.

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-629.5'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This is another heavily altered, plagioclase-dominated rock (anorthosite? gabbroic anorthosite? plagioclase-dominated diorite?). It is very similar to the preceding sample (MSL-94-01-628.2') but noticeably coarser-grained. The alteration is carbonate-dominated and, as in MSL-94-01-628.2', the carbonate does not effervesce in cold HCl, indicating that it is not calcite. In this sample, there is also a suggestion of sericitic alteration, in the form of a very, very fine web of gash-like veinlets consisting of a fibrous sericitic material. The discrete quartz and carbonate veining observed in sample MSL-94-01-628.2' is present but less apparent in this thin section. Some brittle deformation (brittle fracturing of feldspar grains) is evident in this sample.

### MINERALOGY

≈45% Submicroscopic Alteration & Carbonate: a brownish-grey (in plane polarized light), submicroscopic alteration assemblage is pervasive throughout the sample, but especially heavy in areas interstitial to the plagioclase grains; is carbonate-dominated, but other minerals may also be present; the carbonate (even where it is clearly identifiable) does not effervesce in cold HCl, indicating that it is not calcite (could be ankerite or magnesite, among other possibilities); there is a small amount of carbonate veining.

≈40% Plagioclase & Altered Plagioclase: elongate, lath-like grains, ave. 2-3 mm (not as slender and needle-like as in previous samples, more tabular); heavily to totally altered to a submicroscopic, cloudy saussuritic-sericitic assemblage; twinning is preserved in many grains; some grains have undergone brittle fracturing.

≈10%(?) Sericitic Alteration: very difficult to separate from the carbonate-dominated alteration, described above; sericitic occurs mainly in the form of a very fine web of stringers or gash-like veinlets of fibrous sericite, throughout the entire sample;

2-3% Opaques, consisting (in order of decreasing abundance) of:

Leucoxene-Altered Ilmenite/Magnetite: mostly nonreflectant, a leucoxene-type

alteration that preserves the original fine skeletal intergrowth texture of the oxides.

Pyrite: accessory; very fine, irregular grains.

Acc. Quartz: in extremely fine veining, associated with carbonate.

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-809.4'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This sample is extremely fine-grained overall (essentially submicroscopic), and heavily altered. My best guess--based on a preserved randomly-oriented, needle-like texture and the overall mafic aspect of the sample--is that it was probably a fine-grained mafic flow.

The mineral constituents in this sample are mostly unidentifiable by simple optical means. The abundance of cloudy material suggests that presence of submicroscopic epidote, which would be typical of the alteration of a mafic flow. Some fibrous green chlorite is present. The remainder is essentially a submicroscopic clay mixture of some type, pseudomorphously preserving the needle-like texture of the original minerals (probably mainly plagioclase). A small amount of carbonate is present, mostly in very fine veinlets; it does not effervesce in cold HCl. There are also a few very fine veinlets containing the colourless fibrous mineral tentatively identified in sample **MSL-94-01-628.2'** as albite; it could be a fibrous colourless chlorite, but it would be unusual for there to be two chlorites (one colourless, the other green) in one sample. Most of the sulphides (pyrite) in the sample are associated with veining of this material. There is some altered oxide present, but pyrite (with traces of chalcopyrite) dominates the opaque assemblage (less than 3% of the rock as a whole).

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-966.8'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This is a coarse-grained, intrusive rock. It is similar in many respects to sample **MSL-94-01-562.4'**, described above, although this sample is coarser-grained. The protolith was probably a diorite. The presence of apatite as an accessory definitely supports the conclusion that this sample is out of the mafic-ultramafic family and more in the range of a diorite-tonalite-quartz diorite association. The sample consists of coarse, tabular plagioclase grains (mostly in the size range 2-4 mm in length), now moderately to heavily altered to a cloudy saussuritic-sericitic assemblage. The original mafic mineral (probably amphibole, although pyroxene is still a possibility), interstitial to the plagioclase grains, has been altered to a fibrous mixture of strongly coloured chlorite and very strongly coloured, blue-green fibrous amphibole. Chlorite--strongly coloured--also occurs in cross-cutting, irregular, gash-like veinlets. (Strong colour in chlorite often indicates an iron-rich composition.) Where it has been preserved, in the cores of coarse grains, the original ferromagnesian mineral appears to have been almost colourless. Quartz is common in interstitial areas, where it forms myrmekitic intergrowths with plagioclase (this texture suggests, but does not prove, that at least some of the quartz is primary, i.e., igneous quartz). There are also some fine, irregular quartz-bearing veinlets, suggesting minor silicification.

### MINERALOGY

- ≈50% Plagioclase & Altered Plagioclase: coarse, tabular grains, mostly in the size range 2-4 mm; moderately altered to a cloudy, saussuritic-sericitic assemblage.
- ≈30% Amphibole & Altered Amphibole: the original mafic mineral, occurring in coarse, irregular grains interstitial to the plagioclase, was probably an amphibole (although pyroxene is possible too); where preserved, the original mineral appears to have been almost colourless, now heavily altered to a strongly coloured mixture of fibrous amphibole and chlorite; colour (blue-green) in amphiboles can indicate an iron-rich and/or alkalic composition.
- ≈10% Chlorite: forms part of the assemblage altering amphibole; also occurs in gash-like, irregular veinlets; the chlorite is fibrous, unusually strongly coloured (pleochroic from strong emerald green to pale yellow), with strong anomalous green interference colours; strong colour in chlorite often (but not always)

indicates an iron-rich composition.

5-7% Quartz: interstitial to the plagioclase and amphibole; forms myrmekitic intergrowths with plagioclase; also occurs in some very fine, irregular veinlets.

3-5% Opaques, consisting (in order of decreasing abundance) of:

Leucoxene-Altered Magnetite/Ilmenite: relatively coarse, skeletal intergrowths of oxides, now altered to a semi-translucent leucoxene-type mixture.

Pyrite: about half as abundant as the altered oxides; it looks like pyrite occurs as alteration of the oxides, i.e., rimming altered skeletal oxide masses.

Tr. Apatite.

## PETROGRAPHIC DESCRIPTION

**SAMPLE No. MSL-94-01-983.5'** (hand sample & polished thin section)

**ZONE:**

**LOCATION:**

### SUMMARY & TEXTURAL DESCRIPTION

This is a coarse-grained, plagioclase-dominated sample. It may have originally been quite similar to sample **MSL-94-01-966.8'** (preceding), but has been much more extensively altered and deformed. The alteration is heavily pervasive; nothing remains of the original interstitial mafic grains, which have been altered to a combination of pale fibrous chlorite and carbonate. Interestingly, the carbonate in this sample--unlike the carbonate observed in other samples of this group--effervesces vigorously in cold HCl, indicating that it is calcite. The sample is cut by quartz veining with incipient crack-seal textures. Deformation is fairly extensive, primarily brittle in character.

### MINERALOGY

- ≈40% Plagioclase & Altered Plagioclase: relatively coarse, tabular grains (mostly in the size range 1-3 mm); abundant evidence of brittle fracturing; moderate to heavy alteration to a cloudy, saussuritic-sericitic assemblage.
- ≈25% Carbonate (& Other Submicroscopic Alteration): carbonate-dominated alteration is pervasive; mostly very fine-grained; effervesces vigorously in cold HCl, which indicates that it is mainly or exclusively calcite (unlike the carbonate alteration described in preceding samples).
- ≈25% Chlorite: fibrous, altering the remnants of interstitial mafic minerals; unlike the chlorite described in some preceding samples (such as **MSL-94-01-966.8'**), the chlorite is pale, faintly pleochroic from pale green to colourless, with low, slightly anomalous bluish interference colours; this suggests a different composition for the chlorite in this sample.
- 5-7% Quartz: some quartz (primary?) occurs interstitially to the plagioclase grains, forming myrmekitic intergrowths with the feldspar; quartz also occurs in veinlets, some with incipient crack-seal texture (typical in rocks undergoing brittle deformation during the period of vein formation).
- ≈5% Opaques, consisting (in order of decreasing abundance) of:

Leucoxene-Altered Ilmenite/Magnetite: skeletal intergrowths of oxides, now

altered to a semi-translucent leucoxene-type mixture.

**Pyrite:** considerably less abundant than oxides (an accessory mineral in the rock as a whole); may be present as alteration of oxides.



## PHOTOMICROGRAPHS

(All photos taken in transmitted light.)

1. **Sample MSL-94-01-226.5'**: typical serpentinized cumulate-textured olivine (dunite) with interstitial pyroxene; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
2. **Sample MSL-94-01-226.5'**: same as 1, with crossed polarizers; the interstitial pyroxene is the most brightly-coloured material (yellow, blue, green) in this view; the serpentinized olivine appears grey.
3. **Sample MSL-94-01-397.7'**: brecciose sample; subangular fragments in an opaque, nonreflectant matrix; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
4. **Sample MSL-94-01-397.7'**: similar to 3, at higher magnification; presence of round, vesicle-like bodies suggests that the fragments are volcanic in origin; dimensions  $\approx 2.35 \times 1.61$  mm; plane polarized light.
5. **Sample MSL-94-01-432.9'**: similar to preceding sample, irregular fragments in a dark, brecciose or tuffaceous matrix, but texture is much more variable overall; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
6. **Sample MSL-94-01-432.9'**: similar to 5, showing a different field of view with flattened vesicle-like bodies and remnants of microphenocrysts in volcanic fragments; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
7. **Sample MSL-94-01-474'**: irregular volcanic fragments in a brecciose or tuffaceous matrix; cross-cutting carbonate veining; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
8. **Sample MSL-94-01-474'**: similar to 7, showing a different field of view with variable texture; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
9. **Sample MSL-94-01-508.2'**: highly elongate, needle-like hopper crystals of feldspar in a heavily altered chloritic groundmass; the needle-like texture usually indicates rapid cooling but is not a pinifex texture in the classic sense; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
10. **Sample MSL-94-01-508.2'**: same as 9, with crossed polarizers.
11. **Sample MSL-94-01-536.5'**: heavily altered, fine-grained gabbro; plagioclase laths (cloudy) with interstitial altered mafics (green); dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
12. **Sample MSL-94-01-536.5'**: same as 11, with crossed polarizers.

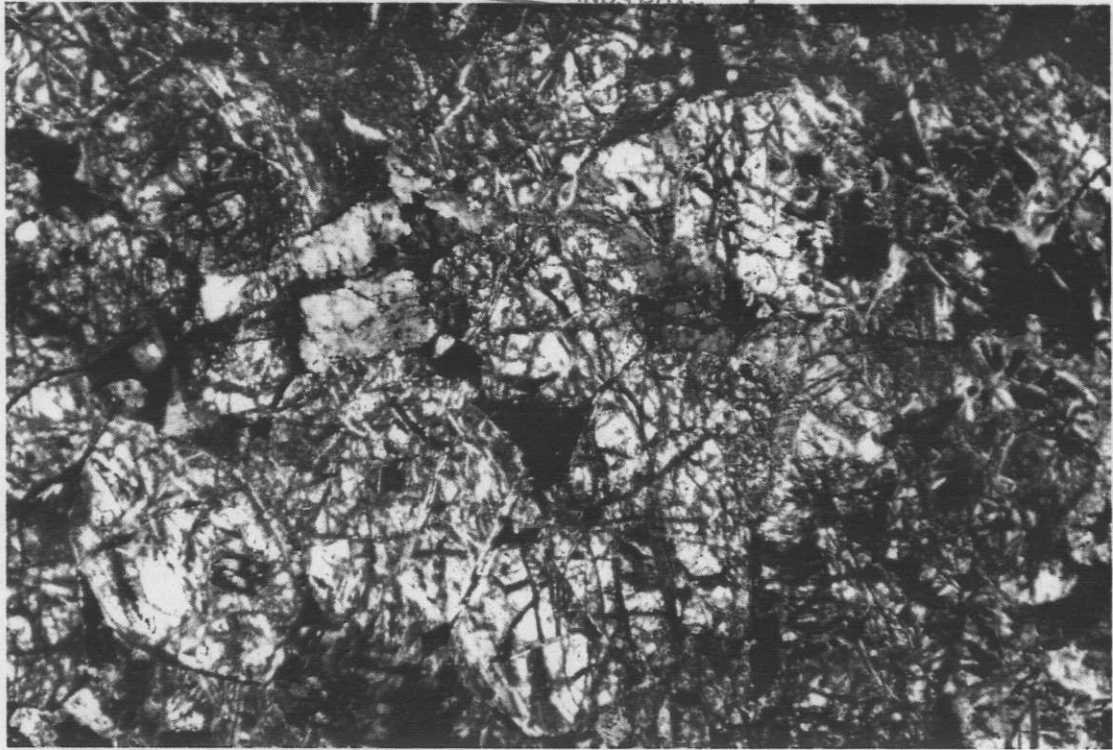
13. **Sample MSL-94-01-562.4'**: similar to 11, an altered fine-grained gabbro (diorite?) with cloudy plagioclase laths and interstitial mafics; mafics (amphibole or pyroxene, now amphibolitized) are very strongly coloured; interstitial quartz (clear, colourless); dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
14. **Sample MSL-94-01-562.4'**: same as 13, with crossed polarizers.
15. **Sample MSL-94-01-628.2'**: cloudy plagioclase laths; texture is similar to that shown in 11 and 13, but interstitial mafics are completely altered, with no remnants; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
16. **Sample MSL-94-01-628.2'**: same as 15, with crossed polarizers.
17. **Sample MSL-94-01-629.5'**: cloudy plagioclase laths with altered interstitial mafics; similar mineralogically to the preceding sample, but coarser-grained; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
18. **Sample MSL-94-01-629.5'**: same as 17, with crossed polarizers.
19. **Sample MSL-94-01-809.4'**: altered very fine-grained mafic flow(?); random needle-like texture; cross-cutting fine veinlets of unknown fibrous material (looks like chalcedonic quartz but isn't); dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
20. **Sample MSL-94-01-809.4'**: same as 19, with crossed polarizers.
21. **Sample MSL-94-01-809.4'**: same as 19, at higher magnification to show texture; dimensions  $\approx 2.35 \times 1.61$  mm; plane polarized light.
22. **Sample MSL-94-01-809.4'**: same as 21, with crossed polarizers.
23. **Sample MSL-94-01-966.8'**: relatively coarse-grained intrusive, probably diorite; fine myrmekitic intergrowth of quartz and feldspar is visible (above center of photo); plagioclase laths appear dark and cloudy due to alteration; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
24. **Sample MSL-94-01-966.8'**: same as 23, with crossed polarizers.
25. **Sample MSL-94-01-966.8'**: similar to 23, showing cloudy plagioclase laths and altered (amphibolitized) interstitial mafics (deep greens), with a small portion of unaltered interstitial mafic (the cracked, colourless material altering to green chlorite left of center); chloritic veining cuts almost horizontally across the center of the photo; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
26. **Sample MSL-94-01-966.8'**: same as 25, with crossed polarizers.

- 27. Sample MSL-94-01-983.5':** brittle deformation (fracturing) in altered plagioclase grains; heavy, near-pervasive chlorite-carbonate alteration; dimensions  $\approx 5.25 \times 3.6$  mm; plane polarized light.
- 28. Sample MSL-94-01-983.5':** same as 27, with crossed polarizers.
- 29. Sample MSL-94-01-983.5':** same sample at higher magnification, showing incipient crack-seal texture in quartz veining; dimensions  $\approx 2.35 \times 1.61$  mm; plane polarized light.
- 30. Sample MSL-94-01-983.5':** same as 29, with crossed polarizers.

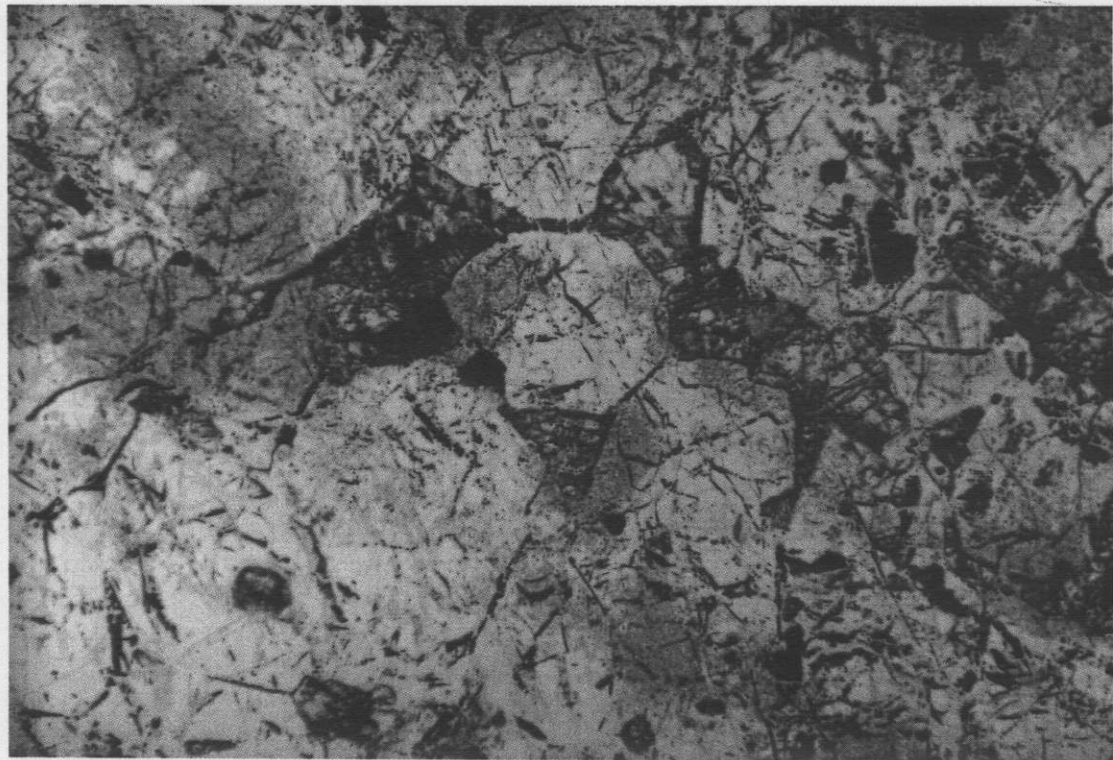
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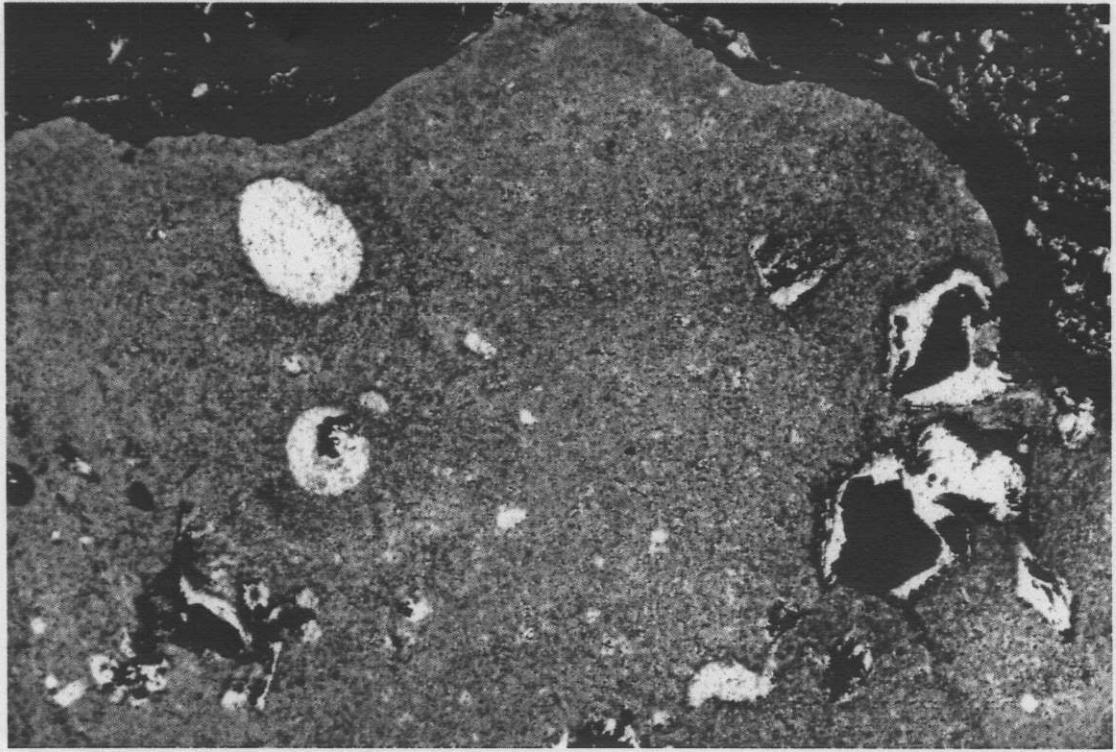
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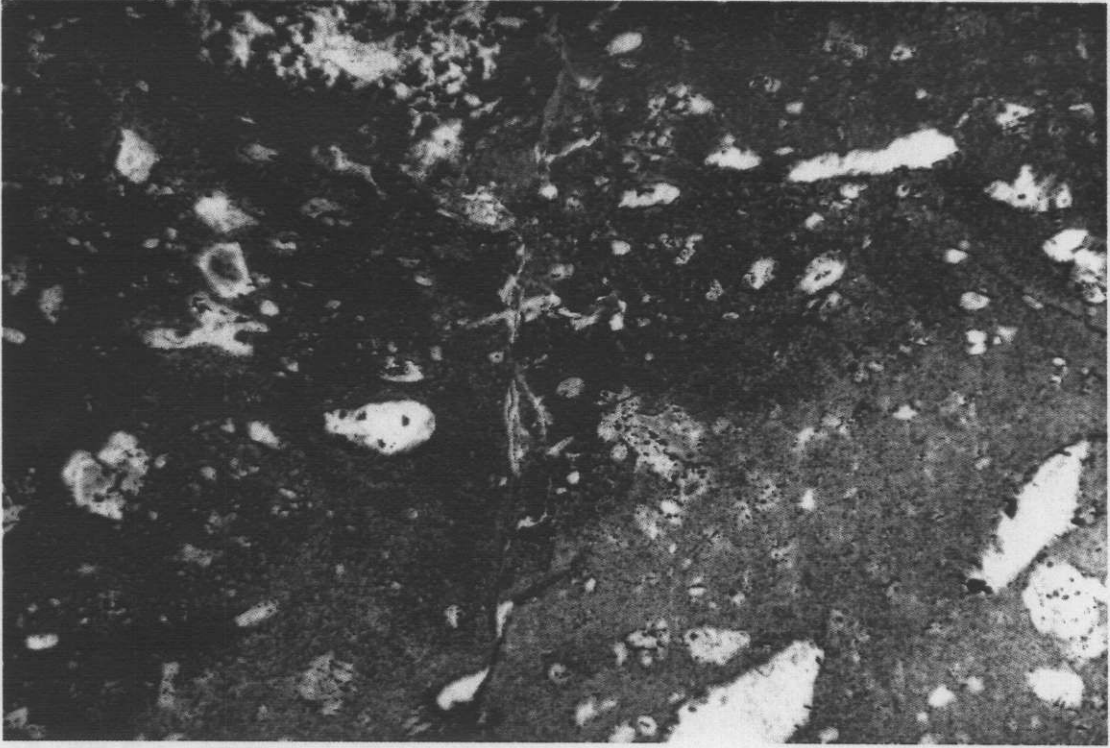
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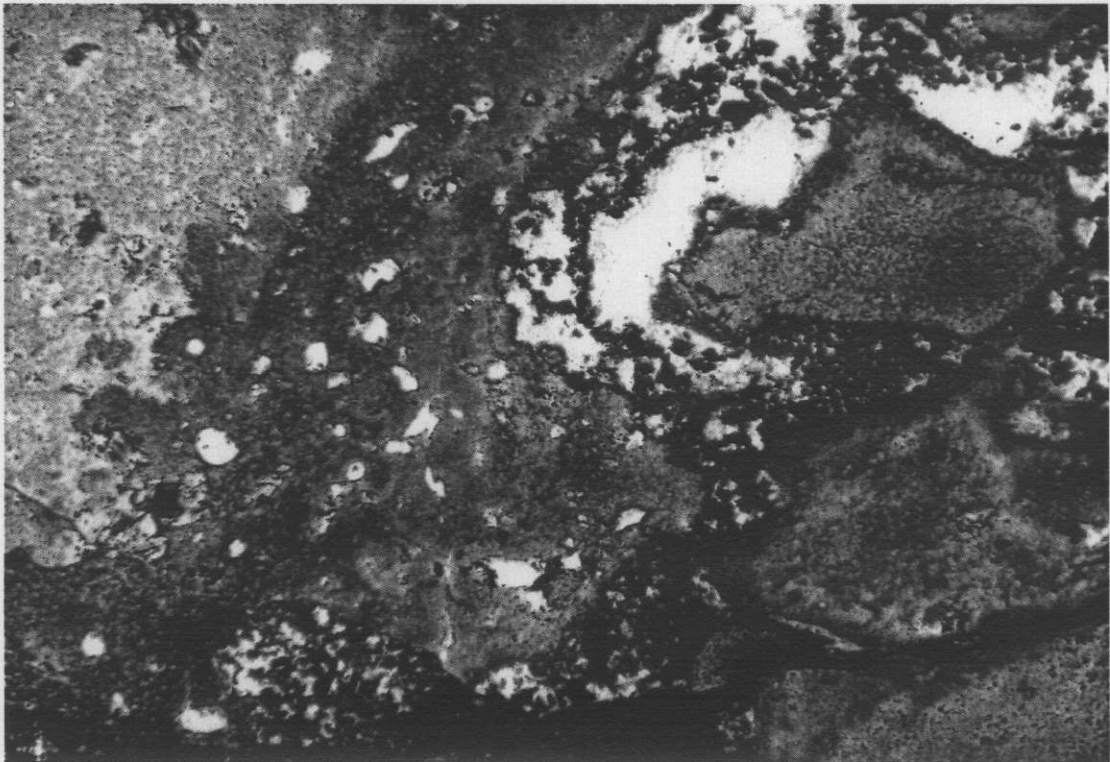
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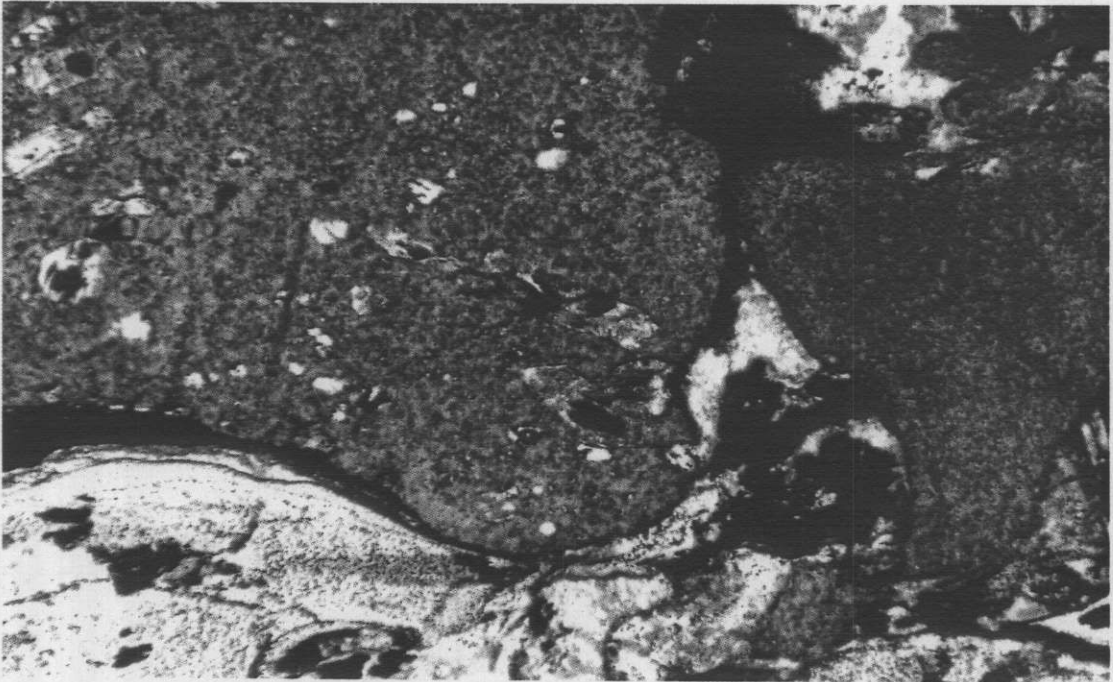
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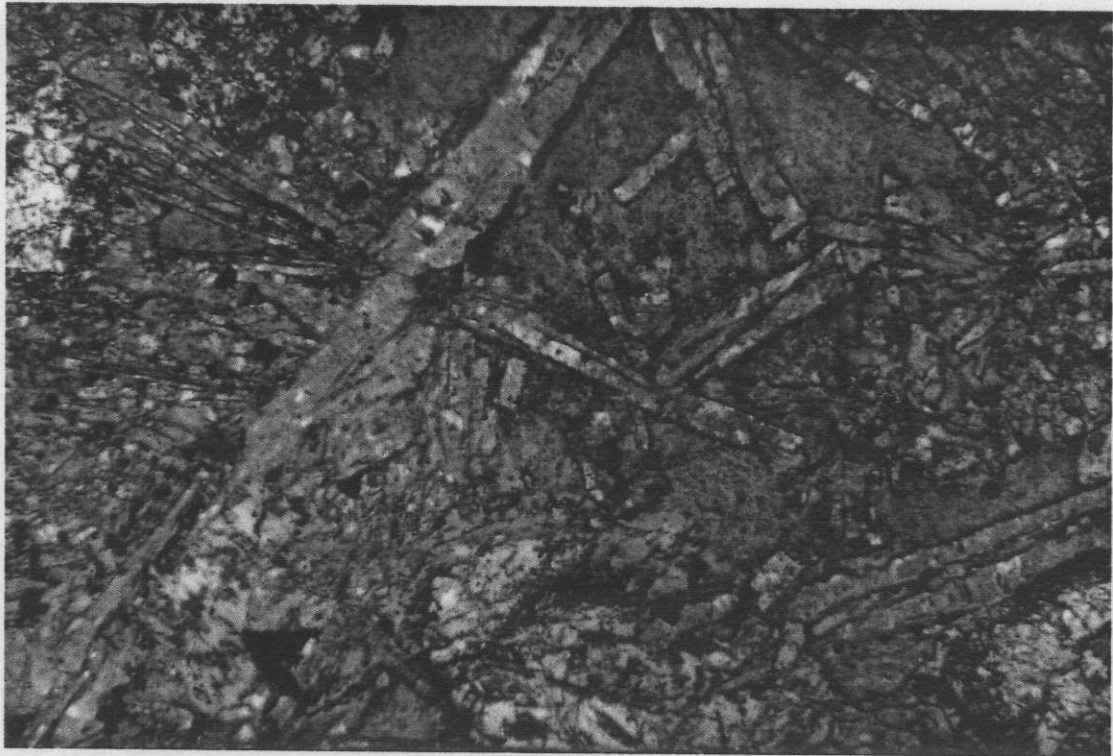
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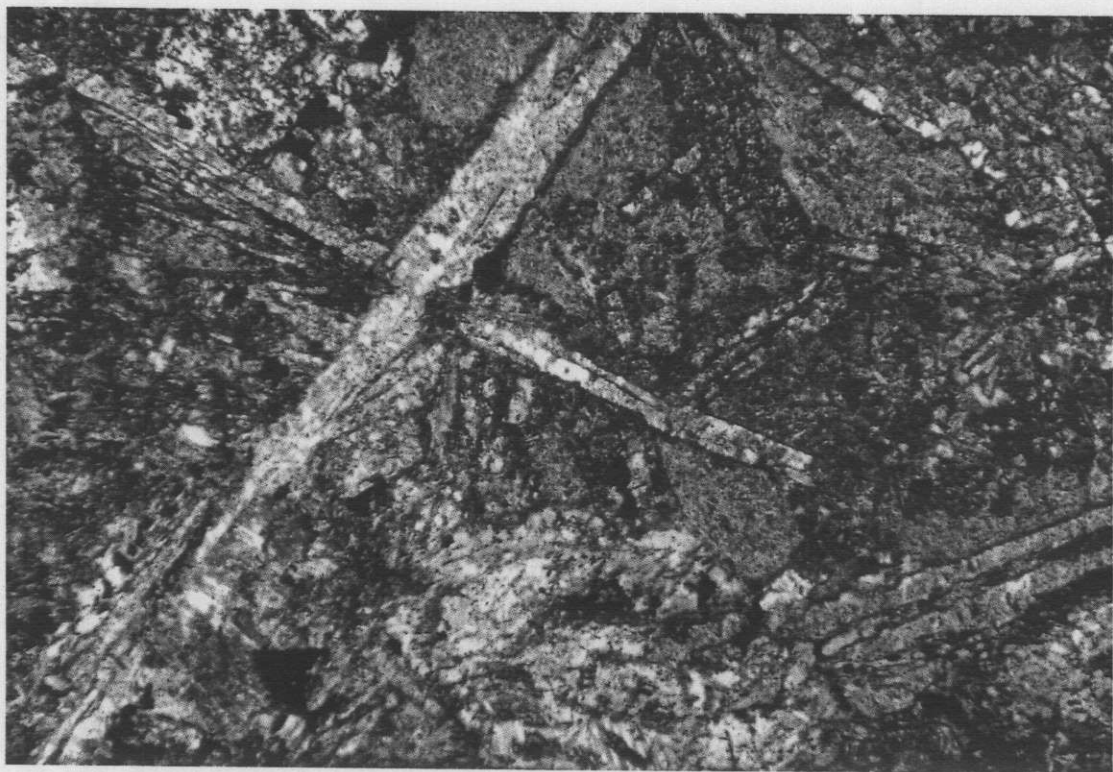
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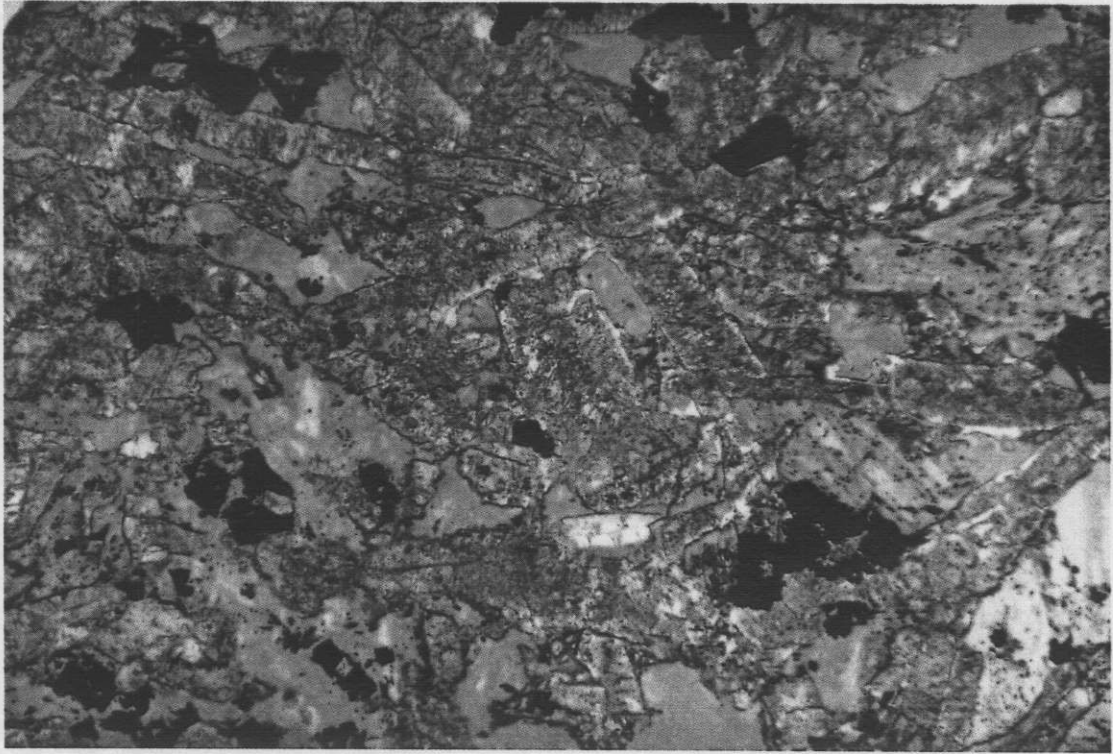


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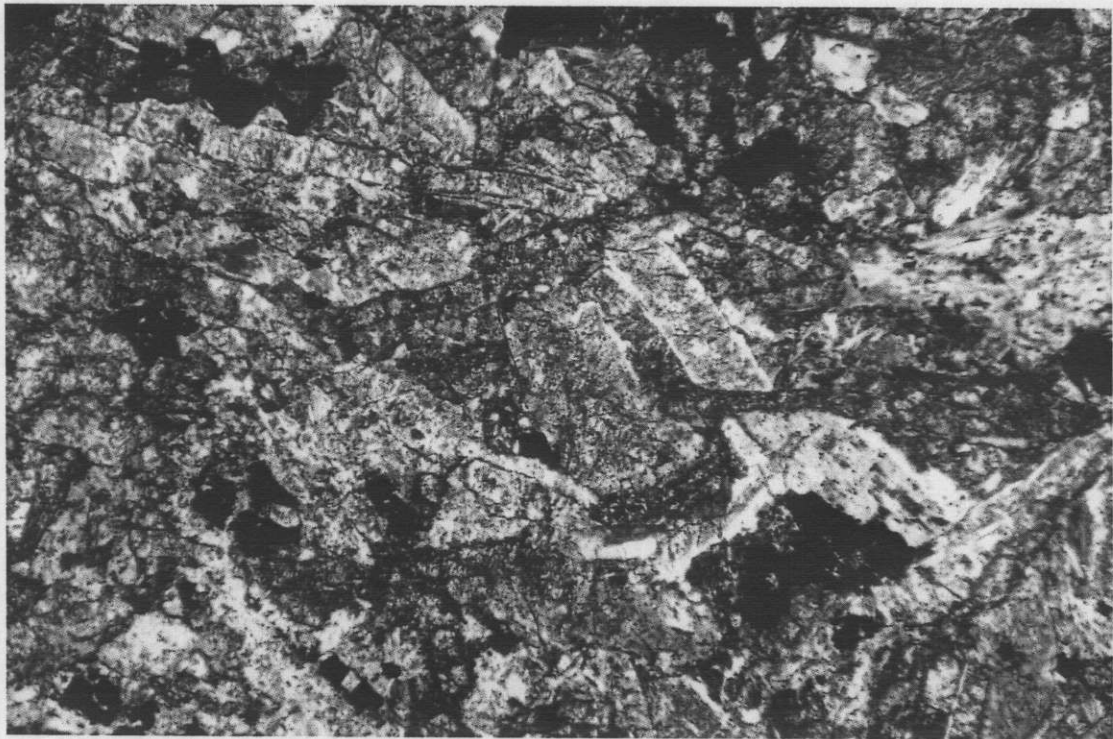




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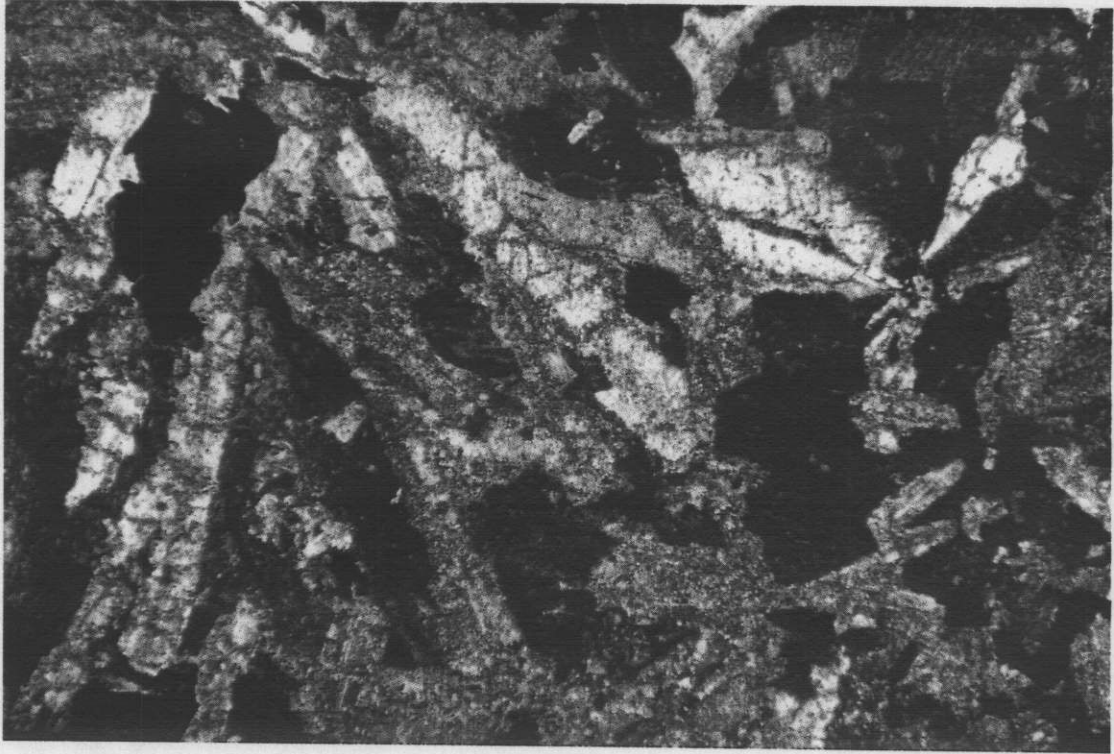
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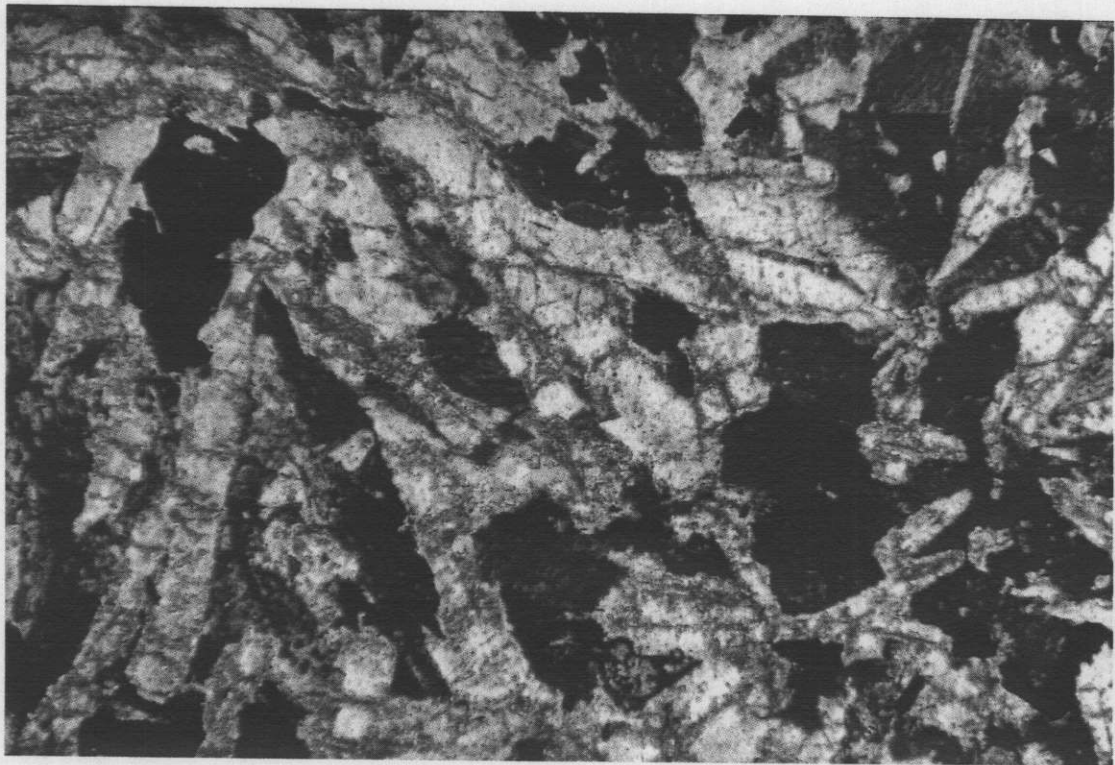
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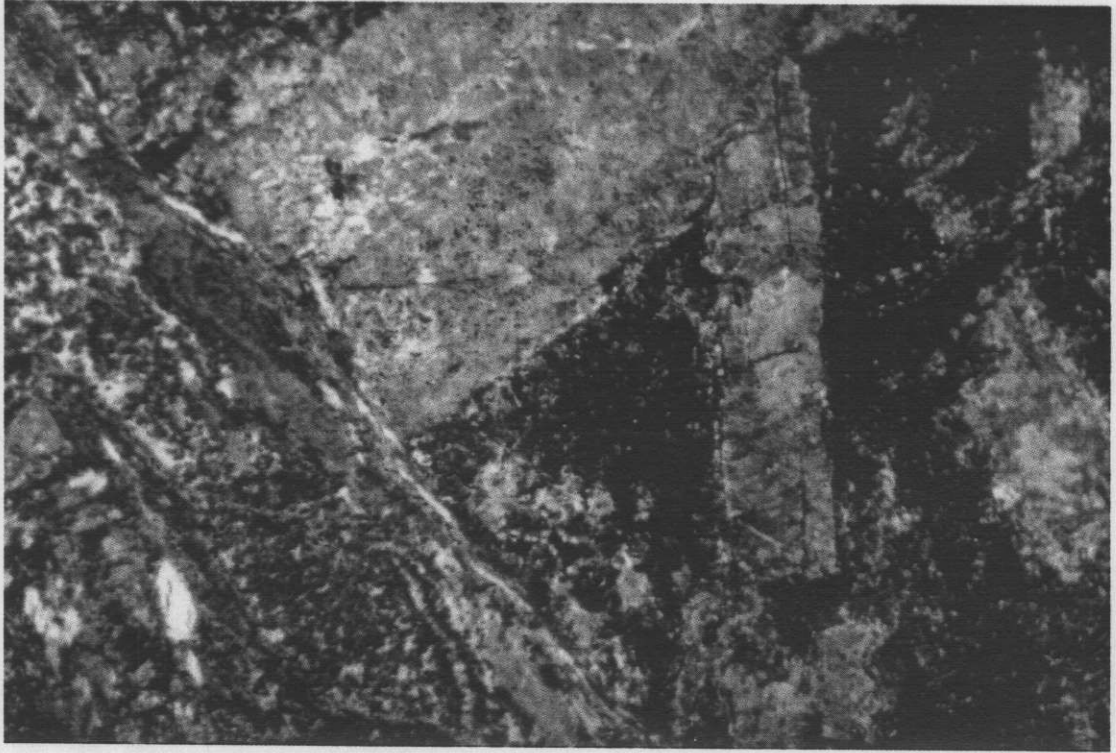
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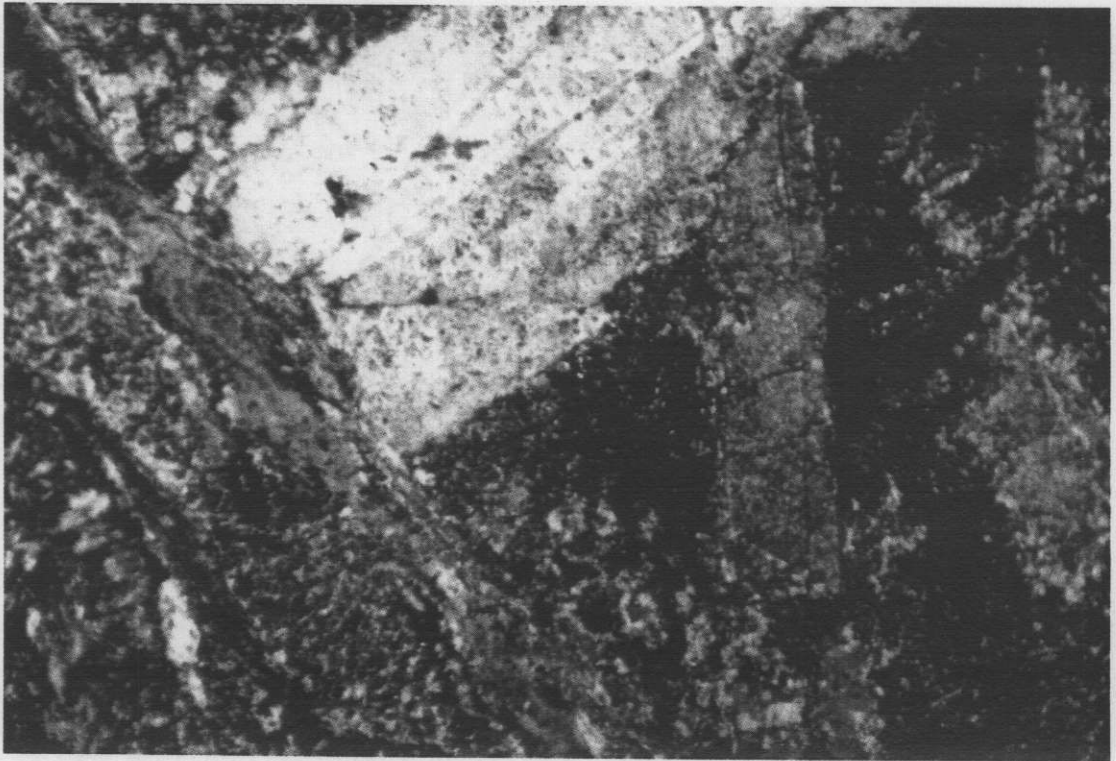
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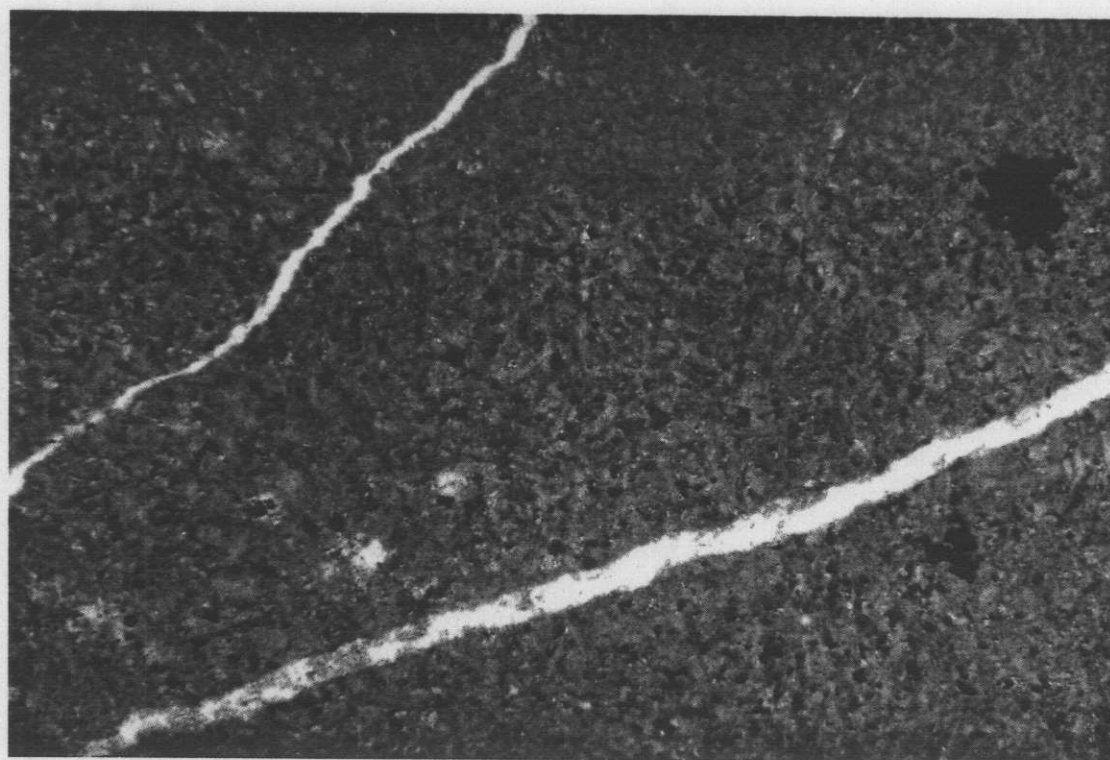
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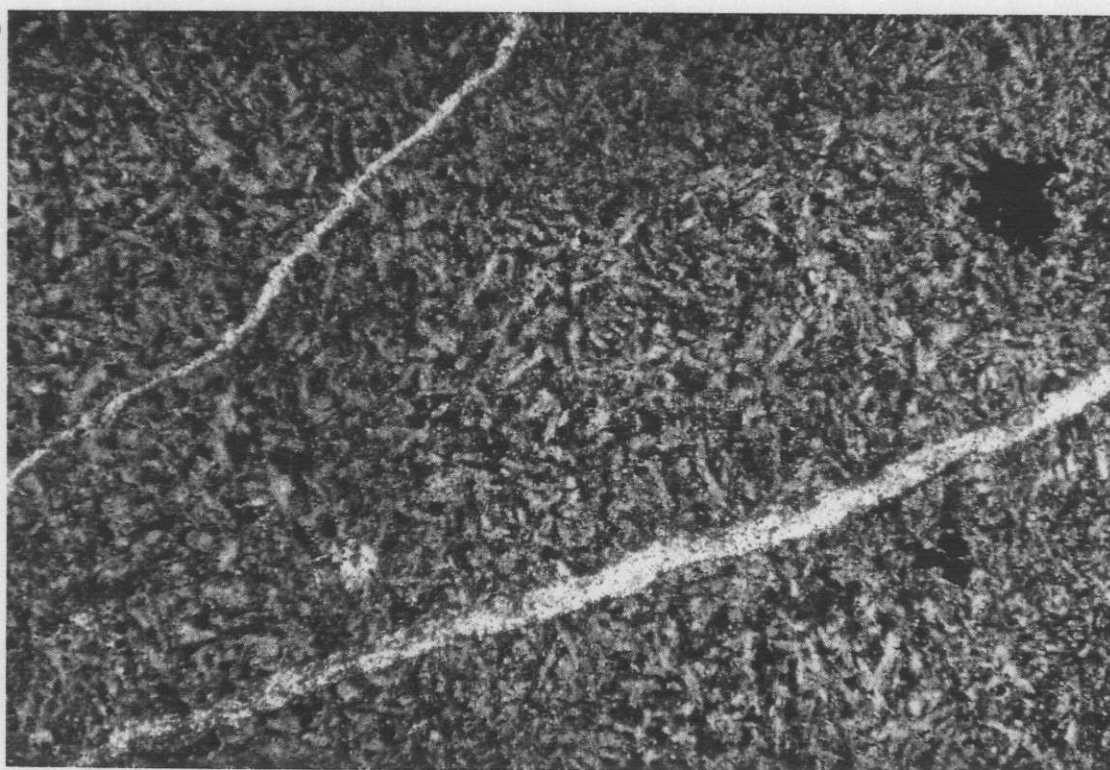
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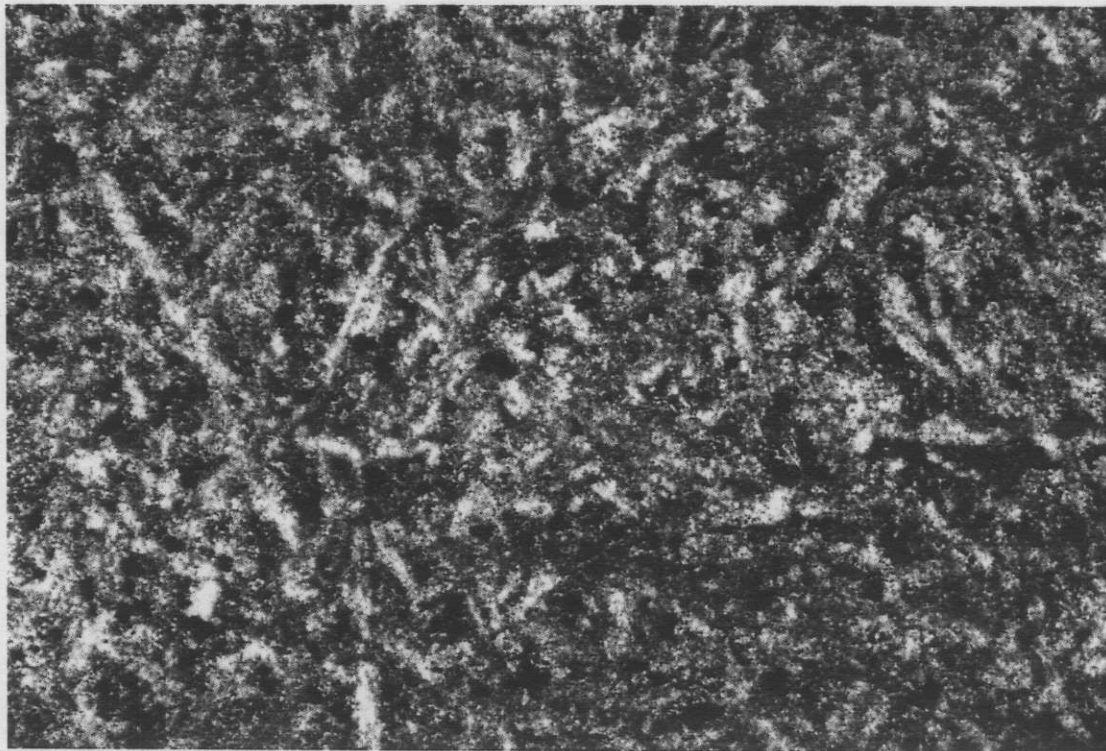
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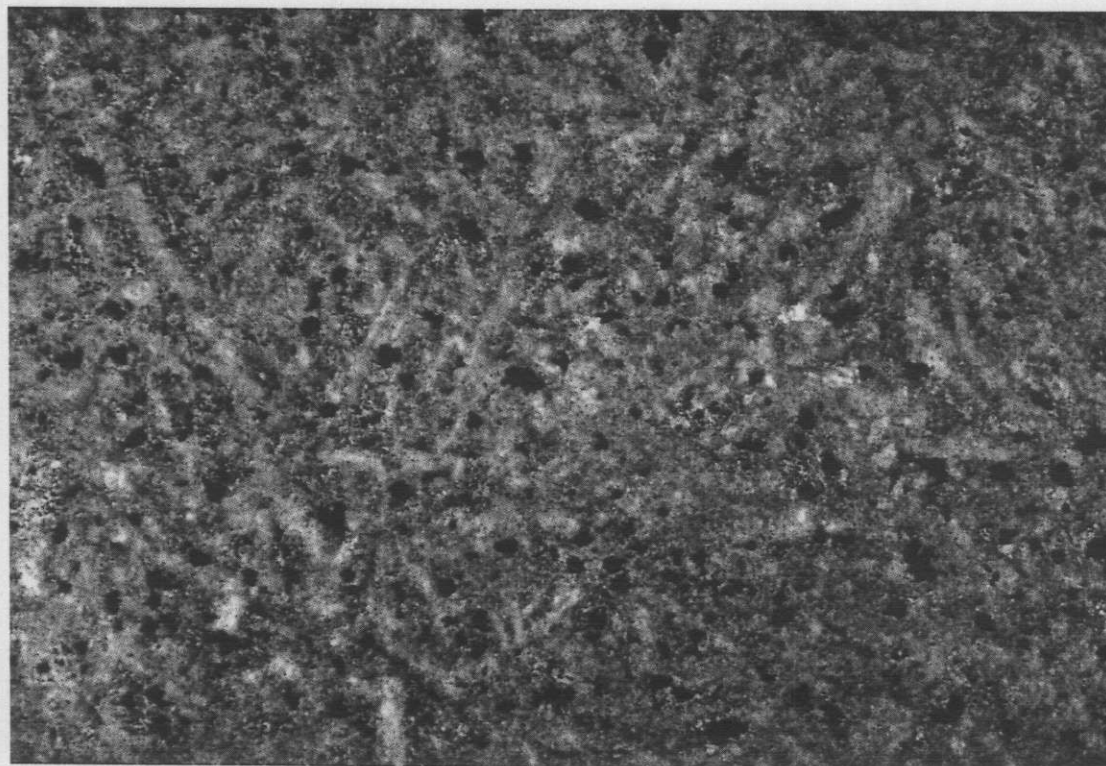
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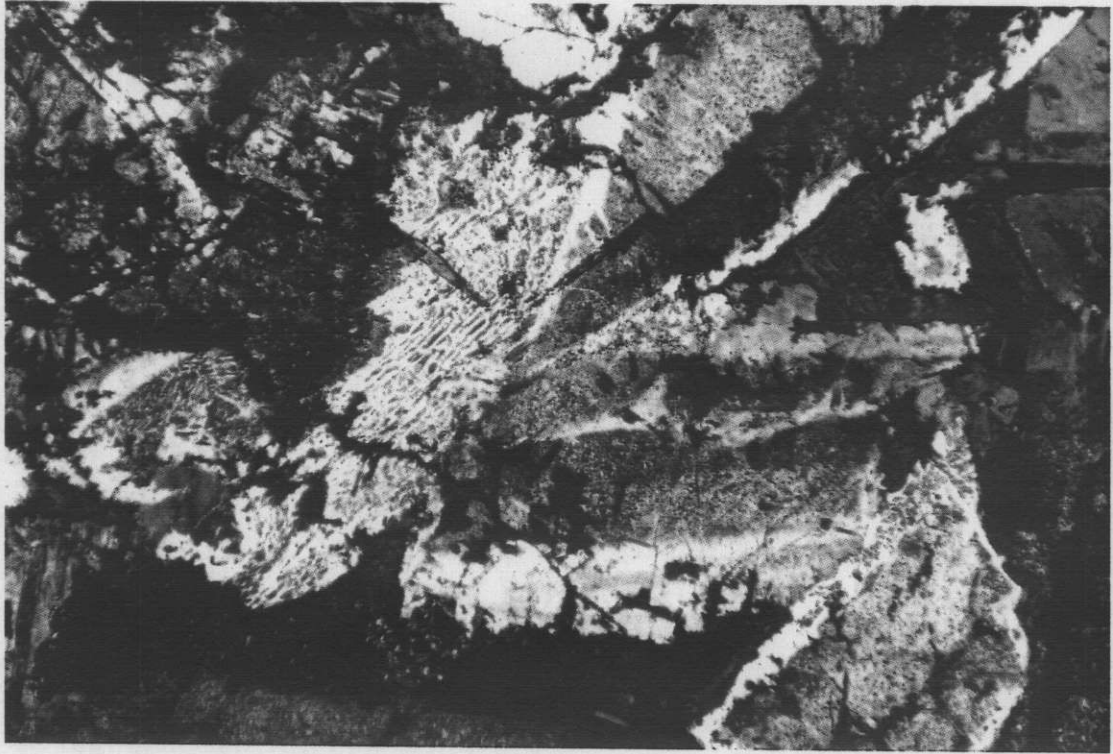
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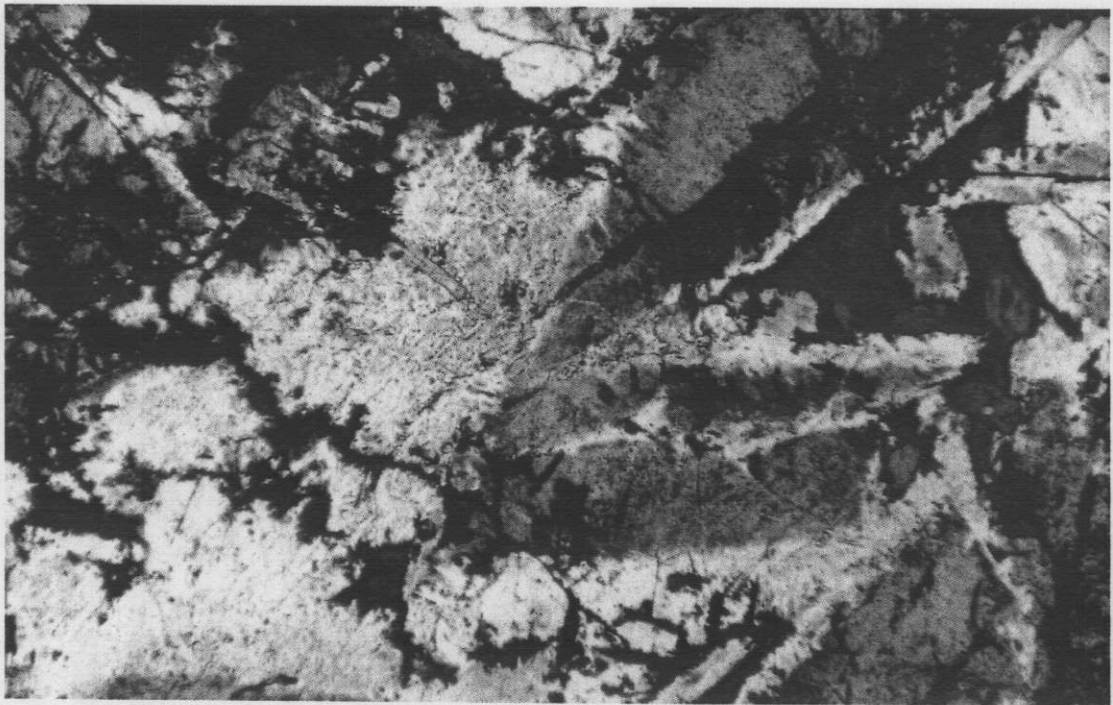
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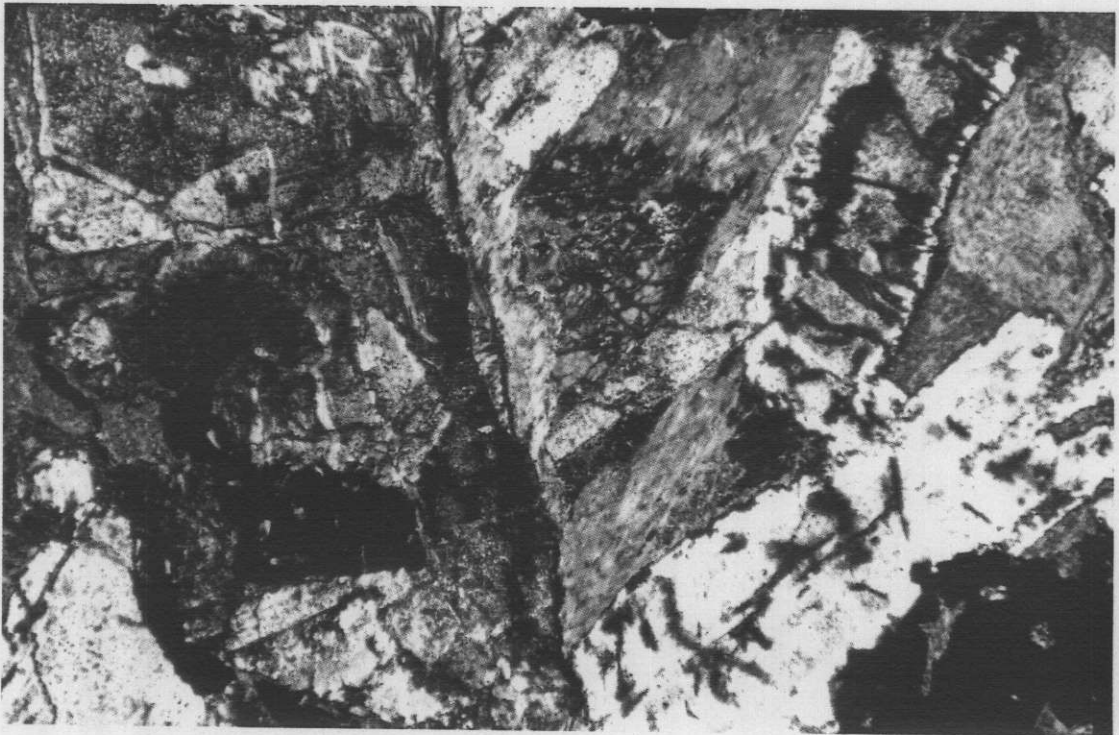
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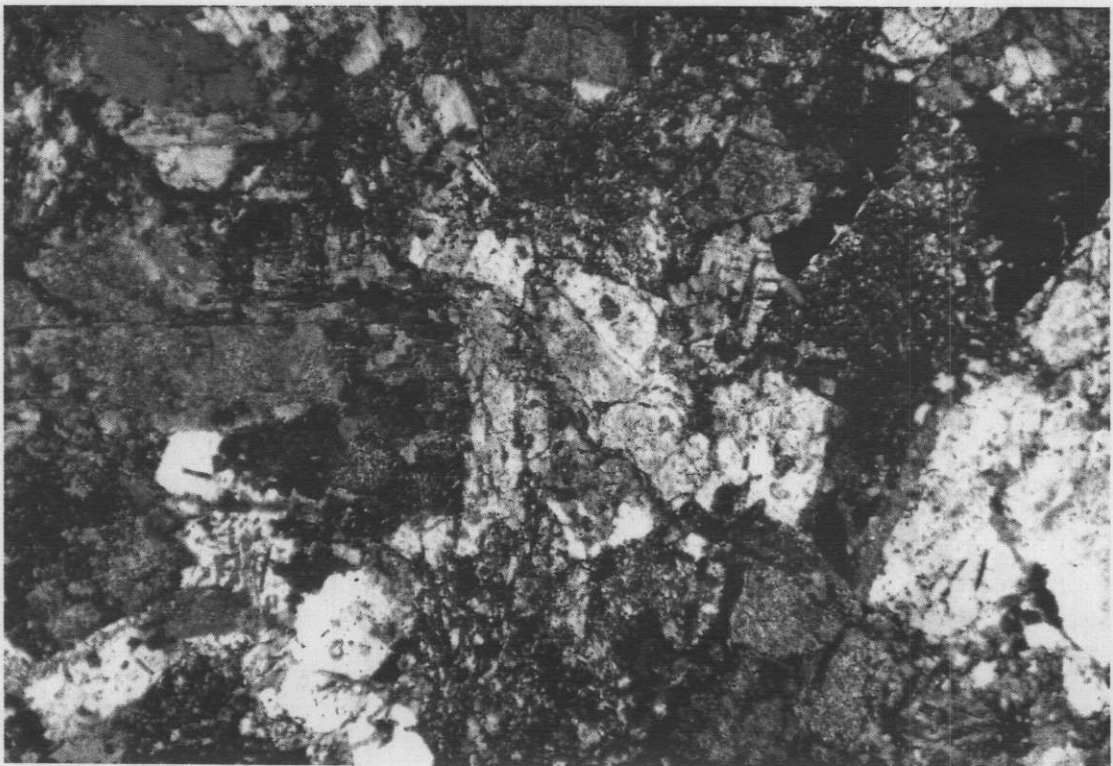




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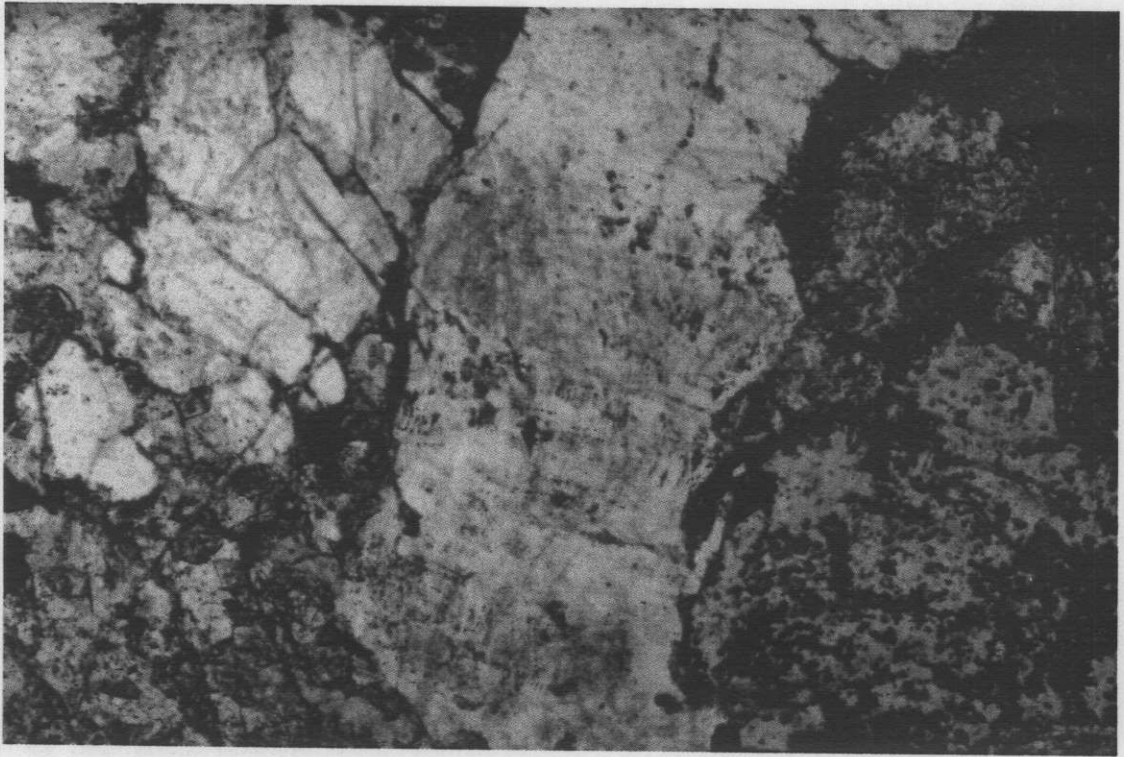
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29



Date: 19 May, 1995

TRINITY EXPLORATIONS

Page: 1 of 14

Northings: 2100

DRILL HOLE RECORD

Drill Hole: MSJ-94-01

Easting: 600

\*\*\* Dip Tests \*\*\*  
Depth Azi. Dip

Property Name: MUNRO PROSPECT  
Date Started: 02 Oct. 94  
Date Finished: 04 Oct. 94

Elevation: 0

Collar Azi.: 205

102 205 -44.0

Collar Dip: -45.0

300 205 -45.0

Hole Length: 1000

500 205 -47.0

Township: MUNRO

700 205 -49.0

Claim: L-1049488 & 1049487

Drilled by: Bradley Brothers Ltd.

Core size: BQ

Stored at: Diepdaume Mine, Timmins.

Logged by: Glenn J. Mulllan

Materials left: NW Casing

Purpose: To Test HLEM & INPUT Anomaly.

*Credit:*  
*1995: Murek, Barbara*  
*Petrographic Descriptions*  
*(Thin sections in 1995)*  
*AW*

From ft.	To ft.	Geology	Sample	From ft.	To ft.	Ing ft.	CU %	ZN %	NI %	AU OZ/TON
.0	102.0	OVERBURDEN								
102.0	383.7	SERPENTINITE								
		Serpentinized Dunite.	14501	112.0	117.0	5.0	.007	.040	.364	.0040
		Fine grained, dark green to black, massive textured ultramafic intrusive.	14502	152.0	157.0	5.0	.004	.016	.364	.0020
		Strongly magnetic ( i.e. Source of magnetic anomaly).	14503	167.0	172.0	5.0	.036	.017	.429	.0010
		Blocky core cut by numerous <1/16 inch wide calcite (and/or brucite), and quartz carbonate veinlets at 25 to 60 degrees to core axis.	14504	207.0	211.0	4.0	.004	.014	.321	.0020
		Local, irregular veinlets of chrysotile.	14505	211.7	217.0	5.3	.006	.014	.257	.0020
			14506	217.0	222.0	5.0	.004	.013	.214	.0010
			14507	257.0	262.0	5.0	.004	.016	.386	.0010
			14508	267.0	272.0	5.0	.005	.014	.321	.0010
			14509	313.0	318.0	5.0	.007	.014	.386	.0004
			14510	322.0	327.0	5.0	.004	.016	.386	.0004
			14511	367.0	372.0	5.0	.016	.029	.321	nil

020

ONJNW 14851.2.5200380027





From ft.	To ft.	Geology	Sample	From ft.	To ft.	Lng ft.	CU %	ZN %	NI %	AU OZ/TON
	320.0	Gradual increase in grain size (fine to medium grained).								
	325.6	0.3' quartz carbonate vein and alteration halo (brucite).								
	370.0	More carbonatization (matrix), less magnetic, decrease grain size (medium to fine grained).								
	380.0	Fine grained, 1% wisps of pyrrhotite, trace pyrite. Contact halo: aphanitic, silicified (?), weakly carbonatized.								
383.7	488.3	<b>VOLCANIC BRECCIA</b>								
		Dark grey to black breccia composed of sub-equal fragments and a black carbonaceous(?) matrix.	14514	383.7	387.0	3.3	.049	.016	.043	nil
		Fragments are both angular and subrounded (redigested by matrix = volcanic, not sedimentary?).	14515	387.0	390.0	3.0	.029	.016	.043	tr
		Some fragments compressed parallel to core axis.	14516	390.0	393.0	3.0	.018	.017	.043	.0020
		Locally cut by dykes (?) of matrix material (no fragments); fragments range from < 1/16 to > 1 inch.	14517	393.0	395.3	2.3	.026	.018	.064	.0020
		NOTE: Photomicrograph # 4 (MSL-94-1-397.7'). Vessicle like bodies observed under higher magnification suggest fragments are of volcanic origin.	14518	395.3	399.3	4.0	.030	.009	.129	tr
			14519	399.3	403.3	4.0	.042	.022	.043	nil
			14520	403.3	407.0	3.7	.036	.027	.107	nil
			14521	407.0	411.0	4.0	.029	.026	.150	nil
			14522	411.0	414.0	3.0	.040	.031	.214	.0010
			14523	414.0	417.0	3.0	.031	.013	.043	tr
			14524	417.0	422.0	5.0	.027	.010	.107	.0040
			14525	422.0	427.0	5.0	.014	.034	.040	.0009
			14526	427.0	430.0	3.0	.012	.024	.040	.0009
			14527	430.0	432.9	2.9	.006	.015	.160	.0009
			14528	432.9	437.0	4.1	.008	.019	.100	.0010
			14529	437.0	442.0	5.0	.012	.021	.100	.0010
			14530	442.0	447.0	5.0	.018	.043	.040	.0010















From ft.	To ft.	Geology	Sample	From ft.	To ft.	Lng ft.	CU %	ZN %	NI %	AU OZ/TON
		(local). Quartz veins at 632.4' (0.5') and at 634.5 (0.7') at 30 degrees to core axis.								
636.4	641.0	FELDSPAR PORPHYRY DYKE								
		636.4' to 637.9' cumulate texture(?) mafic flows (komatiitic).								
641.0	701.5	GABBRO								
		Medium to coarse grained, inequigranular, mafic intrusive; weakly magnetic, blotchy fabric from coarser grained plagioclase (?) laths and crystals.								
		Alteration: local bleaching (carbonate) at 642.7' to 644.3', 646.5' to 647.8' and 649.4' to 650.5'.								
		Veining: cut by narrow (1/2 inch) quartz carbonate veinlets at various orientations.								
701.5	708.5	FELDSPAR PORPHYRY DYKE	14549	702.0	707.0	5.0				
		Pale grey, equigranular, cut by <1 inch quartz carbonate veinlets at 30 to 60 degrees to core axis. Carbonatized, irregular contacts.								
708.5	805.3	GABBRO								
		Weakly magnetic, medium grained, mafic to intermediate, carbonatized.	14550	742.0	747.0	5.0				
			14551	747.0	752.0	5.0				
			14552	757.0	761.0	4.0				













Ministère du  
Développement du Nord  
et des Mines  
Ontario

# Rapport sur les travaux exécutés après l'enregistrement d'un claim

Loi sur les mines

N° de transaction  
**W9580.00194**

**Munro Prospect**

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur l'accès à l'information. Toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, 4<sup>e</sup> étage, Sudbury (Ontario) P3E 6A5; téléphone : (705) 670-7264.



42A09SE0025 2.15984 MUNRO

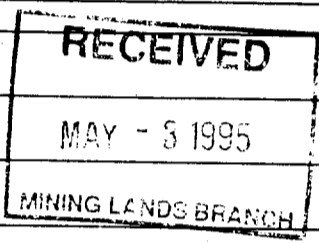
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- Directives :**
- Dactylographier ou écrire en lettres moulées.
  - Se reporter à la Loi sur les mines et aux règlements d'évaluation ou consulter le registrateur de claims.
  - Remplir une formule pour chaque groupe de travaux.
  - Joindre à la présente formule deux exemplaires des rapports techniques et des cartes.
  - Joindre à la présente formule une esquisse indiquant les claims ayant fait l'objet des travaux.

Titulaire(s) enregistré(s) <b>297 3090 Canada Inc.</b>		N° de client <b>300 337</b>
Adresse <b>126, Rue Savoie, Sullivan, Québec</b>		N° de téléphone <b>(819) 834-6149</b>
Division des mines <b>harder lake</b>	Canton/secteur <b>Munro</b>	N° de plan M ou G <b>M-376</b>
Dates d'exécution des travaux du : <b>October 1, 1994</b>		au : <b>October 31, 1994</b>

**Travaux exécutés (cocher un seul groupe de travaux)**

Groupe de travaux	Genre
<input type="checkbox"/> Levé géotechnique	
<input type="checkbox"/> Travaux physiques, y compris forage	
<input type="checkbox"/> Réhabilitation	
<input checked="" type="checkbox"/> Autres travaux autorisés	<b>SECTION 17 - Régulations Petrographique descriptions - Thin Sections - Analyses - Report</b>
<input type="checkbox"/> Essais	
<input type="checkbox"/> Valeur transférée de la réserve	



Total des travaux d'évaluation réclamé sur le relevé des frais ci-annexé **2100.00** \$

**Nota :** Le ministre peut rejeter une partie ou la totalité des travaux d'évaluation présentés pour obtenir des crédits d'évaluation si le titulaire enregistré ne peut vérifier les dépenses réclamées sur le relevé des frais dans les trente jours suivant une demande de vérification.

**Les personnes et la compagnie d'arpentage qui ont exécuté les travaux (donner le nom et l'adresse de l'auteur du rapport)**

Nom	Adresse
<b>Barbara Murch</b>	<b>37 Mississauga Road South, Mississauga, Ont.</b>
<b>GEOPLASTECH INC.</b>	<b>19 Guil Court, Whitchy, Ontario, L1N 5Y6</b>

Joindre une annexe au besoin)

**Certification d'intérêt bénéficiaire \* Voir la note n° 1 au verso**

Je certifie qu'au moment où les travaux ont été exécutés, les claims dont il est question dans le présent rapport étaient enregistrés au nom de leur titulaire actuel ou détenus à titre bénéficiaire par l'actuel titulaire enregistré.

Date: **April 4, 1995** Titulaire enregistré ou représentant (Signature): *[Signature]*

**Certification du rapport sur les travaux exécutés**

Je certifie que j'ai une connaissance directe des faits exposés dans le présent rapport, pour avoir exécuté les travaux ou en avoir constaté l'exécution avant ou après leur achèvement. Je certifie aussi que le rapport ci-annexé est exact.

Nom et adresse du certificateur: **Glen J. Muller (pour le 297 3090 Canada Inc.)**

de téléphone: **(819) 834-6149** Date: **le 4 Avril 1995** Certifié par (signature): *[Signature]*

**Présenté au ministère**

Valeur totale des crédits enregistrés: **\$2100.**

Date d'enregistrement: **April 10/95** Registrateur de claims: *[Signature]* Cachet reçu: **RECEIVED**

Date de l'approbation prévue: **July 9/95.** Date d'approbation: *[Signature]*

Date d'envoi de l'avis de modification: \_\_\_\_\_

Stamp: **95 APR 10 PM 2 ST**



ASSESSMENT No.  
U 9530 - 00194

Statement of Costs - "Munro Prospect"

Munro Township - Ontario

Fall Program, 1994

Item (Description):

Cost:

A) Direct Field Costs: (\$2100)

- sample preparation for thin sections
- preparation of thin sections, plates, etc.
- evaluation of thin sections, core samples, petrographic report, etc
- coloured plates (photomicrographs)

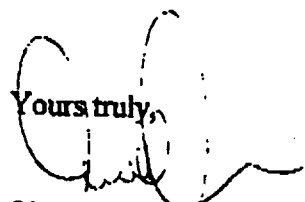
= \$2100

\*\* all inclusive cost (consultants: approx. \$1800, own time preparing samples, log preparation, etc. \$300 (1.5 days) \*\*

Total Allowable For Assessment Credits: \$2100

Total Claimed: \$2100

Yours truly,

  
Glenn J. Mulhan  
April 4th, 1995



# Ontario

Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

Geoscience Approvals Office  
933 Ramsey Lake Road  
6th Floor  
Sudbury, Ontario  
P3E 6B5

Telephone: (705) 670-5853  
Fax: (705) 670-5863

Our File: 2.15984  
Transaction #W9580.00194

June 21, 1995

Mining Recorder  
Ministry of Northern  
Development & Mines  
4 Government Road East  
Kirkland Lake, Ontario  
P2N 1A2

Dear Mr. Spooner:

**SUBJECT: APPROVAL OF ASSESSMENT WORK CREDITS ON MINING CLAIMS  
1049488 ET AL. IN MUNRO TOWNSHIP**

Assessment work credits have been approved as outlined on the original report of work forms for this submission. The credits have been approved under Section 18, Microscopic studies, Mining Act Regulations.

The approval date is **June 12, 1995**. Please indicate this approval on the claim record sheets.

If you have any questions regarding this correspondence, please contact Bruce Gates at (705) 670-5856.

Yours sincerely,

Ron C. Gashinski  
Senior Manager, Mining Lands Section  
Mining and Land Management Branch  
Mines and Minerals Division

*BIG* BIG/jn

cc: Resident Geologist  
Kirkland Lake, Ontario

✓ Assessment Files Library  
Sudbury, Ontario

B. 15984

M-376

WARDEN TWP M-397

2.15984  
(MICRO)

BEATTY TWP M-324

MC COOL TWP M-365

GUIBORD TWP M-352

THE TOWNSHIP OF

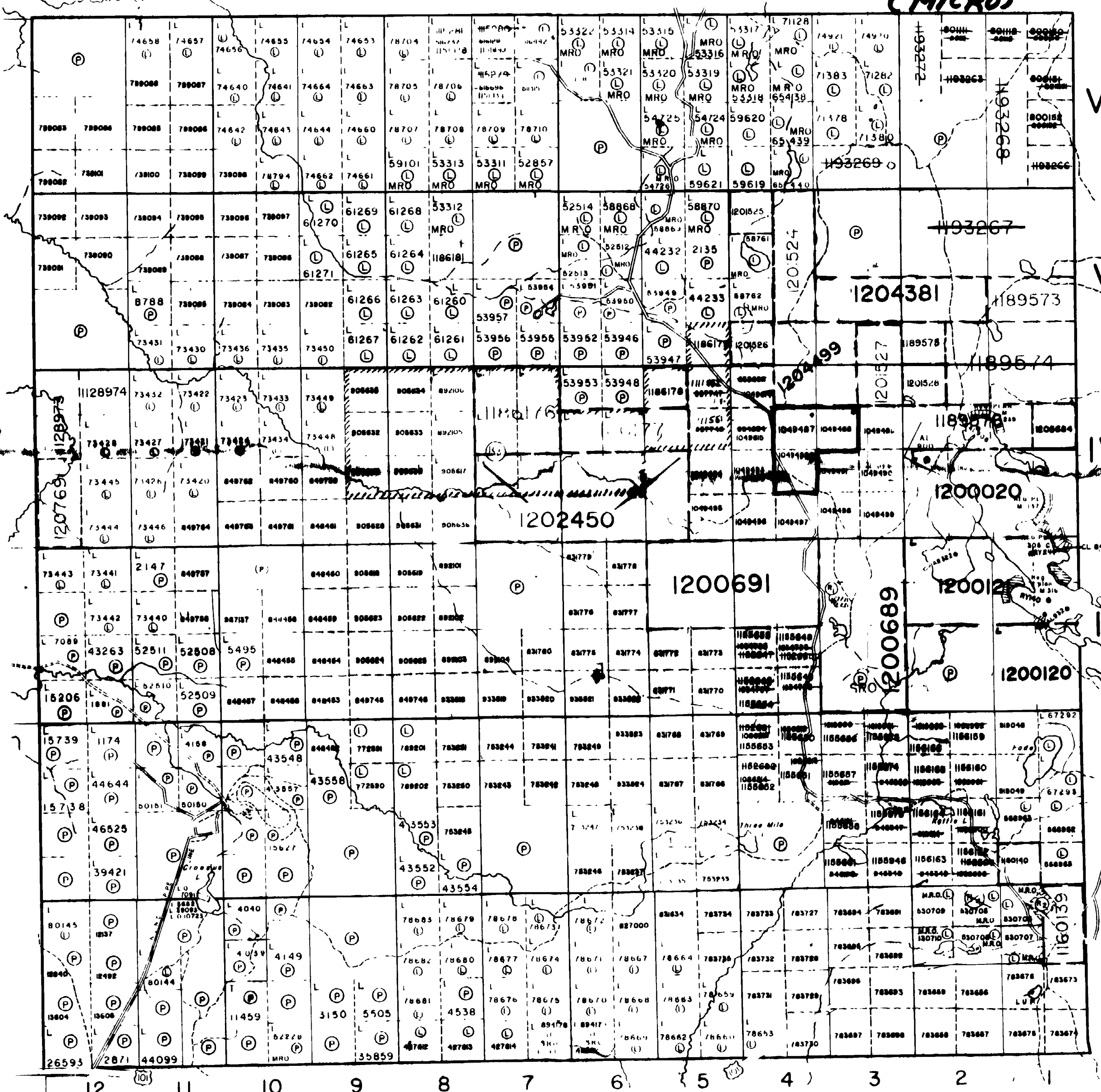
MUNRO

DISTRICT OF COCHRANE

LARDER LAKE MINING DIVISION

SCALE: 1-INCH 40 CHAINS

RECEIVED  
MAY - 3 1995  
MINING LANDS BRANCH



LEGEND

- PATENTED LAND ● or ⊙
- CROWN LAND SALE C.S.
- LEASES ⊙
- LOCATED LAND Loc.
- LICENSE OF OCCUPATION L.O.
- MINING RIGHTS ONLY M.R.O.
- SURFACE RIGHTS ONLY S.R.O.
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED
- PATENTED SRO

NOTES

- 400' Surface rights reservation along the shores of all lakes and rivers
- Areas withdrawn from staking
- ① SURFACE RIGHTS WITHDRAWN FROM STAKING, SECTION 104386, 9/11/89
- ② SURFACE RIGHTS WITHDRAWN FROM STAKING, SECTION 106682, W. 14/77, 10/18/77
- ③ SURFACE RIGHTS WITHDRAWN FROM STAKING, SECTION 106682, N.R.W. 18/88, 2/3/88
- ④ SURFACE AND MINING RIGHTS WITHDRAWN FROM STAKING, SECTION 106682, N.R.W. 27/88, 28/88/88
- 0-08/88L OPENS PART OF NRW87/86

NOTICE OF FORESTRY ACTIVITY

THIS TOWNSHIP / AREA FALLS WITHIN THE WATABEAG MANAGEMENT UNIT AND MAY BE SUBJECT TO FORESTRY OPERATIONS. THE MNR UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT P.O. BOX 129 SWASTIKA, ONT. POK ITO 705-642-3222

PLAN NO. M-376

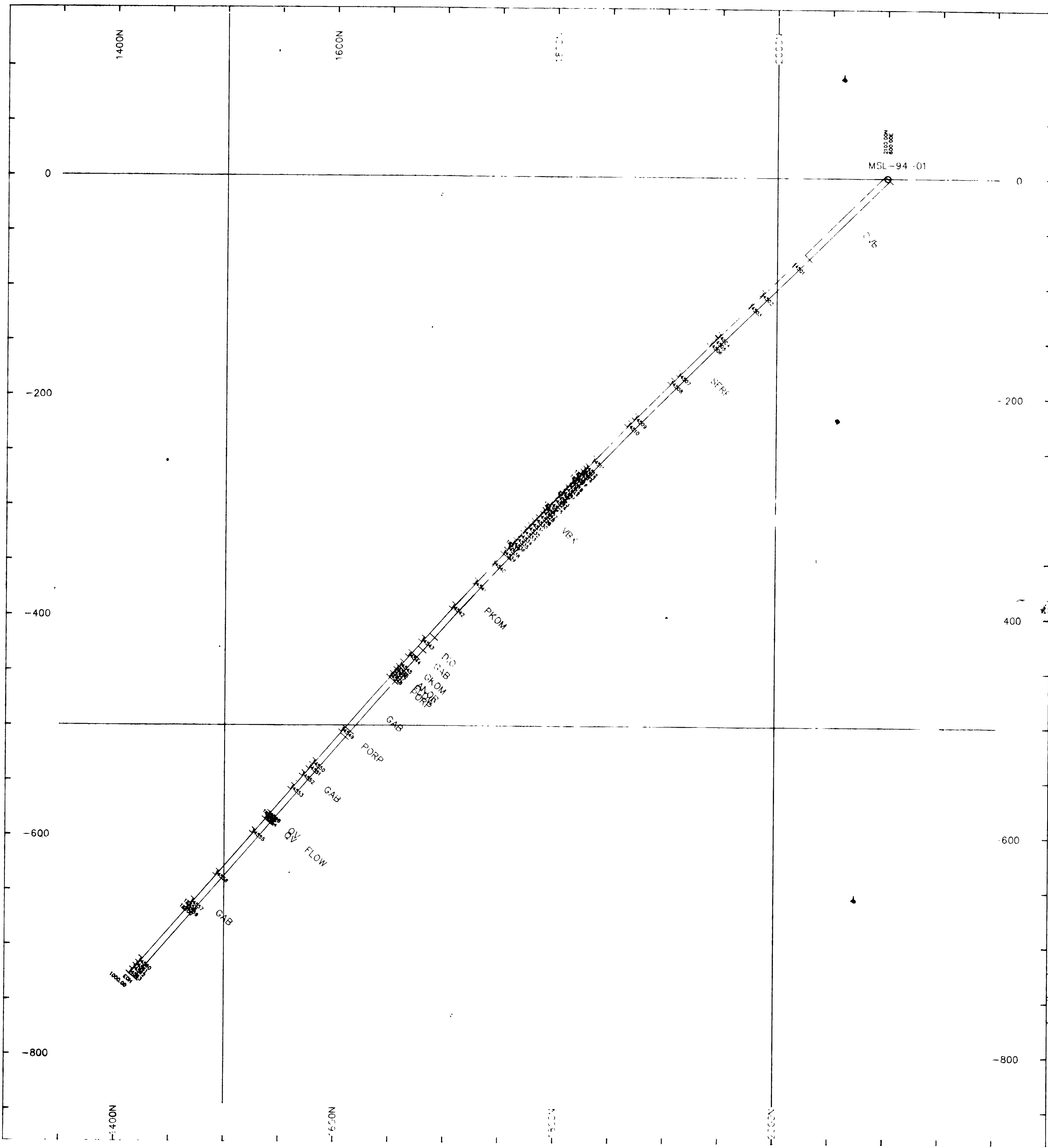
MINISTRY OF NORTHERN DEVELOPMENT AND MINES

COPY OF THIS MYLAR ARCHIVED MAR. 26/92 ARCHIVED MARCH 3, 1995



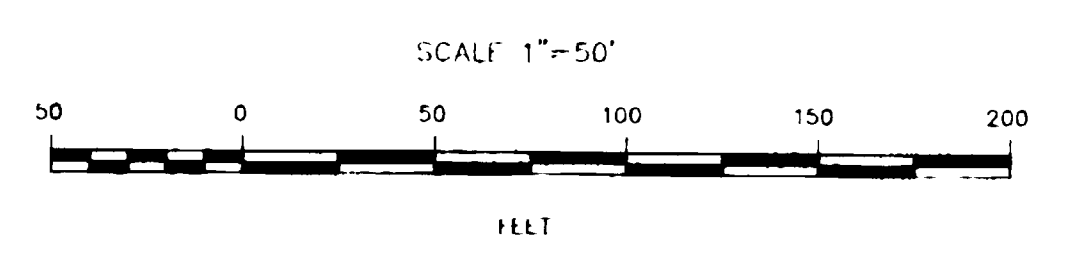
MUNRO TWP

M-376



LEGEND

- OVB Overburden
- FLOW Mafic Flow
- VRX Volcanic Breccia
- SERP Serpentine
- ANOR Anorthosite
- DIO Diorite
- GAB Gabbro
- PORP Magnetite Porphyry
- PKOM Peridotite Komatiite
- GKOM Gabbroic Komatiite



TRINITY EXPLORATIONS

MUNRO PROSPECT	SURVEY BY G. Mullan
Munro Township	CLAIM No. L-1049488 L-1049487
DIAMOND DRILL PROFILE SECTION LOOKING 295 DDH MSL 94 01	APPROVED BY G. Mullan
	DRAWN BY LOG II
	DATE May 1995
	DWG NO

Robert Mullan Geological Services Ltd

**\* Preliminary \***

